

**DETERMINANTS OF UTILIZATION OF YOUTH FRIENDLY
REPRODUCTIVE HEALTH SERVICES AMONG SCHOOL AND COLLEGE
YOUTH IN THIKA WEST DISTRICT, KIAMBU COUNTY, KENYA**

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

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DEDICATION

This study is dedicated to my beloved mother, Benta Alasa and children Wycliffe, Judy and Norah.

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ABSTRACT

This study was on Determinants of Utilization of Youth friendly Reproductive Health services (YFRHS) among school and college youth in Thika West District of Kiambu County, Kenya. The reproductive and sexual health of the youth remains a relatively new and sensitive area mainly due to restrictive norms and policies guiding the services. Sex and sexuality among the young people have remained a sacred area and few structures were in place to address it. After International Conference on Population and Development in 1994 countries started implementing adolescent reproductive health issues. The Government of Kenya together with partners in an attempt to address the reproductive health challenges came up with the Adolescent Reproductive Health and Development Policy (ARH&D) in 2003 whose guidelines were finalized in July 2005 and released for use by service providers. Despite these guidelines, the access and utilization of YFRHS among the school youth are dependent on many factors which include demographic, economic, school, socio-cultural and health system factors. The study examined how those factors determined or affected the utilization patterns of YFRHS by the youth. The study further explored ways of mitigating or addressing the barriers to scale up utilization of those services. The study used both quantitative and qualitative approaches to collect data. The study utilized survey research adapting descriptive cross sectional design and semi-structured questionnaire to interview 390 school and college youth in Thika West District from 9th January 2012 to 17th February 2012. The key informants were mainly nurses who were working at the reproductive health service delivery area at the time of study and were interviewed using an interview guide. Quantitative data was analyzed using Statistical Package for Social Sciences (SPSS) Version 18.0. Descriptive statistics and chi-square tests were performed to determine significant associations. The study established that sex, age, level of education, type of school and youth's awareness about existence of reproductive health facility and services offered were significantly associated with utilization at $p < 0.05$ while religion and parental employment status had association only to a few services. Ethnicity had no association to utilization of all YFRHS, $p > 0.05$. Long queues, unfavorable working hours, mixing out of school youth and the school going youth and lack of money negatively affected utilization of YFRHS. Parents and teachers' involvement in passing RH information was found to be low as majority of the youth reported that they got information of these services from friends. The study concluded that the utilization of reproductive health services among the school and college youth was low largely due to unfriendliness of the reproductive health facilities to the youth and lack of awareness of RH services. In view of the findings, this study recommends need for the Government through the Ministry of Health and partners in health service provision to increase the number of YFRHS and ensure that the recommendations of Adolescent Health Policy guidelines are implemented fully with good evaluation strategies in place. Rigorous awareness drives to sensitize the youth about the available RHS through rigorous health education and increased involvement of both parents/guardians and teachers to scale up utilization are also recommended.

TABLE OF CONTENTS

Declaration	i
Dedication.....	i
Acknowledgements.....	iii
Abstract	iv
Table of Contents.....	v
List of Tables	viii
Table of Figures	ix
Table of Appendices	x
Abbreviations and Acronyms	xi
Definition of Terms.....	xii
CHAPTER ONE: INTRODUCTION	1
1.1 Background of the study.....	1
1.2 Problem Statement	3
1.3 Justification of the Study	5
1.4. Research Questions	6
1.5. Null Hypotheses	6
1.6 Broad Objective of the Study.....	6
1.6.1 Specific Objectives.....	7
1.7 Significance and Anticipated Output	7
1.8 Limitations	7
1.9 Conceptual Framework	8
CHAPTER TWO: LITERATURE REVIEW.....	10
2.0 Introduction.....	10
2.1. Reproductive Health Services.....	10
2.1.1. Barriers to Utilization of Youth Friendly Reproductive Health Services (YFRHS) Globally	10
2.1.2. Barriers to Utilization of Youth Friendly Reproductive Health Services in Africa.....	11
2.1.3. Reproductive Health Service Provision in Kenya.....	13
2.1.4 Reproductive Health Services in Thika West District.....	14
2.2. Demographic actors that influence Utilization of YFRHS.....	15

2.2.1. Age	15
2.3. Socio-economic and Socio-cultural Factors that influence Utilization of YFRHS	10
2.3.1. Education and Awareness of YFRHS	16
2.3.2. Religion.....	16
2.3.3. Traditional Beliefs and Ethnicity	17
2.4. The Health System Factors that Determine Utilization of YFRHS	17
2.4.1. The Health Facility Organization	17
2.4.2. Health Worker’s Attitude	18
2.5. Summary of Literature Review	18
CHAPTER THREE: RESEARCH METHODOLOGY	27
3.0 Introduction.....	20
3.1 Study Design.....	20
3.2 Variables.....	20
3.2.1 Independent Variables	20
3.2.2 Dependent Variables	21
3.3 Study Area	21
3.3.1. Socioeconomic and Socio-cultural Background of Thika West District.....	21
3.3.2 Health Status and Education of Thika West	21
3.4 Target Population	22
3.5 Inclusion Criteria.....	22
3.6 Exclusion Criteria.....	22
3.7 Sampling	23
3.7.1 Sample Size Determination	23
3.7.2 Sampling Technique.....	23
3.8 Research Instruments	24
3.8.1 Primary Data	24
3.8.2 Secondary Data	24
3.9 Pilot Study	24
3.11 Data Analysis and Interpretation.....	25
3.12 Ethical Considerations.....	25
CHAPTER FOUR: RESEARCH FINDINGS AND DISCUSSIONS	27

4.0 Introduction.....	25
4.1 Descriptive Information of Study Variables.....	25
4.2 Demographic, Socioeconomic, School and Socio-cultural Factors and YFRHS Utilization.....	28
4.3 Health Knowledge and Awareness of YFRHS.....	38
4.4 Health System Factors and YFRHS Utilization.....	39
4.4.1 Availability of Reproductive Health Facility.....	40
4.4.2 Availability of Reproductive Health Facility.....	40
4.4.3 Health Facility Organization.....	41
4.4.4 Health Service Provider Attitude	41
4.5 Perception of Health Care Providers Regarding Utilization of YFRHS.	42
4.6 Discussion of Results	44
4.6.1 Demographic and Utilization of YFRHS	44
4.6.2 Socioeconomic and School Factors and Utilization of YFRHS	45
4.6.3 Socio- cultural Factors and Utilization of YFRHS	46
4.6.4 Health Knowledge and Awareness Factors and Utilization of YFRHS.....	46
4.6.5 Health System Factors and Utilization of YFRHS.....	47
4.7 Implications of the Findings	48
CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS.....	50
5.0 Introduction.....	50
5.1 Demographic Factors and Utilization of YFRHS	50
5.2 Socioeconomic and School Factors and Utilization of YFRHS	51
5.3 Socio- cultural Factors and Utilization of YFRHS	51
5.4 Health Knowledge Factors and Utilization of YFRHS	51
5.5 Health System Factors and Utilization of YFRHS	52
5.6 Suggestions to Overcome Barriers to Utilization of YFRHS	52
5.7. Summary of Findings	52
5.8 Recommendations	53
5.9 Areas of further Research.....	54
REFERENCES.....	56

LIST OF TABLES

Table 4.1 Background Characteristics	27
Table 4.2 Reproductive Health Services Utilized by Youth	29
Table 4.3 Demographic Factors and Utilization of YFRHS	30
Table 4.5 Socioeconomic and School Factors and Utilization of Family Planning Services.....	32
Table 4.5 Socioeconomic and School Factors and Utilization of Counselling Services	32
Table 4.6 Socioeconomic and School Factors and Utilization of VCT	33
Table 4.7 Socioeconomic and School Factors and Utilization of STI Treatment Services.....	34
Table 4.8 Socio- cultural Factors and Utilization of Family Planning	35
Table 4.9 Socio- cultural Factors and Utilization of Counselling Services	36
Table 4.10 Socio- cultural Factors and Utilization of VCT	37
Table 4.11 Socio- cultural Factors and Utilization of STI Treatment	37
Table 4.12 Distances to the nearest YFRHS	41

LIST OF FIGURES

Figure 4.1 Sources of Information on YFRHS. 39
Figure 4.2 Persons Consulted about YFRHS. 40
Figure 4.3 Reasons for Missing YFRHS. 41

LIST OF APPENDICES

APPENDIX I: MAP OF KENYA AND STUDY AREA 58

APPENDIX II: INFORMED CONSENT 59

APPENDIX III: YOUTH ASSENT..... 59

APPENDIX IV: QUANTITATIVE DATA COLLECTION TOOL..... 60

APPENDIX V: KEY INFORMANT INTERVIEW GUIDE..... 63

APPENDIX VI : RESEARCH AUTHORIZATION(THIKA) 64

APPENDIX VII : RESEARCH AUTHORIZATION(NCST) 65

ABBREVIATIONS AND ACRONYMS

AIDS	- Acquired Immuno Deficiency Syndrome
ARH&D	- Adolescent Reproductive Health and Development
GOK	Government of Kenya
HIV	Human Immunodeficiency Virus
HS	Health System
ICPD	International Conference on Population and Development
IEC	Information, Education and Counselling
KDHS	Kenya Demographic and Health Survey
KEPH	Kenya Essential Package of Health
KNBS	Kenya National Bureau of Statistics
KSPA	Kenya Service Provision Assessment
MOH	Ministry of Health
NPPSD	National Population Policy for Sustainable Development
STIs	Sexually Transmitted Infections
VCT	Voluntary Counselling & Testing
WHO	World Health Organization
YFRHS	Youth Friendly Reproductive Health Services

DEFINITION OF TERMS

Utilization- The ability to consume services and incorporates economics, geographic location, abundance of health services, physical and social resources (Rebman, 2005) or usage of the youth friendly reproductive health services

Determinants of Health- These are a range of personal, social, economic and environmental factors which determine the health status of individuals or populations.

Health System- The health structure or organizations whose primary purpose and activities is to promote, restore or maintain health (WHO, 2007)

Youth –Persons aged 10-24 years in this study

Youth Friendly Reproductive Health Service; Services that are accessible, acceptable and appropriate for the youth. They are in the right place at the right price (free where necessary) and delivered in the right style to be acceptable to young people and are effective, safe and affordable. They include counselling, family planning, voluntary counselling and testing and treatment of sexually transmitted infections (WHO, 2004).

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Globally, there are 1.7 billion young people aged 10 to 24 years, representing one-quarter of the world's population, with over 85% living in developing countries (Population Reference Bureau, 2006). In Kenya, statistics from Kenya National Bureau of Statistics (KNBS) census report estimate the youth to be about 40% of the population and youth aged 10-24 years make up to 36% of the population (KNBS, 2010).

International Conference on Population and Development (ICPD) 1994 identified and recommended that, Adolescent, sexual and reproductive health issues are addressed through the promotion of responsible and healthy reproductive and sexual behaviour, including voluntary abstinence and the provision of appropriate services and counselling specifically suitable for that age group (WHO, 2002a).

Countries were encouraged to ensure that programmes and attitudes of health-care providers do not restrict youth access to and utilization of the services and information they need. These services must safeguard the right of adolescents to privacy, confidentiality, respect and informed consent, while respecting cultural values and religious beliefs as well as the rights, duties and responsibilities of parents (ICPD, 1994).

In pursuit of reproductive health agenda which was deliberated in ICPD, 1994, the government adopted the National Reproductive Health Strategy (NRHS) for Kenya

1997-2010 whose strategy identified reproductive health priority areas as: family planning and unmet needs; safe motherhood and child survival initiatives; promotion of adolescent and youth health; gender and reproductive rights; management of STIs/HIV/AIDs; management of infertility; and other reproductive health issues. Within the context of the Strategy, standards for reproductive health service providers were released in 1997 and implementation plans were developed to guide reproductive health needs in the country.

Ministry of Health in Kenya formally approved the country's first National Reproductive Health Policy (NRHP) was formally approved by the Kenya's Ministry of Health to provide a framework for equitable, efficient and effective delivery of quality reproductive health services to the population especially those considered vulnerable such as the youth. The aim of the policy is to guide planning, standardization, implementation, and monitoring and evaluation of reproductive health care provided by various stakeholders. It focuses on: safe motherhood, maternal and neonatal health, family planning, and adolescent/youth sexual and reproductive health and gender issues.

But despite these initiatives, reproductive health service utilization among the youth still faces a lot of challenges related to the sensitive nature of adolescent sex and sexuality and poor evaluation policy structures hence underutilization. The Ministry of Public Health and Sanitation (MOPHS) and Ministry of Medical Services (MOMS) started a review to the process through a study on reproductive health communication (MOPHS & MOMS, 2010-2012).

The health care services given to youth in schools mainly focus on services such as school physical environment and sanitation, nutritional status, immunization and

treatment of common childhood illnesses. Reproductive health needs get little attention (Kenya National School Health Policy, 2009).

1.2 Problem Statement

As a response to the reproductive health needs of youth, the Ministry of Public Health and Sanitation initiated integration process of priority concerns into the Kenya Essential Package for Health (KEPH) Programme at the especially the community level of health care. The government further adopted the Adolescent Reproductive Health and Development Policy (ARH&D) in 2003 with a commitment to address adolescent reproductive health issues raised by the National Population Policy for Sustainable Development and the Kenya Health Policy Framework of 1994 (MOH,2005).

The policy was meant to address: adolescent sexual health and reproductive rights; harmful practices, including early marriage, female genital cutting, and gender-based violence; drug and substance abuse; socioeconomic factors; and the special needs of adolescents and young people with disabilities. The target of this policy was to increase the proportion of facilities offering youth-friendly services to 85%, up from 7% as at that time and reduction of the proportion of women aged below 20 with a first birth from 45% in 1998 to 22% (NCPD, 2010) .This was far below expectation in meeting the reproductive health needs of the 40% youth population in Kenya (KDHS, 2008/9).

The Adolescent Reproductive Health and Development Plan of Action 2005-2015 was developed to guide the implementation of the policy and later a National Guideline for Provision of youth-friendly services has been developed and funds have

been provided all in the effort of meeting the sexual and reproductive health needs of the youth.

Other than the government of Kenya, Non-Government Organizations (NGO) have also tried to increase access to reproductive health services by the youth through various initiatives. For example, Family Health Options of Kenya (FHOK) has started various YFRHS in different parts of Kenya like in Meru, Muranga, Nairobi, Nakuru, Eldoret, Kisumu and latest in 2012 in Bondo. Pathfinder International on the other hand came up with University Based Peer Education in 1988 which aimed at addressing the social, reproductive health and informational needs of the youth in Kenyan Universities namely Jomo Kenyatta University of Agriculture and Technology and Kenyatta University. The effects of all these efforts have not been felt across the Kenyan learning institutions as is evidenced by persistent reproductive health problems and challenges of the youth such as unwanted pregnancy and its' consequences, Sexually Transmitted Infections (STIs) and HIV/AIDS (MOH, 2003; Schueller et al., 2006; Tilahun, 2010). The success and benefits of these initiatives and services cannot be quantified as they are not well documented (Godia, 2010).

Thika West District like other districts in Kenya has recorded high reproductive health problems mentioned above, girls being mostly affected as shown by the Kenya Demographic Health Survey (KDHS) of 2008/2009 which revealed that 26 percent and 8 percent of girls with only primary and secondary school education were already mothers (KNBS and ICF Macro, 2010).

The study explores whether the youth are aware of the availability of youth friendly reproductive health services and whether they are utilizing them as well as the reasons behind under/ non utilization.

1.3 Justification of the Study

The persistence of reproductive health challenges among the school and college youth as revealed from literature therefore prompted this study. Moreover there is scanty information concerning any study on utilization of reproductive health services done in Thika West District focusing on school and college youth despite the fact that the district is well endowed with health facilities offering clinic-based reproductive health services for adolescents as envisioned in essential package. The district also has one stand-alone youth friendly reproductive health service at Ruiru Sub district hospital (NCAPD, 2005).

The access to and utilization of YFRHS services is a primary concern surrounding the promotion of sexual and reproductive health and rights (Braeken, 2012). This is attributed to the sensitive nature of sex and sexuality issues among youth which have not been fully addressed and to a large extent the way the reproductive health services are being offered to them (MOH, 2005; IPPF, 2008; Wahome, 2010).

The need to have a healthy youth is of great value to nation's socioeconomic development because if they use YFRHS promptly, a lot of health problems will be reduced hence better performance at school and better future adult population (MOH, 2005). Studies by Family Health International (FHI) in 2006 further showed that attracting the youth to the clinical services has remained a challenge and that there is need to create demand and improve health seeking behaviour of the youth. It is these revelations that prompted this study.

1.4. Research Questions

The study attempted to answer the following research questions:

1. Which demographic, socioeconomic and socio-cultural factors determine school youth utilization of youth friendly reproductive health services
2. Do knowledge factors influence utilization of youth friendly reproductive health services?
3. What are the health system factors that influence the utilization of youth friendly reproductive health services?
4. What are the strategies that can be put in place to scale up utilization of reproductive health services?

1.5. Null Hypotheses

1. Demographic, Socioeconomic and socio-cultural factors do not influence youth utilization of youth friendly reproductive health services.
2. Knowledge factors do not influence/ have a relationship to utilization of YFRHS
3. Health system factors do not influence utilization of youth friendly reproductive health services by the youth.

1.6 Broad objective of the study

The main objective of the study was to explore the determinants of utilization of youth friendly reproductive health services (YFRHS) among school going youth in Thika West district.

1.6.1 Specific Objectives

- i. To establish demographic, socioeconomic and socio-cultural and knowledge factors that influence utilization of reproductive health Services by the school youth.
- ii. To determine health system factors influencing the utilization of reproductive health services by the school youth.
- iii. To explore strategies that can scale up utilization of reproductive health services by the school youth in Kenya.

1.7 Significance and Anticipated Output

The study on utilization of reproductive health services is key to improvement in the quality of life of the youth. The knowledge acquired from this study will ultimately facilitate the understanding of pattern of demand and uptake of reproductive health services among the school going youth in Thika West District. Health care planners may utilize information generated from the study to improve service delivery to school going youth.

The school youth too may benefit from awareness drive by the health care providers targeting them and this in turn may equip them with adequate information to help them make informed reproductive health choices. The teachers may also utilize the information about reproductive health needs of the school and college youth so that they can support them adequately.

1.8 Limitations

The study focused on school going youth and therefore generalization of the findings for out of the school youth may not be feasible. The study outcome depended on the

truthfulness and openness of respondents as the information sought was considered personal and sensitive. The economic aspect could not come out clearly given that financial matters are so sensitive and most parents are not able to share with their children their salaries. It could have been assessed more effectively if the youth were asked the family income/earnings, other possessions like owning television, refrigerator, computer a car and so on but since most youth may not know the actual income it was assumed that that parental employment status could have shed some light on economic issues of the school youth's family.

1.9 Conceptual Framework

The study used Andersen's Phase Two Model of Health Service Utilization. (Andersen & Newman, 2005) to investigate reproductive health service utilization among school going and college youth in Thika West district. This behavioral model provides a systems perspective to investigate a range of individual, environmental and provider related variables associated with decisions to seek health care. It proposes that the use of health care services is a function of three categories of determinants; Predisposing characteristics which mainly explains the association of demographic factors such as age, sex and education level and consumption of health services.

Enabling characteristics (family and community resources)-Family income or economic status, location of residence, access to health care facilities and availability of persons for assistance are key factors in health seeking behavior. The school going youth is largely dependent on parents/guardian and the infrastructure within their schools or residence. Need characteristics explores perceived need for health services, and expected benefit from treatments. Health care system includes health policy, resources and organization which refers to how health care system manages its

resources and consumer satisfaction determine individual's use of health service (Rebman, 2005).

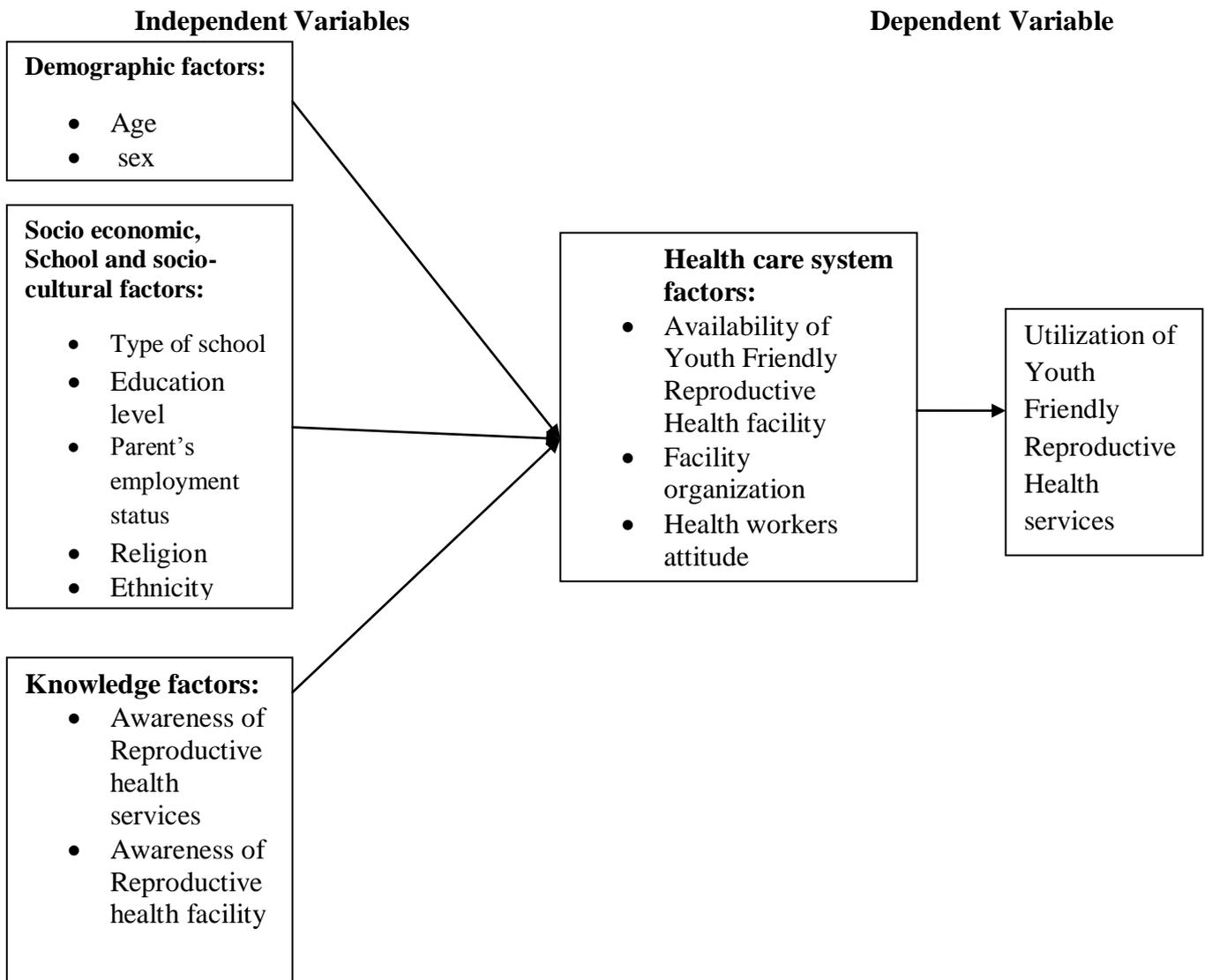


Figure 1.1 Operational Framework of the study (Obonyo, 2011 adopted from Andersen & Newman, 2005)

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Youth Friendly Reproductive Health Services (YFRHS) must be accessible, acceptable and appropriate for the young people to effectively attract them, respond comfortably to their needs and retain them for continued care. The services offered should include family planning (FP), sexual information, pregnancy testing, treatment of Sexually Transmitted Infections (STI) and counselling (International Planned Parenthood Federation (IPPF), 2007; Kipp et al, 2007; Pathfinder, 2005; Warenaus et al., 2006).

Literature reviewed utilization of YFRHS globally, regionally, Kenya and Thika West district scrutinizing demographic, economic, social cultural factors of the youth and health system factors that are likely to influence access and utilization of RHS will be reviewed.

2.1. Reproductive Health Services

2.1.1. Barriers to Utilization of Youth friendly Reproductive Health Services (YFRHS) Globally

Globally, existing barriers to access and utilization include poor access, availability and acceptability of the services (WHO, 2004). Lack of clear directions and services on offer, crowding, lack of privacy, appointment times that do not accommodate young people's work and school schedules, little or no accommodation for walk-in patients, and limited services and contraceptive supplies and options calling for referral are also impediments (WHO, 2004). Senderowitz and others (2003) in a study on rapid assessment of Reproductive Health Services reported that significant barriers

posted by the current state of most RH services are perceived unwelcoming to the youth.

A study in Cambodia showed that the barriers to youth access to reproductive health services included lack of confidentiality, shyness, poor relations with health staff, illiteracy and low prioritization by parents for reproductive health services (Adra, 2007). PATH (2001) in a study to evaluate youth friendly services(YFS) in Shanghai found that although there was good infrastructure, equipment, staff and good environment at the city, district, and school level, few youths used YFS due to insufficient publicity, insufficient full time and skilled professional health service providers, poor services and a weak referral system.

In the Russian Federation, while the government has identified young people's reproductive health needs as a priority, health care and education systems are not yet properly equipped to address the youth's specific reproductive health systems (WHO, 2010). The youth aged 15-18 year olds in Russia are served by paediatricians but health reports show that these young people who had a long relationship with paediatricians are often embarrassed to discuss difficult issues such as contraception or sexually transmitted infections (STIs) and may also worry about breaches of confidentiality (WHO, 2010).

2.1.2. Barriers to Utilization of Youth Friendly Reproductive Health Services in Africa

Most African countries as a follow up to ICPD (1994) have put up youth friendly health services with the combined partnership between The United Nations Population Fund (UNFPA), Pathfinder International through The African Youth Alliance (AYA) program in Botswana, Uganda, Tanzania and Ghana (Senderowitz, 2003) but despite these efforts, most countries in sub-Saharan Africa, youth still

encounter significant obstacles to receiving sexual and reproductive health services to obtaining effective, modern contraception and condoms to protect against sexually transmitted infections (STIs), including HIV.

In South Africa activities geared towards the youth are being implemented but are still limited (Erulker, 2001). A study to evaluate factors that discouraged the youth from using youth friendly reproductive services in South Africa found that inconvenient hours or locations, unfriendly staff and lack of privacy were among the reasons adults gave for not using YFRHS (FHI, 2000). The country in conjunction with Pathfinder International is working hard through a project, 'FOCUS on Youth Adults' to put processes in place to remove those obstacles (Pathfinder International, 2005).

In Nigeria, the realization of the magnitude of reproductive health problems the youth face prompted the government to make it an issue of national health priority. Association for Reproduction and Family Health (ARFH) in conjunction with Ford Foundation Office in Nigerian states is collaborating with NGOs to expand Adolescent Reproductive Health programs. A study conducted by OneWorld UK to assess facilities providing Youth-Friendly Services(YFS) found out that gaps existed in provision of YFS and that few facilities qualified to be called youth friendly as they did not meet universally acceptable standards for youth friendly services and such were run by Non Governmental Organizations(NGOs) and the Universities. There was inadequate staffing, lack of clear policies and guidelines on YFS provision and inadequate Information Education Communication (IEC) materials (Osanyin, 2009).

A study conducted in Zimbabwe on factors affecting Africans on reproductive health found that 12% of the youth did not visit RH because the distance was too great, 11% were too busy while 11% were shy (Anable & others, 2005). In Zanzibar, the policy on reproductive health does not allow unmarried youth to get reproductive health services (Pathfinder International, 2005). Another study in Zambia on vulnerability and sexual and reproductive health among Zambian secondary school students concluded that boys and girls lacked adequate information about human reproduction and STIs including HIV (Warenius et al., 2007).

A study done by Motuma (2012) on youth-friendly services (YFS) utilization and factors in Harar, Ethiopia concluded that most youth had positive attitude towards YFS but had poor knowledge on the services. The same study also reported that only one facility provided YFS in Harar thus pointing the limitations in offering YFRHS in that region.

2.1.3. Reproductive Health Service Provision in Kenya

In Kenya, there are new efforts and reforms in the health sector which are captured in the Second National Health Sector Strategic Plan II (2005- 2010), which provide a framework for addressing the reproductive health challenges in the National Reproductive Health Policy of 2007. The national guideline for provision of youth friendly services in Kenya document further articulates reproductive health issues such as providing information and services which are available, accessible, affordable and acceptable and made available (MOH, 2005). These services are geared towards meeting unmet reproductive needs of the youth.

Other initiatives include Adolescent Reproductive Health and Development policy Plan of Action 2005- 2015 which seeks to spearhead the need to provide and

accelerate access and utilization of youth friendly services by young people (NCAPD/MOH, 2005). Godia (2010) concluded that utilization of youth friendly sexual and reproductive services in Kenya still face multiple challenges from the youth who have little or lack information on youth friendly reproductive health services, community negative perception youth sexuality and reproductive health services to the youth and health facility perspective where there is no ownership of the services, limited management support and poor funding as well as poor staff attitude.

Family Health Options Kenya (FHOP) is an organization partnering with other organizations such as IPPF, FHI, DANIDA among others with a strategic objective of strengthening commitment on support for sexual and reproductive health and rights and needs of adolescents/young people. To achieve this strategic area, FHOK uses various strategies, provision of youth friendly integrated services, sexuality education, peer education, advocacy and empowerment of young people. Through outreach activities, 477,901 adolescents were reached with Adolescent Sexual Reproductive Health (ASRH) information, 23,536 with clinical services, 19,483 with VCT services while 1,574 received counseling services.

The Youth Centres are located in Nairobi, Mombasa, Eldoret, Nakuru and Kisumu and lately Bondo. Integrated outreach activities include VCT/SRH mobile and Moonlights provided an avenue for the young people to access the services with reduced barriers (FHOP, 2013).

2.1.4 Reproductive Health Services in Thika West District

Youth friendly reproductive health services are offered using the integrated model of service delivery both in public, Faith-based and private health facilities within the

district (NCAPD, 2005). Thika is one of the districts in Kenya which has a stand-alone youth friendly facility in Ruiru commissioned in 2008 and offers youth friendly reproductive health services. Although these services are available, the Thika District Strategic Plan 2005-2010 identified that there was inadequate access to affordable and quality RH service and low access to Reproductive Health information and services by the youth and adolescents (NCAPD, 2005).

2.2. Demographic Factors that influence Utilization of YFRHS

2.2.1. Age

Age is a demographic factor that affects utilization of health services. Reports from KDHS 2008/09 revealed an increased uptake of family planning services among age 20-24 years as compared to 10-19 year old youth. The youth hardly perceive the seriousness of sickness or health need and this is a major impediment to the youth in accessing and utilizing health services. A study by Senderowitz, et al (2003) on rapid assessment reproductive health services concluded that youth are unwilling to seek care due to the national laws and policies restricting care based on age and/or marital status, poor understanding of their changing bodies and insufficient awareness of risks associated with early sexual debut, STI/HIV and pregnancy.

2.3. Socio-economic and Socio-cultural Factors that influence Utilization of YFRHS

The economic costs of health care seeking include not only payment for treatment but also loss of productive or school time for the pupil/student, and the travelling expenses. This means that persons of low socio-economic status can have difficulty in affording the costs associated with utilization of healthcare making utilization unlikely unless they are provided with subsidized costs (Taylor, 2003).

Poverty has led some school youth to engage in pre-marital sex in exchange for gift or economic support further exposing them to RH risks. User fee charged at the health facilities may hinder the youth from utilizing youth friendly services (MOH, 2005; NCAPD et al, 2005). Lack of political will has led to a corresponding lack of financial commitment to sexual reproductive health to both international donors and national governments thus further complicating access for the youths who may not have funds for the services (Global Fund, PEPFAR, World Bank's MAP).

2.3.1. Education and Awareness of YFRHS

Studies have revealed that the more educated youth are more likely to seek youth friendly health services as they possess better understanding of their health needs (KDHS, 2008/09). A study done in Burkina Faso, Ghana, Malawi, and Uganda in 2004 showed that contraceptive, STI and VCT services are still under-utilized by the youth due to lack of knowledge about the services (Biddlecom, et al, 2007). Godia (2010) and Transgrud (2001) also found out that lack of understanding of the importance of sexual health care or knowledge of where to go for care may discourage young people from using the services and therefore health education is a major component in passing health information and which in turn can increase utilization of services.

2.3.2. Religion

Most religious groups have stringent rules and norms that tend to view use of family planning among unmarried youth as sinful and believe that engaging in pre-marital sex is sin. These religious norms to some extent have played a role in controlling the youth from involving themselves in indiscriminate sex in Kenya but these efforts have been eroded by increased urbanization which has led to most youth living on

their own without religious guidance and control (MOH, 2005). Squeller et al (2006) in an assessment of youth reproductive health and HIV/AIDS progress in Kenya concluded that young people's health is influenced by parents, religious leaders, teachers and peers.

2.3.3. Traditional Beliefs and Ethnicity

The youth sexuality problems are worsened by lack of adequate information since in the olden days this was given by grandparents and aunts and this is no longer the case due to increased urbanization (Warenius, 2008). Senderowitz (2003) reported that breakdown in traditional communication channels through which adults used to pass information and guidance to the young has broken down due to urbanization thus leaving the youth vulnerable to sexually related problems, most ethnic moral/traditional codes prohibit premarital sex and pregnancy and any youth discovered to be using family planning services is reprimanded thus fear is instilled among the youth especially on family planning use. When there is community involvement whereby communities are engaged in positive dialogue to promote the value of health services and encourage parental and wider support for the provision of quality services to youth, utilization is likely to increase (WHO, 2010).

2.4. The Health System Factors that Determine Youth Utilization of RHS

2.4.1. The Health Facility Organization

Provision of good quality health services to the youth can be achieved through favorable policy environment, improved clinical and communication skills of providers and their supportive attitude (WHO, 2004). The National Guidelines for provision of YFS in Kenya categorizes qualities of a facility which make it youth friendly and which are likely to increase utilization by the youth .These includes; the

services should be in a place that is easily accessible, have flexible working hours, offer privacy, offers wide range of services at affordable cost or free and friendly health service providers (MOH, 2005).

2.4.2. Health Worker's Attitude

Negative provider's attitudes have been identified as a major barrier as it discourages young people from seeking or returning for care (MOH, 2005; Warenius et al., 2005; Godia, 2010). A study by Warenius et al (2006) among Kenyan and Zambian midwives revealed that reproductive health services are under utilized due to judgmental attitude of health providers and lack of competence coupled with lack of knowledge in youth friendly service provision irrespective of training. A study in Ethiopia on health workers' attitude toward sexual and reproductive health services for unmarried youth concluded that some health workers were setting up penal rules and regulations against premarital sex (Tilahun et al.,2010).

2.5. Summary of Literature Review

Literature revealed that despite the initiatives put in place towards improving YFRHS of the youth, barriers still exist which affect the utilization of services by the youth. Studies across the globe point to the ways the services are given and the youth unfriendliness of the facilities. This is evidenced in factors such as service delivery hours, cost of services, lack of confidentiality and facility organization. Others are individual factors such as lack of knowledge and attitude.

Literature also revealed that there is concerted effort by many countries to reach the youth with reproductive health services and though little has been achieved, a lot more need to be done to reach a good threshold to rid the youth from reproductive health problems. Kenya is among the countries a lot of effort is going on in the area

of reproductive health service delivery but little evidenced is shown for the school youth.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter includes study design, variables, area, sampling criteria and study instruments used in the study, data collection, data analysis and interpretation and lastly ethical considerations for the study.

3.1 Study Design

The study adopted a descriptive cross-sectional design that aimed at describing the demographic, socioeconomic, school and socio-cultural and health system factors that influenced utilization of youth friendly reproductive health services (YFRHS) among the youth.

3.2 Variables

3.2.1 Independent Variables

These were factors which literature review revealed that had significance on the utilization of YFRHS by the youth. These were; demographic factors such as age and sex, socioeconomic and school factors such as, level of education and awareness about existence of youth friendly reproductive health facilities and services, employment status of the parents and type of school. Socio -cultural factors studied included religion and ethnicity. Health system factors included health facility organization and service delivery, health provider attitude and availability of youth-friendly health services within the school and the district.

3.2.2 Dependent Variables

The dependent variable in this study was utilization of youth-friendly reproductive health services measured through the dichotomous response of yes or no. The utilization of youth-friendly reproductive health services availed in the reproductive health centre such as family planning, counselling services, VCT and treatment of STIs were considered.

3.3 Study Area

The study was done in Thika West District of Kiambu County, Kenya. The district was hived off from the former Thika District. It is situated along Nairobi- Garissa highway 40 kilometers from Nairobi city. The district covers an area of 327.1 Square kilometers and stretches from Ruiru to Thika municipality. The population of youth aged 10-24 in the district is estimated at 68,677 as recorded in 2011 Thika District health Records.

3.3.1. Socioeconomic and Socio-cultural Background of Thika West District

The district is inhabited by people of different ethnic groups with diverse cultural backgrounds although majority of the inhabitants are from the Kikuyu community who are the natural inhabitants of the district. The residents are mainly small scale farmers, factory workers, civil servants and small scale business men and women. Main industries include Delmonte fruit processing company, Thika cloth mills, bakeries, tanneries among others (NCAPD, 2005).

3.3.2 Health Status and Education of Thika West

Thika District has 105 health facilities 47 of which are in Thika West District, one government hospital- Thika level five hospital and eight private hospitals, two health centers, one of which is faith based and the other one GOK, nine dispensaries and 28

private clinics (Republic of Kenya, 2005). There is only one stand-alone youth friendly health service facility at Ruiru Health centre which was commissioned in 2007. The rest of the facilities offer integrated health services both to adults and the young people (Thika District health Records, 2011).

The district has a total of 34 primary schools, 35 secondary schools, one technical training institution two universities and several middle level and business colleges. Total pupil-student population is 19,843 out of which 12,213 were in primary schools and 7630 in secondary schools (Thika District Education office data, 2011). Data for college enrolment was 9337 for the whole Central Province; specific data for Thika West was not available.

3.4 Target Population

The study focussed on school youth aged 10-24 years in sampled primary, secondary schools and tertiary/ colleges whose population was 19843.

3.5 Inclusion Criteria

This comprised the youth in school, key informants being health service providers who were working at reproductive health facilities at the time of study.

3.6 Exclusion Criteria

The youth who declined to give informed consent and those below 10 years or above 24 years were excluded. The youth in lower primary school were also excluded.

3.7 Sampling

3.7.1 Sample Size Determination

The sample size was determined using Fisher's et al, 2003 Formula. The formula was used to estimate the smallest possible categorical sample size since the population of the school youth was above 10,000 (N=19843)

$$n = \frac{z^2 pq}{d^2}$$

Where:

$$d^2$$

n = The desired sample size (N>10000)

z = The standard normal deviate, usually set at 1.96 which corresponds to 95% confidence level

p = The proportion of target population estimated to have a particular characteristics. In this case estimates for Thika West District was not known therefore 50% (0.5) was used.

d = Permitted error (5%, if the confidence level is 95%); 0.05

q = 1 – p; (1-0.5=0.5)

$$\text{Therefore } n = \frac{1.96^2 * 0.5 * 0.5}{0.05^2} = 384.16$$

Thus the sample size 384 plus 10 extra questionnaires to safeguard against non-response or low return rate. This was necessary because when using Fisher's method, the sample size arrived at is taken to be the minimum estimate and therefore any response rate below it will have a negative effect to the study.

3.7.2 Sampling Technique

Cluster sampling was used to select primary, secondary schools and tertiary learning institutions/colleges using a list of schools in the district provided by the District Education Officer as a sampling frame. The youth in the sampled schools were further listed according to age group to enable variability and equal inclusion. Systematic random sampling technique using random numbers was used to pick the

first respondent in each cluster, followed by every 5th person from the group to ensure randomness until 390 respondents were picked. Each school received 65 questionnaires.

Key informants included 10 nurses from government and private hospitals who were actively involved with reproductive health service delivery to the youth within the district.

3.8 Research Instruments

3.8.1 Primary Data

The study employed the following instruments which were carefully designed, pretested and revised before final data collection. 1. Self-administered structured questionnaires to collect data from the school youth in secondary and tertiary learning institutions. 2. Self-administered questionnaire with partial assistance from research assistants for primary school youth who needed clarification. 3. Two self-administered questionnaires for key informants from health facilities and parents. 4. An Interview guide for Key informants

3.8.2 Secondary Data

These were collected from government documents including KDHS 2008/9 report, the Adolescent Reproductive Health Policy of 2007, census report of 2009, Thika District health records, District education records, journals and books. Information from these sources was used during literature review and for discussion.

3.9 Pilot Study

Two pilot studies involving 39 participants were carried out, one in primary and the other in one secondary school not sampled for the main study within the district. The

results of the pilot study were used to review the questionnaire and corrections made before data collection.

3.10 Logistics

Two research assistants were recruited and trained on data collection techniques and meanings for each technical terms clarified for them for uniformity. Each research assistant covered three schools.

3.11 Data Analysis and Interpretation

Data in the field was continually supervised and quality controlled by the principal researcher. Quantitative raw data from questionnaires were coded and entered using Statistical Package for Social Sciences (SPSS) data entry program. Subsequently data was cleaned and analysis done using SPSS Version 18.0 statistical package.

After entry, cross tabulation was done followed by chi square statistics to get the independent variables that were significantly associated with utilization of YFRHS $p < 0.05$. After chi square, Odds ratio was done to check the direction of association and to test hypothesis. Information generated was then presented in the text in the form of tables, bar graphs and pie charts. Qualitative data was transcribed and analyzed thematically and used in the discussion of results.

3.12 Ethical Considerations

Permission to conduct the study was sought from Kenyatta University Graduate School, Ministry of Higher education, Science and technology (National Council of Science and Technology), Thika West District Education Office and school principals, Medical officer of Health/ medical superintendent of Thika West District. Informed consent was sought from the study participants above 18 years. The youth who were

under 18 years old were asked for their assent to be involved in the study. Confidentiality was maintained throughout the study. Respondents did not receive any incentives to participate in this study and no participant was forced to answer questions they did not wish to answer.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.0 Introduction

This chapter displays results and analysis of the study findings. It is organized as follows; descriptive information of the study variables, factors significantly associated to utilization of YFRHS, perceptions of YFRHS providers and discussion of findings.

4.1 Descriptive Information of Study Variables

The study involved a total of 390 participants aged between 10-24 years and 10 Key informants who were health care providers working at a youth friendly reproductive health service area at the time of study. Table 4.1 summarizes the descriptive information of the study participants.

Table 4.1: Background Characteristics

Factor	Category	Frequency (n)	Percentage (%)
Age group(years)	10-14	169	43.3
	15-19	128	32.8
	20-24	93	23.9
Sex	Male	176	45.1
	Female	214	54.9
Education level	Primary	130	33.3
	Secondary	130	33.3
	Tertiary	130	33.3
School Type	Boarding	223	57.2
	Day school	167	42.8
Religion	Christian	342	87.7
	Muslim	22	5.6
	Other religions	26	6.7
Ethnicity	Kikuyu	195	50.0
	Luo	37	9.7
	Kamba	31	7.9
	Luhya	38	10.0
	Small ethnic groups	87	23.3

Table 4.1 shows that the youth aged 10-14 years were 169 (43.3%), 15-19 years were 128 (32.8%) and 20-24 years were 93 (23.9%). The females were 214 (54.9%) and males were 176 (45.1%).

The study covered youth in primary, secondary and tertiary levels of education and each level was covered equally. Of the youth studied, 223 (57.2%) were in boarding schools while 167 (42.8%) were in day schools. On religious affiliation, 342 (87.7%) of those interviewed were Christians, 22 (5.6%) were Muslims and 26 (6.7%) belonged to various religions which were not falling under either Christianity or Muslim. When asked whether their religion restricted utilization of the YFRHS, 242 (62.1%) said that their religion restricted use of some of the reproductive health services by the youth while 148 (37.9%) said there was no restriction.

Majority of the youth interviewed were from the Kikuyu community forming 195 (50%), followed by Luhya who were 38 (10%), Luo 37 (9.7%) and Kamba 31 (7.9%) while other small ethnic groups were 87 (23.3%). On parental employment, 297 (76.2%) said their parents were employed while the rest 93 (23.8%) were not. Of those employed, 214 were in formal employment like civil service, teaching, NGO among others. Some parents 83 were in self employment and farming.

4.2 Demographic, Socioeconomic, School and Socio-cultural Factors and YFRHS Utilization

The main youth-friendly reproductive health services utilized by the youth were family planning, counselling services, VCT and STI treatment. Table 4.2 summarizes the number of youth and how they utilized each of the youth-friendly reproductive health services mentioned.

Table 4.2 Reproductive Health Service Utilized by Youth

RHS	Utilized (%)	Not Utilized (%)	Total (%)
Family planning	115(29.5)	275(70.5)	390(100)
Counseling services	187(47.9)	203(52.1)	390(100)
VCT	151(38.7)	239(61.3)	390(100)
STI treatment	35(9.0)	355(91.0)	390(100)
Antenatal services	0	390(100)	390(100)

The results indicate that 187 (47.9%) of youth utilized counselling services, 151 (38.7%) utilized VCT, 115 (29.5%) utilized family planning and no student reported having used antenatal or pregnancy services.

In order to establish the relationship between demographic and utilization of YFRHS, chi square test was carried out. The demographic factors were compared with the utilization of family planning, counselling services, VCT and treatment of STIs. The results of the chi square test are displayed in table 4.3.

Table 4.3 shows that age influenced utilization of the four major reproductive health services whereby older school youth tended to utilize the YFRHS more compared to younger ones.

Age had significant association to utilization of family planning ($\chi^2 = 102.430$, $p < 0.001$), VCT ($\chi^2=60.971$, $p < 0.001$) and treatment for STIs ($\chi^2 = 25.111$, $p < 0.001$) whereby older youth aged 20-24 years utilized these services more than those aged 10-14 and 15-19 years , respectively. Age was also associated with utilization of counselling services, younger age group 10-14 years utilized them more than the older ones ($\chi^2 = 5.513$ $p= 0.009$). Age was significantly associated with knowledge of YFRHS and their utilization. Youth aged 20-24 years had higher knowledge of

YFRHS and utilization of YFRHS than those aged 15-19 years and 10-14 years respectively ($\chi^2 = 63.997$, $p < 0.001$).

Table 4.3 Demographic Factors and Utilization of YFRHS

Age and sex by Family Planning utilization		Utilized n=115	Percentage (%)	χ^2 , p value
Age (years)	10-14	10	8.7	$\chi^2 = 102.430$ $p < 0.001$
	15-19	35	30.4	
	20-24	70	60.9	
Sex	Male	65	56.5	$\chi^2 = 9.357$ $p = 0.002$
	Female	50	43.5	
Age and sex by Counseling		n=187		
Age (years)	10-14	74	39.6	$\chi^2 = 5.513$ $p = 0.009$
	15-19	51	27.3	
	20-24	62	33.1	
Sex	Male	85	45.5	$\chi^2 = 0.008$ $p = 0.930$
	Female	102	54.5	
Age and sex by Voluntary Counseling and Testing(VCT)		n=151		
Age (years)	10-14	33	21.9	$\chi^2 = 60.971$ $p < 0.001$
	15-19	41	27.1	
	19-24	77	51.0	
Sex	Male	77	51.0	$\chi^2 = 2.547$ $p = 0.111$
	Female	74	49.0	
Age and sex by Sexually Transmitted Infection treatment(STI)		n=35		
Age (years)	10-14	0	0	$\chi^2 = 25.111$ $p < 0.001$
	15-19	17	48.6	
	20-24	18	51.4	
Sex	Male	22	62.9	$\chi^2 = 5.178$ $p = 0.023$
	Female	13	37.1	
Age and sex		Knowledge of YFRHS	112	
Age (years)	10-14	20	17.8	$\chi^2 = 63.977$ $p < 0.001$
	15-19	36	32.1	
	20-24	56	50.0	
Sex	Male	52	46.4	$\chi^2 = 6.178$ $p = 0.123$
	Female	60	53.6	

On sex and utilization, significance was noted in sex and utilization of family planning, more females than males utilized this service ($\chi^2= 21.431$ $p < 0.001$). Odds was done to show the direction of this relationship and the result showed the Odds that females have used family planning is 2.48 times higher than males. OR = 2.48 (CI 95%: 1.56-3.93), $p < 0.001$ further proving the influence that sex of the youth had on utilization of FP.

Sex of the individual had significant relationship to treatment of STIs, ($\chi^2=5.178$ $p= 0.023$), Odds ratio showed that the odds that males have been treated is 2.26 times higher than that of females OR=2.26 (CI 1.1-4.6), $p=0.026$

However there was no significant relationship between sex of an individual and utilization of VCT services, $p > 0.05$.

Chi square test was carried out in order to establish the relationship between school and socioeconomic factors utilization of family planning. The school and socioeconomic factors were compared with the utilization of family planning. The results of the chi square test are displayed in table 4.4.

Table 4.4 show a significant relationship between level of education and utilization of family planning services whereby more youth in tertiary learning institutions utilized as compared to those in both primary and secondary schools. Type of school on the other hand had significant association to family planning utilization. Youth in boarding schools indicated higher utilization of family planning. This has been proved further by Odds statistics which showed that the odds that students in a boarding school have used family planning services was 1.8 times higher than those of those in day school OR=1.8 (CI 1.14-2.93), $p=0.012$. However, parent's employment status had no role in family planning utilization.

Table 4.4: Socioeconomic and School Factors and Utilization of Family Planning**Services**

Utilization of FP services		Utilized (%) N=115	Not Utilized (%)	Total (%)	χ^2 , p value
Education level	Pri-Sec	38 (9.8)	222 (56.9)	260(66.7)	$\chi^2= 98.878$ p < 0.001
	Tertiary	77(19.7)	53(13.6)	130(33.3)	
Type of school	Boarding	75(19.2)	148(37.9)	223(57.1)	$\chi^2=4.304$ p = 0.038
	Day school	40(10.3)	127(32.6)	167(42.9)	
Parent's Employment status	Employed	90(23.1)	207(53.1)	297(76.2)	$\chi^2 = 0.399$ p =0.528
	Not employed	25 (6.4)	68(17.4)	93(23.8)	

Chi square test was carried out in order to establish the relationship between school and socioeconomic factors utilization of counselling services. The school and socioeconomic factors were compared with the utilization of counselling services. The results of the chi square test are displayed in table 4.4.

Table 4.5: Socioeconomic and School Factors and Utilization of Counselling**Services**

Utilization of counselling services		Utilized (%) n=187	Not Utilized (%)	Total (%)	χ^2 , p value
Education level	Primary	49(12.6)	81(20.8)	130(33.4)	$\chi^2= 8.281$ p =0.016
	Secondary	68(17.4)	62 (15.9)	130(33.3)	
	Tertiary	70(17.9)	60(15.4)	130(33.3)	
Type of school	Boarding	122(31.3)	101(25.9)	223(57.2)	$\chi^2= 9.535$ p =0.002
	Day school	65(16.7)	102(26.2)	167(42.9)	
Parent's Employment status	Employed	146(37.5)	151(38.7)	297(76.2)	$\chi^2=0.730$ p =0.408
	Not employed	41(10.5)	52(13.3)	93(23.8)	

Table 4.5 shows that there was significant association between level of education and type of school to utilization of counselling services $p < 0.05$. More youth in tertiary learning institutions utilized the services as compared to those in secondary and primary school respectively. On the other hand youth in boarding schools had higher utilization compared to those in day schools, the odds that students in boarding school have used counseling services are 1.89 times higher than those in day school. (95% CI 1.26-2.84), $p = 0.002$. Parent's employment status showed no significance to counselling $p > 0.05$.

In the following section, Chi square test was carried out to establish the relationship between school and socioeconomic factors utilization of VCT services whereby the school and socioeconomic factors were compared with the utilization of VCT services. The results of the chi square test are displayed in table 4.6.

Table 4.6: Socioeconomic and School Factors and Utilization of VCT services

Utilization of VCT services		Utilized (%)	Not utilized (%)	Total (%)	χ^2 , p value
Education level	Primary	25(6.4)	105(27.0)	130(33.4)	$\chi^2 = 63.694$ $p < 0.001$
	Secondary	42(10.8)	88(22.6)	130(33.4)	
	Tertiary	84(21.5)	46(11.7)	130(33.2)	
Type of school	Boarding	97(24.9)	126(32.3)	223(57.2)	$\chi^2 = 5.015$ $p = 0.025$
	Day school	54(13.8)	113(29.0)	167(42.8)	
Parent's Employment status	Employed	114(29.2)	183(47.0)	297(76.2)	$\chi^2 = 0.059$ $p = 0.809$
	Not employed	37(9.5)	56(14.3)	93(23.8)	

Table 4.6 shows that there was a significant relationship between level of education and utilization of VCT services. The youth in tertiary level of education utilized VCT more than those in lower levels of education $p < 0.001$. Similarly type of school had a

significant relationship to VCT utilization. But parent's employment status had no significance to VCT utilization, $p=0.809$.

In the following section, chi square test was carried out to establish the relationship between school and socioeconomic factors utilization of STI services whereby the school and socioeconomic factors were compared with the utilization of STI services and Odds ratio done to test the direction of association. The results of the chi square test are displayed in table 4.7.

Table 4.7: Socioeconomic and School Factors and Utilization of STI treatment services

STI Treatment		Utilized (%)	Not utilized (%)	Total	χ^2 , p value
Education level	Primary & Secondary	10(2.6)	250(64.1)	260(66.7)	$\chi^2 =25.299$ $p< 0.001$
	Tertiary	25(6.4)	105(26.9)	130(33.3)	
Type of school	Boarding	16(4.1)	207(53.0)	223(57.1)	$\chi^2 =5.525$ $p=0.151$
	Day school	19(4.9)	148(38.0)	167(42.9)	
	Total	35(9.0)	355(91.0)	390(100)	
Parent's Employment status	Employed	21(5.4)	276(70.7)	297(76.1)	$\chi^2 =5.525$ $p=0.019$
	Not employed	14(3.6)	79(20.3)	93(23.9)	

Table 4.7 displays how treatment for STIs in relationship to education level, type of school and parent's employment status. Education level and parent's employment status were significant ($\chi^2 =25.299$, $p< 0.001$) and ($\chi^2 =5.525$, $p=0.019$) respectively. More youth in tertiary learning level were found to have been treated for STIs than those in primary and secondary schools. Odds ratio revealed that the odds of a student whose parent was employed to have been treated for a STI was 2.33 times than that

of a student whose parents was not employed CI 1.33-4.78, $p=0.022$. Type of school did not have relationship to treatment of STIs, $p>0.05$.

The relationship between religion and ethnicity and utilization of family planning was tested through chi square test. Socio-cultural factors were compared to utilization of family planning. Table 4.8 displays the results.

Table 4.8: Socio-Cultural Factors and Utilization of Family Planning Services

Utilization of FP services		Utilized (%) N=115	Not Utilized (%)	Total (%)	χ^2 , p value
Religion	Christian	103(26.5)	239(61.3)	342(87.8)	$\chi^2=16.298$, $p<0.001$
	Muslim	6 (1.5)	16(4.1)	22(5.6)	
	Others	6 (1.5)	20(5.1)	26(6.6)	
Ethnicity	Kikuyu	53(13.6)	143(36.7)	196(50.3)	$\chi^2=5.506$ $p =0.239$
	Luo	14(3.6)	24(6.1)	38(9.7)	
	Kamba	11 (2.8)	20(5.1)	31(8.9)	
	Luhya	15 (3.8)	23(5.9)	38(9.7)	
	Other ethnic groups	22 (5.7)	65 (16.7)	87(22.4)	

The table 4.8 above shows that religion was significantly associated to utilization of family planning services with Christian youth utilizing more than Muslims and other religious groups. On whether religion restricted utilization, significance was found ($\chi^2=16.298$, $p<0.001$). The youth were asked whether their religion prohibited utilization of YFRHS. Odds analysis showed that the odds that those whose religion did not prohibit utilization of YFRHS were 2.43 times likely to have used a family planning service than those whose religion prohibited, OR=2.43 (95% CI 1.46-4.03), $p< 0.001$.

Relationship between socio-cultural factors and utilization of counselling services was assessed by performing a chi square test and results reflected in table 4.9.

Table 4.9: Socio-Cultural Factors and Utilization of Counselling Services

Utilization of counselling services		Utilized (%) n=187	Not Utilized (%)	Total (%)	χ^2 , p value
Religion	Christian	172(44.1)	170(43.6)	342(87.7)	$\chi^2= 6.373$ p =0.041
	Muslim	6 (1.5)	16(4.0)	22(5.5)	
	Others	9 (2.4)	17(4.4)	26(6.8)	
Ethnicity	Kikuyu	100(25.6)	95(24.4)	195(50.0)	$\chi^2= 5.814$ p =0.214
	Luo	16(4.1)	22(5.6)	38(9.7)	
	Kamba	13(3.3)	18(4.6)	31(7.9)	
	Luhya	23(6.0)	16 (4.1)	39(10.1)	
	Others ethnic groups	35(9.0)	52(13.3)	87(22.3)	

Table 4.9 indicates significant association between religion of the youth and utilization of counselling services ($\chi^2= 6.373$, p =0.041). Youth of Christian faith utilized counselling services more than those of other religions. There was no association between ethnicity and utilization of counselling services at the required threshold $p>0.05$.

Chi square test was carried out in order to establish the relationship between socio-cultural factors and utilization of VCT services. Socio-cultural factors were compared with the utilization of VCT services. The results of the chi square test are displayed in table 4.10.

Table 4.10 shows significance between religion and utilization of VCT services. Christian youth utilized this service more than Muslims and others $\chi^2= 6.085$, p =0.048

Table 4.10: Socio-Cultural Factors and Utilization of VCT Services

VCT services		Utilized (%) n=151	Not Utilized (%)	Total (%)	χ^2 , p value
Religion	Christian	140(35.9)	202(51.8)	342(87.7)	$\chi^2= 6.085$ p =0.048
	Muslim & Others	11(2.8)	37(9.5)	48(12.3)	
Ethnicity	Kikuyu	72(18.5)	123(31.5)	195(50)	$\chi^2= 05.814$ p =0.214
	Luo	19(4.9)	19(4.9)	38(9.8)	
	Kamba	10(2.5)	21(5.4)	31(7.9)	
	Luhya	20(5.1)	19(4.9)	39(10.0)	
	Others ethnic groups	30(7.7)	57(14.6)	87(22.3)	

To establish the relationship between socio-cultural factors and utilization of STI treatment services, Chi square test was carried and socio-cultural factors were compared with the utilization of STI treatment services. The results of the chi square test are displayed in table 4.11.

Table 4.11: Socio-Cultural Factors and Utilization of STI Treatment Services

STI Treatment		Utilized (%) n=35	Not Utilized (%)	Total (%)	χ^2 , p value
Religion	Christian	29(7.4)	313(80.3)	342(87.7)	$\chi^2= 0.897$ p =0.639
	Muslim & Others	6(1.6)	42(10.7)	48(12.3)	
Ethnicity	Kikuyu	20(5.1)	175(44.9)	195(50)	$\chi^2= 6.833$ p =0.145
	Others ethnic groups	15(3.9)	180(46.1)	195(50)	

From table 4.11, there was no association between religion and ethnicity to utilization of STI treatment at the required threshold of $p > 0.05$.

4.3 Health Knowledge and Awareness of YFRHS

The school and college youth knowledge on YFRHS was assessed by asking them whether they knew about any facility offering reproductive health services and the services being offered as reproductive health services. Those who knew about the YFRHS services were further asked to state their source of information and the responses are reflected in figure 4.1

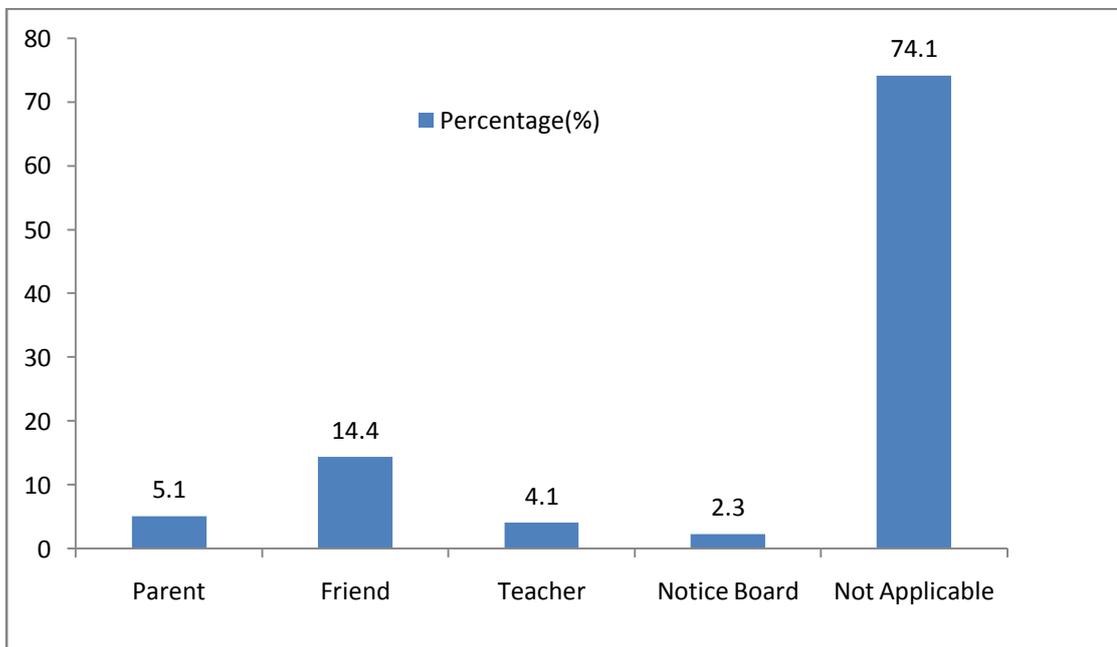


Figure 4.1 Source of information on RHS

Figure 4.1 shows that majority of the school and college youth (74%) had not received any information on YFRHS. However among those who knew about YFRHS, 14.4% got the information from their friend, while 5.1% and 4.1% asked their parent and teacher respectively.

In investigating whether the youth got support when they needed any YFRHS, they were asked to state whom they consulted before going for the services and the results are shown in figure 4.2

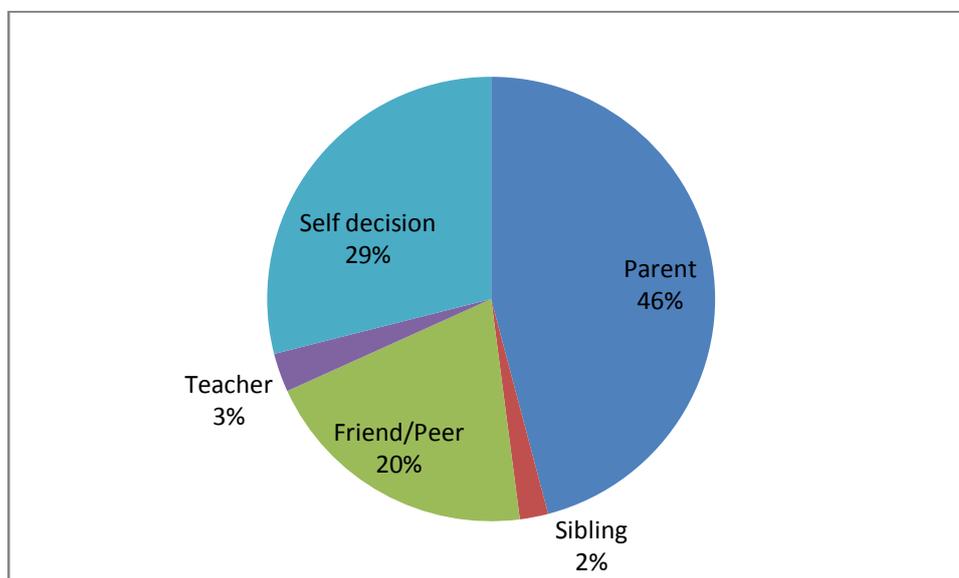


Figure 4.2: Persons consulted about Reproductive Health Services

Figure 4.2 shows that majority (46%) of the youth consulted their parents while 29% decided on their own and 20% consulted their friends. A few youth, that is, 3% and 2% consulted their teacher and sibling respectively.

4.4 Health System Factors and Utilization of YFRHS

Health facility factors that encouraged or discouraged the school going youth from utilizing YFRHS were investigated. Factors such as availability of reproductive health services within the school, distance to reproductive health service, health facility organization, staff treatment/handling of the youth and cost of the services were assessed.

The youth were asked whether there was a reproductive health facility within the school and the distance to a nearest facility in case there was none at school.

4.4.1 Availability of Reproductive Health Facility

The youth were asked whether they had a reproductive health facility within the school and 82.3% said they had no YFRH facility while 17.7% said they had the facilities.

4.4.2 Distance of YRHS Facility and Utilization of YFRHS

The respondents were further asked to estimate the distance from the nearest facility using transport fare as an estimate. Table 4.12 shows that most youth resided far from a health facility as suggested by 154 (39.5%) of the youth who said that it required them transport fare of 50 Kenya shillings to the nearest facility while 111 (28.5%) said that the nearest facility required transport fare of 20 Kenya shillings.

Others, that is, 69 (17.6%) said that there was YFRHS facility within their school while 56 (14.4%) said it was a walking distance. Fare/money was used as an estimate for distance because it was difficult to do the estimate of distances in terms of kilometres as the roads within the district are not all marked showing distances.

Table 4.12 Distances of YFRH Facility

Category	Frequency (n)	Percentage (%)
Walking Distance	56	14.4
Near, requires 20/= fare	111	28.5
Far, requires 50/= fare	154	39.5
Available in School	69	17.6

4.4.3 Health Facility Organization

The youth were asked if they had ever sought for YFRHS but did not get them and 52.1% of the youth indicated that they actually did not get the services. Those who sought but did not get the services were asked to state the reasons that made them miss the services. Figure 4.3 displays the reasons for missing the services as stated by the youth.

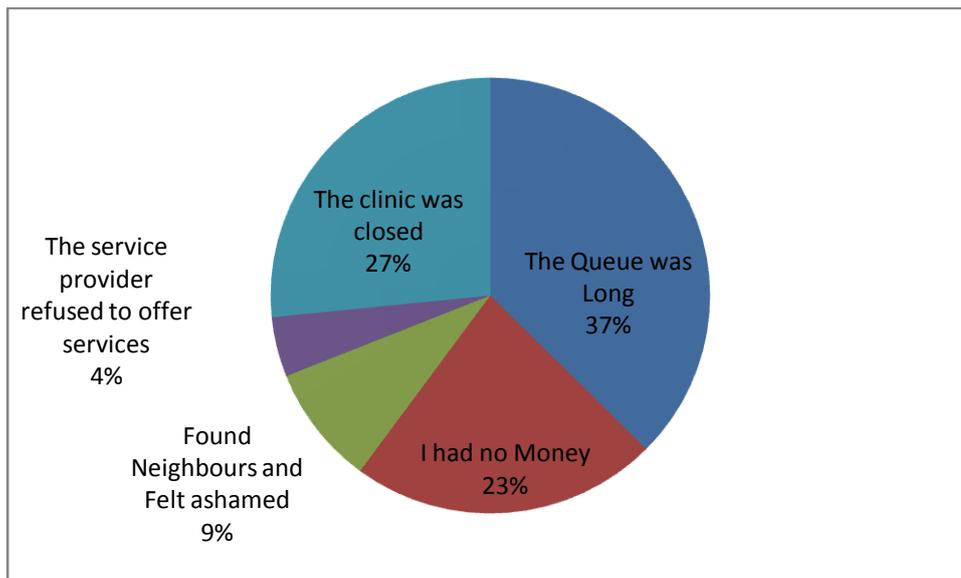


Figure 4.3: Reasons for Missing YFRHS

Figure 4.3 shows the reasons cited by the youth for not receiving the services required as; long queues at the facility (37%), facility closure at the time of arrival at the facility (27%), lack of money to pay for the services (23%) while (9%) said they met neighbours/relatives at the facility and felt embarrassed. Some 4% of the youth were turned back by service providers.

4.4.4 Health Service Provider Attitude

The attitude of health service providers' attitude was captured by asking the school youth who had utilized reproductive health services how they were handled by the staff when they sought reproductive health services. Majority 116 (29.7%) who had

utilized the services said the providers were pleasant, 93 (23.8%) felt they were fairly pleasant but asked too many questions. However 23(5.9%) felt that the service providers were bad and harsh to them while 158 (40.5%) had no comment on this.

4.5 Perception of Health Care Providers Regarding Utilization of YFRHS

The health care service providers were involved in the study to find out their views about reproductive health service delivery to the youth. The themes that were discussed were perceptions of the service providers on youth factors and utilization and health system factors that determined the youths' utilization of the YFRHS. The youth factors included their age, sex and type of services most preferred by the youth. On the health system factors were the knowledge of health service providers on YFRHS and their perception on provision of the same to the youth. The health service providers were also asked to give their suggestions on how YFRHS delivery to the youth can be scaled up.

Most health service providers (key informants) alluded to the fact that most youth who visited the facilities were aged 18 years and above. When asked what their view about offering services such as family planning to school youth, seven (7) out of 10 (70%) of the service providers felt uncomfortable to give the services to the youth below 18 years. Three of them (3) however said that they had no problem giving the youth the services as it was the right of everyone to get the services so long as their was no contraindication and proper information offered to them.

When asked which gender of the school youth access their services, six (60%) said the females visited more than the males. One of the six answered,

'of course girls, you will hardly see any boy at the clinic'.

Majority of the service providers said that the females tend to come for contraceptive pills but usually it is hard to identify them as school going youth as they do not wear school uniform neither do they have any school identification when they visit the facility. This was further confirmed by clinic register which had no data on whether the clients were students or not.

On operation time and the hours, all the 10 health providers said that YFRHS services operate from 8.00 am to 4.00 pm daily Monday to Friday. They also said that all services were integrated within the same area and no separate area isolated for the school youth.

On challenges facing the service providers, majority said that the youth hardly identified themselves and were many times not open to say what exactly they wanted. Some cheated about their age and said they were married women and men. Other than personal problems the service providers cited too much workload which makes them not have quality time with the youth to enable them counsel them adequately. Three of the service providers said that it was a challenge communicating with youth, that is, language barrier due to age difference between them and the youth.

The service providers suggested that to mitigate on the barriers, the government and employers need to add staff, train them on how to handle the youth and separate an area specifically for the school youth to enable them be handled without feeling ashamed or intimidated. They suggested that reproductive health should be taught actively in the primary school and secondary school curriculums and that reproductive health specialists or lecturers be engaged in teaching the youth instead of the regular school teachers who may not be well versed with the area of reproductive health.

They also said that the reproductive health component be strengthened in school health curriculum.

Generally the interviews pointed to the services provided to the school and college youth not to be completely youth friendly and this is the most possible reason for low uptake of reproductive health services.

4.6 Discussion of Results

4.6.1 Demographic Factors and Utilization of YFRHS

Both descriptive and statistical tests (Chi square analysis) showed that age and sex of an individual were greatly associated with utilization of almost all reproductive health services by the youth. Except for counselling services, utilization for all the reproductive health services increased with age. The older youth in age group of 20-24 years utilized all the YFRHS more than those who were younger.

This finding is normal and expected because younger youth have lower knowledge of reproductive health issues and this is in agreement with a study by Sendowitz (2003) which reported low utilization of RHS among young people due to poor understanding of their changing bodies and insufficient awareness of risks associated with early sexual debut, STI/HIV and pregnancy and shyness. The findings also agree with KDHS 2008/09 which revealed an increased uptake of family planning services among older youth, 20-24 years as compared to 10-19 year olds.

This is further supported by key informants who when asked the common age group they tended to serve most, majority of health service providers answered that, 'majority of the youth who sought services were above 18 years as suggested by (80%) of the respondents. This therefore means that the younger youth in the age below 18 years rarely utilize reproductive health services.

This finding therefore reveal a need to reach the younger youth with age appropriate YFRHS message to enlighten and help them make right decisions as some are already sexually active as reported that the adolescent get into sexual debut early and that many have had sex by age 15 years (KDHS 2008/2009 in ICF Macro,2010).

The older youth are sexually active and have freedom to make their choices as was found out by this study that majority of youth aged 20-24 made self decisions when they needed the services. The study also found out that the youth aged 20-24 years had a tendency to trust and consult their peers more than parents as compared to the younger ones. The older youths are in colleges and therefore are free from parents' control and are more sexually active therefore the reason for higher likelihood to have utilized YFRHS especially FP, VCT, and treatment for STIs as per this study findings. This is in agreement with KDHS, 2008/9 which pointed out that youth aged 20-24 years had higher utilization of contraceptives as compared with those younger ones.

4.6.2 Socioeconomic and School Factors and Utilization of YFRHS

The employment/ or occupation of the youths' parent showed no significant association to utilization of YFRHS. The employment status only showed significant association to treatment of Sexually Transmitted Infection. This confirms the finding that there is a cost attached to treatment as was mentioned by some youth. STI management a lot of time involves laboratory investigations that are charged for irrespective of whether the individual is a school youth or not thus explaining the connection between employment status and this utilization. This means that without money the youth might not access and utilize the service.

This finding is in agreement with a study that was done by NCAPD (2005) which showed that generally health service utilization including RHS was tied to economic

aspects of an individual. This finding was also brought out when a big percentage of the youth said that they missed the services due to cost/fee charged on some services.

The implication of this finding is that majority of the youth are likely not to seek medical care and treatment for these infections in time and this can lead to serious reproductive health complications such as infertility in future. The implementation of YFRHS should be done in totality such that no fee should be charged at all for all services offered at YFRH facility.

4.6.3 Socio- cultural Factors and Utilization of YFRHS

Religion had association to some services mainly family planning, VCT and counselling services. It was established that some religions prohibited the youth from utilizing YFRHS. This was evidently brought out when descriptive, chi square and Odd statistics all showed significant relationships. The finding creates a need for religious forums to be used to pass YFRHS messages to the youth and to teach them to be responsible over sexual issues and to make informed and safe choices.

Ethnic group had no significant association to utilization of all services thus disagreeing with a study report in YOUTH and Health World Youth Report 2003 which stated that most ethnic groups prohibit premarital sex and pregnancy and youth were reprimanded for using family planning.

4.6.4 Health Knowledge and Awareness Factors and Utilization of YFRHS

School youth at all levels had generally low knowledge on YRFHS services a fact that led to low utilization of these services. The ones who reported knowing of the specific services given and the YFRHS facility registered increased utilization than those who did not know as was also confirmed by the chi square and Odds analyses. These findings agree with studies by Biddlecom, et al., (2007) and Godia (2010) which

reported that lack of knowledge by the youth was a major factor that caused underutilization of youth friendly reproductive/sexual services. Godia (2010) and Transgrud (2001) further stated that lack of understanding of the importance of sexual health care or knowledge of where to go for care may discourage the youth from using YFRHS.

This is contrary to one of the goals set out in Adolescent Reproductive policy 2007 which intended that reproductive information should be made available to the youth. This shows massive ignorance among the school going youth about YFRHS despite these services being in place in almost all health facilities through comprehensive/combined mode. Chi square analysis showed significant association between awareness and knowledge of RHS and services to utilization and this therefore mean that increasing the knowledge base of the youth by creating awareness concerning the services can greatly improve or scale up utilization.

On sources of RH information, majority (14.1%) of the school going youth sought information from their friend with very few 5.4 % and 4.1% asking parent or teacher respectively. This implies and confirms the literature that the youth due to the sensitive nature of reproductive health issues trust their peers more than the adult population whom they fear might raise judgment of early sexual debut. This finding is in agreement with a study done by Senderowitz (2003) and Tilahun et al.,(2010).

4.6.5 Health System Factors and Utilization of YFRHS

On health system factors, the study established that utilization of YFRHS were affected by health facility organization, key among them were; long queues, facility closure at the time of arrival at the facility. Others were that the youth met

neighbors/relatives at the facility and felt ashamed and being turned back by service provider respectively. Lack of money to pay for the services also featured.

The findings point to the fact that the reproductive health services were not youth friendly because the long queues resulting from serving out of school and school youth at the same point, early facility closure and charging a fee for the services is against the recommendations contained in Adolescent Reproductive Health and Development policy which requires all the aspects of reproductive services to be free for the youth (MOH, 2005).

The findings are also in agreement with other studies which pointed out similar reasons such as unfavourable operation hours which do not accommodate the youth's school schedules, lack of clear directions and services on offer, crowding, lack of privacy as the main impediments to utilization of reproductive health services by the youth (IPPF, 2008; FHI, 2006; WHO, 2004). This finding reveals persistence of prohibitive issues to utilization of YFRHS which have been extensively studied but strategies to solve them by the concerned persons seem not to be quickly forthcoming.

4.7 Implications of the Findings

The study findings show that utilization of YFRHS by youth is still very low and this has serious implications on the youth sexuality and growth. It further signifies the failure of adolescent health policy from meeting its objectives. The school youth in particular are at a great risk of suffering the consequences of poor reproductive health such as Sexually Transmitted Infections , HIV and AIDS, unwanted pregnancy and abortions, and high levels of school drop out rate especially among females, the very

problems which the Adolescent Health policy sought to reverse (GOK,2005; GOK, 2007).

The suggestions brought forth by health service providers that the services need to be made accessible to the school youth through adjustment of operation hours are valid if success in having the school youth fully utilize the YFRHS is to be achieved. The low level of awareness of YFRHS among the school youth means that there is a big gap between policy makers and the community which needs to be bridged by improving on the structures of YFRHS information dissemination to the youth and in deed to the whole nation.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter gives conclusion from the findings from quantitative data and recommendations based on research findings of t independent factors studied as follows; Demographic, socioeconomic and school factors, socio-cultural factors and utilization YFRHS, Health knowledge factors and Health system factors and utilization of reproductive health services. Finally summary of the key findings are also outlined.

The findings show clearly that there are a lot of barriers to successful utilization of YFRHS. Results show that demographic, economic and facility barriers are still impeding utilization of YFRHS.

5.1 Demographic Factors and Utilization of YFRHS

Descriptive and chi square tests showed that there was significant relationship between age and sex of the youth and their utilization of YFRHS. The study established that older youth utilized the services more than the younger youth owing to their increased knowledge of these services $p < 0.05$ thereby rejecting hypothesis one that stated that there was no relationship between demographic factors and utilization of YFRHS. The study therefore concludes that the younger school youth aged between 10-19 years utilization of YFRHS is low and creating awareness of these services to them is important to enable increase their knowledge and understanding and in turn scale up their utilization.

This study concludes that there was disparity between males and females in utilization of YFRHS, for instance more females than males utilized family planning service.

This means that the male youth need to be enlightened on YFRHS issues to help them utilized them more.

5.2 Socioeconomic and School Factors and Utilization of YFRHS

On socioeconomic factors, the study established that parent's employment and type of employment did not play a significant role in the utilization of all YFRHS except for treatment of STIs. Level of education played very significant role in the utilization of all YFRHS as youth in tertiary level/ college registered increased utilization as compared to the school youth in both primary and secondary level of school. Conclusion is that the younger youth have not been adequately been reached with YFRHS information and services. Type of school also had significant relationship to utilization of these services as more youth in boarding schools utilized more than those in day schools thus concluding that utilization was higher among the boarding school youth was due to the semi autonomy that they had and they could use these services without much fear of being reprimanded by parents.

5.3 Socio-cultural Factors and Utilization of YFRHS

Religion had significant relationship to some of the YFRHS while ethnic grouping had no significance to utilization of all YFRHS above the threshold of $p > 0.05$ thus accepting the hypothesis that socio-cultural factors do not have a relationship to utilization of YFRHS.

5.4 Health Knowledge and Awareness Factors Utilization of YFRHS

Knowledge about existence of a reproductive health facility and knowledge about particular services being offered had significant positive influence on utilization of the

services. This therefore calls upon all stake holders to create opportunities that help in passing this crucial information to the youth.

5.5 Health System Factors

Health service factors pointed mainly to the facility organization where both youth and adults were served in the same area thus creating unnecessary long queues which did not favour school youth who were impatient to wait and therefore left without the services. Results further demonstrated contrary to policy objectives that adolescent reproductive should be affordable and even free and yet most facilities still charge the school youth a fee for various RHS.

5.6 Suggestions to Overcome Barriers to Utilization of YFRHS

The health service providers were asked what they thought could be done to enable school going youth and college youth to increase access and utilization of reproductive health services.

1. They unanimously agreed that reproductive service delivery for the youth needs to be given in a separate area of the facility as most of them are shy and may not be willing to be served with together with adults.
2. Training of the service workers on how to handle the school youth
3. The government to improve on staffing so that reproductive health service delivery is delivered effectively and efficiently to avoid unnecessary delays leading to crowding and long waiting time.
4. School health services to include reproductive health sessions

5.7. Summary of Findings

Age, sex, level of education, knowledge of YFRHS had significant influence on utilization of almost all YFRHS such as family planning, counselling, voluntary

counselling and testing for HIV and treatment of sexually transmitted infections while religious affiliation showed significant relationship to utilization of family planning ethnicity did not have any influence on utilization of all the above services. Parents and teachers had minimal participation in educating the youth about youth friendly reproductive health services.

The facility factors found significant was mainly facility organization whereby both the school youth and the adults were being given service in the same area thereby causing long queues and also unfavourable operation hours which led the youth missing services due to closure of the facility.

5.8 Recommendations

The recommendations arising from this study are:

The study has revealed general lack of knowledge, this study recommends active sensitization of the youth in schools through youth forums such as seminars, rallies, chiefs' barazas and any other gathering that creates an opportunity where such information can be shared to scale up their knowledge on the YFRHS and the facilities that are available, this will in turn increase utilization of the services.

There is need to train more school and college peer educators to compliment the health service providers in passing the youth friendly reproductive health information to their peers

The integrated model adopted by most government health facilities have not favoured the youth therefore efforts by the government and partners should be geared towards increasing the number of facilities offering exclusive youth friendly services. This will increase the confidence of the youth and at the same time bridge the distances

and bring these services nearer to the school youth for easier accessibility and in turn enhance utilization by the school and college youth.

The government and partners should try mobile clinic approach and in cooperating them in school health services so that these services are taken to the schools on specific days as a temporary measure as they look for modalities of increasing the number of YFRHS facilities

Need to train more service providers in dealing with the youth so that they may be friendly and appealing to them, this will attract them to the clinics or facilities and in turn improve utilization of the services.

The government and partners should increase funding towards YFRHS to enable service providers to offer these services completely free of charge to enable the school and college youth access them without any constraints. The health care service providers should be mandated to adjust the working days and hours , that is, the facilities should remain open for longer hours up to 6.30 pm and be operated on weekends too to accommodate the school youth schedules.

That more process evaluation be carried out to assess the successes and failures of the YFRHS delivery and identify more effective strategies to address the structural problems/constraints

5.9 Areas of further research

Similar studies need to be done in other districts involving more schools to generate more supportive evidence.

That a comparative study between the urban and rural school and college youth should be done to gauge their utilization patterns for reproductive health services and to inform policy adjustments and formulation.

An age- related research needs to be done to cater for specific age groups for easier generalization

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APPENDIX I: MAP OF KENYA AND STUDY AREA



APPENDIX IV: QUANTITATIVE DATA COLLECTION QUESTIONNAIRE

Date.....

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

PARTICIPANTS' INSTRUCTIONS

Do not write your name; tick only one correct response and multiple responses where applicable. Only youth aged between 10-24 years are eligible for this study. The acronym YFRHS stands for youth-friendly reproductive health services

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. 10-14 years
 - b. 15-19 years
 - c. 20-24 years
3. What is your current level of education?
 - a. Primary school
 - b. Secondary school
 - c. College/Tertiary institution
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 YFRHS?

- a. Yes
 - b. No
7. What is your ethnicity?
- a. Kikuyu
 - b. Luo
 - c. Kamba
 - d. Luhya
 - g. Other
8. Is there any part of your culture that prohibits utilization of YFRHS?
- 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

Part Two-Knowledge and Utilization of Youth-friendly Reproductive Health Services (YFRHS)

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

Utilization of YFRHS

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 |

Part three: Health System Factors

18. Is there youth-friendly reproductive health (YFRHS) facility in your school?

- a. Yes
- b. No

19. How far is YFRH facility from your school?

- a. Near, a short walking distance

- b. Near but requires about ksh.20 for transport
 - c. Far, requires ksh.50 and above for transport
20. If you have ever used a reproductive health service facility, how would you describe how you were handled by service provider?
- a. Good-Friendly, welcoming, handled me well and gave me the service I required
 - b. Moderate-welcomed me but asked too many unnecessary questions before giving me service
 - c. Bad, he/she was harsh rude and denied me service
21. Have you ever visited YFRHS but missed the service you required?
- a. Yes b. No
22. If yes in no.19, 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

APPENDIX V: KEY INFORMANT INTERVIEW GUIDE

1. Do you offer Reproductive Health services (RHS) to the school youth?
2. What is your own view about RHS utilization by the school youth?
3. What RHS do you offer in your facility?
4. What are your operation hours?
5. Which are the days you offer RHS?
6. Do you have a separate service area for school going youth?
7. Would you say that the schools going youths are utilizing the RHS?
8. If yes what is the average age of the young persons seeking RHS?
9. What is the gender who seeks RHS most?

- 10. Which RHS are mostly sought for by school going youth?
- 11. What in your view would you say hinder/encourage the youth to utilize RHS?
- 12. What are the challenges you face as a health provider of RHS?
- 13. Suggest ways to scale up utilization of YFRHS by the school youth.

APPENDIX VI : RESEARCH AUTHORIZATION (Thika District Education Office)

MINISTRY OF EDUCATION

Telephone (067) 31398 / 31272 (D.L.)
FAX: (067) 31272
When Replying please quote



DISTRICT EDUCATION OFFICE
THIKA WEST DISTRICT
P.O. BOX 262,
THIKA.

Ref: THK/ADM/234/YOL/1/79

1ST SEPTEMBER 2011

**ALL THE PRINCIPALS
THIKA WEST DISTRICT**

**REF: RESEARCH AUTHORIZATION – PEREZ AKINYILOBONYO
REG NO P57/PT/12366/2009**

The above mentioned is a student at Kenyatta University and is authorized to carry research on **Determinants of access and utilization of youth friendly reproduction health services among schools** in Thika West district.

Please accord her the necessary assistance.


PURITY NGURE
FOR: DISTRICT EDUCATION OFFICER
THIKA WEST

APPENDIX VII : RESEARCH AUTHORIZATION(NCST)

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams: "SCIENCETECH", Nairobi
 Telephone: 254-020-241349, 2213102
 254-020-310571, 2213123
 Fax: 254-020-2213215, 318245, 318249
 When replying please quote

P.O. Box 30623-00100
 NAIROBI-KENYA
 Website: www.ncst.go.ke

Our Ref:

NCST/RCD/12A/-012/230/4

Date:

9th January, 2012

Perez Akinyi Obonyo
 Kenyatta University
 P. O. Box 43844 – 00100
 NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Determinants of utilization of youth friendly reproductive health services among school going youth in Thika West District, Kiambu County, Kenya*" I am pleased to inform you that you have been authorized to undertake research in **Thika West & Ruiru Districts** for a period ending *31st August 2012*.

You are advised to report to the **District Commissioners, the Medical Officer of Health & the District Education Officers, Thika West & Ruiru Districts** before embarking on the research project.

On completion of the research, you are expected to submit **one hard copy and one soft copy** of the research report/thesis to our office.

DR. M. K. RUGUTT, PhD, HSC
DEPUTY COUNCIL SECRETARY

Copy to:

The District Commissioners
 Thika West District
 Ruiru District