

**SEXUAL BEHAVIOUR CHANGE AND HIV INFECTION AMONG COLLEGE  
STUDENT: A CASE OF MOSORIOT PRIMARY TEACHERS' TRAINING  
COLLEGE  
NANDI NORTH DISTRICT**

**BY**

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## **DEDICATION**

This Thesis is dedicated to my beloved husband, Kipyego Mettoh Isaac.

## **ACKNOWLEDGEMENT**

The product of this Thesis was a corporate endeavour. Without the participation of people mentioned below, this Thesis would not have been a success. Therefore, I am indebted to give my appreciation to the following people.

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To God be the glory, honour, power and praise, now and forever, because with Him I can do all things through Christ who strengthens me.

## ABSTRACT

HIV/AIDS remains a major challenge in Kenya. The concerted efforts to reduce HIV prevalence has not translated into significant behaviour change as new infections occur everyday especially among young people KAIS (2007). AIDS is caused by human immune-deficiency virus, where 80% is transmitted through sex, while approximately 20% is through other factors (NASCOP, February 2007). If student-teachers were intensively involved in campaigns against HIV infection for the last two decades Kenya would be miles ahead in the prevention of infection and the care of the infected (KNUT, June-July 2008). This study therefore sought to find out sexual behaviour change and HIV infection among college students at Mosoriot Primary Teachers Training College.

The study was based on Rosenstock (1974), Modified Health Belief Model. The researcher used purposive sampling to select single college students from the rest of the student population. To select the sample size, stratified sampling technique was used to categorize the college students according to gender and year of study. Simple random sampling technique was used to select participants from each strata. The study adopted both survey and causal comparative research designs.

The main instruments of data collection were questionnaires and focus group discussions. The data collected was analyzed using descriptive statistics in form of frequencies and percentages.

The study found out that all the respondents were aware of the most common mode of transmission of HIV infection as sexual intercourse. The strategies that the college students have adopted to guard themselves against HIV infection were found out to be; keeping one sexual partner, use of condoms, abstaining from sex, choosing lovers carefully and none. It was also established that there was a significant relationship between; VCT visit and measures taken to guard against HIV infection; gender and VCT visit. The study also found out that there was no significant relationship in students' sexual intercourse based on their age and gender.

The recommendations of the current study will provide college students, stakeholders and policy makers with skills and knowledge with which to fight HIV infection.

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### **LIST OF ACRONYMS**

|         |                                                     |
|---------|-----------------------------------------------------|
| DFID-   | Department for International Development            |
| KAIS-   | Kenya AIDS Indicator Survey                         |
| KDHS-   | Kenya Demographic and Health Survey                 |
| KIE -   | Kenya Institute of Education                        |
| KNUT-   | Kenya National Union of Teachers                    |
| UNAIDS- | United Nations Agency for International Development |
| UNFPA-  | United Nations Population Fund                      |

|         |                                                              |
|---------|--------------------------------------------------------------|
| UK-     | United Kingdom                                               |
| NACC-   | National AIDS Control council                                |
| NASCOP- | National AIDS/STI Control Programme                          |
| PRB-    | Population Reference Bureau                                  |
| SPSS-   | Statistical Package for Social Sciences                      |
| STDs-   | Sexually Transmitted Diseases                                |
| STIs-   | Sexually Transmitted Infections                              |
| TSC-    | Teachers Service Commission                                  |
| UN-     | United Nations                                               |
| UNESCO- | United Nations Education, Science and Cultural Organization. |
| UNDP-   | United Nations Development Programme                         |
| VCT-    | Voluntary Counselling and Testing                            |
| WHO-    | World Health Organization.                                   |

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.0 Overview**

This introductory chapter contains the background of the study, statement of the problem, objectives of the study, research questions, research hypotheses, research variables, significance of the study, justification of the study, scope and limitations of the study, conceptual framework and operational definition of terms.

#### **1.1 Background of the Study**

In 1981, doctors in San Francisco, United States of America reported cases of Kaposi's sarcoma (KS) and *Pneumocystis carini* among homosexual males, conditions previously unreported in healthy adults. The *Pneumocystis carini* was recognized when there was an increase in requests for pentamidine to treat this rare pneumonia. Later, the doctors recognized that all these patients were immune-suppressed. In 1983/4, scientists discovered the cause of this Acquired Immune Deficiency Syndrome (AIDS) as a retrovirus (human immune-deficiency virus) (NASCOP, February 2007). Since 1981, the disease has grown into a worldwide pandemic, threatening to wipe out all the gains made in the last half of a century (reduction in infant mortality rates, poverty levels, and illiteracy levels; control of communicable diseases including tuberculosis, improved health care access, to mention but a few). The brunt of the HIV burden is borne by developing countries where 95% of HIV infected people live. HIV was first diagnosed in 1984 in Kenya and it is now estimated that 2.2 million people are infected with HIV and



about 200,000 of these develop AIDS annually. HIV is transmitted through exchange of body fluids like semen, vaginal fluids, blood, and breast milk as well as vertically from mother to child during birth where approximately 80% is transmitted through sex, while approximately less than 20% is through other factors (NASCOP, February 2007). Many people do not develop any symptoms when they first become infected with HIV. Some people however, have a flu-like illness within a month or two after exposure to the virus. More persistent or severe symptoms may not surface for a decade or more after HIV first enters the body in adults, or within two years in children born with HIV infection. This period of “asymptomatic” (without symptoms) infection is highly individual. During the asymptomatic period however, the virus is actively multiplying infecting and killing cells of the immune system and people are highly infectious (KDHS, 2003).

Initially, the body is able to contain the virus but eventually HIV gradually overwhelms the body defence mechanisms leading to development of AIDS and finally death. Preventive strategies that some people have adopted to stay free from AIDS causing virus include; abstaining from sex, being faithful to one uninfected sexual partner and consistent and proper use of quality condoms (KDHS, 2003). The Acquired Immune-deficiency Syndrome (AIDS) is the number one cause of death in Africa and the fourth leading in the world (NASCOP, February 2007). In Kenya, National estimates from (KDHS, 2003) indicates that prevalence rose from 2.5% in 1990 to 6.7% in 2003 and another most recent report from (KAIS, 2007) indicates that the current National adult prevalence of people between 15-65 years stand at 7.4%; women, 8.7%, Men, 5.6%. Nyanza Province stands at 15.3%, Nairobi Province, 8.9%, Coast, 7.9%, Rift Valley,

7.0%, Western, 5.1%, Eastern, 4.7%, Central, 3.8% and North Eastern, 1.0%. By end of 2002, approximately 36.1 Million people had been infected in the world and 70% of HIV infections are in Sub-Sahara Africa (UNAIDS, July 2002). Global update number of people living with HIV in 2006 totalled 39.5 million. People newly infected with HIV in 2006 totalled 4.3 million globally and approximately 1.8 to 2.7 million is in Sub - Sahara Africa. In addition, in Sub-Sahara Africa, it is estimated that by 2010, at least 106 million children under age 15 will have lost one or both parents with 25 million of this group orphaned due to HIV/AIDS. In 2002 life expectancy in Botswana was 33.9 years and by 2010 it is expected to fall to 26.7 years. In Kenya, the effects of HIV/AIDS on life expectancy by 2010 will be 43.7 years. The number of children infected is 120,000 while an approximate number on Anti-Retro viral therapy increased as at the end of August 2006 approximately as follows, Adults 88,589 and children 6,744. Number needing Anti-Retro Viral is 250,000 (NASCOP, February 2007).

Epidemiology of HIV/AIDS in children under 15 years is as follows; Number living with HIV; Global 2.5 million, Sub- Sahara Africa 2.25 million, Kenya 100,000-150,000. Number newly infected; Global 700,000, Sub – Sahara Africa 616,000, Kenya 34,000. The number of AIDS deaths; Global 500,000, Sub–Sahara Africa 450,000, Kenya 18,000. In Kenya also, 60% medical beds – HIV/AIDS, 40% of children's beds – HIV/AIDS. Health workers face both the medical and social challenges of HIV/AIDS on a daily basis meaning that AIDS is still a National Disaster (NASCOP, 2006). While Africa and other developing countries are mostly affected, new diagnoses of HIV doubled in the UK from 3,499 in 2000 to 7,258 in 2004 which is a big challenge

especially in a country where any possible means can be used to prevent the spread (Joachin, January 2006). Some of the sexual behaviours that have been identified to most readily facilitate HIV infection risks are: frequent unprotected sexual intercourse with an infected partner, multiple sexual partners and sex with highly risky groups such as prostitutes among others. Most preventive campaigns have thus been directed to adoption of safe sexual behaviours. These include abstinence till marriage, faithfulness to uninfected sexual partner and consistent condom use. It has been established that HIV/AIDS predominantly affects the young and the middle – aged, those in their prime productive and reproductive years is the age range of 14 to 49 (World Bank, 2003). An alarming 6,000 young people worldwide are getting infected with HIV every day, (UNAIDS, 2003).

Madlala (2002) observes that lack of information and the means to protect themselves is to blame for the high rates of infection among the youth. Piot (2002) asserts that every element of African society from teachers to soldiers to farmers – is under attack of AIDS. In Zambia for example,  $\frac{2}{3}$  of deaths among managerial sector could be attributed to AIDS. Piot further warns that in 2020 over 20% of the workforce may be lost to AIDS in some of the severely affected countries. World Bank (2003) survey reveals that the public is well aware of HIV/AIDS as a severe health problem. Indeed (NASCOP, February 2007) report indicates that despite the promising changes in the recent statistical trend that the epidemic has peaked and may start to recede, prevalence rates are still alarming in Sub-Sahara Africa. This is true since although the awareness is high, prevalence

survey studies and National data show little or no evidence of change in sexual behaviour despite greater knowledge about HIV/AIDS.

### **1.2 Statement of the Problem**

HIV/AIDS remains a major concern in Kenya. It is a challenge to note that 12 million young people worldwide are living with HIV/AIDS and stopping the infection requires comprehensive strategies that focus on them (Joachin, January 2006). The concerted efforts to reduce HIV prevalence has not translated into significant behaviour change as new infections occur everyday especially among young people (KAIS, 2007). Teachers' Training Colleges have not been spared by HIV/AIDS related ailments like upper respiratory infections, skin fungal infections and tuberculosis. Besides most of the cases of absenteeism, psychological fear and poor performance are also attributed to HIV/AIDS (Academy for educational development Kenya (AED) & Education Trust, 9<sup>th</sup> February-14<sup>th</sup> February, 2009). It was against this background that the study sought to establish sexual behaviour change and HIV infection among college students at Mosoriot Primary Teachers' Training College. Besides, no research had been undertaken on sexual behaviour change and HIV infection among college students at Mosoriot Primary Teachers' Training College.

### **1.3 Research Objectives**

1. To investigate college students' awareness of the most common mode of transmission of HIV infection.
2. To find out preventive strategies adopted by college students to protect themselves against HIV infection.
3. To establish the relationship between VCT visit and measures taken to avoid HIV infection.
4. To examine the relationship between gender and VCT visit.
5. To investigate the relationship between age and frequency of sexual intercourse among college students.
6. To determine the relationship between gender and frequency of sexual intercourse among college students.

### **1.4 Research Questions**

1. Are college students aware of the most common mode of transmission of HIV infection?
2. What are the preventive strategies adopted by college students to protect themselves against HIV infection?
3. What is the relationship between VCT visit and measures taken to avoid HIV infection?
4. What is the relationship between gender and VCT visit?
5. What is the relationship between age and frequency of sexual intercourse among college students?

6. What is the relationship between gender and frequency of sexual intercourse among college students?

### **1.5 Null Hypotheses**

- HO<sub>1</sub> There is no significant relationship between VCT visit and measures taken to avoid HIV infection.
- HO<sub>2</sub> There is no significant relationship between gender and VCT visit.
- HO<sub>3</sub> There is no significant relationship between age and frequency of sexual intercourse.
- HO<sub>4</sub> There is no significant relationship between gender and frequency of sexual intercourse.

### **1.6 Research Variables**

According to Fraenkel and Wallen (2003, p.41) a variable is “a concept-a noun that stands for variation within a class or group of objects, such as chair, gender, eye colour, achievement.” Another common way of grouping variables according to Fraenkel and Wallen (2003) is by grouping them as dependent and independent variables. They define independent variables as “those the researcher chooses to study in order to assess their possible effects on one or more variables” (p. 43). They define dependent variables as those that the independent variable is assumed to affect. Thus the dependent variable “depends on” what the independent variable does to it; how it affects it. In other words, they are variables that the researcher observes or measures in relation to independent variables. The independent variables in this study are: age and gender. These variables

are independent because their effects on sexual intercourse among college students were investigated. The dependent variable is sexual behaviour/intercourse. This variable is dependent because the effects of gender and age of college students was determined. Preventive measures used by college students to protect themselves against HIV infection is a covariate which was investigated using survey design.

### **1.7 Significance of the Study**

An understanding of the linkage between sexual behaviour change and HIV infection is important in containing the spread of HIV infection in Teachers' Training Colleges in Kenya, Mosoriot in particular.

Since college students are teachers of tomorrow, they will be the main adults other than the family members with whom young people interact with away from home, it is of great importance they practice safe sexual behaviour which should not contradict the HIV/AIDS messages they pass to their pupils. The pupils may in turn take such HIV/AIDS messages seriously. This would ultimately reduce HIV infection and transmission.

The college students are an important study target because after graduation they will also be interacting with the young pupils in schools who have not yet formed opinions and attitudes before they engage in sex. Such pupils will be easy to mould. So it is important to first understand sexual behaviour and HIV infection among college students before they can be entrusted to guide young children on sexual matters upon completion of college.

The study will serve as a reference material for researchers interested in the topic.

### **1.8 Justification of the Study**

The literature reviewed by the researcher showed that no research has investigated sexual behaviour change and HIV infection among college students at Mosoriot Primary Teachers' Training College. If student-teachers were intensively involved in the campaign against HIV/AIDS for the last two decades Kenya would be miles ahead in the prevention of infection and care of the infected! (KNUT, June-July 2008). According to the report by Primary Teachers' Training College Principals'/BOGS' Workshop (9<sup>th</sup> Feb-14<sup>th</sup> Feb, 2009) at Soi Safari Lodge, most college students had suffered from STIs in the previous 24 months; and though a good number sought treatment, a number of them went on self medication. Besides, most college students were aware of the existence of sexual harassment in their colleges but expressed that cases of sexual harassment were not handled conclusively, hence they preferred not to report.

College students had not been spared as far as having sexual intercourse with their tutors to get favours in terms of grades and money and in such cases students have little negotiation power. It appears that the offer of grades and money can easily override the intention to practice protected sex (Academy for educational development Kenya (AED) & Education Trust, 9<sup>th</sup> Feb – 14<sup>th</sup> Feb, 2009). It is against this background that the study sought to establish sexual behaviour change and HIV infection among college students at Mosoriot Primary Teachers' Training College.



### **1.9 Scope and Limitations of the Study**

The study was carried out among single male and female college students at Mosoriot Primary Teachers' Training College both in first year and second year. Since the study was highly subjective the respondents were bound to give limited information especially in focus group discussions.

The cultural aspect could not allow the researcher to use interview schedule because of the nature of the research as the respondents could shy off from giving the right information.

In addition the researcher did not have the laboratory equipment that would have been used to test HIV and so sexual behaviour change was the only measure used to find out if college students were safe from HIV infection and this was achieved through testing the hypotheses. Kothari (2007) asserts that in social science where direct knowledge of population parameter(s) is rare, hypothesis testing is the often used strategy for deciding whether a sample data offer such support for a hypothesis that generalization can be made. Thus hypothesis testing enables us to make probability statements about population parameter(s).

### **1.10 Conceptual Framework**

According to Mugenda & Mugenda (1999) a conceptual framework is when the researcher conceptualizes the relationship between the variables under study and shows the relationship graphically or diagrammatically. It is a model identifying the concepts under study and their relationships. Since sexual behaviour change and HIV infection was a theme for this study, Modified Health Belief Model (MHBM; Rosenstock, 1974)

was identified as its basis. The Health Belief Model (HBM) is a psychological model that attempts to explain and predict health behaviour in the presence of a life threatening disease. The HBM is a framework for motivating people to take a positive health action that uses the desire to avoid a negative consequence as the prime motivator. The HBM was first developed in 1950s by social psychologists Hochbaum, Rosenstock and Kegels while working in the public health services.

The model was developed in response to the failure of free tuberculosis health- screening programme. Since then, HBM has been adapted to explore a variety of long term health behaviours including sexual risk behaviours that can result into transmission of HIV a theme that this study was addressing. What motivated college students to engage in activities aimed at preventing and avoiding diseases were:

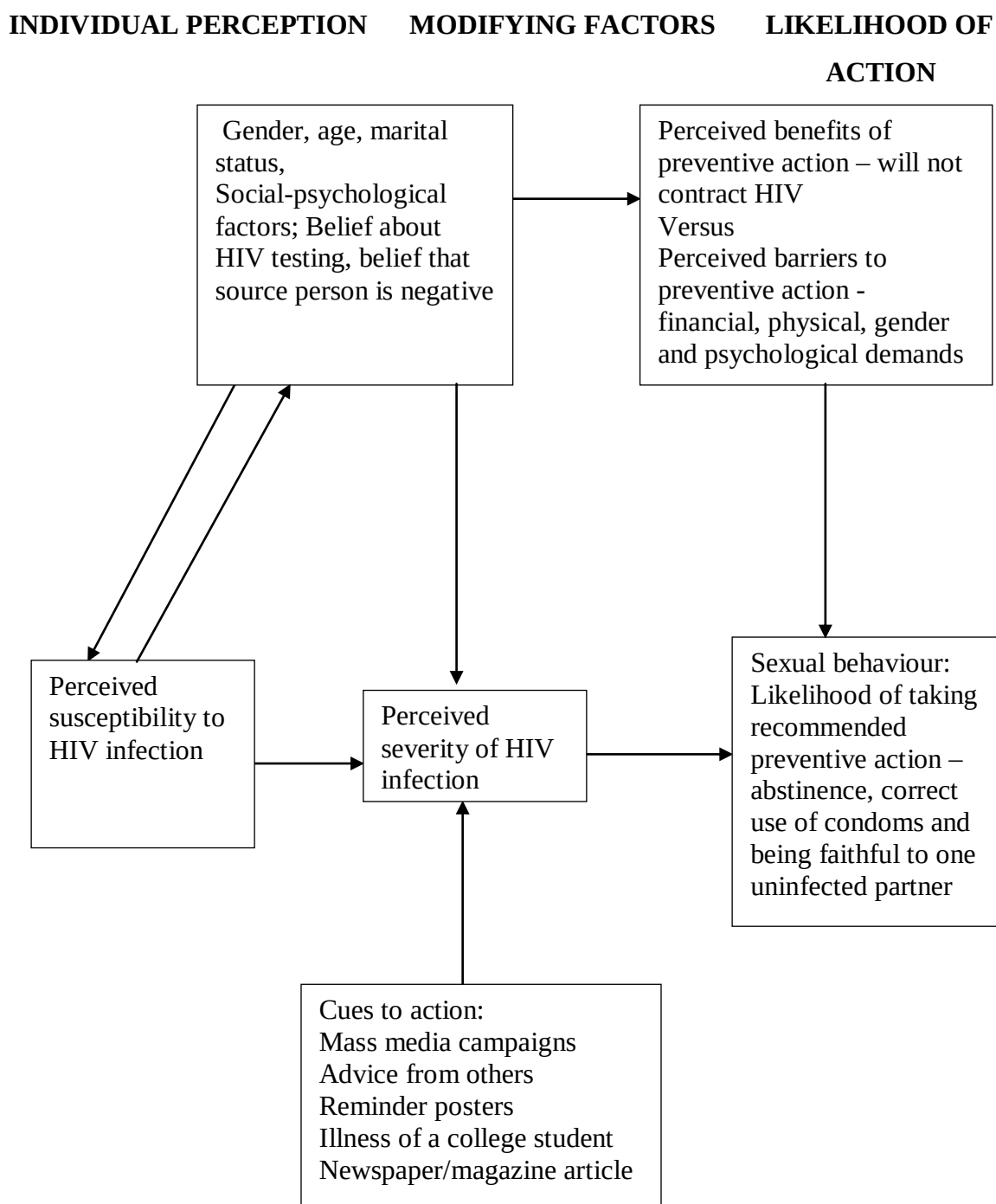
1. Perceived level of susceptibility- This was how vulnerable or at risk to disease or condition the individual felt.
2. Perceived severity- This was how serious the physical, emotional and social consequences of having the disease or condition were believed to be.
3. Perceived benefits of taking action- This was how beneficial or effective the actions were believed to be in preventing the condition or reducing its severity.
4. Perceived barriers- This referred to financial, physical (condoms), gender and other barriers the individual needed to overcome.

The HBM is spelt out in terms of construct, which represents the perceived threat and net benefit. In this research study for instance the perceived susceptibility was that single college students were more vulnerable to HIV infection, yet AIDS has no

cure and it is a leading killer disease in Africa with serious physical, emotional and social consequences.

Therefore an individual would prefer undertaking actions to prevent conditions or reduce its severity and this protect people from contracting this killer disease. The perceived barriers included any hindrances or problems that the group; Single male and female college students encountered in their efforts to avoid contracting the disease. These barriers included financial, physical (lack of condoms) and gender which make an individual take action with negative health consequences associated with threats posed by HIV infection. In an effort to overcome these threats an individual resorts to appropriate life actions and behaviour change likely to reduce/check this threat-HIV infection. Some cues to action provided further information on how to promote awareness like mass media campaigns, putting up reminder posters to help people become aware of the potential health risk, advise from others, newspaper/magazine articles and subsequently initiating appropriate health behaviour. This, when achieved will boost college students' efforts in fighting the spread of HIV infection. This Model is illustrated in Figure 1.

**Figure 1. Modification of the Modified Health Belief Model (Rosenstock, 1974)**



### 1.11 Operational Definition of Terms

**AIDS-** (Acquired Immune Deficiency Syndrome) this is the final phase of HIV.

It is a condition characterized by a combination of signs and symptoms caused by HIV which attack and make the body's immune system weak, opening room for a group of illnesses. It is a state characterized by increased loss of body weight and strength.

**Asymptomatic state-**A state where HIV virus is in the body but a person does not show any signs of the disease, the body is looking strong and healthy.

**College Students-** Learners training to be teachers.

**HIV infection-** (Human Immune-deficiency Virus) it is a state where retrovirus is in the body, it is asymptomatic state which is a prelude to AIDS. This virus attacks and weakens the body's immune system by destroying white blood cells, which help the body fight diseases, thus opening room for opportunistic infections.

**Preventive strategies-**These are methods, actions or behaviour modifications that college students have adopted to be able to stay free from HIV infection. They are; abstinence, being faithful to one uninfected sexual partner, consistent and proper use of quality condoms and Voluntary Counselling and Testing.

**Sexual behaviour change-**It is a move towards not engaging in sexual intercourse, using quality condoms properly and consistently or being faithful to one uninfected sexual partner to protect oneself and others from HIV and

sexually transmitted infections. It is conforming to changes put in place to reduce risk of STIs and HIV infection.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Overview**

This chapter consists of literature related to sexual behaviour change and HIV infection. The literature was drawn from different studies in Kenya and outside Kenya and from authorities who have written extensively on the subject. The aim of this review was to establish what other researchers have written extensively regarding the problem being investigated. This was meant to establish a knowledge gap or points of agreement which could add into a wealth of knowledge in this specific field. The sources of literature review included books, journals, seminar papers, news papers and magazines. The following areas of study provided a basis for the need to carry out the study: Awareness of the most common mode of transmission of HIV infection, measures taken to prevent HIV infection and sexual intercourse and prevalence of HIV infection.

#### **2.1 Awareness of the Most Common Mode of Transmission of HIV Infection**

Research has shown that 80% of HIV infection is through sexual intercourse with an infected person while 20% is transmitted through other means (NASCOP, February 2007). It is against this background that behavioural change is being advocated as the major move to prevent new infections. Around the world, successful preventive programmes among the youth are ones that equip them with knowledge, skills and attitudes to delay sex and prevent infections once they become sexually active (World Bank, 2005). According to (NASCOP, 2001), despite evidence that large proportions of

older adolescents and young adults who live both in rural and urban settings in Kenya, appear to have high levels (98%) of knowledge and awareness about the prevalence, methods of transmission and deadliness of AIDS, they have not changed their sexual behaviour. Related to this is the fact that the world today has placed more people than ever before in contact with many sources of sex information. Sexual attitudes and beliefs are transmitted by numerous socialization agents. The peer group in particular, wields a powerful influence even more than parents do. Other important influences are media and sex education in the school system. The church also affects the attitude development. Students face a difficult task in learning to manage their sexuality. Unfortunately despite sex education in school and college system, people often possess inadequate sex knowledge (Shiphrah, Ruth, Mwaura, Kioko & Mambo, 2006).

Public health officials have learned that education programmes that teach and reinforce safe sexual behaviour to avoid HIV infection through a series of meetings are more effective than one-time exposure to public-health information provided in class lecture, magazine articles, advertisements or pamphlets (NASCOP, 2001). Consequently, the Kenya government supports formal, informal and non-formal HIV/AIDS programmes. Formally, it has been incorporated in primary/secondary and teachers' training programmes although it is not being taught as a separate subject. Its content has been infused and integrated in existing subjects of the curriculum (Nasibi, 2003). The formal education is aimed at transmitting knowledge, enhance skills and change in order to combat the challenges posed by the scourge (KIE, 2003). Education on HIV/AIDS is also transmitted non-formally through many awareness programmes which are organized for



children, youth and adults in schools, colleges, churches, theatre and public places with the aim of informing the audience on the spread of the disease and ways and means of reducing and, where possible, eliminating time – spread among the young and adults (KIE, 2003). The Kenya Institute of Education asserts that HIV/AIDS has been integrated in various subjects in the school and college curriculum in Kenya. The aim is to introduce the subject to the young people at various levels with the hope that this will influence them to adopt desirable sexual behaviour. However, a major challenge related to the education of HIV/AIDS in schools and colleges is the lack of role models among teachers and tutors as well as parents at home.

Kamaara (2005) states that the future of any nation depends on the health of its children and youth. In recognition of this basic fact, the government of Kenya has special programmes targeting these categories of its citizens. Besides public campaigns on HIV/AIDS awareness and teaching of HIV/AIDS in schools and colleges, certain activities are carried out to protect children and the youth against HIV infection. The government for instance, insists on screening of all pregnant mothers attending pre-natal clinics in order to establish their HIV status. The awareness programme according to (Kenya Institute of Education, 2003) and (Kamaara, 2005) involve programmes providing accurate information on basic issues on how HIV is transmitted and prevented. It also involves diagnosis and treatment of sexually transmitted diseases. The objective of these programmes is to promote responsible sexual behaviour. The positive behaviour change is encompassed in what has come to be popularly known as the ABC (Abstinence, Being faithful to uninfected sexual partner and Consistent Condom use) the

latter is not supported by the Catholic Church due to its moral implications. However, the Catholic Church supports behaviour change through sexual abstinence before marriage and faithfulness in marriage. In Kenya, the campaign for sexual behaviour change is intensive and is supported by both government and the church. According to (NASCOP, February 2007) report on HIV/AIDS, there has been a slow change in sexual behaviour among Kenyans despite having adequate knowledge on HIV prevention. This is a very true observation based on the fact that HIV infection is indeed deadly and so far it has no cure.

## **2.2 Measures Taken to Prevent HIV Infection**

Prevention is currently the only way to stop AIDS. Prevention programmes have traditionally advocated for ABCs of prevention; Abstinence, Being faithful to uninfected sexual partner and Consistent use of latex Condom (NASCOP, February 2007). The following are areas that the researcher will discuss under measures taken to prevent HIV infection. Condom use, voluntary counselling and testing, HIV prevention based on abstinence, keeping one uninfected sexual partner to avoid HIV infection and behaviour change in preventing HIV infection.

### **2.2.1 Condom Use**

In a study by UNAIDS a large number of girls said they could not say “no” to unprotected sex, and some men said that they did not like condoms and would not wear them during sex. Others reported having no access to condoms, especially college

students (UNAIDS, 2003). For sexually active people, the condom remains a vital prevention technology. Consistent use of male condom reduces risk of sexual transmission of HIV by 80 to 90 % (UNFPA, 2004). The most common means of transmission of HIV in Kenya is through unprotected sex with an infected person (Ministry of Health, 2001), as cited in (KDHS, 2003). Men (47 %) who engage in higher risk-sex are more likely to use condoms than women (25%) (KDHS, 2003). Observational studies, laboratory experiments and mathematical modelling indicate that female condoms also offered protection against HIV infection. Evidence for efficiency of condom in prevention of HIV is clear with “discordant couples.” In Europe, among 123 couples who reported consistent condom use, none of the uninfected partners became infected. In contrast, among the 122 couples who used condoms inconsistently, 12 of the uninfected partners became infected (UNFPA, 2003).

However in most developing countries where the HIV prevalence rate is high many people cannot afford to purchase condoms. Sexually active people therefore rely on condoms provided for free. Governments often provide and promote condoms, but the poorest countries rely on donations from agencies as United States Agency for International Development (UNFPA, 2004). However, barriers to condom distribution still remain due to lack of transport access to interior areas. Some healthy workers as well have negative attitudes towards distributing condoms considering them a non essential medical commodity. Negative attitude persist in general public as well as with some groups perpetuating fears that condoms are ineffective in preventing HIV infection. Myths still circulate that the condom lubricant has been contaminated with HIV

(Republic of Kenya, 2004). Worth to mention is stiff opposition by the Catholic Church on the use of the condom. By far the most common method of prevention mentioned spontaneously by people in many studies is condom use (UNAIDS, 2000a). Condoms have been actively and successfully promoted as part of HIV prevention strategies in many countries. In Sub Sahara Africa, condom use has increased considerably over time with studies showing that young people are more likely than their elders to use condoms (UNAIDS, 2000b). A study in South Africa revealed that for South African youth, there are strong associations between condoms and notions of unfaithfulness, lack of trust, lack of love, disease and incompatibility with manliness all of which continue to provide barriers against safer sex practices (Madlala 2002).

Even where there is a high level of knowledge, the youth very quickly agree to discard the condom if their partner objects. Other obstacles to condom use include lack of control over condom use, incompatibility of regular condom use with the natural need for procreation, lack of knowledge and skills in condom use, reduced sensitivity, discomfort and being inhibiting, difficulties in obtaining condoms due to high prices, restricted availability and lack of privacy at point of sale and poor or inappropriate quality or design of condoms including insufficiently strong condoms for anal sex (UNAIDS, 2000b). It is vital to provide basic information of HIV prevention continuously to each new group of young adults. A study in Zimbabwe in 1998 showed that knowledge on where to get a condom had declined. Only 68% of boys' aged 15 to 19 knew of a specific source for condoms compared to 77% in 1994 (UNAIDS, UNICEF & WHO, 2002). Level of education is also associated with condom use during sexual intercourse

among youth. Women and men with at least some secondary education are more likely to use condoms during sex than those with less education (KDHS 2003). According to the National AIDS Control Council, the country's awareness on HIV/AIDS issues is well over 95%. However a survey by the Population Council of Kenya (2004) involving teachers from 120 schools (80 primary and 40 secondary) from four districts namely Kiambu, Thika, Kilifi and Kwale indicates some degree of ignorance on core HIV/AIDS related issues. Below are some of the comments made by the teachers' involved in this survey:

I once read that condoms have microscopic pores that pass out the HIV Virus, yet it is still publicly insisted that the condom is a safeguard. How true or false is this? Female teacher Kwale.

AIDS victims should be publicized so that their status can be known and avoided for sexual partnership.

Even now, I do not want to go for (HIV testing). I would prefer to stay ignorant for now. Male teacher, Kiambu (Population Council of Kenya, 2004).

This is a sad situation considering the country's high level of awareness on HIV/AIDS issues, which is well over 95%. However, the condom campaign has been hampered by misconceptions. For example in a large survey in Central Kenya, nearly half of the young men who had had sex and over two thirds of the young women had never used condoms. Among these young people, over 40% of the young men and 55% of the young women thought that HIV might be able to pass through a condom and roughly the same proportions believed that condoms could get stuck inside a woman's body. Another

obstacle to condom use has been societal disapproval, including social and cultural beliefs and norms that restrict or stigmatize condom use (UNAIDS, 2000a). I agree with this view since in some cultures and situations condom use is not seen as necessary especially where ejaculation of semen into the vagina is considered to be a vital part of the sex act. So that even with the use of a condom, consistency may not be guaranteed, yet this aspect has not been featured statistically in the available studies. Consistency in condom use is just mentioned as one of the effective strategies.

### **2.2.2 Voluntary Counselling and Testing (VCT)**

Voluntary Counselling and Testing is also recognized as a necessary support for the reduction of HIV infection. It is important that institutions of learning should encourage their learners to take VCT tests. When one knows that he/she is HIV Negative, he/she stands to avoid risky sexual relationships (Kamaara, 2005). Recognizing the urgency of increasing knowledge on HIV status, in June 2004, UNAIDS and WHO recommend that traditional voluntary testing and counselling programmes be supplemented by enhanced diagnostic HIV testing and by the routine offer of testing in clinics for HIV and other STIs of mother to child transmission (UNAIDS, 2004).

For those who are HIV infected, knowledge of their status allows them to further protect their sexual partners, to access treatment and to plan for their future (KDHS, 2003). Once diagnosed with HIV and particularly if they receive proper counselling, most individuals take steps to avoid exposing others to the virus. There are many reasons why people at risk of infections failed to be tested; fear of discrimination, fear that the test results may turn positive and lack of access to VCT facilities (UNAIDS, 2004). The common reason

for not testing among both sexes was low perception of risk (61%). This underscores the importance of ongoing campaigns to improve knowledge about risk factors for HIV transmission and attitude towards testing (KAIS, 2007). Testing for HIV is an important step toward knowing one's status but does not guarantee it. Repeated exposure to HIV through unprotected sex or other modes of transmission means that one should repeat testing to know one's current HIV status (Kamaara 2005). Indeed it is only when one is aware of his/her status that he/she can choose to behave discreetly by abstaining, being faithful to one uninfected sexual partner or using quality condoms properly and consistently. Most of the available studies have highlighted the importance of VCT, but there is silence on whether people especially college students at Mosoriot Teachers' Training College have indeed taken an HIV test.

### **2.2.3 HIV Prevention Based on Abstinence**

Sexual abstinence can be defined as refraining from all sexual activity, including intercourse, oral sex and masturbation. It is the only sure way of avoiding unwanted pregnancies and sexually transmitted diseases, including HIV infection. Abstinence has physical, emotional, psychological and spiritual benefits. Abstinence model sees man as having a human mind, intellect and spirit, a rational being who can exercise self control. Unmarried people just like the married do experience sexual feelings. However they should not express these feelings in a way that is harmful to themselves and others. Having the ability and desire to do something does not automatically mean that one should do it, it is important to consider the physical, emotional and psychological consequences of sex and be equipped with the necessary requirements of the responsible

decision on sexual issues (Shiphrah et al., 2006). Majority of the countries worldwide, young people are already sexually active. In a recent survey in Western Kenya a third of young married men said that they had had more than 10 partners before marriage and an average number of pre-marital partners were close to 9. Therefore prevention programmes that promote no sex until marriage seem to be failing most young people (UNAIDS, 2000b). Sex education is important part of effective HIV prevention. It is generally accepted that it enables people to acquire knowledge and develop skills which they can use to protect and promote their sexual experiences. Less than one in every five people at risk of infection has access to basic protection services and education about risk of HIV (UNAIDS, 2004).

In Central Asia and Eastern Europe for instance only 3% of those out of school youth and 40% of those in school have access to prevention education. In Latin America, only 4% of those out of school youth and 38% of those in school youth have access to prevention education. Sex education once offered to all learners in the institutions will play a significant role in sensitizing them with facts associated with the causes of AIDS modes of transmission and prevention strategies (UNAIDS, 2004). This means that apart from the professional training, colleges and other institutions of learning should endeavour to disseminate education on HIV infection.

#### **2.2.4 Keeping One Uninfected Sexual Partner to avoid HIV Infection**

Keeping one uninfected sexual partner can be a sure way to prevent HIV infection, but partner turnover rate is greater during adolescence and the early twenties than in later



years. This is true not only for numbers of casual partners, but also for those relationships perceived as being regular and monogamous (Rosenthal, Moore & Brumen, 1990). Although these serially monogamous pairings may be of short duration, their regular status in the minds of many of the young people provides safety with respect to STDs transmission. Unprotected sex is viewed as not risky because the partner is a regular partner as opposed to a casual one. Thus unprotected sex occurs with multiple sexual partners, but the cumulative risk is rendered invisible by the apparent monogamy and commitment to each discrete relationship. The risk posed by unprotected sex in young people is reflected in disproportionately high rates of STDs and unwanted pregnancy. The higher rate of partner turnover during adolescence and the early twenties than in later years is because young people are identifying themselves with the members of the opposite sex.

### **2.2.5 Behaviour Change in Preventing HIV Infection**

Behavioural change programmes targeting populations at especially high risk are among the most cost effective prevention intervention available and present a core component of any National HIV prevention programmes. Countries that have lowered their HIV incidences and have benefited from emergence of new sexual patterns include Cambodia and Thailand, delayed sexual debut in Zimbabwe and increasing emphasis on monogamy in Uganda (UNAIDS, 2004). As a child is born, the family becomes the first school and forms the medium through which children integrate themselves into the society. As they grow, they adopt behaviour of their parents and older members of the society. The adults influence the youth and other single people through verbal and physical demonstrations

of sexuality. How they dress or relate to family and members of the community influence the attitude of the young people towards sexuality and their view of pre-marital sex is a reflection of adults in the community (Tabifor and Mulyanga, 2003). Among obstacles to behaviour change in today's world are the computer and its associated technologies and services such as internet. The services are spreading to many parts of the world and with them are plenty of infectious, pornographic literature, videos, and films (UNAIDS, 2004). Onyehalu (1983) notes that cultural inhibitions and puritanical attitudes often prevent open discussions of sex with parents, teachers or other significant adults. Teenagers thus learn about sex, complete with misinformation and misconception, almost entirely from their peer group. It is also remarkable that young people's natural interest in and pre-occupation with human sexuality is on the increase, aided by the current massive circulation of pornographic literature, adult examples of irresponsibility and the strong desire to conform to peer norms leading to pre-marital sex.

Shiphrah et al. (2006) assert that in the traditional African society, sex as an integral component of human sexuality was meant for procreation and was regarded as sacred (due to its power to transmit life) full of secrets with little discussion even in marriage. In most societies, sexuality is traditionally a matter of the group and not just an individual. Sexuality is thought of in the first instance as means of continuation of the group, extended family, the clan or the ethnic group. Therefore, there is a great social concern about the education and gradual maturing of young people in sexual matters. Each African society has a number of socially determined practices, rules and taboos guiding development in sexuality. Before reaching marriage age, the young people are given

specific social and sexual teaching by chosen elders about their future roles and their duties (Nduati and Kiai, 1996). The traditional African society classify pre-marital sex as an irresponsible sexual behaviour and the offenders were punished through payments of fines, stoning to death and had to undergo mandatory ritual cleansing (Shiphrah et al., 2006). Shiphrah et al. also assert that Sexual experimentation can be an obstacle to behaviour change where some single people want to have an experience, 'to know what it is like' and their sense of curiosity become so strong that it overcomes their judgment of what is right and wrong. This often comes as a result of lack of proper information on pre-marital sex and related consequences. This experimentation may develop into a habit with adverse effects. At times, single men may engage in pre-marital sex to prove to themselves and their partners, their potency and fertility oblivious of dangers associated with pre-marital sex. Unmarried ladies may consent to pre-marital sex because of fear of being jilted.

Effective behaviour change programmes require an integrated approach where people embrace the issues and consider them as much as possible their own business and since schools provide a good playground for learners, parents and teachers it is vital to exploit the situation (KNUT, June-July 2008). Behavioural aims for HIV prevention include abstinence and delayed sexual debut for young people, monogamy within relationship, and reduction in the number of sexual partners (World Bank, 2003). Today there is more change in sexual values than in traditional days where sex was a taboo. Open discussion about sexuality, whether in the classroom, on television or in books, have helped demystify the taboo that once surrounded the topic. More people today are comfortable

talking about sex (Shiphrah et al., 2006). In Kenya, indirect evidence of youth engaged in pre-marital sex from sexually transmitted infections data which indicates that 17% or 170 youth in every 1,000 seek medical attention for STI annually (NASCOP, 2006). This is equally an underestimate given that a good proportion of the cases may go unreported. Other evidence drawn from the youth seeking Voluntary Counselling and Testing (VCT) were aged between 15-24 years. Of those (80%) seeking the services for social reasons (planning for marriage), 18% were found HIV positive (PRB, 2001). It is against this background that the study sought to establish sexual behaviour change and HIV infection among college students at Mosoriot Primary Teachers' Training College.

### **2.3 Sexual Intercourse and Prevalence of HIV Infection**

Prevalence is a measure of total burden of disease, including new and old infections. According to (KAIS, 2007) survey, more than 1.4 million Kenyans are living with HIV/AIDS. In 2003, KDHS estimated a prevalence of 6.7% among 15-49 year olds. For the same age group KAIS estimates that 7.8% are infected. The researcher will discuss sexual intercourse and prevalence of HIV infection based on age and gender.

#### **2.3.1 Sexual Intercourse and Prevalence of HIV Infection by Age**

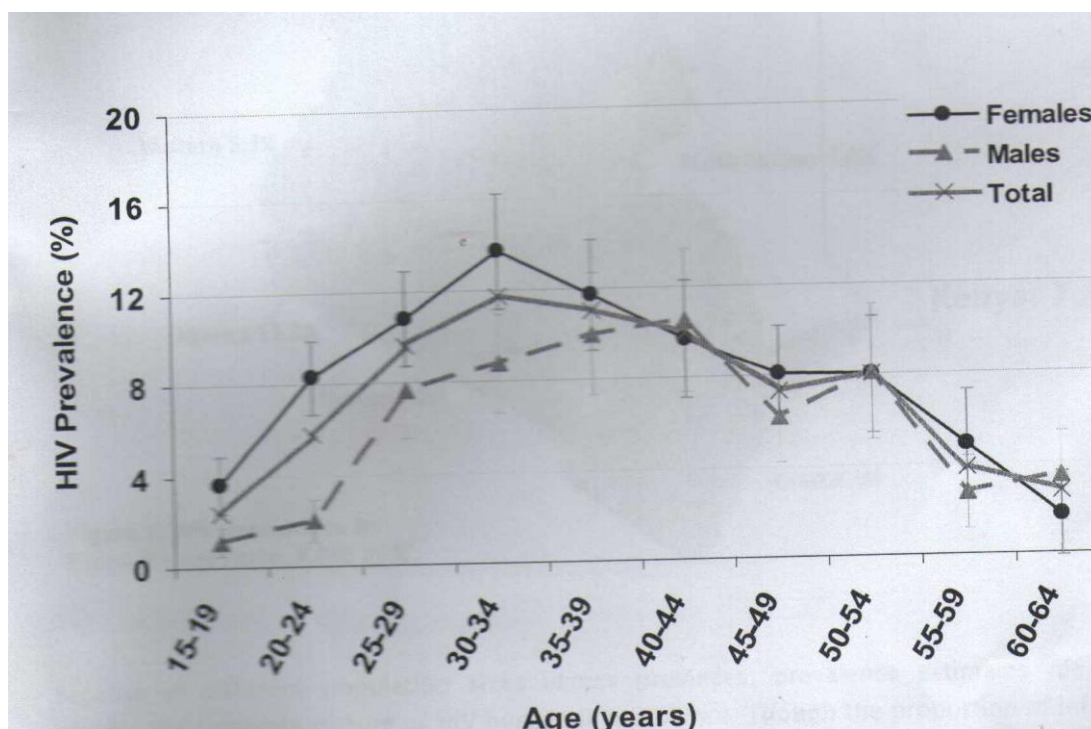
Sexual debut for most young people occurs during their teenage years. Sexual experience among young people has been estimated in a number of countries: At age 15 years, 53% of young people in Greenland, 38% of young people in Denmark and 69% of young people in Sweden have experienced intercourse. By age 18/19 years, the percentage of

sexually active has been reported as 54.1% in the United States, 31% in the Dominican Republic, 66.5% in New Zealand and 51.6% in Australia (Rodden, Crawford, Kippax & French, 1996). Age of debut has been estimated at a mean of 17 years in England and a mean of 15.95 years in the United States (Zelnik & Shah, 1983) and 16.8 years in Sweden (Schwartz, 1993). Therefore, majority of young people have begun to have sexual intercourse before they leave their teens and at least half by the age of 16. Use of contraception and STDs prevention has been reported to vary across adolescence according to the age at which initiation occurs. Condoms (Kraft, Rise & Træen, 1990) and contraception are more likely to be used once sex is first initiated. Kraft et al. assert that education on these topics has been found to modify that pattern, and appears to be more effective if given prior to first intercourse that is, in adolescence or pre-adolescence. Although age at marriage is often used as a proxy measure for the beginning of exposure to the risk of pregnancy, some women engage in sexual activity before marriage.

KDHS (2003) gathered information on timing of the first sexual intercourse for both men and women. At least 18% of women aged 25-49 had sex before age 15; while more than half had their first sex by their 18<sup>th</sup> birthday. Older women are more likely to have had their first sexual encounter at an earlier age. This is further reflected in the mean age at first sex which is about 18 years for those under age 40 and about 17 for women age 40 and above. The data for the male respondents show an earlier age at first sex at most age groups compared with female respondents. At least 25% of men aged 20-54 had sex before age 15 with no clear trend across the age cohorts. The mean age at first sex is 17 years although older men have a slightly higher mean age. This trend is different from

that of women. Comparisons of data from (KDHS, 2003) with similar data from the (KDHS, 1998) indicate that there has been increase in age at first sex. The median age at first sex has increased from 17.3 to 18.1 among younger women age 20-24 from 16.2 in 1998 to 16.6 in 2003. Women in rural areas start sexual activity about one year earlier than their urban counterparts. Sexual activity begins earliest in Nyanza Province (15.9 years) and latest in Nairobi (19.2years). Fourteen percent of young women and 29% of young men had sex by age of 15 and it is higher among women in Nyanza Province and among men in Rift Valley Province. For both females and males, HIV is occurring in all age groups. There are however, some differences in prevalence across the life span. Among youth age 15-24, women are 4 times more likely to be infected than men (6.1% compared to 1.5%).

A higher proportion of Kenyans aged 30-34 are currently infected with HIV than in any category. The decline in prevalence among women after age 34 and among men after age 44 could represent a decline in new infections in older age groups or higher increase HIV- related deaths in these age groups. The burden of infections is statistically higher among females than males until age 35 after which the ratio of male to female infections start to approach 1 to 1 as shown in figure 2 (KAIS, 2007). KAIS also interviewed and tested women age 50-64 and men age 55-64 that had not been included in past HIV sero-surveys. This addition gave new insight into the epidemic among older Kenyan adults who had previously been considered at low risk. Prevalence among Kenyans aged 50 and older is greater than among the youngest Kenyans; this may reflect cumulative lifetime exposure to HIV.



**Figure 2. HIV Prevalence and 95% CI among Participants 15-64 years old by Sex and 5-year Age categories, (KAIS, 2007)**

### 2.3.2 Sexual Intercourse and Prevalence of HIV infection by Gender

A higher proportion of women aged 15-64 (8.7%) than men (5.6%) are infected with HIV according to (KAIS, 2007). This pattern is similar to what was observed in 2003. This means that 3 out of 5 HIV infected Kenyans are female. HIV prevalence rates among both women and men are higher than the rates observed in 2003. There is an overlap in 95% confidence intervals (95% CI) for both women and men as indicated in Figure 3. The overlap is less striking among men, suggesting that the higher rate among men in 2007 may indicate a real increase since 2003. Additionally, in 2003, there were 1.9

infections among women for every one infection among men. The current ratio according to KAIS is 1.6.

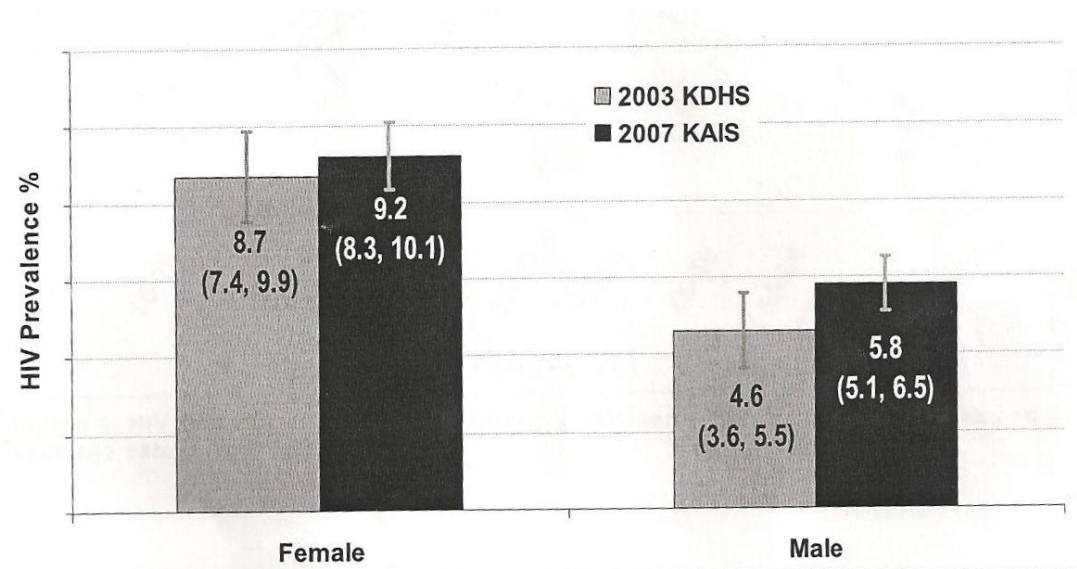


Figure 3. HIV prevalence among females and males age 15-49 in KAIS 2007 and KDHS 2003 with 95% CI.

In the Masaka district in Uganda, prevalence of HIV in girls aged between 13 and 19 years old is 20 times that of boys in the same age group (UNAIDS, 2003). The average age difference between females and their first male partners has been estimated at 1.8 years in the United States and 2.3 years in Sweden. In Norway 83.7% of girls but only 28.4% of boys reported an older partner at first intercourse. Females are also more likely to state that their first partner was a regular boyfriend. In a study examining the correlates of early coitus, the partner's insistence was the single most important reason for engaging in their first sexual intercourse for 5% of boys but 33% of girls (UNAIDS, 1999). NASCOP (2005) notes that in sex with a regular or steady partner only 11.8% of male respondents but 40.9% of female respondents reported that the partner made the decision



not to use condoms. Further, not only are condoms less likely to be used in a steady relationship, but condom use also decreases as sexual experience increases. It could therefore be argued that women are called upon to demand protected intercourse precisely when the odds appear to be against their success: that is, they are in a (regular) relationship they may believe does not require them to use condoms; they are with an older partner who is less likely to be using condoms as he is more experienced and is often in charge of the decision-making about condom use; and they are operating in a culturally determined model that assigns women a passive role in the sexual encounter. It is not that it is impossible, nor is it unreasonable to want women to ask for means by which they can protect themselves from unwanted outcomes of sexual intercourse. There are difficulties in evaluating the impact of HIV/STDs prevention in the context of sexual behaviour education when historically this type of education has been directed at reducing unintended pregnancy. As it is possible to be protected against pregnancy while remaining vulnerable to STDs and HIV transmission (UNAIDS, 2003).

Negotiation of safe sexual practice challenges the culturally constructed notions of femininity and masculinity. Therefore seeking to change female behaviour without taking into account its relationship to male behaviour limits the viability of such strategies. Managing the vulnerability of young women in sexual behaviour and HIV education may also mean addressing young men and the notions of gender and sexual identity through which they understand their experiences (Madlala, 2002). Available evidence shows that women and girls in most developing countries particularly in Sub-Saharan Africa have been socialized to be silent participants in sex. They are neither expected to discuss nor

make decisions about their sexuality, not even when their partners have high-risk sexual behaviour such as having multiple sexual partners (UNAIDS et al., 2002).

This has resulted in girls and women not having negotiating skills to enable them protect themselves from HIV infection. In most developing countries, young women at times virgins marry older men who are more likely to be infected by the disease (UNAIDS, 2004). There are some unique features of the African setting which influence the high rates of HIV infection. Factors such as female sexual submissiveness, entrenched convictions of male dominance, high levels of sexual violence, social acceptance of the 'sugar-daddy' phenomenon, and the lack of fear of HIV infection has made men to seek relations with a pool of increasingly younger women and girls. In Sub Sahara Africa more than two thirds of newly infected, 15 to 19 years old are female. This is associated with "sexual mixing" whereby older men are having sex with young girls (Madlala, 2002).

While early marriages persist in many poor countries, the trend elsewhere is towards later marriage, lengthening the time unmarried adolescents are exposed to the risks of unwanted pregnancy and sexually transmitted infections. Poverty, unequal power relations and social norms in many countries make it hard for many girls and young women to refuse unwanted relations especially with older partners or to protect themselves against pregnancy or infection (UNAIDS, 2003). Women become infected through all known routes of transmission namely sharing of unsterilized equipment, injection drug equipment, blood transfusion and more worse through sexual involvement and other related risk behaviours. This does not only expose them to HIV infection, but

make them more vulnerable than men (Madlala, 2002). Women are more susceptible than men to infection from HIV in any heterosexual encounter due to the greater area of mucus membrane exposed in women due to viral content from the sexual fluids that occur in the vaginal tissue from sexual penetrations (NASCO, May 2004). The risk of infection is greater among younger women. It has also been hypothesized that for male to female transmission, contact between HIV in semen and cells present on mucus of the vagina can result in transmission (NASCO, 2006). World Bank (2003) reported that in 1999 three quarters of blood transfusion in Uganda which was given to women, in most cases was due to complication at child birth. A study in about 60% HIV positive women in Guinea Bissau found out that 55% of women had a history of blood transfusion as compared to 8% of HIV negative women in the study.

This is a clear indication that blood transfusion is a risk factor. HIV as well targets lymphocytes and macrophages which may be present in the vagina as a result of any damage making women more vulnerable. And in cultures where virginity is highly valued, research has shown that some young women practice alternative sexual behaviours such as anal sex to preserve their virginity although it places them at increased risk of HIV (World Bank, 2003).

For reasons related to culture and gender when it comes to sexual relations most women are more concerned about preventing pregnancy than being infected (Nduati and Kiai, 1996). NACC (2001) observes that virginity put young girls at risk of rape or sexual coercion in high prevalence countries because of erroneous belief of infection, that sex with a virgin can cleanse a man of HIV infection. It is sometimes a common practice to

find older men having sexual relationship with young girls. In many countries where economic conditions make it difficult for girls to afford school fees and other needs, some seek favours of a 'sugar-daddy', engage in transactional sex or enter into sex work. Sexual relationships involving exchange of money or gifts may place adolescents at greater risk of STIs including HIV and unintended pregnancies. For young women receiving payments, the power imbalance in the relationship may make it difficult to refuse sex or negotiate condom use. This is especially so where older men are involved as the young women are disadvantaged in terms of gender, age, and economic status (PRB, 2001).

Many girls are driven by poverty to accept relationships with 'Sugar-daddies' (Older men who are prepared to give money, goods or favours in return for sex). Girls who come from families with a poor social-economic background experience many economic constraints in their relationships where they may not have a bargaining power for safer sex. It is also a common practice that these 'Sugar-daddies' engage themselves in many sexual partner relationships. In turn, they stand a higher chance of being infected. Women's economic dependency increases their vulnerability to HIV infection. Research has shown that economic vulnerability of women make it more likely that they exchanged sex for money or favours less likely that they will succeed in negotiating protection and that they are less likely to abandon a relationship that they perceive to be risky (PRB, 2001).

One in every three women world wide, will be raped, beaten, coerced into sex or otherwise abused in her life time (UNAIDS, 2004). They are rarely able to negotiate

terms for safer sex. The decision to use contraceptives like the condom more lies on the man than the woman (WHO, 2004). In a population based studies conducted worldwide, 10 to 50% of women report physical assault by an intimate partner. Individuals who have been sexually abused are more likely to engage in unprotected sex or have multiple sex partners. Often, cases are reported in the media where men forcefully coerce young girls into sexual relationship. At times, some have violently been raped. As well, acts of incest in some families go unreported remaining a family secret due to stigma associated with it (World Bank, 2003). About 45% of all HIV transmission cases in Argentina result due to female inability to negotiate for safer sex. Often young women are unable to refuse to take part in sexual encounter even if it is not a question of physical force; their vulnerability is in the fear of losing the man's affection. An overwhelming number of women lack the ability to insist or even ask that her partner use protection during sex. A similar research in Zambia shows that only 11% of women believed they had the right to ask their husband to use a condom (UNAIDS, 2004).

Unequal power relations reflected in such relationships affect adolescent girls' ability to refuse unsafe sex hence exposing them to HIV and other sexually transmitted diseases and infections. In strong Roman Catholic Argentina, the traditional gender roles are that women should be sexually ignorant and passive and value their virginity while men with multiple sex partners are tolerated (UNAIDS et al., 2002). This gives males greater sexual decision making power denying women the option to protect themselves and increase their exposure to HIV and STIs. In the recent past the clergy from Catholic Church have strongly opposed to the use of condom as preventive measure to HIV. They

argue that it is unethical and likely to promote immorality among the youth. Female youths who may share similar feelings and opt for unprotected sex easily become vulnerable to the pandemic (World Bank, 2003). Oral contraceptives may alter the thickness of cervical mucus and immunity of the female genital tract making women a risk group to HIV infection. A study in Kenya showed that cervical ectopy caused 10% of the HIV cases. It has been hypothesized that oestrogen rich oral contraceptives can increase the frequency and size of ectopy. It should be remembered that females in 15-25 age bracket being a sexually active group often use contraceptives in their quest to protect unwanted pregnancies. Little do they know the role contraceptives play in HIV/AIDS (NASCOP, 2006). Girls tend to have sexual relationship with men at least a few years older than themselves. Consequently, the women of such men are more likely to be infected. Such men feel that if they have to avoid infection, they need to sleep with virgins who are inevitably much younger than themselves. As a result, most women are more likely to be infected. On the contrary, younger boys mainly have sex with girls of the same age (World Bank 2003).

KAIS (2007) interviewed and tested women age 50-64 and men in many societies, young women have sexual relationships with men who are considerably older than they are. This practice can contribute to the wider spread of HIV and other STDs. Women age 15 to 19 who had sex in the 12 months preceding the survey with a non-marital partner shows that some women age 15 to 19 have had non-marital sex with a man 10 years or older than themselves (KDHS, 2003). There is an inherent contradiction in asking women

to ensure the use of condoms or discouraging penetrative practices, when their culturally legitimized role in most cultures is one of passivity (Weinstein, 1994).

This observation is true as women ought to step out of their gender stereotype of passivity and guide the sexual encounter to safety with respect to disease transmission. The literature review revealed that the public is aware of the most common mode of transmission of HIV as sexual intercourse but most studies done have concentrated on the awareness and measures taken to curb HIV infection but not much has been done on the effectiveness of the various measures taken like Condom use and keeping one uninfected sexual partner to avoid HIV infection. Thus awareness alone is not enough. Studies have not been done to find out if college students at Mosoriot Teachers' Training College have been to VCT. The college is advocating for abstinence but no studies have been done to show if the college students are really abstaining. Mosoriot Teachers' Training College is also silent on the provision of condoms to college students, yet available research shows that Consistent use of male condoms reduce risk of sexual transmission of HIV by 80 to 90 % (UNFPA, 2004). Besides many studies have been done on the timing of first sexual intercourse but there are no studies showing the frequency of sexual intercourse especially at Mosoriot Teachers' Training College. Frequency of sexual intercourse can guide towards provision of condoms to college students.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.0 Overview**

This chapter deals with the research methodology, research design, study area, research population, sample size, sampling procedure, data collection instruments, reliability and validity of the data collection instruments, data collection procedures, scoring the research instruments, data analysis procedures and ethical considerations.

#### **3.1 Research Methodology**

This study adopted a mixed research methodology. Quantitative and qualitative approaches to research are complementary and where appropriate, they should be combined to maximize the strengths and minimize limitations (Kombo & Tromp, 2006). Quantitative data collection method yielded discrete numerical or quantifiable data which was obtained through the questionnaire. The study also adopted qualitative data collection method to obtain narrative data from focus group discussions.

#### **3.2 Research Design**

Orodho (2003) defines research design as the scheme, outline or plan that is used to generate answers to research problems. This study adopted survey and causal comparative research designs. Survey research design was adopted to collect data from the respondents, in order to determine their then status with respect to the awareness of



the most common mode of transmission of HIV infection, and preventive strategies adopted by college students to protect themselves against HIV infection. Mugenda & Mugenda (2003) assert that survey research is a self-report study which seeks to obtain information that describes existing phenomenon by asking individuals about their perceptions, attitude, behaviour or values. Survey research is concerned with the conditions or relationships that exist, opinions that are held, procedures that are going on, effects that are evident and trends that are developed. It is primarily concerned with the present although it often considers the past events and effects as they relate to the current conditions (Best & Khan 1984).

Survey research design was chosen because it gathered large amounts of data from many respondents in a convenient and time saving manner. It also allowed for easy analysis and comparison of responses. Causal-comparative research design was also adopted to explore relationships that the researcher was investigating. These were relationships that existed between; VCT visit and measures taken to avoid HIV infection, gender and VCT visit, age and frequency of sexual intercourse among college students and gender and frequency of sexual intercourse among college students. Causal comparative method is often used instead of the experimental design because many of the cause effect relationship that we wish to study in education for example do not permit experimental manipulation but seeks to determine reasons or causes for the current status of a phenomenon under study (Mugenda & Mugenda, 2003).

### 3.3 The Study Area

The study was carried out at Mosoriot Primary Teachers' Training College which is situated near Mosoriot centre 30Km from Eldoret town along Eldoret-Kapsabet Highway, Nandi North District, Rift Valley Province, Kenya. The newly created District is part of the larger Nandi District which is situated in the western part of Rift Valley Province. It borders Kakamega District to the North-West, Uasin Gishu District to the North- East, Kericho District to the South East, Kisumu District to the South and Vihiga District to the West. The District lies within Latitudes  $0^{\circ}$  and  $0^{\circ} 34''$  North and Longitudes  $34^{\circ} 44''$  and  $35^{\circ} 25''$  East and covers an area of  $2,873\text{km}^2$ . The maximum distance from North to South is  $90\text{ km}^2$  while from East to West is  $75\text{km}^2$  (Nandi District Development plan, 2002-2008). It is worth noting that the newly created Nandi North District was yet to be demarcated officially on the Kenyan map.

The district has good drainage with cool and moderately wet climate. On average the district receives between 1,200mm and 2,000mm of rainfall per annum. The District has the potential to produce a surplus of diverse crops such as tree crops, horticulture, cereals and fruits owing to adequate and reliable rainfall. The study area was chosen since Mosoriot Primary Teachers' Training College is situated near Mosoriot centre, an area with the highest rate of HIV infection in Nandi North District. Besides, no research had investigated sexual behaviour change and HIV infection among college students at Mosoriot Primary Teachers' Training College. College students were picked for the study because most of them were in their mature youthful stage, a group most at risk of HIV

infection since they were sexually active. They could also give objective responses on sexual matters and HIV infection. In Rift Valley, the increase in HIV prevalence of 2.1% represents 40% increase since 2003 (KAIS, 2007). However, the choice of Mosoriot Primary Teachers' Training College as a study area did not by any means demean other areas which would have given similar results.

### **3.4 Research Population**

The research population consisted of all single male and female college students at Mosoriot Primary Teachers' Training College. Majority of single College students at Mosoriot Teachers' College were mainly in the age group between 20 and 30 years. This is the age range of people with the greatest risk of HIV infection (KDHS, 2003). The total number of single college students was 720.

### **3.5 Sample Size**

There is no agreed sample size in research. However, one of the most important factors that affect sample size is the degree of variability and extent of unpredictability in the population (Khan, 2008). Thus, the larger the variability, the larger is the sample size necessary. Fraenkel & Wallen (2000) recommend that larger samples can yield results that are closer to the parameter of the population. Therefore, based on these recommendations this study took 30% of the target population as the sample size. This size is expected to yield the desired results (Fraenkel & Wallen, 2000; Polonsky & Waller, 2006 and Khan, 2008). Warwick & Kerlinger (1979) assert that the main factor considered in determining the sample size is the need to keep it manageable enough, this

will enable the researcher to derive from it detailed data at an affordable price in terms of time, finances, and human resource. There were 720 single college students at Mosoriot Primary Teachers' Training College where 57% were male and 43% were female. The study involved both first and second year single college students. All college students were considered to have adequate information on HIV/AIDS and college life in general. Equal numbers of female to male college students were selected to participate in the study.

### **3.6 Sampling Procedures**

Sampling is taking any portion of the population or universe as a representative of that population or universe (Kerlinger, 1973). The researcher used purposive sampling to specifically target single college students from the rest of the student population as they were believed to be reliable for the study. The total number of single college students was 720, where 57% were male and 43% were female. The study took 30% of the target population as the sample size. To select the sample size, stratified sampling technique was used to categorize the college students according to gender and year of study. This ensured that every member of the first and second year, male and female college students had equal chances of being picked as participants. There were 230 first year and 180 second year single male college students. On the other hand, there were 190 first year and 120 second year single female college students. Simple random sampling technique was used to select participants from every strata whereby participants in every strata were assigned numbers corresponding to the strata population. The numbers were then placed in a container, mixing them thoroughly and participants were allowed to pick any number

at random. Only those who picked numbers corresponding to the sample size of the strata were included in the study as advocated by (Mugenda & Mugenda, 2003 and Kothari, 2007). A total of 54 first year and 54 second year single male college students; and 54 first year and 54 second year single female college students were selected to participate in the study. This gave a total of 216 participants, which was 30% of the target population.

### **3.7 Data Collection Instruments**

Data was collected using two instruments. These were: Self-administered questionnaires and focus group discussions that were developed by the researcher and improved on by supervisors and other experts in the School of Education.

#### **3.7.1 Questionnaire**

The questionnaires consisted of open and closed-ended items. They contained items from section a-c as follows:

- a) College students' biographical information
- b) College students' sexual behaviour (1)
- c) College students' sexual behaviour (2)

The questionnaire is described as the most popular instrument particularly in cases of big inquiries (Kothari, 2007). It is an instrument used to obtain information about any conditions and practices and to inquire into opinions and attitudes of an individual or a group. The questionnaire was adopted because it was free from the bias of the researcher and answers were in respondent's own words. Respondents had adequate time to give well thought out answers and respondents who were not easily approachable were also

reached conveniently. Questionnaire is a convenient tool especially where there are large numbers of subjects to be handled. This is because it facilitates easy and quick derivation of information within a short time (Borg & Gall, 1983). The self-administered type of questionnaire was used as it is less expensive in terms of finances and time, it also allows for anonymity since the respondents are not expected to write their names. All these advantages make the questionnaire the most convenient tool to use for data collection as it also guarantees objectivity among the respondents (Warwick & Lininger, 1975). Despite its limitations (Koul, 1984; Sharma, 1984 and Kothari 2007), the questionnaire is preferred to other instruments because of the large number of respondents expected to be covered in the study within the expected time frame (Warwick and Lininger, 1975).

### **3.7.2 Focus Group Discussions**

Focus group discussions were used to elicit in-depth information on sexual behaviour change and HIV infection among college students. Focus group discussions should be composed of homogeneous members of 6-8 individuals and groups of between 4-8 (Kombo & Tromp, 2006). Five focus group discussions were conducted with a membership of six and the questions asked were as per appendix III. The focus group discussions were segregated by age, sex and year of study. Focus group discussions allow a lot of information to be captured quickly and the researcher cannot control the flow of discussion (Kombo & Tromp, 2006).

### **3.8 Reliability and Validity of Data Collection Instruments**

Reliability and validity of data collection instruments were determined as follows:

#### **3.8.1 Reliability**

Pre-testing of the data collection instrument was carried out to test the reliability of the instrument. A data collection instrument is considered reliable when it is able to elicit the same responses each time it is administered (Koul, 1984). To ascertain the reliability of the instrument, the researcher carried out a pilot study (pre-testing) by using test-retest method on student-teachers at Friends Kaimosi Teachers' Training College, Western Province, Kenya.

Mugenda & Mugenda (2003, p.79) assert that "Normally the pre-test sample is between 1% and 10% depending on the sample size". A total of 20 respondents (9.3%) of the sample size were used during this stage, that is 10 male and 10 female both first and second year single college students respectively. The time-span between the first administration and the second administration was two weeks. The variability in the students responses were used to determine the reliability of the items. The reliability index of the research instrument was calculated using Pearson's Product Moment Correlation ( $r$ ) from test-retest scores. The reliability coefficient obtained was 0.8, which determined the stability of the instrument. Values above the minimum of 0.5 (Borg & Gall, 1983) indicate the reliability. A correlation of less than 0.4 implies that the instrument is unreliable, (Borg & Gall, 1983). Difficult or ambiguous items in the questionnaire were adjusted accordingly.

### **3.8.2 Validity of Data Collection Instrument**

The validity of the data collection instrument is the extent to which it measures what it sets out to measure. Validity is the degree to which results obtained from the analysis of data actually represent the variables under study (Mugenda & Mugenda, 2003). The researcher sought expert help from the supervisors and other lecturers in the department of educational psychology. The advice included suggestions, clarifications and other inputs. This helped in making necessary changes. For the instrument to be considered valid, the content selected and included in the questionnaire must be relevant to the variables being investigated (Kerlinger, 1973).

### **3.9 Data Collection Procedures**

The researcher first sought permission from the Ministry of Higher Education through the school of Graduate studies; Moi university. After which authority from the District commissioner, District Education Officer and Mosoriot Primary Teachers' Training College authorities was sought, (see appendix IV, V, VI and VII). The second phase of data collection involved obtaining actual data for analysis. Data was collected from the college students using self-administered questionnaires and focus group discussions. The researcher distributed the questionnaires after getting permission and assistance from the relevant authorities in college. Before respondents filled the questionnaires, the researcher explained the purpose of the study and gave assurance of the confidentiality of their responses. This was meant to remove suspicion and create confidence in the respondents. Each subject filled his/her questionnaire without discussing with colleagues.



Sufficient time was allowed for college students to respond to the instrument accurately. The questionnaires were then collected immediately and focus group discussions were conducted.

### **3.10 Scoring the Research Instrument**

The students' biographical form had closed ended questions hence the researcher interpreted responses accordingly based on the research topic. Similarly the students' sexual behaviour (1) and students' sexual behaviour (2) comprised open and closed ended questions hence it called for the researcher to interpret responses accordingly to allow for proper analysis of data collected from this instrument.

### **3.11 Data Analysis**

The data was computed using Statistical Package for Social Sciences (SPSS). The researcher used descriptive statistics to analyze the data collected. This was in form of frequencies and percentages. The Inferential statistical method used was Chi-square which was used for studying the effects of independent variables on dependent variables (Kerlinger, 1973). The level of significance was tested at 0.05.

### **3.12 Ethical Considerations**

Permission was sought from the Ministry of Higher Education, District Commissioner, District Education Officer and College Principal. The researcher promised to respect the respondents' privacy by not asking them to write their names on the questionnaire. The researcher also assured the respondents of the confidentiality with which the information

was going to be treated. This level of respect towards the respondents by the researcher assured genuine responses since the respondents remained anonymous.

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND INTERPRETATION

#### 4.0 Overview

This chapter deals with presentation, analysis and interpretation of the study findings. A total of 216 questionnaires were administered with a response rate of 100% as shown in Table 4.1. This chapter presents findings based on the data collected. The first section presents demographic characteristics of the respondents, the second section presents the awareness of the most common mode of transmission of HIV infection, the third section presents measures taken to avoid HIV infection and the fourth section presents the frequency of sexual intercourse based on age and gender of the college students.

**Table 4.1 Issued and Analyzed Questionnaires**

| Questionnaires               | 1 <sup>st</sup> year college students |        | 2 <sup>nd</sup> year college students |        | Total       |
|------------------------------|---------------------------------------|--------|---------------------------------------|--------|-------------|
|                              | Male                                  | Female | Male                                  | Female | Respondents |
| Issued questionnaires        | 54                                    | 54     | 54                                    | 54     | 216         |
| Analyzed questionnaires      | 54                                    | 54     | 54                                    | 54     | 216         |
| % of analyzed questionnaires | 100                                   | 100    | 100                                   | 100    | 100         |

#### 4.1 Demographic Characteristics of the Respondents

Demographic characteristics of the respondents included gender, year of study, age, marital status, residence of respondents and province of origin. The respondents were 108 male and 108 female college students both first and second years respectively. The

respondents who were below 24 years old were 121 (56%) while 95 (44%) were above 24 years old. All the respondents 216 (100%) were single. The respondents who came from rural areas were 160 (74.4%) while 55 (25.6%) came from urban areas. It was also worth knowing the respondents' province of origin as follows; Rift Valley 54 (25%), Nyanza 41 (19%), Eastern 33 (15.3%), Western 32 (14.8%), Central 27 (12.5%), Coast 15 (6.9%), Nairobi 12 (5.6%) and North Eastern 2 (0.9%).

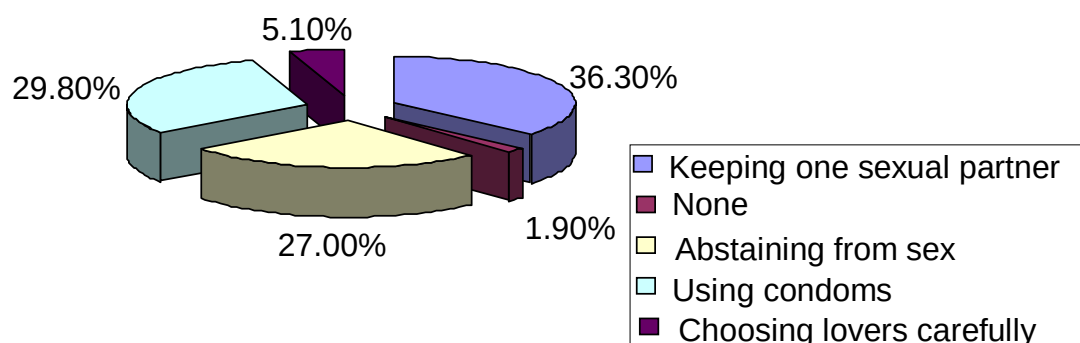
#### **4.2 Awareness of the Most Common Mode of Transmission of HIV Infection**

All the respondents 216 (100%) were aware of the most common mode of transmission of HIV infection as sexual intercourse. NASCOP (February 2007), noted that 80% of HIV infection was transmitted through sexual intercourse. Both print and electronic media have played a role in sensitization of the major mode of transmission of HIV infection as sexual intercourse. But (NASCOP, 2001) observed that despite evidence that large proportions of older adolescents and young adults who live both in rural and urban settings in Kenya appear to have high levels (98%) of knowledge and awareness about the prevalence, methods of transmission and deadliness of AIDS, they have not changed their sexual behaviour.

#### **4.3 Measures Taken to Avoid HIV Infection**

Abstaining from sex, being faithful to one uninfected sexual partner and consistent use of quality condoms are important ways used to avoid HIV infection. Majority, 78 (36.3%) of the respondents kept one sexual partner to avoid HIV infection as shown in figure 4.

**Figure 4. Measures taken to avoid HIV Infection**



Keeping one sexual partner could have been a survival strategy for the respondents since there was no guarantee that the sexual partner was not infected. Rosenthal et al. (1990) noted that although these serially monogamous pairings may be of short duration, their regular status, in the minds of many of the young people confers safety with respect to STDs. UNFPA (2004) noted that for sexually active people, the condom remains a vital prevention technology. This does not correspond to the findings of the study where majority of the college students 78 (36.3%) kept one sexual partner as a strategy used to prevent HIV infection. The respondents who chose lovers carefully were 11 (5.1%) while those who did not use any method were 4 (1.9%). UNAIDS et al. (2002) found out that in Botswana, a fifth of young pupils in secondary schools still believed they could screen out risky partners by looks alone. These strategies are very risky. The respondents who used condoms were 64 (29.8%) but unless condoms are used properly and

consistently they might not give absolute protection. UNAIDS (2000b) noted other obstacles to condom use as lack of knowledge and skills in condom use. But if condoms were used properly they could provide a sure way in preventing HIV infection and even pregnancies. The small percentage of the respondents who used condoms could have been attributed to lack of condoms in college and no permission then, to leave college after classes.

NASCOP (2005) asserted that in sex with a regular or steady partner, only 11.8% of male respondents but 40.9% of female respondents reported that the partners made the decision not to use condoms. Further, not only were condoms less likely to be used in a steady relationship, but condom use also decreased as sexual experience increased. A small number of the respondents abstained from sex 58 (27%), yet this was the focus of the college being founded on Christian principles. UNAIDS (2000b) found out that majority of the countries worldwide, young people are already sexually active. In a recent survey in Western Kenya a third of young married men said that they had had more than 10 partners before marriage and an average number of pre-marital partners were close to 9. Therefore prevention programmes that promote no sex until marriage seem to be failing most young people.

#### **4.3.1 Attitude towards Negotiating for Safer Sex**

Knowledge about HIV transmission and ways to prevent it are useless if people feel powerless to negotiate for safer sex practises with their partners. The findings of the study showed that (80.4%) of the respondents would propose use of condoms, 17.2%

would refuse to have sex while 2.4 % had no power to do anything. WHO (2004) observed that some of the youth engaged in unprotected sex because they lacked skills to negotiate abstinence or condom use. This usually affects the girls more than the boys making them more vulnerable to HIV infection. This could be very true especially where sex with favours was involved.

#### **4.3.2 Consistency in the use of Condoms**

The respondents who used condoms all the time during sexual intercourse were 36 (57%) while 27 (43%) used condoms sometimes during sexual intercourse. This inconsistency could put college students at risk of contracting HIV since 53.1% of the respondents who used condoms sometimes during sexual intercourse had not been to VCT. While only 46.9% had visited VCT. UNAIDS (2000b) asserted that other obstacles to condom use include lack of control over condom use and incompatibility of regular condom use. UNFPA (2004) noted that a condom remains a vital prevention technology and consistent use of male condom reduces risk of sexual transmission of HIV by 80 to 90%. The respondents might not have been practising consistent condom use since the college did not provide them. WHO (2004) noted that the decision to use condoms more lies on the man than on the woman. This could have been another reason for inconsistency in condom use especially where sex with favours was involved.

#### **4.3.3 Reasons for not Using Condoms**

Majority of the respondents who did not use condoms claimed that condoms were uncomfortable (41.5%), followed by partners not liking them (20.5%). UNAIDS (2003)

corresponded to the findings of the study by asserting that even where there is a high level of knowledge, the youth very quickly agree to discard the condom if their partners objected. Those who wanted to have a child were (18.7%), while those who stuck to religious beliefs were (5.8%). Those who felt embarrassed to ask for them and those who forgot to have them with themselves were (4.7%) respectively, while those who could not like them were (4.1%). The reason which was ranked first was that condoms were uncomfortable. Uncomfortable condoms could have been poor quality condoms which were within the reach of the respondents. UNAIDS (2000b) noted other obstacles to condom use as reduced sensitivity and discomforts and this was also supported by focus group discussions.

#### **4.3.4 Difficulties in Obtaining Condoms**

Majority of the respondents 102 (60.0%), indicated that the college did not provide condoms. This corresponds to a study by (UNAIDS, 2003) who observed that some people reported having no access to condoms especially college students. At least three male and two female college students in five focus group discussions asserted that the college did not provide condoms. Madlala (2002) also noted that lack of information and means to protect themselves was to blame for the high rate of infection among the youth. This could be attributed to a fact from the Dean of Students' office that the college operated on Christian principles where the major teaching was on abstinence (no Pre-marital sex) until marriage and faithfulness to the marriage partners to those who were married. Provision of condoms meant encouraging unfaithfulness and pre-marital sex. Further investigations through focus group discussions also showed that at times



Mosoriot Health Centre did not have sufficient supply of condoms despite its proximity to the college. Some respondents felt that condoms were too expensive 8 (4.7%). Three male and two female college students in five focus group discussions also agreed that condoms were too expensive. This corresponds to a study by (UNFPA, 2004) who noted that in most developing countries where HIV prevalence rate is high many people cannot afford to purchase condoms. Sexually active people therefore rely on condoms provided for free. Some respondents in four focus group discussions reported lack of money to purchase condoms which could have been attributed to their state of being students and would not have had enough money to purchase sufficient quality condoms yet the college did not provide them. The respondents who claimed they were too shy to ask for them were 60 (35.3%). This was also supported by male and female college students in two focus group discussions. This corresponds to a study by (UNAIDS, 2000b) who observed lack of privacy at the point of sale. Mainly people are not free to purchase condoms at the point of sale since condoms have been associated with notions of unfaithfulness and pre-marital sex.

#### **4.3.5 Sex with Favours**

A special category of high risk sex is sex with compensation. The findings of the study showed that 17 (7.9%) of the respondents engaged in sex with compensation. Findings from three focus group discussions indicated that some college students had not been spared as far as sex for grades and other favours was concern. PRB (2001) noted that economic vulnerability of women make it more likely that they exchange sex for money or favours less likely that they succeed in negotiating for protection. They were also less likely to abandon a relationship that they perceive to be risky. This could be attributed to

difficult economic situations where people might do anything, even taking risks to survive.

#### **4.3.6 The Role of the College in the Prevention of HIV Infection**

Majority of the respondents 215 (99.5%) indicated that the college teaches on abstinence. This could be attributed to the college being founded on strong Christian principles which upheld abstinence till marriage. Kamaara (2005) noted that the Catholic Church supported behaviour change through abstinence before marriage and faithfulness in marriage. All the focus group discussions indicated that no condoms were provided for in college. Unfortunately, only 27% of the respondents practised abstinence. This was a clear indication of the practice of pre-marital sex in college which could have been attributed to insufficient guidance. NASCOP (2006) asserted that in Kenya indirect evidence of the youth engage in pre-marital sex from sexually transmitted infections data which indicate that 17% or 170 youth in every 1000 seek medical attention for STIs annually.

#### **4.4 HO<sub>1</sub> There is no Significant Relationship between VCT Visit and Measures taken to avoid HIV Infection**

There is a significant relationship between VCT visit and measures taken to avoid HIV infection as shown in Table 4.2. The hypothesis was tested using chi-square at 0.05 level of significance and the findings were ( $\chi^2 = 14.357$ ,  $p < 0.006$ ). Therefore the hypothesis which stated that there is no significant relationship between VCT visit and measures taken to avoid HIV infection was rejected.

**Table 4.2 Relationship between VCT Visit and Measures taken to avoid HIV Infection ( $\chi^2$ )**

**Chi-Square Tests**

|                              | Value               | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square           | 14.357 <sup>a</sup> | 4  | .006                  |
| Likelihood Ratio             | 14.926              | 4  | .005                  |
| Linear-by-Linear Association | 8.658               | 1  | .003                  |
| N of Valid Cases             | 184                 |    |                       |

a. 3 cells (30.0%) have expected count less than 5. The minimum expected count is .76.

While keeping one sexual partner is good, it can be fatal since the findings of the study as shown in Table 4.3 indicates that 56 (72.7%) of the college students who kept one sexual partner had been to VCT while 21 (27.3%) of the college students who were keeping one sexual partner had not been to VCT. This means that they engaged in sex without first knowing their HIV status. This was very risky for the partner who was not infected by HIV since the chances of contracting HIV was very high.

**Table 4.3 Relationship between VCT Visit and Measures taken to avoid HIV Infection**

| VCT testing * Measures taken to avoid HIV/AIDS Crosstabulation |     |                                           |                                  |        |                  |             |                           |
|----------------------------------------------------------------|-----|-------------------------------------------|----------------------------------|--------|------------------|-------------|---------------------------|
|                                                                |     |                                           | Measures taken to avoid HIV/AIDS |        |                  |             |                           |
|                                                                |     |                                           | Stick to one sexual partner      | none   | abstain from sex | Use condoms | Choosing lovers carefully |
| VCT testing                                                    | Yes | Count                                     | 56                               |        | 31               | 23          | 4                         |
|                                                                |     | % within Measures taken to avoid HIV/AIDS | 72.7%                            |        | 67.4%            | 46.9%       | 40.0%                     |
|                                                                | No  | Count                                     | 21                               | 2      | 15               | 26          | 6                         |
|                                                                |     | % within Measures taken to avoid HIV/AIDS | 27.3%                            | 100.0% | 32.6%            | 53.1%       | 60.0%                     |
| Total                                                          |     | Count                                     | 77                               | 2      | 46               | 49          | 10                        |
|                                                                |     | % within Measures taken to avoid HIV/AIDS | 100.0%                           | 100.0% | 100.0%           | 100.0%      | 100.0%                    |

Rosenthal et al. (1990) asserted that unprotected sex was viewed as not risk because the partner is a regular partner as opposed to a casual one. Thus unprotected sex occurs with multiple partners, but the cumulative risk is rendered invisible by the apparent monogamy and commitment of each discrete relationship at a given time. On the other hand 4 (40%) of the college students who chose lovers carefully had been to VCT, while 6 (60%) had not. This was putting such respondents at risk of contracting HIV infection since the only way to know if a person was free from HIV infection was through carrying out a blood test. The practice of unprotected sex could have been attributed to lack of condoms in college.

#### **4.5 HO<sub>2</sub> There is no significant Relationship between Gender and VCT Visit**

There is a significant relationship between gender and VCT visit as shown in Table 4.4. The hypothesis was tested using chi-square at 0.05 level of significance and the findings were ( $\chi^2 = 15.102$ ,  $p < 0.000$ ). The hypothesis which stated that there is no significant relationship between gender and VCT visit was rejected.

**Table 4.4 Relationship between Gender and VCT Visit ( $\chi^2$ )**

| Chi-Square Tests                   |                     |    |                       |                      |                      |
|------------------------------------|---------------------|----|-----------------------|----------------------|----------------------|
|                                    | Value               | df | Asymp. Sig. (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
| Pearson Chi-Square                 | 15.102 <sup>b</sup> | 1  | .000                  | .000                 | .000                 |
| Continuity Correction <sup>a</sup> | 13.949              | 1  | .000                  |                      |                      |
| Likelihood Ratio                   | 15.310              | 1  | .000                  |                      |                      |
| Fisher's Exact Test                |                     |    |                       |                      |                      |
| Linear-by-Linear Association       | 15.021              | 1  | .000                  |                      |                      |
| N of Valid Cases                   | 185                 |    |                       |                      |                      |

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 3.16.

Majority of female 72 (63.2%) college students had been to VCT as opposed to male 42 (36.8%) college students as shown in Table 4.5. Recognizing the urgency of increasing knowledge of HIV status, in June 2004, UNAIDS & WHO recommended that traditional voluntary testing and counselling programmes be supplemented by enhanced diagnostic HIV testing and by the routine offer of testing in clinics for HIV and other STIs of mother to child transmission (UNAIDS, 2004). Findings from three male college students and two female college students in different focus group discussions indicated that some female students knew their status but they engaged in sexual relationships with multiple partners. Kamaara (2005) noted that it is only when one is aware of his/her status that he/she can choose to engage discriminately by abstaining or being faithful to one uninfected sexual partner. These differences could be attributed to the fact that those female college students were testing positive or that they were testing negative but they practised consistent condom use. Reasons why they had several sexual partners was personal though the ability to practice protected sex was not guaranteed.

**Table 4.5 Relationship between Gender and VCT Visit**

| <b>Gender of Respondent * VCT testing Crosstabulation</b> |                      |             |        |        |
|-----------------------------------------------------------|----------------------|-------------|--------|--------|
|                                                           |                      | VCT testing |        | Total  |
|                                                           |                      | Yes         | No     |        |
| Gender of Respondent Male                                 | Count                | 42          | 47     | 89     |
|                                                           | % within VCT testing | 36.8%       | 66.2%  | 48.1%  |
| Female                                                    | Count                | 72          | 24     | 96     |
|                                                           | % within VCT testing | 63.2%       | 33.8%  | 51.9%  |
| Total                                                     | Count                | 114         | 71     | 185    |
|                                                           | % within VCT testing | 100.0%      | 100.0% | 100.0% |

UNAIDS (2004) asserted that once diagnosed with HIV and particularly if they receive proper counselling, most individual take steps to avoid exposing others to the virus. There are many reasons why people at risk of the infection fail to be tested; fear of discrimination, fear that the test results may turn positive and lack of access to VCT facilities. The high percentage (63.2%) of female college students who had been to VCT was because generally women are health seekers and so are careful on issues touching their health. Kaamara (2005) noted that it is paramount that institutions of learning should encourage their learners to take HIV test since when one knows that he/she is HIV negative status; he/she stands to avoid risky sexual relationships. The college students who had not been to VCT, male 47 (66.2%) and female 24 (33.8%), could have been attributed to the fear that the test results could turn positive or due to lack of a VCT facility within Mosoriot Teachers' Training College, which could have encouraged many college students to visit as opposed to visiting the one outside college to avoid suspicion. Besides there is no rule in Kenya compelling men and non pregnant women to take an HIV test.

#### 4.6 HO<sub>3</sub> There is no significant Relationship between Age and Frequency of Sexual Intercourse

There is no significant relationship between age and frequency of sexual intercourse among college students as shown in Table 4.6. The hypothesis was tested using chi-square at 0.05 level of significance and the findings were ( $\chi^2 = 4.599$ ,  $p > 0.467$ ). The hypothesis which stated that there is no significant relationship between age and frequency of sexual intercourse among college students was accepted.

**Table 4.6 Relationship between Age and Frequency of Sexual Intercourse ( $\chi^2$ )**

##### Chi-Square Tests

|                              | Value              | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square           | 4.599 <sup>a</sup> | 5  | .467                  |
| Likelihood Ratio             | 5.101              | 5  | .404                  |
| Linear-by-Linear Association | .282               | 1  | .596                  |
| N of Valid Cases             | 215                |    |                       |

a. 6 cells (50.0%) have expected count less than 5. The minimum expected count is 1.31.

Out of the college students who engaged in sexual intercourse daily, 3 (50%) were above 24 years and 3 (50%) were below 24 years. For the college students who engaged in sexual intercourse few times a week, 7 (87.5%) were below 24 years while 1 (12.5%) was above 24 years. Among the college students who engaged in sexual intercourse weekly 1 (33.3%) was below 24 years while 2 (66.7%) were above 24 years. Of the college students who rarely engaged in sexual intercourse 59 (53.2%) were below 24 years while 52 (46.8%) were above 24 years. For the college students who abstained, 40 (58%), were

below 24 years, while 29 (42%) were above 24 years. The findings of the study indicated that college students were involved in sexual intercourse in almost a similar pattern irrespective of their age as shown in Table 4.7.

**Table 4.7 Relationship between Age and Frequency of Sexual Intercourse**

Age of Respondent \* Respondents frequency of having sex Crosstabulation

|                   |                |                                              | Respondents frequency of having sex |                  |        |         |        |            | Total  |
|-------------------|----------------|----------------------------------------------|-------------------------------------|------------------|--------|---------|--------|------------|--------|
|                   |                |                                              | Daily                               | Few times a week | Weekly | Monthly | Rarely | Not at all |        |
| Age of Respondent | Below 24 years | Count                                        | 3                                   | 7                | 1      | 11      | 59     | 40         | 121    |
|                   |                | % within Respondents frequency of having sex | 50.0%                               | 87.5%            | 33.3%  | 61.1%   | 53.2%  | 58.0%      | 56.3%  |
|                   | Above 24 years | Count                                        | 3                                   | 1                | 2      | 7       | 52     | 29         | 94     |
|                   |                | % within Respondents frequency of having sex | 50.0%                               | 12.5%            | 66.7%  | 38.9%   | 46.8%  | 42.0%      | 43.7%  |
| Total             |                | Count                                        | 6                                   | 8                | 3      | 18      | 111    | 69         | 215    |
|                   |                | % within Respondents frequency of having sex | 100.0%                              | 100.0%           | 100.0% | 100.0%  | 100.0% | 100.0%     | 100.0% |

Kraft et al. (1990) noted that although age at marriage is often used as a proxy measure for the beginning of exposure to the risk of pregnancy, some women engage in sexual activity before marriage. The KDHS (2003) gathered information on timing of the first sexual intercourse for both men and women. Eighteen percent of women age 25-49 had sex before age 15, while more than half had their first sex by their 18<sup>th</sup> birthday. Older women are more likely to have had their first sexual encounter at an earlier age. This is further reflected in the mean age at first sex, which is about 18 years for those under age 40 and about 17 for women age 40 and above. The male respondents showed an earlier age at first sex at most age groups, compared with female respondents. Twenty five percent of men age 20 – 54 had sex before age 15. The median age at first sex is 17 years, although older men have a slightly higher median age. This trend is different from that of women. Fourteen percent of young women and 29% of young men had sex by age of 15



and it is higher among women in Nyanza Province and among men in Rift Valley Province (KDHS, 2003). Schwartz (1993) noted that majority of young people have begun to have sexual intercourse while still teenagers and at least half by the age of 16. Sexual debut for most young people occurs during their teenage years. Sexual experience among young people has been estimated in a number of countries: At age 15 years, 53% of young people in Greenland, 38% of young people in Denmark and 69% of young people in Sweden have experienced intercourse. By age 18/19 years, the percentage that are sexually active has been reported as 54.1% in the United States, 31% in the Dominican Republic, 66.5% in New Zealand and 51.6% in Australia (Rodden, Crawford, Kippax & French, 1996). Age of debut has been estimated at a mean of 17 years in England and a mean of 15.95 years in the United States (Zelnik et al., 1983) and 16.8 years in Sweden (Schwartz, 1993). Three focus group discussions indicated that female college students below 24 years old were more active than female college students above 24 years old, while male college students above 24 years old were more active than male college students below 24 years old.

#### **4.7 HO<sub>4</sub> There is no significant Relationship between Gender and Frequency of Sexual Intercourse**

There is no significant relationship between gender and frequency of sexual intercourse among college students as shown in Table 4.8. The hypothesis was tested using chi-square at 0.05 level of significance and the findings were ( $\chi^2 = 1.184$ ,  $p > 0.946$ ). The hypothesis which stated that there is no significant relationship between gender and frequency of sexual intercourse among college students was accepted.

**Table 4.8 Relationship between Gender and Frequency of Sexual Intercourse ( $\chi^2$ )****Chi-Square Tests**

|                                 | Value              | df | Asymp. Sig.<br>(2-sided) |
|---------------------------------|--------------------|----|--------------------------|
| Pearson Chi-Square              | 1.184 <sup>a</sup> | 5  | .946                     |
| Likelihood Ratio                | 1.196              | 5  | .945                     |
| Linear-by-Linear<br>Association | .004               | 1  | .951                     |
| N of Valid Cases                | 215                |    |                          |

a. 6 cells (50.0%) have expected count less than 5. The minimum expected count is 1.49.

A total of 6 (2.8%) college students engaged in sexual intercourse daily, where 3 (2.8%) were female while 3 (2.8%) were male. Besides, 8 (3.7%) of the college students engaged in sexual intercourse few times a week, where 5 (4.7%) were female while 3 (2.8%) were male. On the other hand, 3 (1.4%) of the college students engaged in sexual intercourse weekly, where 1 (.9%) was a female while 2 (1.9%) were male. In addition, 18 (8.4%) of the college students engaged in sexual intercourse monthly where 9 (8.4%) were female and 9 (8.3) were male. The college students who rarely engaged in sexual intercourse were 111 (51.6%) where 53 (49.5%) were female while 58 (53.7%) were male. Finally 69 (32.1%) of the college students abstained from sex, where 36 (33.6%) were female while 33 (30.6%) were male. Majority of both male and female college students were involved in sexual intercourse in a relatively similar pattern as shown in Table 4.9 and the findings from two focus group discussions, although findings from three focus group discussions indicated that first year female college students were involved in sexual intercourse frequently than second year female college students. While second year male college students were involved in sexual intercourse frequently than first year male college

students. Rosenthal et al. (1990) noted that partner turnover rate is greater during adolescence and the early twenties than in later years.

**Table 4.9 Relationship between Gender and Frequency of Sexual Intercourse**

Gender of Respondent \* Respondents frequency of having sex Crosstabulation

|                           |                                  | Respondents frequency of having sex |                     |        |         |        |            | Total  |
|---------------------------|----------------------------------|-------------------------------------|---------------------|--------|---------|--------|------------|--------|
|                           |                                  | Daily                               | Few times<br>a week | Weekly | Monthly | Rarely | Not at all |        |
| Gender of Respondent Male | Count                            | 3                                   | 3                   | 2      | 9       | 58     | 33         | 108    |
|                           | % within Gender<br>of Respondent | 2.8%                                | 2.8%                | 1.9%   | 8.3%    | 53.7%  | 30.6%      | 100.0% |
| Female                    | Count                            | 3                                   | 5                   | 1      | 9       | 53     | 36         | 107    |
|                           | % within Gender<br>of Respondent | 2.8%                                | 4.7%                | .9%    | 8.4%    | 49.5%  | 33.6%      | 100.0% |
| Total                     | Count                            | 6                                   | 8                   | 3      | 18      | 111    | 69         | 215    |
|                           | % within Gender<br>of Respondent | 2.8%                                | 3.7%                | 1.4%   | 8.4%    | 51.6%  | 32.1%      | 100.0% |

There are some unique features of the African setting, which influence the high rates of HIV infection. Factors such as female sexual submissiveness, entrenched convictions of male dominance, high levels of sexual violence, social acceptance of the ‘sugar-daddy’ phenomenon and lack of fear of HIV/AIDS has made men to seek relations with a pool of increasingly younger women and girls, (Madlala, 2002). From the findings of the study, the male and female pattern of their frequency in sexual intercourse was so closely related that could make one to easily conclude that the college students engaged in sexual intercourse amongst themselves in college.

## **CHAPTER FIVE**

### **SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.0 Overview**

The first section of this chapter summarizes findings on the awareness of the most common mode of transmission of HIV infection while the second section summarizes information on measures taken to avoid HIV infection and the last section summarizes findings on the frequency of sexual intercourse based on age and gender.

#### **5.1 Awareness of the Most Common Mode of Transmission of HIV Infection**

All the respondents 216 (100%) were aware of the most common mode of transmission of HIV as sexual intercourse. Both print and electronic media have played a role in sensitization of the major mode of transmission of HIV infection. NASCOP (February, 2007) noted that 80% of HIV infection is transmitted through sexual intercourse.

#### **5.2 Measures taken to avoid HIV Infection**

Majority 78 (36.3%) of the respondents kept one sexual partner to avoid HIV infection. Only 64 (29.8%) of the respondents used condoms and this could be attributed to the fact that condoms were not found within college. A small number of the college students abstained from sex 58 (27%), yet this was the focus of behaviour changed messages given by the guidance and counselling department at Mosoriot Teachers' Training College. UNAIDS (2000b) found out that majority of the countries worldwide, young people are already sexually active. Therefore prevention programmes that promote no sex until marriage seem to be failing most young people. UNFPA (2004) noted that for

sexually active people, the condom remained a vital prevention technology. The findings of the study also showed that 80.4% of the respondents said that they would propose use of condoms. UNFPA (2004) asserted that for sexually active people, the condom remains a vital prevention technology. Only 36 (57%) of the respondents used condoms all the time during sexual intercourse. UNFPA (2004) noted that consistent use of male condom reduced risk of sexual transmission of HIV by 80 to 90%. Majority of the respondents (41.5%) who did not use condoms claimed that condoms were uncomfortable. These could have been poor quality condoms within the reach of the respondents.

UNAIDS (2000b) found out other obstacles to condom use as reduced sensitivity and discomforts. Majority of the respondents 102 (47.2%) indicated that the college did not provide condoms. This corresponds to a study by (UNAIDS, 2003) who noted that other people reported having no access to condoms especially college students. A total of 17 (7.9%) of the respondents engaged in paid sex. PRB (2001) observed that economic vulnerability of women make it more likely that they exchanged in sex for money or favours. Majority of the respondents, 215 (99.5%) claimed that the college taught on abstinence. The college was founded on strong Christian principles which uphold abstinence till marriage. Kamaara (2005) noted that the Catholic Church supports behaviour change through abstinence before marriage and faithfulness in marriage.

### **5.3 Relationship between VCT visit and Measures taken to avoid HIV infection**

The respondents who kept one sexual partner and had not been to VCT were 21 (27.3%). While keeping one sexual partner is good, it can be fatal if one has not taken HIV test.

Rosenthal et al. (1990) noted that although those serially monogamous pairings could be of short duration, their regular status, in the minds of many of the young people confer safety with respect to STDs transmission. On the other hand 6 (60%) of the respondents who chose lovers carefully had not been to VCT. This was putting such respondents at risk of contracting HIV infection.

#### **5.4 Relationship between Gender and VCT visit**

Majority of female college students 72 (63.2%) had been to VCT as opposed to male college students 42 (36.8%). Recognizing the urgency of increasing knowledge of HIV status, in June 2004, UNAIDS & WHO recommended that traditional voluntary testing and counselling programmes be supplemented by enhanced diagnostic HIV testing (UNAIDS 2004, Kamaara 2005).

#### **5.5 Relationship between Age and Frequency of Sexual Intercourse**

Majority of the college students were below 24 years old 121 (56.3%). Both male and female college students below 24 and above 24 years were involved in sexual intercourse. Schwartz (1993) noted that majority of young people have begun to have sexual intercourse while still teenagers and at least half by the age of 16. Sexual debut for most young people occurs during their teenage years. Kraft et al. (1990) observed that although age at marriage is often used as a proxy measure for the beginning of exposure to the risk of pregnancy, some women engage in sexual activity before marriage.

### **5.6 Relationship between Gender and Frequency of Sexual Intercourse**

Majority of both male and female college students were involved in sexual intercourse. Rosenthal et al. (1990) noted that partner turnover rate is greater during adolescence and the early twenties than in later years. Madlala, (2002) asserted that factors such as female sexual submissiveness, entrenched convictions of male dominance, high levels of sexual violence, social acceptance of the ‘sugar-daddy’ phenomenon, and the lack of fear of HIV/AIDS has made men to seek relations with a pool of increasingly younger women and girls.

### **5.7 Conclusions**

From the study it is evident that some college students at Mosoriot Teachers’ Training College practised pre-marital sex even though they were 100% aware of the most common mode of transmission of HIV as sexual intercourse. Majority of the respondents kept one sexual partner to avoid HIV infection. Some college students at Mosoriot Teachers’ Training College practised inconsistent condom use, kept one sexual partner or chose lovers carefully before visiting VCT. Majority of female college students were aware of their HIV status as opposed to male college students. Some college students at Mosoriot Teachers’ Training College engaged in sexual intercourse irrespective of their age and gender.

## 5.8 Recommendations

- The Guidance and Counselling Department in Teachers' Training Colleges ought to provide films, posters/billboards and other materials on HIV/AIDS and put them in brail too for visually impaired college students to get access to it.
- The Ministry of Higher Education in conjunction with National AIDS and STI Control Programme ought to come up with a policy geared towards provision of regular, free and quality condoms to college students and the decision to use condoms should remain at personal level. A VCT facility ought to be availed too in Teachers' Training Colleges.
- College students should adopt an appropriate measure to be able to protect themselves against HIV infection by visiting VCT, abstaining from sex, being faithful to one uninfected sexual partner, or by consistent and proper use of quality condoms.
- The Ministry of Higher Education ought to employ and post trained counsellors to handle HIV/ADS and other counselling concerns in Teachers' Training colleges.

## 5.9 Suggestions for Further Research

Another focus should be placed on:

- Sexual behaviour change and vulnerability of single mothers in their youthful stage to HIV infection in schools, colleges or out of school.
- Effects of socio-economic background on sexual behaviour change and HIV infection among school going and college students.
- Effects of inconsistent condom use on HIV infection among out of school youth.



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## **APPENDICES**

### **Appendix I. Introductory Letter**

I am a student at Moi University investigating sexual behaviour change and HIV infection among college students at Mosoriot Primary Teachers' Training College. It is hoped that this study will be of great importance to the Ministry of Education and other stakeholders.

You are one of the few college students who can help me achieve the objectives of the study. Kindly spare some time to respond to the questionnaire. This is purely an academic exercise and your sincere response will be highly appreciated and treated with confidentiality both during and after the study.

Thank you

Yours faithfully,

Hellen J.

Hellen J.

Moi University

P.O Box 3900

ELDORET.

## Appendix II. College Students' Questionnaire

This questionnaire is for **SINGLE** male and female college students only:

The questionnaire seeks to obtain information about the sexual behaviour change and HIV infection among college students. You are requested to participate by answering the questions as honestly as possible. The information you provide will be used only for the purpose of research and will be kept confidential. Therefore do not write your name on the questionnaire or any other paper used in data collection. Please note that there are no correct or wrong answers to these questions. Indicate what is most appropriate to you by using a tick on **ONE** alternative only or by filling the blank spaces where appropriate.

### a) College Students' Biographical Form

1. What is your gender?

Male ☐ 1

Female ☐ 2

2. Which is your year of study at Mosoriot College?

First Year ☐ 1

Second Year ☐ 2

3. What is your age?

Below 24 years ☐ 1

Above 24 years ☐ 2

4. What is your marital status?

Single ☐ 1

Married ☐ 2

Never Married ☐ 3

Divorced ☐ 4

Windowed ☐ 5

Cohabiting ☐ 6

5. Residence:

Rural ☐ 1

Urban ☐ 2

## 6. Province of Residence

Nairobi ☐ 1Central ☐ 2Coast ☐ 3Eastern ☐ 4Nyanza ☐ 5Rift Valley ☐ 6Western ☐ 7North Eastern ☐ 8**b) College Students' Sexual Behaviour (1)**

1. Are you aware of the modes of transmission of HIV?

Yes ☐ 1No ☐ 2

2. Which one of the following do you believe is the most common mode of transmission of HIV?

Sexual intercourse ☐ 1Blood transfusion ☐ 2Breast feeding ☐ 3Mother to child during birth ☐ 4Use of contaminated needles ☐ 5Organ transplant ☐ 6

99 Other (specify) .....

3. Are you currently involved in a sexual relationship?

Yes ☐ 1No ☐ 24. If your answer to item (3) is **Yes**, what do you seek for in a relationship?Companionship ☐ 1To be like other peers ☐ 2Gifts and other favours ☐ 3Sexual satisfaction ☐ 4

99 Other (specify) .....

5. How many sexual partners have you had?

1 ☐ 1More than 1 ☐ 2



6. Under what circumstance would you decide to have sex with someone?

Experimenting ☐ 1                      Curiosity ☐ 2

In love with the person ☐ 3                      To get gifts and other favours ☐ 4

Under influence of drugs/alcohol ☐ 5

Peer pressure ☐ 6

7. Do you know of a way of protecting yourself against HIV infection?

Yes ☐ 1                                              No ☐ 2

8. What measure do you take to protect yourself from HIV infection?

Stick to one sexual partner ☐ 1                                              none ☐ 2

Abstain from sex ☐ 3

Use condoms ☐ 4

Choosing lovers carefully ☐ 5

99 Other (specify) .....

9. Did you visit Voluntary Counselling and Testing (VCT) before engaging in sexual intercourse?

Yes ☐ 1                                              No ☐ 2

10. If you use condoms how often have you or your sexual partner(s) used condoms?

All the time during sexual intercourse ☐ 1

Sometimes during sexual intercourse ☐ 2

11. What is the reason that makes you use condom(s)?

To protect myself and my partner from HIV ☐ 1

To protect against sexually transmitted infections ☐ 2

To protect against pregnancy ☐ 3

99 Other (specify).....

12. If you choose lovers carefully, what do you consider?

Those who look health ☐ 1                      Those who are well behaved ☐ 2

Those who have gone for VCT ☐ 3                      Those I know very well ☐ 4

99 Other (specify) .....

13. If you engage in unprotected sexual intercourse, what is the reason why you do not use condom(s)?

Religious beliefs ☐ 1                      Want to have a child ☐ 2

Uncomfortable ☐ 3                      Feel embarrassed to ask for them ☐ 4

Partners do not like them ☐ 5                      Cannot get them ☐ 6

Forget to have them with me ☐ 7

99 Other (specify) .....

14. What difficulties do you find in obtaining condom(s)?

Too expensive ☐ 1                      The College does not provide them ☐ 2

Too shy to ask for them ☐ 3

99 Other (specify).....

15. Is HIV mainly transmitted through unprotected sex?

Yes ☐ 1

No ☐ 2

16. Once infected by HIV there is no cure. Does everybody believe in that?

Yes ☐ 1

No ☐ 2

17. Do you know of any of the student-teacher who has died of AIDS

Yes ☐ 1

No ☐ 2

18. Is HIV infection always fatal?

Yes ☐ 1

No ☐ 2

19. Can AIDS be transmitted by insect bites?

Yes ☐ 1

No ☐ 2

20. A person cannot be infected by sharing utensils with someone with AIDS.

True ☐ 1

False ☐ 2

21. An healthy looking person can have the HIV virus.

True ☐ 1

False ☐ 2

22. Do you know any of your colleagues who are infected by HIV?

Yes ☐ 1

No ☐ 2

23. Are you infected by HIV?

Yes ☐ 1

No ☐ 2

24. Is HIV testing the only way of knowing your HIV status?

Yes ☐ 1

No ☐ 2

Not sure ☐ 3

25. Is there a cure for AIDS?

Yes ☐ 1

No ☐ 2

Not sure ☐ 3

26. HIV infection can be?

Prevented ☐ 1

Not be prevented ☐ 2

Non of the above ☐ 3

27. Alcohol and drugs can increase your risk in getting AIDS?

True ☐ 1

False ☐ 2

I do not know ☐ 3

**c) College Students' Sexual Behaviour (2)**

1. I have sex

Daily ☐ 1

Few times a week ☐ 2

Weekly ☐ 3

Monthly ☐ 4

Rarely ☐ 5

Not at all ☐ 6

99 Other (specify.....)

2. Have you had sex with more than one partner in the last 12 months?

Yes ☐ 1

No ☐ 2

3. If the answer to the above is yes, did you use a condom?

Yes ☐ 1

No ☐ 2

4. Did you have a high risk-sex in the last 12 months?

Yes ☐ 1

No ☐ 2

5. Do you ask/give any compensation after sex?

Yes ☐ 1

No ☐ 2

6. How would you rate your risk/chance of getting infected by HIV?

No chance ☐ 1

Moderate chance ☐ 2

Small chance ☐ 3

Great chance ☐ 4

Don't know ☐ 5

7. Is a woman justified in refusing to have sex with her husband /boy friend if she knows he has had sex with other persons?

Yes ☐ 1

No ☐ 2

8. How do you negotiate safer sex to avoid HIV transmission?

Propose use of condoms ☐ 1

Refuse to have sex ☐ 2

Do not have power to do anything ☐ 3

9. Are there factors in college setup that help in the engagement in high risk-sex?

☐
☐

Yes 1

No 2

10. List the factors above.

- i) .....
- ii) .....
- iii) .....
- iv) .....
- v) .....

11. AIDS can only affect immoral people?

Yes ☐ 1No ☐ 2

12. AIDS patients and HIV carriers are always thin?

Yes ☐ 1No ☐ 2

13. Suggest strategies which can be used to sensitize the students in college on their sexuality.

- i) .....
- ii) .....
- iii) .....
- iv) .....
- v) .....

14. What role does the college play in the prevention of HIV infection?

Teach on abstinence ☐ 1Provision of condoms ☐ 2

### Appendix III: Focus Group Discussions Guide

#### Focus Group Discussions Guide for College Students

1. Are there any expectations for both male and female college students to have sexual experience?.....

.....

.....

2. Are you aware of the major mode of transmission of HIV?.....

.....

.....

3. How do you protect yourselves against HIV infection?.....

.....

.....

4. Do you visit VCT?.....

.....

.....

5. Do you find difficulties in obtaining condoms?.....

.....

.....

6. What impact does having more male than female college students have on patterns of sexual behaviour?.....

.....

.....

7. What role does the college play in the prevention of HIV infection?

.....

.....

.....

8. What is the relationship between age of college students and the frequency of sexual intercourse?.....

.....

.....9.

Do male and female college Students differ in their frequency of sexual intercourse?.....

.....

.....

## Appendix.IV Research Authorization Letter (National Council)

REPUBLIC OF KENYA



**NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY**

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

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

Our Ref: **NCST/5/002/R/600/4**

Date: **3<sup>rd</sup> July 2009**

**Ms. Jepchirchir Hellen**  
 Moi University  
 P.O. Box 3900  
**ELDORET**

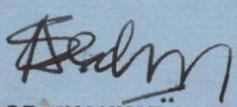
**RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on ***Sexual Behaviour Change and HIV/AIDs Infection Among College Students: A Case of Mosoriot Primary Teachers Training College, Nandi North District'***

I am pleased to inform you that you have been authorized to undertake your research in Mosoriot Teachers College in Nandi North District for a period ending 31<sup>st</sup> December 2009.

You are advised to report to the Principal Mosoriot Teachers Training College before embarking on your research project.

Upon completion of your research project, you are expected to submit two copies of your research report/thesis to our office.



**PROF. SHAUKAT A. ABDULRAZAK Ph.D, MBS**  
**SECRETARY**

Copy to:

The Principal  
 Mosoriot Teachers Training College  
**Nandi North District**

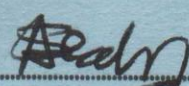


## Appendix.V Research Permit

| PAGE 2                                         | PAGE 3                               |
|------------------------------------------------|--------------------------------------|
| THIS IS TO CERTIFY THAT:                       | Research Permit No. NCST/5/002/R/610 |
| Prof./Dr./Mr./Mrs./Miss. JEPCHIRCHIR           | Date of issue ... 2.07.2009          |
| .....HELLEN.....                               | Fee received..... SHS 1000           |
| of (Address) MOI UNIVERSITY                    |                                      |
| PO BOX 3900 ELDORET                            |                                      |
| has been permitted to conduct research in..... |                                      |
| MOSORIOT TEACHERS T. COLLEGE, Location,        |                                      |
| .....NANDI NORTH..... District,                |                                      |
| .....RIFT VALLEY..... Province,                |                                      |
| on the topic. SEXUAL BEHAVIOR CHANGE           |                                      |
| .....AND HIV/AIDS INFECTION AMONG.....         |                                      |
| COLLEGE STUDENTS. A CASE STUDY                 |                                      |
| OF MOSORIOT TEACHERS TRAINING                  |                                      |
| COLLEGE IN NANDI NORTH DISTRICT                |                                      |
| for a period ending ... 31ST DEC....., 20..09  |                                      |



  
 Applicant's  
Signature

  
 Secretary  
National Council for  
Science and Technology

**Appendix .VI Research Authorization Letter (District Commissioner)**

**OFFICE OF THE PRESIDENT**



TEL:  
FAX:

When replying, please quote

Ref: No. EDU/NND/VOL.II/13

The District Commissioner  
Nandi North District  
P.O. Box 88-30303  
KABIYET

20<sup>th</sup> August, 2009

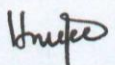
The Principal  
Mosoriot Teachers College  
P.O. Box 100  
MOSORIOT

**RE: RESEARCH AUTHORIZATION**  
**MS JEPCHIRCHIR HELLEN**

This is to inform you that the above named person has been authorized to carry out research within the District on the following topic:

***“Sexual Behaviour Change and Hiv/Aids Infection Among College Students: A Case of Mosoriot Primary Teachers College, Nandi North District”.***

Please accord her any necessary assistance.

  
HELLEN S. KIILU  
DISTRICT COMMISSIONER  
NANDI NORTH

c.c.

Ms Jepchirchir Hellen  
Moi University  
P.O. Box 3900  
ELDORET



## Appendix .VII Research Authorization Letter (District Education Office)

Telegrams: "Education", Mosop  
Telephone: **020-2380058**.  
Fax: 020 - **2410789**



DISTRICT EDUCATION OFFICE  
NANDI NORTH DISTRICT  
P. O. BOX 86,  
**KABIYET.**

When replying please quote

20<sup>th</sup> August, 2009.

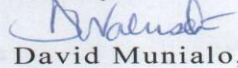
✓  
THE PRINCIPAL,  
MOSORIOT TEACHERS' TRAINING COLLEGE.

**RE: MS JEPCHIRCHIR HELLEN**

This is to confirm to you that the above mention student from Moi University has reported to this office to notify us about her intention to conduct research in your institution.

Kindly accord her the assistance she may require.

Thank you.

  
David Munialo,

For: District Education Officer,  
**Nandi North District.**

FOR DISTRICT EDUCATION OFFICER  
NANDI NORTH

Cc

National Council for Science and Technology  
P.O BOX 30623-00100  
**NAIROBI.**



## Appendix. VIII Research Area

