UTILIZATION OF CONTRACEPTIVES AMONG SECONDARY SCHOOL ADOLESCENT GIRLS IN KARURI, KIAMBA SUB-COUNTY, KIAMBU COUNTY

BY
MARY WANJIRU MURIGI (BScN)
Q139/CTY/PT/20277/2012

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTERS DEGREE OF PUBLIC HEALTH, REPRODUCTIVE HEALTH OPTION IN THE SCHOOL OF PUBLIC HEALTH, KENYATTA UNIVERSITY
DECLARATION

I hereby declare that this is my original work and has not been presented for a degree in any other university.

Signature________________________  Date________________________

Mary Murigi
Q139/CTY/PT/20277/2012
Department of Environmental and Population Health
Kenyatta University

Supervisors

This thesis has been submitted for review with our approval as university supervisors

1. Signature________________________  Date________________________
   Dr. Jackim Nyamari
   Department of Environmental and Population Health
   Kenyatta University

2. Signature________________________  Date________________________
   Dr. Wekesa Barasa
   Department of Environmental and Population Health
   Kenyatta University
DEDICATION

To my dear brother, Kevin Muhia Murigi you have been my rock. Thank you for always encouraging me to be the best.
ACKNOWLEDGMENT

I take this opportunity to appreciate everyone who has supported me and contributed to my writing this thesis. My special thanks go to my supervisor’s Dr. Jackim Nyamari and Dr. Wekesa Barasa for their relentless advice, encouragement and timely advice during this work. The completion of this thesis would not have been possible without their immense guidance.

Special thanks goes’ to Dr. Keraka the head of the Department of Environmental Health, School of Public Health, Kenyatta University for equipping me with knowledge and materials to conduct research. My sincere gratitude goes to my employer, Presbyterian University of East Africa, for supporting my continuous professional development. I am also grateful to the County Commissioner and the County Director of Education Kiambu County for granting me the permission to carry out the study in Kiambu County. Special thanks go to the Divisional Educational Officer Karuri Town Council, Kiambu County for his undue support during the data collection process. My appreciation also goes to my research assistants and to all participants who took part in this study. This would not have been possible without your cooperation. May God shower his blessings upon you all.
# TABLE OF CONTENTS

DECLARATION

DEDICATION

ACKNOWLEDGMENT

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS & ACRONYMS

OPERATIONAL DEFINITIONS

ABSTRACT

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

1.2 Problem Statement

1.3 Justification

1.4 Research Questions

1.5 Objectives

1.6 Significance of the study

1.7 Conceptual Framework

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

2.1 Global Burden of Adolescents Unplanned Pregnancies

2.2 Level of Contraceptive Utilization

2.3 Factors Influencing Adolescent’s Utilization of Contraceptives

2.3.1 Age of the adolescent

2.3.2 Perceived susceptibility and severity of pregnancy outcomes

2.3.4 Gender, Sexual Violence and Coercion

2.3.5 Access to Information

2.3.6 Social- Cultural and Religious norms

2.3.7 Economic Factors
4.7 Use of Contraceptives in Future ................................................................. 39
4.8 Opinion on Use of Contraceptives ......................................................... 39
4.9 Perceptions on Contraceptives ............................................................... 41
4.10 Seeking Reproductive Health Services ............................................... 43
4.11 Factors Related to Engaging in Sexual Activities ................................ 43
  4.11.1 Age .................................................................................................. 43
  4.11.2 Type of school .............................................................................. 44
4.12 Factors Associated with Utilization of Contraceptives ....................... 45
  4.12.1 Socio-demographic Factors .......................................................... 45
  4.12.2 Sexual Debut .............................................................................. 46
  4.12.3 Knowledge .................................................................................. 47
  4.12.4 Accessibility ............................................................................... 47
4.13 Perceptions on Contraception and Contraceptive Utilization .......... 48
4.14 Association between Reproductive Health Aspects and Utilization of Contraceptives .... 49

CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS ...... 51

5.0 Introduction .............................................................................................. 51
5.1 Discussion ............................................................................................... 51
  5.1.1 Level of Contraceptive Utilization ................................................ 51
  5.1.2 Factors Influencing Contraceptive Utilization ............................... 53
5.2 Conclusion .............................................................................................. 62
5.3 Recommendations .................................................................................. 62
5.4 Future Research ..................................................................................... 63

REFERENCE .................................................................................................... 64

APPENDICES ................................................................................................. 73

  5.1 Appendix I: Consent Form .................................................................... 73
  5.2 Appendix II: Adolescent’s Minors (below 18 years) Assent Form .......... 76
  5.3 Appendix III: Semi-Structured Questionnaire ...................................... 77
  5.4 Appendix IV: Focused Discussion Consent Form ............................... 82
  5.5 Appendix V: Focused Group Discussion guide .................................... 82
  5.6 Appendix VI: Kenyatta University Ethics Committee Approval .......... 84
  5.7 Appendix VII: National Commission for Science and Technology Approval .... 85
  5.8 Appendix VIII: County Commissioner Kiambu County Approval .......... 86
LIST OF TABLES

Table 3.1: Proportionate sampling .............................................................................................................. 24
Table 4.2: Socio-demographic characteristics of the study participants .................................................. 31
Table 4.3: Knowledge on contraceptives .................................................................................................... 32
Table 4.4: Sexual activity ............................................................................................................................ 34
Table 4.5: Sex and perceived associated risks .......................................................................................... 36
Table 4.6: Contraceptive utilization .......................................................................................................... 37
Table 4.7: Use of contraceptives in future ................................................................................................. 39
Table 4.8: Opinion on factors influencing an adolescent choice to use contraceptives .......................... 40
Table 4.9: Perceptions on contraceptive use ............................................................................................... 42
Table 4.10: Reproductive health services sought from the hospitals ..................................................... 43
Table 4.11: Comparison of sexual activity based on age ......................................................................... 44
Table 4.12: Factors related to engaging in sexual activity ......................................................................... 45
Table 4.13: Association of Socio-demographic factors and utilization of contraceptives .................. 46
Table 4.14: Relationship between sexual debut and contraceptive utilization ........................................ 47
Table 4.15: Influence of knowledge on contraceptive utilization ............................................................. 47
Table 4.16: Accessibility and contraceptive utilization .............................................................................. 48
Table 4.17: Perceptions on contraception and contraceptive utilization ................................................. 49
Table 4.18: Association between reproductive health aspects and contraceptive utilization .... 50
LIST OF FIGURES

Figure 4.1: Type of modern contraceptive ............................................................... 33
Figure 4.2: Source of information on contraceptives ............................................... 34
Figure 4.3: Age of sexual debut among the study participants .............................. 35
Figure 4.4: Reasons for not using contraceptives ...................................................... 38
Figure 4.5: Discussion on contraceptive use ............................................................ 42
# ABBREVIATIONS & ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC</td>
<td>Antenatal care</td>
</tr>
<tr>
<td>FDGs</td>
<td>Focused Group Discussions</td>
</tr>
<tr>
<td>ICPD</td>
<td>International Conference on Population and Development</td>
</tr>
<tr>
<td>IPPF</td>
<td>International Planned Parenthood Federation</td>
</tr>
<tr>
<td>KDHS</td>
<td>Kenya Demographic Health Survey</td>
</tr>
<tr>
<td>MDGs</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
</tr>
<tr>
<td>PPS</td>
<td>Proportionate Sampling</td>
</tr>
<tr>
<td>RH</td>
<td>Reproductive Health</td>
</tr>
<tr>
<td>SRH</td>
<td>Sexual and Reproductive Health</td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>YFS</td>
<td>Youth Friendly Services</td>
</tr>
</tbody>
</table>
OPERATIONAL DEFINITIONS

Adolescents: World Health Organization defines an adolescent as a person aged 10-19 years.

Adolescent fertility rate: Number of births per 1000 women aged 15-19 years

Contraception: Methods or devices used to prevent pregnancy.

Contraceptives: Device, drug or chemical agent that prevents conception.

Reproductive health: Reproductive health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes.

Sexual reproductive health: Sexual health means having a responsible, satisfying, and safe sex life and not merely having sex for reproduction.

Sexual Activity: Having ever engaged in sexual intercourse

Contraceptive utilization: Ever use of modern contraceptive (both current and past use)
ABSTRACT
Despite high sexual activity among adolescent girls in Kenya, contraceptive uptake is very low with only about 26 percent sexually active adolescent girls currently using a contraceptive method. This exposes them to HIV infections and unplanned pregnancies which consequently lead to school dropouts, unsafe abortions, and lack of employment opportunities. The study aimed at assessing the utilization of contraceptives among secondary school adolescent girls in Karuri Town Council, Kiambu County. The specific objectives were to establish the level of contraceptive uptake and factors influencing contraceptive utilization amongst secondary school adolescent girls in Karuri Town Council, Kiambu County. This was a cross-sectional study, employing stratified random sampling technique. The research instruments were self-administered semi-structured questionnaires and Focused Group Discussions (FGDs). Quantitative data from questionnaires was checked daily for completeness and coded for appropriate computer entry. Quantitative data analysis was conducted using IBM SPSS® 21.0 and involved univariate and bivariate analysis. Chi-square values were used to test the significance of the association between the dependent and independent variables. Qualitative data from FGDs was transcribed and analyzed by thematic content analysis technique. Overall, 421 girls aged between 13.0 to 19.0 years (mean age: 16.3±1.4 years) took part in the study. Findings showed that despite majority (77.5%) of the adolescent girls having had sexual debut by the age of 15 years, contraceptive utilization was low (43%) with majority of this (83.6%) using the Emergency pill. Age, knowledge on contraceptives, Accessibility and perception were cited as the major factors influencing utilization. Other factors identified included transactional sex, culture, unplanned sexual activity and sexual violence. The results revealed that age of the adolescent, knowledge of contraceptives, perception and accessibility had positive significant effect on contraceptive utilization. Adolescents aged 18 years and above were more likely to utilize contraceptives as compared to those of a lesser age (p=<0.001; OR: 9.870 (95% CI: 3.781-25.763)). Those with knowledge on contraceptives were OR 3.2 times more likely to use contraceptives p=0.025 similarly, accessibility was significantly associated with increased contraceptive utilization (p=0.34, 95% CI: 1.054-4.187). Adolescents who perceived use of contraceptives as wise were more likely to use a contraceptive than those of a divergent opinion (OR: 2.053, (95% CI: 1.024-4.115); p=0.041). Despite a high level of knowledge (90.1%) and an early age at sexual debut among secondary school adolescent girls; the study depicted that contraceptive utilization among secondary school adolescent girls remains low (43%). There exists a gap between contraceptive knowledge and practice among secondary school adolescent girls, indicating that knowledge does not always amount to practice. There is therefore need to develop age specific reproductive health messages to guide school education curriculum as well as parent or guardian - child communication. Developing adolescent friendly health services will improve adolescent’s sexual and reproductive health which will subsequently improve contraceptive utilization.
CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The World Health Organization (WHO) defines an adolescent as a person aged 10-19 years (WHO, 2007). It’s a period of transition from childhood into adulthood; a time of physical and emotional change as the body matures and the mind becomes more questioning and independent. Biologically, they can become parents, though psychologically without being ready for the parental responsibility (WHO, 2007).

There are about 1.2 billion adolescents worldwide making a fifth of the world’s population (UNICEF, 2012). Eighty percent of the adolescents live in developing countries therefore making a significant percentage of the population (UNICEF, 2012).

Adolescent fertility regulation and pregnancy prevention is one of the most important health care issues of the twenty-first century (WHO, 2004). This is because more than 16 million adolescent girls give birth every year worldwide and an additional 5 million have abortions (WHO, 2014). Sub Saharan Africa accounts for 50% of these births (WHO, 2014). As a result, the need for specially tailored adolescent’s sexual health services has become more pressing.

Industrialization and urbanization has eroded family ties and traditional values that inhibited premarital sexual activity (IPPF, 2007). Adolescents therefore are no longer always able to rely on intergenerational relationships, which in the past might have given them information about responsible sexual behavior (IPPF, 2007). Parents on the other hand are uncomfortable discussing sexuality and contraception with their children, a task that has been left to schools already limited by the current debates on sex education (Oindo, 2002). As the generational gap
widens, adolescents are forced to learn about sexual issues from their peers or the mass media (Brown, Tucker, & Ladin, 2005).

Currently there are conflicting messages about adolescent sexuality; the promotion of sexual involvement on one extreme and urging of chastity on the other makes the adolescents feel guilty, uncertain or indecisive about contraception (Blanc, 2002). Globally, studies on adolescent sexual behavior show their premarital sexual encounters are generally unplanned, infrequent and sporadic (Oindo, 2002). This pattern predisposes them to unplanned pregnancy. Unplanned adolescent pregnancy is associated with unsafe abortion a cause of 13% of global maternal mortality (Nyalali, et al., 2013). It’s more dangerous for adolescents as they tend to seek abortion later in pregnancy (Nyalali, et al., 2013). Meeting the contraceptive needs of these adolescents could prevent this problem.

In Africa, adolescents account for 23% of the total population (UNICEF, 2012). Sub-Saharan Africa has the greatest proportion of adolescent girls who have begun child bearing (UNICEF, 2012). In many parts of Sub-Saharan Africa, adolescent’s sexual and reproductive health (SRH) remains a highly charged moral and religious issue (Woods, et al., 2006). Studies have shown that while most pregnancies to adolescent girls in sub-Saharan Africa are unplanned, the use of contraceptives remains low (Cleland, Ali, & Shah, 2006).

In Kenya the situation is not different. Contraceptive utilization among adolescents remains low with an estimated 5.5 million Kenyan adolescent girls giving birth annually (CBS, 2003). The Kenya Demographic Health Survey report of the year 2008/09 showed most adolescents now aged 15-19 years had had sex before they were 15 years old; some become sexually active before the age of 12 years (KNBS and ICF Macro, 2010). While this is the case, sex education in
secondary schools in Kenya is limited and, in some cases, non-existent (Central Bureau of Statistics, 2003).

Addressing adolescent SRH issues therefore continues to be a major challenge in Kenya (Onyango, 2003). The lack of sexuality education in Kenyan schools, poor access to information about sexual and reproductive health, sexual coercion and violence and limited access to reproductive health services for Kenyan adolescents has led to high rates of adolescent pregnancy in Kenya (MOH, 2007).

Parents and educators fear that sexuality education will encourage adolescents to have sex but research shows that sexuality education does not hasten the initiation of or increase sexual activity (UNESCO, 2009). A study covering four African countries showed that adolescents generally welcome sexuality education in schools. The majority of the adolescents surveyed in the study reported that sexuality education in schools does not encourage them to have sex (Bankole & Malarcher, 2010). Adolescents have their first sexual experience at an early age and unlike popular believe, educating adolescents on contraception does not promote promiscuity (Bankole & Malarcher, 2010).

1.2 Problem Statement

Worldwide there is an estimated 14.3 million births to adolescents; 2.5 million adolescent girls worldwide have an unsafe abortion annually (UNFPA, 2008). Globally, adolescents face a high unmet need for contraception further predisposing them to unplanned pregnancy and risk of unsafe abortion (Blum, 2007). The evidence is consistent with what is observed in Kenya where one in five adolescents has ever been pregnant (Khan & Mishra, 2008).
According to KDHS 2008-09 by the age of 15 years most adolescent girls have had their first sexual experience. This predisposes them to unplanned pregnancies and STI’s. Though many adolescent girls in Kenya wish to avoid pregnancy they are not using contraceptives to make this possible; as a result 47% of births to these adolescents are unplanned. Consequently, the age-specific fertility rate among adolescents aged 15-19 years in Kenya is 103 per 1000 women (KNBS and ICF Macro, 2010). While this is the scenario, the contraceptive prevalence rate for any modern method of contraception among unmarried sexually active adolescent girls aged 15-19 years in Kenya is 23% (KNBS and ICF Macro, 2010).

Adolescents’ unplanned pregnancies are one of the leading causes of school dropout among Kenyan adolescent girls. Up to 13,000 Kenyan adolescent girls drop out of school every year as a result of unplanned pregnancy (Hussain, 2012). Adolescent pregnancy is associated with high Maternal Mortality Rates (MMR) from pregnancy and delivery complications adding to the MMR in Kenya currently estimated at 488/100,000 live births (KDHS, 2008-09). This is prompted by the unmet need of contraception among this sub-population. There is therefore need to focus on adolescent contraceptive utilization.

In Karuri Town Council, Kiambu County it is no different. According to antenatal care records from Karuri Sub-County hospital, most of the women coming for delivery and antenatal care services are between the ages of 13-19 years 60% of whom are secondary school adolescent girls (ANC records, 2012/2013). Sixty five percent of these girls have had to drop out of school due to pregnancy (ANC records, 2012/2013).

While this is the scenario, the family planning clinic is the least utilized in the health centers despite giving family planning services for free. The evidence therefore is overwhelming that the
Sexual and Reproductive Health of the adolescent population is important to Kenya’s development. It’s a public health priority that demands public health interventions. It’s against this background that this study intended to assess contraceptive utilization among the adolescent girl population an area that has not been extensively explored by research.

1.3 Justification

Early motherhood tends to impede the pursuit of other life options such as formal schooling and career development that might compete with childbearing (Ikamari & Towett, 2007). The large and rapidly growing adolescent population prompts governments to address the health and development needs of adolescents as a commitment for their future economic, social and political progress (World Bank, 2007).

Investing in contraception therefore is more cost effective than managing unplanned pregnancy and caring for more children (Crissey, 2008). According to a report by World Bank, if 1.6 million adolescent girls in Kenya, completed secondary school, and adolescent mothers were employed instead of having become pregnant, the cumulative effect could have added $3.4 billion to Kenya’s gross income every year (Chaaban & Cunningham, 2011).

The study is in line with the millennium development goals that reiterated the point: “Reaching adolescents is critical to improving maternal health & achieving other Millennium Development Goals” (WHO, 2013). Meeting commitments made by world leaders for the Millennium Development Goals (MDGs) requires improving the health and well-being of adolescents (Cleland, Mayhew, & Campbel, 2006). ICPD conference (1994) main objective was; “To address adolescent SRH issues and to substantially reduce all adolescent pregnancies,”
It is also in line with the Kenyan constitution which states, “Health is a constitutional right for every citizen” (The Kenyan Constitution, 2010). This includes contraception which is a reproductive health right to adolescents. Contraceptives are available for free in the health centers in Karuri Town Council; yet adolescent pregnancies continue to increase. This study arrived at identifying reasons why secondary school adolescent girls fail to use the contraceptives to prevent pregnancy.

1.4 Research Questions

1. What is the level of contraceptive uptake among secondary school adolescent girls in Karuri Town Council, Kiambu County?

2. What factors promote contraceptive utilization among secondary school adolescent girls in Karuri Town Council, Kiambu County?

3. What factors hinder contraceptive utilization among secondary school adolescent girls in Karuri Town Council, Kiambu County?

1.5 Objectives

1.5.1 Broad Objective

To assess the utilization of contraceptives among secondary school adolescent girls in Karuri Town Council, Kiambu County

1.5.2 Specific Objectives

1. To establish the level of contraceptive uptake among secondary school adolescent girls in Karuri Town Council, Kiambu County.
2. To establish factors promoting utilization of contraceptives among secondary school adolescent girls in Karuri Town Council, Kiambu County.

3. To identify factors hindering the utilization of contraceptives among secondary school adolescent girls in Karuri Town Council, Kiambu County.

1.6 Significance of the study

Most studies on adolescents are on sexual activity among this sub population and the consequences of their risky sexual behavior. However, little research has been done on adolescent contraception among secondary school girls in Kenya as well as Kiambu County, bridging the information. The study therefore, adds to the knowledge on the level of contraceptive uptake and factors influencing contraception among secondary school adolescent girls hence closing the conceptual gaps in adolescent’s utilization of contraceptives. The study through its findings contributes to future review and revision of policies and practices regarding adolescent’s reproductive health, sexuality and family life. The study contributes to future review and revision of policies and practices regarding adolescent’s SRH. This study will serve as a basis for future research on adolescents’ contraception

The findings of this study will be shared with the teachers and parents of Karuri Community and hence contribute to devising SRH programmes that will work towards empowering the girl child as unplanned pregnancies are the leading causes of school drop outs among the girl child population in Kenya.
1.7 Conceptual Framework

**Independent variable**

- Socio-Demographic variables e.g. Age, religion, culture

**Independent variable**

- Knowledge on contraceptives

**Independent variable**

- Economic variables

**Independent variable**

- Perceived susceptibility and severity to pregnancy outcomes

**Dependent variable**

Contraceptives utilization among the secondary school adolescent girls

Adopted from (Ajzen & Fishbein, 1980) and Literature review.
The conceptual framework is based on the theory of reasoned action and literature review. The theory of reasoned action postulates that behavior is influenced by several factors among them, ones belief about the outcome of an action, ones assessment that a particular behavior is desired by significant others and a motivation to comply with the views of the significant others (Ajzen & Fishbein, 1980). In the social environment there are several factors that would be considered as significant others for example, peers, parents, religion, culture, knowledge/available information and economic factors.

According to this theory, adolescents would have to believe that use of contraceptives would prevent unwanted pregnancies and sexually transmitted infections and that the significant others would not want them to get unplanned pregnancies and sexually transmitted infections. Complying with the significant others would mean that adolescents would take action or not take action. Taking the action to prevent pregnancy would influence adolescent’s utilization of a contraceptive method.

With this theory in mind, literature review revealed that contraceptive utilization among adolescents is influenced by socio-demographic variables such as age at sexual debut, economic variables, knowledge on contraceptives, perceived susceptibility to pregnancy and perceived severity of pregnancy outcomes among the adolescents as independent variables which will either promote or hinder contraceptive utilization.
CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

An adolescent as a person aged 10-19 years (WHO, 2008). It’s a time of increased physical and mental changes that affect their sexuality and sexual preferences. Adolescence, with its many changes, has long been considered a turbulent life stage (Imaledo, Peter-Kio, & Asuquo, 2012). In addition to pubertal stages, the adolescent faces psychological challenges associated with peer relationships, self identity and exploration of possible sexual relationships with the opposite sex (Imaledo, Peter-Kio, & Asuquo, 2012).

Contraception is defined as the use of a contraceptive method to prevent pregnancy by interfering with ovulation, fertilization, and/or implantation (Csapo, 2002). Contraceptives help women plan when and how many children to have (Csapo, 2002). Contraceptive methods are classified as hormonal or non hormonal methods. They include condoms, pills, sterilization, injections, intra-uterine devices, spermicidal and implants (Apter, 2012). The main contraceptive options for adolescents are condoms backed up by hormonal contraception however, hormonal contraceptives should be used in a longer, mutually monogamous relationship (Apter, 2012). With the exception of male and female sterilization, all methods that are physiologically safe for adults are also physiologically safe for adolescents (WHO, 2007).

The International Conference for Population and Development (ICPD, 1994) recognized that reproductive health problems of adolescents had been ignored largely by existing health, education and other social programmes. The conference adopted an action plan for programmes addressing the SRH problems of adolescents globally. Among the objectives outlined were; “To
address adolescent sexual and reproductive health issues and to substantially reduce all adolescent pregnancies,” (ICPD, 1994).

Without contraceptives, women of any age will be unable to realize their own desire to avoid a pregnancy (Cleland, Ali, & Shah, 2006). The prevention of unplanned adolescent pregnancies requires: a desire to use contraceptives, a good contraceptive method, ability to obtain the contraceptive method, and ability to use it. If one of this is missing contraception will fail (Apter, 2012).

Adolescents face deep social and psychological barriers that older women normally do not face; they all have their roots in the denial of adolescent’s sexual rights (Cleland, Ali, & Shah, 2006). Sexual health for adolescents is based on; recognizing their sexual rights, sexuality education and counseling, and high quality confidential services (Godia, et al., 2013).

Addressing the Sexual and Reproductive Health challenges faced by adolescents in Sub Saharan Africa is critical given the large contribution adolescent childbearing makes to the high levels of fertility observed in many Sub-Saharan African countries (Glasier, 2006). Improved Sexual and Reproductive Health among adolescents is likely to raise women’s status and reduce poverty among families (UNFPA, 2010).

2.1 Global Burden of adolescents unplanned pregnancies

Worldwide approximately 16 million adolescents give birth annually; this constitutes 11 percent of all births. The majority (95%) of these births occur in low and middle income countries (WHO, 2008). Many unmarried adolescents worldwide are becoming sexually active at early ages, prompted by the mass media presentation of sex as exciting and risk-free (Were, Kioli, & Kargat, 2012).
In many developing countries the situation is not different. Girls under age 15 account for 2 million of the 7.3 million births to girls less than 18 years every year (UNFPA, 2013). About 19 percent of young women in developing countries became pregnant before the age of 18 years (UNFPA, 2013). In sub-Saharan Africa for example 28% of women give birth by age 18 years (Population Reference Bureau, 2007). If current trends in sub-Saharan Africa continue, the number of girls under 15 years who give birth is expected to rise from 2 million to about 3 million in 2030 (UNICEF, 2012).

Over 200 million women worldwide have no access to modern and effective contraceptives (UNFPA, 2013). In the developing countries, the lack of access to family planning results in 76 million unplanned pregnancies each year (Population Reference Bureau, 2007). Disapproving healthcare providers and community discourages adolescents from seeking reproductive health care (UNFPA, 2003). Contraceptive services need to be “youth-friendly” in order to encourage adolescents to seek reproductive health care (Godia, et al., 2013).

Adolescents often terminate unwanted pregnancies through clandestine induced abortions, which can lead to maternal complications, including death while children born to adolescent mothers are more likely than those born to older women to be underweight and premature most dying within the first month (Gipson, Koenig, & Hindin, 2008). In East Africa, one in five maternal deaths is due to unsafe abortion; a large proportion of these deaths are due to unplanned pregnancies (Bankole & Malarcher, 2010).

Though contraception can prevent these abortions, modern contraceptive use remains low among sexually active adolescents in developing countries (Lloyd, 2005). In Haiti for example, only 33% of single sexually active adolescents and 9% of their married peers use a modern
method of contraception (Population Reference Bureau, 2007). Among sexually active Nigerian female high school students, 47% use the rhythm method of contraception; 21% oral contraceptive pills; and 6% condoms (Okpani, 2000).

In Kenya almost half of all births among adolescents are unplanned. Fifty two percent of the Kenyan adolescents aged between 15-19 years are sexually active; according to Kenya Demographic Health Survey report 2008/09, 12% of adolescent girls and 22% of adolescent boys now aged 15-19 had had sex before they were 15 years old (KNBS and ICF Macro, 2010). Estimates from the survey showed that 18% of adolescent girls aged 15–19 years in Kenya had begun childbearing (KNBS and ICF Macro, 2010).

2.2 Level of Contraceptive Utilization

According to the Kenya Demographic Health Survey 2008/09, Contraceptive Prevalence Rate (CPR) for any modern method is 25% for sexually active adolescents aged 15-19 years. Among unmarried sexually active adolescents of the same age CPR for any modern method is 23% (KNBS and ICF Macro, 2010). A Condom is the most commonly used method among the adolescents (KNBS and ICF Macro, 2010). A research by Oindo in Kisumu Kenya showed that the majority (73.5%) of adolescents are sexually experienced with the level of contraceptive use at 57.5% (Oindo, 2002).

The results of a research done by Ikamara in Kenya showed that the majority (62%) of Kenyan adolescents are sexually experienced. The mean age at first sex is 16.2 years (Ikamari & Towett, 2007). The ever use of contraception among the sexually experienced adolescent was (46.9%) with 37.7% reporting ever use of modern contraceptives. Current use of contraceptives among the adolescents was however low at 21.5% with 9.2 percent on injection, 3.8% on the pill and 2.8% on condoms (Ikamari & Towett, 2007).
2.3 Factors Influencing Adolescent’s Utilization of Contraceptives

Recent years have been marked by increased social change that makes information about sexual reproductive health readily available through mass media; these information may make engagement is sexual activities seem okay hence leading to increased adolescent pregnancy (UNFPA and the Alan Guttmacher Institute, 2008). Although some adults may find the idea disturbing, the reality now is that many adolescents have sexual relations before they are ready for marriage and families (Rose, 2012). This gap between adult attitudes and adolescent realities is a recipe for early pregnancy. Compounding all the problems associated with the early experience of first sexual intercourse before marriage is the low level of contraceptive use amongst adolescents (Nyalali, et al., 2013).

Reasons for non-use of contraception among adolescent’s include; lack of access to contraceptive services, age at the time of initiation of sexual activity, having a sexual partner, personal or religious beliefs, inadequate knowledge about the risks of pregnancy following unprotected sexual relations, limited decision-making ability with regard to sexual relations and contraceptive use, incest, and rape (Greenberg, Makino, & Coles, 2013).

A study conducted by Nzioka in Makueni District, Kenya found that contraceptive use among adolescent girls was hindered by inaccessibility to services, fear of side effects and religious beliefs. Most girls used untested traditional methods of contraception, and they did not have skills to resist sexual advances or negotiate condom use (Nzioka, 2004). Fifty percent of the adolescents are ashamed to use contraceptives, 49% feared parental reaction should their contraceptive use be discovered and 43% did not trust contraceptives (Mwaba, 2000). Adolescents’ attitudes of shame, fear of parental disapproval and distrust in the efficacy of
contraceptives all pose possible barriers to adolescent’s utilization of contraceptives to prevent unplanned pregnancies

2.3.1 Age of the adolescent

A research by Ikamari on sexual initiation and contraceptive use among adolescent females in Kenya showed that use of contraceptives and sexual initiation increased with the adolescent’s age (Ikamari & Towett, 2007). An American study found that those who began having sex at young ages were less likely to use contraception, and tend to engage in higher risk sexual behaviors such as alcohol or drug use prior to sexual intercourse (Moore, et al., 2008). A research in the United Kingdom found that, sex at an early age is compounded by lack of knowledge, lack of access to contraception, lack of skills and self-efficacy to negotiate contraception, or inadequate self-efficacy to resist pressure (Tripp, 2005).

The older the girl at the time of initiation of sexual activity, the more likely she is to use contraception regularly and use a modern method. Younger girls are likely not to use or use them ineffectively. They rely on the male partner’s decision (Oindo, 2002).

2.3.2 Perceived susceptibility and severity of pregnancy outcomes

In the process of becoming adults, adolescents constantly analyze the world around them, testing the boundaries of what is possible. This can result in risk-taking behavior. Adolescents may for example perceive the risk of pregnancy as low, and may therefore use an ineffective contraception method or none at all, or use a method incorrectly (Apter, 2012).

Studies have shown that adolescents usually engage in unplanned, sporadic sexual activity. As a result, they don’t use contraceptives at the time of first intercourse (Oindo, 2002). If adolescents do not think they are at risk of pregnancy and have the attitude “it won’t happen to me”, then
they are less likely to make any decision at all regarding contraception (Jay, Durant, Shoffitt, Linder, & Litt, 2007). Many adolescents seek information on contraception only after a pregnancy scare. They are less likely to possess the motivation and skill to use a contraceptive method correctly (WHO, 2004).

Adolescents have inaccurate or incomplete information about sexuality, reproduction and contraception (Bankole & Malarcher, 2010). A study in Uganda found that two in three females did not know that condoms should be used only once (Bankole, 2007) and a study in Ethiopia showed that although nearly all adolescents knew that unprotected sex could result in HIV infection, less than half realized it could also result in pregnancy (Bankole & Malarcher, 2010).

2.3.4 Gender, Sexual Violence and Coercion

Female adolescents are often socialized to abstain from sexual activity until marriage while boys are regarded as “men” if they engage in sexual activities at an early age. Girls receive positive reinforcement for being quiet, innocent and unaware of sexual matters. This reduces their ability to refuse unwanted sexual advances, negotiate condom use or safer sexual practices when sexual intercourse is desired. This imbalance makes it very difficult for them to discuss matters such as the desired timing and number of children and contraceptive use (WHO, 2004).

The sexual offenses act of Kenya 2006 protects children and women against any form of sexual violence and details the punishment prescribed by law to perpetuators of sexual offenses; this ranges from five years for attempted rape cases to life imprisonment for rape, upon conviction (GOK, 2006b). Young age is a known risk factor for a woman’s likelihood of experiencing violence at the hands of an intimate partner. The forced sexual activities and intimate partner
violence increase girls’ vulnerabilities to pregnancy and non likelihood to negotiate protection against HIV/AIDS and contraception (Krug, Dahlberg, Mercy, Zwi, & Lazono, 2002).

2.3.5 Access to Information

Unplanned pregnancies among adolescents happen despite the best of contraceptive intentions. The effectiveness of adolescent pregnancy prevention programs remains below desired levels (Gomes, 2008). Adolescents' success in avoiding pregnancy often depends on having access to contraceptive information, methods and services (Gomes, 2008).

Adolescents frequently lack essential information on contraceptive methods, and the information they have is often incorrect; most get the information from their peers (Mehta & Mathur, 2000). A research on sexual initiation and contraceptive use among females in Kenya found education to be positively associated with the timing of first sex and contraceptive use (Ikamari & Towett, 2007).

According to a research in Nigeria adolescents are more likely to be sexually active if their peers are sexually active. Myths around contraception can have a large bearing on whether and how adolescents seek contraceptive services (Otoide, Orosange, & Okonofua, 2001). A study conducted among adolescents in Nigeria revealed that the myth that contraception caused infertility motivated seeking of abortion services rather than contraceptive services (Stuart S, 2009). In South Africa, 23% of the adolescent pregnancy is caused by girls seeking to prove their fertility. This perception encourages adolescents to engage in unprotected sexual intercourse and avoid using contraceptives so as to prove their fertility (Sibeko, 2012 & Mwaba, 2000).

A study of model sex education programmes found that while a variety of programmes were quite effective at increasing adolescent’s level of knowledge of contraception, they had little
impact on their behavior. The relationship between what adolescents know and how they behave is perhaps the most salient issue (NCPD, 2005).

WHO case studies show that adolescents do not consistently and correctly use contraceptives at sexual debut, especially females. There is a large gap between knowledge, ever use and consistent contraceptive use, particularly with reference to condoms and the pill. In spite of the high level of awareness of the condom, there is little indication of its consistent and regular use (WHO, 2013).

Lack of comprehensive sex education in school, home or youth centers predisposes adolescents to incorrect or deficient information about contraception (UNFPA/WHO/UNICEF, 2009). The topic of sexual intercourse is taboo even in most American households. Few schools in America have adequate sex education programs. As a result, most adolescents first learn about sex from their misinformed and misguided peer (Allan Guttmacher Institute, 2002).

Most adolescent girls are forced to drop out of school or are expelled by the school administration upon becoming pregnant (MOH, 2007). Evidence shows that lack of community involvement can be a barrier to adolescents’ access to both contraceptive information and services (Onyango, 2003).

2.3.6 Social- Cultural and Religious norms

A research in Pittsburg showed that religiosity was not significantly associated with contraceptive use at last intercourse or planned contraceptive use (Gold, et al., 2010). In other researches religion has been found to influence adolescent’s contraception and sexual activity with some researches showing religion to be associated with less use of condoms and or hormonal methods (Sam & Marcelli, 2003).
At the community level, access to contraception may be impeded by norms, mores, attitudes and beliefs that adolescents should not be sexually active and that they therefore do not need contraception (UNFPA, 2013). The dilemma is between tradition requiring adolescents to have many children, and their right to use contraceptives in order to postpone childbearing until they have completed their schooling or become financially independent to care for their children (James, 2013).

Social expectations include attitudes towards marriage and fertility, including, in some societies, child marriage, particularly for girls, and in others, proof of fertility before unions are formalized (UNFPA, 2013). Societal perceptions of contraception have a great influence on adolescents, for example, the perception that contraception should only be used by married couples who want to space out pregnancies. Others believe that exposure to contraceptive information encourages women to promiscuity. These social attitudes may condemn adolescents for seeking such information before marriage (Allan Guttmacher Institute, 2002).

The introduction of sex education in schools has been met with religious resistance. The Catholic Church maintains contraceptives are bad and condoms should not be used (Global Press Institute, 2011). As a result of this opposition, the government and the parents shy away from addressing adolescent’s sexual and reproductive health. Cultural attitudes towards sexuality differ widely and may hinder an adolescent’s understanding of contraception, and ability to access contraception (WHO, 2004).

2.3.7 Economic Factors

Adolescents are dependent on their parents for economic support contributing to the non-utilization of contraceptives. This is because some contraceptives are expensive. Adolescents may have to take time off work or school to get to the reproductive health centers. Similarly,
clinic fees and the contraceptive fees hinder adolescent utilization of contraceptives (Moore, et al., 2008).

In a study done by World Bank, when a girl has power to delay pregnancy, she is also empowered socially to stay in school, and then economically to secure a more lucrative job or pursue other income-earning opportunities (Chaaban & Cunningham, 2011). A research by Ikamaara and Towett on sexual initiation and contraceptive use among adolescent females in Kenya showed economic status was significantly associated with the use of contraception. Those in poor households were less likely to use since they could not afford the contraceptives (Ikamari & Towett, 2007).

Transactional sex which is sexual activity in exchange of financial gains has also been illustrated to lure adolescents to sexual activity predisposing them to unplanned pregnancies. A research in Sub Saharan countries showed that in situations of transactional sex, adolescents may not be capable to decide the timing and conditions of sex. They have little negotiating power with their partners to insist on use of condoms and experience a higher risk of becoming pregnant and contracting sexually transmitted infections (Chatterji & Nancy Murray, 2004). A research in Kenya however showed majority (91.3%) adolescents had never given or received money or gift or favors in exchange for sex. Only 8.7 percent indicated that they had received money/gift/favors in return for sex (Ikamari & Towett, 2007).
CHAPTER THREE: MATERIALS AND METHODS

3.0 Introduction

This chapter covers the research design and methodology, including sampling method, study population, data collection, data analysis and ethical considerations.

3.1 Study Design

Cross sectional study design was utilized. Cross sectional design is based on observations made at one point in time. Cross sectional studies can be generalized because they are representative of given populations; they are the best suited in determining the prevalence and in identifying associations that can then be more rigorously studied using a cohort study or randomized controlled study (Mann, 2003).

3.2 Dependent and Independent Variables

Behavior is influenced by several factors among them, ones belief about the outcome of an action, ones assessment that a particular behavior is desired by significant others and a motivation to comply with the views of the significant others (Ajzen & Fishbein, 1980). Secondary school adolescents contraceptive utilization as the dependent variable is influenced by significant others which are the independent variables. The independent variables are socio-demographic factors such as age, socio-cultural and religious factors, perceived susceptibility and severity of pregnancy outcomes for example discontinuation from school, knowledge on contraception and economic factors. These significant others will either promote or hinder contraceptive utilization.
3.3 Study Area

The study area was Karuri, Kiambaa Sub-County, Kiambu County. It’s approximately 20 km South of Nairobi City and borders Kikuyu Town Council to the West, Limuru Municipal Council to the North and Kiambu Municipal Council to the East. It covers an area of 46 km² with a population of 107,716 people (KNBS, 2009). Karuri serves as the divisional headquarters for Kiambaa division thereby boosting its growth.

Demographically this area is characterized by a population of more women than men (males; 53,735 and females 53,981) hence a high reproductive capacity (KNBS, 2009). The population is very needy in terms of social amenities, services and infrastructure. The population growth rate around Karuri stands at 2.87% (KNBS, 2009). It holds the majority of high schools in Kiambaa Sub-county making it prime for this study.

3.4 Study Population

Secondary school adolescent girls from the selected schools in Karuri Town Council, Kiambu County participated in the study. There are nine public schools in Karuri Town Council. Each school had an estimated population of 350 adolescent girls giving a target population of 3,150 students.

3.5 Inclusion Criteria

Secondary school adolescent girls from the selected schools in Karuri Town Council, Kiambu County; who gave a written informed consent to participate in the study.

3.6 Exclusion Criteria

Secondary school adolescent girls who did not consent to participate in the study.
3.7 Sample Size Determination

Fisher formula was used to determine the sample size.

\[ n = z_{1-\alpha/2}^2 \times p \times (1-p) \] (Mugenda & Mugenda, 1999)

\[ d^2 \]

\[ N = \text{Minimum sample size.} \]

\[ \alpha = \text{Level of significance (0.05).} \]

\[ Z_{1-\alpha/2} = \text{Standard normal deviate at 95%, confidence interval (1.96).} \]

\[ P = \text{Proportion in the target population with specific characteristic (47% adolescents are using a contraceptive method, KDHS 2008/09)} \]

\[ d = \text{Absolute precision (Error margin), (0.05).} \]

Therefore \[ n = 1.96^2 \times (0.47) \times (0.53)/0.05^2 \]

\[ n = 383. \]

The minimum required sample size was 383. However, allowing for 10\% non-response the sample size was adjusted upwards to 421.

3.8 Sampling Technique

The study used purposive sampling to select the public schools in the study area. There are 9 public schools in Karuri Town Council, Kiambu County: Five mixed day schools, one mixed day and boarding school, and three girl’s boarding schools. All the 9 public schools were included in the study. There were approximately 3,150 adolescent girls in the 9 schools. The sample in each school was proportionate to the number of adolescent girls per school. Therefore, the school with
the highest ratio gave more students in the study and vice versa. Table 3.1 illustrates the sample size determination.

Table 3.1: Proportionate sampling

<table>
<thead>
<tr>
<th>Schools</th>
<th>No. of adolescent girls per school</th>
<th>Representative adolescent girls per school.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>335</td>
<td>45</td>
</tr>
<tr>
<td>B</td>
<td>355</td>
<td>48</td>
</tr>
<tr>
<td>C</td>
<td>325</td>
<td>43</td>
</tr>
<tr>
<td>D</td>
<td>370</td>
<td>50</td>
</tr>
<tr>
<td>E</td>
<td>345</td>
<td>46</td>
</tr>
<tr>
<td>F</td>
<td>325</td>
<td>43</td>
</tr>
<tr>
<td>G</td>
<td>335</td>
<td>45</td>
</tr>
<tr>
<td>H</td>
<td>375</td>
<td>50</td>
</tr>
<tr>
<td>I</td>
<td>385</td>
<td>52</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3150</td>
<td>421 (sample size)</td>
</tr>
</tbody>
</table>

The researcher then utilized stratified random sampling in each school using the various classes as strata’s: that is form 1 to form 4 to get study representatives from each of the forms. Simple random sampling using the lottery method was used to get the specific participants in the study from the forms; the researcher wrote pieces of paper put them on a bowl and those who picked the desired number were the study participants. This gave a sample size of 421 study subjects.
3.9 Instruments and Techniques

The study utilized semi-structured questionnaires and Focused Group Discussions (FDGs) as prime methods of data collection. This is because both methods complement one another in terms of generating ideas and understanding respondent’s views, perceptions, experiences, values, beliefs and expectations about a phenomenon (Patton, 2002b).

FGDs provide a good social context of gaining a deeper understanding and an opportunity for issues to be explored in detail, as the moderator has the opportunity and time to ask questions and seek clarification of issues raised putting meaning to adolescents sexual health experiences (Finch & Lewis, 2003). FGDs were used to gain an understanding of perceptions of the adolescents on contraception.

3.10 Pre-test of Data Collection Tools

A Pre-test was done in order to test validity and feasibility of the research tools as well as the capabilities of the research assistants to collect the data. All the study tools were pre-tested in 3 public secondary schools in Kikuyu Town Council, Kiambu County. These public secondary schools were believed to have similar characteristics to those of the study and similar locality that is Kiambu County. The pre-test aimed at assessing relevance, clarity, accuracy and flow of questions asked, the approximate time needed for each tool and the clarity of the instructions to the respondent’s.

3.10.1 Validity of the Study Tools

Validity is the degree to which a test measures what it purports to measure and consequently permits appropriate interpretation of scores. The study tools were pre tested before use to assess their validity through expert reviews and training of the research assistants.
3.10.2 Reliability of the Study Tools

Reliability is the measure of the degree to which a research instrument yields consistent results on repeated trials (Mugenda & Mugenda, 1999). Cronbach Alpha 2004 reliability coefficient of equal to or greater than 0.7 for the whole instrument was used; the study tools were reliable.

3.11 Data Collection

The researcher used semi-structured questionnaires to collect quantitative data (See Appendix III). The questionnaires were administered to each study subject by the researcher on a drop and pick sequence. Focus Group Discussion (FDG) guides were used to collect qualitative data (See Appendix IV). The researcher conducted 5 FGDs in five secondary schools that were selected purposively. Each FDG consisting of the secondary school adolescent girls had 6 to 8 participants who were purposively recruited from different levels that is form 1 to form 4. Each group had one moderator who was the researcher while the assistants were the note takers. The discussions took place at the school fields, at a time agreed upon by the school administration. Participants sat in a round table arrangement, so as to ensure open participation from all. The discussions, which took 45 minutes -1 hour, were recorded on tapes which were later transcribed.

3.12 Data Processing and Analysis

Qualitative data collected during the FGDs was transcribed verbatim into Microsoft Word and thematic content analysis done. Quantitative data from the questionnaires was checked daily for completeness and coded for appropriate computer entry. Equivalent responses were pooled to arrange the responses in different categories. The Quantitative data was managed by IBM Statistical Package for Social Sciences (SPSS) 21.0. The study utilized univariate and bivariate analysis. In univariate analysis, frequency distributions showed the distribution of the study population by background characteristics. In bivariate analysis, Chi-square and fishers exact test
values were used to test the significance of the association between the dependent and independent variables. The threshold for statistical significance was set at \( P<0.05 \). The results were then presented using tables, graphs, pie chart and figures.

3.13 Ethical Considerations

3.13.1 Research Ethics Committee Approval

Before data collection, ethical approval was obtained from Kenyatta University Research Ethics Committee (See Appendix V), the Ministry of Education, Science and Technology and National Commission for Science and Technology (NACOSTI) (See Appendix VI). Consent was also sought from the County Commissioner Kiambu County and the Director of County Education Kiambu County (See Appendix VII). The Divisional Education Officer (DEO) of Karuri Town Council gave a verbal consent supported by the documents from the County Directors office. The school principals and the class teachers for the various levels that is form 1 to form 4 gave a verbal consent.

3.13.2 Consent for the Questionnaire and Focus Group Discussions

Before data collection, participants were informed that the study was voluntary and they had a right to refuse to participate or discontinue at any time with no negative consequences. Before administration of the questionnaire, informed consent was obtained from each research participant, who signed a consent form as an indication of agreement to participate in the study (See Appendix I). Confidentiality of the respondents was maintained by ensuring the use of codes and not names on the questionnaire. On completion of the questionnaire the data collected was kept under a lockable cabinet throughout the duration of data collection and was only accessible to concerned people in the research team. The participants themselves put the forms in
an unmarked envelop, sealed it before dropping it in a box. To maintain privacy teachers were asked to leave the classrooms and while filing the questionnaire, student’s desks were separated.

With regards to FGDs, verbal consent was obtained from all group members and only one consent form was signed by the FGD moderator to signify the group’s acceptance to participate in the study (See Appendix IV). To maintain confidentiality during the discussions, emphasis was made that what was said during the discussions would stay within the group. A respectful approach in an open climate was used in order to obtain valid data. Open questions were posed in order to make the informants feel comfortable. Permission was sought from the respondents to have the discussions tape recorded.

3.13.3 Consent from Adolescents below 18 years

Before data collection, consent was sort from the adolescents who were below 18 years (See Appendix II). According to the Ministry of Health, National Guidelines for HIV Testing in Clinical Settings, sexually active adolescents who are below 18 years are regarded as mature minors and are allowed to give consent when in need of Sexual Reproductive Health services (NASCOP, 2006). In this study the adolescent below legal age consented for the study backed by these guidelines. The teachers also gave assent for the adolescents to participate in the study.

The law does not grant parents veto power over decisions of mature (that is, competent) adolescents who decide to participate in research on their reproductive health (WHO, 2013). In such cases where adolescents are or are about to be sexually active, investigators commit no legal offence in undertaking research that promises a favorable benefit-risk ratio (WHO, 2013).

There are no clear ethical justifications for excluding from research adolescent subjects below the age of legal majority if there are reproductive health problems that are restricted to, or occur
also in adolescents which cannot be solved with existing knowledge. There is an ethical duty of beneficence and justice to conduct appropriate research to address these problems (WHO, 2013).
CHAPTER FOUR: RESULTS

4.0 Introduction

This chapter covers data analysis and results presentation.

4.1 Characteristics of the Study Participants

Table 4.2 shows the socio-demographic characteristics of the adolescent girls who participated in the study. A total of 421 adolescents selected from nine public secondary schools from Karuri Town Council took part in the present study. Most of the study participants were from rural areas (59.1%) with the rest resided either in a peri-urban area (27.1%) or an urban area (13.8%). Majority of the sampled adolescents (90.3%) lived with family members. Further, majority of the respondents were Christians (91.4%). The distribution of the sample according to the classes/forms was based on proportionate sampling approach. The students selected from Form 1 were 25.7%, form 2 (26.1%), form 3 (24.7%) and form 4 (23.5%). The participants age ranged from 13.0 to 19.0 years with a mean age of 16.3 (sd 1.4) years. Most of the respondents were aged more than 15 years (90.5%) of which 67.9% were aged between 15 to 17 years and 22.6% for those aged 18 years or more. Only 9.5% of the respondents were less than 15 years old.
Table 4.2: Socio-demographic characteristics of the study participants

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Frequency (n=421)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Category (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;15</td>
<td>40</td>
<td>9.5</td>
</tr>
<tr>
<td>15-17</td>
<td>286</td>
<td>67.9</td>
</tr>
<tr>
<td>≥18</td>
<td>95</td>
<td>22.6</td>
</tr>
<tr>
<td><strong>Residence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>249</td>
<td>59.1</td>
</tr>
<tr>
<td>Urban</td>
<td>114</td>
<td>27.1</td>
</tr>
<tr>
<td>Peri-urban</td>
<td>58</td>
<td>13.8</td>
</tr>
<tr>
<td><strong>Lives with family members</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>380</td>
<td>90.3</td>
</tr>
<tr>
<td>No</td>
<td>41</td>
<td>9.7</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>385</td>
<td>91.4</td>
</tr>
<tr>
<td>Muslim</td>
<td>36</td>
<td>8.6</td>
</tr>
<tr>
<td><strong>Form</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form 1</td>
<td>108</td>
<td>25.7</td>
</tr>
<tr>
<td>Form 2</td>
<td>110</td>
<td>26.1</td>
</tr>
<tr>
<td>Form 3</td>
<td>104</td>
<td>24.7</td>
</tr>
<tr>
<td>Form 4</td>
<td>99</td>
<td>23.5</td>
</tr>
</tbody>
</table>

4.2 Knowledge on contraceptives

4.2.1 Contraceptives

Table 4.3 shows the respondents knowledge on contraceptives. Asked whether they had ever heard of contraceptives, majority (79.3%) of the respondents reported to have heard about contraceptives. Further probing on what they understood about the term ‘contraceptives’, 90.1% were able to, correctly, state that these were drugs/medicines/things used to prevent pregnancy and/or for family planning. However, thirty three respondents (9.9%) failed to provide an answer to this question.
Table 4.3: Knowledge on contraceptives

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Frequency (n=421)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ever heard of contraceptives?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>334</td>
<td>79.3</td>
</tr>
<tr>
<td>No</td>
<td>87</td>
<td>20.7</td>
</tr>
<tr>
<td><strong>Understanding of the term contraceptives (n=334)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A drug that prevents woman to become pregnant</td>
<td>102</td>
<td>30.5</td>
</tr>
<tr>
<td>Medicine used to do family planning</td>
<td>124</td>
<td>37.1</td>
</tr>
<tr>
<td>Something to protect someone from pregnancy</td>
<td>75</td>
<td>22.5</td>
</tr>
<tr>
<td>No response</td>
<td>33</td>
<td>9.9</td>
</tr>
</tbody>
</table>

4.2.2 Modern Contraceptives

Figure 4.1 presents the type of modern contraceptives mentioned by the respondents. The question being a multiple response question, condoms and pills were the most frequently stated contraceptives having been mentioned by 264 (79.0%) and 213 (63.8%) respondents respectively. Nineteen respondents (5.7%) mentioned injection as a method of modern contraception. The least frequently mentioned contraceptives were implants (0.6%) and vasectomy (0.6%).
Respondents who reported ever having heard of contraceptives and were able to correctly define what the term meant and/or were able to state at least one modern contraceptive method were considered to have knowledge on contraception. Overall, 90.1% of the respondents had knowledge on modern methods of contraception.

### 4.3 Sources of Information on Contraceptives

Figure 4.2 represents sources of information about contraception as reported by the respondents. Mass media was the main source of information on contraception (55.7%) followed by peers (40.4%). Other sources of information mentioned included teachers (7.2%), health workers (5.1%), parents (4.8%) and books/magazines (3.6%).
4.4 Contraceptives Utilization and Sexual Activity

Table 4.4 shows the sexual activity among the adolescents. Asked in confidence if they had ever engaged in sexual intercourse, 142 students (33.7%) responded in the affirmative. The mean age of sexual debut for this group was 15.0 years (sd 1.1) with the highest proportion of the sampled students (77.5%) having been initiated into sex at either 14 or 15 years of age.

Table 4.4: Sexual activity

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever engaged in sexual intercourse (n=421)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>142</td>
<td>33.7</td>
</tr>
<tr>
<td>No</td>
<td>279</td>
<td>66.3</td>
</tr>
<tr>
<td>Age of sex debut (n=142)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤14</td>
<td>45</td>
<td>31.7</td>
</tr>
<tr>
<td>15</td>
<td>65</td>
<td>45.8</td>
</tr>
<tr>
<td>16</td>
<td>19</td>
<td>13.4</td>
</tr>
<tr>
<td>≥17</td>
<td>13</td>
<td>9.1</td>
</tr>
</tbody>
</table>
4.4.1 Engagement in Sexual Intercourse as a Function of Age

Figure 4.3 shows the trend in engagement in sexual intercourse for the first time as a function of age. A minority (4.9%) had sex for the first time at the age of 13 years. The proportion of students initiated into sex increased with age peaking at 15 years (45.8%). This was followed by a decline, with the proportion of students having sex for the first time at 18 and 19 years of age being marginal (1.4% in each case).

Figure 4.3: Age of sexual debut among the study participants

These findings were further confirmed by the FGDs where the adolescent girls described adolescent’s sexual behavior as being very “experimental” driven by “curiosity” and a sense of feeling mature. “…Because adolescents are very young and they are curious to engage themselves in sex, someone decides let me do this and see what will happen. As a result they end up getting HIV or unwanted pregnancies.” (A 15 year old girl, FGDs Karuri town council, Kiambu County)
The early sexual debut is prompted by transactional that is sex for material and financial gain as expressed in the FGDs “…Poverty..., Let’s say, a girl comes from a poor family, you find when you come to school people have good shopping (a lot of shopping) and nicely done hair so girls decide it is better I have sex with my boyfriend or an older man so that I can get money to do my hair and buy good things” (FGD Girls, Karuri town council, Kiambu County).

### 4.4.2 Sex and Perceived Associated Risks

Table 4.5 shows sex and perceived associated risks. Out of the 421 students interviewed, an overwhelming majority (93.8%) were of the opinion that engaging in sexual activities was risky. Of these, 64.1% reported pregnancy and 78.0% the possibility of acquiring diseases (STIs) as risks following engagement in sexual activities.

Table 4.5: Sex and perceived associated risks

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk of engaging in sexual activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>395</td>
<td>93.8</td>
</tr>
<tr>
<td>No</td>
<td>26</td>
<td>6.2</td>
</tr>
<tr>
<td>Risks(n=395)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnancy</td>
<td>253</td>
<td>64.1</td>
</tr>
<tr>
<td>STIs including AIDS</td>
<td>308</td>
<td>78.0</td>
</tr>
</tbody>
</table>

### 4.5 Contraceptives Utilization

Table 4.6 shows contraceptive utilization among the participants. Of the 142 respondents who were sexually active, only 61 (43.0%) reported having ever used a modern method of contraception. Pills and condoms were the most commonly used method of contraception with 83.6% and 57.4% confirming having utilized these methods respectively. Moreover, injection as a method of contraception was reported to have been used by 16.4% of the respondents.
Table 4.6: Contraceptive utilization

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of contraceptives (n=142)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>61</td>
<td>43.0</td>
</tr>
<tr>
<td>No</td>
<td>81</td>
<td>57.0</td>
</tr>
<tr>
<td>Contraceptive(s) ever used (n=61)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pills</td>
<td>51</td>
<td>83.6</td>
</tr>
<tr>
<td>Condoms</td>
<td>35</td>
<td>57.4</td>
</tr>
<tr>
<td>Injection</td>
<td>10</td>
<td>16.4</td>
</tr>
</tbody>
</table>

4.6 Reasons for not Using Contraceptives

Figure 4.4 shows the reasons cited by the participants for not using a contraceptive. Asked reasons for not using contraceptives after sexual intercourse, almost half of the respondents (49.4%) cited not knowing where to get them from and not knowing how to use a contraceptive as key barriers to use of contraceptives. 28.4% did not know where to get the contraceptives and 21.0% did not know how to use the contraceptives. In addition, a substantial proportion of the respondents (39.5%) reported being ashamed to purchase the contraceptives as a hindrance to the use of contraceptives. Shortage of money to purchase contraceptives and having not planned to engage in sex ‘(reported to have been accidental)’ were reported as reasons for not using contraceptives by 14.8% and 13.6% of the respondents respectively. Further, 11.1% mentioned that they had not used contraceptives because of fear of side effects, 9.9% parental disapproval and 6.2% partner disapproval. Religious opposition was the least cited for non-use of contraceptives (3.7%).
Figure 4.4: Reasons for not using contraceptives

Reasons for not using the contraceptive were further confirmed by the FGDs where an 18 year girl reported “…knowledge is power…a young girl will not know having sex has consequences…..we cannot know that contraceptives can be given to us…some of us don’t even know how they look like, where to get them or how to use them…if we did we would use because no one wants to get pregnant and drop out of school.” (18 year old girl, FGD girls Karuri town council, Kiambu County)

Adolescents are ashamed to go buy the contraceptive and majority of the hospitals which are supposed to offer the contraceptive services are not youth friendly. The adolescent girls felt like the hospitals are places for women and children and they waste a lot of time due to the long waiting queues as depicted in the following statements “…most of the waiting areas in the hospital are for old people (women) and children and when I go sit there they start to look at me
as if I do not belong there and this makes me feel shy” (A 16 year old, FGD Girls Karuri town council, Kiambu County)

“So you find a long queue and you only had 30 minutes from school…..or you were sent to the shop by your mother….then you cannot stay at the hospital because you need to get back” (FGD Girls Karuri town council, Kiambu County)

“If I have an STD (STIs) or wanted a contraceptive, I would go to a private hospital no many questions as long as I have money.” (FGD Girls Karuri town council, Kiambu County)

4.7 Use of Contraceptives in Future

Table 4.7 shows the intention of the participants to use contraceptives in future. Most of the respondents (81.7%) declared that they had intentions to use contraceptives in future. Further inquiry revealed that the respondents anticipated to utilize contraceptives in future for various reasons including; protection from sexually transmitted infections (34.7%), plan the family (66.7%) and prevent unplanned (unwanted) pregnancies (48.0%).

Table 4.7: Use of contraceptives in future

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would you ever use a contraceptive (n=360)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>294</td>
<td>81.7</td>
</tr>
<tr>
<td>No</td>
<td>66</td>
<td>18.3</td>
</tr>
<tr>
<td>Reasons for use (n=294)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To protect myself &amp; my partner from STIs</td>
<td>102</td>
<td>34.7</td>
</tr>
<tr>
<td>To plan my family</td>
<td>196</td>
<td>66.7</td>
</tr>
<tr>
<td>To prevent unwanted pregnancies</td>
<td>141</td>
<td>48.0</td>
</tr>
</tbody>
</table>

4.8: Opinion on use of contraceptives

Table 4.8 shows the respondents opinion on what influences adolescent girls choice to use contraceptives. The most frequently mentioned factors were; having a sexual partner (61.0%),
religion (48.2%) and peer pressure (48.2%). Additionally, 44.9% were of the opinion that age influenced their choice in the use of contraceptives, 42.5% academic aspirations and 28.7% mass media. Noteworthy is the fact that only 26.6% of the students interviewed considered parental support and control, 22.3% age of initiation of sexual activity and 15.7% gender as factors that influenced a student’s choice of contraception. Factors that elicited least responses in support of their influence of choice of contraceptive were support from the health care facilities (12.8%), accessibility (11.4%) and culture (7.4%).

Table 4.8: Opinion on factors influencing an adolescent choice to use contraceptives

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency (n=421)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What influences your choice to use CP</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having a sexual partner</td>
<td>257</td>
<td>61.0</td>
</tr>
<tr>
<td>Religion</td>
<td>203</td>
<td>48.2</td>
</tr>
<tr>
<td>Peer pressure</td>
<td>203</td>
<td>48.2</td>
</tr>
<tr>
<td>Age</td>
<td>189</td>
<td>44.9</td>
</tr>
<tr>
<td>Academic aspirations</td>
<td>179</td>
<td>42.5</td>
</tr>
<tr>
<td>Access to information</td>
<td>152</td>
<td>36.1</td>
</tr>
<tr>
<td>Mass media</td>
<td>121</td>
<td>28.7</td>
</tr>
<tr>
<td>Parental support and control</td>
<td>112</td>
<td>26.6</td>
</tr>
<tr>
<td>Socio-economic factors</td>
<td>96</td>
<td>22.8</td>
</tr>
<tr>
<td>Age of initiation of sexual activity</td>
<td>94</td>
<td>22.3</td>
</tr>
<tr>
<td>Affordability</td>
<td>84</td>
<td>20.0</td>
</tr>
<tr>
<td>Gender</td>
<td>66</td>
<td>15.7</td>
</tr>
<tr>
<td>Support from the health care facilities</td>
<td>54</td>
<td>12.8</td>
</tr>
<tr>
<td>Accessibility</td>
<td>48</td>
<td>11.4</td>
</tr>
<tr>
<td>Culture</td>
<td>31</td>
<td>7.4</td>
</tr>
</tbody>
</table>

Parental support, control and their judgmental nature was depicted to influence choice of contraceptive utilization as confirmed by the following statement from the FGDs “....... When we get to adolescence our parents assume we are adults, they don’t teach us what sex is and the
problem of having sex, that is why some girls get pregnant and others are getting HIV....” (FGD Girls Karuri town council, Kiambu County)

“Parents say sex is a big word. In our culture you cannot talk about sex with your parents, it is embarrassing“........even when I get pregnant my father and mother will kill me so it's better aborting the baby.”(16 year old girl FGD Girls Karuri town council, Kiambu County)

Gender as a factor influencing secondary school girls’ choice of contraceptive utilization was also confirmed from the FGDs as shown by the following statement “......as a young girl am not supposed to ask about sex and its consequences....am supposed to keep quiet then when my boyfriend has sex with me which is sometimes forced he expects me not to get pregnant (get the contraceptive) because am the woman and he is the man” (16 year old girl, FGD girls Karuri town council, Kiambu County).

4.9 Perceptions on Contraceptives

Table 4.9 shows the perceptions of the participants on contraceptive utilization. Overall, 95.0% of the respondents had a favorable perception towards use of contraceptives. Only 5.0% of the participants thought that use of contraceptives was harmful. Asked if they thought it wise for them to use contraceptives, 16.2% responded in the affirmative while 71.5% felt it was not wise to do so. A further 12.4% said they were not sure about it. 82.2% of the respondents reported that they could not get contraceptives for themselves if, and when, they wanted. Most of the participants (88.8%) were of the opinion that their parent(s)/guardian(s) would not approve of their use of contraceptives.
Table 4.9: Perceptions on contraceptive use

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contraceptives harmful</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>21</td>
<td>5.0</td>
</tr>
<tr>
<td>No</td>
<td>400</td>
<td>95.0</td>
</tr>
<tr>
<td><strong>Parent/guardian would approve contraceptive use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>47</td>
<td>11.2</td>
</tr>
<tr>
<td>No</td>
<td>374</td>
<td>88.8</td>
</tr>
<tr>
<td><strong>Wise to use contraceptives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>68</td>
<td>16.2</td>
</tr>
<tr>
<td>No</td>
<td>301</td>
<td>71.5</td>
</tr>
<tr>
<td>Not sure</td>
<td>52</td>
<td>12.4</td>
</tr>
<tr>
<td><strong>Easy to get contraceptives for self</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>75</td>
<td>17.8</td>
</tr>
<tr>
<td>No</td>
<td>346</td>
<td>82.2</td>
</tr>
<tr>
<td><strong>Discuss contraception with anyone</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>28</td>
<td>6.7</td>
</tr>
<tr>
<td>No</td>
<td>393</td>
<td>93.3</td>
</tr>
</tbody>
</table>

Figure 4.5 presents the respondents discussion on contraceptives and contraceptive utilization.

Twenty eight students (6.7%) said that they discussed matters related to contraception with somebody and this included peers/girlfriends (82.1%) as well as partner/boy friend (10.7%) and parents (7.1%).

![Figure 4.5: Discussion on contraceptive use](image)
4.10 Seeking Reproductive Health Services

Table 4.10 shows the Sexual and Reproductive Health seeking behavior of the respondents. Only a small proportion of the respondents (8.1%) had ever sought reproductive health (RH) services from the hospital. Similarly, only a few of the students who had ever sought RH services (14.7%) reported that they had felt discriminated against while they sought the services in hospitals. Of these, two said the service providers were not friendly while one complained that she waited unnecessarily for long time before she was served.

Table 4.10: Reproductive health services sought from the hospitals

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever sought RH services from the hospital (n=421)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>34</td>
<td>8.1</td>
</tr>
<tr>
<td>No</td>
<td>387</td>
<td>91.9</td>
</tr>
<tr>
<td>Ever faced discrimination seeking RH services (n=34)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>5</td>
<td>14.7</td>
</tr>
<tr>
<td>No</td>
<td>29</td>
<td>85.3</td>
</tr>
<tr>
<td>Discrimination explained (n=5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unfriendly service providers</td>
<td>2</td>
<td>40.0</td>
</tr>
<tr>
<td>Waited too long to be served</td>
<td>1</td>
<td>20.0</td>
</tr>
<tr>
<td>No response</td>
<td>2</td>
<td>40.0</td>
</tr>
</tbody>
</table>

4.11 Factors Related to Engaging in Sexual Activities

4.11.1 Age

Table 4.11 shows the comparison of sexual activity based on age. Students who had ever engaged in sexual activities were significantly older on average compared to their counterparts who reported had not engaged in sexual activities at the time of the study (mean age ±sd: 17.1 ± 0.1 and 16.0 ± 0.1 years, respectively, p<0.001).
Table 4.11: Comparison of sexual activity based on age

<table>
<thead>
<tr>
<th>Ever engaged in sexual intercourse</th>
<th>N=421</th>
<th>Mean age (years)</th>
<th>Standard error</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>142</td>
<td>17.1</td>
<td>0.115</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>No</td>
<td>279</td>
<td>16.0</td>
<td>0.080</td>
<td></td>
</tr>
</tbody>
</table>

4.11.2 Type of school

Table 4.12 shows comparison of sexual activity based on type of school, religion and residence. The type of school a student was enrolled in was a significant determinant of whether a student had ever engaged in sex or sexual activities (p=0.038). Being in a mixed secondary school was associated with increased likelihood of having had sex as compared to being in a girls-only school (OR=1.586; 95% CI: 1.024-2.458). Religious affiliations of the students was not predictive of whether a student had engaged in sexual activities (p=0.292). A greater proportion of the students who were not living with family members (34.1%) had engaged in sexual activities when evaluated against those who lived with family members (33.7%). Nevertheless, this association was not significant statistically (p=0.953). Similarly, the students who perceived engagement in sexual activities as a risky affair reported lower rates of engagement in sexual activities (26.9%) as compared to those who had a contrasting perception (34.2%) this however was not statistically significant (OR=1.409; 95% CI: 0.578-3.436, p=0.449). residing in an urban or peri-urban area was associated with 1.7-fold increase in odds of having ever engaged in sex compared to living in a rural area (40.7% versus 28.9% respectively, OR=1.687; 95%CI: 1.120-2.541, p=0.012).
Table 4.12: Factors related to engaging in sexual activity

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total (n=421)</th>
<th>Ever had sex</th>
<th>OR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No (n=279)</td>
<td>Yes (n=142)</td>
<td>Lower</td>
<td>Upper</td>
</tr>
<tr>
<td>Type of school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mixed</td>
<td>274</td>
<td>172 (62.8%)</td>
<td>102 (37.2%)</td>
<td>1.586</td>
<td>1.024</td>
</tr>
<tr>
<td>Girls only</td>
<td>147</td>
<td>107 (72.8%)</td>
<td>40 (27.2%)</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>385</td>
<td>258 (67.0%)</td>
<td>127 (33.0%)</td>
<td>0.689</td>
<td>0.344</td>
</tr>
<tr>
<td>Muslim</td>
<td>36</td>
<td>21 (58.3%)</td>
<td>15 (41.7%)</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Residence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Peri-)urban</td>
<td>172</td>
<td>102 (59.3%)</td>
<td>70 (40.7%)</td>
<td>1.687</td>
<td>1.120</td>
</tr>
<tr>
<td>Rural</td>
<td>249</td>
<td>177 (71.1%)</td>
<td>72 (28.9%)</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Lives with family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>41</td>
<td>27 (65.9%)</td>
<td>14 (34.1%)</td>
<td>1.021</td>
<td>0.517</td>
</tr>
<tr>
<td>Yes</td>
<td>380</td>
<td>252 (66.3%)</td>
<td>128 (33.7%)</td>
<td>REF</td>
<td></td>
</tr>
</tbody>
</table>

4.12 Factors Associated with Utilization of Contraceptives

The factors associated with the utilization of contraceptives among secondary school adolescent girls were analyzed based on a dataset comprising of 142 respondents who reported having ever engaged in sexual intercourse.

4.12.1 Socio-demographic Factors

Table 4.13 presents the relationship between socio-demographic factors and utilization of contraceptives among the sampled adolescents. Age was significantly associated with utilization of contraceptives, with uptake of contraceptives increasing in tandem with age. Students who were seventeen years of age were 3.6 times (OR: 3.619 (95% confidence interval (CI): 1.264-10.365)) more likely to utilize contraceptives as compared to their counterparts of lesser age (p=0.014). Similarly students aged eighteen years or more were more likely to use contraceptives than those aged sixteen years or less (40.0% against 15.6% respectively, OR: 9.870 (95% CI: 3.781-25.763), p<0.001). On the other hand, the locality from which the student hailed from
(residence), living with family members or otherwise as well as religion showed no significant relationships, statistically, with the use of contraceptives among the sexually active students.

Table 4.13: Association of Socio-demographic factors and utilization of contraceptives

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total</th>
<th>Ever used contraceptives</th>
<th>OR</th>
<th>95% CI (^1)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No (No.)</td>
<td>Yes (Yes.)</td>
<td>Upper</td>
<td>Lower</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥18</td>
<td>62</td>
<td>22(35.5%)</td>
<td>40(64.5%)</td>
<td>9.870</td>
<td>3.781</td>
</tr>
<tr>
<td>17</td>
<td>35</td>
<td>21(60.0%)</td>
<td>14(40.0%)</td>
<td>3.619</td>
<td>1.264</td>
</tr>
<tr>
<td>≤16</td>
<td>45</td>
<td>38(84.4%)</td>
<td>7(15.6%)</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Residence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>72</td>
<td>42(58.3%)</td>
<td>30(41.7%)</td>
<td>0.899</td>
<td>0.462</td>
</tr>
<tr>
<td>(Peri)Urban</td>
<td>70</td>
<td>39(55.7%)</td>
<td>31(44.3%)</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Lives with family members</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>128</td>
<td>73(57.0%)</td>
<td>55(43.0%)</td>
<td>1.005</td>
<td>0.329</td>
</tr>
<tr>
<td>No</td>
<td>14</td>
<td>8(57.1%)</td>
<td>6(42.9%)</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>127</td>
<td>73(57.5%)</td>
<td>54(42.5%)</td>
<td>0.845</td>
<td>0.289</td>
</tr>
<tr>
<td>Muslim</td>
<td>15</td>
<td>8(53.3%)</td>
<td>7(46.7%)</td>
<td>REF</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\)Confidence interval

4.12.2 Sexual Debut

Table 4.14 shows the relationship between sexual debut and contraceptive utilization. A greater proportion of the respondents who had their sexual debut at the age of sixteen, or more, utilized contraception when evaluated against the corresponding group which had an earlier sex debut (56.3% versus 39.1% respectively). However, this difference in proportions between the two groups did not attain statistical significance (p=0.084). In addition, study participants who were of the opinion that engaging in sexual activities was risky (44.4%) utilized contraceptives more as compared to their colleagues who had a contrary opinion (14.3%) though this relationship was not significant statistically (p=0.239; Fisher’s exact test (FET)).
Table 4.14: Relationship between sexual debut and contraceptive utilization

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Total</th>
<th>Contraceptives Use</th>
<th>OR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>Yes</td>
<td>Upper</td>
<td>Lower</td>
</tr>
<tr>
<td>Age sex debut</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤15</td>
<td>110</td>
<td>67(60.9%)</td>
<td>43(39.1%)</td>
<td>0.499</td>
<td>0.225</td>
</tr>
<tr>
<td>≥16</td>
<td>32</td>
<td>14(43.8%)</td>
<td>18(56.3%)</td>
<td>Ref</td>
<td></td>
</tr>
</tbody>
</table>

4.12.3 Knowledge

Table 4.15 represents the influence of knowledge on contraceptive utilization. Having ever heard of contraceptives was significantly associated with increased use of contraceptives (p=0.037). Having ever heard of contraceptives was associated with 2.9-fold increase in the odds of using contraceptives amongst the sexually active adolescent girls (OR: 2.975; 95% CI: 1.031-8.584). Significantly more students who were classified as having some knowledge on contraception were found to utilize contraceptives as compared to their counterparts who were classified as having no knowledge at all (respectively, 47.1% versus 21.7%, p=0.025; OR: 3.200 (95% CI: 1.115-9.183)).

Table 4.15: Influence of knowledge on contraceptive utilization

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total</th>
<th>Contraceptive Use</th>
<th>OR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>Yes</td>
<td>Upper</td>
<td>Lower</td>
</tr>
<tr>
<td>Ever heard of contraceptives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>120</td>
<td>64(53.3%)</td>
<td>56(46.7%)</td>
<td>2.975</td>
<td>1.031</td>
</tr>
<tr>
<td>No</td>
<td>22</td>
<td>17(77.3%)</td>
<td>5(22.7%)</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Knowledge levels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some</td>
<td>119</td>
<td>63(52.9%)</td>
<td>56(47.1%)</td>
<td>3.200</td>
<td>1.115</td>
</tr>
<tr>
<td>None</td>
<td>23</td>
<td>18(78.3%)</td>
<td>5(21.7%)</td>
<td>REF</td>
<td></td>
</tr>
</tbody>
</table>

4.12.4 Accessibility

Table 4.16 presents the comparison between accessibility and contraceptive utilization. Accessibility of contraceptives to the students was significantly associated with increased uptake of contraceptives (p=0.034). More students who said that they could get contraceptives if, and when, they needed them (50.6%) utilized contraceptives more than those who said otherwise.
(32.8%). Access to contraceptives was shown to increase the likelihood of using contraceptives by more than 100% (OR: 2.101; 95% CI: 1.054-4.187).

Table 4.16: Accessibility and contraceptive utilization

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total</th>
<th>Contraceptives use</th>
<th>OR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Get contraceptives for self if wanted</td>
<td></td>
<td>No</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>81</td>
<td>40(49.4%)</td>
<td>41(50.6%)</td>
<td>2.101</td>
<td>1.054</td>
</tr>
<tr>
<td>No</td>
<td>61</td>
<td>41(67.2%)</td>
<td>20(32.8%)</td>
<td>REF</td>
<td></td>
</tr>
</tbody>
</table>

4.13 Perceptions on Contraception and Contraceptive Utilization

Table 4.17 shows the comparison between perception on contraception and contraceptive utilization. Perception of contraception being harmful was not associated with use of contraceptives (p=0.725; FET). Higher, albeit statistically insignificant, utilization of contraceptives was observed in adolescents who felt that their parents/guardians would consent to their use of contraceptives as opposed to their counterparts who felt contrary (respectively 50.0% against 41.5%, p=0.445). Study participants who responded positively on being asked whether they deemed it wise to use contraceptives were about two times more likely to use contraceptives than those who had a divergent opinion (OR: 2.053 (95% CI: 1.024-4.115); p=0.041). Having someone to discuss contraception with was not associated significantly with uptake of contraceptives among the students.
Table 4.17: Perceptions on contraception and contraceptive utilization

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total</th>
<th>Contraceptives Use</th>
<th>OR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>Yes</td>
<td>Upper</td>
<td>Lower</td>
</tr>
<tr>
<td>Contraceptives harmful</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>8</td>
<td>4(50.0%)</td>
<td>4(50.0%)</td>
<td>1.351</td>
<td>0.324</td>
</tr>
<tr>
<td>No</td>
<td>134</td>
<td>77(57.5%)</td>
<td>57(42.5%)</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Parent/guardian approval of contraception use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>24</td>
<td>12(50.0%)</td>
<td>12(50.0%)</td>
<td>1.408</td>
<td>0.584</td>
</tr>
<tr>
<td>No</td>
<td>118</td>
<td>69(58.5%)</td>
<td>49(41.5%)</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Wise to use contraceptives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>84</td>
<td>42(50.0%)</td>
<td>42(50.0%)</td>
<td>2.053</td>
<td>1.024</td>
</tr>
<tr>
<td>No/Not sure</td>
<td>58</td>
<td>39(67.2%)</td>
<td>19(32.8%)</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Get contraceptives if you wanted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>81</td>
<td>40(49.4%)</td>
<td>41(50.6%)</td>
<td>2.101</td>
<td>1.054</td>
</tr>
<tr>
<td>No</td>
<td>61</td>
<td>41(67.2%)</td>
<td>20(32.8%)</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Discussed contraception with anyone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>27</td>
<td>19(70.4%)</td>
<td>8(29.6%)</td>
<td>0.493</td>
<td>0.2</td>
</tr>
<tr>
<td>No</td>
<td>115</td>
<td>62(53.9%)</td>
<td>53(46.1%)</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td>Who do you discuss with</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peers/Girlfriends</td>
<td>22</td>
<td>17(77.3%)</td>
<td>5(22.7%)</td>
<td>0.882</td>
<td>0.074</td>
</tr>
<tr>
<td>Partner/Boyfriend</td>
<td>4</td>
<td>3(75.0%)</td>
<td>1(25.0%)</td>
<td>REF</td>
<td></td>
</tr>
</tbody>
</table>

4.14 Association between Reproductive Health Aspects and Utilization of Contraceptives

Table 4.18 presents the association between selected reproductive health (RH) aspects and utilization of contraceptives among the sexually active study participants yielded. More students who reportedly ever sought RH services from health facilities utilized contraceptives than those who had not (54.5% and 40.8% respectively). Nonetheless, no statistical significance was found in this association (0.232). Further, ever faced discrimination when seeking RH services was not associated with utilization of contraceptives among the sexually active adolescents who participated in the study.
Table 4.18: Association between reproductive health aspects and contraceptive utilization

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Total</th>
<th>Ever used contraceptives</th>
<th>OR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>Upper</td>
<td>Lower</td>
<td></td>
</tr>
<tr>
<td><strong>Ever sought RH services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>22</td>
<td>10(45.5%)</td>
<td>1.739</td>
<td>0.697</td>
<td>4.340</td>
</tr>
<tr>
<td>No</td>
<td>120</td>
<td>71(59.2%)</td>
<td>Ref</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ever faced discrimination when seeking RH</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>3</td>
<td>1(33.3%)</td>
<td>1.800</td>
<td>0.139</td>
<td>23.374</td>
</tr>
<tr>
<td>No</td>
<td>19</td>
<td>9(47.4%)</td>
<td>Ref</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Fisher’s exact test (FET)
CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter will discuss the findings of the study and relate them to review of literature, conclusions and recommendations. Section one provides a discussion on the level of contraceptive uptake among secondary school adolescent girls in Karuri Town Council Kiambu County. Section two provides a discussion on factors influencing contraceptive uptake among secondary school adolescent girls in Karuri Town Council Kiambu County.

5.1 Discussion

5.1.1 Level of Contraceptive Uptake

5.1.1.1 Sexual Activity

Generally the study has shown that adolescents (34%) are sexually active with their first sexual debut peaking at 15 years of age. This is comparable to a survey done using a structured questionnaire among high school students in Nairobi, Kenya that reported the median age at first sex to be 15 years for females (Kabiru & Orpinas, 2009). Similarly, Kenya Demographic Health Survey 2008/09 indicated that most adolescents now aged 15-19 years had had sex before they were 15 years old. Some become sexually active before the ages of 12 years (KNBS & ICF micro, 2010).

The results of a research done by Ikamari in the year 2007 in Kenya however showed that the majority (62%) of Kenyan adolescents are sexually experienced indicating a higher rate than that of the current study. The mean age at first sex according to Ikamari in the year 2007 was 16.2 years (Ikamari & Towett, 2007). A research by Oindo on contraception and sexuality among youths in Kisumu Kenya also indicated a higher rate of sexual experience. The research in
Kisumu by Oindo reported that majority of the adolescents 73.5% are sexually experienced with most of their sexual experiences occurring at 15-19 years (Oindo, 2002).

Transactional sex which is sexual relations for material and financial gains as well as poverty was depicted as a major contributor to early sexual activity among the adolescent girls. This is supported by a research in Sub-Saharan countries on factors influencing transactional sex among young women and men that showed transactional sex occurs mostly among women aged 15-19 years (Chatterji & Nancy Murray, 2004).

Sex before marriage is regarded as an immoral act and as such the consequences of unsafe sex such as teenage pregnancy and STI/HIV/AIDS infection are also viewed by the society through a “moral lens” instead of being seen as a public health problem. This is unlike the view in some western countries where lower teenage pregnancy rates are experienced and adolescent pregnancy is regarded as a public health problem (Moore, Biddlecom, & Zulu, 2007b).

5.1.1.2 Contraceptive Uptake

Despite initiating sexual activity at an early age, this study indicates contraceptive uptake among the secondary school adolescent girls is low (43.0%). The findings tally with those of a research of a research done by Ikamari in Kenya that showed the ever use of contraception among the sexually experienced adolescent was (46.9%) with 37.7% reporting ever use of modern contraceptives (Ikamari & Towett, 2007).

The findings in this study however in comparison to those of the Kenya Demographic Health Survey 2008/09 show higher contraceptive uptake levels. According to KDHS 2008/09, among unmarried sexually active adolescents 15-19 years Contraceptive Prevalence Rate for any modern method was 23% (KNBS and ICF Macro, 2010). The targeted contraceptive prevalence
rates are 56% by the year 2015 for all methods and 70% for modern contraceptives from the current 46% (Rose, 2012).

5.1.2 Factors Influencing Contraceptive Uptake

5.1.2.1 Socio-Demographic Factors

5.1.2.1.1 Age
This study identified age as an influencing factor to contraceptive use among secondary school adolescent girls. Uptake of contraceptives increased in tandem with age. Adolescent girls aged 18 years or more are more likely to utilize contraceptives as compared to their counterparts of a lesser age (p=<0.001; OR: 9.870 (95% CI: 3.781-25.763)). The findings tally with those of a research by Oindo in Kisumu Kenya that showed that the older the girl at the time of initiation of sexual activity, the more likely she is to use contraception regularly and use a modern method. Younger girls are likely not to use or use them ineffectively. They rely on the male partner’s decision (Oindo, 2002). Similarly, Ikamari in Kenya on sexual initiation and contraceptive use among adolescent females in Kenya found that the use of contraceptives and sexual initiation increased with the adolescent’s age (Ikamari & Towett, 2007). They also tally with the findings of an American study that showed adolescents who began having sex at young ages were less likely to use contraception (Moore, et al., 2008).

Similarly, Tripp in his study in the United Kingdom concluded that sex at an early age is compounded by lack of knowledge, lack of access to contraception, lack of skills and self-efficacy to negotiate contraception, or inadequate self-efficacy to resist pressure (Tripp, 2005). This study however, did not find any statistical significance between age at sexual debut and contraceptive utilization p=0.084.
5.1.2.1.2 Gender

The FGDs results in this study identified that reproductive responsibility is left out to the female gender. The adolescent girls in the FGDs reported that the sexual partners “expected them not to get pregnant after sexual intercourse because contraception isn’t their responsibility”. Similar findings were reported by Nzioka in a research in Machakos Kenya on perspectives of boys on the risk of unwanted pregnancy and STIs where boys considered pregnancy prevention the responsibility of girls and not their own (Nzioka, 2004).

In the FGDs majority of the girls reported that young men tend to dissociate themselves from use of family planning and regard it as the responsibility of the girl. According to the girls, most boys imply that pregnancy prevention is the girl’s responsibility and perceive contraception as a woman’s domain. These findings are similar to those of a report by WHO that showed, female adolescents receive positive reinforcement for being quiet, innocent and unaware of sexual matters reducing their ability to refuse unwanted sexual advances, negotiate condom use or safer sexual practices when sexual intercourse is desired (WHO, 2004). This imbalance makes it very difficult for them to discuss matters such as the desired timing and number of children and contraceptive use (WHO, 2004).

5.1.2.2 Religious and Social Cultural Norms

This study also established that religion influenced the adolescent girl’s choice to use contraceptives (48.1%), majority of who were Christians (91.4%). This however had no statistical significance P=0.759. Similar findings were reported in Pittsburg where religiosity was not significantly associated with contraceptive use or planned contraceptive use (Gold, et al., 2010).
The findings of this study however, are in contrast to those of a research done by Cherotich in Turkana, Kenya that showed women of reproductive age who belonged to the Muslim religion were more likely to use contraceptives OR 2.1, chi square - 10.137, p<0.002 (Cherotich, 2013). The findings of this study also contrast with those of a research on adolescent religiosity and sexuality in the United States that found religion to influence adolescent’s contraception and sexual activity with the study showing religion to be associated with less use of condoms and or hormonal methods (Sam & Marcelli, 2003).

5.1.2.3 Knowledge on Contraceptives

The high level of knowledge on contraceptives (90.1 %) tallies with the findings of a research in Kisumu Kenya that showed 99.2% level of knowledge of at least one contraceptive method (Oindo, 2002). The findings also tally with the KDHS 2009/08 findings of 95% knowledge of at least one modern method of contraceptives (KNBS and ICF Macro, 2010).

This study established that a majority of the adolescents know of condoms as indicated by 79.0% response which is also reflected in the Kenya Demographic Health Survey 2009/08 findings where 89% of the target population reported knowledge of condoms (KNBS and ICF Macro, 2010). Mass media that is print and electronic media was the main (59.3%) source of information on contraception. These could be due to so much print and electronic media advertisement as compared to the other modern methods of contraception and the fact that condoms offers duo protection.

This study identified that among the sexually active adolescents, having knowledge on contraceptives increases by three times the likelihood to use contraceptives (OR: 3.200, 95% CI: 1.115-9.183, p=0.025). Having knowledge on contraception increases an adolescent’s likelihood
to use a contraceptive method as compared to having no knowledge at all (MOH, 2007). According to a research in Kisumu Kenya by Oindo the education system exposes one to more interactions and other sources of information that enables one to make wise decisions such as using a contraceptive when sexually active (Oindo, 2002).

Similarly, the KDHS (2008-09) report indicates that over 95% of young adolescents aged 10-14 are in-school (UNFPA and Population Council 2010). School-based sex and HIV education programmes have been found to be successful in improving SRH knowledge and attitudes among young people (Shepherd, et al., 2010). In addition Poobalan in the USA, reported sex education programmes have been found to be more effective if introduced at a younger age, before young people begin engaging in sexual activity (Poobalan, et al., 2009). A review on reducing adolescent pregnancy in Nigeria suggested that a combination of education and contraceptive methods reduced adolescent pregnancies (Origanje, 2009).

5.1.2.4 Accessibility and Affordability.

This study established that accessibility to contraceptives was significantly associated with increased contraceptive utilization (p=0.034, 95% CI: 1.054-4.187). Majority of the sexually active adolescents are ashamed to purchase contraceptives and those who are willing to purchase have no money to purchase them. “Some feel shy to go buy the contraceptives at the chemist and the hospital doesn’t have”. This findings tally with those of a study on sexual and reproductive health provision to young people in Kenya, that found the reproductive services mostly inadequate and inaccessible to the adolescents either due to unavailability, unaffordability and the poor attitude from the health care givers (Godia, et al., 2013). Similarly, a research on sexual initiation and contraceptive use among adolescent females in Kenya showed economic status was significantly associated with the use of contraception. Those in poor households were less likely
to use since they could not afford the contraceptives (Ikamari & Towett, 2007). A research among Sub Saharan countries by Moore showed that adolescents are dependent on their parents for economic support contributing to the non-utilization of contraceptives. This is because some contraceptives are expensive (Moore, et al., 2008). Adolescents may have to take time off work or school to get to the reproductive health centers. Similarly, clinic fees and the contraceptive fees hinder adolescent utilization of contraceptives (Moore, et al., 2008).

The study established from the FGDs that health care facilities had long waiting queues yet the adolescents only have time during breaks from school and when at home, they have to get back quickly before the parents notice their absence. These results agree with a research in Brazil that showed adolescents' success in avoiding pregnancy often depends on having access to contraceptive information, methods and services (Gomes, 2008). With these long queues and unconducive environment adolescents cannot access contraceptives. In a research in Kenya Godia found out that majority of the hospitals are not structured in a youth friendly way. Most of the waiting bays are for women and children and this makes the adolescents shy to go sit and wait to be served (Godia, et al., 2013). Adolescents’ attitudes of shame, fear of societal judgment, and distrust in the efficacy of contraceptives all pose possible barriers to adolescent’s utilization of contraceptives to prevent unplanned pregnancies. A study done by World Bank concluded that when a girl has power to delay pregnancy, she is also empowered socially to stay in school, and then economically to secure a more lucrative job or pursue other income-earning opportunities (Chaaban & Cunningham, 2011).

5.1.2.5 Perception on Contraceptives

This study identified that majority of the adolescent girl’s perceived contraception as good because it would prevent pregnancy with (81.7%) intending to use contraceptives in future and
(95%) reporting contraceptives are not harmful. Adolescents who perceived it wise to use contraceptives were two times more likely to use contraceptives than those of a contrary opinion (OR: 2.053, (95%CI: 1.024-4.115); p=0.041). This findings tally with those of a research done in Kisumu Kenya that found that though adolescents wish to use contraceptives, they may perceive the risk of pregnancy as low, and may therefore use an ineffective contraception method or none at all, or use a method incorrectly (Oindo, 2002). If adolescents do not think they are at risk of pregnancy / have the attitude “it won’t happen to me”, then they are less likely to make any decision at all regarding contraception (Jay, Durant, Shoffitt, Linder, & Litt, 2007).

5.1.2.6 Peer Influence

The study established peer influence as key in secondary school adolescent girl’s choice to use a contraceptive (48.2%). This findings however did not have any statistical significance (p=0.999). These findings contrast with those of a research in Nepal that showed adolescents are more likely to be sexually active if their peers are sexually active and they are more likely to use contraceptives if their peers use (Regmi, Teijlingen, Simkhada, & Acharya, 2010).

5.1.2.7 Parental Support

The study depicted a significant association between parental control and support and the use of contraceptives (p=0.445). Adolescent girls who felt that their parents or guardians would consent to their use of contraceptives were more likely to utilize contraceptives as opposed to their counterparts. Only 26.6% of the respondents however, were of the opinion that parental support and control influenced their choice to utilize contraceptives this is because most of the adolescents are considered grownups and the parents are too busy with work to even realize the SRH problems of their children as depicted by the FGD results. Similar findings were reported in a research in Nairobi Kenya by Joyce on perceptions among adolescents to contraceptive us, the
results showed about (65.1%) of the parents or guardians would object to contraceptives use by unmarried adolescents (Joyce, 2011).

Similar findings were also reported in rural Mwanza, Tanzania, where both adolescents and community members pointed out that parents had collectively failed in their responsibility of being good role models and providing proper advice to their children; instead some parents encouraged their daughters to engage in transactional sex so as to meet the family financial needs (Remes, et al., 2010). Transactional sex which is sexual activity in exchange of financial gains has been illustrated to lure adolescents to sexual activity predisposing them to unplanned pregnancies. A research in Sub Saharan countries showed that in situations of transactional sex, adolescents may not be capable to decide the timing and conditions of sex. They have little negotiating power with their partners to insist on use of condoms and experience a higher risk of becoming pregnant and contracting sexually transmitted infections (Chatterji & Nancy Murray, 2004).

In her study about sex and HIV education among 17-19 year old high school students in Nairobi, Mbugua reported that educated Christian mothers do not feel comfortable giving SRH education to their daughters as these conflicts with their traditional, cultural and Christian values (Mbugua, 2007). The same study, notes that educated mothers may resort to buying sex-education text books and giving these to their daughters without taking time to discuss and explain the contents (Mbugua, 2007).

5.1.2.8 Access to Information

This study established that peers & mass media (print and electronic media) are the main sources of information on contraceptives accounting for 96.1%. This study has similar findings to those
of a research done in Kisumu Kenya, which indicated that most adolescent get contraceptive knowledge from their peers (Oindo, 2002). The ‘informed’ peers are viewed as a better source of knowledge and counsel because of assumed confidentiality and non-judgmental aspect (Oindo, 2002). Similar findings were also reported in a research in Nepal which showed adolescents frequently get most of their information from peers making them lack essential information on contraceptive methods, and the information they have is often incorrect (Regmi, Teijlingen, Simkhada, & Acharya, 2010).

Similarly in a research in Brazil, Gomez found that adolescents' success in avoiding pregnancy often depends on having access to contraceptive information, methods and services (Gomes, 2008). A research by Laurence on sexual initiation and contraceptive use among females in Kenya found education to be positively associated with the timing of first sex and contraceptive use (Ikamari & Towett, 2007). With regard to media as a source, not much research has been done. Perhaps the high response in this study could be because of the current “C-word” campaign in Kenya’s electronic and print media. Noteworthy in this study, parents as a source of information for contraceptives was accounted by only 4.8% of the respondents.

5.1.2.9 Having a Sexual Partner

This study established that having a sexual partner highly (61%) influences the choice to use contraceptive for secondary school adolescent girls. Similar findings were reported by Joyce the year 2011 in a research on perceptions for contraceptive use among adolescents in Nairobi that indicated that having a sexual partner and communicating about contraception increases the probability of contraceptive use by an adolescent by 77.2% (Joyce, 2011).
5.1.2.10 Unplanned Sexual Activity and Sexual Violence

This study identified sexual violence as one of the reasons why the girls are afraid to seek contraceptive services; first because the perpetrators of the sexual offence are mostly believed to be close keen or relatives and second because Kenyan law has no distinction between coerced sex and voluntary sex as illustrated by the following statement from the FGDs by an 18 year old girl “In some homes when growing up you are forced to have sex by an uncle/cousin (relative)…… then they use threats and tell you not to say anything…. Now whom do you go tell that you want the pills because they do not even use a condom…..it is so embarrassing….so you keep quiet and get pregnant/HIV”

These findings agree with a world report on violence that showed forced sex and intimate partner violence increase girls’ vulnerabilities to pregnancy. Young age is a known risk factor for a woman’s likelihood of experiencing violence at the hands of an intimate partner (Krug, Dahlberg, Mercy, Zwi, & Lazono, 2002).

Among adolescent girls, sexual coercion has been documented as a risk factor for STI/HIV infection and unwanted pregnancies. The “blurred boundaries between forced, coercive and consensual sex” in the Kenyan social context negatively affects access to SRH services for adolescents (Kilonzo, et al., 2008). The social constructs around sexual coercion dictates that girls are not expected to initially agree to have sex and that the boys have to use some tricks, deception and even force for the girl to agree to have sex (Maticka, et al., 2005).

There is therefore need to engage adolescent girls themselves, community leaders and religious organizations in educating the public about the risk factors of sexual violence and the need to
seek health services. Health services providers and the criminal justice system also need to be sensitized on how to identify and handle victims of sexual violence (Kilonzo, et al., 2009b.).

5.2 Conclusion

From this study it can be conclude that while adolescents are engaging in sexual activities at a young age, the level of contraceptive utilization among secondary school adolescent girls in Karuri town council, Kiambu County is low despite a high level of knowledge. The major factors influencing contraceptive utilization are age, accessibility, perception on contraception and Knowledge on contraceptives. Other factors identified include transactional sex, socio-culture, parental support and control, unplanned sexual activity and sexual violence. Adolescents are engaging in risky sexual behavior at an early age which predisposes them to unplanned pregnancies and STI/HIV. The prevention of unplanned adolescent pregnancies requires: a desire to use contraceptives, a good contraceptive method, ability to obtain the contraceptive method, and ability to use it.

5.3 Recommendations

1. Education is one way of empowering the girl child. Hence the high existing knowledge as showed in this study should be encouraged. It may be the only way that adolescent have access to appropriate reproductive health education in situations where discussion of this is a taboo at their homes and community and hence they have to rely on the peers who are poorly informed.

2. The Ministry of Health (MOH) should promote use of dual protection that is condoms: The study showed more use of the Emergency pill as compared to condoms, therefore, it should be emphasized that if adolescents have to have safe sexual activities, both
prevention of STIs as well as unplanned pregnancy is very important; knowledge about condom use should be a priority.

3. Provision of adolescent-friendly services: The health system should offer confidential, accessible and acceptable services to adolescents. This way, they will not shy away from seeking services such as contraception.

4. Parents and teachers were the least sources of information on SRH hence, the Ministry of Education & Sub-County education office should develop age specific SRH curriculum that is, tailored age specific information on adolescent SRH to strengthen parent-child communication.

5. Male involvement in ASRH: Men in the community should be involved in shouldering the burden of adolescent contraception and pregnancy.

5.4 Future Research

Future research is needed on how to bridge the gap between adolescents’ knowledge that translates to practice. The adolescents had more knowledge on condoms but utilized emergency contraceptive more. Action research; research where the adolescents themselves are part of posing the question, planning and carrying out the study would promote obtaining more answers in adolescents’ SRH.

More research is needed on the influence of mixed schools on adolescent’s sexual and reproductive health as opposed to an all girl’s school. This could also include mode of study that is day or boarding school. Similar studies should be done in private school settings as these study focused only on public schools.
REFERENCES


In Focus. (1997). *Do Youth-Friendly Services Make a Difference?* December.


APPENDICES

5.1 Appendix I: Consent Form

This Informed Consent form was administered to secondary school adolescent girls attending school in Karuri town council who are invited to participate in this research. The title of the research project is “utilization of contraceptives among secondary school adolescent girls in Karuri Town Council, Kiambu County”.

Name of researcher: MARY MURIGI.
Name of Organization: KENYATTA UNIVERSITY
Title of Proposal: utilization of contraceptives among secondary school adolescent girls in Karuri Town Council, Kiambu County.

This Informed Consent Form has two parts:

- Information Sheet (to share information about the research with you),
- Certificate of Consent (for signatures if you agree to take part).

You will be given a copy of the full Informed Consent Form

PART I: Information Sheet

Introduction

My name is Mary Murigi. I am a post graduate student undertaking a Master’s of Science in Public health- Reproductive Health option, Kenyatta University. As a requirement by the university, for the completion and award of my degree, I am conducting a study on the utilization of contraceptives among secondary school adolescent girls in Karuri Town Council, Kiambu County.

I am going to extensively explain about this research and invite you to voluntarily participate. I am going to give you time to decide on whether you will participate in the research. You are free to consult before making any decision.

I am going to use the language that you understand either spoken or written. You are free to ask any question or clarification about the research during, and after data collection using the contact address provided at the end of this document.
Purpose of the research
Assessing the utilization of contraceptives among secondary school adolescent girls is vital in order to identify the gaps in provision of sexual reproductive health, and improve quality of life for the girl child. The adolescent pregnancy burden to the individual, families and communities will be reduced when strategies to enhance the utilization of reproductive health care services especially contraceptives are identified.

Benefits
There are no direct benefits for you as an individual but your involvement will help in finding the response to the research question stated in the research proposal. There are no benefits to the community at this stage of the research, but future generations can benefit from the published document. Information obtained from the study will be published.

Risks
There are no risks involved in taking part in this research.

Voluntary Participation
Your involvement in this research is completely voluntary. It is your choice whether to take part or not. Whether you choose to take part or not will not affect you in any way. You may change your mind later and discontinue taking part even if you had agreed earlier.

Confidentiality
The identity of those taking part in the research will not be disclosed or shared with anyone. Informed consent will be obtained from you in order to participate in the study. To ensure confidentiality the data collection forms will not bear your name or ethnicity. You will be identified by the study code number. Only the researchers will recognize what your number is and the collected data kept under lock and key. All the data and the information obtained during the study will be used for the sole purpose of meeting the objective of the study.

Duration
The data collection will only take a period of 45 minutes -1 hour. During this time, you will only be expected to answer the questions asked as outlined.
Contacts

Questions are welcome at the moment or later, even when the study is in progress. If later use the contacts below.

MARY MURIGI
P.O.BOX 387-09200
KIKUYU, KENYA.
MOBILE NUMBER 0729721747
Email address murigim@yahoo.com
5.2 Appendix II: Adolescent’s Minors (below 18 years) Assent Form

The information about the study has been explained to me. I fully understand the nature of the study and how I will participate in it. I fully understand that if I agree to participate in the study, I will either fill a questionnaire or participate in a focused group discussion for a period of 1-2hrs. I understand that participation is voluntary and I am free to withdraw from the study at any time. I am also aware that if I decide not to participate in the study, it will not affect the services I receive in school. I also understand that the information in the Focused Group Discussions will be tape recorded. By signing this form, I will be accepting to participate in the study.

I agree to take part in this study

Signature___________________          Date_________ /_______/_________

Researcher

Name____________________________

Signature________________________  Date_____/ ________/_________
5.3 Appendix III: Semi-Structured Questionnaire

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

Signature_________________________ Date_____/_____/________

Instructions

1. Do not write your name on the questionnaire
2. Tick in the boxes provided where applicable
3. For open ended questions write the answers in the space provided
4. Answer all questions
5. All information obtained will remain confidential

SECTION A: SOCIO-DEMOGRAPHIC DATA

1. Age in years_______________?
2. Which form are you in?
   i. Form 1
   ii. Form 2
   iii. Form 3
   iv. Form 4
3. Where do you live?
   i. Rural area
   ii. Urban area
   iii. Peri-Urban area
4. Do you live with your family members?
   i. Yes
   ii. No
5. What is your religion?
   i. Christian
ii. Muslim

iii. Buddhist ☐

iv. Non-Practicing ☐

v. Others specify__________________________?

SECTION B: KNOWLEDGE ON CONTRACEPTIVES

6. Have you ever heard of contraceptives?
   i. Yes ☐
   ii. No ☐

7. If NO go to SECTION C

8. What do you understand by the term contraceptives______________________?

9. What was the source of the information on contraceptives?
   i. Mass Media ☐
   ii. Health worker ☐
   iii. Peers ☐
   iv. Parents ☐
   v. School teacher ☐
   vi. Others specify_________________________________?

10. Which types of modern contraceptives do you know?
    i. Pills ☐
    ii. Condoms ☐
    iii. injections ☐
    iv. Implants ☐
    v. Intra uterine devices ☐
    vi. Vasectomy ☐
    vii. Tubal ligation ☐
    viii. others specify_____________________________________________?

SECTION C: CONTRACEPTIVE UTILIZATION

11. Have you ever engaged in sexual intercourse?
79

12. At what age did you first engage in sexual intercourse_________________?

13. Did you use any contraceptives?
   i. Yes ■
   ii. No ■
   iii. If yes which contraceptive(s) have you ever used____________________?
   iv. If no why didn’t you use_______________________________?
   v. Others specify____________________________________?

14. Would you ever use a contraceptive?
   i. Yes ■
   ii. No ■
   iii. If yes please explain_______________________________?
   iv. If No please explain_______________________________?
   v. Others specify____________________________________?

15. In your own opinion is engaging in sexual activity risky?
   i. Yes ■
   ii. No ■

16. If yes what are the risks associated with sexual activity___________________________?

17. In your opinion what influences your choice to use contraceptives?
   i. Cultures ■
   ii. Religion ■
   iii. Peer pressure ■
   iv. Parental support and control ■
   v. Mass media ■
   vi. Access to information ■
   vii. Age ■
   viii. Academic aspirations ■
   ix. Socio-economic factors ■
x. Time of initiation of sexual activity

xi. Having a sexual partner

xii. Accessibility

xiii. Affordability

xiv. Gender

xv. Support from the health care facilities

18. Have you ever sort reproductive health services from the hospital

   i. Yes

   ii. No

   iii. If yes, please explain?

   iv. If no, please explain?

   v. Others specify?

19. Have you ever faced discrimination in the hospital when seeking reproductive health services?

   i. Yes

   ii. No

   iii. If yes, please explain?

   iv. If no, please explain?

   v. Others specify?

20. In your opinion do you think using contraceptives is harmful

   i. Yes

   ii. No

   iii. If yes, please explain?

SECTION D: PERCEPTIONS ON CONTRACEPTIVES

21. Would your parent/guardian approve contraception if you are/ were unmarried

   i. Would object

   ii. Would not object
iii. Others specify_______________________________________?

22. Do you think it is wise for you to use a contraceptive?
   i. Yes
   ii. No
   iii. Not sure
   iv. No information

23. Can you get contraceptives for yourself if you wanted
   i. Yes
   ii. No
   iii. If yes, please explain______________________________?
   iv. If no, please explain______________________________?
   v. Others specify____________________________________?

24. Do you discuss/communicate about contraceptives with anyone
   i. Yes
   ii. No
   iii. If yes please explain______________________________?
   iv. If no please explain______________________________?
5.4 Appendix IV: Focused Discussion Consent Form

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

Identification of the focused group discussion……………………………

Number of participants in the FDG…………………………………

Date of the FDG_____/_____/_______ Place of the FDG________________________

Moderator’s name________________________

Each of the participants has either read the information sheet. I have also explained to the participants the information contained in the information sheet. They have assured me that they fully understand that if they agree to participate in the study, they will have a group discussion of between 6-12 persons which will take 1-2hrs. They understand that they are free to withdraw from the discussion at any time and this will not have any adverse effects. They also understand that the discussion will be tape recorded.

The participants have agreed to take part in the study.

Name of the researcher______________________________

Signature____________________________________ Date________________________

5.5 Appendix V: Focused Group Discussion guide

Exploring the SRH problems for adolescents

1. What SRH problems do adolescents experience in this community?
2. What contributes to the sexual and reproductive health problems?
3. How can these problems be addressed?

Exploring health seeking behavior

1. What types of SRH services are available in this community?
2. What are your views/ opinions about the available services?
3. How can you describe the relationship/interaction between adolescents and the provider of the above services?
Reasons for not seeking SRH services

1. What are some of the reasons that make adolescents not seek reproductive health care from the health facilities?
2. What SRH services should be provided to adolescents and why?
3. What SRH services should not be provided to adolescents and why?

Information access and how to access sexual reproductive health care

1. What is your source of information on SRH advice and care
2. How can adolescents be encouraged to access SRH services?
3. How can the existing services be made acceptable to everyone (both the adolescents and the other community members)
5.6 Appendix VI: Kenyatta University Ethics Committee Approval

KENYATTA UNIVERSITY
ETHICS REVIEW COMMITTEE

P. O. Box 43844
Nairobi, 00100
Tel: 8710901/12
Fax: 8711242/8711575

Email: kuerc.chairman@ku.ac.ke
kuerc.secretary@ku.ac.ke
Website: www.ku.ac.ke

Our Ref: KU/R/COMM/51/318

Date: 4th April, 2014

Mary Wanjiru Murigi,
Department of Environmental Health,
Kenyatta University,
P.O. Box 43844

RE APPLICATION NUMBER PKU/181/I 158 – “UTILIZATION OF CONTRACEPTIVES AMONG SECONDARY SCHOOL ADOLESCENT GIRLS IN KARURI TOWN COUNCIL, KIAMBU COUNTY” VERSION 2

1. IDENTIFICATION OF PROTOCOL
The application before the committee is with a research topic “Utilization of contraceptives among secondary school adolescent girls in Karuri town council, Kiambu County” version 2 dated 4th April, 2014.

2. APPLICANT
Mary Wanjiru Murigi, Department of Environmental Health.

3. STUDY SITE
Karuri town council, Kiambu County

4. DECISION
The committee has considered the research protocol in accordance with the Kenyatta University Research Policy (section 7.2.1.3) and the Kenyatta University Ethics Review Committee Guidelines AND APPROVED that the research may proceed for a period of ONE year from 4th April, 2014.

5. ADVICE/CONDITIONS
i. Progress reports are submitted to the KU-ERC every six months and a full report is submitted at the end of the study.
ii. Serious and unexpected adverse events related to the conduct of the study are reported to this board immediately they occur.
iii. Notify the Kenyatta University Ethics Committee of any amendments to the protocol.
iv. Submit an electronic copy of the protocol to KUERC.

When replying, kindly quote the application number above.
If you accept the decision reached and advice and conditions given please sign in the space provided below and return to KU-ERC a copy of the letter.

PROF. NICHOLAS K. GIKONYO
CHAIRMAN ETHICS REVIEW COMMITTEE

I accept the advice given and will fulfill the conditions therein.
5.7 Appendix VII: National Commission for Science and Technology Approval

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471, 2241349, 310571, 2219420
Fax: +254-20-319245, 318249
Email: secretary@nacost.go.ke
Website: www.nacost.go.ke
When replying please quote

Ref: No.

NACOSTI/P/14/5388/1422

Mary Wanjiru Murigi
Kenyatta University
P.O.Box 43844-00100
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “Utilization of contraceptives among secondary school adolescent girls in Karuri Town Council, Kiambu County,” I am pleased to inform you that you have been authorized to undertake research in Kiambu County for a period ending 20th June, 2014.

You are advised to report to the County Commissioner and the County Director of Education, Kiambu County before embarking on the research project.

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

Said Hussein
For: Secretary/CEO

Copy to:

The County Commissioner
The County Director of Education
Kiambu County.
5.8 Appendix VIII: County Commissioner Kiambu County Approval

OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND CO-ORDINATION OF NATIONAL GOVERNMENT
COUNTY COMMISSIONER, KIAMBU

P.O. Box 32-00900
KIAMBU

ED.12/1/VOL 1/195

Ref. No. ………………………………………
and date

Mary Wanjiru Murigi
Kenyatta University
P.O. Box 43844-00100
NAIROBI

RE: RESEARCH AUTHORIZATION

Reference is made to National Commission for Science, Technology and Innovation letter re no. NACOSTI/P/14/5388/1422 of 9th May 2014.

You have been authorized to conduct research on “Utilization of contraceptives among secondary school adolescent girls in Karuri Town Council, Kiambu County” for a period ending 20th June 2014

You are requested to share your finding with the county education office upon completion of your research.

MUGO GICHIRI
FOR COUNTY COMMISSIONER
KIAMBU COUNTY

Cc County Director of Education
KIAMBU COUNTY

National Commission for Science, Technology and Innovation
P.O. Box 30623-00100
NAIROBI