

**ASSESSMENT OF KNOWLEDGE AND ATTITUDES
TO HIV AND SEXUAL RISK BEHAVIOUR AMONG
15-19-YEAR-OLD LEARNERS
IN NGONG SUB-DISTRICT, KENYA**



**A mini-thesis submitted in partial fulfillment of the degree
Masters in Public Health, School of Public Health,
University of the Western Cape**

Supervisor: Verona Mathews

Co-Supervisor: Dr Brian van Wyk

ACKNOWLEDGEMENTS

I could not have achieved the completion of this dissertation without God's grace and favour. I am greatly indebted to my supervisor, Verona Mathews, and co-supervisor, Dr Brian Van Wyk, for their meticulous guidance, invaluable criticism and moral support throughout this process.

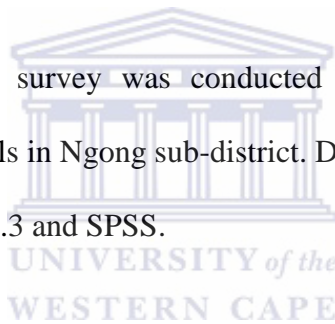
A special thank you to the staff at the Ministry of Education offices in Ngong sub-district, Kajiado, who helped make this thesis possible, including all the staff and learners from the sampled schools for their time and contribution to the data collected.

My appreciation also goes to Robert Muthiga, my husband, for being so very supportive and encouraging throughout the years and years of study hours, and my son, Paul Murathime, for his understanding.

ABSTRACT

Since the early 1980's when the first case of HIV was diagnosed, AIDS remains a serious and threatening health crisis in the world. Sub-Saharan Africa is the region most affected by the HIV/AIDS pandemic having 67 % of the 33 million people infected with HIV globally in 2007. Young people aged 15-24 account for an estimated 45% of all new HIV infections worldwide. The study aimed to assess the knowledge and attitudes on HIV/AIDS and sexual behavior among 15-19 year olds in Kenya.

A descriptive, cross-sectional survey was conducted among 96 students randomly selected from five public schools in Ngong sub-district. Descriptive and bivariate analysis was conducted using Epi Info 3.3 and SPSS.



The main findings indicate that a third (31/96) of respondents were sexually experienced. Knowledge level was however found to be inadequate (below 60 %) indicating a poorly informed sample on knowledge about HIV transmission and prevention. The study showed poor attitudes towards the risk to HIV as only 40 % of both males and females supported the use of condoms even when the sexual partners know each other well. In addition, risky sexual behaviors were reported by sexually experienced respondents where condom use in last sexual intercourse was (57 %) among males and (20 %) among females.

DECLARATION

I, Caroline Njeri Njogu, hereby declare that this mini-thesis titled '*Assessment of knowledge and attitudes to HIV/AIDS and sexual risk behaviour among 15-19-year-old learners in Ngong sub-district, Kenya*' is my own work and has never been presented in any other institution. I also declare that any secondary information used has been duly acknowledged.

Signature: _____

Date: _____



KEY WORDS

Adolescence

HIV/AIDS

Knowledge

Risky Sexual behaviour

Attitudes

Perceptions

HIV Risk

Sexual health education

Schools

Kenya



Note:

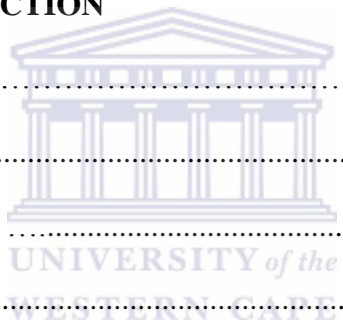
In Kenya, school-going youth are most commonly referred to as ‘students’, while in South Africa the term ‘learner’ is mostly used. In this study, the terms ‘learner’ and ‘student’ mean the same and are used interchangeably.

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CHAPTER ONE

INTRODUCTION

1.1 OVERVIEW

HIV/AIDS is currently one of the major causes of mortality globally with more than 2.9 million people having died of related deaths in 2005 (United Nations AIDS (UNAIDS) Program, 2006). The World Health Organization (2007) estimated that 33.2 million people were newly infected with HIV in 2006. According to UNAIDS, sub-Saharan Africa is the region most severely affected by the HIV pandemic, with an estimated 5.7 million new HIV infections in sub-Saharan Africa (UNAIDS, 2006). Young people are considered to be particularly vulnerable to the HIV/AIDS epidemic, as evidenced in more than half of the globally reported new infections occurring among 15-24-year-olds (Advocates for Youth, 2008). In addition, it is reported that about one third of people living with HIV/AIDS are between 15 and 24 years (The Gale Group, 2002). Young people, particularly young girls, are the most vulnerable to HIV infection (Lori, 2008). It is often argued that these young girls are often enticed or coerced into having sex with someone older, wealthier or in a position of authority (Family Health International, 2004).

In Kenya, life expectancy has decreased to approximately 50 years as a result of the HIV/AIDS epidemic (National AIDS and STI Control Program (NAS COP, 2005). The Central Bureau of Statistics estimates that without HIV/AIDS, life expectancy would be about 65 years (WHO, 2004). It is estimated that over 1.5 million people have died due to AIDS-related illnesses, resulting in 1.8 million children left as orphans (National Aids Control Council (NACC, 2005). It

is argued that HIV/AIDS will remain a significant health problem in the foreseeable future for Kenya due to a consistent increase in HIV infection rates among young adults (NACC, 2005).

Since young people constitute a significant proportion of the current and future work force, the epidemic will decrease the productive labour force and may thereby cripple economic and social development in the country and severely restrict life opportunities for young people. The economic impact of HIV/AIDS occurs in the form of additional hiring and training costs to replace lost labour, increased absenteeism, higher medical claims and pensions, and a lower income due to the illness of an adult family member (Bonnell, 2005).

There is still no effective cure for HIV/AIDS thus prevention is the mainstay for controlling the spread of the epidemic (UNAIDS, 2003). The extent of prevention programmes in the world has varied greatly from country to country (Family Health International, 2006). Prevention programmes in Africa, especially in Uganda (UNAIDS, 2004) have been found to significantly improve young people's knowledge on HIV/AIDS (UNAIDS, 2005). Prevention programmes include endorsing abstinence by delaying sexual initiation among youth, encouraging youth to be faithful to their partners, and correct and consistent condom use (UNAIDS, 2004).

Despite a significant 1.6 % decline in HIV prevalence among the Kenyan population from 6.7 % in 2003 to 5.1 % in 2007 (NACC, 2008), the new HIV cases in Kenya and prevalence rate among adolescents in Kenya continues to rise and is currently at 4.1 % (NACC, 2008). In response to an increase in the HIV prevalence rate among young people, UNAIDS advocates that young people be taught negotiation skills, decision-making and communication (Advocates for

Youth, 2008). It is found that although most young people have heard about AIDS, many do not know how HIV is spread and downplay their own risk or do not protect themselves because they lack the skills to adopt safe sexual behaviours (UNAIDS, 2003). In other cases, it is found young people may have information on how to protect themselves from HIV, but many continue to engage in unprotected sex because they may be fearful or embarrassed to talk with their partner about sex, or they perceive their individual risk to be low (UNAIDS, 2005).

The National AIDS Control Council (NACC) was created to provide leadership and coordinate a multi-sectoral response to the epidemic. This approach aims at building capacity and facilitating collaboration across all sectors in society to address the causes and impact of HIV/AIDS. In addition, a consortium of organisations that have an interest in AIDS has been formed, known as the Kenya AIDS NGOs Consortium (KANCO), to provide leadership, collaboration, and enhance capacity among civil society organisations for collective action towards effective responses to HIV/AIDS (Irungi, 2002). In response to insufficient knowledge of HIV among young people, the Kenyan government mandated a weekly HIV/AIDS lesson in all primary and secondary schools. Unfortunately this national curriculum has gone largely unutilized due to teacher inexperience and uneasiness with teaching this sensitive subject (Poverty Action Lab, 2003). The Ministry of Education has also embarked on launching a revised syllabus that includes HIV/AIDS. However, this syllabus has gone largely unutilized as it requires support from partners to facilitate teaching HIV/AIDS in education institutions countrywide (UNESCO, 2001). Other setbacks to rolling out the revised syllabus include a lack of coordination and a small number of trained teachers compared to the number of teachers who need training (NACC, 2005).

1.2 PROBLEM STATEMENT

While youth represent a population at significant risk of HIV infection, they also provide a window of opportunity for shaping the course of the epidemic (NACC, 2005). Statistics show that the majority of HIV infections among teenagers are contracted through sexual activity (The Gale Group, 2002). Youth in Kenya begin having sex at an early age and have high rates of sexual activity despite the implementation of national HIV prevention programs (NACC, 2005). There is a clear need to help young people make healthy decisions regarding sexual activity so that they can protect themselves from HIV/AIDS (The Guttmacher Institute, 2002). Despite the high numbers of young people living with HIV, there still remains insufficient attention directed towards preventing future transmission of HIV among this population (UNAIDS, 2007).

HIV/AIDS is causing dramatic shifts in demographics with long-ranging social and economic consequences in Kenya. The great geographic spread of HIV and AIDS has raised mortality rates among young people to 1 per 100,000 deaths (Family Health International, 2004), causing drastic rises in mortality among young adults. Since young people represent a high percentage of the productive work force, the epidemic will decrease the productive labor force in Kenya.

1.3 DESCRIPTION OF STUDY SETTING

Kenya is administratively divided into seven provinces and 69 districts. The study was conducted among randomly selected schools in Ngong sub-district, which is one of the eight sub-districts in the Rift Valley Province. This district has a HIV prevalence of 3.8% where half of all new HIV infections occur among young people within the 15-19 age bracket (National Coordinating

Agency for Population and Development, 2005). The target population was young people enrolled in either boarding or day schools in public secondary schools in Ngong sub-district, studying for nine months and breaking for three months in a year.

1.4 RATIONALE FOR STUDY

While young people have the potential to reduce the spread of HIV/AIDS and are also the most vulnerable to HIV infection, they are also the most affected as they are often called to carry the burden of caring for sick family members. Knowledge about sexual behaviour among school going youth aged 15-19 years in Ngong sub-district will be essential for planning meaningful implementation strategies in the sub-district. This will be done through seeking the views of young people and addressing the issue of HIV prevention among young people. The information gained from the study will be used to make recommendations to the National Aids Control Council, Kenya Ministry of Education, Non-governmental Organizations working in HIV and AIDS among youth and United Nations AIDS (UNAIDS) based in the country. The information should be used as evidence to inform policy and programmes. It will also contribute to the development and implementation of the Kenya National HIV and AIDS Strategic Plan specifically for the development of HIV preventive programmes for young people.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The literature review starts with an overview of HIV/AIDS among young people. Secondly, it provides an overview on HIV/AIDS knowledge among youth. The literature review then explores sexual behaviour, followed by perceptions on HIV/AIDS. The chapter concludes with a discussion on behaviour change.

2.2 OVERVIEW OF HIV/AIDS

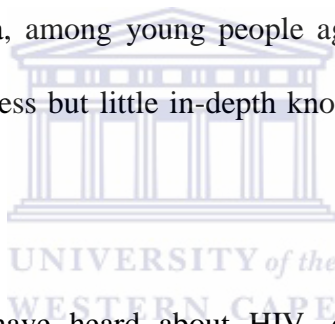
Today's generation of young people is the largest in history and nearly half of the world's population is under the age of 25 years (United Nations Population Fund (UNFPA), 2006). Young people are considered to be particularly vulnerable to the HIV/AIDS epidemic, accounting for half of all new cases of HIV (Advocates for Youth, 2008). Young people are exposed to HIV in different ways, the main mode of transmission being heterosexual intercourse (UNAIDS, 2005). Between the ages of 15–19 years, many young people become sexually active and begin to develop patterns of sexual behaviour, exposing them to a high risk of acquiring HIV infection (Gurung, 2004). During their mid-teen years, young people spend less time with their parents and more with their friends; are more interested in the opposite sex; and also develop the desire for sexual activity (UNFPA, 2004).

It still remains in doubt whether today's youth are able to construct appropriate attitudes and safe practices to prevent HIV infection (Yuntadilok, 2004). Despite the high numbers of young

people living with HIV, there still remains insufficient attention directed towards preventing future transmission of HIV among young people (UNFPA, 2008). The disease is spreading fastest in sub-Saharan Africa where 8.6 million young people are estimated to be HIV-positive (UNAIDS, 2006). Sub-Saharan Africa is home to almost two thirds (61%) of all youth living with HIV (UNAIDS, 2007). The Kenya adult prevalence rate in 2007 was 5.1%, which is a national estimate based on sentinel surveillance data (NACC, 2008).

2.3 KNOWLEDGE ON HIV/AIDS

Research from data collected from nationally-representative household-based surveys in Burkina Faso, Ghana, Malawi and Uganda, among young people aged 12-19 years, found that young people have high levels of awareness but little in-depth knowledge about HIV prevention (The Guttmacher Institute, 2008).



Although most 15-19-year-olds have heard about HIV, detailed knowledge of HIV/AIDS remains low and misperceptions abound (Darabi et al., 2008). A Behaviour Surveillance survey conducted in Kenya among 4 000 youth aged 15-19 years between 2002/3 by the National AIDS and STI Control Program (NAS COP), found that although nearly all youth surveyed (98%) had heard of HIV/AIDS, less than half of all respondents knew of the window period in which a person may be infected with the HIV virus yet test negative on antibody tests for several weeks (NAS COP, 2005). A quantitative descriptive study was conducted in Kenyan schools among 176 eighth grade learners between the ages of 15-19 years, where data was collected through a self-administered questionnaire (Lalani, 2006). The study revealed a critical lack of knowledge of HIV transmission via body fluids (Lalani, 2006).

Despite good knowledge on HIV among youth in Kenya, only a small proportion has good knowledge on the prevention of HIV. A cross-sectional study survey of 322 young people aged 15-24 years, aimed at investigating knowledge on HIV transmission, found that although 98.4% of the respondents were aware of HIV/AIDS, only 36.3% acknowledged use of condoms as a method to prevent transmission (Lema, 2008).

Education and prevention programmes are seen as the primary way of decreasing HIV infection (Gallant, 2004). A baseline study to measure HIV knowledge among 4 111 young people aged 12-20 years in the Philippines found that knowledge of HIV increases with age and is high among those with high education (Health Alert Information Network (HAIN), 2005). A national survey conducted using interviews and questionnaire in South Africa revealed that there is no significant correlate between knowledge and sexual experience (UNFPA, 2006). Statistics from the Kenya Demographic Health survey (KDHS), which collected information nationwide through self-administered questionnaires among 4 000 young people between 15-24 years of age, revealed that increasing knowledge can prevent HIV infection and can promote sexual abstinence behaviour (Central Bureau of Statistics, 2005).

2.4 ATTITUDES AND PERCEPTIONS ABOUT HIV/AIDS

Sexual behaviour is important in curbing new HIV infections among young people. The Demographic Health Survey indicates that 50% of young people in Kenya are sexually active by age 20 (Kenya Demographic and Health Survey, 2003), causing an increase in their vulnerability

to HIV (UNAIDS, 2005). Making efforts to change sexual behaviour among youth is a vital component in the fight against the HIV/AIDS pandemic (Guttmacher Institute, 2006).

2.4.1 Risk Behaviour

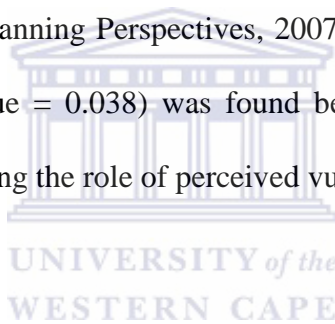
The crucial period for young people to protect themselves from the consequences of risky sexual behaviour is the period between first intercourse and first marriage (Kibombo, 2007). It is during this period when young people are involved in sexual experimentation, relationship instability, and a lack of health services access (Guttmacher Institute, 2004). Several indicators define risky sexual behaviour, including the number of sexual partners (NASCO, 2007); engaging in casual sex (Parks, 2009); exchanging sex for goods or money (Family Health International, 2006); sexual intercourse without the use of a condom (Taylor-Seehafer, 2009); using alcohol during sex; or experiencing an early sexual debut (Majumdar, 2003). In Kenya, sexual debut for young people is at a later age compared to other selected African countries (Guttmacher Institute, 2007). According to an analysis of demographic health survey data from Burkina Faso, Ghana and Zambia between 2001-2003, the mean age of sexual debut among young people was 18 years of age (Stephenson, 2009).

HIV risk perception can be described as an individual's opinion of their chances of getting HIV (Horizons, 2006). HIV risk perception is a problem among young people as they are more likely to underestimate their risk to HIV infection, rather than to overestimate it (Chapin, 2000).

It has been found that even when young people reveal that they or their peers were engaging in high risk sexual behaviour, they have the tendency to have a false or low HIV risk perception, as

many do not believe themselves to be at risk (Family Health International, 2006). A qualitative study conducted among 631 high school learners in Kenya, found that young people maintain a strong optimistic bias on their comparative risk, thus lowering their risk perception regardless of their sexual behaviour (Ntozi, 2001).

Longitudinal data collected through self-administered questionnaires between 2002 and 2005 from 3 017 youth in South Africa (confidence interval 95 %), revealed that inexperienced youth who perceived themselves to be at high risk were more likely to delay sexual intercourse, indicating that a high perception of personal risk could lead to a modification of sexual behaviour (International Family Planning Perspectives, 2007). In a study by Caldwell (1999), a strong positive association (p -value = 0.038) was found between risky sexual behaviour and perceived risk of HIV/AIDS showing the role of perceived vulnerability in predicting a variety of subsequent preventive behaviors.



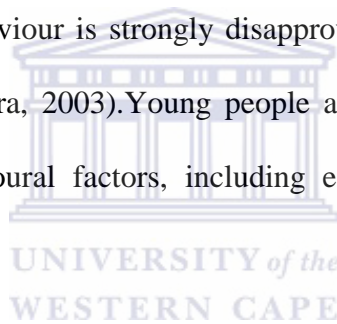
Literature has revealed contradictory findings concerning the relationship between a high level of knowledge, and participation in high-risk behaviour. Some studies indicate that there is limited evidence that HIV/AIDS-related knowledge and attitudes shape HIV/AIDS-related sexual practices (Kiragu, 1994). Even when youth are knowledgeable about HIV/AIDS, their behaviour often fails to reflect their knowledge (Population Council, 2003). It is common to find young people engaging in risk-taking behaviour even though they have the knowledge, as they often underestimate their own risk of becoming infected with HIV (Dias, 2005).

A study conducted in the USA among high school students, showed no relationship between high levels of HIV knowledge and participation in high-risk behaviour (Tawa, 2008). Ingham (1997) suggests that young people seem to make judgments about risk based on a host of factors, and not just on their knowledge of a HIV/AIDS risk.

2.4.2 Factors Affecting Risky Sexual Behaviour

Myths and culture

Risk-taking behaviour is sometimes a product of community socio-cultural beliefs and practices (Caldwell, 1999), and is caused by social and familial influences. This behaviour is tolerated in some contexts, but the same behaviour is strongly disapproved or regarded as irresponsible or immoral in other contexts (Akwara, 2003). Young people are at high risk of contracting HIV because of socio-cultural behavioural factors, including early initiation into sexual activity (Tawa, 2001).



In South Africa, the term *isoka*, which refers to a man with many sexual partners, is the ultimate compliment, while in some West African countries, a woman who does not engage in sex is considered old-fashioned (Population Information Program, 2001). In Cameroon, sexual purity among young people is usually a difficult practice due to norms and cultural factors where the perception is that young girls, who have had no sexual experience, do not make good marriage prospects and tend to be scorned by both men and women (Population Information Program, 2001).

Commonly identified cultural influences that affect sexual behaviour, include a false teaching that HIV/AIDS can be acquired from a curse, taboo or breaking a societal norms, which in turn causes young people to engage in risky sexual behaviour including frequent partner changes, low rate of condom use and poor personal risk perception (Ntozi, 2001). The way people behave is largely influenced by the culture in which they have grown. Cultural beliefs can result in exposing people to greater risk of HIV infection. Rape, especially of virgin in the mistaken belief that it can cure HIV infection, sex cleaning ritual, multi-partnership network, polygamy, are important risk factors in some areas and are ways that cultural behaviours and beliefs can contribute heavily to the spread of HIV infection (Dillard, 2009; Dickson, 2008; Gabriel, 2005).

One of the most common misconceptions in Africa, and now in Kenya, claims that HIV/AIDS can be cured by having sex with a virgin (Govender, 1999). This has resulted in an epidemic of infected males violating virgins and infants because of the belief that the younger the virgin the more potent the cure (Taylor, 2002). Another myth is the perception that HIV can be spread through mosquito bites, coughing and sneezing as professed by Malaysian secondary school students (Naggappan, 2004). In Botswana, some refugees are convinced that HIV is spread by witchcraft and that sexual habits have nothing to do with it (UNHCR, 2005).

Condom use and alcohol

A British national survey of more than 17 000 youth, found that alcohol users were nearly three times more likely to have had multiple sex partners in the past month than non- alcohol users (Wechsler, 2003). Studies have shown that substance use increases the probability that a young person will initiate sexual activity (Kaiser Family, 2003). In Kenya, alcohol plays an important

role in risky sexual behaviour particularly among men between 15-19 years of age (Carpenter, 2005). In addition, alcohol influences sexual behaviour and has been found to inhibit the ability to make rational decisions (Johns, 2005). A study conducted in Kenya (Johnston, 2000), concluded that young people who experiment over time with alcohol are more prone to contracting HIV than those who never experiment with alcohol.

Parks found an association between alcohol and drug users with condom use, which influences safe sex practices (Parks, 2009). Condom use is crucial as a protective behaviour to the spread of HIV/AIDS, as the majority of AIDS cases in Kenya are due to heterosexual transmission (Ministry of Health, 2005). Young people who use alcohol are therefore more likely to engage in sex without the use of protection against HIV than those who do not, with females found to be especially at risk as they decreased their consistency of condom use when new sexual partners became regular sexual partners (Sheppard, 2004). The use of alcohol or drugs places young people at risk to HIV/AIDS, either directly through sharing needles, or indirectly through inhibited judgment (Baurfess, 2005).

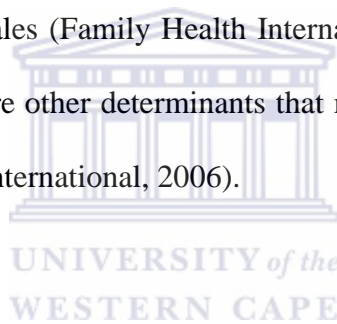
Peer pressure

Youth are strongly influenced by their peers to become sexually active (Brown, 2001). Peer pressure experienced by young men and women in Kenya is a source of risk of HIV infection (Kabiru, 2008). Young males face the challenge of pressure to be sexually experienced; prove their manhood by having many sexual partners; feel the pressure to impregnate a girl; or assume an adult role (Family Health International, 2006). Young women, on the other hand, are under

pressure to prove their fertility before marriage and thus engage in sex at an early age (Kiragu, 2001).

Poverty and unemployment

Studies conducted in Malawi, Nigeria and Kenya (Grant, 2000; Olabisi, 2000; Akwara, 2003) indicate that poverty has fuelled the spread of HIV as it remains a cause for unhealthy sexual behaviour, especially among young girls living below the poverty line. HIV/AIDS is not their first concern, compared to unemployment or poverty (Capua, 2001). Limited economic opportunities in Kenya contribute to early sexual debut and unprotected sexual activity through commercial sex behaviour in females (Family Health International, 2004). Sexual coercion and violence among youth in Kenya are other determinants that make young people engage in risky sexual behaviour (Family Health International, 2006).



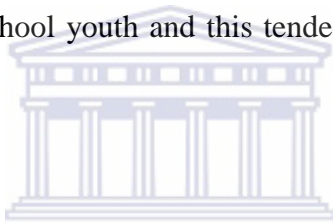
2.5 BEHAVIOUR CHANGE

Behaviour change among youth is one of the most difficult changes to ensure, as risky behaviour is often found attractive or convenient and young people believe that experimenting with such behaviour is harmless (World Bank, 2007). Studies in Kenya (Hewet, 2003) and Uganda (Jacob, 2003) have shown that behaviour change is possible by providing culturally-appropriate teaching about health risks and increasing the capacity of young people to practice healthy behaviour, including teaching them how to negotiate safe sex with partners (World Bank, 2007). Young people in Uganda were advised by the Ministry of Health and other authorities to abstain from sex in order to avoid HIV (Murphy, 2006). Also in Uganda, culturally appropriate teachings

were given to increase the capacity of young people to practice healthy sexual behaviour (UNFPA, 2008).

Role of school sexual health education

It has been found that in-school youth have more potential for change than out-of-school peers because of school health programmes (UNFPA, 2004). Out of school youth are disadvantaged because they lose the valuable opportunity to learn about HIV in a stable and credible environment (Family Health International, 2004). A study conducted in Suriname among 133 out-of-school youth using focus group discussions, revealed that out-of-school youth participated more in risky behaviour than in-school youth and this tended to leave them more vulnerable to HIV/AIDS (Sarafian, 2002).



Relationship between school health education and sexual activity

Behaviour change has been found to come as a result of comprehensive sex education, which includes discussion of contraception and how to say no to sex. Sex education conducted through open discussions has a higher impact on adolescent behaviour than sex education that teaches only abstinence (Tannes, 2005). Research has also shown that it is difficult to get young people to change their behaviour and for that behaviour to be sustained through sex education alone (Eisen, 2006). A review of 19 studies worldwide examined sexual behaviour of high school students who have received sexual education. None of the studies indicated that sexual education contributed to earlier or increased sexual activity in youth (Baldo, Aggleton & Slutkin, 1993). In fact, a study by Mellanby (1999) found a relationship between effective school health education and a decrease in sexual activity in the United Kingdom (Shuey, 1999).

In Uganda, individual behaviour change among adolescents aged 12-19 years involved the interaction of both personal and environmental factors, in addition to investing in health education (Helperin, 2003). Personal factors included personal experiences and beliefs and attitudes, while environmental factors included change in social norms, practices and policies to support the desired behaviour (Kibombo, 2007). As a result, a number of young Ugandans postponed the onset of sexual activity; thus bringing about a decrease in the HIV/AIDS incidence rate (Ali, 2000).

Baseline data was collected in 2002 using surveys with 2 000 youth aged 15-20 years in 40 schools in Kenya, using 12 focus group discussions and interviews with teachers (Tavrow, 2005). The findings of the surveys indicate that educating young people to change their behaviour and ensuring they are informed to avoid infection, has been seen to be effective in reducing the prevalence of HIV/AIDS among young people (Baffour-Awuah, 2004). Baseline surveys were conducted in 1997 to 2001 where multivariate analysis was used to assess whether the project was associated with changes in young people's safer-sex behaviour (Erulkar et al, 2004). These surveys showed that peer education could have positive effects on adolescent's knowledge and attitudes (Erulkar et al, 2004). The two studies above emphasize the importance of education in behaviour change.

In the case of Kenya, results from a study conducted among 3 556 high school learners revealed that young people may benefit from sex education programmes addressing multiple factors that predispose them to sexual activity and take account of gender differences (Kabiru, 2008).

2.6 CONCLUSION

Young men and women report high rates of risky sexual behaviour, including multiple partnerships and casual unprotected intercourse (Camlin, 2008). As noted in the literature review, the success of HIV/AIDS prevention may lie in addressing the highlighted issues, although all may not be addressed through one single intervention programming (UNESCO, 2001). This study acknowledges that sexual behavior is influenced by the interplay of many factors such as peer pressure, condom use, myths and culture ,attitudes and perceptions about HIV and AIDs among others all which influence the sexual decision making process (Brown 2001).



CHAPTER THREE

METHODOLOGY

This chapter describes the aim and objectives of the study, the study design, study population, sample size and sampling procedure. It continues with the data collection method used in the study, reliability, generalization and data analysis. The chapter concludes with the ethical considerations taken in the study.

3.1 AIM

The aim of the study was to investigate sexual risk behaviour and knowledge and attitudes about HIV/AIDS among learners aged 15-19 years old in Ngong sub-district.



3.2 OBJECTIVES

The objectives of the study were:

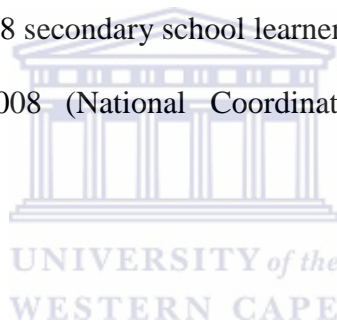
1. To describe the knowledge about HIV/AIDS among 15-19-year-old learners in Ngong sub-district.
2. To describe perceptions of HIV risk among 15-19-year-olds.
3. To describe reported sexual behaviour of 15-19-year-olds.
4. To assess the relationship between sexual risk behaviour and knowledge about HIV/AIDS among 15-19-year-olds.
5. To assess the relationship between sexual risk behaviour and risk perceptions of HIV risk among 15-19-year-olds.

3.3 STUDY DESIGN

A descriptive cross-sectional survey was conducted. This study design was chosen because surveys are a cost-effective and efficient method of rapidly mapping out dominant behaviour (Bowling, 1997). Survey questionnaires also have the advantage of describing information using numerical comparisons, while also describing the factors related to the pattern of disease within a context (Baum, 1998).

3.4 STUDY POPULATION

The study population constituted learners aged 15-19 years from 34 public secondary schools in Ngong sub-district. A total of 9 498 secondary school learners aged 15-19 years were enrolled in public secondary schools in 2008 (National Coordinating Agency for Population and Development, 2008).



3.5 SAMPLE SIZE

The sample size (N=96) was calculated by means of the Raosoft online sample size calculator (Raosoft, 2007), using the following parameters: (i) assuming (conservatively) maximum variation in the sample with respect to sexual activity, i.e. $p=0.5$; (ii) margin error of 10%; and (iii) 95% level of confidence.

3.6 SAMPLING PROCEDURE

A two-stage random sampling selection process was followed. In the first stage, five out of 34 secondary schools in Ngong sub-district were randomly selected by drawing their names from a box. The selected schools were Oololaiser Secondary School, Matasia Secondary School,

EGGCS Eneo Girls, Kibiko Mixed Secondary School and St Charles Mutuku Secondary School. In the second stage, lists of learners aged 15-19 years registered in each of the five selected schools were obtained from the school principals. All names were listed on pieces of paper, neatly folded and put in a box. Nineteen names from four schools and twenty names from one school were drawn from a box by the researcher to participate in the study.

3.7 DATA COLLECTION

Primary data was collected and gathered from respondents through the delivered self-administered questionnaire consisting of 56 close-ended questions (See Appendix 1). The data collection instruments were adopted from a similar study conducted in Nepal since it had been used successfully to create content on the subject matter (Gurung, 2004). There was a need to capture new information and an understanding of the 15-19 age group. The added questions were related to capturing perceptions related to HIV risk. This was tested by the questions such as, ‘when sexual partners trust each other well, they don’t need to use condoms’ and ‘my sexual partner is HIV-negative until proven otherwise’ and ‘youth are safe to have sex with other youth because many young people are not vulnerable to HIV’.

Clarity of questions was tested by first conducting a pilot study. The pilot study was conducted on 10 learners aged 15-19 years, enrolled in one public secondary school in the sub-district that was not part of the main study. After administering the questionnaire, a participatory discussion was held with the respondents and questions that were difficult to understand were identified, clarified and corrected in the final questionnaire. An example of a change made on the final questionnaire was the rephrasing of the question asking if the respondents had engaged in a ‘one

night stand' during the last 12 months. This was rephrased to read 'if the student previously had sex with someone they did not know very well during the past 12 months'. Another change was replacing the word 'oral sex' with the phrase 'any other type of sex' as most learners were unsure what oral sex referred to.

Respondents were requested to respond to questions by answering whether the statement given is 'true', 'false' or if they 'did not know'. The questionnaire included questions on the demographic characteristics of the respondents, their sexual relationships, knowledge of HIV/AIDS, and perception of risk.

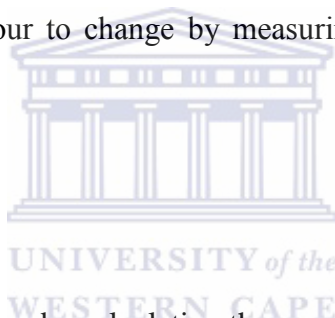
Data collection was done between 24th November and 5th December 2008. Selected learners were gathered in one classroom or hall and the questionnaire was administered to each of them. Each question was read out in English and difficult terms that the learners did not understand (like steroids and latex condom) were explained in Swahili. Learners were then given an opportunity to clarify questions or discuss whether they experienced any difficulty in understanding the questions.

3.8 DATA ANALYSIS

Data was first entered into Epi Info 3.3, then into SPSS and edited for completeness and consistency, and then coded. The results from Epi Info 3.3 and SPSS were then combined to make a comprehensive result that is outlined in the results section.

Descriptive statistics such as frequencies and percentage distribution were used to show the distribution of the study population according to selected study variables. A bivariate analysis technique known as cross-tabulation was used to show the associations between selected variables. Chi-square and Fisher exact statistics were calculated to test whether associations were significant.

Analysis was done using Epi Info 3.3. Stratified analysis was done to note differences between males and females. Inferential statistics were done using SPSS. In order to understand factors that influenced changed behaviour, we needed to also know perceived barrier factors that influenced an individual's behaviour to change by measuring knowledge levels, attitudes and sexual behaviour of respondents.



Knowledge

Measurement of knowledge was done by calculating the percentage of correct responses.

Combined measurement of knowledge about HIV was classified as sufficient if the proportion of correct responses was 80% or more, while less than 80% correct responses was classified as insufficient knowledge.

Attitudes

The questions on attitude aimed to collect information on learners' attitudes towards HIV transmission through sexual and non-sexual means. To collect information on attitudes related to sex, six questions were used to determine a positive attitude towards HIV transmission through sexual means (Q 11, 12, 15, 16, 20, 21 in Appendix 1). If the learner answered three out of six

questions correctly, the learner was said to have a good attitude towards sexual transmission of HIV/AIDS. To collect information on respondents attitudes not related to sex, five key questions were used (Q 3, 4, 5, 7, 9 in Appendix 1). If the learner answered three out of five questions correctly, they were said to have a good attitude towards non-sexual transmission of HIV/AIDS.

Sexual behaviour

HIV risk was assessed based on responses to past sexual activity, number of sexual partners in the past three months; use of alcohol or drugs during last sexual encounter; and use of protection (condoms) during last sexual encounter.

3.9 VALIDITY AND RELIABILITY

Validity

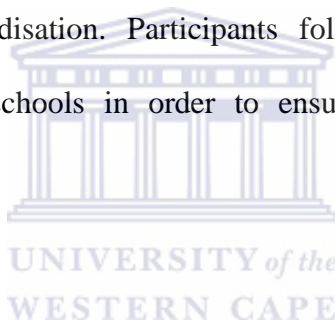
Ensuring that the implementation of the questionnaire followed the same rules in all classes ensured validity. The questions asked of the learners pertained to their experiences and exploration of concepts they used to relay their experiences. A rich and detailed description of the same instructions was read to each class. Learners were then asked to fill in the questionnaires individually and anonymously. Learners sat in the same room in desks far apart so that they did not see each other's answers. The questionnaire was pre-tested by 10 learners to determine their validity.

Some recall bias could have occurred, as some learners might not have remembered whether their last sexual encounter was protected or not which may have resulted to random error from imprecise memory of past experience. A potential factor that might have caused possible

selection bias of learners was the current individual schoolwork load of each learner at the time of the study, which might influence the results.

Reliability

Using a structured questionnaire on all learner participants in the study ensured reliability. Questions from each section were pre-tested and modified to ensure questions were clear and unambiguous. An assistant researcher was trained to administer the structured questionnaire to ensure uniformity in data collection. Using the same guidelines concerning classroom environment, duration and supervision during implementation of the questionnaire further ensured consistency and standardisation. Participants followed the same explanation and procedure in each of the five schools in order to ensure comparable understanding and interpretation of the questions.



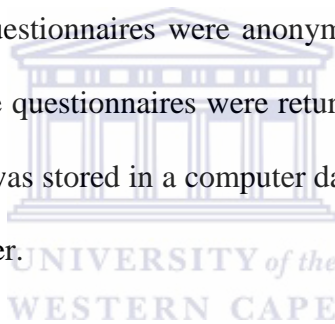
3.10 GENERALIZABILITY

The sample was representative of the population of 15-19-year-old learners from Ngong sub-district, since learners were randomly selected and all selected learners participated in the study and were entered into the analysis (i.e. there were no refusals or spoilt questionnaires). Thus, the findings of the study could be generalized to in-school youth aged 15-19 years in Ngong sub-district, albeit with a rather large (10%) margin of error.

3.11 ETHICAL CONSIDERATIONS

Ethical clearance was obtained from the Senate Research Committee of the University of the Western Cape as well as from the Quality Assurance Department, Kenya Ministry of Education. Permission was obtained from the school principals of the participating schools.

Learners and schools participated voluntarily with neither learner nor school names being indicated in the questionnaire. Consent was sought from both parents (Appendix 3) and learners (Appendix 5). In order to obtain consent from their parents, a consent form explaining the purpose of the study and what the learners were expected to do was given one week in advance (Appendix 2 and Appendix 4). The data collection was done after written consent was received from parents and learners. All questionnaires were anonymous, private, and confidential, and were coded. After completion, the questionnaires were returned in a sealed box for anonymous collection. Information collected was stored in a computer database that was password protected and accessible only to the researcher.



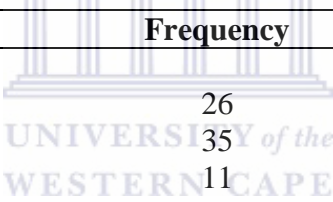
CHAPTER FOUR

RESULTS

4.1 CHARACTERISTICS OF RESPONDENTS

A response rate of 100 % was realized; from 44 male and 52 female learners. Their ages ranged from 15 to 19 years, with a median age of 16 years. Just under half of the respondents received their first sex education by age 14 years; while more than one third received their first sex education by age 10 years (Table 1).

Table 1. Socio-demographic characteristics



	Frequency	Percentage
Age (in years)		
15	26	28
16	35	37
17	11	12
18	14	13
19	10	10
Gender		
Male	44	45.8
Female	52	54.1
Age at first sex education		
≤ 10 Years	38	39.5
11-14 Years	43	44.7
15+ Years	15	15.6

4.2 SEXUAL BEHAVIOUR

Table 2 presents sexual experience by age and gender. Out of 77 learners who responded to the question on sexual experience, 31 (40.3 %) reported being sexually experienced. More males (21/31) than females (10/31) reported being sexually experienced ($p=0.014$). Significantly more respondents above 16 years had sexual experience ($p=0.037$) than those 16 years and below.

Table 2. Sexual experience by gender and age

	Sexually experienced	Abstained	Total
Gender			
Male	21	18	39
Female	10	28	38
$\chi^2 = 6.065$ $p = 0.014^*$			
Age			
≤16 years	14	34	48
>16 years	17	12	29
$\chi^2 = 4.367$ $p = 0.037^*$			

The most common reasons for having sexual debut were the desire to experiment (9/31), and peer pressure (9/31). Other reasons for having sex included responding to a request from girl/boyfriend to show love (6/31), and during marriage (4/31). Two respondents indicated that they were forced to have sex; none indicated that a need for money was the reason for having sex (Figure 1). For most of the respondents, sexual debut occurred at home (15/31). Others reported having their first sexual experience in the bushes (9/31), in a rented house or hotel (4/31), a building under construction (2/31), and a car (1/31) (Figure 2). Most respondents indicated that their last sexual encounter was with a boy/girlfriend (15/31), during marriage (7/31). However, others responded that they had sex with an unknown partner (6/31) and an unmarried regular partner (3/31) (Figure 3).

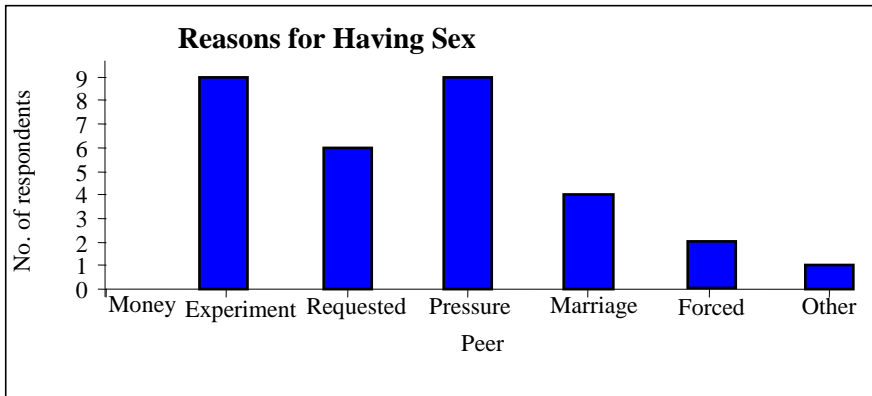


Figure 1 Reasons for having sex

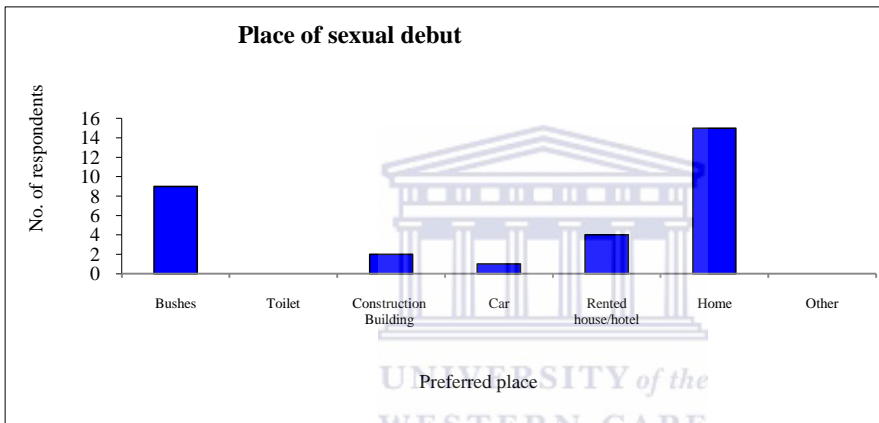


Figure 2 Place of sexual debut

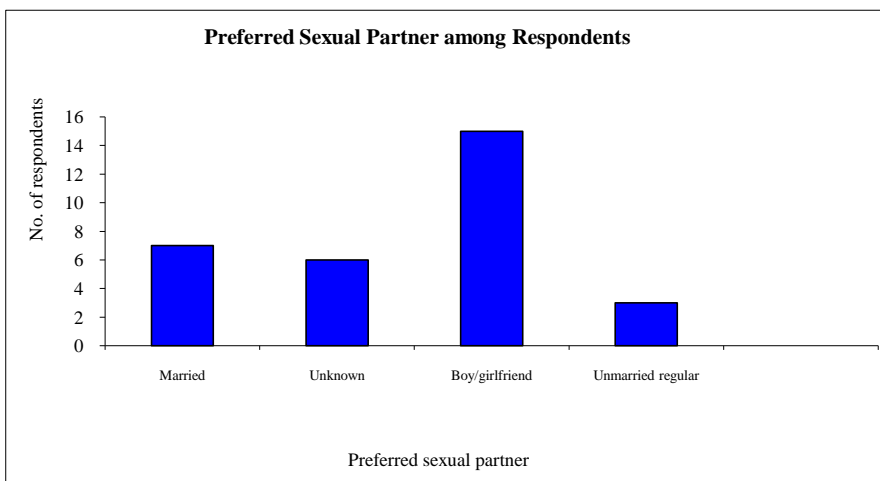


Figure 3 Preferred sexual partners

4.3 AWARENESS OF HIV STATUS

Table 3 below presents awareness of HIV status by gender and age. Out of 96 learners who responded to the question on awareness of HIV status, almost a third of both male (27/94) and female (27/94) learners were aware of their HIV status. There was no significant difference between male and female respondents ($p=0.458$) or across age ($p=0.389$) as shown in Table 3 below.

Table 3. Awareness of HIV status

	Aware	Not Aware	Total
Gender			
Male	27	17	44
Female	27	23	50
$\chi^2=0.550$ $p=0.458^*$			
Age			
≤16 years	33	26	59
>16 years	21	14	35
$\chi^2 = 7.397$ $p=0.389^*$			

4.4 KNOWLEDGE on HIV AND AIDS

4.4.1 Knowledge on HIV transmission

Almost half of the respondents were not knowledgeable about transmission of HIV/AIDS with only 56% having adequate knowledge i.e. answering 80% and more of the questions correctly as shown in Table 4 below. The findings demonstrated that 65% did not know that one can get HIV through unprotected sex, while 57% did not know that one cannot get HIV from a mosquito bite. In addition, 77% of respondents who had sexual experience scored highly (above 80%) as shown in Table 5 below.

Table 4. Knowledge on HIV transmission

	TOTAL	Male	Female
	n (%)	n (%)	n (%)
Sexual intercourse does not refer only to vaginal intercourse.	74 (78)	37 (84)	37 (71)
One can get infected with HIV by having sex with an infected person.	85 (89)	38 (87)	47 (91)
Sex with different people increases the incidence of getting AIDS.	84 (88)	39 (89)	45 (87)
Some STDs cause sores that make it easier to get HIV.	80 (83)	37 (83)	43 (82)
One can get HIV through unprotected sex.	61 (65)	30(68)	31 (59)
Sharing needles may cause someone to get HIV.	94 (98)	43 (97)	51 (98)
A mosquito bite cannot transmit HIV.	54 (57)	25 (56)	29 (55)
One cannot get HIV from sharing a meal with someone with HIV or AIDS.	43 (90)	39 (88)	47 (91)
One can get HIV through blood transfusion.	45 (93)	41 (93)	48 (93)
One cannot get AIDS through taboos, curse or witchcraft.	44 (93)	41 (94)	47 (91)
One cannot get HIV by donating blood.	45 (93)	40 (90)	49 (95)

Total	22 (50)	22 (50)	28 (54)
80 % and above	58 (59)	26 (59)	32(62)

Table 5. Knowledge of HIV Transmission Stratified by Sexual Activity

	Never Had Sex	Sexually experienced	Total
<80 % Knowledge on HIV Transmission	21	18	39
>80% Knowledge on HIV Transmission	44	13	57
$\chi^2 = 4.91$ $p = 0.324^*$			

4.4.2 Knowledge on HIV prevention

Just over half of the respondents (58%) showed having adequate knowledge on HIV prevention, i.e. answering 80% and more of the questions correctly as shown in Table 6 below. Additionally, at least more than half of the respondents (58%) knew that HIV could be prevented by using condoms; with (60%) male and (68%) females answering correctly, there was no significant difference across gender ($p = 0.45$). Only 75 % of those with sexual experience knew that sex with a virgin does not cure HIV as shown in Table 7 below.

Table 6. Knowledge on HIV prevention

	TOTAL n (%)	Male n (%)	Female n (%)
Birth control pills do not prevent STDs	77 (89)	32 (80)	45 (96)

There is no vaccine for HIV and AIDS.	77(82)	36 (80)	41 (84)
Using condoms prevent HIV transmission	58 (64)	26 (60)	32(68)
Abstinence protects against HIV and STDs	86 (91)	38 (83)	48 (98)
Sex with a virgin does not cure HIV.	92 (94)	44 (98)	46 (90)
TOTAL	52 (50)	50 (94)	52 (96)
80 % and above	56 (59)	62 (90)	56 (86)

Table 7. Knowledge on HIV prevention by Sexual Activity

	Never Had Sex	Sexually experienced	Total
<80 % Knowledge on HIV Prevention	31	9	40
>80% Knowledge on HIV Prevention	34	22	56
$\chi^2 = 3.52$ p = 0.541 *			

4.5 RISKY SEXUAL BEHAVIOUR

4.5.1 Number of sexual partners by age and gender among sexually experienced

Table 8 presents the number of sexual partners by age and gender among sexually experienced learners. More male respondents (9/10) compared to female respondents (1/10) reported having

more than one sexual partner in the past three months. However, there was no significant difference across gender ($p=0.549$) or across age ($p=0.540$), shown using Fischer exact (Table 8).

Table 8. Number of sexual partners according to age and gender

	One sexual partner in the last 3 months	More than one sexual partner in the last 3 months	Total
Gender			
Male	5	9	14
Female	4	1	5
FET=3.027 p=0.549*			
Age			
≤16 years	5	5	11
>16 years	4	5	9
FET=11.44 p=0.540*			

4.5.2 Use of alcohol by age and gender among sexually experienced

Most respondents who used alcohol during last sex were above 16 years (67%), compared to those less than 16 years (33%) as shown in Table 9 below. Moreover, more male (67%) than female (33%) respondents used alcohol during last sex. However, there was no significant difference across gender ($p=0.627$) or across age ($p=0.484$), shown using Fisher exact (Table 9).

Table 9. Use of alcohol or drugs during last sex

	Used alcohol or drugs during/before last sex	Did not use alcohol or drugs during/before last sex	Total
Gender			
Male	4	18	22
Female	2	8	10
FET=4.03 p=0.627*			
Age			
≤16 years	2	13	15
>16 years	4	10	14
FET=2.75 p=0.484*			

4.5.3 Use of protection during last sex by age and gender among sexually experienced

Most respondents who used protection during last sex, were male (57%), compared to female (20%). However, no statistically significant difference was found across genders ($p=0.524$) or across age ($p=0.613$) regarding use of protection as shown using Fisher exact in Table 10.

Table 10. Use of protection during last sex

	Used protection during last sex	Did not use protection during last sex	Total
Respondents Sex			
Male	12	9	21
Female	2	8	10
FET=0.29 p=0.524*			
Age			
≤16 years	7	6	13
>16 years	6	10	16
FET=0.12 p=0.613*			

4.6 MISCONCEPTIONS ABOUT HIV AND AIDS

Questions were focused on common misconceptions about HIV/AIDS. Less than half (38%) of the respondents knew the difference between HIV and AIDS. However, when asked if one can be infected by HIV and not even know it, most respondents (83%) answered correctly. Most respondents knew that alcohol abuse can lead to HIV infection with both male (93%) and females (96%) giving a correct response.

Table 11. Misconceptions about HIV and AIDS

	TOTAL n (%)	Male N (%)	Female n (%)	P-value
Not everyone with HIV has AIDS	38 (43)	22 (51)	16 (35)	0.33
Alcohol abuse can lead to HIV infection.	92 (95)	43 (93)	49 (96)	0.20
One can be infected with HIV and not even know it.	77 (83)	39 (86)	38 (75)	0.77

4.7 ATTITUDES TOWARDS HIV and AIDS

4.7.1 Attitudes on Sex and HIV

Most learners from both genders had similar responses to attitudes towards HIV/AIDS with less than half male (39 %) and female (40 %) respondents supporting the attitude of using condoms with a well known partner, as shown in Table 12. There was no significant difference between sexually experienced and those who have not yet had sex as shown in Table 13 below regarding attitudes towards HIV and AIDS.

For example, there was no significant difference ($p=0.44$) between respondents to the question on knowing the sexual history of a partner before having sex as (85 %) of the respondents who were not sexually experienced compared to (90 %) of sexually experienced got this question correct. Additionally, at least more than half of the respondents (80 %) knew that even if a person has sex with only one person, he or she can get HIV and AIDS; with (84 %) not sexually experienced and (94 %) of those who are sexually experienced answering correctly.

Table 12. Attitudes towards Risk to HIV

	TOTAL n (%)	Male n (%)	Female n (%)	P-value
It is important to know the sexual history of one's partners before having sex.	80 (85)	36 (80)	44 (90)	0.44
Even if a person has sex with only one other person, he or she can get HIV.	79 (88)	37 (86)	42 (89)	0.26
Having sex with many people does not reduce the HIV virus amount.	95 (99)	45 (98)	50 (100)	0.34
Even when sexual partners know one another well, they need to use condoms.	38 (40)	18 (39)	20 (40)	0.27



Table 13 Risk to HIV stratified by Sexual Activity

	Total	Never Had Sex	Sexually Experienced	P-value
It is important to know the sexual history of one's partners before having sex.	83 (85)	55 (85)	28 (90)	0.44
Even if a person has sex with only one other person, he or she can get HIV.	77 (80)	55 (84)	29 (94)	0.34
Having sex with many people does not reduce the HIV virus amount.	87 (91)	60 (92)	27 (87)	0.34
Even when sexual partners know one	87 (91)	62 (95)	25 (81)	0.27

another well, they need to use condoms.				
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4.7.2 Respondents opinions towards HIV/AIDS

Most respondents showed apt attitudes towards HIV/AIDS. Attitudes towards HIV/AIDS showed there was no significant difference between genders regarding attitude towards HIV transmission as shown in Table 14 below. However, when asked if one cannot tell if a person has HIV, 91% male compared to 86 % female answered correctly. Most respondents knew that teenagers can get HIV and AIDS (99%) with both male (98%) and females (100%) giving a correct response.



Table 14 Attitudes towards HIV transmission

	TOTAL n (%)	Male n (%)	Female n (%)	p-value
Injecting hard drugs is connected to HIV and AIDS.	78 (85)	37 (82)	41 (87)	0.45
AIDS unlike the common cold is a serious disease.	91 (95)	44 (96)	47 (94)	0.22
Teenagers can get HIV and AIDS.	96 (99)	46 (98)	50 (100)	0.42
Anyone can get HIV and AIDS.	88 (92)	42 (89)	46 (94)	0.56
One cannot tell if a person has HIV by looking at him or her.	85 (86)	43 (91)	42 (86)	0.67
Youth can get HIV from other youth	91 (97)	44 (96)	47 (98)	0.41

4.8 SUMMARY

The study aimed to assess the knowledge and attitudes to HIV/AIDS and sexual risk behaviour among 15-19-year-old learners in Kenya. The general attitude of the sample to HIV/AIDS indicates positive attitudes towards HIV/AIDS with 80% of the respondents answering correctly. Knowledge level was found to be below 60%, indicating a poorly informed sample on knowledge about HIV transmission and prevention. In addition, risky sexual behaviours were reported by sexually experienced respondents where condom use in last sexual intercourse was (57%) among males and (20 %) among females. Attitudes towards HIV/AIDS were found to be correct.

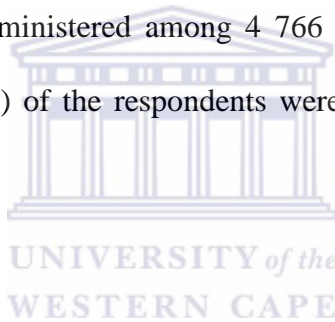


CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 SEXUAL BEHAVIOUR

Adolescence is a critical developmental period when young people begin to define and clarify their sexual values and often start to experiment with sexual behaviour. In this study, 31 out of 77 learners who responded to the question reported being sexually experienced, representing an important proportion (40%) and revealing a risk factor to HIV infection. The findings in this study are similar to those found in another survey conducted in 125 Kenyan schools using anonymous questionnaires and administered among 4 766 learners, between 12-19 years old, which found that about half (46%) of the respondents were sexually experienced by 19 years (Williams, 2010).



5.1.1 Gender and sexuality

In this study, significantly more males (21/31) than females (10/31) were found to be sexually experienced ($p=0.014$), revealing comparable results to another study (Kabiru & Orpinas, 2008) conducted in 32 public schools in Kenya among high school learners between 13-20 years, which showed that one in every two boys compared to one in every 10 girls was sexually exposed by 16 years. A quantitative survey conducted using anonymous questionnaires among 15-19-year-olds in Brazil, Haiti, Hungary, Kenya, Latvia, Malawi, Mozambique and Nicaragua revealed similar results to the above two studies and found that more boys (25%) reported having had sex compared to girls (19%) in the same countries (Ruland, 2003). Similar results were found using focus group discussions in South America among 15-19-year-olds, where more

young men (73%) than women (28%) in the study were sexually experienced by age 19 (Rivers & Aggleton, 2002),

5.1.2 Sexual debut

Age at sexual debut

In this study, the median age at first intercourse was found to be 16 years. These findings are similar to studies conducted in four African countries (Cameroon, Benin, Zambia and Kenya) among 15-20-year-olds through interviewing high school learners on their past and present sexual experiences, which also found the medium age at first intercourse to be 16 years (UNAIDS, 2004). Statistics from the Kaiser Foundation in the United States found the median age at first intercourse is slightly higher at 17 years (Kaiser Foundation, 2005). Kenya National AIDS Control Council (2009) discovered that sex among young people is occurring at earlier ages than previously and Ruland (2003), argues that this results in unmarried youth having the opportunity for a longer period of sexual activity and consequently an increased risk to HIV infection.

WHO (2000) highlighted the link between an early sexual debut and increased HIV infection risk and found that youth who begin sexual activity before 19 years appear more likely to have had sex with high-risk or multiple partners, and less likely to use condoms consistently, thus increasing exposure to HIV. Other studies show that a longer period of sexual activity have been found to consequently result in increased risk to HIV infection (Ruland, 2003). An example is the case of Uganda, where changes in age of sexual debut appeared to have played a role in the continuing HIV transmission decline (Hogle, 2002). Age at first sex has been used as a proxy

indicator of exposure to risk of HIV during adolescence (Burner et al, 2004), and declines of HIV prevalence have been linked to delayed sexual initiation among youth (Bessinger, 2003). In Tanzania, it was found among high school learners in four schools using focus group discussions, that young people who became sexually active before the age of 16 had a higher prevalence of HIV than those who delayed sex until age 20 or older (UNAIDS, 2008). In addition, the lower the age of first sex the higher the lifetime risk of HIV infection because early sexual debut is often associated with older lifetime partners, higher rates of coerced sex and lower rates of condom usage (Pettifor, 2009).

Reasons for sexual debut

This study found that the most common reasons for having sexual were the desire to experiment (9/31), peer pressure (9/31) and request from girl/boyfriend to show love (6/31). In addition, this study found the most common person respondents reported to have sex with was either a boy/girl friend (15/31), or someone they expected to marry (7/31). A qualitative study conducted in Nigeria among 14-19-year-olds with 30 focus group discussions, revealed peer pressure playing a major role in their sexual activity, where male peers encourage first sex of male peers through teasing and humiliation and females experiencing pressure from their boyfriends (Ankomoah, 2004).

Alford (2005) found that young people's sexual decisions are strongly influenced by friends, family and social norms. In fact, young people are strongly influenced by the attitudes and actions of others their age and much of their existing knowledge of sex and HIV is based on information they have received from friends (Avert, 2009).

Abstinence among adolescents is difficult because of peer pressure, and the social environment in the school and community impacts significantly on their sexual behaviour (Ruland, 2003; Poulin, 2004). These findings are supported by Demographic Health Surveys (Madise, 2007) which showed that most young people are sensitive about their peer's opinion on sexuality and initiation of sex. Peer education programmes have been found to be very important for HIV prevention, especially on influencing the knowledge and attitudes of young people (UNAIDS, 1999).

5.1.3 Risky Sexual Behaviour

Use of protection during last sex

Only 57% of the male respondents and 20% of the female respondents in the study reported to have used protection during last sex. In a study that used both questionnaire and focus group discussions in Kenya among 2 500 young people between 12-19 years old in school, at least 50% of the learners had engaged in unprotected sex during last sex (Kabiru, 2007). In comparison, statistics from a national survey conducted by the Kaiser Family Foundation found that only 83% male and 91% females between 15-19 years in the United States used protection during last sex (Kaiser Family Foundation, 2008). Bennell (2003) found that young people in Kenya are less likely to be protecting themselves from unwanted effects of sexual activity such as HIV infection, and appear to be at greater risk.

Analysis of data on sexual behaviour collected by Ministry of Health in Kenya, during a multi-level cross-sectional assessment of lifetime sexual histories from a sample of 7 913 men between 15-24 years, showed that although knowledge of condoms is high, less than one half of young

men between 15-24 years in the study used condoms consistently during the last year (KDHS, 2001). Another study in Nairobi, Kenya, among 3 612 school going adolescents between 12-25 years in 32 randomly selected schools, showed that only one fifth of the sexually experienced adolescent boys used condoms consistently (Oronje, 2008). In Angola, similar findings in a study showed that among 1 995 sexually experienced youth between 15-24 years, only 20% used condoms consistently (Prata, 2005).

Use of alcohol during last sex

This study found that 6/31 (19%) of the sexually-exposed respondents used alcohol before last sex. This is supported by Kabiru & Orpinas (2010), who found that Kenyan learners who were sexually experienced also engaged in risky behaviours, like alcohol and drug abuse, with greater frequency than those who were not sexually experienced. Alcohol abuse is considered to be on the rise in Kenya and as many as (58%) of in-school youth use alcohol (Schuller, 2006). HIV and alcohol abuse are inextricably linked as evidence indicates that alcohol independently influences decisions around sex and undermines skills for condom negotiation and correct use (UNAIDS, 2007). The Kaiser Family Foundation found that in the USA young people (particularly boys) say that use of alcohol often leads to sex without condoms (Davis, 2008).

Number of sexual partners

The results of this study showed that more male respondents (9/10) compared to female respondents (1/10) reported having more than one sexual partner in the past three months. A cross-sectional descriptive survey study in Kenya with in-school adolescents in seven schools supports these findings, that out of the 1 202 learners between 12-19 years, boys were seven

times more likely than girls to have multiple partners (Adaji, 2010). Research conducted using anonymous questionnaires in Nigeria among young people between 13-19 years, revealed that many young people in Nigeria participated in risky sexual activities; including having multiple sexual partners with 40% of sexually experienced girls and 65% of sexually experienced boys reported having more than one sexual partner showing comparable results to this study (Ademola, 2006).

5.2 KNOWLEDGE ON HIV/AIDS

The findings from this study found that only 56% of respondents have adequate knowledge on HIV transmission, i.e. answering 80% and more of the questions correct. Knowledge gaps were demonstrated with 65% not knowing that HIV can be transmitted through unprotected sex, and 57% not knowing that HIV cannot be transmitted through a mosquito bite. Among sexually experience, only 77% of sexually experienced scored above 80%. The knowledge gaps found in HIV prevention were that only 64% of the respondents knew that using condoms prevents HIV transmission and 65% knew that HIV can be transmitted through unprotected sex, showing inadequate knowledge. In addition, only 75 % of those with sexual experience knew that sex with a virgin does not cure HIV. Findings from this study thus show that although many learners had heard of HIV, they do not possess adequate knowledge on HIV prevention and transmission.

Even though a school level national HIV/AIDS curriculum was launched in Kenya in 2000, one possible reason why there may still be knowledge gaps among learners, is that although teachers are expected to infuse HIV/AIDS messages as they teach regular subjects, HIV/AIDS is not

getting the attention it deserves on the timetable, since it is not an examinable subject (Ndambuki, 2006).

Similar findings were found in four African countries (Burkina Faso, Ghana, Malawi and Uganda) where young people lacked adequate knowledge and skills on how to protect themselves from HIV (Gutmacher Institute, 2006). Kangara, (2007) argues that although youth in Kenya are knowledgeable about HIV, their gaps in knowledge could lead to them getting infected with HIV (Deng, 2004).

5.3 ATTITUDES TOWARDS HIV/AIDS

This study showed that although most students had good knowledge , they still had poor attitudes towards the risk to HIV with less than half (40%) of both genders supporting that one should use a condom even with a partner you know well, however 85% felt that it was important to know a partner's sexual history before having sex. In addition, 88% knew that even if a person has sex with only one other person, he or she can get HIV.

Most respondents in this study showed apt attitudes towards HIV/AIDS with no significant difference between genders regarding attitude towards HIV transmission. Literature from a study conducted in China on a cross sectional questionnaire of 259 students (15-19 years) indicated positive attitudes towards HIV and AIDS (Sarafian, 2002) and that gender differences were not associated with the number of correctly answered HIV knowledge and attitudes questions.

5.4 LIMITATIONS OF THE STUDY

The sample size population was small as it was limited to learners in selected secondary schools in Ngong-Sub-district, hence the study cannot be extrapolated to learners found in other settings. Other limitations include the study design, as the study did not have a qualitative component and therefore could not provide detailed information on the knowledge gaps found among respondents. The qualitative method was not used due to time and resource constraints. There is also a possibility of recall bias on last sexual encounter due to the time that has elapsed since the event occurred and given the sensitivity of the topic.

5.5 CONCLUSION

The study revealed that the level of knowledge on HIV/ AIDS was inadequate and knowledge gaps were found specifically on the role of condoms in prevention of HIV transmission, and the transmission of HIV through a mosquito bite. However, this can be addressed through school interventions, the media and peer outreach education programmes, according to the Guttmacher Institute (2006), but these interventions have to be sensitive to culture, and should empower young people by providing them with the information, skills and services they need to make responsible decisions about their sexual and reproductive lives (Family Care International, 2010).

The study found that respondents were engaging in behaviours that put them at risk for sexually transmitted diseases, including HIV. Risky behavioural outcomes found in this study include early initiation of sex; having more than one sexual partner; use of protection; and use of alcohol during sex. There is evidence that HIV/AIDS education interventions for youth have been found to reduce risky sexual behaviour (Ndambuki, 2006). It is argued that educational interventions

can address delaying debut into sexual activity and provide skills that build and enhance self-esteem, imparting skills for self protection to decrease vulnerability to early sexual debut and HIV infection (Williams, 2010).

5.6 RECOMMENDATIONS

- Sex education should be provided in all high schools to enable secondary school learners to learn about sexuality and the risks associated with it.
- Comprehensive sex education in schools should be holistic to teach young people about sex and sexual health. It should be comprised of age and culturally appropriate, medically accurate information about reducing the risk of sexually transmitted diseases and HIV/AIDS.
- HIV prevention messages using entertainment should be conducted at school assemblies and other meetings through emphasizing abstinence as one of the key actions for the prevention of HIV (Africa Youth Alliance, 2005).
- Youth-friendly forums should be established where young people can speak openly and freely about sexual issues and where they are taught sexual refusal skills and learn how alcohol use impairs their judgment.
- It is hoped that this study will help in planning and improving policies for addressing issues related to HIV and AIDS among youth in Kenya.

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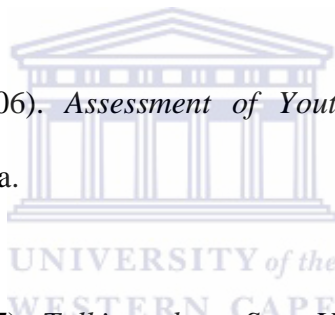
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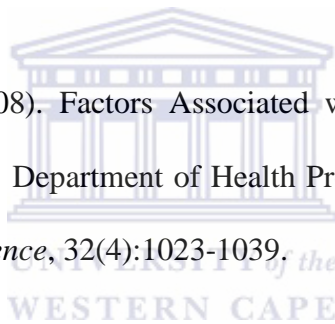
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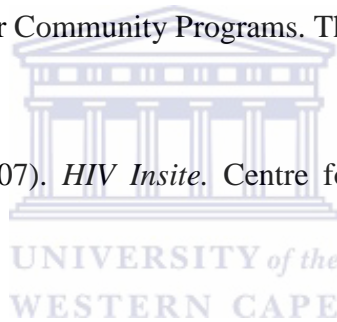
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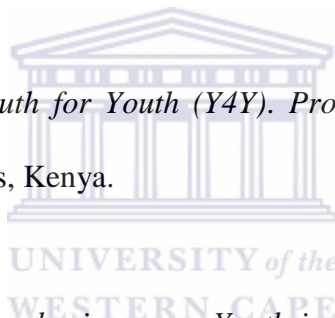
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APPENDICES

Appendix 1: Questionnaire

My name is Caroline Njeri Njogu. I am a student at University of Western Cape, South Africa. I am conducting a research on 15-19 year olds enrolled in public secondary schools in Ngong sub-district regarding HIV/AIDS and sexuality issues. This research requires selected young people to fill in a questionnaire truthfully. You and your school have been selected by a random process to participate in this research study.

Introduction to the survey

This assessment asks some personal questions, but your answers will not be shown to anyone and you do not have to answer any questions that you do not want to. Your answers are completely confidential. Your name will not be written on this questionnaire, and will never be used in connection with any of the information you tell me. Your honest answers to these questions will help us better understand young people and their lives. We would greatly appreciate your participation. Should you have any questions please feel free to ask the person who distributed the questionnaire to you. Remember your answers will not be shown to anyone, your name is not recorded and you do not have to answer any questions that you do not want to. If you feel uncomfortable during the completion of any questions, you may omit the question that makes you uncomfortable. Also you may also withdraw from the study completely without providing any reason for your withdrawal.

Kindly fill the questionnaire on your own and without taking a break. After your completion, please drop the questionnaire in the sealed box provided. Please **do not** write your names anywhere on this questionnaire as I do not need to know who you are. When you complete it please put it in the secured box in the front.

1. SOCIAL AND DEMOGRAPHIC QUESTIONS

Fill in the blanks with the correct answers.	
1. How old were you on your last birthday?	I was _____ years on my last birthday.
2. Are you male or female?	_____
3. Are you married?	_____
4. Date of filling the questionnaire	_____
5. Age at which you first knew about sex education?	When I was _____ years.

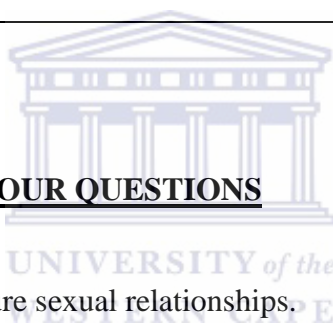
2. KNOWLEDGE ASSESSMENT

Answer either true or false or I don't know in the box provided.	
1. AIDS is caused by a virus.	
2. Everyone with HIV, the AIDS virus, has AIDS.	
3. I can tell if a person has HIV by looking at him or her.	
4. AIDS is not at all serious; it is like having the common cold.	
5. Teenagers cannot get HIV/AIDS.	

6. AIDS is caused by the same virus that causes HERPES.	
7. A person can be infected with HIV and not even know it.	
8. Symptoms of AIDS will usually appear within 12-24 hours after being infected.	
9. People with HIV/AIDS have done bad things and deserve to be sick.	
10. AIDS is a disease which destroys the body's natural immunity against infection.	
11. Receiving a transfusion, with blood infected by the AIDS virus, is one way to get the disease.	
12. If a person has sex with only one other person, he or she cannot get HIV	
13. One can be cured of HIV/AIDS if they have sex with a virgin.	
14. A traditional healer can cure someone of HIV/AIDS.	
15. A blood test can tell if you have AIDS.	
16. A person can be transmitted with HIV by sharing a meal with someone who is infected with HIV.	
17. A person can get HIV from a mosquito or other insect bite	
18. It is possible for a person to get HIV through a taboo, a curse or by other witchcraft.	
19. One can spread HIV around through unprotected sexual intercourse with different people.	
20. By having sex with many people, one can reduce the amount of virus and enable that person to live longer.	
21. A healthy looking person can also be infected with HIV	

<u>ATTITUDE ASSESSMENT</u>	
Answer either true or false or I don't know.	
1 Drinking alcohol can lead to behaviours that can cause the spread of HIV.	
2. You can get HIV/AIDS by donating blood.	
3. The only certain protection against HIV and other STDs is to practice abstinence and/or avoid the use of drugs.	
4. A person can get infected with HIV by sharing needles.	
5. Injecting hard drugs has no connection to HIV/AIDS.	
6. You can be re-infected with HIV even if you are already HIV positive.	
7. Having sexual intercourse with someone who has AIDS is one way of getting the disease.	
8. Some STDs cause sores that make it easier to get HIV.	
9. There is a vaccine to prevent HIV and AIDS.	
10. Birth control pills prevent STDs	
11. When sexual partners know one another well, and trust each other, they don't need to use condoms.	
12. My sexual partner is HIV negative until proven otherwise.	
13. Using condoms during sex helps prevent transmission of HIV.	
14. Anti retroviral drugs (ARV) cures HIV/AIDS.	
15. Youth are safe to have sex with other youth because many young people are not vulnerable to HIV/AIDS.	
16. It is not important to know my sexual partners sexual history before having sex with	

them as long as I trust them.	
17. You increase the chance of getting AIDS by having sexual intercourse with many different people.	
18. Sexual intercourse refers only to vaginal intercourse.	
19. There is no cure for AIDS	
20. It is possible to protect oneself from HIV infection by having sex exclusively with one healthy and faithful partner.	
21. One has a higher chance of getting HIV/AIDS if they are already infected with a sexually transmitted disease.	



3. PAST SEXUAL BEHAVIOUR QUESTIONS

This section talks about past or future sexual relationships.

Circle the write answer or fill in the gaps.	
1. Have you ever had (vaginal, oral or any other type of) sex? (if no jump to 7)	a) Yes b) No
2. How old were you when you had sex for the first time? _____yrs old.	
3. During the past three months, with how many persons did you have sexual intercourse with? _____ Persons.	
4. Did you use protection /condom during your last intercourse? c) Don't know	A) Yes b) No
5. Did you drink alcohol or use drugs before you had sex the last time?	a) Yes b) No

c) I don't know.		
6. The last time you had sex; did you or your partner use a condom?	a) Yes	b) No
c) I don't know		
7. Do you know your HIV status?	a) Yes	b) No
8. Do you think your partner is faithful to you?	a) Yes	b) No
c) I don't know.		
9. Have you had casual sex with someone you do not know very well in the last 12 months?		
a) Yes b) No c) I don't know.		
10. Have you ever spoken to your partner about HIV?	a) Yes	b) No
c) I don't know.		
11. With whom do you intend to or have had your last sex with?		
<input type="checkbox"/> Married partner		
<input type="checkbox"/> Unknown partner		
<input type="checkbox"/> Never had sex		
<input type="checkbox"/> Boyfriend / girlfriend		
<input type="checkbox"/> Unmarried regular partner.		
<input type="checkbox"/> Unmarried un regular partner		
12. What would be / was the main reason behind why you may in the future or have had your first sexual experience?		
<input type="checkbox"/> Desire to experiment.		
<input type="checkbox"/> Need for money.		
<input type="checkbox"/> Request from boy/girl friend to show love or to be loved.		
<input type="checkbox"/> Peer pressure.		



ث To prepare for marriage.

ث Forced.

ث Other, please specify _____

13. Where would be the most likely place you may have your first sexual encounter or where did you have your last sexual encounter?

ث Bushes.

ث Toilet.

ث Building under construction.

ث Car.

ث Rented house / hotel.

ث Home.

ث Other please specify _____

ث Never had sex.



14. Do you think you are at personal risk of contracting HIV/AIDS? a) Yes b) No

c) I don't know.

Appendix 2: Parents Participant Information Sheet



UNIVERSITY OF THE WESTERN CAPE

School of Public Health

Private Bag X17 • **BELLVILLE** • 7535 • South Africa

Tel: 021- 959 2809, Fax: 021- 959 2872

Study topic: *Assessment of sexual behaviour and knowledge about HIV among young people aged 15-19 year old in Ngong sub-district.*

Dear Parent,

Thank you for your willingness to hear about this research. Following is an explanation of the research project and an outline of your potential involvement.

The research is being conducted for a mini thesis among 5 randomly selected schools in Ngong sub-district. This is a requirement for the Masters in Public Health which I am completing at the University of Western Cape South Africa by December 2008. If there is anything you do not understand or are unclear about, please ask me using my contact details below or you may wish to contact my supervisor or co supervisor whose contacts are found at the end of this memo.

1. TITLE OF RESEARCH

The title of the study is *'An assessment of knowledge and attitudes on HIV and sexual behaviour among 15-19 year olds in Ngong sub-district.*

2. PURPOSE OF THE STUDY

The aim of this research is to investigate sexual risk behaviour, knowledge and HIV/AIDS attitudes among teenagers aged 15-19 years in Ngong sub-district. The objectives of this study will assess HIV/AIDS knowledge, prevention and perception of HIV risk and describe sexual behaviour of 15-19 year olds attending public secondary schools in Ngong sub-district.

3. DESCRIPTION OF THE STUDY AND YOUR INVOLVEMENT

Your child will be asked to fill a questionnaire with sections on social and demographic information, knowledge assessment and attitude and behaviour questions administered by a researcher and research assistant over one hour in the school compound during off class hours. The questionnaire will contain 56 questions administering to 25-30 Students at one sitting. Questions will be read in English, and difficult terms explained in Swahili.

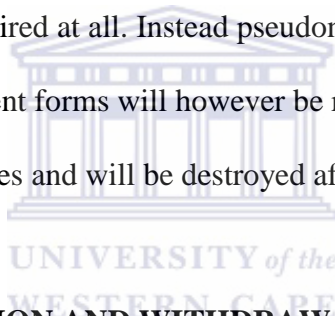
Participation in the study will not result to any adverse consequences to you or your child. You will be required to sign a consent form to assent your willingness to allow your child to participate in the study. Your child will also be required to sign a consent form before taking part in the study.

4. BENEFITS AND COSTS

You will not get any direct benefit from this study. However the information we learn from participants in this study may help in guiding the policy making bodies to establish more appropriate programs concerning school going young people and HIV issues. There are no costs for participating in this study other than time spent by you and your child reading and filling in the consent form and your child's time spent filling in the questionnaire for approximately one hour during off class hours.

5. CONFIDENTIALITY

Names of Students will not be required at all. Instead pseudonyms will be used to ensure anonymity. Names on signed consent forms will however be required, but the signed consent form will be locked away at all times and will be destroyed after the research is complete.



6. VOLUNTARY PARTICIPATION AND WITHDRAWAL

Participation to take part in this research study is entirely voluntary and none is compelled to participate. If you choose as a parent for your child not to participate, you may stop your child at any time. Your child may also choose not to answer particular questions that are asked in the study.

7. INFORMED CONSENT

Your signed consent to participate in this research study is required before I proceed to ask your child to fill the questionnaire. I have included the consent form with this information sheet so that you will be able to review the consent form and then decide whether you would like your

child to participate in this study or not. If you agree to allow your child to continue to participate in this study, please sign the consent from.

8. QUESTIONS

If you should have any questions my contact details and those of my supervisors using the contact details shown below.

My name: Caroline Njogu.

Student Number: 2658388

Cell phone: 00 254 722 614 929.

Email: cnjogu2002@yahoo.com.

You may also wish to contact my co supervisor, Dr Brian Van Wyk who I am accountable to while my supervisor is on maternity leave. His contact details are:

Dr Brian Van Wyk. C/o School of Public Health

University of Western Cape Private Bag X17, Bellville, 7535 South Africa

Email: bvanwyk@uwc.ac.za.

My supervisor contacts are as follows:

Verona Mathews

Cell: 083 258 2802.

Email: vmathews@uwc.ac.za.

Or c/o School of Public Health. University of Western Cape.

Private Bag X 17, Bellville, 7535 South Africa. Phone (+ 27) 21 959 2809.

Fax (+ 27 21) 9592872. The University website is www.uwc.ac.za/comhealth.soph.

Appendix 3: Parents Informed Consent Form



UNIVERSITY OF THE WESTERN CAPE

School of Public Health

Private Bag X17 • **BELLVILLE** • 7535 • South Africa

Tel: 021- 959 2809, Fax: 021- 959 2872.

Dear Parent,

I am Caroline Njeri Njogu a student at the University of Western Cape. I am doing a research to assess knowledge and attitudes on HIV and sexual behaviour among school going 15-19 year olds in Ngong sub-district for one month using a randomized sample. I would like to inform that through random selection both your child and his/her school were selected to participate in the study. The study has no direct benefits to participants, risks, dangers or health complications. As mentioned in the Participant Information Sheet your child's participation in this research is entirely voluntary meaning that they can refuse to participate in this research. I would like to assure that refusal to participate or deciding to withdraw from the study at any time will not result in penalty or any loss of benefits.

You have been given one week to decide whether you will allow your child to participate, and you are free to stop your child from participating at any time. Your child may also choose not to answer particular questions that are asked in the study. The information collected in this study

will be kept strictly confidential and anonymous. If you permit your child to participate in this study, please sign below.

I have read the information about this study on the participant Information Sheet. I have had the opportunity to inquire and ask questions about it and any questions have been answered to my satisfaction.

Parent's name: _____ Parents signature: _____

Date: _____



Appendix 4: Student Information Sheet



UNIVERSITY OF THE WESTERN CAPE

School of Public Health

Private Bag X17 • **BELLVILLE** • 7535 • South Africa

Tel: 021- 959 2809, Fax: 021- 959 2872



Title of Research study: Assessment of sexual behaviour and knowledge about HIV among young people aged 15-19 years old in Ngong sub-district.

Dear Student,

Thank you for your willingness to hear about this research. What follows' is an explanation of the research project and an outline of your potential involvement. The research is being conducted for a mini thesis. This is a requirement for the Masters in Public Health which I am completing at the University of Western Cape in South Africa by December 2008. If there is anything you do not understand or are unclear about, please feel free to ask me. My contact details and those of my supervisor and co supervisor are recorded at the end of this memo.

1. TITLE OF RESEARCH

The title of the research is 'Assessment of knowledge and attitudes on HIV and sexual behaviour among 15-19 year olds in Ngong sub-district.

2. PURPOSE OF THE STUDY

The aim of this research is to investigate sexual risk behaviour, knowledge and attitudes about HIV/AIDS among teenagers aged 15-19 years in Ngong sub-district. The objectives of this study will assess HIV/AIDS knowledge, prevention and perception of HIV risk and describe sexual behaviour of 15-19 year olds attending public secondary schools in Ngong sub-district.

3. DESCRIPTION OF THE STUDY AND YOUR INVOLVEMENT

You will be asked to fill a questionnaire with sections on social and demographic information, knowledge assessment and attitude and behaviour questions administered by a researcher and research assistant as a group in the school setting during off class hours. Participation in the study will not result to any adverse consequences to you.

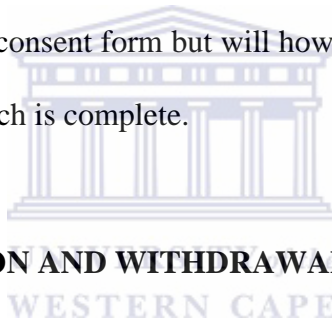
The study will be conducted by a researcher and research assistant by administering a structured questionnaire to 25-30 Students in a group setting in the school compound during off class hours for one hour. The self administered questionnaire will consist of 56 close-ended questions. The questionnaire will contain sections for social and demographic information, knowledge assessment and attitude and behaviour questions over a period of approximately one hour. Questions will be read in English and difficult terms explained in Swahili.

4. BENEFITS AND COSTS

You will not get any direct benefit from this study. However the information we learn from participants in this study may help in guiding the policy making bodies to establish more appropriate programs concerning school going young people and HIV issues. There are no costs for participating in this study other than time spent by you while reading and signing the consent form and filling the questionnaire for approximately one hour during off class hours.

5. CONFIDENTIALITY

Your names will not be required at all. Instead pseudonyms will be used to ensure anonymity. Your name will be required on your consent form but will however be locked away at all times and will be destroyed after the research is complete.



6. VOLUNTARY PARTICIPATION AND WITHDRAWAL

Participation to take part in this research study is entirely voluntary and none is compelled to participate. If you choose as a student not to participate, you may stop at any time. You may also choose not to answer particular questions that are asked in the study. If there is anything you would prefer not to discuss you are allowed to feel free to say so.

7. INFORMED CONSENT

Your signed consent to participate in this research study is required before I proceed to ask you to fill the questionnaire. I have included the consent form with this information sheet so that you will be able to review the consent form and then decide whether you would like to

participate in this study or not. If you agree to accept to continue to participate in this study, please sign the consent form and then proceed to answer the questions that follow.

8. QUESTIONS

If you should you have any questions my contact details and those of my supervisors are below.

My name: Caroline Njeri Njogu.

Student Number: 2658388.

Cell phone: 00 254 722 614 929.

Email: cnjogu2002@yahoo.com.

You may also wish to contact my co supervisor, Dr Brian Van Wyk who I am accountable to as my supervisor is on maternity leave. His contact is

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Fax (+ 27 21) 9592872. The university website is: www.uwc.ac.za/comhealth.soph.

Appendix 5: Student Informed Consent Form



UNIVERSITY OF THE WESTERN CAPE

School of Public Health

Private Bag X17 • **BELLVILLE** • 7535 • South Africa

Tel: 021- 959 2809, Fax: 021- 959 2872



Dear Student,

I am Caroline Njeri Njogu a student at the University of Western Cape. I am doing a research to assess knowledge and attitudes on HIV and sexual behaviour among school going 15-19 year olds in Ngong sub-district in five schools using a randomized sample. I would like to inform that through random selection both you and your school were selected to participate in the study. The study has no direct benefits to you or your school, no risks, dangers or health complications are expected if you participate in this study. As mentioned in the Participant Information Sheet your participation in this research is entirely voluntary meaning that you can refuse to participate in this research. I would like to assure that refusal to participate or deciding to withdraw from the study at any time will not result in penalty or any loss of benefits.

Your parents have been asked to sign consent forms on your behalf, but you are also free to stop your participation in this study at any time without resulting in any loss of benefits or penalty. You may also choose not to answer particular questions that are asked in the study. The information collected in this study will be kept strictly confidential and anonymous. If you accept to participate in this study, please sign below. I have read the information about this study on the participant Information Sheet. I have had the opportunity to inquire and ask questions about it and any questions have been answered to my satisfaction.

Learner's name: _____ Student's signature: _____

Date: _____

