

**FACTORS INFLUENCING UTILIZATION OF SEXUAL AND
REPRODUCTIVE HEALTH SERVICES AMONG ADOLESCENTS IN
TURKANA SOUTH SUB COUNTY, TURKANA COUNTY, KENYA.**

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**A THESIS SUBMITTED TO THE SCHOOL OF MEDICINE AND HEALTH
SCIENCES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE CONFERMENT OF THE DEGREE OF MASTER IN PUBLIC HEALTH
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SEPTEMBER, 2024

DECLARATION AND RECOMMENDATION

Declaration

I declare this thesis is my original work that has never been presented in any other university for award of any degree or diploma



Signature..... Date: 20th September 2024

Lobolia, William Abong

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Recommendations

This thesis has been recommended by the university supervisors for the examination purposes.

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DEDICATION

This thesis is dedicated to the almighty God for His guidance and strength, my supervisors and my family for believing in me and their unconditional support throughout this proposal writing process.

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I would like to acknowledge my supervisors Dr. Consolata M'mayi and Ms. Teresia Kyulu, for guiding me through this proposal development process, the Department of Public Health and Nutrition at the Kenya Methodist University for providing resources to ensure that the research writing took place smoothly.

ABSTRACT

The study was on factors influencing utilization of sexual and reproductive health services among adolescents in Turkana South Sub-County, Turkana County, Kenya. Services for teenage reproductive health-affiliated aspects have become important than in previous years, taking center stage in national and international. The increase in the rate of these SRH problems among secondary school students is wanting and worse in marginalized counties like Turkana County. This suggests the social and health need for adequate attention towards adolescents' sexual and reproductive health in Turkana County. Turkana County is considered to be one of the marginalized regions across Kenya due to various aspects that include poor access to water, social amenities, infrastructure, drought, poverty and illiteracy among members of the society therefore, adolescents living in Turkana County are vulnerable to poor utilization of health services such as reproductive medical services. Generally, the objective of the study is to explore factors influencing utilization of sexual and adolescent reproductive health services among adolescents in Turkana South Sub-County. Specific objectives were: 1) To ascertain the level of awareness regarding the utilization of sexual and reproductive health services among adolescents attending secondary school. 2) To estimate utilization of sexual reproductive health services among secondary school adolescents. 3) To examine the influence of social-economic factors on utilization of sexual reproductive health services among secondary school adolescents. 4) To determine the influence of health system factors on utilization of sexual reproductive health services among secondary school adolescents. The study utilized a sampling frame of Sub-county schools provided by the county education officer, categorized by type (girls-only, boys-only, and mixed). Proportional representation of each school type was calculated based on the total number of students in each category, ensuring a representative sample. Random sampling was employed to select schools from each category. the population of 337 adolescents were sampled and questionnaires were used as primary data collection method. For quantitative data, content analysis was used in SPSS version 21, and for qualitative data, content analysis was used. Findings reveal that age and sex do not significantly influence SRH service utilization among adolescents. Despite gender disparities in awareness, socio-cultural factors such as early marriage practices impact utilization. However, religious and cultural influences were not significant determinants. Economic status emerged as a crucial factor, with families' financial constraints hindering access to services despite attending boarding schools. The study underscores the importance of information availability in shaping service utilization, with limited awareness correlating with low uptake. Peer influence, age, sex, economic status, and health system challenges collectively shape adolescents' engagement with SRH services. Addressing these barriers requires comprehensive interventions, including awareness campaigns, interactive educational initiatives, improved access to services, targeted interventions for vulnerable groups, capacity building for healthcare providers, and collaboration between stakeholders. These findings provide valuable insights for policymakers, healthcare professionals, and educators to develop tailored interventions and strategies to enhance SRH service utilization among adolescents.

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ABBREVIATION AND ACRONYMS

FP	:	Family Planning
IPPF	:	International Planned Parenthood Federation
KDHS	:	Kenya Demographic Household Survey
NACC	:	National Aids Control Council
NRHS	:	National Reproductive Health Policy
SDGs	:	Sustainable Development Goals
SRH	:	Sexual reproductive health
SRHS	:	Sexual and reproductive health service
STDs	:	Sexually Transmitted Diseases
VCT	:	Voluntary Counseling and Testing
WHO	:	World Health Organization
YFRHS	:	Youth Friendly Reproductive Health Service

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter's introduction addresses the foundation of SRHS, defines the problem statement, outlines the study's objectives, presents associated hypotheses, discusses its significance, outlines its scope, acknowledges limitations, and provides operational definitions for key terms.

1.1 Background of the Study

World Health Organization [WHO] (2017) defines adolescents as people or rather persons who are of 10-19 years of age. Adolescence is therefore the time where adolescents exhibit rapid growth and development that is majorly characterized by sexual, cognitive, physical emotional, social and sexual changes that impacts their sexual and reproductive health (Kanathi & Johnson, 2021). Sexual and reproductive health services are range of medical, educational, and counseling services that focus on sexual and reproductive needs of individuals. Common sexual and reproductive health services includes; contraceptive services, sexually transmitted infections and sexual health education. Recent study of adolescents across the globe depicts that, number of adolescents is estimated to be 1. 25 billion people globally (WHO, 2017; Fetene & Mekonnen, 2018). A study by Melesse (2018) found that among the 1.25 billion teenagers, 513 million of them are of age 15-19 years and 85% live in developing countries (Ansha et al., 2017). Reproductive and sexual health is a fundamental part of mental, physical and social health of all people. Teenagers

worldwide are regarded to have special reproductive needs and in addition different kind of vulnerabilities.

The availability, quality, and availability of SRH services, as well as the social structures, healthcare systems, and individual characteristics and beliefs of the clients of the services, all directly impact their uptake (WHO, 2017). A study by Arslan (2018) in Turkey found that, very few secondary school adolescents utilize health services from any of the health facility due to various social, cultural and health system factors as well as lack of access to relevant information on sexual and reproductive health. Adolescents are always shy; have no or little complete know how about puberty stage changes that includes emotional and physical changes due to puberty, HIV & AIDS, and Sexually Transmitted Infection (Upadhyay & Khandelwal, 2018). Similarly, adolescent girls have unsanitary menstrual hygiene practice, unhealthy food habit (Choudhury et al., 2020). Fifty percent of pregnant Nepalese adolescent girls age (15-19) do not seek Antenatal care (Temmerman, 2017).

In developing countries, there is broad agreement that sexual and reproductive health (SRH) is a critical component of secondary school going adolescents because of the positive association between investments in SRH services and sustained improvement in educational attainment, workforce development, and economic growth (Kangaude et al., 2020; Lande et al., 2018). As a result, African countries have come together with other worldwide nations and agreed to work together as part of the United Nation's which guide international development efforts and national health policies in resource-poor settings (United Nations Population Fund [UNFPA], 2016; WHO, 2019). Currently, many low-income countries find it hard to meet the need for SRH

services because of shortages in human resources, infrastructure, equipment, and drug supply.

As such, each year, as reported by Kaski et al. (2018), more than 1.5 million adolescents undergo unsafe abortions and other stringent problems attached to SRH. Studies done in sub-Saharan Africa countries reveal that more than 60% of hospitalized cases affiliated to reproductive health care are attached to adolescents (Ndongmo et al, 2017; World Bank 2017). National policies are needed to guide service integration but there is limited peer-reviewed evidence regarding best-practices for minimizing disruption of health reproductive services.

Many young girls living in Kenya engage in sexual activities at a relatively early age and are more likely to not use contraceptives. This is worse among those living in marginalized areas such as Turkana. In Turkana County, adolescents represent 23.62% of the total population (Kenya National Bureau of Statistics [KNBS], 2019) census report. Presently, very little healthcare provision is tailored to this demographic. However, conditions indicate this population requires increased sexual and reproductive healthcare attention.

Additionally, Honwana (2019) posits that the shifting from traditional and cultural norms to modern life style deprived adolescents' subsequent and imperative aspects such as informal education systems where adults were able to teach adolescent on matters sexuality (Nxumalo-Mabuza, 2019). Due to this, adolescents have been left with no one to make them understand about sex issues and mostly depend on surrounding friends for info. As such, teenagers get misguided information from their peers (Mutea et al., 2020). Hence, adolescents face several reproductive health challenges. A study on determinants of utilization of reproductive health services

among secondary school and college youth in west Pokot Sub-County, Kenya found that Adolescents lack easy access to quality knowledge that later affect their decision on utilization of SRH (Chebet et al., 2019).

A similar study by Kaski et al. (2018) found that, the social set ups of Kenya communities' influence how secondary students access and utilize SRHS. Lack and insufficient proper guidelines for the subsequent availability of medical services, and scarcity of disseminated info on available health aspects influences adolescent's utilization of reproductive health services.

Government of Kenya developed a national Adolescent Reproductive Health and Development Policy in 2003 with the aim to address the various challenges facing adolescents as reported by Towett & Kungu (2019). Additionally, it also crucial to have adolescent friendly reproductive health services and to promote an integrated services approach in addressing sexual health needs (Ministry of Health [MOH], 2016). Marginalization of rural centers subsequently creates more predicaments for teenagers and adolescents who may want access to SRHS. According to review of self-collected reported, there is conflicting findings from previous studies. Thus, this research aims at gaining and bridging knowledge gap in the context of SRHS among secondary school adolescents.

1.2 Statement of the Problem

Turkana County in Kenya faces significant challenges with early marriages, teenage pregnancies, and HIV prevalence among adolescents, highlighting pressing social and health needs. Marginalization due to factors like limited access to water, poor

infrastructure, poverty, and low literacy rates exacerbates these challenges. Cultural norms endorsing early marriages further compound the situation.

The Kenyan government's National Reproductive Health Strategy (NRHS, 2022-2032) aimed to address these issues by prioritizing services like family planning and HIV management (MOH, 2022). Despite efforts and devolved governance allowing county-level initiatives, data from the Kenya Demographic Household Survey 2022 (KNBS, 2022) indicates persistent reproductive health problems among secondary school students. Turkana County's government has initiated projects to encourage adolescent use of sexual and reproductive health services (SRHS), yet uptake remains low.

Statistics reveal a contraceptive prevalence rate of 4.7%, low skilled birth attendance at 9.7%, and HIV prevalence of 4.0%, slightly below the national average. Alarming, only 18% of young people in Turkana County have adequate HIV knowledge (National AIDS Control Council [NACC], 2019). Further research is vital to understand how various factors, including health systems, economics, socio-culture, and SRH information availability, affect Turkana County's adolescents. Such insights are essential for developing targeted interventions to improve reproductive health outcomes in the region.

1.3 Purpose of the Study

The main aim of this study was to explore factors influencing utilization of sexual reproductive health services (SRHS) among secondary school adolescents across Turkana South Sub-County.

1.4 Study Objectives

- i. To ascertain the level of awareness regarding the utilization of sexual and reproductive health services among adolescents attending secondary school.
- ii. To examine the influence of social-economic factors on utilization of sexual reproductive health services among secondary school adolescents
- iii. To determine the influence of health care service delivery factors on utilization of sexual reproductive health services among secondary school adolescents

1.5 Research Questions

- i. How does the level reproductive health awareness influence utilization of sexual reproductive health services among secondary school adolescents?
- ii. What is the impact of socio-economic factors on utilization of sexual reproductive health services among secondary school adolescents?
- iii. How does health care delivery factors influence utilization of sexual reproductive health services among secondary school adolescents?

1.6 Justification of the Study

Despite making up a significant portion of the population, adolescents' needs in terms of sexual and reproductive health are often neglected or underserved. Adolescents are particularly vulnerable as they navigate through a crucial stage of physical, emotional, and social development. Healthcare providers and policymakers may better understand this population's needs and address barriers to treatment use by taking into account factors such as cultural norms, socioeconomic status, and lack of knowledge. Teens' health, education, and socioeconomic status are all profoundly and permanently

impacted by sexual and reproductive health problems, making it all the more important to address these concerns for their overall well-being and future prospects.

Additionally, focusing on this research topic in Turkana South Sub-County specifically is important due to its marginalized status and unique socio-cultural context. Adolescents in Turkana County have unique obstacles as compared to other locations when it comes to seeking sexual and reproductive health services. These include poverty, social and cultural norms, and restricted healthcare access. Finding common ground in order to address the unique needs of teenagers from low-income areas is the overarching goal of this study. These results have the potential to provide the groundwork for future research and policy initiatives that target this vulnerable population in an effort to increase their use of and access to essential healthcare services.

1.7 Significance of the Study

This study finding will aid the adolescents to understand how does accessibility of SRHS related information influences their utilization of SRHS hence helping them make informed reproductive health choices. The study findings will be of great importance to the health care services providers. They will understand how variables under investigation influence the utilization of SRHS among the adolescents.

The teachers may also find it important to use information affiliated to reproductive and also sex medical needs to support them adequately. Governments, through departments of sexual related health services will consume these study findings to improve ARHS. The results of this study will recommend future scope that will act as an imperative aspect. Academicians, scholars and researcher will review this study as

a basis for discussions on the adolescents' influences of availability of information, health systems factors, social-demographic factors and economic factors on utilization of SRHS.

1.8 Scope of the Study

The study explored factors influencing utilization of sexual reproductive health services (SRHS) among secondary school adolescents across Turkana South Sub-County. The various factors assessed were level of awareness regarding the utilization of sexual and reproductive health services, utilization of sexual reproductive health services, social-economic factors, and health system factors. The respondents were adolescents in secondary schools who were issued with questionnaires.

1.9 Limitations of the Study

This research had difficulties, such as the existence of social desirability bias. This phenomenon, known as social desirability bias, arises when survey participants intentionally submit replies that they see as socially acceptable rather than their genuine opinions. This may result in distorted findings and misinterpretations for the researcher. Cultural and religious factors may limit adolescents' willingness to openly discuss sexual and reproductive health issues, impacting the accuracy of the findings.

1.10 Delimitations of the Study

The purpose of this study was to identify the factors that affect the need for SRHS among secondary school students in Turkana South Sub County. Due to their heightened vulnerability to a range of sexual and reproductive health issues, including HIV, unintended pregnancies, and STDs, the focus group was selected to consist of secondary school students (Binu et al., 2018). As a result, individuals may face

problems such as lack of support, marginalization, and exclusion from family systems, society, and government programs and policies. The study id delimited to adolescents aged 15-19 years in secondary schools, excluding younger adolescents and those not in school. The researcher also focused specifically on secondary schools within Turkana South Sub-County, ensuring a manageable scope for data collection and analysis.

1.11 Assumptions of the study

Involved researcher assumed that respondents will answer questions honestly and truthfully. Further, the researcher assumed that respondents are aware impacting aspects their utilization of sexual related medical services and they will not be shy or be prevented from their cultural backgrounds and have freedom to talk on the topic of study.

1.12 Operational Definition of Terms

Adolescence

The World Health Organization (WHO) defines adolescents as individuals aged 10 to 19 years. This age range encompasses early adolescence (10-14 years) and late adolescence (15-19 years).

Health System Factors

These are health factor that comprise the structure that promote, restore or maintain health of adolescents (United Nations International Children's Emergency Fund [UNICEF], 2019).

Reproductive Health

Not only the absence of illnesses, but a condition of total physical, mental, and social well-being in all issues relevant to the reproductive system and its functions and processes (WHO, 2012).

Sexual and Reproductive Health Services

It incorporates counseling, maternity care, treatment of STIs, safe abortion and abortion care, access to information and education, and prevention, diagnosis, and treatment relating to STIs preventive services (United Nations Development Programme [UNDP], 2024).

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The overview of other research work in reference to adolescent reproductive health services is provided in this chapter, subsequent definitions and adolescent affiliated perspective. Conceptual issues about adolescents' sexuality matters and medical concerns, the knowledge affiliated to RHS and its impacts the consumption of medical service. This particular section of research provides various definitions and outlook of adolescence.

2.1 Access of Reproductive Health Services Utilization

The issues utilization of reproductive health services among adolescents varies significantly across different geographical regions, with factors such as socio-economic status, cultural norms, healthcare infrastructure, and government policies playing crucial roles (Bearinger et al., 2007). Limited access to information and services, stigma around sexuality, and insufficient healthcare resources are just a few of the many obstacles that teenagers throughout the world encounter while trying to obtain and make use of reproductive health services (WHO, 2012).

Teenagers in developing countries have additional challenges in accessing reproductive health services owing to cultural stigmas, low levels of education, and poverty (Chandra-Mouli et al., 2017). Unwanted pregnancies, STIs, and maternal mortality rates are higher among teenagers in these regions due to these barriers (Patton et al., 2016). With higher rates of teen pregnancies and early unions as well as

limited access to contraception and comprehensive sexual education, Sub-Saharan Africa bears a disproportionate share of the burden when it comes to adolescent reproductive health (Darroch et al., 2016). Cultural norms, gender inequality, and weak healthcare systems further exacerbate these challenges, resulting in adverse health outcomes for adolescents (UNICEF, 2019).

In Kenya, adolescents still face challenges in accessing reproductive health care, despite the progress made in this area. These hurdles include a lack of knowledge, social stigma, and a lack of programs specifically designed to meet their requirements (KNBS, 2019). The problems faced in disadvantaged places such as Turkana County are especially severe. Factors such as poor salaries, limited infrastructure, and deeply rooted cultural traditions worsen concerns of adolescent reproductive health (National Council for Population and Development [NCPD], 2013).

According to the Turkana County Government (2017), teens in the county face a number of obstacles, such as lack of healthcare facilities, cultural norms that discourage them from obtaining reproductive health treatments, and their nomadic lifestyles. Teenage pregnancies and STIs have increased dramatically in the region due to the disparate atmosphere that these factors create, which in turn makes it difficult for young people to get the help they need.

2.2 ARHS awareness availability Aspects

There are major changes occurring on many levels of development throughout adolescence, including the physical, emotional, and social. During this period, adolescents begin to explore their sexuality and reproductive health, which can have profound implications for their well-being and future. Pregnancy prevention, sexually

transmitted infections (STIs), and contraception are all areas in which research shows that teenagers (those between the ages of 15 and 19) often lack enough understanding (Kirby et al., 2007). Misconceptions and myths about reproductive health may prevail among adolescents, leading to risky behaviors and adverse health outcomes (Wamoyi et al., 2018).

Many factors, including cultural norms, family beliefs, peer pressure, and access to information, influence adolescents' perspectives on reproductive health. In many cultures, discussions about sexuality and reproductive health are taboo, leading to misinformation and stigma surrounding these topics (Svanemyr et al., 2015). Adolescents may also face barriers in accessing accurate and comprehensive information about reproductive health due to inadequate sexuality education in schools and limited access to youth-friendly healthcare services (UNFPA, 2016).

Studies have shown that adolescents' perceptions of reproductive health services play a crucial role in their utilization of these services. Negative perceptions, such as fear of judgment from healthcare providers or concerns about confidentiality, may deter adolescents from seeking reproductive health services (Low, 2016). Conversely, positive perceptions, such as feeling respected and supported by healthcare providers, can enhance adolescents' willingness to engage with reproductive health services and adopt healthy behaviors (Denno et al., 2015).

In conclusion, a variety of social, cultural, educational, and healthcare variables impact the knowledge and attitudes on reproductive health among adolescents ranging from fifteen to nineteen years old. Eradicating misconceptions and fostering a greater comprehension of reproductive health are imperative undertakings. Comprehensive

education regarding sexual and reproductive health is imperative for adolescents in order to enable them to make well-informed decisions. Such endeavors are crucial in order to accomplish this objective.

2.3 Socio-Economic Factors Influencing ARHS

Multiple socioeconomic variables impact adolescent healthcare seeking and use, including access to reproductive health treatments. There are a number of variables that affect a person's ability to obtain and use reproductive health care. These include their socio-economic position, level of education, family income, and place of residence (Barber et al., 2019). Consistent with previous research, less resources are available to teenagers from lower socioeconomic backgrounds when it comes to reproductive health care. Limited financial resources may restrict adolescents' ability to afford contraception, STI testing, and other reproductive health services, leading to disparities in service utilization (Patton et al., 2016).

The extent to which adolescents have access to reproductive health care is significantly impacted by their educational attainment. Ancestrally well-educated individuals generally exhibit a greater capacity for precise and reliable information pertaining to sexual and reproductive health. This comprehension enables individuals to make well-informed decisions and actively pursue the services they need (Acharya et al., 2016). Conversely, teenagers with little educational attainment may have challenges in comprehending information about reproductive health and navigating healthcare systems efficiently.

The functioning of a home and the assistance offered by family members are additional social and economic factors that influence the use of reproductive health care by

teenagers. Adolescents who are raised in supportive households that promote open conversations about sexual health are more likely to actively seek reproductive health services and adopt healthier practices (Mmari et al., 2014). In contrast, adolescents from households with conservative attitudes towards sexuality or where discussions about reproductive health are taboo may face stigma and barriers to accessing services.

The geographical residence of teenagers is a crucial determinant of their ability to get reproductive health treatments. Individuals living in rural or remote regions may face challenges such as limited access to healthcare services, long travel distances, and a lack of transportation options. These obstacles might impede their ability to get the necessary assistance (Singh et al., 2019). Finally, when it comes to reproductive health treatments, teenagers' access and usage are greatly influenced by socio-economic determinants. Addressing disparities in access requires multi-sectoral approaches that consider the broader social determinants of health, including poverty reduction strategies, investments in education, and efforts to improve healthcare infrastructure in underserved communities.

2.4 Health care delivery Factor on ARHS

Adolescents' use of reproductive health services is influenced by several elements within the healthcare system. These variables influence the manner in which teenagers get and engage with healthcare services. The fundamental components of the healthcare system include the presence, ease of use, cost-effectiveness, social acceptability, and excellence of reproductive health services particularly designed for teenagers. To guarantee that teenagers get thorough and private treatment, it is essential that they have access to reproductive health services that are specifically

designed for them. Preventative care for young people, including STI testing and treatment, counseling on birth control options, and education on reproductive health, should be a priority for healthcare providers (Denno et al., 2015).

Accessibility of services: Accessibility refers to the ease with which adolescents can reach reproductive health services. Barriers such as long travel distances, lack of transportation, and inconvenient clinic hours can hinder adolescents' ability to access services, particularly in rural or remote areas (Hameed et al., 2014). Health systems should prioritize the establishment of youth-friendly clinics and outreach programs to improve accessibility for adolescents. **Affordability of services:** Cost is a significant barrier to accessing reproductive health services for many adolescents, particularly those from low-income households. Health systems should ensure that services are affordable or provided free of charge to remove financial barriers and ensure equitable access for all adolescents (Darroch et al., 2016).

Acceptability of services: Adolescents may avoid seeking reproductive health services if they perceive healthcare facilities as unwelcoming or judgmental. Health systems should strive to create an environment that is respectful, non-judgmental, and culturally sensitive to adolescents' needs and preferences (Acharya et al., 2016). This includes training healthcare providers to communicate effectively with adolescents and respecting their confidentiality and autonomy. **Quality of services:** The quality of reproductive health services is critical for ensuring positive health outcomes for adolescents. This includes providing accurate information, appropriate counseling, and evidence-based care that meets adolescents' needs (Bearinger et al., 2007). Health systems should invest in training healthcare providers, improving facility infrastructure, and monitoring service delivery to ensure high-quality care for

adolescents. Adolescents' utilization of reproductive health services is substantially impacted by the operation of healthcare systems. In order to facilitate unhindered and appropriate access to comprehensive reproductive health services for adolescents, healthcare systems must address concerns pertaining to care quality, availability, affordability, and suitability.

2.5 Theoretical Framework

Several theoretical frameworks inform our understanding of adolescent health-seeking behaviors and utilization of reproductive health services. These theories provide valuable insights into the factors that influence adolescents' decisions regarding reproductive health care. Some relevant theories include: According to the Health Belief Model (HBM), people's perceptions of the probability of health hazards, the severity of possible health consequences, the benefits of preventive measures, and the barriers to adopting such measures influence their behavior in relation to their health. When it comes to adolescent reproductive health, the HBM shows that when teens feel at risk of unwanted pregnancies, STIs, or other problems, they are more likely to seek out reproductive health care. Additionally, they are more inclined to seek care if they believe that the benefits of seeking care outweigh the difficulties.

According to TPB, people are more or less likely to engage in a behavior depending on their attitude toward it, the social pressures they feel from others (subjective norms), and their assessment of how easy or difficult the behavior is to carry out. In the context of adolescent reproductive health, the TPB suggests that adolescents' intentions to seek reproductive health services are influenced by their attitudes toward sexual health,

perceptions of social norms regarding healthcare-seeking behavior, and beliefs about their ability to access and utilize services.

The dynamic relationship between individuals, their actions, and their environment is emphasized by Social Cognitive Theory (SCT). Adolescents' health-related decision-making is impacted by factors such as social support, self-efficacy, the influence of role models, and the expectations placed on the outcomes of their actions. According to SCT, when it comes to adolescent reproductive health, factors such as seeing how other people get healthcare, positive reinforcement from friends and family, self-assurance in using these services, and expectations of outcomes influence adolescent decisions to seek out reproductive health services. Ecological Systems Theory (EST) examines the impact of several factors, including individual characteristics, community norms, and social settings, on the behaviors connected to adolescent reproductive health care. This statement highlights the interaction between personal, interpersonal, community, and social factors in influencing how teenagers may access and use these services.

Essentially, EST highlights the influence of several elements at different levels, including individual characteristics, family and peer connections, community resources, and broader social and cultural contexts, on this particular facet of health behavior. EST highlights the importance of considering these multiple levels of influence when designing interventions to promote adolescent reproductive health. While each of these theories offers valuable insights into adolescent reproductive health behaviors, no single theory comprehensively explains all aspects of adolescent health-seeking behavior. Instead, researchers often draw on multiple theoretical

frameworks to develop holistic approaches to understanding and addressing the complex factors influencing adolescent reproductive health services.

2.6 Conceptual Framework

The usage of reproductive health services among teenagers in Turkana South Sub-County was studied using Andersen and Newman's (2005) Second Stage Model of Health Service usage. A variety of human, environmental, and provider-related factors linked to health care seeking choices are described and understood using a systems viewpoint in the model. Three types of factors are postulated to influence health care utilization: Predisposing factors, which primarily characterize the interplay between demographic variables including age, gender, education level, and health care use. A person's propensity to seek medical attention depends on a number of enabling features.

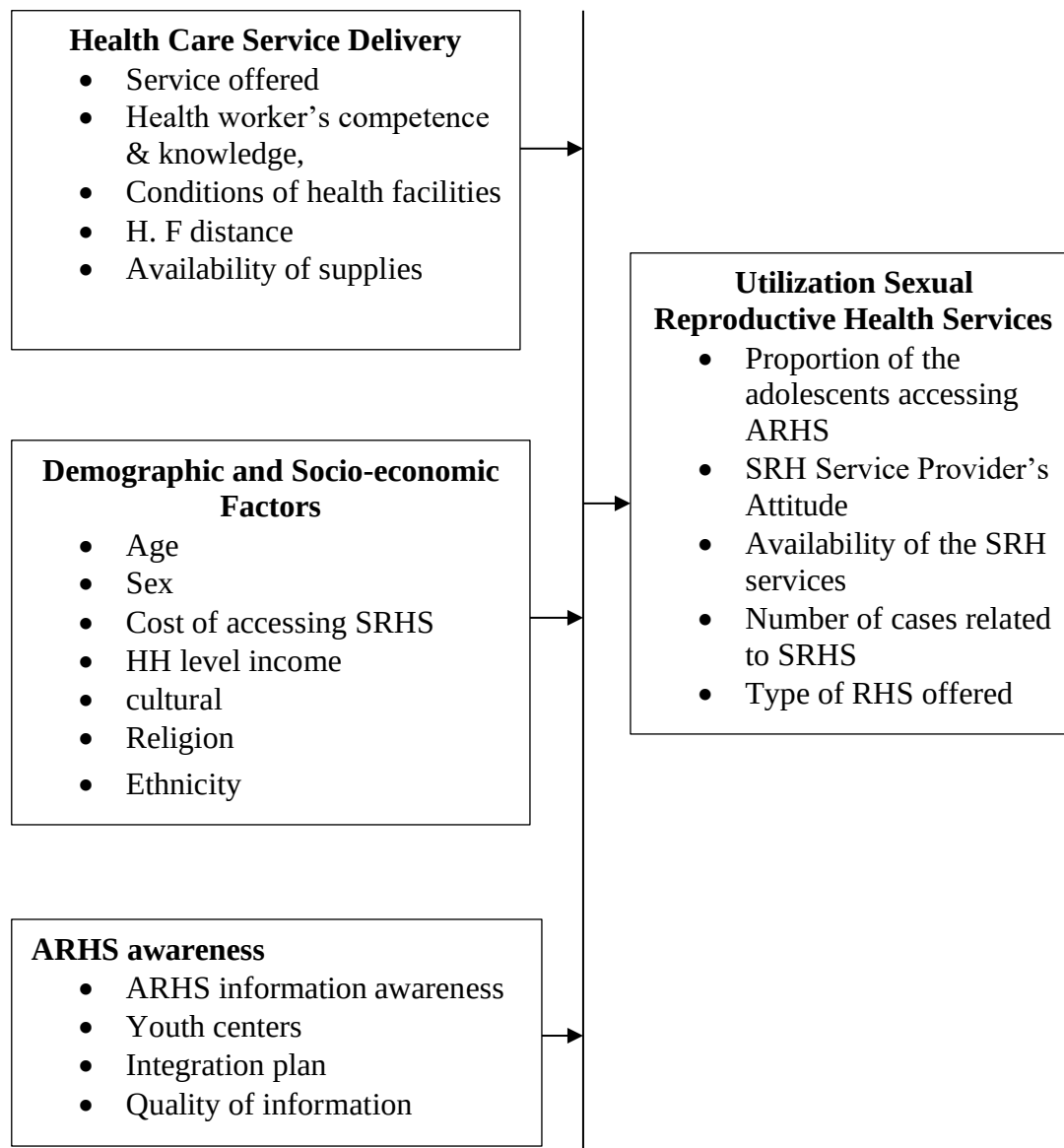
They included the resources available to them at home and in the community, their socioeconomic position, the proximity of medical facilities, and the availability of medical professionals. Whether the facilities are located at school or at home, the majority of the time, the financial support for a student's education comes from their parents or guardians. The structure of health care facilities, as well as health policies and resources, make up a health care system. A health care system's organization is its approach to managing its resources, but customer satisfaction is what ultimately decides how individuals use health services (Rebman, 2005).

Figure 2.1

Conceptual Framework

Independent Variable

Dependent Variable



CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter explains the research method that was used in conducting this study. It contains the following seven subsections: research design, target population, sample size and sampling techniques, data collection tools, data collection procedure, data analysis techniques, as well as ethical issues.

3.1 Research Design

The study adopted a descriptive cross-sectional design facilitates the gathering of comprehensive information regarding various aspects of SRH service utilization among adolescents. This includes exploring the prevalence of service utilization, patterns of access, satisfaction levels, and barriers encountered.

Furthermore, qualitative and quantitative data will likely be collected at the same time due to the study's cross-sectional design. Adolescent sexual and reproductive health service (SRH) usage may be better understood by using a multi-level approach that takes into account both systemic and individual-level variables. The purpose of this study was to investigate teenage SRH service utilization in Turkana South Sub County using a descriptive cross-sectional design. The results will help with policy decisions and targeted interventions to improve reproductive health outcomes for teenagers in the area.

3.2 Location of the Study

The Turkana South Sub-County spans approximately 18,000 square kilometers and is situated between 35°10' - 36°45' East Longitude and 1°0' - 3°0' North Latitude. Its population, as per the 2019 census, is 153,736. Within this area, there are 14 secondary schools accommodating a total of 3,847 students, with a gender distribution of 42% boys and 58% girls. Turkana South, situated in the northwestern part of Kenya, is bordered by Uganda to its west, Lake Turkana to the east, West Pokot County to the south, Baringo County to the southeast, and Samburu County to the south-southeast.

3.3 Target Population

The study focused on 3,836 male and female teenagers, classified as late adolescents by the WHO, who were enrolled in 14 secondary schools in Turkana South Sub County and aged 15 to 19. This age group represents late adolescents who are typically more knowledgeable about reproductive health matters and thus more readily engage in studies related to this topic. Teenage pregnancy, STIs, and lack of access to reproductive health care are all problems that Turkana South Sub County was chosen for specifically because of its high incidence of these difficulties. Unlike other Sub Counties, Turkana South relies heavily on agro-pastoral activities for its subsistence.

Researchers are able to tackle urgent health challenges and help improve the well-being of teenagers in the community by choosing this location for their study. The study encompassed students in Forms 1 through 4 within this age category. According to the Education Officer of Turkana South, there are a total of 14 secondary schools in the sub-county, with an overall student population of 3,836. Among these students, 2,748 fall within the 15-19 years age bracket. Table 3.1 indicates the target population.

Table 3.1*Target Population*

Description	Target population	Sample Size
Form 1	1070	494
Form2	1026	514
Form 3	898	898
Form 4	842	842
Total	3836	2748

Source: Turkana South Sub County Education Officer June, 2022

3.4 Sampling Technique and Sample Size

The study ranked the Sub-county's schools according to whether they were coded, boys-only, or mixed, using the county education officer's list as a sample frame. The proportional representation of each school type was calculated based on the total number of students (girls and boys) in each category. As an example, the sample consisted of an equal number of schools catering to both boys and girls, as well as two schools that did not have a gender restriction. We used a random sample approach to choose schools from each category.

This method removes any possibility of bias and ensures that the sample is representative of the population at large. For descriptive research methodologies, Mugenda & Mugenda (2003) suggest that, for populations under 10,000, a sample size between 10% and 30% of the total is sufficient. A suggested sample size of 384 people is used when the population is more than 10,000 (Mugenda & Mugenda, 2003). The

population available for this study was 2748 Form 1 to 4 students. Mugenda and Mugenda (2003) propose a formula as:

$$nf = \frac{n}{1 + \frac{n}{N}}$$

Where:

nf is desired sample size when the population is < 10,000

n is desired sample size when the population is > 10,000

N is estimated population size.

Substituting the follows by the given figures:

$$\begin{aligned} nf &= \frac{384}{1 + \frac{384}{2748}} \\ &= 336.92 \end{aligned}$$

Therefore, it is 337 students that took part in the study.

3.5 Data Collection Instruments

The main method that the study collected data was by use of questionnaires. In order to collect specific data from the participants, these questionnaires were organized with a series of questions. Factors within the health system affecting service usage, socio-economic status affecting access to services, levels of reproductive health awareness, and the utilization of ARHS were among the important themes addressed by the surveys. By providing a consistent framework for data gathering, questionnaires

guarantee that both the questions asked and the answers received are accurate and reliable.

This improves the data's credibility and makes it easier to compare responses from different respondents. Compared to other techniques of data collecting, such as focus groups or interviews, self-administered surveys like this one enable respondents do the survey at their own speed and convenience. Respondents are more likely to be open and honest while filling out questionnaires because of the anonymity and privacy they give, which is especially helpful when asking personal questions about reproductive health. Last but not least, surveys are a cheap way to get data from a wide range of people in different places or from a huge number of respondents all at once.

3.6 Pre-test Study

A pre-test simply means as issuing the questionnaires to another category of participants to ensure that validity and reliability of the instruments is ensured. The study conducted a pre-test study at Loturerei Mixed day secondary school in Turkana Central Sub-County whereby 34 adolescents sampled using simple random method. The school was selected since it was also experiencing an increased number of school drop-outs due to early pregnancies.

3.6.1 Validity

Instrument validity is how effectively the instrument measures what it's supposed to and what it promises to. This entails evaluating how effectively the instrument answers study and research questions (Mueller & Knapp, 2018). Reeves and Marbach-Ad (2016) adds that validity is a test's ability to measure what it promises to measure,

ensuring that it is performing its intended job. In this research, concept and content validity were used.

The questionnaire was divided into parts to ensure construct validity by evaluating information linked to particular goals and aligning with the study's conceptual framework (Kothari, 2019). The questionnaire is subjected to thorough examination and scrutiny to ensure content validity. The purpose of this survey is to get information from people on their perceptions of the validity, clarity, and offensiveness of the questionnaire's measuring items. During the evaluation time, the instruments are adjusted correctly before the final data collection exercise. Any changes realized during validity check from participants are made sure that validity of the content is enhanced.

3.6.2 Instrument Reliability

The term reliability is used to describe how well test results hold up when given to the same person under various circumstances, for as when given the test at a different time or with new items (Mueller & Knapp, 2018). By fostering openness and decreasing room for prejudice, this dependability feature guarantees objectivity and credibility (Mohajan, 2017). To contrast this, internal consistency looks at how many items or subscales within the same test correlate with one another, suggesting whether or not different items measuring the same idea provide comparable findings (Kothari, 2019). The research assistants that collected the data were well-trained, and the questionnaires were pre-tested to ensure their dependability.

3.7 Data Collection Procedure

In this study, self-administered paper questionnaires were utilized, where respondents were provided with printed questionnaires to complete independently. These questionnaires were distributed in person during meetings, and respondents were instructed to fill them out and return them. To reach the respondents, the researcher sent a letter to the County Education Officer (CEO) of Turkana County. The letter outlined the study's purpose, potential benefits of the results, and included a sample questionnaire for reference.

3.8 Data Analysis and Presentation

In this study, once filled questionnaires are returned, the researcher begins to sort and capture data into statistical package for social sciences (SPSS) window version 25 to create a data file. The next step is to check whether the data is error-free by reviewing and cleaning it, and then to run preliminary analyses to see if the statistical techniques' assumptions are satisfied. Afterwards, descriptive and inferential statistics are used to meet the study's goals. Condensing a series of numbers into essential figures, descriptive statistics like percentages, averages, and standard deviations explain and characterize the data.

Some research problems may be better understood with the help of these descriptive analyses. Conversely, inferential statistics enable researchers to extrapolate from their sample data to the whole population. The research will make use of inferential statistics tools such binary logistic regression modeling, correlation analysis, and chi-square testing for independence. The goal of these approaches is to determine what variables impact the use of ASRH services among adolescents. Inferential statistics allow the

research to draw well-informed conclusions about the population at large from the data collected from the sample.

3.9 Ethical Considerations

The study upheld the participants' right to autonomy by making sure they weren't coerced into filling out the surveys. This indicates that people were offered the option to take part or not. The participants gave their informed permission before they were involved, and we were very mindful of time management so that we could fit everything in around the instructors' and kids' hectic schedules. Avoiding needless risks and ensuring the participants' emotional, social, and physiological well-being were our top priorities. The permission of guardians or parents was sought for pupils who were not yet eighteen years old.

All volunteers were treated fairly and equally throughout the trial, which ensured transparency. In order to protect their privacy, participants were given the option not to answer some questions, even if they did consent to participate in data gathering. Finally, confidentiality requirements were followed to the letter in this investigation. The researcher received approval from Kenya Methodist University and the National Commission for Science, Technology, and Innovation (NACOSTI). Additionally, permission was sought from the Ministry of Health and the Ministry of Education to conduct the study.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

This chapter presents and discusses the study findings. It is organized as follows; descriptive information of the study variables, factors significantly associated to utilization of ARHS, perceptions of ARHS providers and discussion of findings.

4.1 Socio-demographic Characteristics

The study involved a total of 337 participants aged between 15-19 years old, with a majority of 57.6% falling below 18 years. This section covers general information on the characteristics of the respondents such as sex, age, and level of education and religious affiliation. The study involved more boys than girls, with a ratio of 6:5 giving a total response rate of 100%.

Table 4.1*Socio-demographic Characteristics of the Participants in the Study*

Factors	Frequency (n)	Percentage (%)
Age group (years)		
15-17	194	57.6%
18-19	143	42.4%
Sex		
Male	183	54.4%
Female	154	45.6%
Class		
F1	72	21.4%
F2	106	31.5%
F3	83	24.7%
F4	76	22.4%
School type		
Boarding	235	69.8%
Day	102	30.2%
Religion		
Christians	301	89.3%
Muslims	36	10.7%
Parental occupation		
Employed	135	40.1%
Not employed	202	59.9%

Whereas the study was focus on school-going children, the sex disparities were influenced by the community's socio-cultural perceptions on uptake of formal education along with other social factors negatively affecting girls, such as early marriages. The Table 4.1 above summarizes the socio-demographic characteristics of the study participants.

Table 4.2*Chi-square Relationship between Demographic factors and SRHS*

Demographic factor	Relationship tests	SRHS Chi-square		
		Counselling	VCT	STI Treatment
Age	Pearson Chi-Square	3.104	3.333	3.099
	Likelihood Ratio	3.244	3.246	4.048
	Linear-by-Linear Association	1.230	.686	1.693
	N of Valid Cases	337	337	337
	d.f.	4	4	4
Sex	Pearson Chi-Square	1.597	.568	.275
	Likelihood Ratio	1.463	.553	.301
	Linear-by-Linear Association	1.593	.566	.274
	N of Valid Cases	337	337	337
	d.f.	1	1	1

The findings of the study indicated that age was not a significant influencer to the utilization of SRHS. Whereas this study sought to test the null hypothesis that SRHS is independent of age, it undertook a chi-square test of independence. With the calculated chi-square being less than the critical values (9.488 at d.f.=4 and $\alpha=0.05$), the null hypothesis was upheld. This study therefore established that SRHS is independent of age. Hence, age does not influence the utilization of SRHS among adolescents in Turkana. Sex was also found to have no significant influence on the uptake of SRHS among the secondary school students. This is evinced by the calculated chi-square being less than the critical values (3.841 at d.f.=4 and $\alpha=0.05$), which leads us to upholding the null hypothesis of independence as detailed in the Table 4.2 above.

The findings of this study regarding the utilization of Sexual Reproductive Health Services (SRHS) among adolescents in Turkana resonate with existing literature from various regions. Age was not found to be a significant influencer of SRHS utilization, aligning with global research indicating that factors beyond age alone drive utilization patterns (Smith et al., 2019; Agbenu et al., 2024). Additionally, the observed gender disparities in SRHS utilization, influenced by socio-cultural perceptions and early marriage practices, are consistent with findings reported in studies conducted across Kenya and sub-Saharan Africa (Ogbo et al., 2018; Njue et al., 2020).

Socio-cultural factors, such as cultural norms and religious beliefs, were identified as significant barriers to SRHS utilization, a theme echoed in research conducted globally (Sutherland et al., 2017; WHO, 2021). However, it's essential to acknowledge methodological variations across studies, which may contribute to differences in findings. Despite these variations, addressing socio-cultural barriers remains critical for improving SRHS utilization among adolescents worldwide.

4.2 Adolescent SRHS (ASRHS) Awareness

The evaluation of adolescents' comprehension of reproductive health included assessing their awareness of institutions that provide services related to adolescent reproductive health and the specific sorts of services that are accessible. Those acknowledging awareness of such services were subsequently asked to specify the sources from which they obtained this information. The ensuing table presents their responses regarding the type of their reproductive health services.

Table 4.3*ASRHS Source of Information*

Awareness Source	Frequency	Percentage %
Peer/friends	139	93%
School noticeboard	7	4.7%
Teachers	3	2.3
Parents	0	0

This study noted that most respondents had little knowledge of adolescent sexual reproductive health programs, with only 44.2 percent of the 337 respondents acknowledging to be aware of services offered under the program. Among the 149 respondents that were aware of Adolescent SRH programs, a majority of 93 percent said to have acquired the knowledge from peers and friends. Those who said to have obtained the knowledge from school noticeboards were 4.7 percent while 2.3 percent said to have been informed by teachers. None of the respondents acknowledged to have acquired knowledge on adolescent sexual health services from their parents as shown in the Table 4.3 above. The findings therefore suggested that peers were a more influential factor in the utilization of ASRH services.

Table 4.4*ASRHS Awareness Level*

ASRH Service	Awareness Frequency	Percentage %	Not aware	Percentage %
Family Planning	15	4.5	322	95.5
VCT	51	15	286	85
General Treatment	12	3.6	325	96.4
STI Treatment	9	2.7	328	97.3
ANC for the Young	8	2.4	329	97.6
Counselling	54	16.0	283	84
Social Activities	0	0	337	100

The data highlights variations in awareness levels among different ASRH services, with counseling being the most recognized and social activities being the least. Among the ASRH services given, counseling and VCT was most cited, with 16 and 15 percent respectively of the respondents claiming to be aware of the service being offered in the ASRH program and followed by family planning as shown in Table 4.4 above.

Table 4.5*Chi-square Relationship between Awareness Level and Utilization of SRHS*

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.091	1	.008
Continuity Correction	6.173	1	.013
Likelihood Ratio	6.393	1	.011
Linear-by-Linear Association	7.073	1	.008
N of Valid Cases	337		

Upon performing chi-square test on awareness of ASRHS and its utilization, the study found the two variables to have a relationship. The null hypothesis for independence is rejected ($\chi^2=7.09 > 3.84$ at d.f.=1 and $\alpha=0.05$) therefore indicating that the two variables, awareness and utilization of ASRHS, are dependent on each other, whereby awareness was seen to influence utilization. In Kenya and across Africa, studies have identified gaps in adolescents' access to sexual and reproductive health services, with peer influence being pivotal (Okereke, 2010; Owusu-Addo et al., 2018). Similar challenges exist on other continents, with peer networks often serving as primary information sources (Biddlecom et al., 2019; Chae et al., 2020). Despite socio-cultural differences, peer influence remains a common determinant globally.

Table 4.6

ASRHS Awareness Level by Age and Sex

Age	Utilized	%	Not Utilized	%
Age				
15-17	48	14.20%	289	85.80%
18-19	101	30.00%	236	70.00%
Gender				
Male	62	18.40%	275	81.60%
Female	87	25.80%	250	74.20%

The study found the awareness level of students on adolescent sexual health services to be influenced by age, whereby students aged between 18 and 19 years were twice likely to have interacted with ASRHS information or services compared to their counterparts below 18 years. In addition, sex was also an influencing factor, with more girls than boys being aware or having interacted with ASRHS (25.8% against 18.4%). This is despite the study having more boys than girls in its sample population as shown

in the Table 4.6 above. The findings of this study regarding the limited knowledge and utilization of Adolescent Sexual Reproductive Health Services (ASRHS) resonate with research conducted in various regions globally, including Kenya, Africa, and beyond.

In Kenya, studies have highlighted gaps in adolescents' knowledge and access to sexual and reproductive health services, with peer influence playing a significant role (Mwangi et al., 2019; Okereke, 2010). Similarly, findings from other African countries have indicated low awareness and utilization of ASRHS among adolescents, with peer networks often serving as primary sources of information (Kassa et al., 2019; Owusu-Addo et al., 2018). Research conducted on other continents has also documented challenges in adolescents' awareness and utilization of sexual and reproductive health services, with peer influence and age playing significant roles (Chae et al., 2020; Sully et al., 2020). Despite variations in socio-cultural contexts, the influence of peers on adolescents' access to sexual health information and services appears to be a common theme globally.

The findings regarding the relationship between awareness and utilization of ASRHS are consistent with broader literature emphasizing the importance of knowledge and awareness in shaping health-seeking behaviors among adolescents (Patton et al., 2016; Naanyu et al., 2020). Understanding these dynamics is crucial for designing effective interventions to improve adolescents' access to and utilization of ASRHS globally.

4.3 Utilization of Adolescent Reproductive Health Services

The main reproductive health services utilized by the adolescents were; family planning, VCT, STI treatment. The table below summarizes the number of adolescents and how they utilized each of the reproductive health services.

Table 4.7*Utilization of Adolescent Reproductive Health Services*

RHS	Utilized		Not utilized	
	Frequency	percentage	Frequency	Percentage
Family planning	10	2.9%	327	97.1%
Counseling services	42	12.5%	295	87.5%
VCT	48	14.3%	289	85.7%
STI treatment	6	1.6%	331	98.4%

Overall, this study recorded a low utilization of sexual reproductive health services, with less than 100 respondents, cumulatively, having utilized any of the four services enquired. The most utilized service was VCT, accounting for 14% of the sample population, whereas counselling services and family planning recorded 12.5 and 2.9 percent respectively as shown in the Table 4.6 above. The least utilized service was STI treatment, with only 6 out of the 337 respondents acknowledging seeking STI-related services.

The findings of this study regarding the low utilization of sexual reproductive health services among adolescents in Turkana are consistent with research conducted in similar contexts globally, including other regions of Africa and beyond. In sub-Saharan Africa, studies have highlighted challenges in accessing and utilizing reproductive health services among adolescents due to various factors such as cultural norms, limited resources, and stigma surrounding sexual health issues (Mmari et al., 2014; Wado et al., 2019). Low utilization rates, similar to those observed in this study,

have been reported in countries across the region, including Zambia, Nigeria, and Ethiopia (Berhane et al., 2019; Chandra-Mouli et al., 2017).

Research conducted in other continents, such as Asia and Latin America, has also documented barriers to adolescent sexual reproductive health service utilization, including socio-cultural norms, lack of access to services, and insufficient knowledge about sexual health (Mumtaz et al., 2020; Kanthi & Johnson, 2021). Globally, efforts to improve adolescent sexual and reproductive health have highlighted the importance of addressing these barriers through comprehensive sexuality education, youth-friendly services, and community engagement (UNFPA, 2021; WHO, 2021).

4.4 Healthcare Delivery Factor

A study was conducted to identify the elements related to the health facility that either supported or discouraged the teenagers from using ARHS. We looked into things including how close a reproductive health clinic was, how friendly the staff was, how much it cost, and whether or not there were any RHS available at the facility.

Table 4.8*Distribution of Reasons for Non-utilization of SRHS*

Reason for ARHS Non-utilization	Frequency	Percentage %
Long Queue	3	1.0
No Money	5	1.6
Shyness	2	0.5
Harsh Healthcare Provider	3	0.8
Closed Clinic	0	0

The study recorded 0.8 percent of the respondents claiming to have been badly handled by healthcare workers in the respective facilities, which was found to have discouraged the utilization of ASRHS. Additionally, 2.2 percent of the respondents said to have gone unattended when they visited healthcare facilities for sexual reproductive healthcare services. When asked of reasons for not being attended to, service-delivery reasons were eminent, with 1.0 percent citing long queues at the health facilities while 0.8 percent cited that the harshness of healthcare workers had dissuaded them from receiving ASRHS. The healthcare-delivery factors of accessibility and quality of service were therefore notably significant influencers to the uptake of ASRHS. A majority of the study's respondents said to access their healthcare services from dispensaries (57.69%) and Hospitals (26.92%). However, the study area was poorly invested with these health facilities, many having to travel long distances in order access healthcare services. Only 6.75 percent of the respondents had the respective healthcare facilities within a range of walking distance. Further, none of the schools covered in this study had any of adolescent healthcare services offered within their vicinity. This worked against the expected sensitization and level of support that is

needed of the school towards its students, hence the extremely low ASRHS awareness and utilization levels.

The findings of this study regarding the challenges in accessing adolescent sexual reproductive health services (ASRHS) due to limited healthcare infrastructure resonate with research conducted in similar contexts across Kenya, sub-Saharan Africa, and globally. In Kenya, studies have highlighted disparities in healthcare infrastructure and access to services, particularly in remote and marginalized areas (Opondo et al., 2018; Nyangara et al., 2010). Limited availability of healthcare facilities within walking distance, as observed in this study, is a common challenge faced by adolescents in rural and underserved communities across the country. Research conducted in other sub-Saharan African countries has also documented barriers to accessing ASRHS, including inadequate healthcare infrastructure and long distances to healthcare facilities (Atuyambe et al., 2015; Izugbara et al., 2016). These challenges contribute to low awareness and utilization of ASRHS among adolescents in the region.

Globally, disparities in healthcare access and quality are pervasive issues affecting adolescents' utilization of reproductive health services (Blanchard et al., 2019; UNICEF, 2019). Inadequate healthcare infrastructure, coupled with service delivery challenges such as long waiting times and perceived mistreatment by healthcare workers, hinders adolescents' access to ASRHS worldwide. Addressing these systemic barriers requires multi-sectoral approaches that prioritize investments in healthcare infrastructure, strengthen health systems, and promote youth-friendly services (WHO, 2019; UNFPA, 2021). Ensuring equitable access to ASRHS is essential for promoting adolescent health and well-being globally.

4.5 Sociocultural Factors

Cultural practices, religious beliefs, and societal norms collectively contribute to placing adolescents at risk of contracting HIV/AIDS, sexually transmitted infections (STIs), and experiencing unwanted pregnancies, often hindering the adoption of protective behaviors. To assess these factors, the study sought adolescents' opinions on the perceived reasons for their non-engagement with reproductive health (RH) services. The study's sample comprised individuals from a range of cultural and ethnic backgrounds, with the Turkana, Luo, Kikuyu, and Luhya being the predominant groups, constituting 28%, 21%, 16%, and 15% of the sample, respectively. However, even with the cultural diversity, 99 percent of the respondents said that their respective cultures did not restrict nor have any influence on the utilization of ASRHS. Further, the study sample accommodated a religious mix of 89.06 percent Christians to 10.94 percent Muslims.

Similarly, 94.29 percent of the respondents said that their respective religion did not influence the utilization of ASRHS, with only 5.71 percent stating of some form of influence. This was noted to arise from the disparities in interpretation of religious scriptures and personal expression of faith. The findings of this study regarding the limited influence of sociocultural factors, ethnic culture, and religion on the utilization of Adolescent Sexual Reproductive Health Services (ASRHS) resonate with research conducted in various regions globally, including Kenya, sub-Saharan Africa, and beyond.

In Kenya, studies have explored the intersection of culture, religion, and health-seeking behaviors, highlighting the complex dynamics that shape individuals'

decisions regarding reproductive health services (Mboane & Bhatta, 2015; Njue et al., 2020). While cultural and religious beliefs may play a role in shaping attitudes towards sexuality and reproductive health, the findings of this study suggest that they may not significantly influence ASRHS utilization among adolescents in Turkana. Research conducted in other sub-Saharan African countries has also documented the influence of cultural and religious beliefs on reproductive health behaviors, but findings regarding their impact on ASRHS utilization vary (Chimbindi et al., 2020; Owolabi et al., 2018).

Similar to the findings of this study, some research suggests that individuals may prioritize personal beliefs and autonomy when making decisions about their reproductive health. Globally, studies have explored the interplay between culture, religion, and reproductive health, emphasizing the importance of understanding diverse cultural and religious perspectives in shaping health-seeking behaviors (Turan et al., 2019; Kassa et al., 2021). The findings of this study underscore the need for culturally sensitive and context-specific approaches to promoting ASRHS utilization among adolescents.

4.6 Economic Factors

Variations in the use of reproductive health care services might be caused by socioeconomic status-related variables. Parent/guardian occupation plays significant roles, as they interact in diverse ways to shape individuals' decisions regarding healthcare utilization as shown in the table below.

Table 4.9*Occupation Distribution of Respondent's Parents*

Parent/guardian occupation		Frequency	Percentage (%)
1	Formal employment	27	8.10
2	Casual laborer	27	8.10
3	Self-employed/business	31	9.15
4	Farmer/herdsman	39	11.62
5	None	213	63.03

The study used the parents' occupations as a proxy for the family's socioeconomic level. It found that a significant majority, amounting to 63%, had parents who lacked a steady source of income or a job that generated income. The parents who were formally employed represented only 8 percent of the sample population as shown in the figure below. Additionally, the type of school attended by the student was used to gauge his family's financial ability. The study's sample had 82.49 percent of its respondents attending boarding schools and only 17.51 percent attending day schools.

The study applies an assumption that families with children in boarding schools are a bit well off financially compared to those with children in day schools due to the higher cost implications for studying in boarding schools. Further, the study notes a significant relationship between the derived economic status and the utilization of ASRH services, with the calculated chi-square of 5.531 exceeding the critical value of 11.07 at d.f.=5 and $\alpha=0.05$, hence rejecting the null hypothesis.

The findings of this study regarding the association between economic status and the utilization of Adolescent Sexual Reproductive Health (ASRH) services resonate with research conducted in various regions globally, including Kenya, sub-Saharan Africa,

and beyond. In Kenya, studies have highlighted the impact of socioeconomic factors on health-seeking behaviors, including access to reproductive health services (Finlay et al., 2020; Main et al., 2020). Economic challenges, such as lack of steady income or formal employment, can limit families' ability to afford healthcare services, including ASRH services, for their adolescents. Research conducted in other sub-Saharan African countries has also documented disparities in ASRH service utilization based on socioeconomic status, with individuals from lower-income households facing greater barriers to accessing care (Mensch et al., 2019; Babalola et al., 2019). Similarly, studies in other continents have highlighted the role of economic factors in shaping health behaviors and outcomes, including reproductive health service utilization (Kassa et al., 2021; Upadhyay et al., 2018).

Globally, efforts to address disparities in access to reproductive health services have emphasized the need for targeted interventions to support vulnerable populations, including adolescents from low-income families (UNFPA, 2022; WHO, 2021). Understanding the socioeconomic determinants of ASRH service utilization is essential for developing equitable and effective interventions to promote adolescent health and well-being worldwide.

4.7 Discussion of Key Findings

The correlation between the availability of information and the utilization of sexual reproductive health care among secondary school teenagers was evident. The findings of this study revealed that most of the participants had a limited understanding of adolescent sexual reproductive health programs. Only 15.58 percent of the 337 respondents reported being aware of the services offered. This is directly related to the

notably low utilization of sexual reproductive health treatments among teenagers. Reshmi et al. (2021) also finds awareness to be the greatest inhibitor to the success of vaccination programs in Mandera County, and suggests that much strategizing and resources should be put to informing/educating the populace from the very onset of such programs.

Elsewhere, Mumtaz et al. (2020) acknowledged the significance of awareness and its potential of not only preventing but further countering the uptake of health services and attendance of medical camps. Whereas 98 percent of those who attended medical camps did so purposefully in response to awareness they had earlier received about the camp and services offered, only 2 percent attended the medical camp by coincidence. Further, Mumtaz et al. (2020) observed that the source of awareness highly influenced turnout by the populace. In their findings, those who got recommendations from professional/practitioners were highest likely to actively respond to seeking health services. The least effective medium from the study was found to be written distributable which only accounted for 11 percent of those in attendance.

In support of this phenomenon, Izugbara et al. (2016) posits that referral from trusted and relatable people is the most effective channel of inducing the uptake of health services and interventions. Among the 60 respondents that were aware of Adolescent SRH programs in this study, a majority of 93 percent said to have acquired the knowledge from peers and friends. Those who said to have obtained the knowledge from school noticeboards were only 4.7 percent while 2.3 percent said to have been informed by teachers. None of the respondents acknowledged to have acquired knowledge on adolescent sexual health services from their parents. The findings

therefore suggested that peers were a more influential factor in the utilization of ASRH services.

The study also found that different age groups of students had different levels of knowledge about sexual health services for adolescents. Students between the ages of 18 and 19 were twice as likely as those under the age of 18 to have interacted with ASRHS materials or services. This follows the pattern that knowledge comes with age and exposure, as was the case in studies including those by Kabagenyi et al. (2014), and Shahid et al. (2009). In addition, sex was also an influencing factor, with more girls than boys being aware or having interacted with ASRHS (59% against 41%). This is despite the study having more boys than girls in its sample population. This is similar to the findings by Gardner et al. (2010) on sexual reproductive health among school-going children in Tana-river County. The justification given for the disparities in sexual reproductive health between male and female students was the high number of community, government and NGO social health programs that primarily targeted females than males. There was therefore more female-related SRH information in the society than that related to males. Elsewhere, noted that female parents/guardians were more likely to engage their girls in sexual reproductive health talks as compared to their counterpart males with boys.

This study observed that the area's residents held socio-cultural perceptions, beliefs and practices with a high level of significance. This was observed to influence all other factors around, but not directly to ASRHS. This is evinced by findings such as that of low female to male ratio in school attendance as a result of early marriages, sex roles and socio-cultural perception. In a study on the impact of curriculum development of Kenya's education on the sexual and reproductive health of the young generation,

Mumtaz et al. (2020) found that sexual education was 3 times more effective at the onset of adolescence than in late teenagerhood. This finding could therefore imply that, since more boys received formal education than girls, sex is an influencing factor to awareness on sexual reproductive health.

However, this could not be translated to the utilization of sexual reproductive health services offered by health practitioners. As found by this study, sex was found to be independent of and having no significant influence on the uptake of SRHS among the secondary school students ($2.01 < 3.841$ at d.f.=4 and $\alpha=0.05$). This is similar to findings by Godia et al. (2014) on communities in north of Kenya's rift-valley province. He observes a blanketed reaction to sexual reproductive health education and practice across all age and sex. He links this to the stereotype, perception and connotation accorded to sexual and reproductive information in the society, which might not be outright culture-stated but tacit with the society. In another study that sought to justify the low uptake of sexual reproductive health in Africa, a majority of the respondents' shame over cultural discrimination.

Therefore, this study take note that the undermining factor to utilizing sexual reproductive health services is not cultural but societal. This can further be confirmed by the fact that the study's sample included respondents from a diverse set of cultures and ethnic backgrounds, with the Turkana, Luo, Kikuyu and Luhya taking up the majority (28%, 21%, 16% and 15% respectively). However, even with the cultural diversity, 99 percent of the respondents did not acknowledge their respective cultures to restrict or have any influence on the utilization of ASRHS, but then utilization of these services was evenly low across the populace. None of the respondents acknowledged to have acquired knowledge on adolescent sexual health services from

their parents, contributing to the low awareness level of SRHS among adolescents and hence low uptake of sexual reproductive health services.

Similarly, 94.29 percent of the respondents said that their respective religion did not influence the utilization of ASRHS, with only 5.71 percent stating some form of influence. The independence of ASRHS from sociocultural factors, ethnic culture and religion, was further confirmed by results in a chi-square test analysis which cited no strain of relationship between the variables (chi-square results were less than critical value, $\chi^2 = 340.52$ at $\alpha = 0.05$). However, the minority citing some form of influence was noted to arise from the disparities in interpretation of religious scriptures and personal expression of faith. This was similarly observed to yield higher levels of standard deviation in data results on a study by Mochache et al. (2020) that sought to determine the impact of religion on the uptake of health programs in the coastal region of Kenya. They observed a similar situation across all types of religion in the region, deviant religious beliefs and practices amongst members of the same faith bracket. Muslims, Christians and traditionalists all had several sects with diverse perceptions towards mainstream health practices/services, in addition to personal interpretations. Mochache et al. (2020) recommended intentional efforts by religious leaders to correcting these perceptions by clearly stating the position of the religious organization of the particular issues.

The study observed a host of health system factors to be directly influencing utilization of sexual reproductive health services among secondary school adolescents. Majority of the study's respondents said to access their healthcare services primarily from dispensaries (57.69%) and Hospitals (26.92%), the study area was poorly invested with

these health facilities, many having to travel long distances in order access healthcare services. This is however not an isolated case especially in Sub-Saharan Africa. Amo-Adjei et al. (2017) found insufficient coverage of health facilities to be a very significant barrier to accessing and utilizing health services in Uganda. Also in North-eastern Kenya, Gardner et al. (2010) found inaccessibility of health facilities due to poor transport systems, adverse roads and long-distance travels as deterrent to the utilization of health services in the region.

In this study, only 6.75 percent of the respondents had the respective healthcare facilities within a range of walking distance. Further, none of the schools covered in this study had any of adolescent healthcare services offered within their vicinity. This worked against the expected sensitization and level of support that is needed of the school towards its students, hence the extremely low ASRHS awareness and utilization levels.

Further, the study recorded 22.2 percent of the respondents claiming to have been badly handled by healthcare workers in the respective facilities, which was found to have discouraged the utilization of ASRHS. According to Godia et al. (2014), the impact of poor handling of patients could even get worse especially for purely service-based healthcare services such as is SRHS. A purely service-based healthcare service refers to those which a patient is given not tangible medication. These categories of healthcare services rely on a higher level of patient-health worker trust. Poor handling demeans the level of trust and consequently discourages the patient from continuing with treatment or further seeking these healthcare services.

Additionally, 60.87 percent of the respondents said to have gone unattended when they visited healthcare facilities for sexual reproductive healthcare services. When asked of reasons for not being attended to, service-delivery reasons were eminent, with 20 percent citing the harshness of healthcare workers while 26.67 percent cited long queues at the health facilities had dissuaded them from receiving ASRHS. Turkana, like many other African rural and areas termed as marginalized, faces a challenge of resource shortages in addition to the scarce health facilities. In detailing the impact health-worker shortage was having on access to healthcare, Godia et al. (2014) records a ratio of one diagnostic care worker (nurse, clinicians and doctors) to 690 residents in Kenya.

He further notes that most of the healthcare workers were concentrated in urban centers, leaving remote rural areas in an even direr situation. Such shortages are the highest contributors to long queues in the study area's health facilities which, according to respondents, discouraged them from accessing health services unless for the case of sickness or emergencies. Additionally, the study finds that ASRH service consumption is significantly related to the inferred economic position. The occupation to the student's parents was used to gauge the economic levels of their families. It was noted that a majority (to the tune of 63%) had their parents without a regular source of income nor an income-generating occupation. The parents who were formally employed represented only 8 percent of the sample population as shown in the figure below.

Additionally, the type of school attended by the student was used to gauge his family's financial ability. The study's sample had 82.49 percent of its respondents attending boarding schools and only 17.51 percent attending day schools. The study applies an

assumption that families with children in boarding schools are a bit well off financially compared to those with children in day schools due to the higher cost implications for studying in boarding schools. The low economic level of the populace is incongruent with the state of health systems. Whereas the people are required to travel longer distances for healthcare services, their poor economic state does not allow them to do so. In another sense, the costs incurred in financing for the healthcare services has also been found by scholars to be a significant deterrent to accessing health services especially for the low and middle-income earners (Shahid et al., 2009).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the study's overall summary of findings and deduced inferences in the conclusion section. Based on the conclusions, the study gives recommendations that could be acted upon by companies and policy-makers, as well as recommendations that future scholars would pick up for further research.

5.1 Summary of Results

The research highlights the significant impact that information accessibility has on the manner in which adolescents utilize sexual reproductive health services while in secondary school. A considerable proportion of the participants demonstrated a lack of comprehension regarding adolescent sexual reproductive health programs and their operations, with an even smaller subset being cognizant of the services that are accessible to them. This lack of awareness directly correlated with low engagement in sexual reproductive health services by adolescents. Similar studies have emphasized the importance of awareness in successful healthcare programs.

Further research by Mumtaz and Salway underscores the impact of awareness on healthcare service attendance. Attendees at medical camps were primarily influenced by prior awareness, with referrals from professionals and peers being highly effective. Referrals from trusted sources were found to play a critical role in encouraging healthcare utilization. Peer influence was particularly significant among adolescents, as a majority of those aware of Adolescent SRH programs learned about them from

friends. In contrast, written materials and school noticeboards had limited impact. Age and sex were influential factors, with older students and more girls being aware of and engaging with ASRHS.

While sociocultural perceptions and beliefs indirectly shaped behavior, they did not directly affect ASRHS utilization. Sex differences in healthcare awareness and utilization were attributed to targeted interventions. Interestingly, the study found that despite cultural diversity, awareness of ASRHS was uniformly low. Religion played a minimal role in influencing ASRHS utilization, although differing interpretations of religious scriptures sometimes had an impact. Healthcare system factors were also significant. There is limited access to healthcare facilities due to distance, resource shortages, negative interactions with healthcare workers, and inadequate school support hindered service utilization.

Economic status emerged as a determinant of service utilization. Families with better economic standing were more likely to access services, potentially due to their ability to afford both healthcare costs and travel expenses. Boarding school attendance was linked to relatively higher economic status. Finally, one of the most important factors in why high school students seek out sexual and reproductive health services is the ease with which they can access relevant information. Awareness, peer influence, age, sex, and economic status collectively impact engagement. Sociocultural factors, religion, and healthcare system limitations also play roles, highlighting the complex interplay of factors affecting healthcare utilization in this context.

5.2 Conclusion of the Study

The research revealed that the degree of information accessibility significantly influences the extent to which adolescents utilize sexual and reproductive health services during their secondary school years. The results of the study revealed that a significant proportion of the participants exhibited a restricted comprehension of the programs specifically designed to address the sexual and reproductive health needs of adolescents. As a consequence, their engagement with these initiatives was minimal. This highlights the crucial role of awareness campaigns and educational initiatives in enhancing healthcare utilization among adolescents.

Further research corroborates the significance of awareness in healthcare service attendance, particularly among adolescents. Referrals from trusted sources, including professionals and peers, were found to be highly effective in encouraging healthcare utilization. However, written materials and school noticeboards had limited impact, suggesting the need for more interactive and targeted awareness strategies.

While sociocultural perceptions and beliefs indirectly shaped behavior, they did not directly influence ASRHS utilization. Sex differences in healthcare awareness and utilization were attributed to targeted interventions, indicating the importance of tailored approaches to address gender disparities in healthcare access.

The study also highlights the influence of economic status on service utilization, with families of higher economic standing being more likely to access services. This underscores the importance of addressing socioeconomic barriers to healthcare access and ensuring equitable service provision for all adolescents, regardless of their financial background.

In conclusion, the findings emphasize the multifaceted nature of factors influencing healthcare utilization among secondary school adolescents. While information availability plays a central role, peer influence, age, sex, economic status, sociocultural factors, religion, and healthcare system limitations collectively shape adolescents' engagement with sexual reproductive health services. Addressing these complex interplays requires comprehensive and targeted interventions that address barriers at individual, social, and systemic levels.

5.3 Recommendations of the Study

Based on the findings discussed, several recommendations can be proposed to enhance the utilization of sexual reproductive health services among secondary school adolescents:

Comprehensive Awareness Campaigns: Implement targeted and comprehensive awareness campaigns to educate adolescents about sexual reproductive health programs and services. Utilize trusted sources such as healthcare professionals, peer educators, and community leaders to disseminate information effectively.

Interactive Educational Initiatives: Develop interactive and engaging educational initiatives tailored to the needs and preferences of adolescents. Utilize peer-led discussions, workshops, and digital platforms to provide information and facilitate open dialogue about sexual reproductive health.

Improved Access to Services: Promote equitable access to sexual reproductive health services by mitigating obstacles including geographical separation, insufficient resources, and adverse encounters with healthcare personnel. Expand the availability

of services in schools and communities to ensure convenience and accessibility for adolescents.

Targeted Interventions for Vulnerable Groups: Implement targeted interventions to address the specific needs of vulnerable groups, including adolescents from low-income families, rural communities, and marginalized populations. Provide financial support, transportation assistance, and culturally sensitive services to ensure equitable access for all.

Capacity Building for Healthcare Providers: Provide training and capacity building for healthcare providers to deliver youth-friendly services and create supportive environments for adolescents seeking sexual reproductive health care. Emphasize empathy, confidentiality, and non-judgmental attitudes in service delivery.

Collaboration and Partnership: Foster collaboration and partnership between government agencies, non-governmental organizations, schools, and communities to strengthen sexual reproductive health programs and services. Pool resources, expertise, and networks to maximize impact and reach.

5.4 Suggestions for Future Studies

Conduct further research and evaluation to monitor progress, identify gaps, and inform evidence-based interventions. Utilize data-driven approaches to continuously improve sexual reproductive health programs and address emerging challenges.

Conducting longitudinal studies to track the changes in SRHS utilization among secondary school adolescents over an extended period would provide a deeper understanding of how awareness, socio-cultural factors, and economic influences

evolve. This could help identify trends, the long-term impact of interventions, and the effectiveness of educational programs over time.

Conducting comparative studies across various regions or countries with diverse socio-cultural backgrounds could provide insights into the universal and context-specific factors influencing SRHS utilization. Analyzing how different cultural norms, healthcare systems, and economic conditions interact with SRHS awareness and utilization would enhance our understanding of this complex issue.

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APPENDICIES

Appendix I: Consent Form

By signing this form, I consent to participate in a research study focusing on the factors influencing utilization of sexual and reproductive health services among adolescents in Turkana South Sub-County. As a secondary school student aged between 15 to 19 years residing in Turkana South Sub County, I understand that I have been chosen to take part in this study.

I acknowledge that my participation is voluntary, and I can choose to withdraw from the study at any time without facing any consequences. The interview is expected to last around 30 minutes. I understand that all information I provide will be kept confidential, and my identity will remain anonymous.

I understand that the aim of this study is to understand the factors influencing the utilization of sexual and reproductive health services among adolescents in Turkana South Sub-County. The findings of this research aim to improve access to and utilization of these services for adolescents in the region.

I am aware that I can request to receive the study results if I wish, and I know that Mr. Abong William is available to address any questions or concerns I may have about my participation. Mr. Abong can be reached at 0729155564.

Participant's Name:Participant's signature:Date:

Researcher's Name:.....Researcher's Signature:Date:

Appendix II: Questionnaire

Date..... Study Site..... Code of the interview.....

INSTRUCTIONS

Do not write the name of participants in this questionnaire.

Only one response is circled thought most correct as given by participant.

You may give multiple responses where applicable.

Youths aged between 15-19 years are eligible for this study.

Part One-Socio-demographic, economic, school and socio-cultural Information

1. What is your Sex/Gender?

- a. Male ☐
- b. Female ☐

2. What is your age in years?

- a) 15 years ☐
- b) 16 years ☐
- c) 17 years ☐
- d) 18 years ☐
- e) 19 years ☐

3. Which class are you?

- a. Form one ☐
- b. Form two ☐
- c. Form three ☐
- d. Form four ☐

4. What is the type of school you attend?

- a. Boarding school ☐
- b. Day school ☐

5. What is your religious status? ☐

- a. Christian (catholic protestant) ☐
- b. Muslim ☐
- c. Other ☐

6. Does your religion restrict utilization of ARHS?

- a. Yes ☐

- b. No ☐
7. Is there any part of your culture that prohibits utilization of ARHS?
- a. Yes ☐
- b. No ☐
8. Is your parent(s) employed?
- a. Yes ☐
- b. No ☐
9. If employed, what is his/her/their occupation?
- a. Formal employment (Teacher, civil servant, NGO worker etc.) ☐
- b. Casual laborer ☐
- c. Self-employment/business ☐
- d. Farmer /herdsman ☐

Part Two-Knowledge and Utilization of adolescent Reproductive Health Services (ARHS)

10. Do you know of any Reproductive Health facility?
- a. Yes ☐
- b. No ☐
11. If yes who told you about it?
- a. Parent/Guardian ☐
- b. Friend/Peer ☐
- c. Teacher ☐
- d. I read on a notice board ☐
- e. I do not know of any ☐
12. Which services are being offered in reproductive health facility? Tick all correct answers
- i. Family planning services (Contraceptives, condoms) ☐
- ii. Voluntary Counseling and Testing (VCT) ☐
- iii. Treatment of all the diseases ☐
- iv. Treatment of sexually transmitted Infections/diseases ☐
- v. Care of pregnant young persons ☐
- vi. General health information/counseling ☐
- vii. Sports and recreational activities ☐

Have you ever used any of these services?

13. Counseling services

- a) Yes ☐

b) No ☐

14. Family planning

a) Yes ☐

b) No ☐

15. VCT services

a) Yes ☐

b) No ☐

16. Treatment of STI

a) Yes ☐

b) No ☐

17. Antenatal services

a) Yes ☐

b) No ☐

18. Where do you mainly obtain the above reproductive health services?

i. Hospital ☐

ii. Dispensary ☐

iii. Clinic ☐

iv. Pharmacy ☐

v. Other ☐

14. If yes who told you about those services?

i. Parent/guardian ☐

ii. Friend ☐

iii. Brother/sister ☐

iv. Read on newspaper ☐

v. Teacher ☐

vi. Do not know any ☐

vii. Other ☐

Part three: Health care service delivery Factors

19. Is there adolescent reproductive health (ARHS) facility in your school?

a) Yes ☐

b) No ☐

20. How far is ARHS facility from your school?

a) Near, a short walking distance ☐

b) Near but requires about ksh.50 for transport ☐

c) Far, requires ksh.100 and above for transport ☐

21. If you have ever used a reproductive health service facility, how would you describe how you were handled by service provider?

- Good-Friendly, welcoming, handled me well and gave me the service I required ☐
- Moderate-welcomed me but asked too many unnecessary questions before giving me service. ☐
- Bad, he/she was harsh rude and denied me service ☐

22. Have you ever visited ARHS but missed the service you required?

- a) Yes ☐
- b) No ☐

23. If yes in no.20, state the reason for not getting the service

- a) The queue was long ☐
- b) I had no money for the service ☐
- c) I found neighbors and felt ashamed ☐
- d) The service provider refused to give the service/ was harsh ☐
- e) The clinic was closed ☐

24. Any other comment.....

<<<<<<<<<**END**>>>>>>>>>>

THANK YOU FOR YOUR PARTICIPATION

Appendix III: NACOSTI Research License

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 659039	Date of Issue: 04/April/2023
RESEARCH LICENSE	
	
This is to Certify that Mr.. Lobolla Abong William of Kenya Methodist University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Turkana on the topic: Factors influencing utilisation of sexual and reproductive health services among adolescents in Turkana South Sub County, for the period ending : 04/April/2024.	
License No: NACOSTI/P/23/24292	
659039 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 document, Scan the QR Code using QR scanner application.	
See overleaf for conditions	

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)
Legal Notice No. 108/ The Science, Technology and Innovation (Research Licensing) Regulations, 2014

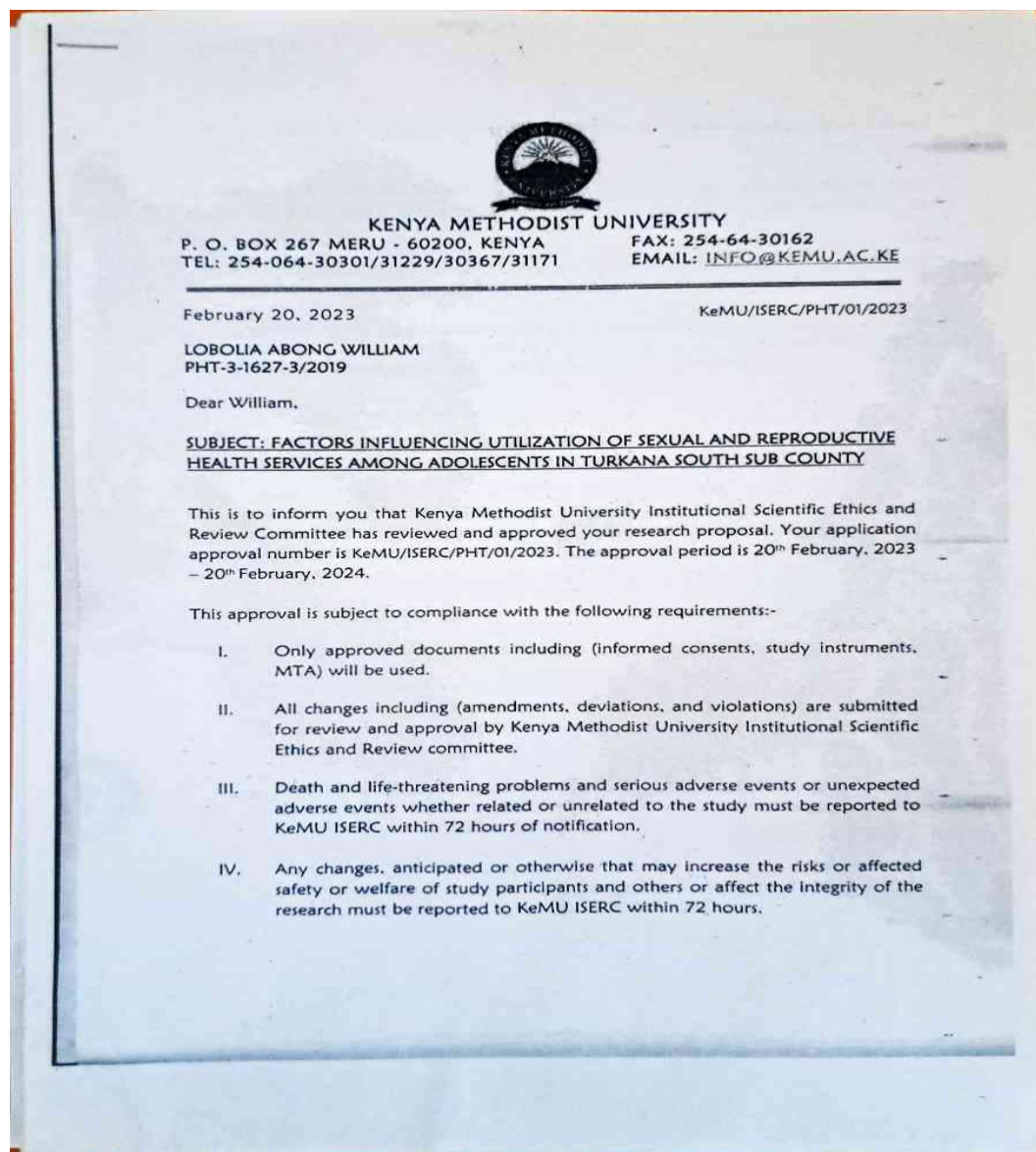
The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
 - i. Endanger national security
 - ii. Adversely affect the lives of Kenyans
 - iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
 - iv. Result in exploitation of intellectual property rights of communities in Kenya
 - v. Adversely affect the environment
 - vi. Adversely affect the rights of communities
 - vii. Endanger public safety and national cohesion
 - viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. The license any rights thereunder are non-transferable
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

National Commission for Science, Technology and
Innovation (NACOSTI),
Off Waiyaki Way, Upper Kabete,
P. O. Box 30623 - 00100 Nairobi, KENYA
Telephone: 020 4007000, 0713788787, 0735404245
E-mail: dg@nacosti.go.ke
Website: www.nacosti.go.ke

Appendix IV: Ethical Clearance from SERC



- 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 KeMU ISERC.

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.



Appendix V: Research Authorization (MOH)

TURKANA COUNTY GOVERNMENT

Telegram address "Administration"

Telephone: 054-21073, 21078



Office of the Chief Officer

MOH-Turkana County

MINISTRY OF HEALTH SERVICES AND SANITATION

When replying please quote:

Ref: ID: 27710436 Date 06th April, 2023

To

Sub County Medical Officer of Health - Turkana South
Turkana County Government.

Dear Madam,

RE: RESEARCH AUTHORIZATION: MR LOBOLIA ABONG WILLIAM LICENSE NO: NACOSTI/P/23292.

This is to authorize above named researcher to carry out research on "*Factors influencing utilization of sexual and Reproductive Health Service among Adolescents in Turkana South Sub County in Turkana County*". As for the letter reference No. NACOSTI/P/23/23292 dated 4th April, 2023 from the National Commission for Science technology and innovation. The research period ends on 4th April, 2024.

Any assistance accorded to him will be highly appreciated.

Thanks in advance.



Mr. Nelson Nakan
Chief Human Resource Officer
For: County Chief Officer
Health Services and Sanitation.



Copy to

1. County Chief Officer of Health – Health Services and Sanitation
Turkana County Government.
2. County Director Medical services.
Turkana County Gornment

Appendix VI: Research Authorization (MOE & County Commissioner)


REPUBLIC OF KENYA
MINISTRY OF EDUCATION
STATE DEPARTMENT OF EARLY LEARNING AND BASIC EDUCATION

Telegram 'ELIMU', Lodwar
Telephone 'Lodwar' 054 21076
Fax/No: 054 21076
Email: cdeturkana@education.go.ke
When replying please quote
REF: TC/CONF/ED. 12/1/VOL.II/220

TURKANA COUNTY EDUCATION OFFICE,
P.O. BOX 16- 30500,
LODWAR

6th April 2023

RE: RESEARCH AUTHORIZATION: MR. LOBOLIA ABONG WILLIAM
LICENSE NO: NACOSTI/P/23/24292.

This is to authorize the above named researcher to carry out research on "*Factors Influencing Utilization of Sexual and Reproductive Health Services Among Adolescents in Turkana South Sub County in Turkana County.*" As for the letter reference No. NACOSTI/P/23/23292 dated 4th April, 2023 from the National Commission for science technology and innovation. The research period ends on 4th April, 2024.

Any assistance accorded to him will be highly appreciated.

Thanks in advance.

PP 
MR. HENRY A. LUBANGA
COUNTY DIRECTOR OF EDUCATION
TURKANA COUNTY

COUNTY DIRECTOR OF EDUCATION
TURKANA COUNTY
P. O. Box 16 - 30500,
LODWAR

Authorized to Conduct Research

DEPUTY COUNTY COMMISSIONER
TURKANA SOUTH SUB-COUNTY
11 APR 2023
P. O. Box 63 - 30500,
LODWAR

CC: - The County Commissioner
Turkana County

-Deputy County Commissioner
Turkana South Sub County

- Director General
NACOSTI

Appendix VII: Turkana South Sub County Map

