DETERMINANTS OF RISKY SEXUAL AND REPRODUCTIVE HEALTH BEHAVIOUR AMONG STREET ADOLESCENTS IN DAGORETTISUB COUNTY, KENYA.

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Determinants of risky sexual and reproductive health behavior among street adolescents in Dagoretti sub county, Kenya.

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DECLARATION

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

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This thesis has been submitted for examination with our approval as the university supervisors.

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DEDICATION

To all the adolescents in contact with the streets, may this thesis help provide valuable information on risk factors in sexual and reproductive health among them with the aim of strengthening programming in the same.

To my entire family especially my dad and late mom, Christopher Kamano and the late Susan Waithera Kamano, for their sacrifice to ensure that I had access to formal education and their continued mentoring and support.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ABBREVIATIONS AND ACRONYMNS

ASFR Age Specific Fertility Rates

AMREF African Medical and Research Foundation

ANC Ante Natal Care

CBO Community Based Organizations

CBS Central Bureau of Statistics

CDC Centre for Disease Control

DCO District Children's Officer

FBO Faith Based Organization

GTZ German Technical Cooperation

HIV/AIDS Human Immune Virus /Acquired Immunodeficiency Syndrome

KAIS Kenya AIDS Indicator Survey

KDHS Kenya Demographic Health Survey

MoH Ministry of Health

MoPND Ministry of Planning and National Development

MoYA Ministry of Youth Affairs

NACC National AIDS Control Council

NCC Nairobi City Council

NCPD National Council for Population and Development

NGO Non Governmental Organizations

RTI Reproductive Tract Infection

SFRTF Street Families Rehabilitation Trust Fund

SNV The Netherlands Development Organization

SRH Sexual and Reproductive Health

STI/STD Sexually Transmitted Infection / Sexually Transmitted Diseases

TFR Total Fertility Rate

UMP Urban Management Programme

UNAIDS Joint United Nations Programme on HIV/AIDS

UNDESAUnited Nations Department of Economics and Social Affairs

UNHCRUnited Nations High Commissioner for Refugees

UNICEFUnited Nations Children's Fund

UNFPA United Nations Population Fund.

UNPD United Nations Population Department

WHO World Health Organization

WRC Women's Refugee Commission

DEFINITION OF TERMS AS USED IN THIS STUDY

Abortion: Unsafe abortion is a procedure for terminating an unintended pregnancy carried out either by persons lacking the necessary skills or in an environment that does not conform to minimal medical standards, or both (WHO,1992).

Adolescents: Persons aged between 10 and 19 years (WHO, 1998).However in this study only adolescents aged eleven to nineteen participated.

Area Advisory Council (AAC): A structure within the Children's act that is mandated responsibility of ensuring children enjoy their rights at the district level.

Parent/Guardian: Any person of adult age for whom the child identifies as a guardian/parent irrespective of their biological or family relationship.

Street children: Any girl or boy who has not reached adulthood, forwhom the street (in the broadest sense of the word, including unoccupied dwellings, wasteland, etc.) has becomeher or his habitual abode and/or sources of livelihood, and who is inadequately protected, supervised or directed by responsible adults (UNICEF, 2001)).It classifies street children into two main groups. The first are children on the streets who are engaged in some kind of economic activity ranging from begging to vending and go home at the end of the day and contribute their earnings to their family. They may also be attending school and retain a sense of belonging to a family. The second group are children of the street who live on the street (or outside of a normal family environment) with none or very weak family ties if any (Lemba, 2002).

Street Adolescents: Children agedbetween ten years and nineteen years living or working on the streets with or without any linkages to their families.

Reproductive Health: Addresses the reproductive processes, functions and system at all stages of life. It is a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity, in all matters relating to the reproductive system, its functions and processes (WHO, 1946).

Base: A place where economic and social activities of street children/adolescents are concentrated. The point where the children come together and live in a 'familial' kind of arrangement.

ABSTRACT

Adolescents make up a quarter of the world populationand despite being the hardest hit by sexual and reproductive health challenges their sexual and reproductive health (SRH) needs are not fully appreciated andare largely unmet. The challenges are more intense among certain groups, including street children/adolescents based on social, cultural and biological factors.

This descriptive cross sectional study was carried out in Dagoretti district of Nairobi, Kenya, to determine the determinants of sexual and reproductive health among street adolescents. Data was collected through interviewsfrom 195 adolescents selected randomly and5 key informants selected purposively representing different players in the street children/adolescents sector in the sub county. The quantitative data was analyzed using SPSS while qualitative data was transcribed, coded and analyzed thematically.

The study established that despite moderatelyhigh SRH knowledge among 79% of the participants, 55% of them were involved in high risk sexual behaviour.Majority of the adolescents had sex by the age of 10-15 years (41.9%) with older partners and did not use condoms (74.4%).Adjusting for other factors, male gender (P =0.006), age in years (P =0.037), HIV testing (P =0.011), parents/guardians as a source of SRH information and combination of number of drugs used (P =0.001) were found to be significantly associated with risky sexual behaviour. The study concluded that though street adolescents have high knowledge on SRH their behavior was risky. Further they accessed SRH services and information from informal sources. This study recommends the strengthening and parental involvement in peer education, integration of sensitization of adolescence on drugs and substances of abuse and improvement of health centres as education and service provision centres on ASRH. It further recommends enactment of a comprehensive ASRH policy aimed at providing accurate, age-appropriate and comprehensive sexual and reproductive health education for all adolescents with specific focus on early adolescence (10yrs to 14yrs) and the male gender. It shall inform healthcare policy development and

implementation to ensure inclusion of street children/adolescents in health care provision especially in SRH issues.Further studies are recommended to understand the gap between knowledge and practice as well as the need to disaggregate data on street children/adolescents by cohorts to ensure appropriate programming for the different age groups.

CHAPTER ONE

INTRODUCTION

1.1 Background Information

Adolescents make up a quarter of the world population (UNFPA, 2013) but have until now been neglected as a distinct group and have generally been subsumed under the heading of child, family or women's health and welfare. In 2005, there were 1.21 billion adolescents (people aged 10–19 years) in the world – the largest-ever number in the history of mankind. Population in this age group is estimated to continue to increase to 1.23 billion by 2040(UNDESA, 2005).

Adolescents have specific health and development needs, and many face challenges that hinder their well being including; poverty, lack of access to health information and services and unsafe environments. Interventions that address their needs can save lives and foster a new generation of productive adults who can help their communities' progress. In many parts of the world the sexual and reproductive health needs of adolescents are either poorly understood or not fully appreciated. Evidence is growing that this neglect can seriously jeopardize the health and future well-being of young people (Bott *et al.*, 2003; WHO, 2006).

According to UNFPA, in 2010 there were 1.2 billion adolescents in the world forming 18 % of world population. The vast majority of adolescents – 88 % – live in developing countries. The least developed countries are home to roughly 20% of all adolescents (UNFPA, 2010). Worldwide, adolescent females and males are reaching puberty sooner, marrying later and having more premarital sex (Machel, 1996).However the sexual and reproductive health(SRH) needs of adolescents are largely unmet (Benitez, 2007).The unmet need for contraceptives among adolescentsis more than twice that of married women(UNFPA, 2008).

Worldwide, one third of women give birth before the age of 20, (WRC, 2002). Ninety five percent of the world's births in adolescents occur in developing countries (UNFPA, 2013). About 19 per cent of young women in developing countries become pregnant before age 18. Girls under 15 account for 2 million of the 7.3 million births that occur to adolescent girls under 18 every year in developing countries (UNFPA, 2013). Pregnant adolescents are at increased risk of morbidity and mortality due to complicationsduring pregnancy and childbirth, including obstructedlabor, preterm labor and spontaneous abortion. Fivemillion adolescents between 15 and18 years have unsafe abortions each year and 70,000abortion-related deaths occur among this agegroup every year. Half of new HIV infections occurin 15-to-24 year olds, and one third of new cases ofcurable sexually transmitted infections (STIs) affectpeople younger than 25 years (WHO, 2009).

According to the 2009 Kenya census, adolescents aged 10-19 years constitute about 9.2 million which makes 24 % of the country's total population (CBS, 2009).In Kenya, as in other parts of Sub-Saharan Africa, adolescents face severe challenges to their lives and general well-being. They are vulnerable to early and unintended pregnancy, unsafe abortion, female genital mutilation (FGM), child marriages, sexual violence, malnutrition and reproductive tract infections including sexually transmitted infections (STIs) as well as HIV and AIDS (MOH,2015). Kenya is one of the countries in Sub-Saharan Africa that have high levels of adult and adolescent childbearing and HIV/AIDS infection. The risk of unplanned pregnancy and sexually transmitted infections (STIs) including HIV/AIDS may be affected by the age of sexual debut. Sexual activity at younger ages may be associated with greater likelihood of unprotected intercourse and multiple partners, potentially leaving the adolescent at greater risk of contracting an STI/HIV/AIDS (Ikamari & Towett, 2007). Early initiation of sexual activity prolongs the period of exposure to risk of pregnancy during the reproductive span. It often leads to early marriage and child bearing. Early child bearing is fraught with substantial health risks for both the mother and the child. Young mothers are more likely to experience pregnancy related complications and less able to deal with them, which often lead to maternal death. Children born to young mothers are usually subject to elevated risks of morbidity and

mortality (Ikamari, 1996). Furthermore, 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). Due to the fact that early childbearing hinders a mother's educational attainment, it often results in reducing economic opportunity for the mother and the household as a whole. The above mentioned serious health risks of early sexual activity and child bearing underlie the need for addressing adolescent sexual and reproductive health.

KDHS(2008) indicated that SRH indicators among adolescents have improved in the past 5 years. Adolescents who have begun child bearing have the least median number of months since the preceding birth which has greater risk of having poor health and threatening maternal health. KDHS, 2008 also indicates that the percentage of teenagers who have begun childbearing declined from 23 % in the 2003 KDHS to 18% in the 2008-09 KDHS. The proportion of teenage mothers declined from 19% in 2003 to 15% in 2008-09, while the proportion of those pregnant with their first child declined as well, from 5% in 2003 to 3% in 2008-09. Further the KDHS report (2008) indicated that the proportion of teenagers who have begun childbearing increases dramatically from 2 % at age 15 to 36% at age 19. Though there is not much of a differential in teenage fertility between urban and rural women the levels of teenage childbearing vary based on provinces with the highest in Nyanza (27%) and Coast (26 %) provinces and lowest in Central province (10 %). This conforms to other social indicators of development such as education that influence a delay in onset of childbearing. One-third of uneducated teenagers (32 %) have begun childbearing, compared with only one-tenth of those with some secondary education and above. Similarly, teenagers from poorer households are more likely to have begun childbearing (24 %) than are teenagers from wealthier households (16 %).

Adolescents living in difficult circumstances and especially street children are already excluded from mainstream society by virtue of their social positioning; this thus complicates the issues of ASRH further within this group. They constitute a

marginalized group in most societies and do not have what society considers appropriate relationships with major institutions of childhood such as family, schools and health facilities.

It is estimated that there are tens of millions of street children in the world (UNICEF, 2006). In Kenya, the number of street children is estimated to be 250,000. However this number rises to more than 300,000 when street families and youth are factored in (SFRTF, 2010). Most street children in Kenya live and labor in very exploitative situations (Kilbride *et al.*,2000). Though street children are developmentally and psychologically children, their adaptive strategies are seemingly mature than their chronological age (Kilbride *et al.*, 2000). These children live a transitory lifestyle and are vulnerable to inadequate nutrition, physical injuries, substance use, and health problems including sexual and reproductive health problems (UNICEF, 2006). This exclusion and vulnerability coupled with the challenges of adolescence mentioned above complicate the sexual and reproductive health issues in this group further.

1.2 Statement of the Problem

Though adolescents make up a quarter of the world's population,they remain neglected as a distinct group and have generally been subsumed under the heading of child, family or women's health and welfare. Furthermore, adolescence is increasingly seen as a "gateway to health" because behavioural patterns acquired during this period tend to last throughout adult life – approximately 70% of premature deaths among adults are due to behaviours which began during adolescence (WHO, 1998).According to WHO (2014) an estimated 1.3 million adolescents died in 2012, mostly from preventable or treatable causes. Road traffic injuries were the leading cause of death in 2012, with some 330 adolescents dying every day. Other main causes of adolescent deaths include HIV, suicide, lower respiratory infections and interpersonal violence. Half of all mental health disorders in adulthood appear to start by age 14, but most cases are undetected and untreated(WHO, 2014).

Globally, adolescents are hardest hit by sexual and reproductive health challenges with the challenges being more intense among certain groups, including street children based on social, cultural and biological factors (Benitez, 2007). Despite thesechallenges their sexual and reproductive health needs are often not incorporated in many health and development plans and programs (Pathfinder, 2011). UNICEF's annual State of the World's Children reports have for many years highlighted the extremely difficult circumstances in which children who work and live in the streets suffer. But despite their visibility, street children have more often served as tragic illustrations of neglect and vulnerability than as genuine targets of policies, programmes and services (UNICEF, 2009).

Further the evidence on SRH needs among higher risk adolescent populations such as street adolescents remain very limited (Dehne & Riedner, 2005). This leads to poor understanding of the reproductive health problems facing this group of adolescents and could lead to their further exclusion in reproductive health care provision. This research aimed at providing information on determinants of SRH among street adolescents.

1.3 Justification

Streetadolescenceisa social and security problem that requires attention globally and especially in developing countries. However, little accurate information exists about their numbers. They are estimated in the millions globally and their rapid increase calls for an urgent response. Further a significant number of street children have no regular source of health care. Confronted with the harsh life of the street, these children engage in high risk behaviour in a quest to survive. Street children who are often coerced into unsafe sexual practices will continue to be at risk for psychoactive substance use, HIV and other reproductive health problems. Intensive and ongoing services are thus required to meet their multi-facetted health and social needs.

However, very little documentation exists especially in Sub Sahara Africa to inform policy development and programming for this group.The evidence on SRH problems among higher risk adolescent populations (such as young sex workers and their clients, boys who have sex with boys, street children and children in homes) and other STIs (such as herpes and chancroid) remains very limited indeed (Dehne &Riedner, 2005). The problem of street children is well documented in Latin America and South-East Asia. However, in Africa it is a comparatively new phenomenon (UMP, 2000).There is limited literature on street children which has gaps related to gender insensitivity, methodology and lack of validity which ultimately affects the quality of the researches (SNV &GTZ, 2002).

There was therefore need to carry out a study to understand the reproductive health needs and challenges of street children and adolescentsto ensure that their reproductive health issues are brought to the forefront and incorporated in long term developmental planning. The results of this study will inform policy development and street adolescents programming to ensure inclusion of one of the most vulnerable groups and development of more sustainable and impactful programmes.

1.4 Research Questions

1. What is the level of knowledge and attitudeon sexual and reproductive health among street adolescents in Dagoretti Sub County?
2. What are the sexual and reproductive practices and the associated factors among street adolescents in Dagoretti Sub County?
3. What is the health seeking behaviour on SRH among street adolescents in Dagoretti Sub County?

1.5 Objectives

General Objective

To establishthe determinants of risky sexual and reproductive health behavioramong

street adolescents in Dagoretti Sub County.

Specific Objectives

1. To determine knowledge and attitude on SRH among street adolescents in Dagoretti Sub county.
2. To determine sexual behaviour /practices and the associated factors among street adolescents in Dagoretti Sub County
3. To determine health seeking behaviour among street adolescentsDagoretti Sub County.

CHAPTER TWO

LITERATURE REVIEW

2.1 Adolescents Sexual and Reproductive Health

Adolescence comprises a lengthy period of transition from childhood to adulthood, associated with an emerging awareness of sexuality and an age-specific drive to experiment with sex. In many societies, the gap between the age of sexual maturity and that at which sexual relations become legitimate has widened. During this period, young people are kept relatively uninformed regarding sexual matters, sexual activity is stigmatized and adolescents are confronted with hostility from adults if non-sanctioned sexual relations take place. These conflicting factors not only make the need for sex education, contraception and STI services for adolescents urgent but also make their provision difficult to implement (WHO, 2005).

Adolescence is a time of tremendous opportunity and change but it is also a period of risk taking and young men and women face increased vulnerabilities. Unfortunately, pervasive social, economic and health problems mean that circumstances for Africa's youth are often especially difficult. Many young Africans are forced to end their education early and a growing number must grow up as orphans or on the streets. Gender based inequalities persist, such that girls do not reach their potential and boys have a false sense of power and domination. These factors give rise to sexual reproductive health problems exacerbated by risk-taking behaviour, early onset of sexual activity, limited access to basic health services and information about HIV/AIDS and a tendency to have many partners (World Bank *et al*, 2009).

Kenya is characterized by a youthful population with over 40 % being younger than 15 years (CBS, 2008). This implies that over half of Kenya's population is aged

below 24 years, with a large proportion being adolescents (CBS, 2008). Adolescents in Kenya constitute 22.3% of Kenya's population (UNICEF, 2013). This proportion has major demographic, social and economic implications, including strain on the national economy, pressure on the provision of social services and demand for employment, as well as high dependency. Yet adolescents and youth are the nation's future, an important resource whose capacities need to be tapped for development.

2.2 Street Children and Adolescents

The actual number of street children and adolescents the world over is unknown. As pointed out by Muir (1991), street youths can be difficult to quantify, for they range on a continuum from those who live at home but spend a great deal of time 'hanging out' to those who live on the street (often in abandoned buildings and underground parking lots and whose financial and personal support comes from street life.The number of children living independently in the streets is tens of millions (UNICEF, 2006). Further not much has been done to categorize street adolescents separately from the other groups of children on the streets and thus most research refers to all as children.

However it is clear globally that more and more children and youth around the world find themselves with no choice but to make a living for their own survival and often that of their families, thereby assuming roles traditionally played by their parents (Kobayashi Y., 2004). Various factors contribute to the increase in the numbers of street adolescents. The most important is the HIV/AIDS epidemic. In these heavily affected countries, HIV/AIDS orphans were expected to number 25 million by 2010 (USAID, 2002). In addition, HIV/AIDS has made more children vulnerable, as they care for sick parents, take on adult responsibilities, and live in weakened families and communities. An increasing number of children orphaned by HIV/AIDS are living and/or working on the street. In Zimbabwe, for example, half of street children are orphans, themajority of them because of AIDS (UNAIDS *et al.*, 2002).

2.2.1 Categories of street children and adolescents

There are three main categories of street children including street adolescents. The first classification refers to children on the streets. These are children who maintain good family ties and often return home in the evening. The second classification refers to children of the streets. These are children with loose family contacts who spend some nights or days, or part of the day on the streets and occasionally go back home. The third category is closely related to the second category, and refers to children who are completely detached from their families and live in gangs in temporary makeshift shelters (UNICEF.2006). Lately a new category of street children is emerging; children whose parents are also street children/adolescents also known as children of street families. Street children depend less on their families but rely more on the meaningful ties they have established within their groups or gangs (UMP, 2000).

2.2.2 Street Children in Kenya

One of the major challenges facing urban development in Kenya and many developing countries is the growing number of street children, youth and families. The Kenya government estimates the number of street persons in the country to be more than 300,000 out of a population of slightly over 38 million (SFRTF, 2010). The phenomenon is slowly changing from just street children and adolescents to street families with the children growing up on the streets, getting into relationships and building their own families on the streets.

The number of street children in Nairobi is over 50,000, and the government estimates that their numbers grow at a rate of 10 % per year. These children are often involved in theft, drug trafficking, assault, trespassing and property damage, (US Dept of State, 2005). Fifty three percent of street children in Nairobi are born in the slums while the rest migrate from other counties. Most of them come from single mothers. The parents of street children and adolescents are young with about 80% with under 40 years of age (Kilbride*et al.,* 2000).

Kenyan street children, as in the world over, are often observed sniffing glue and develop addictions to glue and other substances such as thinner (Kilbride*et al.*, 2000).The children are stigmatized, as their counterparts elsewhere, and this can be seen in constant police harassment and public fear of them, symbolic of their lives lived apart from school, family and community in contrast to legitimate social contexts for children (Kilbride*et al.*, 2000).

There are macro and micro factors pushing children to the streets. The macro factors include poverty, HIV/AIDS, civil war, rural –urban migration and apartheid while the micro factors include family breakdown and step parenting which has been identified as one of the immediate factors precipitating push factor that prompts a child to leave home directly to the streets(Kilbride, *et al.*, 2000). Others include matrifocal tendency (single motherhood) which results in an aberrant movement of children away from homes that no longer adequately provide for them adequately. Further, abandonment, abuse at home, lack of food, unplanned adolescent pregnancies, high birth rates and self-recruitment were cited as additional factors pushing the children to the streets(Kilbride, *et al.*, 2000).

In the study by Kilbride *et. al.* (2000) the children identified possible solutions to their problems which included provision of basic needs, education, skills training, identity cards, jobs and family planning services.

2.3 Sexual and Reproductive Health

Reproductive health is a state of complete physical, mental and social wellbeing in all matters relating to the reproductive system and its functions and processes. It is therefore, not merely, the absence of infirmity or disease (UN,1995).

Globally, reproductive health problems remain the leading cause of ill health and death for women of childbearing age worldwide (WHO, 2009). Impoverished

women, especially those living in developing countries, suffer disproportionately from unintended pregnancies, maternal death and disability, sexually transmitted infections including HIV, gender-based violence and other problems related to their reproductive system and sexual behavior (UNFPA,2008). Adolescents on the other hand often face barriers in trying to get the information or care they need.

Adolescents, both unmarried and married, face many sexual and reproductive health risks stemming from early, unprotected, and unwanted sexual activity. Key factors underlying this issue are lack of access to sexuality education, and to accessible, affordable, and appropriate contraception (WHO, 2012). The number of sexually active adolescents is increasing globally. This is leading to a large and growing unmet need for contraceptive services appropriate to the unique needs of adolescents. Many individuals worldwide initiate sexual activity during their adolescent years within, or outside of, formal unions. The level and context of sexual activity among adolescents varies widely by sex and location. About 14% of adolescent girls in developing countries are married by the age of 15 years, and as many as 30% are married by age 18 (Lloyd C. B., 2005)

Kenya's commitment to addressing the issues affecting adolescents is demonstrated by the fact that the country is a signatory to several international and regional human rights treaties and declarations. These include the Ministerial Commitment on Comprehensive Sexuality Education and SRH Services for Adolescents and Young People in Eastern and Southern Africa (ESA, 2013), Convention on the Rights of the Child (CRC) ratified in 1990, Program of Action of the International Conference on Population and Development (ICPD, 1994) and the MDGs approved by the World Summit on Sustainable Development in September, 2000 as well as the Maputo Plan of Action 2007-2010.

Nationally, Sexual Reproductive Health (SRH) issues are addressed within various legislative and policy frameworks. These include the Constitution of Kenya (2010), Sexual Offences Act (2006), Children's Act (2001), Counter Trafficking in Persons Act (2010), Prohibition of FGM Act (2011), Person With Disability Act (2003), HIV

and AIDS Prevention and Control Act (2006), Marriage Act (2014), National Reproductive Health Policy (2007), National Youth Policy (2007), Sessional Paper No. 3 on Population Policy for National Development (2012), Gender Policy in Education (2007), Kenya Health Policy (2012-2030), Kenya Health Sector Strategic and Investment Plan (2013-2017), Education Sector Policy on HIV and AIDS (2013), National School Health Policy (2009), National Gender-Based Violence (2014) and Kenya Vision 2030. However, it's not until 2015 that an ASRH policy was enacted which still does not put focus on street adolescents.

Despite the favorable policy and legal context in relation to SRH in Kenya, the adolescentswere said to be especially vulnerable to unplanned teenage pregnancies and sexually transmitted infections, including HIV/AIDS, (MoYA, 2006). A study carried out in Kenya in 2007 indicated that by age 16, 56 % of the adolescents were already sexually experienced and by age 18, 84 % of them had already had their first sex and by age 20 nearly 97 % of them had had their sexual debut. The mean debut age was indicated at 16.2 years with the onset ranging from 8 years onwards. The study indicated that household economic status and education have a significant effect on the timing of first sex: adolescent with at least secondary education are more likely than those with no education to initiate sexual activity late. Rural adolescents were indicated as 14% less likely than urban adolescents to initiate sexual activity, an unexpected observation(Ikamari & Towett, 2007). The study by Ikamari and Towett (2007) further indicated that the ever use of contraceptive among the adolescents was high at 46.9% with a very low condom use at 13% indicating high exposure to unsafe sex.

2.3.1 Sexually Transmitted Infections among adolescents

Sexually transmitted infections (STIs) are infections that are spread primarily through person-to-person sexual contact. There are more than 30 different sexually transmissible bacteria, viruses and parasites. HIV and syphilis, can also be transmitted from mother to child during pregnancy and childbirth, and through blood products and tissue transfer (WHO, 2013).It is estimated that more than 340 million

new cases of curable sexually transmitted infections occur every year throughout the world in men and women aged 15–49 years, with the largest proportion in the region of south and south-east Asia, followed by sub Saharan Africa, and Latin American and the Caribbean (WHO, 2007a).

Sexually transmitted infections can have severe consequences for individuals and communities. The presence of untreated sexually transmitted and other reproductive tract infections (STI/RTI) increase the risk of HIV infection and transmission by a factor of two to nine. The most serious complications and long-term consequences of untreated sexually transmitted infections tend to be in women and newborn babies. Gonorrhoea and chlamydial infections can cause pelvic inflammatory disease, which can lead, in turn, to ectopic pregnancy and infertility (UNFPA,2004). Almost all STI/RTI have been associated, for pregnant women, with premature delivery and low birth weight babies. Children can be born with congenital syphilis or herpes or with serious eye infections due to gonorrhoea or chlamydia (UNFPA, 2004).

Sexually transmitted diseases (STDs) affect men and women of all backgrounds and economic levels. CDC estimates that 19 million new infections occur each year (CDC, 2008).Prevalence estimates suggest that young people aged 15–24 years acquire half of all new STDs (Satterwhite *et al.*, 2008) and that 1 in 4 sexually active adolescent females have an STD, such as chlamydia or human papillomavirus (Forhan *et al.*, 2009). Compared with older adults, sexually active adolescents aged 15–19 years and young adults aged 20–24 years are at higher risk of acquiring STDs for a combination of behavioral, biological, and cultural reasons (CDC,2012).Other unwanted consequences of sexual activity include early motherhood, complications of pregnancy and unsafe abortions for adolescent girls, and the psychological and health consequences of sexual violence for both sexes (Dehne & Riedner, 2005).

According to Dehne and Riedner(2007) STIs are widely associated with stigmatization, embarrassment and denial among health workers and patients alike. Sexuality, and associated health risks, are still a major taboo in many societies. This

is especially true for young people. While their rights and needs may be acknowledged in theory, in practice they are still confronted with many barriers when it comes to obtaining the practical support they need to avoid problems. An expression of their "unmet needs" is the worldwide scarcity of services available for young people especially services related to the treatment of STIs.

UNFPA estimates, 340 million new cases of curable STIs (syphilis, gonorrhoea, chlamydia and trichomoniasis) occur annually throughout the world in adults aged 15-49 years (UNFPA, 2004).In developing countries, STIs and their complications rank in the top five disease categories for which adults seek health care. Infection with STIs can lead to acute symptoms, chronic infection and serious delayed consequences such as infertility, ectopic pregnancy, cervical cancer and the untimely death of infants and adults.

The control of STIs remains a priority for WHO. The World Health Assembly endorsed the global strategy for the prevention and control of STIs in 2006. The strategy urges all countries to control the transmission of STIs by implementing a number of interventions. Education on sexuality is now on the agenda of ministries of education and ministries of health in most countries, even if implementation has remained weak or limited to certain aspects of sexual health. However, in many cases young people are not provided with the skills to protect themselves against the risk of infection (Dehne, 2005).

In Kenya, young people face severe threats to their health and general well-being. They are vulnerable to sexual assault and prostitution, early pregnancy and childbearing, unsafe abortion, malnutrition, female genital cutting, infertility, anaemia, and reproductive tract infections (RTIs) including STIs and HIV/AIDS (NCPD, 2003).

2.3.2 HIV prevalence in Kenya

In Kenya, according to KAIS (2012) 5.6% persons aged 15-64 years were living with

HIV infection, a decrease from 7.4% in 2007. A higher proportion of women aged 15-64 years (6.9%) than men (5.4%) are infected with HIV according to KAIS 2012. This pattern is similar to what was observed in 2007. Among youth aged 15–24 years, HIV prevalence was higher among women than men from the age of 17 years (KAIS, 2012)

Among adolescents age 15-19, HIV prevalence between men and women is minimal at 1.1% and 0.9% respectively. The difference peaks between 20 and 24 years (4.6% compared to 1.3%). The burden of infections is statistically higher among females than males (KAIS, 2012).

According to KDHS (2014)women and men aged 15-19 have lower levels of knowledge of HIV prevention methods than people aged 20 and above.

Kenya is estimated to haveapproximately1,100,000 AIDS orphans (UNAIDS, 2011). Increases in the mortality rate of bothchildren and young adults have a substantial impact on life expectancy.Sexually transmitted infections, especially those that cause ulcerations to the genital area, significantly increaseHIV transmission by as much as 10 %. On the other hand, STIs are not easily detectable amongstfemales which becomes an intervention challenge (NACC, 2002).

2.3.3 Safe Motherhood, Teenage Pregnancy and Unsafe Abortion

KDHS (2014) indicates a total fertility rate (TFR) of 3.9 children per womancompared to a TFR of 4.6 children reported for the period in 2009(KDHS, 2009). Age specific fertility rates (ASFR) have been decreasing over the years consistent with the TFR peaking at the ages between 20 to 29 years. Adolescent fertility rate (births per 1,000 women ages 15-19) in Kenya was 98.52 as of 2011 and 96 in 2014 (KDHS, 2014) which is very high compared to the World average at 48.9 (UNDESA, 2012). The percentage of women who have begun childbearing increases rapidly with age, from about 3 percent among women age 15 to 40 percent among women age 19 (KDHS, 2014).

Further KDHS (2008) indicates that the shortest median birth intervals are observed for children born to women age 15-19 (23 months). This has a direct impact on marternal mortality and children's health and development.

Sexual activity among Kenyan adolescents begins early (NCPD, MoPHS and MoMS, 2003). It is, moreover, often characterized by what might be called serial monogamy - one partner after another. Despite this multiplicity of partners, sexual activity is usually unprotected, giving rise to early pregnancy and unsafe abortion, school dropout, STIs including HIV/AIDS, and economic hardship (NCPD, 2003).However comparison of data from the 2008 KDHS with similar data from the 2003KDHS indicates that there has been an increase in the age at first sexual experience. The median age at first sex has among women aged 20-49 years risen from 17.8years in 1998 to 18.2 years in 2003 while that of men aged 20-54 increased from 17.1 yrs to 17.6 yrs.Women living in rural areas have their first sex almost 2 years earlier than those living in urban areas (KDHS, 2008).

According to KDHS (2008) the median age at first birth in Kenya is 20 years. On average, women are waiting longer than their mothers to begin childbearing. KDHS (2008) reported that only 18% of 20- to 24-year-old women in Kenya had given birth by the age of 18, compared with 34 % of women 45–49. Age at first birth also increases with education and wealth, and is higher in urban areas than rural areas.

In spite of high fertility and early sexual debut, contraceptive use among adolescents is relatively low.Only 6.6% of persons aged 15-19 years in Kenya were using any method of family planning in 1998. Of these, only 4 % were using modern methods. Among 20-24-year-olds, only 27% were using any method while 19.9% were using modern methods (NCPD, 2003).An analysis of KDHS surveys from 1998 to 2007 indicates that less than 40% of adolescent girls who have ever had sex have ever used any method of family planning. The proportion that ever used any contraceptive method remained stable at 36% and 35% respectively between 1998 and 2003 before slightly increasing to 39% in 2008-2009 (Obare *et al.*, 2011). There was, however, a

steady increase in the proportion that ever used a modern method of family planning over the same period with the greatest increase occurring between 2003 and 2008-2009 (Obare *et al.*, 2011). The level of current use of any family planning method among adolescent girls whohave ever had sex is even lower with no remarkable change across survey years. Inall survey years (1998; 2003; 2008), less than 20% of adolescent girls who have ever had sex reportedcurrently using any contraceptive method (17% in 1998; 15% in 2003; 16% in 2008-2009).

Teenage pregnancy is a pertinent issue given that 18% of teenagers have began childbearing. The proportion of teenagers who have begun childbearing increases dramatically from 2 % at age 15 to 36 % at age 19 with one third of uneducated teenagers having begun childbearing compared to one tenth of those with some secondary education and above (KDHS, 2008). Similarly teenagers from poorer households are more likely to have begun childbearing (24%) than are teenagers from wealthier households (16%) (KDHS, 2008). Teenage pregnancies have negative impacts including increased school drop outs, suicide, being ostracized by family and community, being forced into early marriage, unsafe abortion among others (MOYA, 2006).

Most abortions occur in developing countries, 35 million annually, compared with seven million in developed countries, a disparity that largely reflects the relative population distribution (Guttmacher Institute, 2009a).Of the estimated 208 million pregnancies that occurred worldwide in 2008, 33 million (16%) resulted in unintended births and 41 million ended in induced abortions (20%). Of the 23 million pregnancies that occur in developed countries, more than 40% are unintended and 28% end in induced abortion. Of the 185 million pregnancies that occur in developing countries, 40% are unintended, 19% end in induced abortion and these are mainly illegal and in most cases unsafe (Guttmacher Institute, 2009a).Unsafe abortion contributes significantly to maternal morbidity and mortality. Unsafe abortion causes approximately 13% of all maternal deaths and approximately 20% of

the overall burden of maternal death and long-term sexual and reproductive ill-health (WHO,2005).

The annual number of induced abortions in Africa rose between 2003 and 2008, from 5.6 million to 6.4 million with the most abortions occurring in Eastern Africa (2.5 million). Of the 6.4 million abortions carried out in 2008, only 3% were performed under safe conditions (Guttmacher Institute, 2012).The estimated abortion rate in 2008 was 38 per 1,000 women aged 15–44 in Eastern Africa, 36 in Middle Africa and 28 per 1,000 in Western Africa (Guttmacher Institute, 2012). Thirteen percent of all pregnancies in Africa ended in abortion in 2008. (Guttmacher Institute, 2012) The World Health Organization estimates that in Africa in 2008, 14% of maternal deaths were due to unsafe abortion (WHO, 2012). Even though induced abortion is highly restricted in most of Eastern Africa, an estimated 2.4 million unsafe induced abortions occurred in the region in 2008. The rate of unsafe abortion in East Africa is 36 per 1,000 women of reproductive age, and although this rate has declined since 2003, it remains the highest among all subregions in the world (WHO, 2011)

Though pregnancy termination is highly restricted in Kenya, induced abortion remains common. More than 40% of births in Kenya are unplanned; among adolescents aged 15–19, 47% are unplanned ((Guttmacher Institute, 2009b). Illegal abortion is often unsafe, putting women at risk of death or severe complications (Guttmacher Institute, 2008). In Kenya it is estimated that 316,560 spontaneous and induced abortions occur annually—46 for every 1,000 women of reproductive age (or about 29 abortions for every 100 live births), IPAS, 2004. In 2002, a study of women admitted to public hospitals for abortion-related complications in Kenya showed that patients were diverse in age from teens to over 34 years (IPAS,2004).The majority of women seeking care for unsafe abortion complications are below 25 years of age (NCPD, MoP and MoH, 2003).Study data by IPAS revealed that about 48% of abortions occurred in women aged 14 to 24 years; 57% of the women were from urban areas. During the three-week course of the study, 7 out of the 809 study participants with abortion complications died (nearly 1 in 100). The

total annual direct cost of treating complications of unsafe abortion in public hospitals was nearly $230,000 (18 million Kenyan shillings) (IPAS, 2004).

2.3.4 Sexual and Reproductive Health among Street Adolescents

Although the typical age of a street child varies from place to place, the age range includes children in the adolescent period. However,little literature exists on the street adolescent despite a lot of studies having been carried out on street children. Street children are exposedto situations that make them vulnerable to sexual and reproductive health problems on a day to day basis. Their vulnerability to these situations is increased by their lack of understanding of thechanges associated with adolescence, the lack of knowledge and skills which could help them tomake healthy choices and their inability to access the appropriate services (WHO,2000).

Street children are said to engage in sex for initiation, comfort and as a punishment. In Australia and Canada, many street children engage in commercial sex while intoxicated as they say it helps them not to think about what they are doing (WHO, 2000).According to WHO, street girls may become pregnant due to their high vulnerability to physical and sexual abuse and exploitation. Since the reproductive systemis not fully developed, they are prone to complications related to childbirth such as premature delivery and obstructed labour. These can cause injuries or death to the baby and the mother. The baby born to such mothers may have a low birth weight and may be prone to infections and illness. Coping with the needs of the child may be difficult for a street girl. WHO also points out the fact that street children are particularly vulnerable to HIV/AIDS/STDs because of their circumstances (WHO,2000).

CHAPTER THREE

MATERIALS AND METHODS

3.1 Study Area

The study was carried out inDagoretti district. Dagoretti district is one of the nine districts that make up Nairobi County with coverage of 38.7 km^2. Administratively the district is divided into three divisions: Waithaka, Woodley and Kawangware (Appendix 1). According to the 2009 national housing and population census the population of Dagoretti district was 329,777 with 166,391 male and 163,186 female (KNBS, 2009a).The district attracts high immigrants from other parts of the country in search of employment in the capital city. This has contributed significantly to the high population growth of the district especially in Kawangware Division which has a population of 212,620 and a density of 18,984 person/km^2. Dagoretti district has informal settlements, where many residents with low income reside, such as Kawangware which is characterized with high population density with over 50% of the district population (KNBS, 2009b). A baseline survey carried out by AMREF in 2001 indicated that 35000 children were living in difficult circumstances (AMREF, 2001).This study was carried out in Dagoretti to facilitate possible expansion of an existing street children rehabilitation program into ASRH.

3.2 Study Design

The study wasa descriptive cross sectional studyon the determinants of sexual and reproductive health among street adolescents.

3.3 Study Population

The study populationcomprisedall street adolescents living in Dagorettidistrict.

- Inclusion criteria
    - Adolescents (10 to 19 years) who:
        - had lived or worked on the streets for at least 2 years
        - either had or didn't have contact with their families.
        - consented to participate in the study.
- Exclusion criteria
    - Street adolescents that refused to consent to participate in the study.

Key informant interviewees were also part of the study population. They were selected based on past experience in working with street children/adolescents. They should have worked or interacted closely with street children for at least 2 years.

3.4 Sampling

3.4.1 Sample size determination

The sample size was determined based on knowledge levels of out of school youth observed in a study conducted in Kenya using the formula by Fisher *et al*(1988).

$$N = \frac{Z^2pq}{d^2}$$

Where Z=1.96

d=0.05

p= 0.12 (percentage of out of school youth with knowledge on STIs, NASCOP, 2002.)

q=1-p= 0.88

$$n=\frac{1.96^2x0.88x0.12}{0.05^2}$$

n= 163

To allow for attrition a 20% increment was added to the minimum sample size to come to a final sample size of 196. The attrition is due to increased possibility of losing interviewees in the early stages of the interview due to high drug intake.

3.4.2 Sampling method

3.4.2.1 Sampling method for the street adolescents.

Systematic random sampling method was used. All bases where the street adolescents converge in Dagoretti district and the approximate numbers were obtained from the DCO's office and other partners working with street children and a list compiled. The total number of adolescents to be interviewed per base were calculated proportionately. The sample was stratified based on gender to ensure inclusion of both sexes based on their population ratio. A total number of 197 street adolescents in contact with the streets were reached from the bases through random sampling. Every other third adolescent in the base or soccer teams was selected and interviewed based on registration lists done by the interviewees. Twelve soccer teams and 9 bases were reached. 8 persons were interviewed from each soccer team reaching 108 persons and 96 adolescents were reached from the 9 bases. The adolescents were recruited from the following bases proportionately; 16 from zion base, 8 from BP base, 12 from Mama Oliech base, 16 from kawangware market base, 18 from ndunyu base, 8 from Waithaka base, 16 from Saigon base, 10 from Kabiria base and 16 from Gatina base. The soccer teams which comprise of adolescents in contact with the streets gave the researcher an opportunity to reach more girls in contact with the streets.

3.4.2.2 Sampling method for Key informants

Six persons were selected purposively based on their experience working with street children. They included the District Children's office, the area chief Kawangware, three social workers working for NGOs and the County government social worker.

3.5 DataCollection

3.5.1 Data Collection procedures

3.5.1.1 Quantitative data collection procedure

A questionnaire was developed in English and translated to Swahili, the language

that most respondents would be familiar with. Preliminary activities before the actual data collection included selection data collection assistants. To ensure credibility of data it was estimated that each enumerator would collect data from a maximum of 5 persons per day and a maximum of five data collection days set to ensure that there was no contamination of respondents' information. A total of ten enumerators were thus settled on.

To ensure that the street adolescents accepted to participate in the study, all data enumerators were street educators who had worked with street children in the past. This ensured a smooth entry to their 'private' lives.

The data enumerators were trained for two days on the tools to ensure that they had a clear understanding of the tools. The tools were then pretested for one day and revised accordingly. Eighteen (10%) questionnaires were pretested at a base in Westlands. The data enumerators who were selected based on their interest in street children issues were supervised and call back done on a few of the questionnaires selected randomly to ensure credibility of data.

The Sub county was divided into four clusters; Dagoretti Corner, Kawangware, Dagoretti Market and Uthiru. The data collectors focused on one cluster each day. This was further aimed at reducing contamination of respondents.

3.5.1.2 Qualitative data collection procedure

Appointments were made with KII and interviews held at their offices and for some at other points of their convenience. The interviewees were explained to what the study was about and informed of the importance of recording the interviews to ensure consent before starting the interviews. The researcher sat with one other person so that as she interviewed, the other person took notes and the recorder ran on. At the end of the interview the KII were given a chance to ask any questions that they may have had and thanked for participating in the interview.

3.5.2 Data collection tools

3.5.2.1 Quantitative data collection tools

Data was collected using structured questionnaires (Appendix 1). The main issues included socio demographic aspects of the participants, their knowledge, attitudes and practice on sexual and reproductive health and factors influencing their health seeking behaviour. Knowledge level was measured through analysis of the understanding of the adolescents on key reproductive health issues including methods of protection, contraception, HIV/AIDS and STIs. The data enumerators explained the information required to the participants who had consented to participate in the study. The questionnaires were coded to conceal the identity of the participant.

3.5.2.2 Qualitative data collecting tools

Key informant Interview Guide/schedule (Appendix 3) was used to collect data from sixkey informants. The KII guides focused on collecting information on SRH challenges facing street adolescents, key factors driving SR health seeking behaviors of street adolescents and any striking SRH behaviours among street adolescents. Information collected from the key informant interviews helped to cross-check, authenticate and validate information analyzed from the questionnaires.

3.5.3 Data Analysis

3.5.3.1 Quantitative data collection

Data analysis for quantitativedata was conducted using descriptive and multivariate analysis aided by SPSS statistical software. Descriptive statistics such as proportions were used to summarize categorical variables and measures of central tendency for continuous variables. Composite scores were generated for the analysis of knowledge, attitude and practice as annexed in Appendix 5.

Pearson's Chi-square test was used to test for the strength of association between categorical variables.The independent variables included, age, education level, gender, place of birth and source of SRH information while the dependent variable was risky sexual behaviour. All exposure variables (Independent factors) were associated with the dependent variable (*Risky Sexual behaviour)* to determine which

ones had significant association. Odds Ratio (OR) and 95% Confidence Interval (CI) were used to estimate the strength of association between independent variables and the dependent variable. The threshold for statistical significance was set at $\alpha = 0.05$ and a two-sided P at 95% confidence intervals (CI) reported for corresponding analysis.

All independent variables identified to significantly associate with *Risky Sexual ehkd l* at bivariate analysis were considered together in a multivariate analysis. This was performed using binary logistic regression where backward conditional method was specified in order to identify confounders and effect modifiers. Adjusted odds Ratios (AOR) together with their respective 95% Confidence Interval (CI) were used to estimate the strength of association between the retained independent predictors and 'Risky Sexual behaviour'.

3.5.3.2 Qualitative data Analysis.

Data collected from the key informants was transcribed, coded and analyzed thematically based on the emerging themes. Two persons were involved in transcribing and coding vis the researcher and a qualitative data analyst. The key themes arising from the KII were the main SRH issues affecting street adolescents, challenges facing the street adolescents in relation to SRH, factors contributing to SRH problems among street adolescents and issues related to SRH service provision. The qualitative data was also quantized and integrated with the quantitative data.

3.6 Ethical Considerations

Approval to carry out the study was sought from the KEMRI SSC and National Ethics Review Committee before embarking on data collection (Appendix 6). Data was collected in a setting where privacy was ensured and where adolescents felt comfortable.

The researcher sought for approval from the Children's department who are assumed to be the custodians of children in contact with the streets. Further consent was sought from the local administration to ensure a smooth flow of the activity.

The second level of consent wasassent by the individual children who though some hadnot attained the maturity age weretreated as mature minors with capacity to consent as they have demonstrated the ability and capacity to manage their own affairs and to live wholly or partially independent of their parents or guardians. This is in line with the provision by the American Academy of Paediatrics that the study is harmless and information needed can only be collected from this population (Koren*et al*. 1993). The consentwas read out to the respondents and once in agreement they were given the consent form to sign.

To ensure privacy, the interview was carried out in a private area so as to rule out being overheard by others.Confidentialitywas guaranteed through guarding of the identities of the participants on the questionnaires to ensure that no tool can be linked to the respondent.The questionnaires were also kept in a locked cabinet and could only be accessed by the researcher and the data entry assistants.

Results of the study will be used to streamline programming for this group of adolescents particularly in sexual and reproductive health to ensure better access to SRH information and services. Further any adolescents identified to be ailing were referred to AMREF Child in Need project for treatment and follow up and the rest were taken through counseling as need arose. The study had a probable risk of making the respondent uncomfortable as they were sharing very personal and confidential information and thus the respondents were informed that they were free not to answer any question that made them feel uncomfortable.

Study Limitations

Due to the uniqueness of the target population the study faced certain limitations which include:

- Access to the study group due to drugs abuse. Drugs abuse was a big challenge and there was need to revisit the bases severally to be in a position to interview some of the respondents.
- Language was a limitation in the study as many of the street adolescents use 'sheng'. This was dealt with by having data collectors who have worked on the streets and thus understand the children's language.

Expected Application of the Results

The results from this study shall inform:

1. Sexual and Reproductive Health programming for street children by NGOs and other stakeholders.
2. Healthcare policy development and implementation to ensure inclusion of street children in health care provision especially in SRH issues.
3. Further research and programming on ASRH and street adolescents.

CHAPTER FOUR

RESULTS

A total of one ninety five street adolescents who consented to participate in the study were interviewed using a structured questionnaire.

4.1 Socio-demographic and socio-economic characteristics of the street adolescents

4.1.1 Social and demographic characteristics of street adolescents

Gender distribution had a high proportion of females (53.8%) compared to males with the majority of the street adolescents (78.5%) aged between 13 and 16 years. Majority of the street adolescents (73.8%) were between 1st and 3rd birth. 33% of the adolescents were 1st born and 40.5% comprised 2nd and 3rdborn. Most of the adolescents (67.7%) were born within Nairobi area and ahigh proportion of the street adolescents (40.5%) had 3 or 4 siblings. The level of education among the adolescents was mainly upper primary (31.8%), completed primary school (25.1%), and started secondary (23.6%) with 4.1% having not attended school at all.Out of 74% that were able to estimate their stay on the streets, a high proportion (41.8%) reported that they had been in contact with the streets for less than five (5) years (Table 4.1).

Table4.1: Selected Socio-demographic characteristics of the street adolescents

Variables	n=195	%
Sex		
Male	90	46.2
Female	105	53.8
Age in years		
<13	14	7.2
13 – 14	83	42.6
15 – 16	70	35.9
17 – 18	28	14.4
Birth Order		
1st	65	33.3
2nd or 3rd	79	40.5
4th or 5th	32	16.4
6th or higher	19	9.7
Place of birth		
Within Nairobi area	132	67.7
Outside Nairobi area	63	32.3
Number of siblings		
<3	30	15.4
3 – 4	79	40.5
5 – 6	54	27.7
>6	32	16.4
Education Level		
No formal education	8	4.1
Lower Primary	9	4.6
Upper Primary	62	31.8
Completed Primary	49	25.1
Started Secondary	46	23.6
Completed Secondary	15	7.7
College	6	3.1

4.1.2 Socio and Economic support among street adolescents

Majority of the street adolescents (61.5%) reported that they had daily contact with their family members.Out of 105 street adolescents that revealed their source of livelihood, 68.3% indicated that they did some form of jobs (employed, porter, casual labour, recycling) in order to survive and 31.4% depend on parents or well-wishers (Table 4.2)

Table 4 2: Social and economic support among the street adolescents

Variables	n=195	%
Contact with family		
None	31	15.9
Annually	9	4.6
Quarterly	7	3.6
Monthly	19	9.7
Weekly	9	4.6
Daily	120	61.5
Economic Support		
Parent	20	19.0
Well wishers	13	12.4
Employed	21	20.0
Porter	15	14.3
Casual labour	12	11.4
Recycling	24	22.9
Declined to mention	90	

4.2 Knowledge on Sexual and Reproductive Health among the Street Adolescents.

Knowledge level was measured by testing knowledge on consequences of having

unprotected sex, methods of protecting oneself from HIV/ AIDS and pregnancy, probing on some of the consequences of having unprotected sex, the most commonly mentioned consequences included; getting infected with HIV/AIDS (89.7%), unplanned pregnancy (86.2%), and STI (85.6%).The most commonly mentionedmethods of protecting oneself from HIV/AIDS included; Proper use of condoms (85.6%), Abstinence (76.9%), and Being faithful to one partner (73.3%).After probing on ways in which one can contract HIV, the most commonly mentioned modes included; unprotected sex (91.8%), blood transfusion (81.5%), mother to child in pregnancy (72.8%), and piercing with unsterilized sharps (72.3%).The most commonly mentioned methods of protecting oneself from getting pregnant included; Abstinence (82.6%), Proper use of condoms (79.0%), Use of pill (71.8%), and use of injectibles (62.6%). Other mentioned methods accounted for less than 50% each. However HIV knowledge was higher than knowledge on contraceptives (89% of the adolescents knew more than 4 methods of protecting oneself from HIV while only 59% of them knew more than 4 methods of protecting oneself from pregnancy).

Overall knowledge score on Sexual and Reproductive Health ((Index in Appendix 5) revealed that a high proportion of the adolescents (74.9%) scored above '*moderately j g*, constituted by 27.2% scoring '*j g* and 47.7% scoring ' *h j g*.(Table 4.3, Appendix 4)

This contradicted KII who felt that the street adolescents were ignorant of SRH issues. KII_1 said, "*The street adolescents lack the right source of SRH information leading to the habits that they have of sodomy*." KII_2 added that, "*They have so many myths and beliefs in relation to sexuality which sometime lead them neither to seek for treatment nor use protection. For instance some believe that condoms are f d l d hg d g fd dnh h eh ded h jh fklog h l i hl*

Table 4 3: Knowledge on Sexual and Reproductive Health among the street Adolescents.

Variables	n=195	%
Some of the consequences of having unprotected sex		
Unplanned pregnancy	168	86.2
STI	167	85.6
HIV/AIDS	175	89.7
Don't know	7	3.6
Consequences of having unprotected sex (multiple responses)		
Don't know	7	3.6
1 consequence	20	10.3
2 or more consequences	168	86.2
Methods of protecting oneself from HIV/AIDS		
Abstain	150	76.9
Being faithful to one partner	143	73.3
Proper use of condoms	167	85.6
Not sharing sharp objects	2	1.0
Don't know	7	3.6
Methods of protecting oneself from HIV/AIDS (multiple responses)		
Don't know	7	3.6
1 method	15	7.7
2 methods	173	88.7
How one can get HIV		
Unprotected sex	179	91.8
Blood transfusion	159	81.5
Piercing with unsterilized sharps	141	72.3
Mother to child in pregnancy	142	72.8
Not through taboo, curse or witchcraft	178	91.3
How one can get HIV (multiple responses)		
1 mode	4	2.0
2 - 3 modes	38	19.5
4 or more	153	78.5
Methods of protecting oneself from getting pregnant		
Abstain	161	82.6
Proper use of condoms	154	79.0
Use of pill	140	71.8
Use of coils	94	48.2
Use of injectibles	122	62.6
Use of norplant	80	41.0
Natural (Properly counting the days)	1	0.5
Don't know	11	5.6
Methods of protecting oneself from getting pregnant (multiple responses)		
Don't know	11	5.6
1 method	26	13.3
2 – 3 methods	43	22.1
4 and or methods	115	59.0
Overall knowledge score on Sexual and Reproductive Health		
Poor	17	8.7
Moderately good	32	16.4
Good	53	27.2
Very good	93	47.7

4.2.1 Knowledge on Signs and Symptoms of STIs in men among the street adolescents.

The most commonly mentioned signs and symptoms of STIs in menincluded; burning pain on urinating (74.4%), genital ulcers/sores (68.7%), genital discharge (55.9%), and swellings in groin area (55.4%). Other mentioned signs and symptoms of sexually transmitted illnesses among men accounted for less than 10% each. (Fig. 4.1)

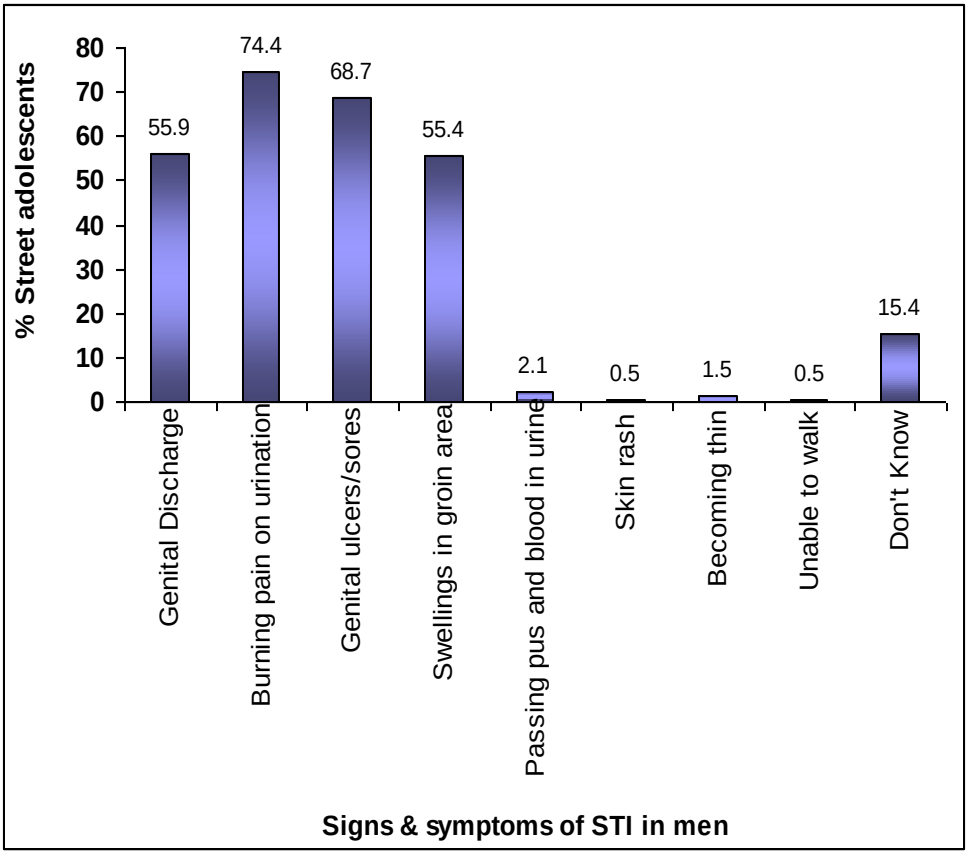

Figure 4 1:Signs and Symptoms of STI in men as mentioned by the street adolescents

According to the KII, STIs are the biggest SRH challenge among street adolescents. KII_3 said, "*STIs are f d j kh kd kh fdœl n fk hnd d g dg l h hdfk kh kd g j e lL d elj l hi kh e h hfldœ*"

4.2.2 Knowledge on signs and symptoms of STIs in women among the street adolescents

The most commonly mentioned signs and symptoms of STIs in women include; burning pain on urinating (69.2%), genital ulcers/sores (66.7%), foul smell (65.1%), itching (57.9%), genital discharge (54.9%), and pain in the abdomen (47.7%). Other mentioned signs and symptoms of STI in women accounted for less than 10% each. (Fig. 4.2)

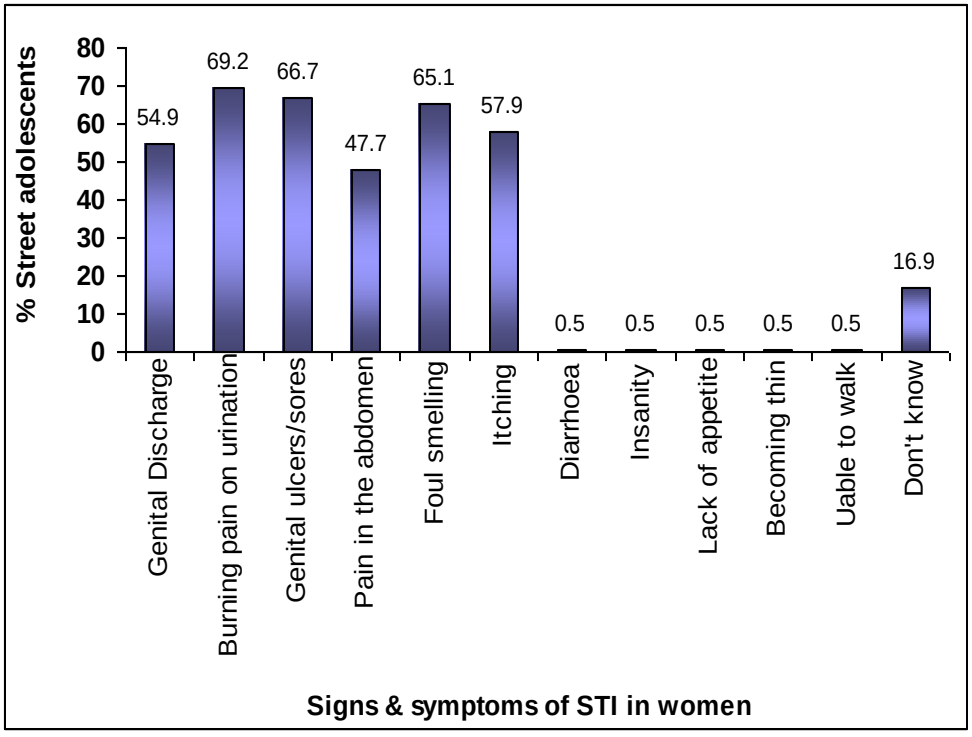

Figure 4 2:Signs and Symptoms for STIs in women as mentioned by the street adolescents.

4.3 Attitudes on Sexual and Reproductive Health among the Street Adolescents

Upon probing on some of the indicators of attitude with respect to HIV transmission, the most commonly highlighted indicator of positive attitude included; one cannot

get HIV through a curse or witchcraft (91.8%), HIV cannot be transmitted by sharing a meal with an infected person (91.3%), HIV cannot be transmitted by mosquito bites (87.7%), Having sex with a virgin cannot cure HIV (85.6%), and HIV has no cure (85.1%). Other highlighted indicators of positive attitude towards HIV/AIDS accounted for less than 30% each.

Overall attitude was assessed using 6 variables each scoring one. A composite score was generated by summation of all the scores. The maximum attainable score was 6. A percentage score for each adolescent was determined. An adolescent who scored less than 25% was graded to have scored poorly, 25 – 50% as moderately good, 51 – 75% good while one who scored more than 75% was considered to have very good attitude towards SRH (Appendix 4). Majority of the adolescents (90.8%) scored above 'moderately good', constituted by 14.9% scoring 'good' and 75.9% scoring 'very good' (Table 4.4).

Table 4 4: Attitudes on Sexual and Reproductive Health among the Street adolescents

Variables	n=195	%
Attitudes on Sexual and Reproductive Health		
HIV cannot be transmitted by mosquito bites	171	87.7
HIV cannot be transmitted by sharing a meal with an infected person	178	91.3
A healthy looking person can transmit HIV	54	27.7
One cannot get HIV through a curse or witchcraft	179	91.8
HIV has no cure	166	85.1
Having sex with a virgin cannot cure HIV	167	85.6
Don't know	6	3.1
Attitudes on Sexual and Reproductive Health (multiple responses)		
Don't know	6	3.1
1 attitude	1	0.5
2 – 3 attitudes	0	0.0
4 or more attitudes	188	96.4
Overall attitude score on Sexual and Reproductive Health		
Poor	8	4.1
Moderately good	10	5.1
Good	29	14.9
Very good	148	75.9

Additionally, the Key informant interviewees cited myths, beliefs and traditions as key factors influencing the attitude and behavior of the street adolescents in relation

to SRH. KII4, said, *G l j khi f j gl f l h khd h d myths and ehdhi d g h d g h do h g f l h khdok .*

4.4 Sexual and Reproductive health Practices among the Street Adolescents

4.4.1 Sexual debut

A relatively high proportion of the adolescents (62.1%) reported that they had ever gone for HIV test. Sixty percent of the adolescents had experienced sexual intercourse in their life, most of them (41.9%) having sexual debut at age 10 – 15 years. The mean age at sexual debut was found to be13 years (+ 4 SD).A small proportion of the adolescents (25.6%) had used a condom during the sexual debut and 53.9% experienced their first sexual encounter with a friend. Approximately one-third of the adolescents (32.5%) reported that the person with whom they experienced sexual debut was aged >15 years (Table 4.5).

The key informant interviews identified early sexual debut as a key challenge. KII_3cited sexual debut to be as early as at 7 years due to exposure to pornography and lack of support structures.

Table 4 5: First sexual contact among the street adolescents.

Variables	n=195	%
Ever gone for a HIV test		
Yes	121	62.1
No	74	37.9
Ever had sexual intercourse		
Yes	117	60.0
No	78	40.0
If yes, age of sexual debut		
<10	10	8.5
10 - 15	49	41.9
>15	25	21.4
Can't remember	33	28.2
Not applicable	78	
If yes, used a condom		
Yes	30	25.6
No	87	74.4
Not applicable	78	
Person had sexual intercourse with the first time		
A woman	2	1.7
A young girl	5	4.3
Antie	1	0.9
Classmate	2	1.7
Cousin	1	0.9
Elderly man	1	0.9
Friend	63	53.9
Husband	3	2.6
Neighbour	7	6.0
Sister	1	0.9
Teacher	1	0.9
Uncle	2	1.7
Can't remember	28	23.9
Not applicable	78	
Age of the person with whom the street child had sexual intercourse with the first time (years)		
<10	7	6.0
10 - 15	21	17.9
>15	38	32.5
Can't remember	51	43.6
Not applicable	78	

4.4.2: Circumstances leading to early sexual debut among street adolescents

The most commonly mentioned circumstance leading to early sexual debut included;willingness (43.6%) and persuasion (16.4%). Other cited circumstances accounted for less than 10% each. (Figure 4.3)

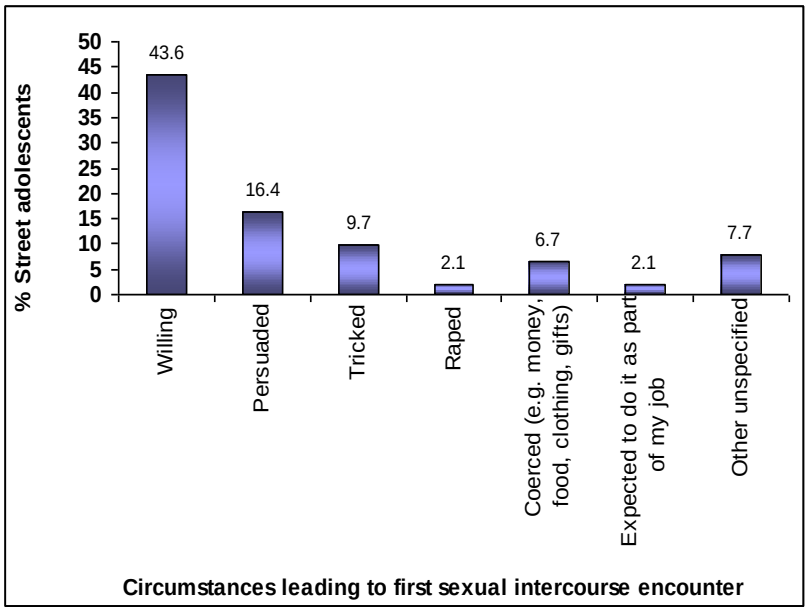

Figure 4 3: Circumstances leading to first sexual intercourse encounter among the street adolescents.

KII cited exposure to pornography, drugs, sexual abuse and need to belong as the key factors leading to early sexual debut. *Wkh j to practice what they watch in the lgh k edfn l kh ed h* /KII$_5$

4.4.3 Coercion to sex and sexual abuse among street adolescents

The specified forms of coercionreceived included; money (24.8%), food (23.1%), gifts (20.5%), and security (15.4%). Other unspecified forms of coercion accounted for 63.2%. Similarly, the specified forms of coercion given to others by the respondents included; money (13.7%), food (15.4%), other gifts (15.4%), and security (8.5%). Other unspecified forms of coercions accounted for 72.6%.

Twenty percent of the adolescents reported that they had ever had sexual intercourse when somebody was physically forcing or threatening them, 56.5% reporting that they were forced by a friend, 39.1% by other relative, and 26.1% by their teacher.A high proportion of the adolescents (45.3%) reported that they ever had sexual intercourse when physically forcing or threatening somebody (Table 4.6).

Table 4 6: Sexual abuse and Coercion to sex among the street adolescents

Variables	n=195	%
Ever received anything from someone in exchange for having sex with him/her		
Money	29	24.8
Food	27	23.1
Gifts	24	20.5
Security	18	15.4
Other unspecified	74	63.2
Not applicable	78	
Ever received anything from someone in exchange for having sex with him/her (multiple response)		
Other unspecified	74	63.2
1 item	14	12.0
2 – 4 items	29	24.8
Ever given anything to someone in exchange for having sex with him/her		
Money	16	13.7
Food	18	15.4
Gifts	18	15.4
Security	10	8.5
Other unspecified	85	72.6
Not applicable	78	
Ever given anything to someone in exchange for having sex with him/her (multiple response)		
Other unspecified	85	72.6
1 item	18	15.4
2 – 4 items	14	12.0
Ever had sexual intercourse when somebody was physically forcing or threatening		
Yes	23	19.7
No	94	80.3
Not applicable	78	
If yes, the person who forced or threatened		
Sibling	1	4.3
Other relative	9	39.1
Friend	13	56.5
Stranger	1	4.3
Teacher	6	26.1
Policeman	1	4.3
Gang	1	4.3
Other unspecified	4	17.4
Not applicable	172	
If yes, the person who forced or threatened (multiple response)		
Other unspecified	4	17.4
1 item	9	39.1
2 – 4 items	10	43.5
Ever had sexual intercourse when physically forcing or threatening somebody		
Yes	53	45.3
No	64	54.7
Not applicable	78	

The KII identified sexual abuse as a key SRH challenge among street adolescents. Sam, a social worker with AMREF said, "Sexual abuse is very high on the streets and new children/adolescents on the streets are most likely to be abused as a form of initiation into street life."

4.4.4 Sexual practices among Street adolescents

Within the past three monthsof the study, 26.3% of the street adolescents reported that they had had sexual intercourse with at least two (2) persons.Among those who had sex, 39.3% indicated that they had not used a condom at all, with 38.5% using occasionally.Out of those who did not use a condom at all, 26.1% cited that they trusted their partners, 23.9% indicated that condoms were not readily available, while 10.9% reported that they feared the consequences of using a condom. According to Sam, a social worker, myths and beliefs affect the use of condoms as the adolescents believe that use of condoms affect their virility and future possibility to have children. The commonly cited reasons for engaging in sex included; love (68.4%), sexual pleasure (22.2%), to belong (12.9%), and to earn some money (11.1%).(Table 4.7)

Though sodomy was not mentioned as an issue by the adolescents, the KII identified it as a big challenge among the boys especially. *Sodomy and beastiality is a big challenge that affects them physically and emotionally but they are ashamed of it and will keep it a secret until there is physical pain and they need external help,* said $KII_{6.}$ *Wkh jh e s are at a very high risk of being sodomized by the older ones ,* said KII_4. *Sodomy has actually become a lifestyle for the children and a source of income*l L df dœ d i i l l ld l l kh hh i d *children* /said KII_5.

Table 4 7: Sexual Practices among the Street Adolescents

Variables	n=195	%
Number of persons had sexual intercourse with in the past three months		
<2	21	17.9
2 - 3	23	19.7
>3	8	6.8
Can't remember	65	55.6
Not applicable	78	
Frequency of using a condom while having sex		
Every time	26	22.2
Sometimes	45	38.5
Not at all	46	39.3
Not applicable	78	
Reason not using a condom while having sex		
Condoms are not available	11	23.9
I fear the consequences of using a condom	5	10.9
I trust my partners	12	26.1
They will say I am a prostitute	1	2.2
Other unspecified	20	43.5
Not applicable	149	
Main reasons why one engage in sex		
For Protection	7	6.0
Love	80	68.4
To earn some money	13	11.1
To belong	15	12.9
Procreation	1	0.9
Sexual pleasure	26	22.2
Other unspecified	31	26.5
Not applicable	78	

4.4.5 Use of contraceptives among street adolescents

A relatively high proportion of the adolescents (45.3%) had ever used at least one family planning method. The most commonmethodwas condoms (43.6%), followed by oral pills (17.9%) and injectibles (10.3%). Majority (64.2%) of the adolescents who had used contraceptives in the past 3 months had used one type only(Table 4.8).

Table 4 8: Family Planning among the Street Adolescents

Variables	n=195	%
Used any family planning method		
Yes	53	45.3
No	64	54.7
Not applicable	78	
If yes, contraceptive used in the last 3 months		
Condoms	51	43.6
Oral pill	21	17.9
Coils	4	3.4
Injectibles	12	10.3
Norplant	4	3.4
Not applicable	131	
If yes, contraceptive used in the last 3 months (multiple response)		
1 contraceptive	34	64.2
2 – 3 contraceptives	15	28.3
4 or more contraceptive	4	7.5

4.4.6 Pregnancy experiences among street adolescents.

A relatively small proportion of the adolescents (13.7%) indicated that they had ever been pregnant, majority of them (62.5%) reporting to have carried one pregnancy. Seventy five percent(75.1%) of the pregnancies were carried to term.

A relatively high proportion of the adolescents with a pregnancy experience (62.5%) had used ANC services during their last pregnancy. For those who had not used ANC services, the reasons for non-useincluded; lack of money (83.3%), not seeing its importance (50.0%), and poor reception at the clinic (33.3%)(Table 4.9).

KII_3 and KII_4cited pregnancy as a big challenge among the street adolescents. "*Sometimes the girls do not even know who the father of their children is due to ol dh d h d g de h/* said KII_4.

Table 4 9:Pregnancy experiences among the Street adolescents

Variables	n=195	%
Ever been pregnant		
Yes	16	13.7
No	101	86.3
Not applicable	78	
Number of pregnancies		
1	10	62.5
2	3	18.8
3	3	18.8
Not applicable	179	
Number of pregnancies alive		
0	4	25.0
1	11	68.8
2	1	6.3
Not applicable	179	
ANC attendance during the last pregnancy		
Yes	10	62.5
No	6	37.5
Not applicable	179	
Reasons for not attending ANC		
Lack of money	5	83.3
Poor reception at the clinic.	2	33.3
Didn't see its importance	3	50.0
Not applicable	189	
Reasons for not attending ANC (multiple response)		
1 Reason	2	33.3
2 or more reasons	4	66.7

4.4.7 Use of drugs and substance of abuse among street adolescents.

A high proportion of the adolescents (43.1%) reported that they had used drugs and substances of abuse.The commonly cited drugs and substance abused by the street adolescents include; Alcohol (40.5%), cigarettes (23.6%), marijuana (22.6%), and glue (11.8%). Other cited drugs and substance accounted for less than 10% each(Table 4.10 and Figure 4.4).

Table 4 10: Frequency of abuse of drugs and other substances among the street adolescents in the last twelve months

Drugs	n=195	%
Glue		
Daily	11	47.8
Weekly	12	52.2
Not applicable	172	
Cigarettes		
Daily	18	39.1
Weekly	11	23.9
Monthly	17	37.0
Not applicable	149	
Alcohol		
Daily	15	19.0
Weekly	27	34.2
Monthly	37	46.8
Not applicable	116	
Marijuana		
Daily	19	43.2
Weekly	16	36.4
Monthly	9	20.5
Not applicable	151	
Jet fuel/thinner		
Daily	7	58.3
Weekly	3	25.0
Monthly	2	16.7
Not applicable	183	
Tablets-*Taptap*		
Daily	5	45.5
Weekly	5	45.5
Monthly	1	9.1
Not applicable	184	
Sniffers-*Kichuri*		
Daily	10	71.4
Weekly	3	21.4
Monthly	1	7.1
Not applicable	181	

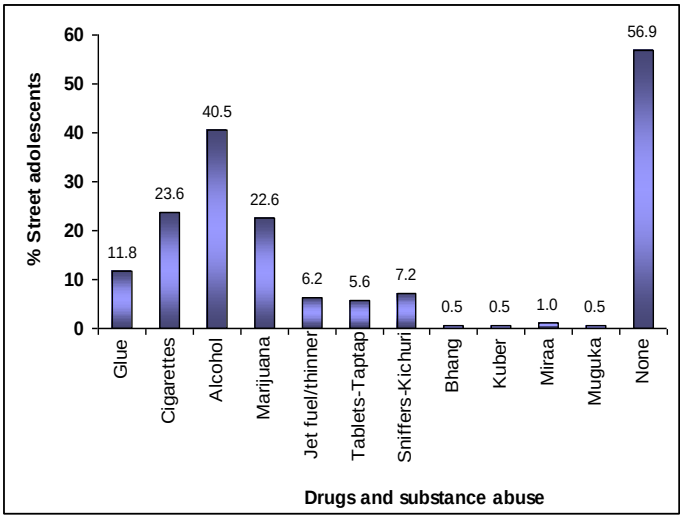

Figure 4 4: Drugs and Substances abuse among the street adolescents

Twenty one percent (21.0%) of the adolescents used more than two types of drugs and substances of abuse (Figure 4.5).

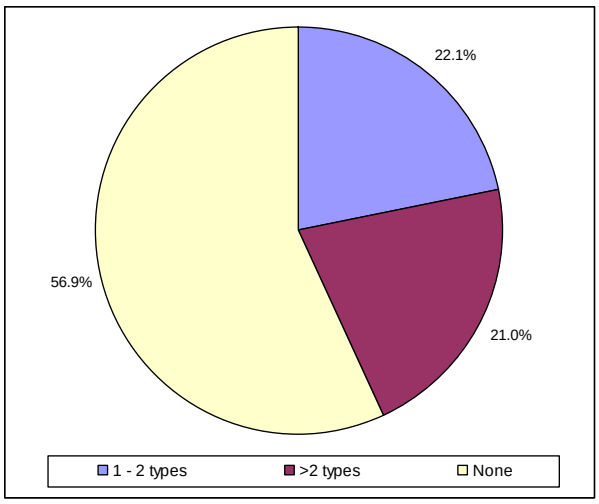

Figure 4 5: Combination of drugs and substances abused among the street adolescents

Key informant interviews identified drugs and substances of abuse as a key challenge in terms of SRH among street adolescents. KII_6 felt that drugs had a big role to play in the sexual behaviour of the street adolescents. "*Most of the girls that are picked from the video shops and brothels will have taken drugs especially marijuana*,"said KII_6

4.4.8 Risk score for Sexualand Reproductive Health among street adolescents

Risk score for sexual and reproductive health among the street adolescents was done using a profile of variables. A composite score was generated by summation of all the scores indicated in Appendix 5. The maximum attainable score was 16. A percentage score for each adolescent was determined. An adolescent who scored less than 25% was considered *Not at risk*, 25 – 50% as *at low risk*, 51 – 75% at *moderately high risk* while one who scored more than 75% was considered to be at*high risk*. Fifty five (55.4%) % of the adolescents were categorized as either moderately high (51.3%) or high risk(4.1%) in relation to sexual and reproductive health(Figure 4.6).

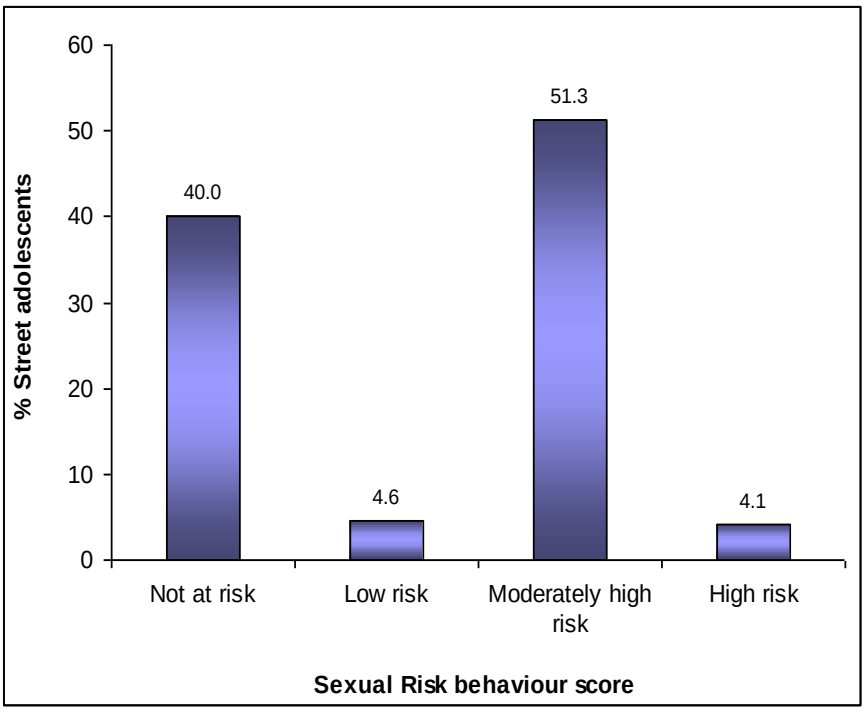

Figure 4 6: sexual and reproductive health risk score among the street adolescents

4.5 Sexual and Reproductive Health seeking behavior.

4.5.1 Sexual and reproductive health associated illnesses among street adolescents

A relatively small proportion of the adolescents (12.0%) reported that they had had an STI, 6.7% had abnormal genital discharge and 5.1% had genital ulcers. Among those who suffered a form of illness, 76.2% visited a hospital or a private clinic as their point of treatment(Table 4.11).

Table 4 11: Sexual and Reproductive health associated illnesses among the street adolescents

Variables	n=195	%
Had an STI in the last 12 months		
Yes	14	12.0
No	103	88.0
Not applicable	78	
Genital discharge and/or genital ulcers in the last 12 months		
Genital discharge	13	6.7
Genital ulcers	10	5.1
Genital discharge and/or genital ulcers in the last 12 months (multiple response)		
No illness	177	90.8
1 illness	13	6.7
2 illnesses	5	2.6
Where treatment was sought		
Hospital	8	38.1
Private Clinic	8	38.1
Traditional Doctor	4	19.0
Did not do anything	1	4.8
Not applicable	174	

4.5.2 Access to SRH services among street adolescents

The most commonly cited types of sexual and reproductive health services ever accessed by the adolescent includedattendance to VCT (56.9%), education and counseling regarding SRH (35.4%), STI treatment and counseling (21.5%), immunization (21.5%), and family planning services (20.5%). Other types of sexual and reproductive health services accessed accounted for less than 20.0%. A relatively high proportion of the adolescents (45.6%) accessed 1 – 2 types of sexual and

reproductive health services.

The most commonly cited types of sexual and reproductive health services recently (in the last 3 months)accessed by the adolescents included; VCT (28.7%), education and counseling regarding SRH (15.4%), and immunization (10.8%). Other types of sexual and reproductive health services recentlyaccessed accounted for less than 10.0%. Close to one-third (30.8%) of the adolescents accessed 1 – 2 types of sexual and reproductive health services.

Upon further probing on whether the adolescents would return to the same facility they accessed SRH information, 51.3% indicated that they would. Among those who indicated that they would not return, the most cited reasons included: takes too much time (21.1%), mistreated by staff (21.1%), not enough privacy (15.8%), it is so far (13.2%), too embarrassing (10.5%), and lack of staff of the same sex at the facility (10.5%)(Table 4.12).

The key informants cited stigma, non-acceptance and unnecessary probing into the adolescents' lives as a key push factor for the adolescents from public health centres. "*The adolescents will seek services where they are accepted. Money is not a problem, what they need is acceptance and availability of services around the clock*,said KII_3. KII_4 added that the adolescents also look for privacy and do not want to leave their records behind nor come back for reviews thus prefer to go to pharmacies directly for drugs.

Table 4 12: Access to Sexual and Reproductive Health Services among the street adolescents

Variables	n=195	%
Types of sexual and reproductive health services ever accessed		
Education and counseling regarding SRH	69	35.4
VCT for HIV	111	56.9
Miscarriage/Post-abortion care services	35	17.9
Family planning services	40	20.5
STI treatment and counseling	42	21.5
Pregnancy care and delivery	28	14.4
Immunization	42	21.5
Mental health and psychosocial support	38	19.5
None	55	28.2
Combination of types of sexual and reproductive health services ever accessed		
1 - 2 types	89	45.6
>2 types	51	26.2
Never	55	28.2
Types of sexual and reproductive health services recently accessed		
Education and counseling regarding SRH	30	15.4
VCT for HIV	56	28.7
Miscarriage/Post-abortion care services	9	4.6
Family planning services	18	9.2
STI treatment and counseling	11	5.6
Pregnancy care and delivery	12	6.2
Immunization	21	10.8
Mental health and psychosocial support	13	6.7
Not recently/Never	117	60.0
Types of sexual and reproductive health services recently accessed		
1 - 2 types	60	30.8
>2 types	18	9.2
Not recently/Never	117	60.0
Would return to the facility in future		
Yes	40	51.3
No	38	48.7
Not applicable	117	
[illegible]		
Takes too much time	8	21.1
Too difficult to get there	1	2.6
It is so far	5	13.2
Costs too much	3	7.9
Too embarrassing	4	10.5
Not enough privacy	6	15.8
Mistreated by staff	8	21.1
No staff of the same sex available	4	10.5
Not specified	7	18.4
Not applicable	157	
[illegible]		
Not specified	20	52.6

1 reason	7	18.4
2 or more reasons	11	28.9

4.5.3 Access to condoms among street adolescents.

The most commonly cited sources of condoms by the street adolescents included:shop (50.4%), clinic (33.3%), and friend (33.3%). A relatively high proportion of the adolescents (44.4%) had either 1 or 2 sources of condoms (Table 4.13).

Table 4.13: Access to condoms among the street adolescents

Variables	n=195	%
Sources of accessing the condoms		
Clinic	39	33.3
Friend	39	33.3
Youth centre	26	22.2
Shop	59	50.4
Bar	26	22.2
Chemist	2	1.7
Toilet	1	0.9
None	35	29.9
Not applicable	78	
Combination of types of sources of access for condoms		
1 - 2 types	52	44.4
>2 types	30	25.6
None	35	29.9
Not applicable	78	

4.5.4 Sources of SRH information among street adolescents.

Majority of the adolescents (87.7%) reported at least one source of information on sexual reproductive health.The commonly cited sources of information on sexual reproductive health included; peers (69.2%), NGO/CBO/FBO (67.7%), radio (49.2%), parents/guardians (45.1%), posters (36.4%), siblings (32.8%) and health workers (32.3%). Other cited sources of information on sexual reproductive health accounted for less than 10% each (Figure 4.7).

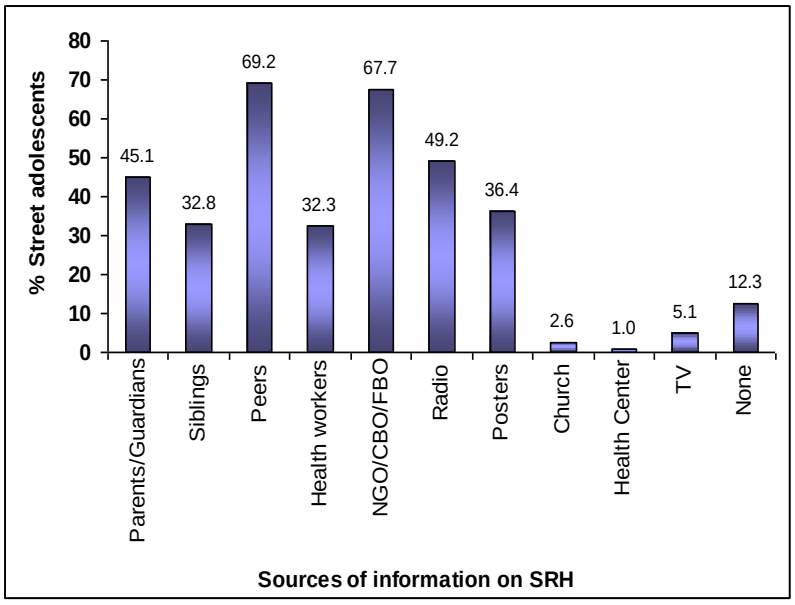

Figure 4 7: Sources of Sexual and Reproductive Health information among street adolescents

4.5.5 Combination of sources of SRH information among street adolescents

Most for the adolescents (30.8%) cited 3 – 4 types of sources of information on sexual reproductive health(Figure 4.8).

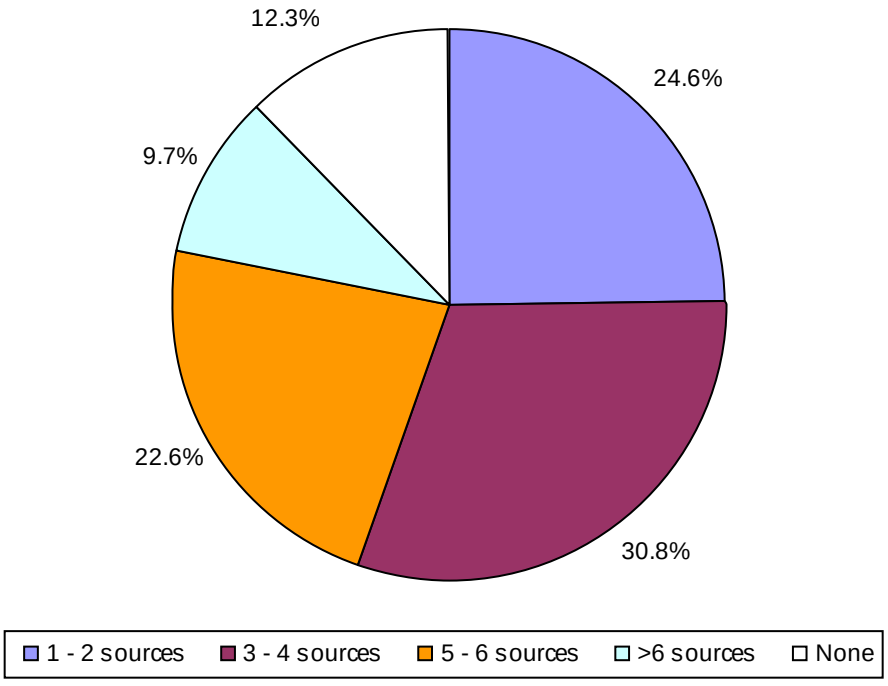

Figure 4 8: Combination of types of sources of SRH information for the street adolescent

4.6 Risky Sexual behaviorin relation to different characteristics of the street adolescents

Risky Sexual behaviour was analyzed in relation to (1) selected demographic characteristics among the street adolescents, (2) knowledge, attitude, and accessibility with respect to SRH among the street adolescents, and (3) selected behavioral characteristics among the street adolescents.

4.6.1 Risky Sexual behaviour in relation to selected demographic characteristics among the street adolescents

Risky sexual behavior was analyzed in relation to the following selected demographic characteristics among street adolescents: sex, age, birth order, place of birth, number of siblings, education level and duration on the streets. Four factors namely gender, age, place of birth, and education level were significantly associated with risky sexual behaviour among the street adolescents (Table 4.14).

Male gender was statistically associated with increased number of street adolescents engaging inrisky sexual behaviour (72.2%) compared to their female counterparts (49.5%), (OR=2.65; 95% CI: 1.46 – 4.83; p=0.001). (Table 4.14)

Age 15 - 16 years wasstatistically associated with increased number of street adolescents engaging inrisky sexual behaviour (74.3%) compared to age <15 years (42.3%), (OR=3.95; 95% CI: 2.02 – 7.71; p<0.001). Similarly, age >16 years was significantly associated with increased number of street adolescents engaging inrisky sexual behaviour (85.7%) compared to age <15 years (42.3%), (OR=8.20; 95% CI: 2.64 – 25.43; p<0.001).Adolescents aged more than 16 years were 8 times more likely to engage in risky sexual behaviour as compared to those aged less than 16 years(Table 4.14).

Being born within Nairobi was statistically associated with increased number of street adolescents engaging inrisky sexual behaviour (65.2%) compared to being

born outside Nairobi (49.2%), (OR=1.93; 95% CI: 1.05 – 3.55; p=0.034).Adolescents born in Nairobi were twice more likely to engage in risky sexual behaviour than those born outside Nairobi(Table 4.14)

Upper primary level of educationwas significantly associated with decreased number of street adolescents engaging inrisky sexual behaviour (46.8%) compared to completed secondary level (85.7%), (OR=0.15; 95% CI: 0.04 – 0.55; p=0.004).(Table 4.14)

Table 414: Risky sexual behavior among street adolescents in relation to certain demographic factors

Variables	At moderate/high risk (n=117) n	%	At low risk (n=78) n	%	OR	95% CI Lower	Upper	P
Sex								
Male	65	72.2	25	27.8	2.65	1.46	4.83	**0.001**
Female	52	49.5	53	50.5	Reference			
Age in years								
<15	41	42.3	56	57.7	Reference			
15 - 16	52	74.3	18	25.7	3.95	2.02	7.71	**<0.001**
17 - 18	24	85.7	4	14.3	8.20	2.64	25.43	**<0.001**
Birth Order								
1st	38	58.5	27	41.5	Reference			
2nd or 3rd	46	58.2	33	41.8	0.99	0.51	1.93	0.977
4th or 5th	19	59.4	13	40.6	1.04	0.44	2.46	0.932
6th or higher	14	73.7	5	26.3	1.99	0.64	6.18	0.235
Place of birth								
Within Nairobi area	86	65.2	46	34.8	1.93	1.05	3.55	**0.034**
Outside Nairobi area	31	49.2	32	50.8	Reference			
Number of siblings								
<3	17	56.7	13	43.3	Reference			
3 - 4	48	60.8	31	39.2	1.18	0.51	2.78	0.697
5 - 6	31	57.4	23	42.6	1.03	0.42	2.54	0.948
>6	21	65.6	11	34.4	1.46	0.52	4.07	0.470
Education Level								
None	4	50.0	4	50.0	0.17	0.03	1.06	0.057
Lower Primary	5	55.6	4	44.4	0.21	0.03	1.25	0.087
Upper Primary	29	46.8	33	53.2	0.15	0.04	0.55	**0.004**
Completed Primary	30	61.2	19	38.8	0.26	0.07	1.02	0.053
Started Secondary	31	67.4	15	32.6	0.34	0.09	1.35	0.127
Completed Secondary	18	85.7	3	14.3	Reference			
Duration being on the streets in years								
<5 years	44	72.1	17	27.9	1.60	0.73	3.49	0.239
5 - 10 years	18	60.0	12	40.0	0.93	0.37	2.30	0.869
>10 years	34	61.8	21	38.2	Reference			
Could not estimate	21		28					

4.6.2 Sexual and reproductive health risk score in relation to knowledge, attitude, and access to SRHinformation and services among the street adolescents

Four factors namely overall knowledge score, combination of types of sexual and reproductive health services ever accessed, combination of types of sexual and reproductive health services recently accessed and number of sources of SRH information were statistically associated with risky sexual behaviour among the street adolescents.

Analysis of overall knowledge score revealed that those scoring above *gh d ho j g* were significantly associated with risky sexual practices. Those who scored *J g* were significantly associated with increased number of street adolescents engaging inrisky sexual behaviour (58.5%) compared to (29.4%), (OR=3.38; 95% CI: 1.04 – 10.98; p=0.043). Similarly, a *Yh j g* score was significantly associated with increased number of street adolescents engaging inrisky sexual behaviour (68.8%) compared to (29.4%), (OR=5.30; 95% CI: 1.71 – 16.43; p=0.004). Adolescents with good knowledge score were 5.3 times more likely to engage in risky sexual behaviour as compared with those with low knowledge (Table 4.15).

High combination of types of sexual and reproductive health services ever accessed was associated with increased risky sexual practices. Ever accessing 1 - 2 types was significantly associated with increased number of street adolescents engaging in risky sexual practices (64.0%) compared to never accessing (45.5%), (OR=2.14; 95% CI: 1.08 – 4.24; p=0.030). Similarly, ever accessing >2 types was significantly associated with increased number of street adolescents engaging in risky sexual practices (68.6%) compared to never accessing (45.5%), (OR=2.62; 95% CI: 1.19 – 5.81; p=0.017).Adolescents who had accessed more than 2 types of SRH services were 2.62 times more likely to engage in risky sexual behaviour than those who had

never accessed SRH services(Table 4.15).Increased combination of types of sexual and reproductive health services recently accessed was associated with risky sexual practices. Recent access of 1 - 2 types was significantly associated with increased number of street adolescents engaging in risky sexual practices (73.3%) compared to not recent/never accessing (52.1%), (OR=2.52; 95% CI: 1.28 – 4.97; p=0.007)(Table 4.15).

Table 415: Risky Sexual behavior among street adolescents in relation to knowledge, attitude and accessibility to SRH services.

	At moderate/high risk (n=117)		**At low risk (n=78)**			**95% CI**		
Variables	**n**	**%**	**n**	**%**	**OR**	**Lower**	**Upper**	**P**
Overall knowledge score (grade)								
Poor	5	29.4	12	70.6	Reference			
Moderately good	17	53.1	15	46.9	2.72	0.78	9.52	0.118
Good	31	58.5	22	41.5	3.38	1.04	10.98	**0.043**
Very good	64	68.8	29	31.2	5.30	1.71	16.43	**0.004**
Overall attitude score (grade)								
Poor	2	25.0	6	75.0	Reference			
Moderately good	7	70.0	3	30.0	7.00	0.86	56.89	0.069
Good	19	65.5	10	34.5	5.70	0.97	33.60	0.054
Very good	89	60.1	59	39.9	4.53	0.88	23.18	0.070
Combination of types sexual and reproductive health services ever accessed								
Never	25	45.5	30	54.5	Reference			
1 - 2 Types	57	64.0	32	36.0	2.14	1.08	4.24	**0.030**
>2 Types	35	68.6	16	31.4	2.62	1.19	5.81	**0.017**
Combination of types sexual and reproductive health services recently accessed								
Not recent/never	61	52.1	56	47.9	Reference			
1 - 2 Types	44	73.3	16	26.7	2.52	1.28	4.97	**0.007**
>2 Types	12	66.7	6	33.3	1.84	0.65	5.22	0.254

4.6.3 Risky Sexual behaviour in relation to sources of SRH information among the street adolescents

Four factors namely health workers/health centers as a source of SRH information, media (radio/posters/TV) as a source of SRH information, peers/siblings as a source of SRH information, parents/guardians as a source of SRH information, and combination of types of sources of SRH informationwere significantly associated with risky sexual behaviour among the street adolescents (Table 4.16).

Use of health workers/health centers as a source of SRH information was significantly associated with increased number of street adolescents engaging inrisky sexual behaviour (70.3%) compared to not using health workers/health centers (55.0%), (OR=1.94; 95% CI: 1.03 – 3.67; p=0.040). Street adolescents using health workers / centres as a source of SRH information were 1.94 times more likely to engage in risky sexual behaviour than those who did not (Table 4.16).

The media (radio/poster/TV) as a source of SRH information was significantly associated with increased number of street adolescents engaging inrisky sexual behaviour (68.3%) compared to not using Media (Radio/Poster/TV) (50.5%), (OR=2.10; 95% CI: 1.18 – 3.77; p=0.012). Street adolescents accessing SRH information through the media are twice more likely to engage in risky sexual behaviour as compared to those not using the media (Table 4.16).

Having peers/siblings as a source of SRH information was significantly associated with increased number of street adolescents engaging inrisky sexual behaviour (67.4%) compared to not using peers/siblings(43.3%), (OR=2.70; 95% CI: 1.45 – 5.05; p=0.002). Adolescents accessing SRH information through their peers were 2.7 times more likely to engage in risky sexual behaviour than those who did not(Table 4.16).

Parents/guardians as a source of SRH information was significantly associated with decreased number of street adolescents engaging inrisky sexual behaviour (48.9%) compared to not using Parents/Guardians(69.2%), (OR=0.43; 95% CI: 0.24 – 0.77; p=0.004). Street adolescents accessing SRH information from guardians/ parents were more than two times less likely to engage in risky sexual behaviour as compared that those who did not(Table 4.16).

Analysis of combination of sources of SRH information revealed that any combination was significantly associated with risky sexual practices. Significantly high number of street adolescents were engaging in risky sexual practices among those accessing 1 - 2 sources (72.9%), (OR=8.08; 95% CI: 2.63 – 24.80; p<0.001); 3 - 4sources (60.0%), (OR=4.50; 95% CI: 1.56 – 12.97; p=0.005); 5 - 6sources (61.4%), (OR=4.76; 95% CI: 1.58 – 14.39; p=0.006); and >6 sources (68.4%), (OR=6.50; 95% CI: 1.71 – 24.77; p=0.006) compared to those not accessing (25.0%), (OR=2.14; 95% CI: 1.08 – 4.24; p=0.030)(Table 4.16).

Table 416: Risky Sexual behavior among street adolescents in relation to sources of SRH information

Variables	At moderate/high risk (n=117) n	%	At low risk (n=78) n	%	OR	95% CI Lower	Upper	P
NGO/CBO/FBO/Church								
Yes	85	64.4	47	35.6	1.75	0.95	3.22	0.070
No	32	50.8	31	49.2	Reference			
Health workers/Health centers as a source of SRH information								
Yes	45	70.3	19	29.7	1.94	1.03	3.67	**0.040***
No	72	55.0	59	45.0	Reference			
Media (Radio/Poster/TV) as a source of SRH information								
Yes	71	68.3	33	31.7	2.10	1.18	3.77	**0.012***
No	46	50.5	45	49.5	Reference			
Peers/Siblings as a source of SRH information								
Yes	91	67.4	44	32.6	2.70	1.45	5.05	**0.002***
0.No	26	43.3	34	56.7	Reference			
Parents/Guardians as a source of SRH information								
Yes	43	48.9	45	51.1	0.43	0.24	0.77	**0.004***
No	74	69.2	33	30.8	Reference			
Combination of sources of SRH information								
None	6	25	18	75	Reference			
1 - 2 sources	35	72.9	13	27.1	8.08	2.63	24.8	**<0.001***
3 - 4 sources	36	60	24	40	4.5	1.56	12.97	**0.005***
5 - 6 sources	27	61.4	17	38.6	4.76	1.58	14.39	**0.006***
>6 sources	13	68.4	6	31.6	6.5	1.71	24.77	**0.006***

4.6.4 Risky Sexual behaviour in relation to selected behavioral characteristics among the street adolescents

Two factors namely: ever gone for a HIV test (p=0.002) and combination types of drugs and substances used (p=0.002) were statistically associated with risky sexual behaviour among the street adolescents.

Ever taking a HIV test was significantly associated with increased number of street adolescents engaging inrisky sexual behaviour (68.6%) compared to never taking (45.9%), (OR=2.57; 95% CI: 1.41 – 4.67; p=0.002). Adolescents who had taken a HIV test were 2.57 times more likely to engage in risky sexual behaviour compared to those who had not(Table 4.17).

Analysis of combination of types of drugs and substances used revealed that any combination was significantly associated with risky sexual practices. Use of 1 – 2 types of drugs and substances was significantly associated with increased number of street adolescentsengaging in risky sexual practices (74.4%) compared to non-use (42.3%), (OR=3.96; 95% CI: 1.81 – 8.66; p=0.001). Similarly, use of >2 types of drugs and substances was significantly associated with increased number of street adolescentsengaging in risky sexual practices (92.7%) compared to non-use (42.3%), (OR=17.23; 95% CI: 5.02 – 59.26; p<0.001). Adolescents who were using drugs were four times more likely to engage in risky sexual behaviour while those who were abusing multiple drugs were 17 times more likely to engage in risky sexual behaviour compared to those who did not (Table 4.17).

Table 4.17: Risky sexual behavior in relation to selected behavioral characteristics among the street adolescents

	At moderate/high risk (n=117)		At low risk (n=78)			95% CI		
Variables	**N**	**%**	**n**	**%**	**OR**	**Lower**	**Upper**	**P**
Ever gone for a HIV test								
Yes	83	68.6	38	31.4	2.57	1.41	4.67	**0.002***
No	34	45.9	40	54.1	Reference			
Combination of types of drugs and substance use								
None	47	42.3	64	57.7	Reference			
1 - 2 types	32	74.4	11	25.6	3.96	1.81	8.66	**0.001***
>2 types	38	92.7	3	7.3	17.25	5.02	59.26	**<0.001***

4.6.5 Multivariate analysis

Multivariate analysis was performed to identify independent predictor(s) of risky sexual practices among the street adolescents. Fourteen (14) factors associated with risky sexual practices at $p<0.05$ during bivariate analysis were considered for multivariate analysis. They include; (1) sex, (2) age in years, (3) place of birth, (4) education level, (5) overall knowledge score (grade), (6) combination of types of sexual and reproductive health services ever accessed, (7) combination of types of sexual and reproductive health services recently accessed, (8) health worker/health center as a source of SRH information, (9) media (radio/poster/tv) as a source of SRH information, (10) peers/siblings as a source of SRH information, (11) parents/guardians as a source of SRH information, (12) combination of types of sources of SRH information , (13) ever going for a HIV test, and (14) combination of types of drugs and substance use.

Upon fitting the factors using binary logistic regression and specifying *edfn d g f gl l do* method with removal at $p<0.05$, seven iterations were performed(Table 4.18)

Table 4.18: Predictor(s) of risky sexual practices among the street adolescents (Full model)

Variables	AOR	95% CI Low	Upper	P
Sex				
Male	2.93	1.19	7.22	**0.019***
Female	Reference			
Age in years				
<15	Reference			
15 – 16	2.98	1.01	8.80	**0.048***
17 – 18	6.09	1.26	29.47	**0.025***
Place of birth				
Within Nairobi area	0.55	0.20	1.52	0.249
Outside Nairobi area	Reference			
Education Level				0.179
No formal education	0.11	0.01	1.64	0.109
Lower Primary	0.09	0.00	1.93	0.122
Upper Primary	0.48	0.06	3.57	0.473
Completed Primary	0.91	0.14	5.97	0.919
Started Secondary	0.25	0.04	1.67	0.154
Completed Secondary	Reference			
Overall knowledge score (grade)				
Poor	Reference			
Moderately good	2.18	0.32	14.90	0.426
Good	2.60	0.39	17.44	0.327
Very good	8.37	1.18	59.32	**0.033***
Combination of types of sexual and reproductive health services ever accessed				
None	Reference			
1 - 2 types	0.87	0.31	2.47	0.794
>2 types	0.57	0.13	2.54	0.462
Combination of types of sexual and reproductive health services recently accessed				
None	Reference			
1 - 2 types	1.30	0.47	3.63	0.616
>2 types	2.38	0.39	14.47	0.347
Health worker/Health center as a source of SRH information				
Yes	0.96	0.20	4.57	0.958
No	Reference			
Media (Radio/Poster/TV) as a source of SRH information				
Yes	2.52	0.65	9.80	0.183
No	Reference			
Peers/Siblings as a source of SRH information				
Yes	1.78	0.41	7.80	0.445
No	Reference			
Parents/Guardians as a source of SRH information				
Yes	0.20	0.04	0.93	**0.040***
No	Reference			
Combination of sources of SRH information				
None	Reference			
1 - 2 sources	3.39	0.59	19.57	0.172
3 - 4 sources	2.40	0.16	35.82	0.525
5 - 6 sources	1.02	0.02	45.64	0.992
>6 sources	1.58	0.02	123.30	0.838
Ever gone for a HIV test				
Yes	3.40	1.34	8.59	**0.010***
No	Reference			
Combination of types of drugs and substance use				
None	Reference			
1 - 2 types	2.70	0.82	8.93	0.103
>2 types	14.48	2.57	81.46	**0.002***

The final iteration (eighth) yielded the estimates as shown by the reduced model (Table 4.19). Seven factors were retained in the final analysis.

Adjusting for other factors, male gender was significantly associated with risky sexual practices (AOR=2.44; 95% CI: 1.11 – 5.39; p=0.027). A male participant was 2.44 times more likely to engage in risky sexual practicescompared to a female.

The analysis of age revealed that adolescents aged 15 - 16 years were significantly associated with risky sexual practices (AOR=2.51; 95% CI: 1.11 – 5.72; p=0.028). A participant aged 15 - 16 years was 2.51 times more likely to engage in risky sexual practices compared to one aged <15 years. Similarly, age >16 years was significantly associated with risky sexual practices (AOR=5.13; 95% CI: 1.42 – 18.55; p=0.013). A participant aged >16 years was 5.13 times more likely to engage in risky sexual practices compared to one aged <15 years.

A *h j g* overall knowledge score was significantly associated with risky sexual practices (AOR=8.13; 95% CI: 1.77 – 37.30; p=0.007). A participant who scored *h j g* was 8.13 times more likely to engage in risky sexual practices compared to one that scored .

Parents/guardians as a source of SRH information was significantly associated with reduced risky sexual practices (AOR=0.31; 95% CI: 0.13 – 0.74; p=0.008). A participant who received SRH information from parents/guardians was 3 times less likely to engage in risky sexual practices compared to one that did not receive from parents/guardians.

Ever going for a HIV test was significantly associated with risky sexual practices (AOR=3.12; 95% CI: 1.42 – 6.85; p=0.005). A participant who reported to had ever done a HIV test was 3.12 times more likely to engage in risky sexual practices compared to one that have never done.

High combination of specific drugs and substance used was associated with risky sexual practices. Previous use of more than 2 combinations was significantly associated with risky sexual practices (AOR=11.93; 95% CI: 2.98 – 47.81; p<0.001) compared to none. A participant who reported to have used more than 2 combinations drugs and substance was 11.93 times more likely to engage in risky sexual practices compared to one that have never used.

Table 4.19: Predictors of risky sexual practices among street adolescents (Reduced Model)

		95% CI		
Variables	**AOR**	**Low**	**Upper**	**P**
Sex				
Male	2.44	1.11	5.39	**0.027***
Female	Reference			
Age in years				
<15	Reference			
15 – 16	2.51	1.11	5.72	**0.028***
17 – 18	5.13	1.42	18.55	**0.013***
Overall knowledge score (grade)				
Poor	Reference			
Moderately good	2.01	0.41	9.72	0.387
Good	2.78	0.59	13.03	0.195
Very good	8.13	1.77	37.30	**0.007***
Parents/Guardians as a source of SRH information				
Yes	0.31	0.13	0.74	**0.008***
No	Reference			
Ever gone for a HIV test				
Yes	3.12	1.42	6.85	**0.005***
No	Reference			
Combination of types of drugs and substance use				
None	Reference			
1 - 2 types	2.33	0.88	6.16	0.087
>2 types	11.93	2.98	47.81	**<0.001***

4.7 KII Results on SRH among street adolescents in Dagoretti Sub county

Table 4.20:Qualitative data results

Determinants of sexual and reproductive health among street adolescents, Dagorettti								
			Key informants					
Question	**Category**	**Sub-category (as necessary)**	**1**	**2**	**3**	**4**	**5**	**6**
Most common sexual and reproductive health issues	***Health issues***							
		Sodomy/Homosexuality	X	X	X	X	X	X
		Sexual exploitation	X					X
		Sexual abuse/defilement	X	X	X	X	X	X
		STIs	X	X	X	X	X	X
		Early pregnancy	X					
		Sex for cash		X			X	X
		Bestiality					X	X
Causes of common sexual and reproductive health issues	***Causes of health issues***	Vulnerability	X			X		X
		Pornography	X	X			X	X
		Age of child	X			X		X
		Poverty	X				X	
		Exposure	X					X
		Early marriage		X			X	
		Early pregnancy		X				
		Lack of guidance			X		X	X
		Ignorance			X			
		Idleness			X		X	
		Drugs	X			X		X
		Lack of acceptance				X		
		Peer influence					X	X
		Exposure by adults					X	
Main challenges in relation to sexual and reproductive health	***Main challenges***	Beliefs	X	X				X
		Myths/Misinformation	X	X				X
		Ignorance		X				X
		Poverty	X		X			
		Lack of correct information	X			X		
		Lack of access to SRH resources/ services	X			X		
		Stigmatization	X			X		X
		Lack of trust					X	
SRH practices on the streets	Practices	Multiple Sexual partners	X					X
		Group sex	X					X
		Sodomy as a lifestyle	X	X	X		X	X
		Sex for money and/or drugs for girls and boys	X				X	X
		Lesbianism		X				
		Sex for security		X				X
		Bestiality			X			X
In house solutions to SRH challenges	Solutions	Peer support	X			X	X	X
		Withdrawal	X		X	X	X	X

		Self-treatment		X				
The Services that are sought	Demand for services	Treatment for STIs	X	X	X	X	X	X
		Counseling	X					
		Supply of condoms	X					
Service provision	Service providers	NGOs/CBOs	X		X	X	X	X
		Pharmacies/Private clinics	X	X			X	X
		Business persons	X					
		Peers	X				X	
		Health centres			X			
		Video shops		X			X	X
	Determining factors of service providers	Trust	X		X	X	X	X
		Lack of documentation / confidentiality		X			X	
		24 hr. access	X			X		X
		Acceptance		X	X	X	X	X
		Privacy		X			X	X
Best approaches for discussing SRH issues	Approaches	FGDs	X	X	X		X	X
		Individual counseling	X	X	X			X
		Open discussions				X		

Discussion

Information from key informant interviews alluded to information from the respondents. They highlightedsodomy/homosexuality, sexual abuse and STIs as the main SRH issues among street adolescents. Vulnerability level of the child including age, lack of guidance and exposure to pornography were underscored as the key causes for SRH issues.

The KII identified the main challengesto SRH as wrong beliefs, myths, misinformation and stigmatization while sodomy, sex for money, sex for security and bestiality were underscored as some of the key sexual practices on the streets.

The key sort for services were underscored as STI treatment which was mainly sort from NGOs/CBOs, pharmacies/private clinics. The main source of SRH information were in video shops and peers. The choice of the source of information and services was determined by acceptability, 24 hour access and privacy. Focus group discussions and individual counseling were identified as the most efficient methods of discussing SRH among street adolescents.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussion

5.1.1 Socio-demographic and Socio-economic Characteristics among the Street Adolescents

The gender distribution of the street adolescents in the study indicated a higher percentage of girls in comparison to boys contrary to previous studies on street children which have indicated a higher percentage of boys to girls (Singh *et al*, 2008; Guttmacher, 2006a). However, though this may seem as a contradiction to previous studies it is as a result of the data collection strategies. Whereas most studies focus on children and adolescents that are visible on the streets, this study focused on adolescents in contact with the streets and made efforts to purposely reach out to girls in contact with the streets for survival. These girls are in many cases not seen on the streets in the day but come out in the evenings as described by WHO which explains that among the reasons for less street girls is the fact that they may be less 'visible' to researchers or street educators as they disguise themselves as boys to protect themselves from harassment by the police, welfare workers, employers and other street children and others may only appear on the streets at night (WHO, 2000).

Majority of the adolescents confirmed to have dropped out of school in primary school. This is inline with other studies, carried out on street children, which indicate that most street children are school drop outs with a very small percentage still attending school (Lemba, 2002; UNICEF,2012).

5.1.2 Knowledge and attitude on sexual and reproductive health among street adolescents.

The study established that the adolescents in contact with the streets had a relatively high knowledge on sexual and reproductive health (74.9% scored above '*moderately*

j g). The street adolescents had high knowledge level on HIV/AIDS, STIs and pregnancy. They were also able to negate most misconceptions and myths around HIV/AIDS. This knowledge level is above moststudies carried out in other parts of Africa and Asia on SRH among regular adolescents. A study carried out in Ghana, among regular adolescents, indicated a knowledge level of between 49% to 56% (Hessburg *et al.,* 2006).This concurs with studies carried out among school going adolescents in Europe which indicated that awareness was generally high for HIV/AIDS (above 90%) and low for HPV- an STI- that ranged between 5.4% to 66% (Samkange-Zeeb F. *et al.,* 2011).Several studies from different parts of the world have also indicated high HIV knowledge levels among adolescents and quite low knowledge levels on STIs (Clark *et al.,* 2002; Trajman *et al.,* 2003; Paz-Bailey *et al.,* 2003;Lundberg P.*et al.,* 2013; Awang H. *et al.,* 2013).This suggests that street adolescents may have higher knowledge levels on SRH as compared to earlier studies on adolescents. This could be due to the high exposure levels on the streets. However the knowledge does not translate to practice.

In concurrence with other studies (UNFPA, 2000), this study indicates that the knowledge on HIV/AIDS supersedes knowledge on all other SRH issues.This may be due to the focus on HIV/AIDS programming in the past years both by the government civil society. Further in agreement with KDHS (2008) this knowledge level is lower than that of adults above 20 years which underscores the fact that the knowledge level on HIV/AIDS among adolescents is lower than that among adults.
The KII alluded to the fact that though the street adolescents had knowledge on SRH , the knowledge was not correct as it was based on myths and beliefs thus affecting practice.

5.1.3 Sexual behavior /practices among street adolescents

In this study, sixty percent of the adolescents were found to have willingly experienced sexual intercourse in their lifetime with an older friend. They had their sexual debut between the age of 10 and 15years with a mean sexual debut age at 13 years. This is lower than what most studies have found around Africa; a study by Chinyere and Funmi (2008)on SRH among adolescents in Nigeria indicated a mean

sexual debut age of 15 yearswhile another study carried out in Ghana indicated that majority of females and males aged 20-24 yearshad their sexual debut before the age of 18 and 20 respectively(Hessburg*et al.*, 2006).In Kenya the sexual debut age is placed at 18 yrs for urban youth (Luke *et al.*, 2011) while in Uganda the sexual debut is between 15 and 18 years (Guttmacher, 2006b).Another study carried out by Ikimari and Towett (2007) in Kenya indicated the mean debut age at 16.2 years with the onset ranging from 8 years onwards.This could be attributed to the early exposure to sex and violence that the children face as well as yearning for belonging which is fulfilled through the sexual relationships.

The adolescents in this study attributed their sexual activity to search for love, pleasure, belonging and source of income. Consequently, the early sexual debut could be attributed to multiple factors in relation to streetism which include lack of parental love and care, low self-image and economic circumstancesas highlighted by a study on adolescents in developing countries done by Blum and Mmari(2005).

Despite high knowledge levels on SRH and HIV/AIDS, a relatively small proportion of the adolescents (25.6%) used a condom during theirsexual debut and consequent sexual experiences. This is consistent with the results of a study carried out among high risk adolescents in USA which indicated that a high percentage (67%) of these adolescents did not use condoms in their last intercourse (Brown *et al.*, 2008). This is mainly due to negative attitude towards the condoms. It is also in concurrence with many studies carried out in different parts of the world that have shown a discrepancy between knowledge levels on HIV/AIDS and practice (Anyamene *et al*, 2011;Ezeama M., 2011).

Above nineteen percent (19.7%) of the adolescents reported that they had ever had sexual intercourse when somebody was physically forcing or threatening them with 45.3% reporting that they ever had forced someone into sexual intercourse. This could be related to the exclusion and need for assertion by this group of adolescents.It also concurs with the high sexual abuse (sodomy) on the streets

reported in the key informant interviews especially among the younger boys. The level of sexual abuse concurs with studies carried out in Ethiopia by Tadele (2009) that indicated 28.6% of the street adolescents had been sexually abused. However the study noted the possibility of the sexual abuse levels being higher than 28.6% as the quantitative data contradicted the qualitative data as is the case for the current study.

Sixty two percent of adolescents (62.1%) reported that they had ever gone for HIV test. This was found to be positively associated with risky sexual practices and thus may have been as a result of the perceived risk. This percentageis very high in relation to 4% of adolescents in Uganda (Guttmacher, 2006b) and 35% among females and 19% among males for adolescents in Kenya (Kabiru *et al.*, 2011).

Despite high knowledge on contraceptives, the utilization was found to be low. This could be due to the fact that most of the girls opted to use either condoms or pills irregularly. Thirteenpercent of the adolescents confirmed to have been pregnant at least once in their lifetime with the live births ranging from 1 to 3.

A high percentage of the adolescents (43.1%) were found to be using drugs and substances of abuse with the most used drugs being alcohol, marijuana, cigarettes and glue. This is comparable to 41% in Zimbabwe(UNICEF, 2001)but way below 92% in Brazil (Embleton *et al.*, 2013).Use of more than 2 drugs was positively associated to risky sexual behaviour. This is in line with KII which pointed towards increased sexual abuse when the adolescents were intoxicated.

5.1.4Behaviour risk factors associated with sexual and reproductive health among street adolescents.

Consistent with other studies carried out in both the developed and developing world, malegender was associated with risky sexual practice (Blum and Mmari, 2005;Wang*et al.*, 2004; Slap *et al.*, 2003; Park *et al*, 2002; Cruz, *et al.*, 2001; Lam *et al.*, 2001).A male participant was 2.44 times more likely to engage in risky sexual practices compared to a female participant.According to Blum and Mmari (2005), the

main causes of increased risky sexual practice among males as compared to females include increased probability of males watching X-rated material (pornography), higher probability of abusing drugs, influence by peers and perception that friends are having sex thus need to belong. This is consistent to the findings of this study as the sexual debut for the male was earlier than females, drugs abuse and sexual abuse was higher among the males. Further, males slept on the streets thus predisposing them to abuse as compared to the females who worked on the streets and viewed sex as a source of income as opposed to a form of abuse.

Contrary to programming expectations, knowledge on SRH was found to be positively related to risky sexual practice. A *h j g* overall knowledge score was significantly associated with risky sexual practices. Many studies that have looked into the relationship between knowledge on HIV/AIDS, STIs and contraception use vis a vis sexual debut and sexual practice have indicated either no relationship (Mathai *et al.*, 1997)or increased risky sexual behaviour (Huerta- Franco *et al.*, 2009;Magnani *et al.*, 2002).However, the study results compare to a study done in Northern Thailand that indicated that early sexual initiation was related to high knowledge on HIV among boys and high knowledge on STIs among girls (Liu A. *et al.*, 2006). However since the study was cross sectional it is not possible to tell which came first, knowledge or sexual practice.

This study further revealed that age was significantly associated with Risky sexual practices. A participant aged 15 - 16 years was 2.51 times more likely to engage in Risky sexual practices compared to one aged <15 years. Further a participant aged >16 years was 5.13 times more likely to engage in Risky sexual practices compared to one aged <15 years. This is consistent with other studies carried out the world over that have indicated a direct relationship between age and risky sexual behaviour irrespective of age (Slap *et al.*, 2003; Blum & Mmari, 2005; Park *et al.*, 2002; Lam *et al.*, 2001). Though initially the study had found an association between education level and risky sexual behaviour practices, on further analysis this was found to have been confounded by age. This is in line with previous studies that either found no

relationship (Huerta-Franco *et al.*, 1999; Rwenge, 2000; and Zulkifli & Low, 2000) or found that having a higher education level actually increased the risk of sexual initiation, and this was particularly true among male adolescents (Meekers & Ahmed, 2000; Karim *et al.*, 2000; Raymundo & Laguna, 2001).

The source of SRH information was found to be a key determining factor of SRH behaviour among adolescents. Parents/guardians as a source of SRH information was significantly associated with reduced Risky sexual practices. A participant who received SRH information from parents/guardians was 69% less likely to engage in Risky sexual practices compared to one that did not receive SRH information from parents/guardians. This concurs with other studies that found that when adolescents biological parents presence led to a less probability of engaging in sex (Anteghini *et al.*, 2001; Magnani *et al.*, 2002; Karim *et al.*, 2000; Rwenge, 2000; Raymundo & Laguna, 2001; Podhisita *et al.*, 2001). Other studies also found that adolescents who lived away from home at an early age were more likely to have had sex compared with those who stayed at home (Choe *et al.*, 2001; Laguna, 2001) Further adolescents who perceived their parents to be in less stable relationships were significantly more likely to engage in premarital sex (Cruz, Laguna & Raymundo, 2001). For example, in Kenya, Kiragu & Zabin (1993) found that female adolescents whose parents often argued were almost twiceas likely to be sexually experienced than those who came from more conflict-free environment.

Conversely, peers as a source of SRH information was significantly associated with higher probabilities of engaging in risky sexual behaviour. Studies have shown a positive relationship between peer discussions on SRH and sexual practice (Magnani *et al.*, 2002; Meekers & Calves, 1999). For example, in Cameroon, females who reported discussing sexual issues with their friends and peers often were more than twice as likely as other females to have become sexually active by the age of 15 (Meekers & Calves, 1999). Similarly, in Zambia, males and females who communicated with a close friend about reproductive health issues were more than three times more likely to had ever had sex compared with those who had not had such conversations (Magnani *et al.*, 2002). However, because these studies used

cross-sectional survey designs, it is difficult to determine whether those who have had sex are just more likely to discuss sex with their friends or whether discussing sex is a precursor to having sex.

Use of drugs and substances of abuse was found be positively associated with risky sexual practices. High combination of specific drugs and substance used was associated with Risky sexual practices. A participant who reported to have used more than 2 combinations drugs and substance was 11.93 times more likely to engage in Risky sexual practices compared to one that have never used.This is in line with other studies carried out on adolescents which indicate that adolescents who used drugs (mainly marijuana) were much more likely to be sexually experienced than adolescents who did not (Murray *et al.*, 1998; Magnani *et al.*, 2002; Selvana*et al.*, 2001). Further use of alcohol significantly increased the odds that an adolescent has already engaged in sex (Murray *et al*, 1998; Magnani *et al.*, 2002; Selvana*et al.*, 2001; Podhisita *et al.*, 2001). In Zambia, adolescents who used alcohol were almost two times more likely to have had sex (Magnani *et al.*, 2002), while in Thailand, males who used alcohol were more than four times as likely to have had sex (Podhisita *et al.*, 2001).This can be attributed to the fact that the driving factors for drugs abuse are similar to those of risky sexual behaviour as they are both deviant behaviours. Further drugs and substance abuse affects the decision making capacity of the adolescent leading to lose of guard.

Ever going for a HIV test was significantly associated with Risky sexual practices. A participant who reported to had ever done a HIV test was 3.12 times more likely to engage in Risky sexual practices compared to one that have never done.This is in concurrence to a study done in Britain that indicated that voluntary HIV testing was highly associated with high-risk (sexual or drug-injecting) behaviours or population sub-groups at high risk (MacGarrigle *et al.,* 2005). This indicates that most of the street adolescents attended HIV testing as a result of high exposure.

5.1.5 Health seeking behavior among street adolescents

Majority of the youth reported to have sought SRH services from public health

centres (38.1%) and private health centres (38.1%).This is in line with adolescents in Uganda and Zambia who sought their SRH services from health centres. Amongst the most sought services included VCT, education and counseling contrary to adolescents in Uganda where the most sought services were contraceptives and STI treatment (Guttmacher, 2006b).

In this study, the most utilized form of contraception was the condom and the pill. Other studies have indicated condoms as the most preferred form of contraception for those adolescents using contraception (Guttmacher, 2006a). The preferred source of condoms for the street adolescents was shops (50.4%), clinics and friends at 33.3% respectively. This could be attributed to the fact that most street adolescents have a source of income and thus would find it easier to buy the condoms than to go to the clinics where they feel unaccepted as indicated in the study. Some of the adolescents felt that the gender of the health worker, attitude and distance make it difficult for them to go access SRH services such as contraception from the clinics. This discomfort could have led to the fact that the adolescents seek more of curative than preventive services as indicated in the study. They only seek the services when they have no otherwise as they need treatment.

Findings in this study indicate that organizations such as CBOs, NGOs, FBOs (67.7%), peers (69%) and radio (39%) were the main source of SRH information for these adolescent. This is contrary to findings in Uganda and Zambia where the main preferred source of SRH information are teachers, health workers and the media (Guttmacher, 2006a). This could be due to the fact that the street adolescents have no access to teachers or the media but on the other hand are in rehabilitation programs where they get SRH information.

Despite the inverse relationship between peers as a source of SRH information and sexual behaviour, peers are the main source of information for the street adolescents.

5.2 Conclusions

1. The street adolescents have high knowledge (74.9%) on sexual and reproductive health. However this knowledge is not comprehensive as the sources are mainly peers who have not been trained on the same.
2. Most of the street adolescents engage in risky sexual behaviour and practices (55%). These include early sexual debut (10 -15 years) with some having their sexual debut before the age of 10, multiple partners, sodomy/homosexuality, lack of use of protection such as condoms and use of drugs and substances of abuse among others.
3. The street adolescents prefer to receive SRH services from public health centres but there are barriers that push them away. These include health workers attitude, lack of privacy, lack of same gender health workers and distance.
4. Gender (male), age (above 15 years), knowledge level (high knowledge), source of information (parents/guardians) and HIV testing were found to be the factors associated with risky sexual behavior among the street adolescents.

5.3 Recommendations

The study recommends the following for the policy makers, civil societyand research institutions:

- Developholistic, comprehensive and sustainable programmes on SRH to ensure street adolescents have access to right information.
- Enact policies requiring the provision of accurate, age-appropriate and comprehensive sexual and reproductive health education for street adolescentswith specific focus on early adolescence (10yrs to 14yrs) and the male gender.
- Strengthen peer education component by integrating parental involvement in peer education on SRH among adolescents and integrate initiatives on drugs and Substances of abuse in ASRH programs.

- Strengthen ASRH service and information provision in public health centres and schools by dealing with the identified barriers through further training and sensitization of health workers and teachers.
- Further research and policy development is required to identify factors leading to the gap between knowledge and practice for this group of adolescents.

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APPENDICES

Appendix1a: Questionnaire

Code No.

1.0 Demographic data

1.1 Sex: Male ( ) Female ( )

1.2 Age: Years ……

1.3 Birth order……

1.4 Place of birth……...

1.5 Number of siblings……..

1.5 Education Level*(Tick)*

None	1
Nursery	2
Lower Primary	3
Upper Primary	4
Completed Primary	5
Started Secondary	6
Completed Secondary	7
College	8

1.6 Period that one has been on the streets

1.7 Contact with family*(Tick)*

None	1
Annually	2
Quarterly	3
Monthly	4
Weekly	5
Daily	6

1.8	Source of livelihood*(Tick)*	Employed	1
		Porter	2
		Recycling	3
		Other	

2.0 Knowledge and attitudes

2.1 What are some of the consequences of having unprotected sex?*(tick the mentioned ones)*

i)	Unplanned pregnancy	Yes	( )	No	( )
ii)	STI	Yes	( )	No	( )
iii)	HIV/AIDS	Yes	( )	No	( )

2.2 What methods of protecting oneself from HIV/AIDS are you aware of?*(tick the mentioned ones)*

i)	Abstain	Yes	( )	No	( )
ii)	Being faithful to one partner	Yes	( )	No	( )
iii)	Proper use of condoms	Yes	( )	No	( )
iv)	Other (specify)_____				

2.3 How can one get HIV? *(tick the mentioned ones)*

i)	Unprotected sex	Yes	( )	No	( )
ii)	Blood transfusion	Yes	( )	No	( )
iii)	Piercing with unsterilized sharps	Yes	( )	No	( )
iv)	Mother to child in pregnancy	Yes	( )	No	( )
v)	Taboo, curse or witchcraft	Yes	( )	No	( )
vi)	Other (specify)_____				

2.4 Answer Yes or No to the following: *(tick the mentioned ones)*

i) HIV can be transmitted by mosquito bites. Yes ( ) No ( )

ii) HIV can be transmitted by sharing a meal with

an infected person. Yes ( ) No( )

iii) A healthy looking person can transmit HIV Yes( ) No( )

iv) One can get HIV through a curse or witchcraft. Yes( ) No( )

v) HIV has a cure. Yes( )No( )

vi) Having sex with a virgin can cure HIV Yes ( ) No( )

2.5 Have you ever gone for a HIV test? Yes ( ) No ( )

2.6 If yes, why? (*Tick)*

i) I wanted to know my status. Yes ( ) No( )

ii) I was referred for one by a doctor. Yes ( ) No( )

iii) Other (specify)_____

2.7 What are some of the symptoms of STIs in men are you aware of? *(tick the mentioned ones)*

i) Genital Discharge

ii) Burning pain on urination

iii) Genital ulcers/sores

iv) Swellings in groin area

v) Other (specify)_____

2.8 What signs of STIs in women are you aware of?*(tick the mentioned ones)*

i) Genital Discharge

ii) Pain in the abdomen

iii) Foul smelling

iv) Burning pain on urination

v) Genital ulcers/sores

vi) Itching

vii) Other (specify)_____

2.9 How can oneprotect themselves from getting pregnant?*(tick the mentioned ones)*

i) Abstain

ii) Proper use of condoms

iii) Use of pill

iv) Use of coils

v) Use of injectibles

vi) Use of norplant

vii) Other (specify)_____

3.0 Practice

3.1 Have you ever had sexual intercourse? Yes( ) No ( )

3.2 If yes, at what age did you have sexual intercourse for the first time?

Age in years ( ) Don't know ( )

3.3 If yes, did you use a condom? Yes( ) No ( )

3.4 How old was the person with whom you had sexual intercourse for the first time?

Age in years ( ) Don't know ( )

3.5 Thinking about the first time you had sexual intercourse, could you tell me which statement best describes your experience? (*Tick*)

I was willing Yes( )

No( )

I was persuaded Yes( )

No( )

I was tricked Yes( )

No( )

I was forced Yes( )

No( )

I was raped Yes( )

No( )

I was coerced (received money, food, clothing, gifts)

Yes( )

No( )

I was expected to do it as part of my job Yes( )

No( )

Don't know Yes( )

No( )

2.10 Have you ever received any of the following from someone inexchange for having sex with him/her?*(tick the mentioned ones)*

i) Money

ii) Food

iii) Gifts

iv) Security

v) Other (specify)_____

3.6 Have you ever given anything (such as money, food, gifts, etc.) to someone in exchange for having sex with him/her?*(Tick)*

i) Money

ii) Food

iii) Gifts

iv) Security

v) Other (specify)_____

3.8 Have you ever had sexual intercourse when somebody was physically forcing you or threatening you?

Yes ( ) No ( )

2.11 3.9 If so, whom of the following have forced you into sex?*(tick the mentioned ones)*

i)	Parent	Yes	( )	No	( )
ii)	Sibling	Yes	( )	No	( )
iii)	Other relative:	Yes	( )	No	( )
iv)	Friend	Yes	( )	No	( )
v)	Stranger	Yes	( )	No	( )
vi)	Teacher	Yes	( )	No	( )
vii)	Policeman	Yes	( )	No	( )
viii)	Gang	Yes	( )	No	( )

3.10 Have you ever had sexual intercourse where you physically forcedor threatened somebody?

Yes ( ) No ( )

3.11 Have you had sex in the last 3 months? Yes ( ) No( )

3.12 How many persons have you had sexual intercourse with in the past three months?.....

3.13 Do you have a regular partner currently? Yes ( ) No ( )

3.14 Did you or your partner use a condom the last time you had sexual intercourse with him?

Yes ( ) No ( )

3.15 Have you ever been involved in any of the following?*(Tick)*

i. Oral Yes ( ) No ( )

ii. Anal Yes ( ) No ( )

iii. Same gender sex Yes ( ) No ( )

iv. Group sex Yes ( ) No ( )

v. Forced sex Yes ( ) No ( )

2.12 3.16 What are the main reasons why you engage in sex?*(tick the mentioned ones)*

i) Protection

ii) Love

iii) To earn some money

iv) To belong

v) Forced

vi) Other (specify) _____

3.17 Have you used any family planning method?

Yes ( ) No ( )

2.13 3.18 If yes, which of the following contraceptive have you used in the last 3 months?*(tick the mentioned ones)*

i) condoms

ii) Oral pill

iii) coils

iv) injectibles

v) norplant

vi) Other (specify) _____

From 3.19 to 3.28 to be asked to ladies only.

3.19 Have you ever been pregnant? Yes ( ) No( )

3.20 How many pregnancies have you carried?

3.21 How many of these are alive?

3.22 Did you attend ANC services during the last pregnancy? Yes ( )

No ( )

If no, why not?*(tick the mentioned ones)*

i) Distance

ii) Lack of money

iii) Poor reception at the clinic.

iv) Didn't see its importance

v) Other (specify) _____

3.23 If dead, what was the cause of the death? (Tick appropriately)

1st 2nd 3rd 4th 5th 6th

i) Physical violence

ii) Self induced

iii) Sickness

iv) Other (specify) _____

3.24 Have you had to incur an abortion? Yes ( ) No( )

3.25 How many have you incurred in the past five years?.....

3.26 Where did you seek for the services?*(tick the mentioned ones)*

i) Health centre

ii) Private clinic

iii) District hospital

iv) Traditional doctor

v) Other (specify) _____

3.27 Of the pregnancies you have had, how many children were born alive?.....

End of section for ladies only

3.28 Have you had an STI in the last 12 months? Yes( )

No( )

3.29 Have you had abnormal genital discharge in the last 12 months?

Yes()

No( )

3.30 Have you had genital ulcers in the last 12 months? Yes( )

No( )

3.31 Where did you seek for treatment?

i) Health centre

ii) Private clinic

iii) Other (specify) _____

3.32 Have you used the following in the last 12 months? *(tick the mentioned ones)*

i) Glue

ii) Cigarettes

iii) Alcohol

iv) Marijuana

v) Jet fuel/thinner(Kamsii)

vi) Tablets-Taptap

vii) Sniffers-Kichuri

viii) Other (specify) _____

3.33 How often do you take the following: (*Tick appropriately)*

	Daily	Weekly	Biweekly	Monthly	Never
i) Glue					
ii) Cigarettes					

iii) Alcohol

iv) Marijuana

v) Thinner(Kamsii)

vi) Tablets-Taptap

vii) Sniffers-Kichuri

viii) Other (specify) _____

4.0 <u>Access to ASRH Services</u>

4.1 What kinds of sexual and reproductive health services do you have access to? *(Tick All Mentioned)*

i) Education and counseling regarding SRH

ii) VCT for HIV

iii) Miscarriage/Post-abortion care services

iv) Family planning services

v) STI treatment and counseling

vi) Pregnancy care and delivery

vii) Mental health and psychosocial support

viii) Other (specify) _____

4.2 Have you ever visited a health facility or other place to get sexual and reproductive health services in the last year?

Yes ( ) No ( ) Wanted to, but services not available ( )

4.3 What was the reason for your most recent visit to a health facility for sexual or reproductive health services?*(Tick the mentioned ones)*

i) Education and counseling regarding SRH

ii) VCT for HIV

iii) Miscarriage/Post-abortion care services

iv) Family planning services

v) STI treatment and counseling

vi) Pregnancy care and delivery

vii) Vaccination

viii) To get condoms

ix) To get mental health and psychosocial support

x) Other (specify) _____

4.4 Would you return to the facility in future? Yes ( ) No( )

4.5 If no, why wouldn't you return?*(Tick the mentioned ones)*

i) Takes too much time

ii) Too difficult to get there

iii) Costs too much

iv) Too embarrassing

v) Not enough privacy

vi) Mistreated by staff

vii) No staff of the same sex available

viii) Other (specify)_____

4.6 Which are your main sources of SRH information? *(Tick the mentioned ones)*

i) Parents/Guardians

ii) Siblings

iii) Peers

iv) Teachers

v) Health workers

vi) NGO/CBO/FBO

vii) Radio

viii) Posters

ix) Other (specify) _____

4.7 Have you ever used a condom?

4.8 If yes ,where did you get it from? *(Tick the mentioned ones)*

i) Clinic

ii) Friend

iii) Youth centre

iv) Shop

v) Bar

vi) Other (specify) _____

Appendix 1 b: Maswali

Kodi.

1.0 Demographic data

1.1 Jinsia: Mwanaume ( ) Mwanamke ( )

1.2 Umri: Miaka ……

1.3 Wewe ni motto nambari ngapi?.....……

1.4 Mahali pa kuzaliwa……...

1.5 Mumezaliwa mukiwa watoto wangapi?……..

1.5	Umesoma hadi kiwango kipi *(Tick)*	Sijaenda shuleni	1
		Nursery	2
		Chini ya darasa la tatu	3
		Darasa la nne hadi la saba	4
		Nilimaliza shule ya msingi	5
		Nilianza bali sikumaliza shule ya sekondari	6
		Nilimaliza shule ya sekondari	7
		College	8

1.8 Umeishi mtaani kwa muda upi?.....

1.9	Una uwasiliaLa upi na familia yako? *(Tick)*	Hakuna kabisa	1
		Mwaka mara moja	2
		Mara nne kwa mwaka	3
		Mara moja kwa mwezi	4
		Mara moja kwa wiki	5
		Kila siku	6
1.8	Unapate mapato yako vipi? *(Tick)*	Nimeajiriwa	1

Nabebea watu mizigo	2
Naokota vitu vya kuchakata	3
Mengine	4

2.0 Ujuzi na mitazamo

3.34 Je madhara ya kufanya ngono bila kujilinda ni yapi? *(tick the mentioned ones)*

iv)	Mimba bila mipango	Ndio	( )	La	( )
v)	Magonjwa ya zinaa	Ndio	( )	La	( )
vi)	Ukimwi	Ndio	( )	La	( )

3.35 Ni njia zipi ambazo mtu aweza jilinda kutok ana na ukimwi? *(tick the mentioned ones)*

v)	Kutofamya ngono kabisa	Ndio	( )	La( )
vi)	Kuwa mwaminifu kwa mpenzi wako	Ndio	( )	La( )
vii)	Kutumia mpira vizuri	Ndio	( )	La( )
viii)	Mengine (taja)_____			

3.36 Mtu aweza kupata ukimwi vipi? *(tick the mentioned ones)*

vii)	Kutojilinda akifanya ngono	Ndio	( )	La( )
viii)	Akiongezwa damu	Ndio	( )	La( )
ix)	Kudungwa na vitu visivyo ??	Ndio	( )	La( )
x)	Kutoka kwa mama kuenda kwa motto kwenye mimba	Ndio	( )	La( )
xi)	Uchawi au laana	Ndio	( )	La( )
xii)	Mengine (taja)_____			

3.37 Jibu Ndio au La kwa maswali yafuatayo: *(tick the mentioned ones)*

vii)	Ukimwi waweza kuambukizwa kwa kuumwa na mbu.	Ndio	( )	La( )
viii)	Ukimwi waweza kuenezwa kwa kula sahani moja na mtu mgonjwa ukimwi.	Ndio	( )	La( )
ix)	Mtu anayefanana kama ana afya bora			

hawezi ambukiza ukimwi. Ndio ( ) La( )

x) Mtu aweza pata ukimwi kwa kurogwa au kulaaniwa. Ndio ( ) La( )

xi) Ukimwi una tiba Ndio ( ) La( )

xii) Kufanya ngono na bikira huponya ukimwi Ndio ( ) La( )

3.38 Umewahi pimwa ukimwi? Ndio ( ) La ( )

3.39 Kama Ndio, kwa sababu gani? (*Tick)*

iv) Nilitaka kujua afya yangu, Ndio ( ) La( )

v) Nilitumwa na daktari. Ndio ( ) La( )

vi) Mengine (jibu)_____

3.40 Ni dalili zipi za magonjwa ya zinaa kwa wanaume unazozifahamu? *(tick the mentioned ones)*

vi) Genital Discharge

vii) Uchungu wakati mtu anakojoa

viii) Vidonda kwenya sehemu nyeti

ix) Kuvimba kwenye sehemu nyeti

x) Mengine (jibu)_____

3.41 Ni dalili zipi za magonjwa ya zinaa kwa wanawake unazozifahamu? *(tick the mentioned ones)*

viii) Genital Discharge

ix) Kuumwa na tumbo

x) Harufu mbaya kwenye sehemu nyeti

xi) Uchungu wakati mtu anakojoa

xii) Vidonda kwenya sehemu nyeti

xiii) Kujikuna kwenye sehemu nyeti.

xiv) Mengine (jibu)_____

3.42 Ni jinsi gani mtu aweza kujilinda kutokana na kupata mimba? *(tick the mentioned ones)*

viii) Kutofanya ngono

ix) Kutumia mpira vyema

x) Kumeza dawa za uzazi

xi) Kutumia coil

xii) Kudungwa sindano

xiii) Kuwekwa norplant

xiv) Mengine (jibu)_____

3.0 Mazoea

3.5 Umewahi fanya ngono? Ndio( ) La ( )

3.6 Kama Ndio, mara yako ya kwanza ulipofnya ngono ulikuwa naiaka ngapii?

Umri kwa miaka ( ) Sijui ( )

3.7 Kama Ndio, ulitumia mpira? Ndio( ) La ( )

3.8 Mtu mliyefanya ngono naye, wakati huo wa kwanza alikuwa nani na umri upi?

Nani……..

Umri kwa miaka ( ) Sijui ( )

3.5 Kati ya maneno yaliyohapa chini ni yapi yanaeleza hisia zako ulipofanya ngono wakati wa kwanza.Ukifikiria juu ya wakati ulipofanya ngono kwanza. (*jibu ndio au la*)

Niliitikia	Ndio ( )	La( )
Nilibembelezwa	Ndio ( )	La( )
Nilifanyiwa hila	Ndio ( )	La( )
Nilishikwa kwa nguvu (kubakwa)	Ndio ( )	La( )
Nilishawishiwa (Kupewa pesa, nguo, zawadi, chakula etc)	Ndio( )	La( )
Nilitarajiwa kufanya hivyo kazini mwangu	Ndio( )	La( )

3.6 Je, umewahi kupokea yoyote ya yafuatayo kutoka kwa mtu kama tuzo baada ya kufanya ngono naye? *(Jibu ndio au la)*

vi) Pesa	Ndio ( )	La( )
vii) Chakula	Ndio ( )	La( )

viii) Zawadi Ndio ( ) La( )

ix) Usalama Ndio ( ) La( )

x) Mangine (specify)_____

3.7 Je umewahi kumpa mtu yoyote ya yafuatayo kama tuzo baada ya kufanya ngono? *(Jibu ndio au la)*

vi) Pesa Ndio ( ) La( )

vii) Chakula Ndio ( ) La( )

viii) Zawadi Ndio ( ) La( )

ix) Usalama Ndio ( ) La( )

x) Mengine (specify)_____

3.8 Je umewahi lazimishwa kufanya ngono?

Ndio ( ) La ( )

3.9 Kama ndio, nani alifanya hivyo? *(Jibu ndio au la)*

i) Mzazi Ndio ( ) La ( )

ii) Ndugu yako Ndio ( ) La ( )

iii) Jamaa Ndio ( ) La ( )

iv) Rafiki Ndio ( ) La ( )

v) Mtu nisiyejua Ndio ( ) La ( )

vi) Mwalimu Ndio ( ) La ( )

vii) Polisi Ndio ( ) La ( )

viii) Genge Ndio ( ) La ( )

3.10 Umefanya ngono kwa miezi tatu iliyopita? Ndio ( ) La( )

3.11 Kama ndio, umefanya ngono na watu wangapi kwa miezi tatu iliyopita?.....

3.12 Ni neno lipi linaloeleza vyema utumizi wako wa mpira unapofanya ngono ?

Kila wakati( ) Wakati mwingine( ) Situmii kabisa ( )

3.13 Sababu zipi zafanya usitumie mpira unapofanya ngono?

Mipira haipatikani ( ) Naogopa madhara ya mipira ( )

Nawaamini wapenzi wangu ( ) Watasema mimi naranda randa

Mengine----------

3.14 Mbona wewe hufanya ngono? *(tick the mentioned ones)*

i) Kupata usalama

ii) Mapenzi

iii) Kupata pesa

iv) Kuitikiwa kwenye kikundi

v) Kulazimishwa

vi) Mengine (specify) _____

3.15 Umewahi tumia njia yoyote ya kupanga uzazi?

Ndio ( ) La ( )

3.16 Kama ndio ni zipi umetumia kwa mwaka uliopita? *(tick the mentioned ones)*

i) Mpira

ii) Tembe

iii) 'Coil'

iv) Sindano

v) Norplant

vi) Mengine (specify) _____

Kutoka 3.18 mpaka 3.28 yaulizwe wasichana pekee.

3.18 Umewahi pata mimba? Ndio ( ) La( )

3.19 Umewahi beba mimba ngapi?

3.20 Una watoto wangapi waliozaliwa wakiwa hai?

3.21 Watoto wangapi walifariki kabla ya kuzaliwa

3.22 Ulienda kliniki wakati ulipokuwa na mamba? Ndio ( ) La( )

3.23 Kama La, mbona? *(tick the mentioned ones)*

vi) Kliniki ilikuwa mbali

vii) Sikuwa na pesa

viii) Poor reception at the clinic.

ix) Sikuona umuhimu

x) Mengine(eleza) _____

3.24 Watoto waliofariki, ni nini ilifanya wafariki?

1st 2nd 3rd 4th 5th 6th

v) Kupigwa

vi) Ugonjwa

vii) Dawa

viii) Mengine (specify) _____

3.25 Umewahi toa mimba Ndio ( ) La ( )

3.26 Kama ndio, ngapi?.....

3.27 Ulipata huduma hizo wapi? *(tick the mentioned ones)*

vi) Hospitali

vii) Kliniki ya kibinafsi

viii) Daktari wa kienyeji

ix) Mengine (specify) _____

x)

Mwisho wa sehemu ya wasichana

3.28 Umepata ugonjwa wa zinaa kwa miezi kumi na mbili iliyopita?

Ndio( ) La( )

3.29 Umepata genital discharge kwa miezi kumi na mbili ilyopita? Ndio( )

La( )

3.30 Umepata vidonda katika sehemu za siri kwa miezi 12 iliyopita? Ndio( )

La( )

3.31 Kama ndio , ulipata matibabu wapi?

i) Hospitali

ii) Kliniki ya kibinafsi

iii) Daktari wa kienyeji

iv) Mengine (specify) _____

3.32 Umewahi tumia madawa yafuatayo kwa miezi kumi na mbili iliyopita? *(tick the mentioned ones)*

i) Glue Ndio ( ) La

( )

ii) Sigara Ndio ( ) La ( )

iii) Pombe Ndio ( ) La ( )

iv) Marijuana Ndio ( ) La ( )

v) Jet fuel/thinner(Kamsii) Ndio ( ) La ( )

vi) Tablets-Taptap Ndio ( ) La ( )

vii) Sniffers-Kichuri Ndio ( ) La ( )

viii) Other (specify) _____

3.33 Wewe hutumia madawa yafuatayo mara ngapi?: (*Tick appropriately)*

		Kila siku Situmii	Mara chache kwa wiki	Mara chache kwa mwezi	
i)	Glue	( )	( )	( )	( )
ii)	Sigara	( )	( )	( )	( )
iii)	Pombe	( )	( )	( )	( )
iv)	Marijuana	( )	( )	( )	( )
v)	Jet fuel/thinner(Kamsii)	( )	( )	( )	( )
vi)	Tablets-Taptap	( )	( )	( )	( )
vii)	Sniffers-Kichuri	( )	( )	( )	( )

viii) Other (specify) _____

4.2 <u>Upatikanaji wa huduma za ASRH</u>

4.3 Mnapata aina gani za huduma za ASRH hapa ?

(Tick All Mentioned)

ix) Elimu na ushauri nasaha kuhusu SRH

x) VCT

xi) Huduma za baada ya Kuvya mimba

xii) huduma za mpango wa uzazi

xiii) Matibabu ya magonjwa ya zinaa

vi) Kliniki ya wakati mtu anamimba

xiv) Chanjo

xv) Msaada wa kisaikolojia

xvi) Mengine (specify) _____

4.2 Mwaka uliopita ulitembelea kliniki yoyote kupata huduma za SRH??

Ndio ( ) La ( ) Nilitaka kuenda lakini hakuna huduma( )

4.3 Nini sababu ya ziara yako ya hivi karibuni kwenye kituo cha afya kwa ajili ya huduma ya ngono na afya ya uzazi? *(Tick the mentioned ones)*

i) Elimu na ushauri nasaha kuhusu SRH

ii) VCT

iii) Huduma za baada ya Kuvya mimba

iv) huduma za mpango wa uzazi

v) Matibabu ya magonjwa ya zinaa

vi) Kliniki ya wakati mtu anamimba

vii) Chanjo

viii) Msaada wa kisaikolojia

ix) Mengine (specify) _____

4.4 Waweza rudi kliniki hiyo tena? Ndio ( ) La ( )

4.5 Kma La, Mbona hutarudi tena? *(Tick the mentioned ones)*

ix) Inatumia wakati mwingi sana

x) Ni ngumu kufika huko

xi) Ni mbali sana

xii) Bei ni ghali sana

xiii) Nilisikia aibu sana

xiv) Hakuna faragha (privacy)

xv) Wafanyi kazi hawana heshima

xvi) Wafanyi kazi wa jinsia yangu hawako

xvii) Mengine (specify)_____

4.6 Wewe hupata wapi masomo juu ya mambo ya ngono na afya ya uzazi? *(Tick the mentioned ones)*

x) wazazi

xi) ndugu

xii) marafiki

xiii) walimu

xiv) wahudumu wa afya

xv) NGO/CBO/FBO

xvi) Radio

xvii) Posters

xviii) Mengina (specify) _____

4.8 Wewe hupata mipira kutoka wapi? *(Tick the mentioned ones)*

vii) Kliniki

viii) Rafiki

ix) Senta ya vijana

x) duka

xi) Bar

xii) Mengine(specify) _____

Appendix 2a: Informed Consent Form

Study Title	**Sexual and Reproductive Health Behaviour Risk Factors Among Street Adolescents in Dagoretti.**

This Informed Consent Form has two parts:

• Information Sheet (to share information about the study with you)

• Certificate of Consent (for signatures if you choose to participate)

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

Part I: Information Sheet: We are carrying out research on sexual and reproductive health issues affecting street children in Nairobi. We are giving you this information because we would like you to participate in our research project. If you prefer not to participate, you are free to choose to do so. If you do not understand any of the words or ideas that you see on this form, please ask us to explain the information to you. You can talk to anyone from our team whom you feel comfortable with about the research.

Why is this Project Important? This study is very important as it will help us as organizations and the government to understand the sexual and reproductive health issues affecting you and factors affecting service provision on the same. This will inform future planning and thus ensure that your needs are taken into consideration for better services.

Who Can Participate? You are being invited to take part in this research project because we feel that your experiences on the streets are invaluable in our understanding of the current situation.

Participation is Your Choice: Your participation in this research is completely voluntary. You will make the choice about whether you will participate or not. If you choose not to take part, you will continue to receive all of the services that you usually get in your community and nothing will change.

What Is Involved in this Project? : The study will be done in two parts. This will include:

Interview: We will interview you on several issues including your personal details, knowledge level on SRH issues, sexual experiences, STIs and health seeking behaviour. To carry out the interview we will use a questionnaire that will take approximately 45 minutes. You have a choice not to answer any questions that you feel uncomfortable with or withdrawing at any time.
Key informant interview: This will only involve health workers and persons working directly with adolescents living on the streets.

What are the Risks? There is a risk that you may share some personal or confidential information by chance, or that you may feel uncomfortable talking about some of the topics in this study. However, we do not wish for this to happen. You do not have to answer any question or take part in the survey if you feel the question(s) are too personal or if talking about them makes you uncomfortable..

What are the Benefits? There will be no direct benefit to you, but your participation is likely to help us find out more about how to improve reproductive health services for you and other children living on the streets.

How will we Protect your Information and Confidentiality? The research being done in the community may draw attention and if you participate you may be asked questions by other people in the community. We will not be sharing information about you to anyone outside of the research team. The information that we collect from this research project will be kept private. Any information about you will have a number on it instead of your name. Only the researchers will know what your number is and we will lock that information up with a lock and key. It will not be shared with or given to anyone outside of our project.

What will happen with the Results? The knowledge that we get from this research will be shared with other stakeholders working with street children. We will publish the results so that other interested people may learn from the research.

Can I Refuse to Participate or Withdraw from the Study? You do not have to take part in this research if you do not wish to do so. If you choose not to participate, you will continue to receive all of the normal services that you usually get and nothing will change. If you wish to stop participating in the study after you begin, you can stop at any time by informing us.

Contacts and Questions: The researcher conducting this study is Rosemary Kamanu.If you have any questions, you are encouraged to contact the following:

Rosemary Kamanu,
P.O. Box 8522, 00100 NAIROBI
Tel. No. 020-6994419.
or
The Chairman, KEMRI National Ethical Review Committee,
P.O. Box 54840-00200 NAIROBI, KENYA
Tel. No. +254 20 2722541, 2713349, 0722 205901, 0733 400003

Part II: Certificate of Consent

Print Name of Participant	
Signature of Participant	
Print Name of / person taking the consent	
Signature of Researcher/person taking the consent	
DD/MM/YYYY	

Appendix 2 b: Fomu ya Idhini

Study Title	**Mambo yanayohatarisha afya ya uzazi miongoni mwa vijana wa barabara Dagoretti**

Hii fomu ya ridhaa ina sehemu mbili:

- Kijikaratasi cha habari (Kukujulisha kuhusu utafiti huu)
- Hati ya Idhini (Ya kuweka saini yakwamba umeitikia kushiriki kwa huu utafiti)

Utapewa nakala kamili ya Fomu hii.

Sehemu ya 1: Karatasi ya taarifa: Tunafanya utafiti juu ya mambo yanayoathiri afya ya uzazi kwa watoto wa mitaani mjini Dagoretti. Tunakupa habari hii kwa sababu tungependa ushiriki katika utafiti huu. UKo huru kuamua kutoshiriki kwa huu utafiti.Usipoelewa maneno au mawazo yaliyo kwenye fomu hii,tafadhali uliza uelezwe zaidi. Unaweza kuzungumza juu ya utafiti huu na mtu yeyote kutoka timu yetu ambaye unajisikia huru naye.

Utafiti huu una umuhimu gani? Utafiti huu ni muhimu sana kwani utasaidia mashirika na serikali kuelewa mambo ya afya ya uzazi yanayowaathiri na mambo yanayoathiri utoaji wa huduma kwa vijana wanaoishi barabarani. Hii itajulisha mipango ya baadaye na hivyo kuhakikisha kwamba mahitaji yako yatazingatiwa kwa ajili ya huduma bora.

Nani aweza kushiriki? Wewe unaalikwa kushiriki katika utafiti huu kwa sababu masomo ambayo umepata mtaani ni mchango mkubwa sana katika kuelewa hali ya sasa.

Kushiriki ni chaguo lako: Kushiriki kwako katika utafiti huu ni kwa hiari yako. Utaamua kama utashiriki ama la. Ukiamua kutoshiriki, utaendelea kupata huduma zile wewe hupata bila vikwazo au mabadiliko.

Je, nini inayohusika katika mradi huu?: Utafiti huu utafanyika katika sehemu mbili. Hii ni pamoja na: Mahojiano: Tutakuhoji juu ya masuala kadhaa ikiwa ni pamoja na maelezo yako binafsi, kiwango cha elimu juu ya masuala ya afya ya uzazi, uzoefu wa ngono, magonjwa ya zinaa na ujuzi wa wanaoweza kukupa huduma hizi. Tutatumia kijikaratasi chenye maswali katika mahojiano ambaayo yatachukuwa takriban dakika 45. Una haki kuamua kutojibu maswali yanayokupa wasiwasi au kuacha kujibu wakati wowote.
Mahojiano ya wataalam: Hii itahusisha wafanyakazi wa afya na watu wanaofanya kazi moja kwa moja na vijana wanaoishi mitaani.

Je, madhara ni yapi? Kuna hatari ya kwamba unaweza kushiriki baadhi ya taarifa binafsi au ya siri, au unaweza kuhisi wasiwasi kuzungumza juu ya baadhi ya mada katika utafiti huu. Hata hivyo, hatutaki haya kutendeka. Si lazima ujibu swali lolote au kushiriki katika utafiti kama wewe wajisikia swali ni binafsi sana au kama kuzungumza juu ya jambo hilo lafanya usikie vibaya.

Utafiti huu una faida gani? Utafiti huu hauna manufaa ya kibinafsi moja kwa moja, lakini kushiriki kwako kwawezatusaidia kujua zaidi kuhusu jinsi ya kuboresha huduma za afya ya uzazi kwako na watoto wengine wanaoishi mitaani.

Tutalinda habari kutoka kwako vipi? Utafiti huu unafanyika kwenye jamii na hivyo unateka makini na waweza kufanya uulizwe maswali mengi na wenzako. Hatutapatia watu wengine nje ya timu hii habari uliyotupa. Tutaifanya siri. Taarifa yoyote kutoka kwako itapewa namba badala ya kutumi jina lako ambayo ni watafiti peke yao watajua namba inayokusimamia. Tutafungia habari hii kwenya kabati na hatutaipatiana kwa mtu mwingine yeyote.

Matokeo ya utafiti yatatumika vipi? Matokeo tutakayopata kutokana na utafiti huu yatapatiwa washika dau wengine katika kazi ya watoto wa mitaani. Tutayaandika matokeo haya kwa kijitabu ili watu wengine wenye riba juu ya watoto wa mitaani waweze kupata matokeo haya na kujifunza kutoka kwayo.

Nawezakataa kushiriki ama niache kushiriki nikiwa nimesha anza? Si lazima ushiriki katika utafiti huu kama hutaki kufanya hivyo. Ukichagua kutoshiriki, wewe utaendelea kupokea huduma kama kawaida na hakutakuwa na mabadiliko. Kama unataka kuacha kushiriki katika utafiti baada ya kuanza, unaweza kuacha wakati wowote kwa kutueleza yakwamba wataka kuacha.

Mawasiliano na Maswali: Mtafiti anayefanya utafiti huu ni Rosemary Kamanu. Kama una maswali yoyote, unaulizwa kuwasiliana naye katika anwani ama nambari ya simu zifuatazo:

Rosemary Kamanu,
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ama
Mwenyekiti, KEMRI National Ethical Review Committee,
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Sehemu ya pili: Kibali cha idhini

Jina la Mshiriki	
Sahihi ya mshiriki	
Jina la mtu anayechukua ridhaa	
Sahihi ya mtu anayechukua ridhaa	

Tarehe

Appendix3: Key informant interview guide

Copies of informed consent and confidentiality forms should be provided to eachparticipant and read aloud for the benefit of those who cannot read. Participants should beprovided an opportunity to ask any questions.The following is a guide. You may want to start the discussion by asking the intervieweeabout some of the activities she/he carries out as a leader in the community. Ask aboutissues related to health. Try to ask all the questions below in the order given, but it ismore important to maintain the flow of discussion. Suggested probes have been included.Start by explaining the ground rules as follows:
Before we start I would like to remind you that there are no right or wrong answers inthis discussion. We are interested in knowing what you think, so please feel free to befrank and to share your point of view. It is very important that we hear your opinion.

1. How long have you worked with the street children?
2. What are your qualifications/experience?
3. Based on your experience what are the most common sexual and reproductive health issues facing the adolescents living on the streets according to you?
4. What leads to the above mentioned issues?
5. What are the main challenges facing these adolescents in relation to sexual and reproductive health issues?
6. What are the striking practices among this group of adolescents in relation to sexual and reproductive health?
7. How do the adolescents deal with issues of sexual and reproductive health?
8. Where do the adolescents seek for services and why?
9. What services do they seek for the most?
10. Who are the main providers of sexual and reproductive health services and information for this group of adolescents?
11. What would you say influences the choice of the service provider?
12. What approach do you use to discuss SRH issues?
13. How interested are the adolescents in SRH issues?
14. Let's summarize some of the key points from our discussion. Is there anything else?
15. Do you have any questions?

Appendix 4:Index of analysis of overall scores

Analysis of overall score on knowledge of SRH

Knowledge of SRH was assessed using the following variables:

- Some of the consequences of having unprotected sex
    1. Unplanned pregnancy (1 score)
    2. STI (1 score)
    3. HIV/AIDS (1 score)
- Methods of protecting oneself from HIV/AIDS
    1. Abstain (1 score)
    2. Being faithful to one partner (1 score)
    3. Proper use of condoms (1 score)
    4. Not sharing sharp objects (1 score)
- How one can get HIV
    1. Unprotected sex(1 score)
    2. Blood transfusion(1 score)
    3. Piercing with unsterilized sharps(1 score)
    4. Mother to child in pregnancy(1 score)
    5. Not through taboo, curse or witchcraft(1 score)
- Methods of protecting oneself from getting pregnant
    1. Abstain (1 score)
    2. Proper use of condoms (1 score)
    3. Use of pill (1 score)
    4. Use of coils (1 score)

5. Use of injectibles (1 score)
6. Use of norplant (1 score)
7. Natural (Properly counting the days) (1 score)

- Some of the mentioned symptoms of STIs in men
    1. Genital Discharge(1 score)
    2. Burning pain on urination(1 score)
    3. Genital ulcers/sores(1 score)
    4. Swellings in groin area(1 score)
- Some of the mentioned symptoms of STIs in women
    1. Genital Discharge(1 score)
    2. Pain in the abdomen(1 score)
    3. Foul smelling(1 score)
    4. Burning pain on urination(1 score)
    5. Genital ulcers/sores(1 score)
    6. Itching(1 score)

A composite score was generated by summation of all the scores. The maximum attainable score was 29. A percentage score for each adolescent was determined. An adolescent who scored less than 25% was graded to have scored *poorly*, 25 – 50% as *moderately good*, 51 – 75% *good* while one who scored more than 75% was considered to have *very good* knowledge of SRH.

Analysis of overall score on attitude SRH

Attitude towards SRH was assessed using the following variables;

- HIV cannot be transmitted by mosquito bites (1 score)

- HIV cannot be transmitted by sharing a meal with an infected person (1 score)
- A healthy looking person can transmit HIV (1 score)
- One cannot get HIV through a curse or witchcraft (1 score)
- HIV has no cure (1 score)
- Having sex with a virgin cannot cure HIV (1 score)

A composite score was generated by summation of all the scores. The maximum attainable score was 6. A percentage score for each adolescent was determined. An adolescent who scored less than 25% was graded to have scored *poorly*, 25 – 50% as *moderately good*, 51 – 75% *good* while one who scored more than 75% was considered to have *very good*attitude towards SRH.

Analysis of overallpractice score

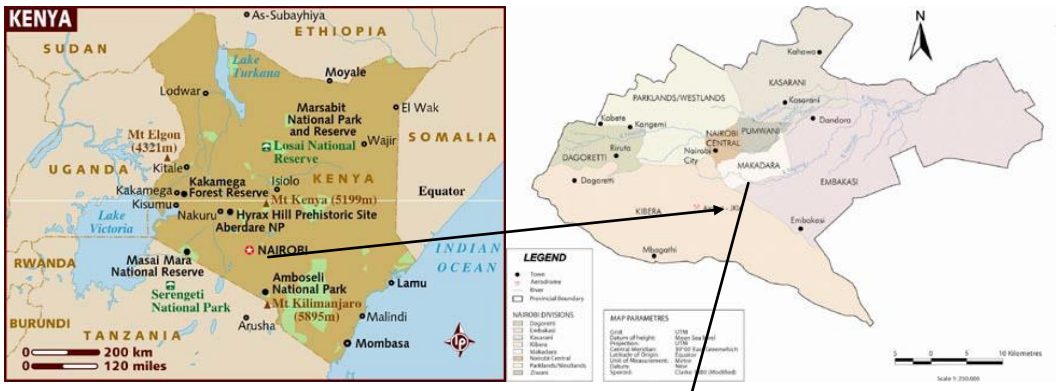
Overall assessment on practice with regard to SRH was assessed using the following variables;

- Never gone for a HIV test (1 score)
- Ever had sexual intercourse (1 score)
- Never used a condom (1 score)
- The first time the respondent had sexual intercourse, s/he was willing (1 score)
- Ever received anything (such as money, food, gifts, etc.) from someone in exchange for having sex with him/her (1 score)

- Ever given anything (such as money, food, gifts, etc.) to someone in exchange for having sex with him/her (1 score)
- Ever had sexual intercourse where you physically forced or threatened somebody (1 score)
- Number of persons ever had sexual intercourse with in the past three months (score ranging between 0 – 3)
- Frequency of using a condom while having sex (score ranging between 0 – 2)
- Have ever used any family planning method (1 score)
- Age at sexual debut (score ranging between 0 – 3)

A composite score was generated by summation of all the scores. The maximum attainable score was 16. A percentage score for each adolescent was determined. An adolescent who scored less than 25% was considered *Not at risk*, 25 – 50% as *at low risk*, 51 – 75% at *moderately high risk* while one who scored more than 75% was considered to be at*high risk*.

Appendix 5: Map of Dagoretti



Source: daymix.com/Nairobi-Map/