



EAC/AMREF LAKE VICTORIA PARTNERSHIP (EALP) PROGRAMME

*“ADDRESSING MOBILITY, VULNERABILITY AND GAPS IN
INTEGRATED RESPONSE TO HIV&AIDS IN THE LAKE VICTORIA
BASIN”*

HIV SERO-BEHAVIOURAL STUDY IN SIX UNIVERSITIES IN KENYA



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ACRONYMS/ABBREVIATION

AAU	-	African Association of Universities
ACASI	-	Audio-Computer Assisted Self – Interviewing
ACU	-	Aids Control Unit
AIDS	-	Acquired Immunodeficiency Virus
AMREF	-	African Medical and Research Foundation
DBS	-	Dry Blood Spot
EALP	-	East African Lake Basin Project/Programme
GDP	-	General Domestic Product
HIV	-	Human Immunodeficiency Virus
ICRAF	-	International Centre for Research in Agro-Forestry
IRERC	-	Institutional Research and Ethical Review Committee
IUCEA	-	Inter-University Council for East Africa
JKUAT	-	Jomo Kenyatta University of Agriculture & Technology
KAIS	-	Kenya Aids Indicators Survey
KARSCOM	-	Kenya HIV/AIDS Research Coordinating Mechanism
KDHS	-	Kenya Demographic Health Survey
KEMRI	-	Kenya Medical Research Institute
KNASP	-	Kenya National HIV/Aids Strategic Plan
KNBS	-	Kenya National Bureau of Statistics
KU	-	Kenyatta University
LVB	-	Lake Victoria Basin
MMUST	-	Masinde Muliro University of Science and Technology
NASCOP	-	National Aids & Sexually Transmitted Infections Control Programme
NACC	-	National Aids Control Council
NCAPD	-	National Council for Population and Development
NERC	-	National Ethical Review Committee
NHRL	-	National HIV Reference Laboratories
NICD	-	National Institute for Communicable Diseases
NPHL	-	National Public Health Laboratories
NTT	-	National Technical Team
SPSS	-	Statistical Package for Social Sciences
UDSM	-	University of Dar-es –salaam
UNAIDS	-	United Nations Joint Programme on Aids
UON	-	University of Nairobi
VCT	-	Voluntary Counselling and Testing
WHO	-	World Health Organization

EXECUTIVE SUMMARY

Universities and institutions of higher learning in general consist mainly of young people in the 17-24 year old category, most of whom are sexually active, and therefore most vulnerable to HIV infection. And though studies such as KAIS (2007) and KDHS (2003, 2008) have been conducted on the general Kenyan population, studies specific to institutions of higher learning are scanty, in particular, sero-prevalence data on this target group is lacking. This prompted the EALP/IUCEA to commission a study to understand the extent, nature and impact as well as response to HIV and AIDS within universities. The purpose of this assignment therefore was to generate an understanding of the way that HIV/AIDS is affecting universities and host communities and to identify responses and gaps in the management of the pandemic that could be used to strengthen and expand interventions at national and regional levels. The study had a total representative sample of 3942 students drawn from six universities in Kenya, four of which were from the Lake Victoria Basin region. Thus, this study is aimed at providing evidence to guide the responses and policy formulation to the challenge of HIV in institutions of higher learning.

Findings of the EALP/IUCEA HIV and AIDS baseline study in institutions of higher learning carried from 1st March to 12th March and from 25th May to 5th June 2009, revealed that 20 (0.51%) of the 3942 respondents were diagnosed as infected with HIV at the time of the survey. Significantly greater prevalence was recorded among men (0.58%) than women (0.40%) Thus, HIV prevalence among students at Kenyan universities is way below the national average of 3.8% for the age group of 15-24 years (KAIS, 2007) where most belong. HIV prevalence among male students was within the national range of 0.4% to 2.6% for that age group. However, HIV prevalence among female students was well below the national range of 3% to 12% for the age group. HIV prevalence among total orphans was higher than other parenthood groups

Sexual debut was at 18 years and was earlier in males than females. For those testing HIV positive, sexual debut was one year earlier at 17 years. Primary abstinence was reported in a quarter of the respondents, was higher in females, and decreased with increase in year of study. The main reasons given for abstinence were religion (70%), followed by waiting for marriage (66.5%) and fear of contracting HIV (62.3%). The prevalence of the high risk anal sex was generally low at 2.5%. However, anal sex for HIV positives respondents was four times higher than the overall prevalence rate in the study.

Overall use of condoms was generally high with two thirds of respondents having used them during their last sexual episode. Most respondents knew

where to obtain condoms on campus. Multiple sexual partners were reported by nearly half of the respondents, and were more common in males. Sex for favours was generally low at 8.6% and more common among males. Among those testing HIV-positive, 23.5% reported having had sex for favours, almost three times higher than the overall average.

Intergenerational sex was fairly low at 15.4% and higher among males. Among those testing HIV-positive, 35.3% and 35.3%, reported having had sex with persons 10 years older and 5 years younger respectively, about double the overall average. Sex with lecturers was very low at 1.8% and more common among males, and largely attributed to attraction. Prevalence of academic wives or husbands was low at 2.7% and was more common among males. Influence of drug and alcohol into undesired sex was low at 16.2% and greater among males. Among those testing HIV positive, 43.8% reported having been influenced by drugs and alcohol to have undesired sex, which was about two and half times the overall average. Reports of infection with other STI's other than HIV were low at 4.2%. STI infections among those testing positive was reported at 25%, six times more than the overall average. Sexual partner sharing with friend was at 15.0% and more common among males. Among those testing HIV positive, 33.3% reported having shared a sexual partner with a friend, double the overall average. Sexual assault was reported by 8.9% and was higher in females

Slightly less than two thirds of respondents had taken university level course on HIV and AIDS, mainly as a common university unit. However, only 19% of students from PU had undertaken university level course on HIV and AIDS compared to 90.8% at GU. Knowledge of HIV transmission and prevention was similar irrespective of university or undertaking of courses on HIV and AIDS. Unprotected sex was mentioned by all respondents as the main mode of HIV transmission. Abstinence and condom use were the most preferred mode of HIV prevention and were highly recommended by respondents.

Slightly over half of the students rated themselves as being at low risk of contracting HIV, with abstinence, followed by condom use, and partner trust being cited as reasons for the low rating. HIV testing was reported by 63.6% which was nearly double the national average of 33.9% (KAIS, 2007). Some 15% of those testing HIV positive had never taken an HIV test. Use of condoms and abstinence were the most popular behaviour change choices cited after HIV testing. Among those testing HIV positive, 41.1% had joined a behaviour change group, while another 35.3% had joined support group of people living with HIV.

Most respondents travel by road to and from college, and it takes majority less than half a day to make the journey. Sex during travelling was reported in 10.1%

and more common among male respondents, and often involved boyfriend or girlfriend. Sex during transit among HIV positive respondents was slightly more than double the average. Walking was the most common means of travelling between lectures. Physical and sexual assault and accidents were cited as the greatest risks associated with travelling between lectures

The study revealed that there is goodwill from top management to fight the pandemic in the investigated universities. This has resulted in the following significant improvements in Policies and Coordination Structures put in place such as: The establishment of HIV/AIDS control units which are mandated with co-ordination of HIV/AIDS activities within and without campus; the provision of VCT services and mainstreaming of HIV and AIDS into university common compulsory course for increased awareness; and high incidence of abstinence among female students and enhanced linkages with other organizations.

A number of useful lessons were learnt from the baseline survey in six universities in Kenya. These are detailed out in chapter 9 and include: Problem of contextual factors affecting students; problem of risky behaviors; limited provision of student-friendly services; institutional arrangement and HIV/AIDS policies; lack of student-host community HIV/AIDS planning; lack of integrated HIV and FP services; weak support and referral systems; too much academic and social freedom; lack of Monitoring and Evaluation of programmes

Based on the analysis of findings from the study and lessons learned, recommendations by priority HIV and AIDS programme needs within universities are as follows: Give priority to the contextual factors affecting students such as; putting mechanisms in place to look into gender norms and disparities, addressing poverty and available economic opportunities, preventing alcohol and drug abuse within campus, developing a sound social support system, addressing issues concerning campus and non-campus residence; change emphasis from awareness to behavior change and abstinence; expand the provision of student-friendly services; operationalization of HIV/AIDS policies; strengthening coordination and partnerships; and enhancement of student-host community HIV/AIDS planning.

CHAPTER 1 INTRODUCTION

1.1 Background

The Eastern and Southern Africa region is the epicentre of HIV and AIDS in Africa and remains the leading cause of death there. The estimated number of deaths due to AIDS in 2008 was 2.0 million [1.7–2.4 million] worldwide of which 76% occurred in sub-Saharan Africa (UNAIDS, 2009). More than two out of three (68%) adults and nearly 90% of children infected with HIV live in this region. Results of the Kenya Aids Indicator Survey (KAIS, 2007) indicate that 7.4% of adults aged between 15-64 years are infected with HIV, while 7.8% of adults aged 15-49 years were infected with HIV, which translates to 1.4 million adults. Women continue to be disproportionately infected with HIV (8.7%) compared to men (5.6%). The overall prevalence among youth aged 15-24 years was 3.8% ranging from 3% in women 15 years old and 12.0% in women 24 years old, and among men aged 15-24 years ranged from 0.4% to 2.6%. Thus, young women aged 15-24 years remain especially vulnerable to HIV infection

Kenya has a significant demographic challenge; a large youth population, high population growth with rapid urbanization and growth of informal settlements. Young people aged 15-35 represent 38% of the population and the current 11 million young people in this age group are expected to increase to 16 million by 2012. Over 60% of new HIV infections are among this age group, yet the dynamic of this demographic challenge is in danger of being ignored as new cohorts of young people are constantly becoming sexually active. Young people will require support to prevent new HIV infections, and to have effective and equitable access to sexual and reproductive health services (NICD 2006). HIV and Aids remains a major development and social issue. Indeed, The Government of Kenya recognizes that HIV/AIDS epidemic poses a severe threat to the Kenyan economy, with major social and economic impact on individuals, households, communities and society as a whole. Among other things, it has negative implications for the productive capacity of individuals and households as well as accumulation and transfer of human capital between generations. Within the education sector, HIV and Aids is reducing the availability of financial resources for education and compromising the quality of education. And yet, education is one of the best “social vaccines” against HIV because it equips young people with invaluable tools to increase their self confidence, social and negotiation skills, improve earning capacity and family well-being, fight poverty and promote social progress (Nzioka *et al.*, 2007). And though young people are the most threatened by the epidemic, they offer the greatest hope for turning the tide against HIV and AIDS.

According to CHE (2004) institutions of higher learning must respond to HIV and AIDs since no institution is immune to the pandemic and its impact. This demands a coordinated response from such institutions by mainstreaming

through the formulation of policies, plans, programmes and activities which effectively address the concerns arising from the epidemic. The HIV/AIDS Control Unit (ACU) is one of the major interventions developed as a response to the HIV/AIDS pandemic in the institutions of higher learning. These Unit fall under the ACU of the Ministry of Higher Education, Science and Technology through the Commission for Higher Education's ACU, which coordinate ACU activities among the universities. The overall goal of the Aids Control Unit is to formulate programmes for the control and management of HIV/AIDS crisis within the university and its neighborhood.

Universities and institutions of higher learning in general consist mainly of young people in the 17-24 year old category, most of whom are sexually active, and therefore most vulnerable to HIV infection. And though studies such as KAIS (2007) and KDHS (2003, 2008) have been conducted on the general Kenyan population, studies specific to institutions of higher learning are scanty, in particular, sero-prevalence data on this target group is lacking. This has prompted the EALP/IUCEA to commission a study to understand the extent, nature and impact as well as response to HIV and AIDS within universities. The purpose of this assignment therefore was to generate an understanding of the way that HIV and AIDS is affecting universities and to identify responses and gaps in the management of the pandemic that could be used to strengthen and expand interventions at national and regional levels.

1.2 The Terms of Reference

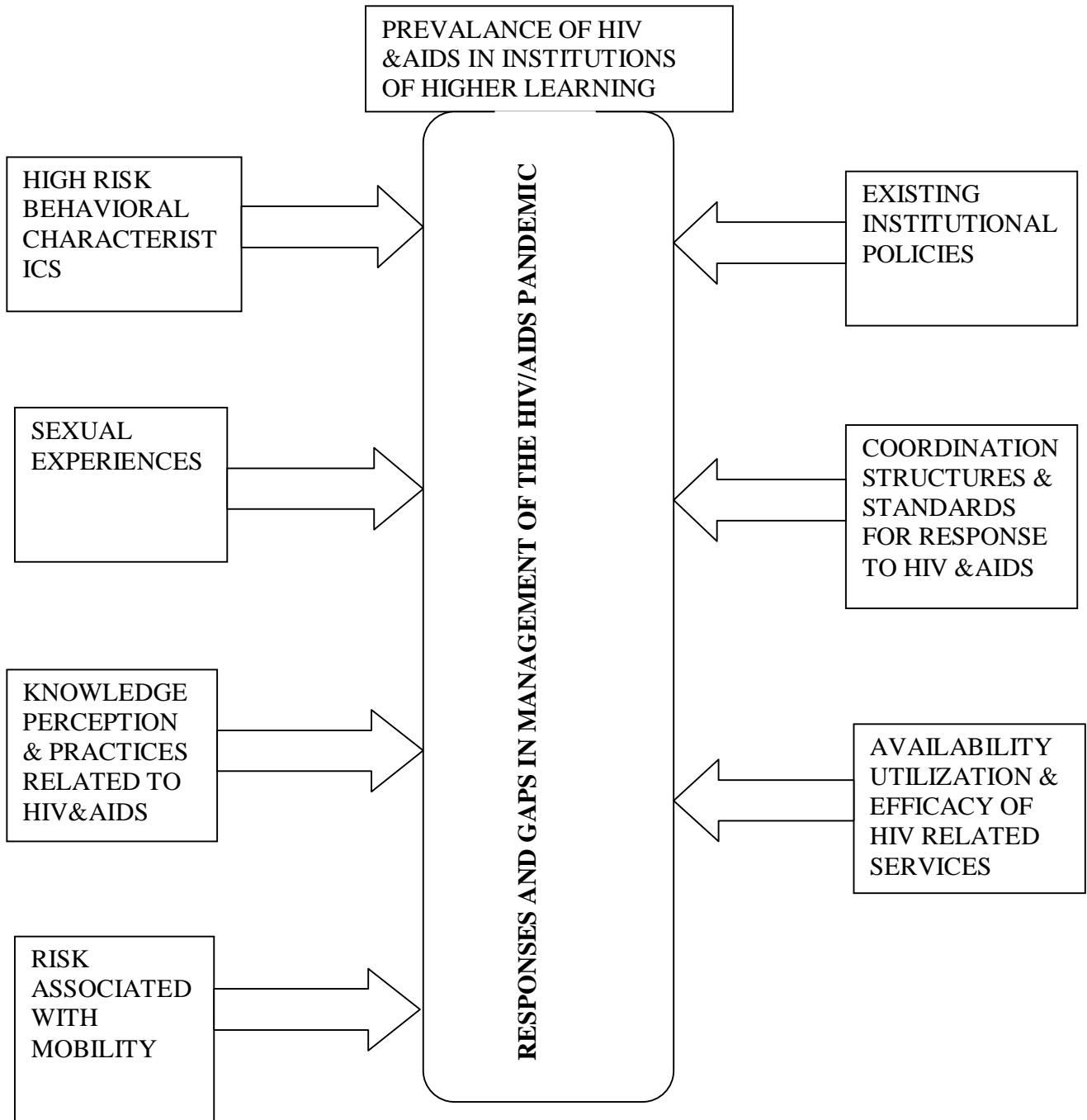
The terms of reference made the bases on which the objectives of the study were formulated and these were:

- 1) To work with the IUCEA/EALP task force to develop appropriate study methodology, including a sampling strategy and study scope,
- 2) To identify and analyze the HIV risks and the vulnerabilities related to internal and cross-border movement of university students, including an assessment of the HIV-related impacts of the interactions with the surrounding host communities,
- 3) To establish the nature, extent and impact of HIV and AIDS on the universities in particular, and the education sector in general,
- 4) To identify existing policies, coordination structures and standards for responding to HIV and AIDS in institutions of higher learning; and ascertain their relevance, effectiveness and impact, e) assess the availability, utilization and efficacy of HIV and AIDS- related services for students and staff of universities in East Africa.

1.3 Study Context

As the AIDS epidemic continues to spread in Sub-Saharan Africa, increasing numbers of youth are under constant threat of being infected with HIV, and university students are no exception. This study is among the very first of its kind among students at institutions of higher learning, who are predominantly youth. The study involved conducting a sero-prevalence survey in relation to the underlying mechanisms of youth sexual experiences and high risk behavioural characteristics, knowledge, perceptions and practices related to HIV, and risks associated with their mobility and to and within their learning institutions. The study also explored structures, programmes and activities in place and implemented towards the mitigation of the impacts associated with HIV within the institutions. This study laid greater emphasis on institutions based mainly within the Lake Victoria basin. Though there are several activities within universities addressing the HIV and AIDS pandemic, these have not been based on credible evidence to inform university level responses. It is important to fully have a clear understanding of the way universities have responded to the challenge posed by HIV and AIDS, identify responses and gaps in the management of the pandemic that could be used to strengthen and expand interventions. Furthermore, there has been no authoritative study aimed at identifying existing policies, coordination structures and standards for responding to HIV and AIDS in institutions of higher learning. Thus, this study is aimed at providing evidence to guide the responses and policy formulation to the challenge of HIV in institutions of higher learning.

1.4 Conceptual Framework



Source: EALP/IUCEA Consultants, 2010

1.5. LITERATURE REVIEW

1.5.1. HIV/AIDS in institutions of higher learning

There is a paucity of relevant and current data with respect to the impact of HIV/AIDS on institutions of higher learning. It is apparent that most studies seem to focus on its effects broadly on the education sector, and especially on children. A World Bank study (Over, 1992) examined the macroeconomic impact of AIDS in 30 sub-Saharan African countries. This study concluded that the net effect is likely to be a reduction of the annual growth rate of GDP by 0.8 to 1.4 percentage points per year and a 0.3 percentage point reduction in the annual growth rate of GDP per capita. Hancock *et al.* (1996) in a study of the impact of AIDS on the economy of Kenya projected that GDP would be 14 percent lower in 2005 than it would have been without AIDS, while GDP per capita would be 10 percent less in 2005. Other studies in Tanzania, Cameroon, Zambia, Swaziland, Kenya, and other sub-Saharan African countries are cited to have found that the rate of economic growth could be reduced by as much as 25% over a 20-year period.

Crewe (2000) notes that HIV and AIDS can reduce student enrolments through deaths, illness, financial constraints, and demand for home care of sick relatives and friends. HIV and AIDS also increase the cost of training academic and support staff due to enhanced attrition and premature deaths. The universities also incur huge expenses in the form of employee benefits given in case of HIV related illness or death. Moreover, these impacts can adversely affect the quality of education within the institution because sick, depressed, unmotivated or demoralized staff cannot be expected to teach effectively, nor can infected and affected students be expected to fully comprehend educational instructions or assume all the course workloads.

Accurate data on HIV prevalence among staff and students is unavailable in most higher and tertiary education institutions, but there is anecdotal evidence that HIV and AIDS-related illnesses and deaths among both staff and students in these institutions are on the increase. Student absenteeism and deaths are, however, less conspicuous owing to rapid growth in student populations in these institutions and also due to the fact that many students with HIV related illnesses withdraw from their studies and subsequently there is little opportunity of tracking where they go and what happens to them. It is possible that HIV-related absenteeism, the loss of skills, and the overall costs and other impacts due to HIV and AIDS are seriously undermining the capacities of tertiary institutions to achieve their defined educational and research goals (Anarfi, 2000; Crewe, 2000; Kelly 2000, ACU, 2002; Abebe, 2004).

University students are mostly sexually-active young people in the 18-30 year old category. Global data shows that more than a third of all people living with HIV are under the age of 25 (UNAIDS, 2004). Certain aspects of social life place members of tertiary and higher education institutions at risk of contracting HIV. Enhanced personal freedom coupled with the attractions and pressures of life in tertiary and higher education institutions is a recipe for sexual activity and experimentation. Casual sex and multiple sexual partnerships are common. Instances of offering sex in return for favours like good grades and academic advancements exist in some of these institutions. Commercial sex may not be uncommon as poor students seek to earn money to pay for their fees or for personal upkeep. Campuses are places where the safety of all students and staff, especially women must be guaranteed. Nevertheless, some university residences have earned a reputation as being places where rape, sexual violence and harassment of women are commonplace and where unprotected sex is perhaps the norm.

The growing HIV/AIDS pandemic has already had a marked impact on higher education and will continue to do so as the disease intensifies. This, in turn, will have multiple effects on society, particularly in sub-Saharan Africa where the prevalence is so high. Higher education institutions therefore have a crucial role to play in developing effective mechanisms to deal with this impact both within the campus and in surrounding communities as demonstrated below:

In a workshop held in December 2001 at the World Agroforestry Centre (ICRAF), it was reported that most of the institutions reported that they had each been hit very hard by the HIV/AIDS epidemic. Statistics were more easily available for infection and death rates among staff than they were for students, since staff members tend to remain attached to the university after the onset of illness whereas students tend to disappear. Estimates of percentage of staff infected range from 12% to over 50% of staff members between the ages of 30 and 39, and 35% of those over 40 years. Many institutions reported an average death rate of about 2 staff members per month, with University of Nairobi reporting an average death rate of 2 staff members per week (Nzioka, 2000). In each case, the numbers of students infected and dying were unknown.

More specifically, a report on the University of Dar es Salaam (UDSM) compiled by Luhanga (2006) reported that during the academic year 2003/04, it was shown that slightly over two-thirds (69%) of the students had sex for the first time before the age of 22 years (before they were enrolled in the University). While a small proportion of students (3.2%) reported recent sexual intercourse with sex workers, and slightly over a tenth (12.4%) of the students reported to have had sex with casual partners. About half of the students (55.7%) reported to have sex with regular partners. Furthermore, evidence indicates that 12% of students are not always faithful to their partners. As a result, multiple partnerships are fairly common among students. Nearly a third (31.6%) of the respondents had two or

more partners within the last 6 months. Taken together these data reflect low level of sexual abstinence among students at the University of Dar es Salaam.

The above observations indicate that young people could be susceptible to unplanned pregnancies, sexually transmitted infections (STIs) including HIV infection. On condom use, almost a third of the students (32.8%) and a quarter (25%) of the staff never asked their new sexual partners how they felt about using condoms before having sex (Kline, 2002). Nevertheless, the majority of the student respondents (61.6%) reported to have used a condom the last time they had sex. Students were more likely to use condoms during casual and commercial sex/outside relationship. Students who are in stable relationship do not use condoms. The majority of the staff (68.7%) reported not to have used a condom the last time they had sex. Moreover, there was evidence that condoms were not used consistently.

A significant proportion of students and staff at the UDSM reported to have not tested for HIV. Reasons given by both students and staff for not going for an HIV test in descending order were: I am afraid of the results (90.5%); I do not have time to go for testing (39.3%); it costs too much (12.2%); I do not know where to go for testing (12.2%); I trust myself to be ok (10.8%) and no need to (9.4%).

A study by Chiboola (2001) carried among 1240 students of the University of Zambia (UNZA) showed that most students were aged between 19-26 years, the age group which is highly vulnerable to HIV infection. It further revealed that knowledge regarding HIV transmission was only moderately good considering that the students are among the most highly educated group in the country. Most students knew that HIV infection was spread through blood, semen and vaginal fluids, and nearly 50% also thought that HIV could be transmitted through saliva and mosquitoes - popular beliefs among different study groups. The study also noted that despite the fact that the majority of students knew someone with HIV/AIDS, they still held very negative attitudes to those with the disease. For instance, 8% felt that people with HIV/AIDS had led immoral lives, 14% felt that people with HIV/AIDS should be isolated, and 15% did not like the idea of working with people who have HIV/AIDS. Such negative attitude seems predominant in the general population and greatly contributes to the mystification, stigmatisation, and perpetuation of inappropriate fears regarding HIV/AIDS.

On admission into UNZA, 53% of male and 24% of female students said that they had one or more sexual partner (in reference to "freshers" or new students). When the same question was asked among the continuing students, 85% of male and 61% of female students indicated having had one or more sexual partner. This clearly demonstrates that sexual behaviour amongst University students is quite permissive. This scenario is made possible because of the newly gained

freedom and independence from parental control as well as the desire for sexual experimentation, characteristic of adolescence and young adulthood.

Information from Jomo Kenyatta University of Agriculture and Technology (JKUAT) Hospital indicated that 130 to 150 (11.7% to 13.5%) staff members were infected with HIV (Magambo, 2000). Approximately 11% of academic staff, 13% of middle level personnel and 12% of ancillary staff were living with HIV. Estimates from university records between 1995 and August 2000 indicated that 22 staff members died of AIDS-related illnesses. It is estimated that the University paid approximately Kshs. 550,000 as terminal benefits and Kshs. 840,000 as funeral expenses during that period. However, among the undergraduate population of 1900 males and 365 females, the HIV prevalence was unknown. It is further shown that whereas the majority of the students were sexually active, and highly knowledgeable about HIV/AIDS, many engaged in risky unprotected sex. About 10% of the study subjects attributed the reported risky sexual behaviour to financial constraints, peer pressure, need for emotional support and sense of security. In fact, it was reported that every year at least 8 (2%) of female students get impregnated. This indicates the existing levels of unprotected sex.

A health report compiled in Maseno University shows that the male/female ratio was 2:1 and the ages affected most were the 0-39.9 years at 51.5% and above 40 years followed at 35.4%. The staff category most affected was the unionisable at 59.6%, while the senior and middle were 20.2% each respectively. Further categorization showed that support staff suffered most (73.8%), followed by academic (17.2%) then administrative staff at 9.1% (Sigot, 2001)

A study carried out in Kenyatta University in 2006 revealed that the impact of HIV/AIDS was reflected in a significant number of students frequently missing classes due to HIV-related illnesses and low productivity of infected staff. The university was also reported to incur huge medical expenses (Ksh 120 million per year) most of which was apportioned to management of HIV/AIDS infected students, staff and their families (KU Financial Report, 2005) Besides those infected, there were also several cases of students and staff that were directly affected by illnesses and deaths of close family members.

1.5.2 Universities response to HIV/AIDS

A few case studies have addressed the response of universities to the HIV pandemic, notably, studies by Kelly (2001) and Van Wyk and Pieterse (2006).

Kelly (2001) conducted case studies of seven universities in east and central Africa and the impact of HIV on those institutions and concluded that "A thick cloak of ignorance surrounds the presence of the disease within the Universities. This cloak is amply lined with layers of secrecy, silence, denial, and fear of

stigmatization and discrimination". He further observed that the situation in the surveyed institutions had "considerably disarray, inadequate understanding and piecemeal response in its attempt to manage the impacts of HIV and AIDS. He bemoaned the considerable uncertainty, limited understanding, lack of coordination, absence of well-developed action plans, persistent atmosphere of HIV and AIDS discrimination and minimal policy framework prevalent in these institutions. The institutions covered in the study by Kelly included; Jomo Kenyatta University of Agriculture and Technology and the University of Nairobi, in Kenya, the University of Zambia, the University of Namibia, the University of Ghana, the University of Western Cape in South Africa, the University of Benin (Cotonou), and the Université d' Abobo Adjame in Ivory Coast. Kelly (2001) indicates as a challenge the need for a comprehensive HIV prevention programme, the first requirement of which is total management commitment through; HIV/AIDS policy and strategy development, developing culturally appropriate prevention messages, tackling socio-economic factors, establishing partnerships, sustaining awareness and education, challenging denial and stigma, situating prevention in a community context, linking care to prevention, and, rigorous scientific reflection.

Van Wyk and Pieterse (2006) conducted an extensive case study on the institutional response to HIV/AIDS from most institutions of higher education in the Southern African Development Community (SADC). They concluded that there is yet any integrated, coherent regional response to the HIV and AIDS in the higher education sector. Yet in virtually all the institutions surveyed, a culture of discrimination and stigma does linger in various degrees of pervasiveness. Much of the lack of data and pervasive stigma associated with the disease in SADC institutions of higher learning have occurred as a result of universities not developing effective institutionalised responses, not institutionalising HIV and AIDS as a core responsibility and business practice, and not mobilising adequate resources and research and to be able to relocate HIV and AIDS on campus from a culture of silence to a culture of critique and openness. This report proposes five guideline for higher education institutions to promote institutional responses to HIV and AIDS.

Similarly, a number of case studies of the impact of and response to HIV and AIDS in African Universities have been undertaken , and both the Association of African Universities (AAU) and the Association of Commonwealth Universities (ACU) have increased their institutional support to member institutions to support HIV/AIDS related activities. And an analysis of a series of papers presented during a workshop whose theme was "African universities responding to HIV/AIDS" held on December 3rd – 5th , 2001 in Nairobi shows that most African universities have already taken a variety of measures to respond to the HIV crisis, including awareness-raising and prevention, care and treatment, and medical research.

During the 10th General conference of the Association of African Universities (AAU) held in Nairobi in March 2001, it was resolved that apart from taking a leading role in Research and Education, African Universities must also take action against the HIV crisis. The AAU HIV and AIDS Core Programme resolved to ensure that the African higher education community uses all available means within the institutions and through partnerships with the international community to prevent the spread, mitigate the impact and manage the epidemic through proactive and sustainable programs of action. As part of its HIV and AIDS Core Programme, the AAU established the East African Network of Tertiary Institutions against the HIV and AIDS Pandemic in July, 2006. Generally expected of the Network are the sharing of best practices on the prevention, mitigation and management of the HIV and AIDS epidemic through as many fora as are possible, consultation with the AAU for assistance to members of the Network in the development of institutional HIV and AIDS policies, and the promotion of HIV and AIDS curricula integration in the various institutions.

1.6 Purpose of the Study

The purpose of this study was to generate an understanding of how HIV/AIDS is affecting universities and to identify responses and gaps in the management of the pandemic that could be used to strengthen and expand interventions at institutional, national and regional levels.

1.7 Study Objectives

The study is guided by the following objectives:

1. To determine HIV Sero Prevalence among university students in Kenya.
2. To establish the demographic and behavioral risks factors, knowledge and attitudes regarding HIV and STI transmission among students in universities.
3. To establish the range, availability and utilization of HIV and AIDS related services.
4. To determine the existence and effectiveness of policies, programmes and coordination structures on HIV and AIDS at the universities.

CHAPTER 2 METHODOLOGY AND PROCEDURES

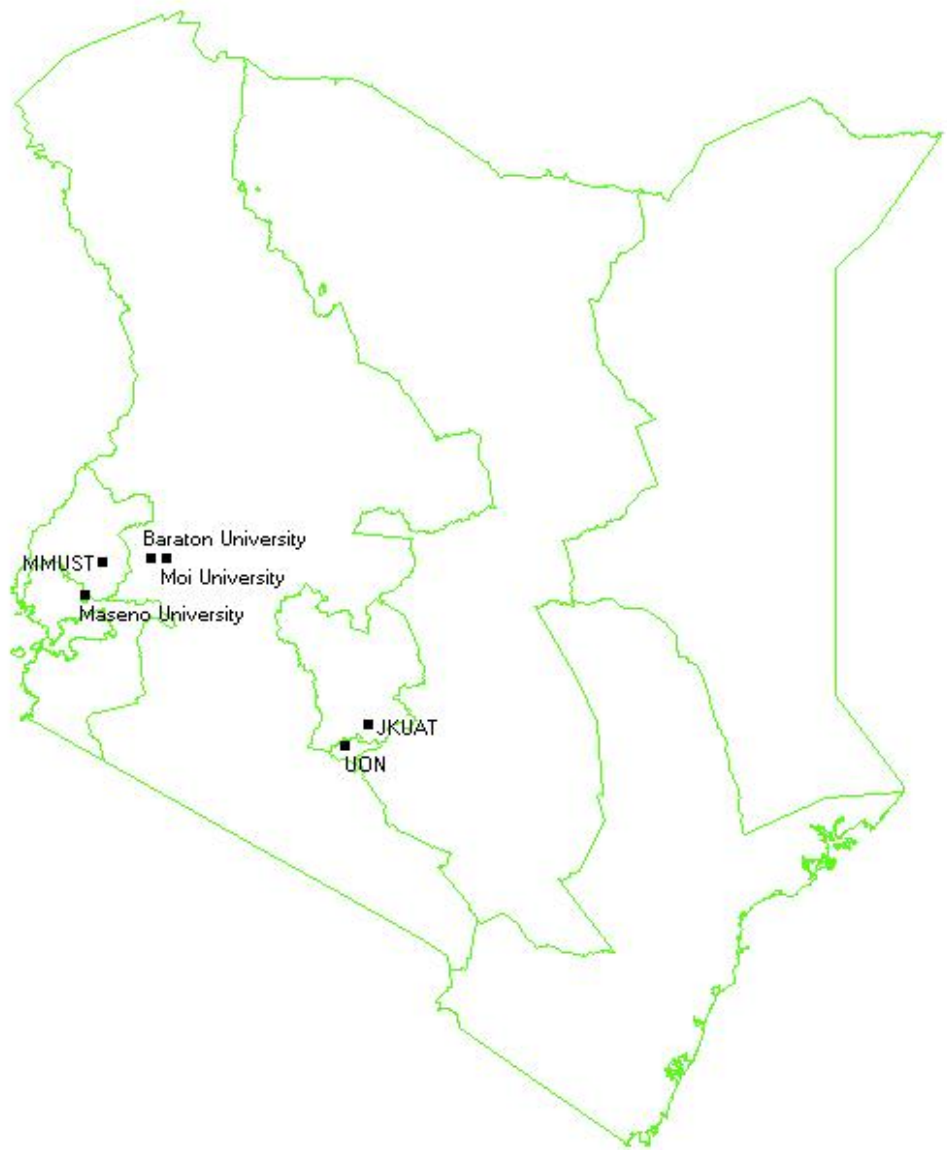
2.1 Study Sites and population

The study was conducted in six universities from 1st March 12th March and from 25th May to 5th June 2009. Four universities were selected from the Lake Victoria Basin (LVB) in keeping with the EALP programme mandate and focus. However, two additional universities were selected from outside the LVB as guided by EALP/IUCEA for purposes of comparison. The selection criteria adopted for the selection included:

- The university should have some resident student population
- Geographic Location representation by rural and urban
- Representation of both public and private universities
- Inclusion of both the oldest and youngest university

Based on the above criteria, the following universities were selected:

- i. University of Nairobi (UON) is the mother university and also the oldest. It also represents an urban setup
- ii. Jomo Kenyatta University of Agriculture and Technology (JKUAT) is more rural based and is the smaller and younger compared to Nairobi University
- iii. Maseno University, represents the Lake Basin
- iv. Moi University represents the Lake Basin
- v. Masinde Muliro University of Science and Technology, (MMUST) represents the Lake Basin
- vi. Baraton University is a private University and it is also faith-based

**KEY**

MMUST: Masinde Muliro University of Science and Technology
JKUAT: Jomo Kenyatta University of Agriculture and Technology
UON: University of Nairobi

Figure 2.1: Map of Kenya Showing the Location of the Selected Universities

2.2 Study design and sampling procedures

A cross sectional study design was used to collect both quantitative and qualitative data. Questionnaires were used for quantitative data whereas review of documents, Key informants interviews, Focus group discussions and observation were used for qualitative data. Ideally, for efficiency Audio-computer assisted self-interviewing (ACASI) would have been the preferred mode of questionnaire administration at the institutions of higher learning. However, logistical and administrative limitations did not allow the implementation of this approach. Piloting of the study was carried out in similar situations of the study population at Kenyatta University, and necessary changes adapted before execution of the study in order to ensure data quality control.

The university population is big and has varied characteristics that make it heterogeneous. A complete student register was obtained for all students in the sampled campuses (see selection criteria above). The student list at each university was numbered from 1- n , and systematic random sampling technique used to select students to participate in the study depending on the sample size for the respective campus. This process gave each unit under study (students) an equal chance of being selected. Considering the unique circumstances for each university participating in this study, satellite campuses were covered only for Nairobi and Moi Universities, based on logistical and budgetary feasibility.

3.4 Sample size

Using the formula of Lemeshow *et al.* (1990), the calculated sample size for each university based on average prevalence rate of 7.4% at 95% confidence level was as follows:

$$n = \frac{Z^2 p(1-p)d}{e^2}$$

where n = desired sample size if target population is greater than 10,000, Z is the critical value of the confidence interval for standard normal deviation, p is the estimate of the expected prevalence and d is the design effect and e is the tolerated error

$$n = \frac{(1.96)^2 0.071(1-0.071) * 2}{0.0275^2} = 669 \text{ sample size for each of the six universities}$$

The total number of respondents expected for this study was 4019. The acceptable minimum respondent rate for the sero-prevalence survey was 75%. The samples were distributed as follows:

Table 2.1: Sample size distribution by institution EALP/IUCEA 2009

University	Population estimates	Questionnaire Sample size	Sero-prevalence sample size
JKUAT	7962	632	632
Nairobi	36,339	1336	1336
Maseno	5686	583	583
Moi	14832	851	851
MMUST	1224	255	255
Baraton	3000	362	362
Total	69,043	4019	4019

Source of population estimates: Kenya Commission of High Education, January 2008

2.3 Survey implementation and Research Procedures

2.3.1 Training

2.3.1.1 Research Assistants

36 student interviewers were selected on a competitive basis and a gender sensitive way (2 postgraduates and 4 undergraduates per university). The interviewers were trained in interviewing techniques, respondents' identification, obtaining informed consent, maintaining confidentiality and anonymity, and administering the individual questionnaires. A training manual was developed for this purpose.

2.3.1.2 Laboratory technologists

36 registered laboratory technologists were trained for 3 days by resource persons identified by the sub-committee of the National technical team (NTT) in Kenya. The training involved both theory and practical applications. Field laboratory technologists were trained in preparing respondents for the blood

draw, and specimen collection, processing, storage and transportation to the central laboratory according to the national standards. Ways to minimize risks in handling biological specimens were emphasized.

2.4 Mobilization

The respective Vice Chancellors and Aids Control Unit Directors facilitated university students' community sensitization and launch of EALP/IUCEA HIV and AIDS Baseline Study in Institutions of Higher Learning in Kenya. Posters, banners, drama, skits and any other appropriate means were used to mobilize students. In some cases, university student leaders were involved in the mobilization of the students for the study. The role of the student mobilizers involved 1) assisting in the recruitment and mobilization of the respondents and 2) in reducing stigmatization and win the confidence of those students that were sampled.

2.5 Questionnaires, document review, focus group discussions and key informant interviews

The research assistants administered questionnaires to students and persuaded them to go for blood drawing. Completed questionnaires were presented to the ACU directors who packed them and delivered to the consultants. Qualitative data were gathered in order to describe institutional services, programmes, structures and policies available to address HIV/AIDS in universities. The instruments used to gather information were focused group discussions (FGD), key informant interviews, observations and secondary documents. The focused group discussions were carried out in groups of 6-12 persons. An attempt was made to select persons of similar attributes in order to stimulate discussions. The FGDs involved students, student clubs and faith-based groups on campus. On average 6-9 FGDs were carried in each university depending on the size and number of campuses.

Key informant interviews were carried out on university Vice Chancellors, Deputy Vice Chancellors, Registrars, Deans of students, Medical Officer, student leaders, wardens, ACU Directors, Academic Advisors and University Chaplains. A list of questions guided the FGDs and key informant interviews. Two Research Assistants (graduate students) conducted the interviews with one person interviewing and the partner recording. For both FGDs and key informant interviews, data collection stopped when there was data saturation; that is the point when no new data emerged from additional interviews.

Observations of HIV/ AIDS related facilities took place during field work and helped to elicit information on the following: presence and location of VCT

facilities, AIDS Control Units, counselling facilities and location of male and female halls of residence.

The secondary data collected during field work included HIV/AIDS policies, HIV/AIDS awareness material, HIV/AIDS related publications and budget for HIV/AIDS activities. The team reviewed these documents to identify strengths, weaknesses and priorities for evidence-based planning.

2.6 Blood Sample Collection, Transportation, Storage and Assay

Laboratory procedures followed in this study, particularly for safe blood sample collection, transportation and diagnostic assays for HIV. HIV testing strategies have been devised by UNAIDS and WHO to maximize the sensitivity and specificity of HIV tests while minimizing costs (UNAIDS/WHO, 1999; WHO, UNAIDS/WHO Working group on Surveillance, 2001; WHO/UNAIDS, 2004b). In agreement with proposed quality assurance for HIV testing and in order to make testing consistent over time and across countries, UNAIDS and WHO recommends that a second confirmatory test be conducted for all cases in which the first test for HIV is positive.

Trained lab technologists collected 3 drops of blood from a finger prick and prepared a Dry Blood Spot (DBS) using an S&S 903 filter paper. The samples were air dried over night in a dust free and ambient environment. Specimens were collected by the field laboratory teams working in different universities, and shipped by AMREF to the National HIV Reference Laboratory (NHRL) after the two-week study. The samples received at the NHRL were logged into an electronic laboratory information management database and then screened for HIV using recommended protocols and procedures as applied in the KAIS 2007. All samples reading positive and 5% of all the negative samples were re-tested for quality assurance at the KEMRI laboratory (Kenya Medical Research Institute, Nairobi, Kenya).

2.7 Supervision

Data collection teams were continuously supervised by teams of coordinators representing the NTT and partner agencies. Every university had a full time technical supervisor. The field supervisors were selected in consultation with the NTT. The NTT visited each of the teams and performed quality checks on questionnaires, assess mobilization efforts and helped address challenges to data collection. Supervision reports were shared between the NTT, consultancy team and other stakeholders, and key issues attended to immediately.

2.8. Data management

2.8.1 Date entry, validation, cleaning and merging

Quantitative data were coded and entered into SPSS version 11.5. Data entry validation was undertaken by members of the NTT, and complete data re-entry of all questionnaire responses were performed to minimize error. Data cleaning was undertaken prior to analysis. A series of consistency range checks were used to identify any unreasonable responses. The data from the questionnaire and blood test were merged.

2.8.2 Response Rates

Table 2.2 shows the expected sample size for each university, the actual or realized sample who filled the questionnaire, and their respective response rates based on the expected sample sizes. Also shown are the blood draw samples and respective response rates based on individuals who filled the questionnaire. The overall response rate was 14.0% above the expected sample size. Out of these, 98.5% accented to a blood draw.

Table 2.2 Questionnaire and blood draw response rates, EALP/IUCEA 2009

University	Expected sample size	Actual sample	Blood draw sample	Response rate
JKUAT	632	631	616	97.5%
UON	1336	1328	1296	97.0%
Maseno	583	581	571	97.9%
Moi	851	846	845	99.3%
MMUST	255	255	252	98.8%
Baraton	362	362	362	100%
Total	4019	4003	3942	98.4%

2.8.3 Data Analysis

The data from the questionnaire and blood test were analyzed using the Statistical Package for Social Sciences (SPSS) version 11.5 for Windows. Data were summarized using descriptive statistics such as frequencies and percentages. Cross tabulation was used to test relationships of variables in

relation to the dependent variable(s). Chi square test was used to test variable homogeneity and associations. Student' t-test were used to compare between differences means. Throughout the document, the term significant indicates a p-value less than or equal to 0.05.

The HIV prevalence among entire population or within each university or by any demographic parameter was calculated as:

$$P = \frac{\sum y_i}{n}$$

Where $\sum y_i$ is the total number of all cases testing positive for HIV and n is the total number of people who were tested.

In qualitative research data analysis is a continuous process and it begins during field work. During field work, field notes were transcribed. After transcription, other sets of data were collapsed in the transcribed text. Data were coded. Content analysis was then carried out. Themes based on the research objectives were then derived from the transcribed text. Themes then formed subtopics under which results are reported. Data for this section was reported under the following subtopics: Availability and utilization of HIV/AIDS services, Vulnerability and Risk factors to HIV/AIDS within universities, Top management commitment and budgetary allocation, HIV/AIDS prevention reinforcing policies and regulations, partners and Linkages to National HIV/AIDS Programmes and programme and coordination structures to HIV/AIDS (Chapter 8).

2.9. Ethical considerations

Ethical and scientific approval was sought and obtained from Kenya Medical Research Institute/National Ethical Review Committee (KEMRI/NERC) and Study Institutional Research and Ethical Review Committee (IRERC). Research authorization was also obtained from The Ministry of Higher Education, Science and Technology. Prior to submission of protocol to the ethical committee, the document was submitted to Kenya HIV and AIDS Research Coordinating Mechanism (KARSCOM) for endorsement.

Confidentiality in the handling of information and procedures involved in this study was completely ensured. To achieve this, a record keeping system was put in place for storage of all the sero-prevalence and data, together with filled questionnaires were stored in a way that ensured security, but will allow access

to authorized scientists only. No unauthorized person had access to the confidential information. Participants interested in knowing their status were referred to VCT service providers.

Participation in this study was voluntary; consent to participate was sought from the participants. Each participant was provided with a questionnaire to complete. They were not obliged to answer any questions if they did not feel comfortable to do so. Each questionnaire was stored in a sealed envelope and was not accessible to anyone else on campus in order to ensure confidentiality. It took up to 30 minutes to answer all the questions. To ensure confidentiality, the name of the respondent did not appear anywhere on the questionnaire and it was not possible to know which responses came from any individual. In addition to questionnaire, they were required to provide 3 drops of blood from a finger prick for sero-prevalence study. Apart from a slight pain during the prick, there were no known risks in participating in this study. The management on campus had agreed to co-corporate in this study and allowed individuals to participate in the study.

2.10. Consent Procedure

An informed consent form was prepared in conformity to standards expected of research involving human subjects. The consent form is attached hereto as Annex 1. Oral informed consent was also obtained from all sampled study participants. The research team explained the purpose and components of the study to the individual participants. An interviewer (research assistant) went through the consent form with the participant before asking them to sign it.

2.11 Study Limitations

Purposive sampling was used in the selection of the universities participating in the study and hence the universities selected are not representative of all the universities in Kenya. The results therefore cannot be generalized to the whole Kenyan University population. They can however be generalized within the universities in the LVB. The study could not identify and/or isolate any most at risk groups, nor circumcised from uncircumcised respondents.

The study focuses only on the university student population. Information sought from other university community members is solely for purposes of enriching the study and not for providing information on the other university community members such the university administration, academic and non academic staff as well as the university host community.

3.0 CHAPTER 3: DEMOGRAPHIC INFORMATION

3.1 Introduction

This section provides information on the demographic composition of the respondents from each university. Such information included sex, age, religion, year of study, type of sponsorship, residence status, parenthood and marital status. These demographic characteristics are important because they may be associated with the general welfare of the student which may have a bearing on their vulnerability to HIV.

3.2 Demographic characteristics

A total of 3942 students (hereafter referred to as respondents) participated in both the behavioural and sero-prevalence study of which 2422 were males and 1500 females, comprising 61.7% and 38.3% respectively (Table 3.1). Some 18 respondents did not indicate their sex. Their age ranged from 17 – 59 years with an overall median of 21.90 ± 2.25 yrs. The median age for males (22.25 ± 2.67 yrs) was significantly higher than that of females (21.35 ± 1.92 yrs). With respect to religion, Protestants were the most dominant (69%) followed by Catholics (27.4%), Muslims (2.4%) SDA's (0.7%) and others comprise 0.1%. First year respondents' were the most represented group (32.3%) in the study, followed by 2nd years' (27.2%), 3rd years' (22.2%) and 4th years' (17.2%), while 5th, 6th and 7th year students formed a small group (1.2%). These percentages reflect the relative proportions of respondents in all universities. A slight majority of respondents were on Government of Kenya scholarship (52.4%), with 47.0% being self sponsored, while 0.6% were in some form of scholarship other than those mentioned above. In terms of respondent residence, majority resided on campus hostels/halls (70.3%), with 23.7% living in rental residences off-campus, while 5.9% lived at home. Most of the respondents were Kenyans (9.1%), with another 8 African comprising the remaining 0.9%. Majority of the respondents were from Rift Valley (27.1%) followed by Nairobi (20.4%), Nyanza (17.5%), Central (11.9%), Western (10.4%), Eastern (8.6%), Coast (3.3%), North Eastern (0.15%) and non Kenyans (0.27%). This information was only provided by 3321 (84%) of the 3942 respondents. Majority of respondents had both parents living (73.2%), followed by those with mother only (17.1%), Father only (5.0%), while total orphans comprised 3.9%. The other 0.7% were adopted. Most of the respondents were single (96.5%) with the other 3.5% married

Table 3.1. Demographic characteristics of respondents EALP/IUCEA 2009

CATEGORY	n*	%
Respondents	3922	
Males	2422	61.7%
Females	1500	38.3%
Age		
Range	2563	17-59 yrs
Median	2563	21.90 ± 2.25 yrs
Males	1573	22.25 ± 2.67yrs
Females	990	21.35 ± 1.92 yrs
Religion	3764	
Protestants	2614	69.0%
Catholics	1031	27.4%
Muslims	92	2.4%
SDA's	26	0.7%
Others	1	0.1%
Year of Study	3889	
First	1257	32.3%
Second	1056	27.2%
Third	862	22.2%
Fourth	670	17.2%
5th, 6th & 7th	44	1.20%
Educational Sponsorship	3882	
Government	2036	52.4%
Self	1823	47.0%
Other	23	0.6%

*Note that **n** represent only numbers of those who responded to the question

Table 3.1. Continued

Residence Status	3699	
On-Campus	2602	70.3%
Off-Campus	879	23.7%
Home	219	5.9%
Home Province	3321	
Rift Valley	901	27.1%
Nairobi	676	20.4%
Nyanza	582	17.5%
Central	396	11.9%
Western	346	10.4%
Eastern	285	8.6%
Coast	109	3.3%
North Eastern	5	0.15%
Non Kenyans	8	0.24%
Parental Status	3884	
Both	2843	73.2%
Mother only	666	17.1%
Father only	195	5.0%
Total orphans	153	3.9%
Adopted	26	0.7%
Marital Status	3779	
Single	3647	96.5%
Married	132	3.5%

4.0 CHAPTER 4: PREVALENCE OF HIV

4.1 Introduction

Knowledge of HIV status is a critical first step in accessing life-saving HIV care and treatment, and the Government of Kenya encourages everyone to know his/her HIV status and has put in place policies and strategies that provide for HIV testing in different settings. Though studies have been done on general populations, studies on specific populations such as institutions of higher learning are scanty, in particular, Sero-prevalence data on this target group is lacking. Thus, the present EALP/IUCEA Behavioural and Sero-prevalence survey is the first of its kind ever conducted among universities in Kenya and East Africa. This section provides information on HIV prevalence within universities in Kenya, with emphasis on universities within the Lake Victoria basin.

4.2 HIV prevalence

According to the present study, 20 of the 3942 respondents were diagnosed as infected with HIV at the time of the survey, representing 0.51% of the sample. Proportionally, the prevalence of HIV infection was in the following order: Baraton (2.21%), MMUST (0.79%), UON (0.46%), Moi (0.35%), Maseno (0.17%) and none of the respondents from JKUAT were infected (0.0%) (Table 4.1). Greater prevalence was recorded among men (0.58%) than women (0.40%), though the difference was not statistically significant (Table 4.2). First year respondents comprised 15% of the sero-positives, second year 25% third year 35%, while fourth year were at 25%. However, further analysis showed prevalence of 0.24% for first year, 0.47% for second year 0.81% for third year and 0.75% for fourth year respondents (Table 4.2). Government sponsored respondents had 0.44% infection rates, self sponsored at 0.49%, while respondents in other form of sponsorship were at 8.7% (2 out of 23) (Table 4.2). Infection rates for campus residing respondents was at 0.50% and 0.57% for off-campus (Table 4.2). Two positives did not indicate their residence status. With regards to guardianship, HIV prevalence among those with both parents was at 0.46%, father only at 0.51%, mother only at 0.60% and total orphans at 1.31% (Table 4.2).

Table 4.1 HIV prevalence among university students, EALP/IUCEA 2009

UNIVERSITY	% INFECTED	NUMBER TESTED
JKUAT	0.00%	616
MMUST	0.79%	252
Moi	0.35%	845
Maseno	0.17%	571
Baraton	2.21%	362
Nairobi	0.46%	1,296
Total	0.51%	3,942

Table 4.2 HIV prevalence by various categories, EALP/IUCEA 2009

CATEGORY	NUMBER TESTED	PREVALENCE (%)
HIV Prevalence by Sex	3942	
Males	2422	0.58%
Females	1500	0.40%
HIV Prevalence by Year of Study	3887	
1 st year	1256	0.24%
2 nd year	1056	0.47%
3 rd year	861	0.81%
4 th year	670	0.75%
HIV Prevalence by Education Sponsorship	3880	
Government sponsored	2035	0.44%
Self Sponsored	1822	0.49%
Other sponsorship	23	8.70%
HIV Prevalence by Residence Status	3697	
On –Campus	2601	0.50%
Off-campus	878	0.57%
Home	217	0.00%
HIV Prevalence by Guardianship	3882	
Both living	2842	0.46%
Father only	196	0.51%
Mother only	665	0.60%
Total orphan	153	1.31%

4.3 Summary of findings

- *The overall HIV prevalence of 0.51% among students at Kenyan universities is way below the national average of 3.8% for the age group of 15-24 years (KAIS, 2007) where most belong*
- *HIV prevalence among males was significantly higher than among females contrary to national statistics*
- *HIV prevalence among male students was within the national range of 0.4% to 2.6% for the age group*
- *HIV prevalence among female students was well below the national range of 3% to 12% for the age group*
- *HIV prevalence among total orphans was higher than other parenthood groups*

CHAPTER 5: SEXUAL EXPERIENCES AND HIGHER RISK BEHAVIOUR

5.1 Introduction

Human sexual behaviour includes practices and activities in which humans experience and express their sexuality. In exploring their sexuality, youth in particular may be more vulnerable to infection by HIV due to activities that characterize their sexuality such as sexual exploration with multiple sexual partners and frequent new sex partners and condom use. Indeed, it is known that delayed sexual initiation among youth, abstinence, and condom use with non regular partners have been acclaimed for declines in HIV prevalence. Thus, the "ABC strategy continues to be an appropriate general recommendation. The university campus offers vast environment and opportunity for HIV higher-risk behaviours, including unprotected sex, multiple partnerships, transactional sex, and even intergenerational sex. While the overall incidence of HIV infection has seen some decline in recent years, rates of new infections among the general population, and young adults in particular have not seen a proportionate decline.

This section reports on abstinence, sexual debut, sexual partnerships and condom use. It also reports on higher risk behaviour and related experiences among university students.

5.2 Sexual activity, abstinence and sexual debut

Some 74.1% of respondents reported ever having sexual intercourse while 25.9% have never (primary abstinence) in their life time (Table 5.1). Abstinence was higher in females at 38.2% compared to males at 22.3%. One out of the twenty respondents who tested HIV positive reported having never had sex. Overall abstinence among first year respondents was at 42.8%, with females at 44.6% and males at 21.2%. For second year respondents, abstinence was at 26.7% with females at 41.0% and males at 18.2%. Abstinence among third years' was at 23.3% with females at 33.5% and males at 16.6%. By fourth year, abstinence was at 20.3% with females at 29.0% and males at 14.6% (Figure 5.1). Median age at sexual debut was approximated at 18.0 ± 3.20 years, with females at 19.51 ± 2.27 years and males at 17.32 ± 3.34 years. For those testing HIV positive, median age at sexual debut was 17.0 ± 3.421 yrs.

For those having sexual intercourse, the preferred type of sexual intercourse for all respondents at all universities was markedly vaginal, with overall preference at 97.6%, distantly followed by oral at 12.6%, and lastly anal at 2.5% (Figure 5.2). Some 10% of those testing positive reported having had anal sex, four times higher than the overall average. Sexual preference was not exclusive as those

having anal sex also had vaginal sex, those having oral sex also had vaginal sex, and those having anal sex also engaged in oral sex.

Table 5.1 Sexual experiences among respondents, EALP/IUCEA 2009

CATEGORY	n	%
Sexual Experience	3888	
Ever	2882	74.1%
Never	1006	25.9%
Primary sexual abstinence	3868	25.9%
Males	2401	22.3%
Females	1467	38.2%

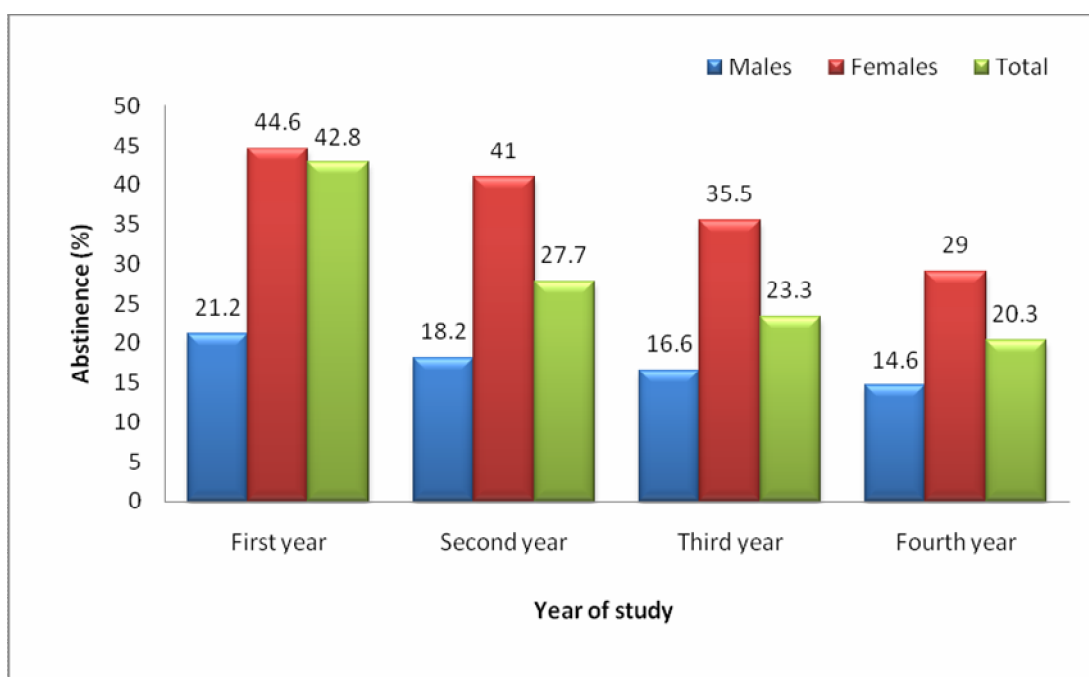


Figure 5.1 Proportion of those abstaining by year of study and sex, EALP/IUCEA 2009 (n = 977)

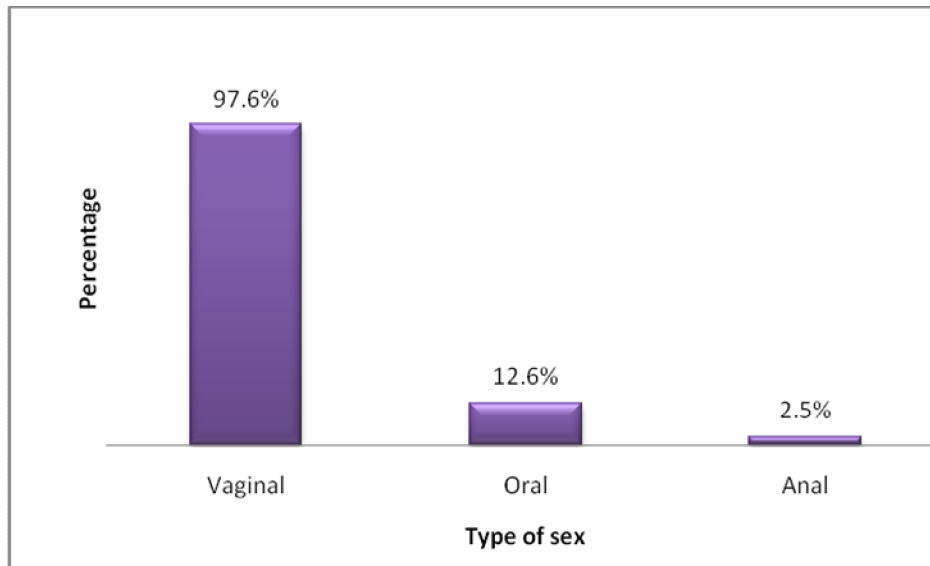


Figure 5.2 Sexual preferences, EALP/IUCEA 2009 (n = 2753)

5.3 Condom Use

Among those having sexual intercourse 87.9% reported of having ever using condom during intercourse while 12.1% did not (Figure 5.3). Condom use for females was at 88.7% slightly higher than males at 87.5% (Table 5.2). For the sero-positives, condom use was about nine percentage lower at 78.9%. Overall, there was increased condom use with year of study for both sexes, except for females at fourth year whose condom use slightly declined below second and third year levels, but still remained higher than first year (Figure 5.4). However, only 68.2% of respondents mentioned that they used a condom during their last sexual episode, while 31.8% did not (Table 5.2). Some 70.6% of the sero-positives did use.

On the question on the relationship with the last person they had sex with when they used a condom, majority mentioned a steady girlfriend (46.2%) or steady boyfriend (26.3%) collectively accounting for 72.5% of cases. The other notable group was casual partner (20.7%), with commercial sex workers accounting for 2.8% (Figure 5.5). Among the sero-positives 14/16 or 87.5% reported steady girlfriend/boyfriend and wife/husband as last person they had sex with when they used condom, suggesting that some may be aware of their HIV status.

The preferred type of condom during the last sexual episode was the male condom (96.5%) with female condom accounting for 2.8%. Curiously, some 14 people (0.6%) used both (Table 5.2). During this last sexual episode, the option to use a condom was mainly made by the individual (80.5%), while the partner was responsible for the decision in 19.3% of the cases (Table 5.2).

Males were more assertive at making this decision themselves (81.9%) than females (76.5%) (Table 5.2). Concurrently, females allowed their partners to make the decision for them more than the men. The self decision appeared stronger among third year respondents (82.7%) and weakest among fourth years' (75.4%) (Table 5.2). Assertiveness varied marginally among the universities (Table 5.2).

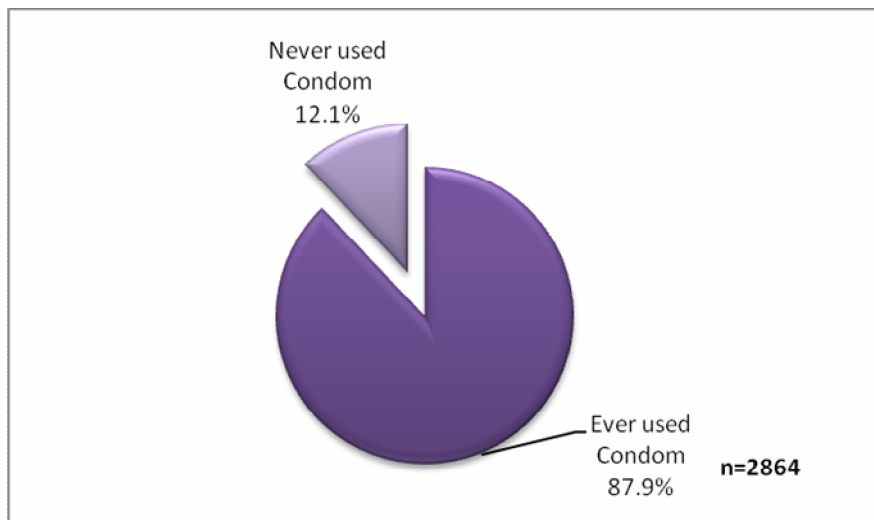


Figure 5.3 Condom use among respondents, EALP/IUCEA 2009

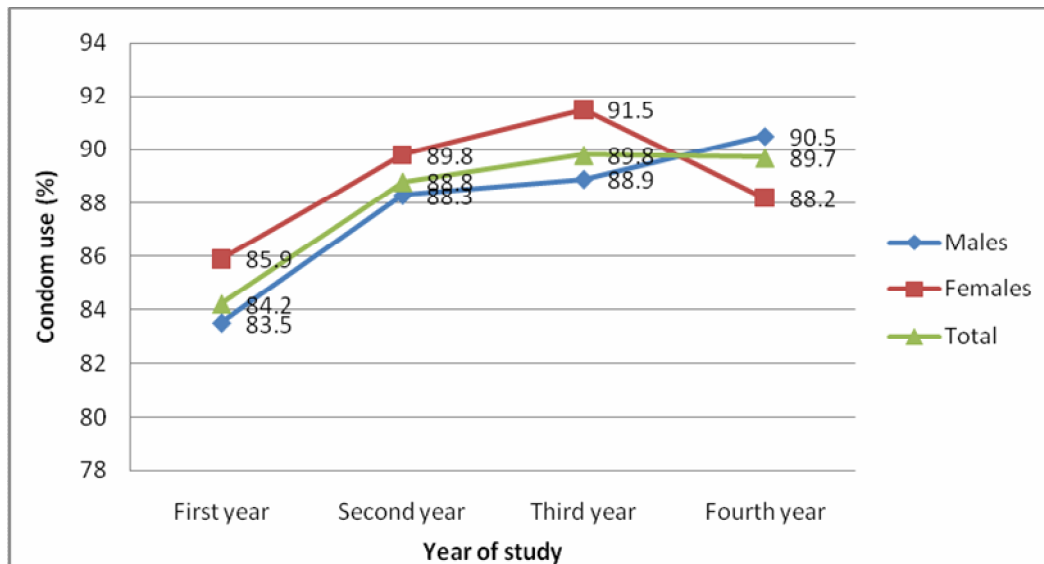


Figure 5.4 Condom use by year of study and sex, EALP/IUCEA 2009 (n = 2813)

Table 5.2 Condom use by sex, and during last intercourse, EALP/IUCEA 2009

CATEGORY OF CONDOM USE	N	%
Condom use by sex	2854	
Males	1944	87.5%
Females	908	88.7%
Sero-positives	19	78.9%
Condom use during last intercourse	2729	
Used	1861	68.2%
Did not use	868	31.8%
Sero-positives	17	70.6%
Condom type used during last intercourse	2351	
Male	2270	96.5%
Female	67	2.85%
Both	14	0.59%
Decision on condom use during last intercourse	2261	
Myself	1820	80.5%
My partner	436	19.3%
Both of us	5	0.2%
Self decision to use condom by sex	2214	
Males	1523	81.9%
Females	693	76.5%
Self decision to use condom by sex	2188	
1 st year	652	80.9%
2 nd year	616	80.9%
3 rd year	510	82.7%
4 th year	408	75.4%
Self decision to use condom by University	2188*	
GU		79.3%
LU		79.0%
PU		80.5%
VU		80.2%
WU		79.7%
XU		81.1%

* The **n** represents pooled number of respondents from all universities

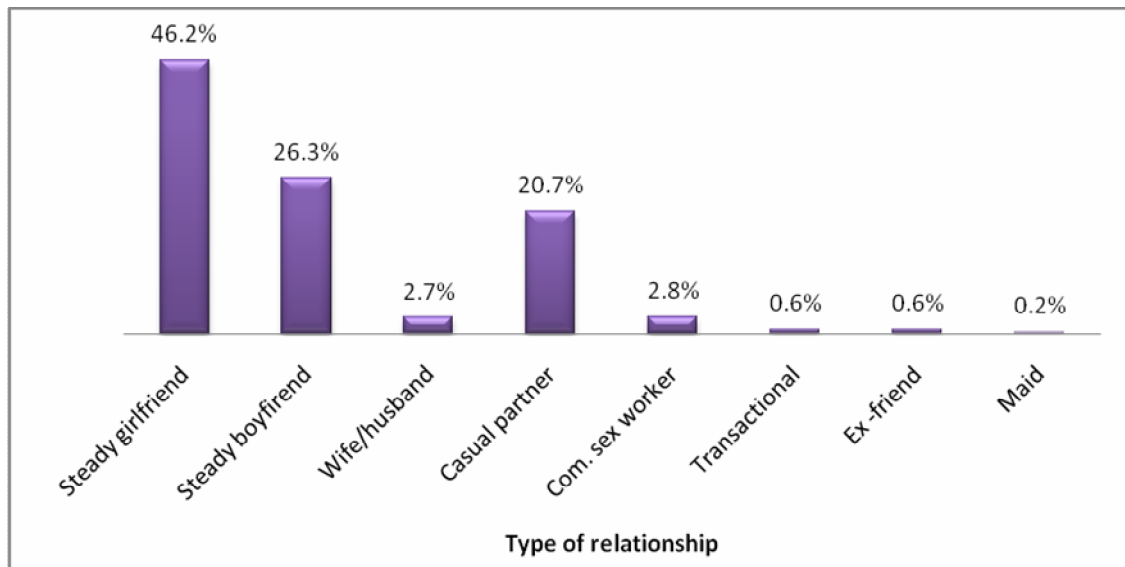


Figure 5.5 Relationship with person last had sex with using condom, EALP 2009 (n=2446)

5.4 Number of sexual partners and condom use

On the number of sexual partners, 1199 respondents (52.2%) mentioned having had only one partner in the last six months while 24 respondents (1.0%) had 9 or more, all except one being males, while 17.0% had none (Figure 5.6). The line graph further shows that whereas females had mainly one sexual partner, the males had proportionately more multiple sexual partners. Among the sero-positives, 42.1% had more than one sexual partner.

Second year respondents had the largest proportion of those having multiple ($n > 1$) partners (35.1%) followed by 3rd (31.2%), 1st (28.6%) and lastly 4th (27.5%) year respondents (Figure 5.7). UON respondents had the highest proportion of multiple partners (34.9%) within the last six months, while Moi had the least (25.2%) (Figure 5.8). Abstinence was highest at MMUST (20%) and lowest at Baraton (14%), with the rest varying only marginally (Figure 5.8).

During that last six months, 33.0% of respondents used condoms every time they had sex 21.1% most of the time, 17.1% some of the time, 10.3% did not use condoms at all, while 18.4% of respondents did not have sex (Figure 5.9). Among the sero-positives 16.7% did not use condoms at all in the last six months.

Sex within the last one month was not reported for 41.4% of respondents, with once a week (19.2%) being the most reported, while some 26 respondents (1%) reported daily sex (Figure 5.10).

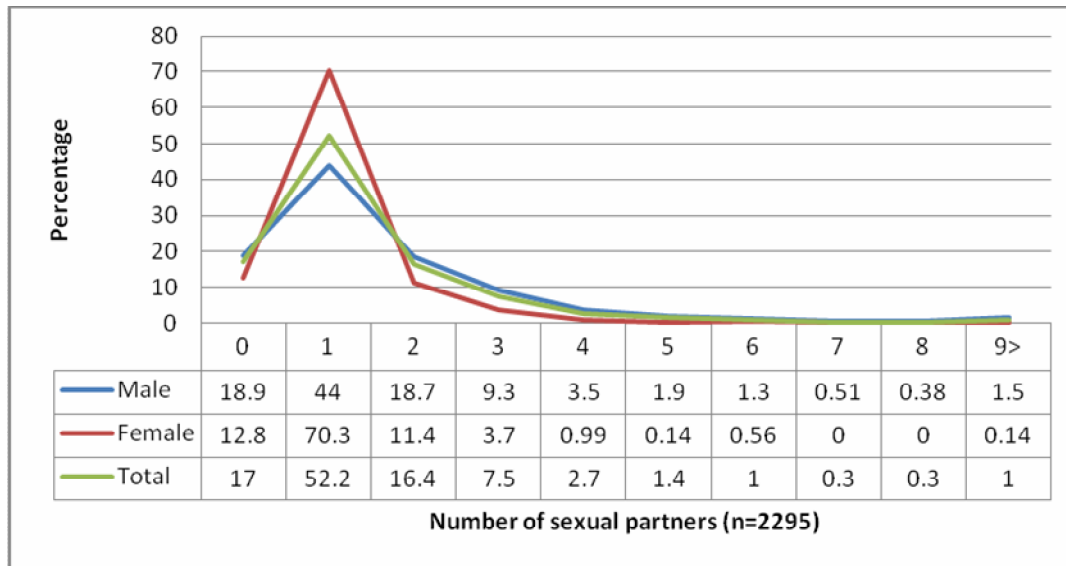


Figure 5.6 Number of sexual partners in the last six months, EALP 2009

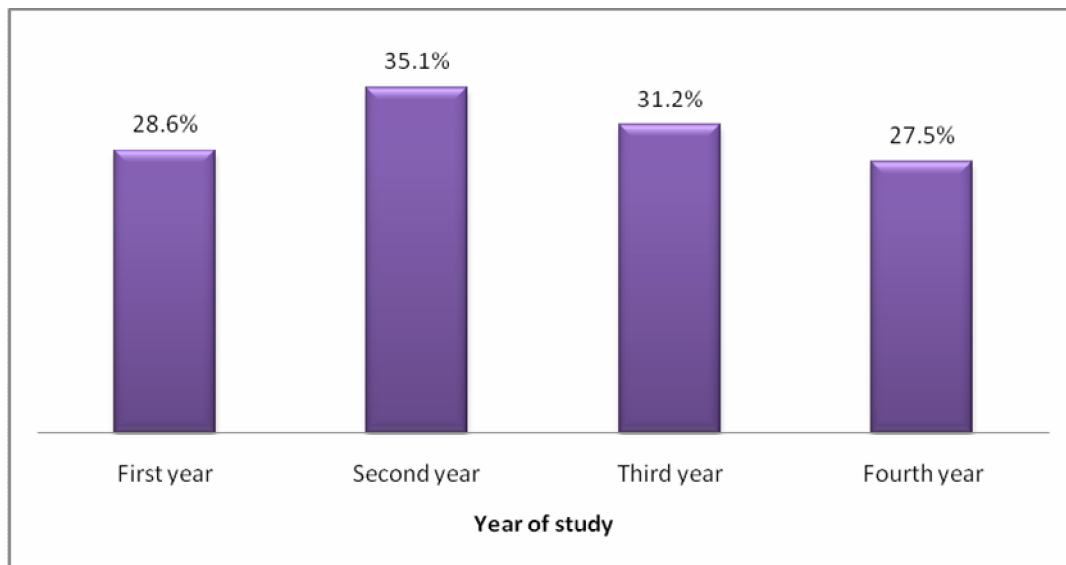


Figure 5.7 Proportion with multiple sexual partners in the last six months by year of study, EALP 2009

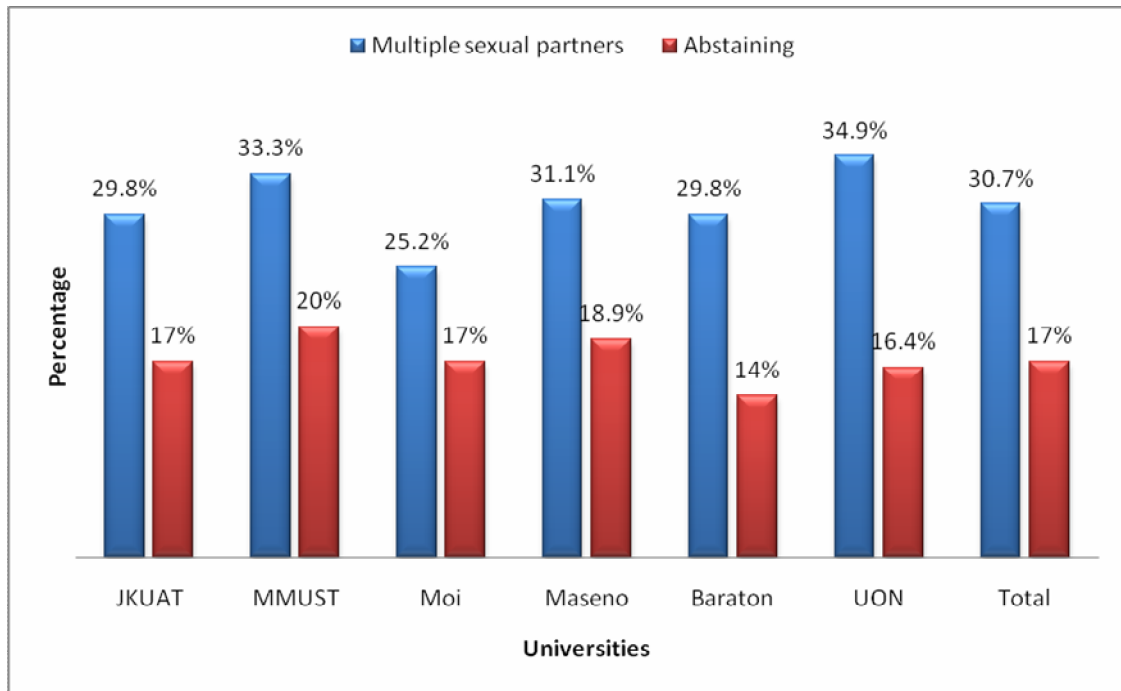


Figure 5.8 Proportion abstaining and having multiple sexual partners in the last six months by University, EALP/IUCEA 2009 (n = 2295)

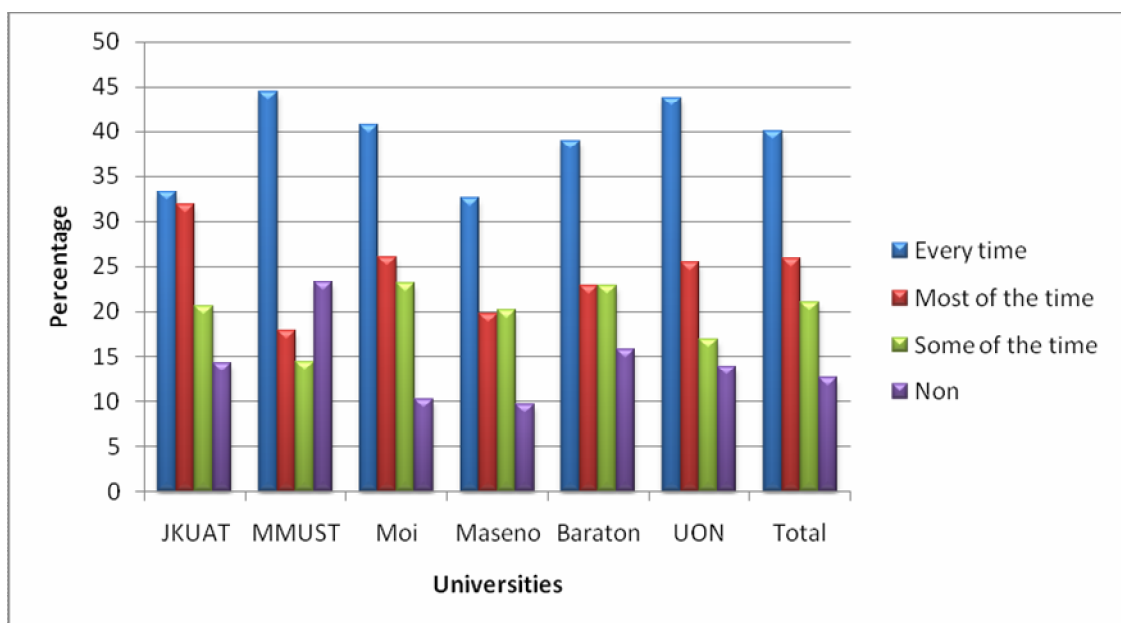


Figure 5.9 Condom use in the last six months by University, EALP/IUCEA 2009 (n = 1601)

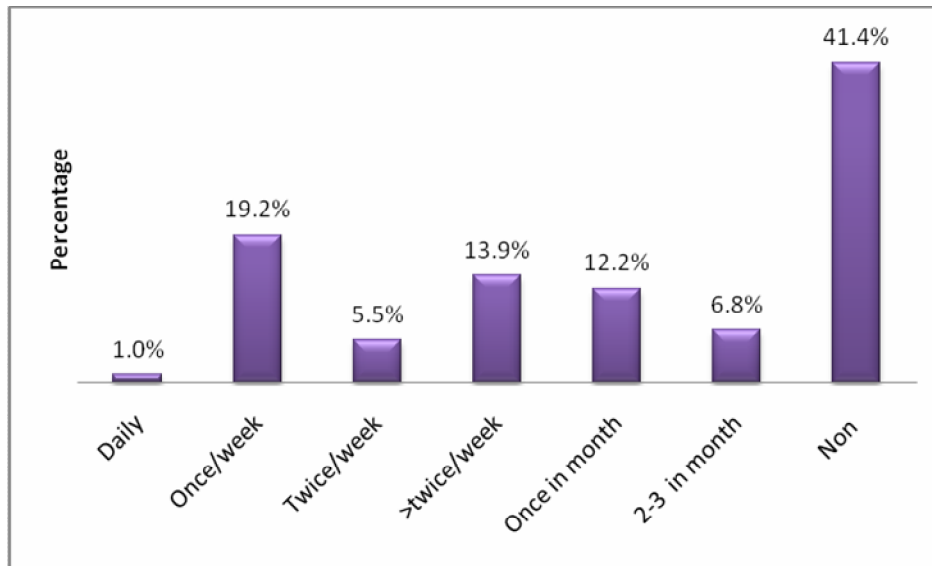


Figure 5.10 Frequency of sex within the last one month, EALP/IUCEA 2009 (n = 2720)

Among those having had sex within the last one month, 79.7% had one sexual partner while 20.3% had multiple partners (Figure 5.11). Among the seropositives 60% had one sexual partner while 30% had none.

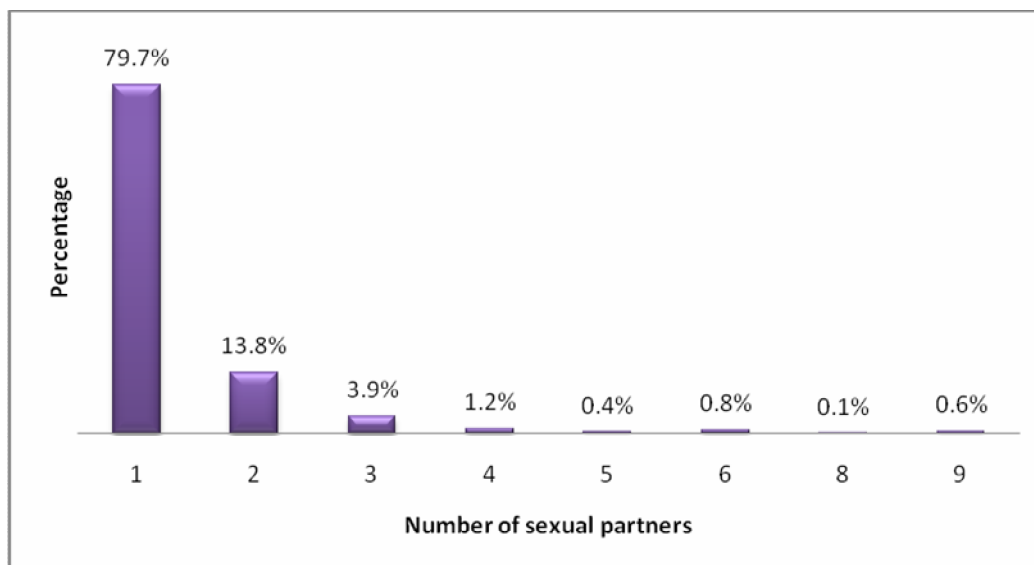


Figure 5.11 Number of sexual partners in the last one month, EALP/IUCEA 2009 (n = 1757)

Condom use among those having sex during the past one month was 41.8% every time, 20.3% most of the time, 16.5% some of the time and 21.3% not using condoms at all (Figure 5.12). Among the sero-positives, a similar proportion of 22.2% did not use condoms at all.

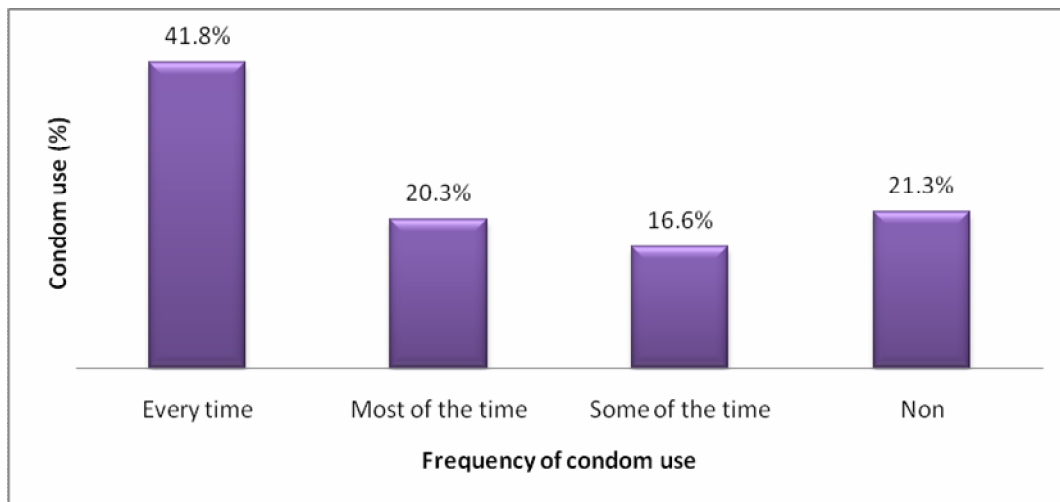


Figure 5.12 Condom use in the last one month, EALP/IUCEA 2009 (n=1601)

Majority (97.8%) of respondents said they knew where to obtain condoms (Figure 5.13), with condom dispenser at the halls of residence being the most popular, followed by the tuck shop (Figure 5.14).

The most popular reasons given for non use of condom during every sexual encounter was partner trust, followed by partners all know their HIV status (Figure 5.15). Four of the sero-positives cited partners all knowing their HIV status as being very much a reason for non condom use every time they had sex.

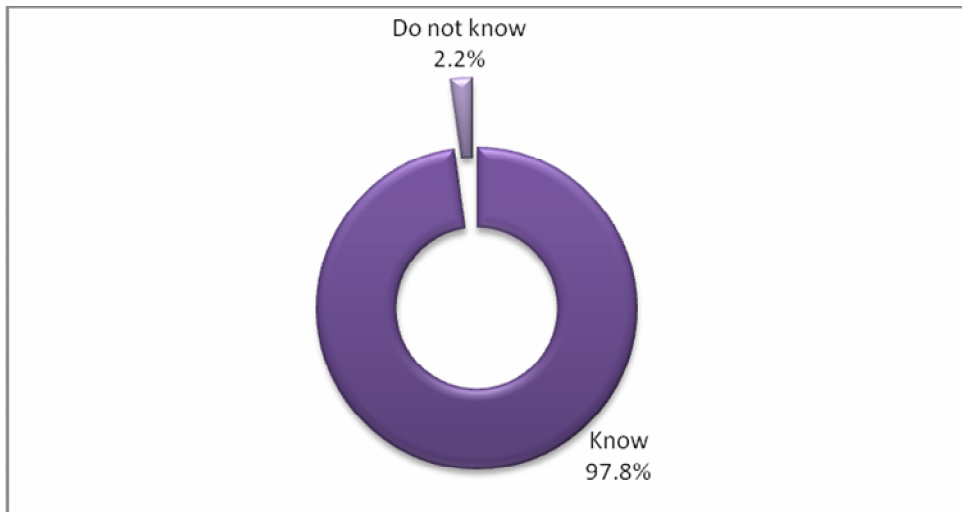


Figure 5.13 Proportion knowing where to obtain condoms on campus, EALP/IUCEA 2009 (n=2911)

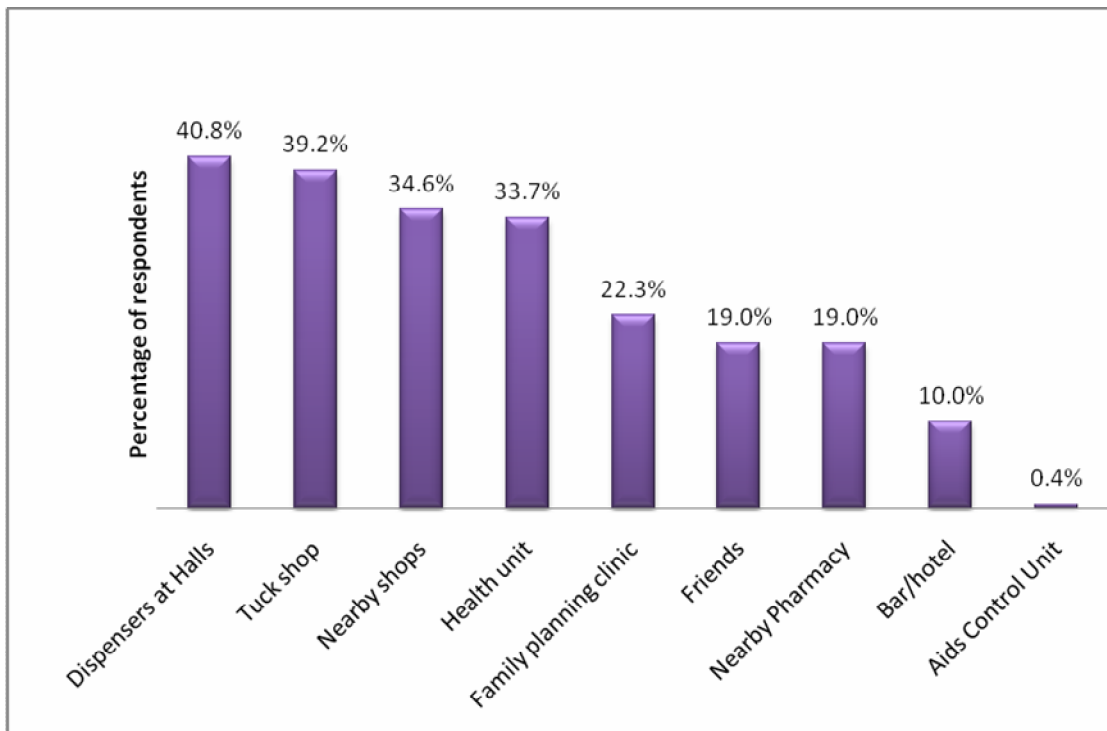


Figure 5.14 Sources of condoms on campus, EALP/IUCEA 2009 (n=2862)

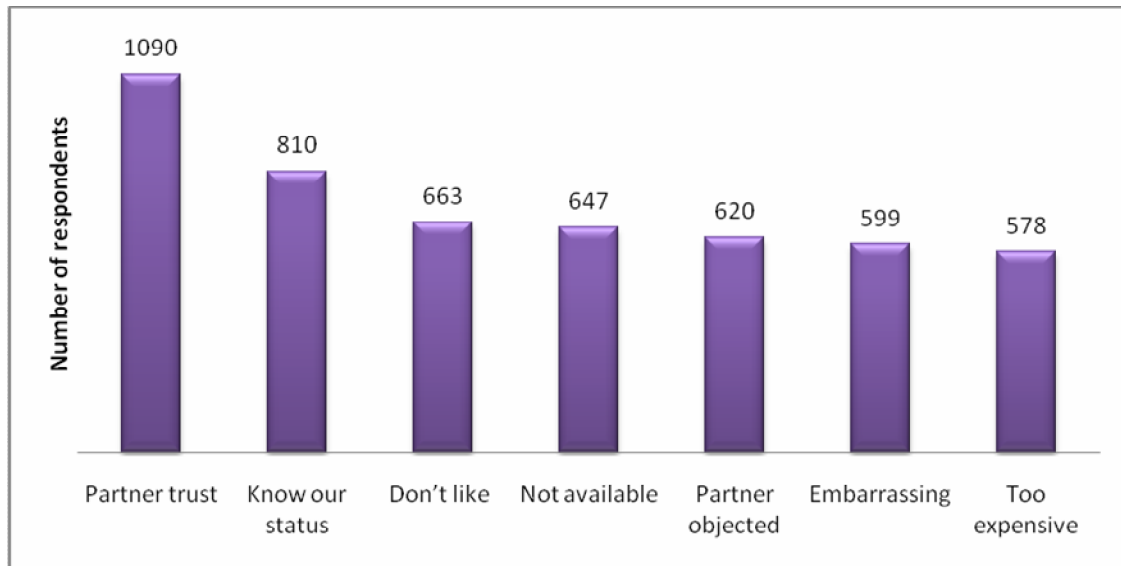


Figure 5.15 Reasons given for non use of condom during every sexual encounter, EALP/IUCEA 2009

5.5 Reasons for abstinence

With regard to reasons for abstinence (Table 5.3), those who reported not being ready for sex yet were, 51.5% reported that it was very much a reason, 25.4% somewhat a reason, and 23.1% not a reason. Those who said they had never had a feeling for sex or did not have a sex drive; only 6.0% gave it as very much a reason, 9.7% somewhat a reason, with the majority of 84.3% saying it was not a reason. Concern about pregnancy or getting someone pregnant was very much a reason for 40.5%, somewhat a reason for 34.3% and not reason for 25.1%. For those who reported that their partner did not want to have sex, only 5.5% gave it as very much a reason, 8.7% as some what a reason, while 85.6% said it was not a reason. Fear of contracting HIV was given as very much a reason by 62.3%, somewhat a reason by 22.0% and not a reason by 15.8%. Those responding to being embarrassed to use birth control methods, only 7.9% said it was very much reason, 11.4% somewhat a reason, while 80.7% not a reason. Religion was given as very much a reason for abstinence by 70.0% of respondents with 16.0% saying somewhat a reason and 14.0% not a reason. Waiting for marriage was very much a reason for 66.5%, somewhat a reason for 16.9% and not a reason for 16.5%. Not having a partner was mentioned 9.3%, somewhat a reason by 7.8%, and not a reason for abstinence by 82.5%. It should be mentioned that in five of the nine reasons reported above, the number of respondents were more than the number who earlier reported of never having sex, since some respondents may have resolved to abstain at some point after sexual experience.

**Table 5.3 Reasons for abstaining expressed by percentage response
EALP/IUCEA 2009**

Reason	Not a Reason	Somewhat a reason	Very much a reason
Not ready for sex	23.1%	25.4%	51.5%
No feeling for sex	84.3%	9.70%	6.00%
Concerned about pregnancy or impregnating somebody	25.1%	34.3%	40.5%
Partner does not want sex	85.8%	8.70%	5.50%
Afraid of contracting HIV	18.8%	22.2%	62.3%
Embarrassed to use birth control methods	80.7%	11.40%	7.90%
Religious faith against pre-marital sex	14.0%	16.0%	70.0%
Waiting for marriage	16.5%	16.9%	66.5%
Do not have sexual partner	82.8%	7.80%	9.30%

5.6 Transactional and Intergenerational sex

Engaging in sex for favours was reported by 8.6% of respondents, with males (10.2%) engaging more than females (6.0%). Sex for favours was marginally higher among second (9.11%), followed by fourth (8.65%), third (8.58 %) and lowest among first (8.11%) year respondents. The trend was slightly higher in self (8.99%) compared to government (8.31%) sponsored respondents (Table 5.4). Among the sero-positives, 23.5% reported having had sex for favours, almost three times higher than the overall average.

Sexual intercourse with persons 10 years older was reported by 15.4% of respondents, and was higher in males (17.6%) than females (12.1%). Third year (17.6%) respondents had the highest proportion, followed by first (15.3%), second (14.6%) and fourth years (14.1%) (Figure 5.16). Similarly, sexual intercourse with persons 5 years younger was reported by 14.8% of respondents, and was higher in males (22.9%) than females (1.61%). Fourth year (21.7%) respondents had the highest proportion, followed by third (16.0%), second (13.5%) and first years (10.9%) (Figure 5.16). Among the sero-positives, 35.3% reported having had sex with persons 10 years older and 5 years younger respectively, about double the overall average.

Table 5.4 Proportion engaging in sex for favours, EALP/IUCEA 2009

CATEGORY	n	%
Sex for favours by sex	3634	8.6%
Males	2251	10.2%
Females	1383	6.0%
Sex for favours by year of study	3609*	
1 st year		8.1%
2 nd year		9.1%
3 rd year		8.6%
4 th year		8.7%
Sex for favours by sponsorship	3581	
Government sponsored	1902	8.3%
Self sponsored	1679	9.0%

* The *n* represents pooled number of respondents from all years of study

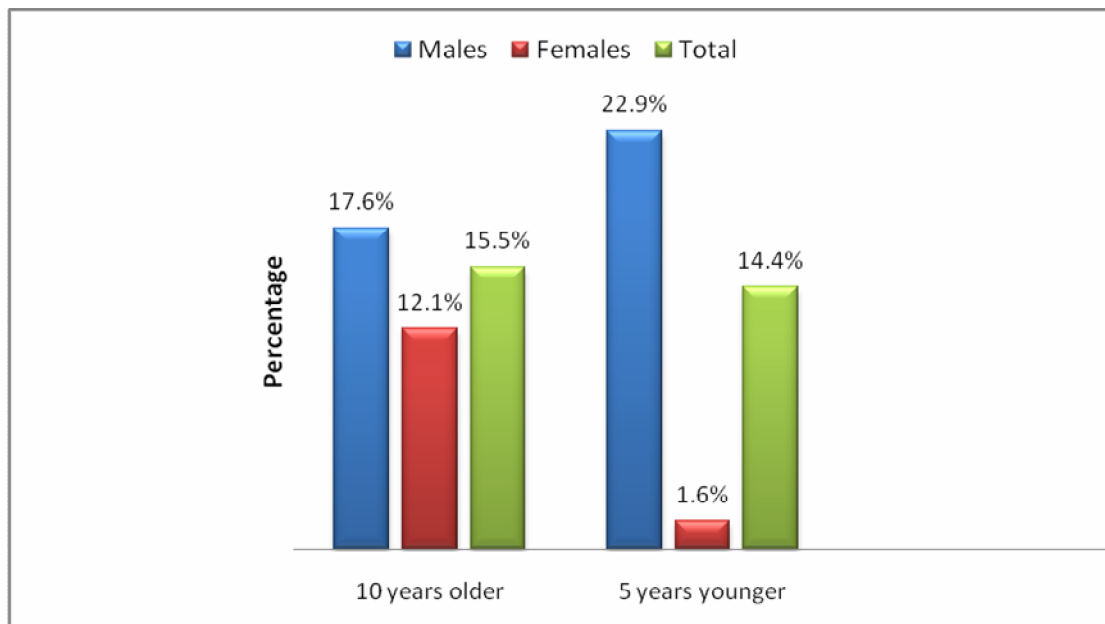


Figure 5.16 Sex with persons 10 yrs older and 5 yrs younger, EALP/IUCEA 2009 (n = 3656 & 3647 respectively).

Sexual intercourse with lecturer was reported by 1.8% of respondents, and was higher in males (2.15%) than females (1.18%) (Figure 5.17). Second year (2.9%) respondents had the highest proportion, followed by third (2.2%), fourth (0.98%) and first years (0.97%) (Figure 5.18). Reasons given for sexual intercourse with lecturers were fourfold; attraction (58.9), leisure/pleasure (2.6%), force (16.1%), and influence of alcohol (2.4%) (Figure 5.19). None of the sero-positives reported ever having sex with lecturer.

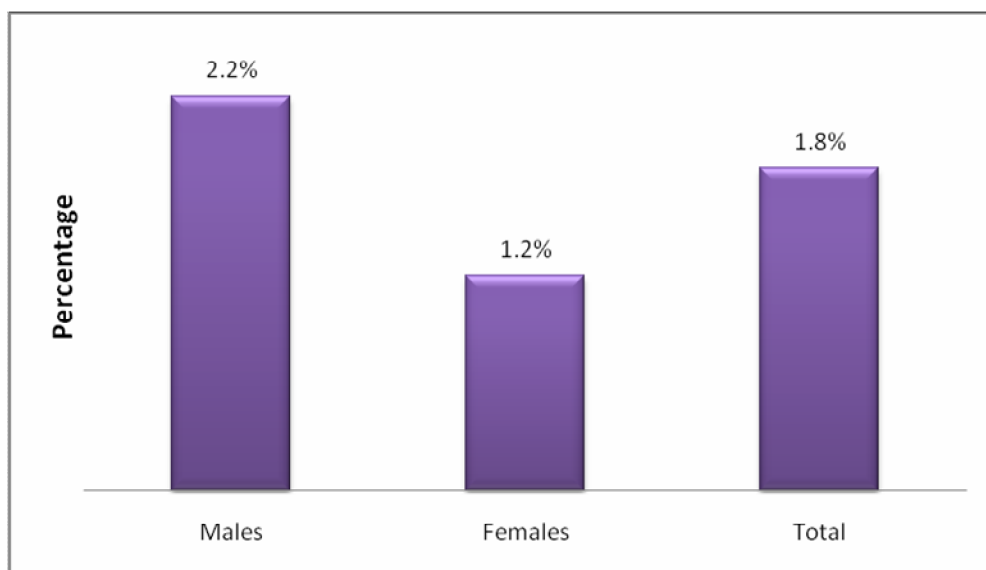


Figure 5.17 Proportion having sex with lecturer by sex, EALP/IUCEA 2009 (n=3542)

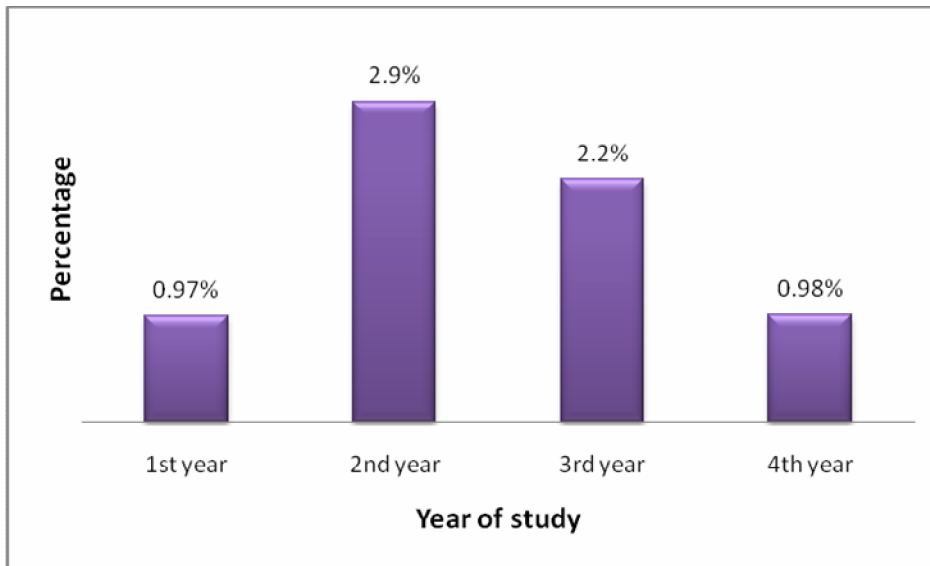


Figure 5.18 Proportion having sex with lecturer by year of study, EALP/IUCEA 2009 (n=3512)

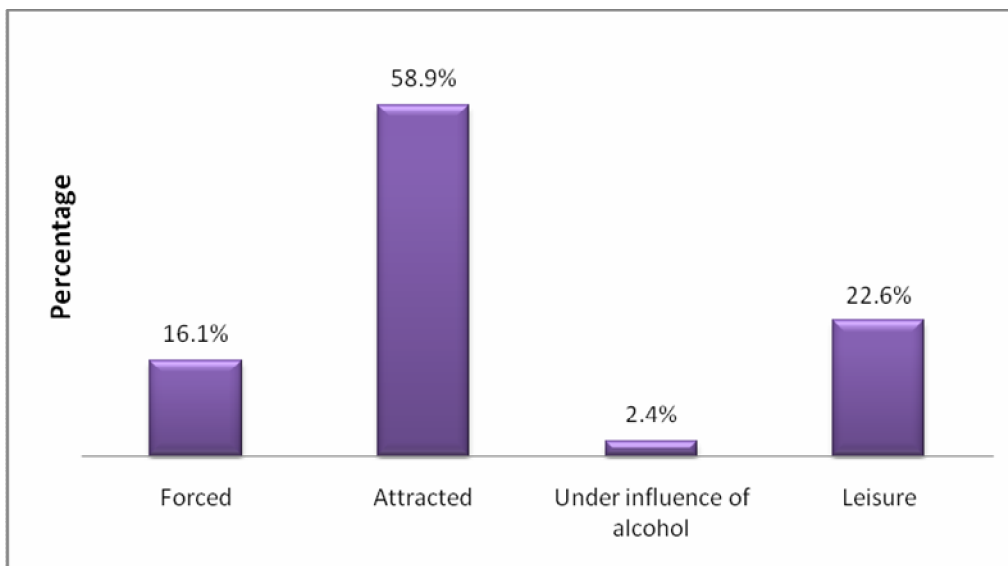


Figure 5.19 Reasons given for sexual intercourse with lecture EALP/IUCEA 2009 (n = 168)

On the question of being an academic wife or husband, 2.7% answered to the affirmative, with more males (3.2%) than females (1.8%) (Figure 5.20). Second year (3.7%) respondents had the highest proportion, followed by third (3.2%), first (1.9%) and fourth (1.8%) (Figure 5.21). Reason given for this form of engagement included; peer pressure (54.2%) with males at 57.6% and females at 46.1%, hope in eventual marriage (27.1%) with males at 27.2% and females at 30.8%, financial gain (14.6%) with males at 15.1% and females at 15.4%, and not knowing why (4.2%) (Figure 5.22). Some 585 respondents knew of one or more academic wives with 45.1% of this group saying they knew many (Figure 5.23). None of the sero-positives reported ever being an academic wife/husband.

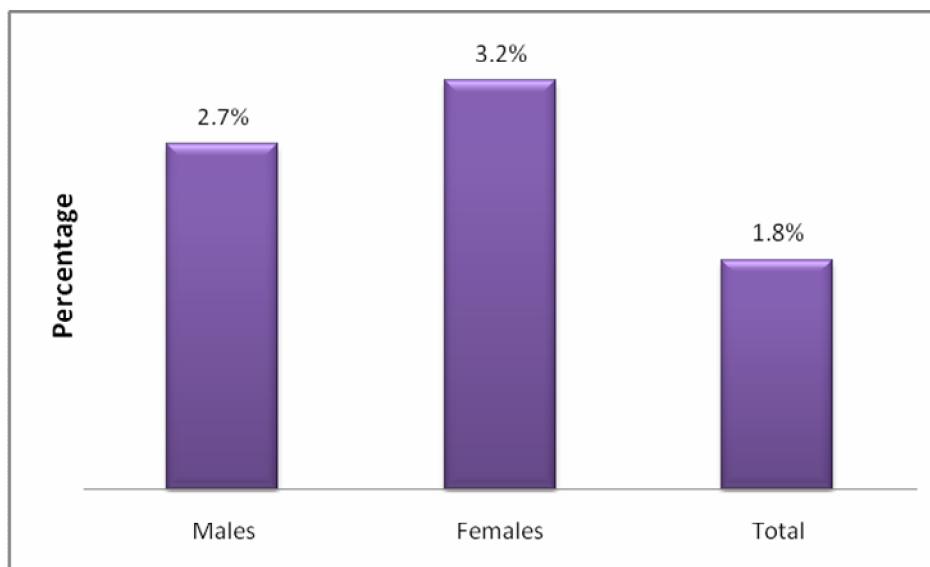


Figure 5.20 Proportion of academic wives/husbands by sex, EALP/IUCEA 2009 (n=3459)

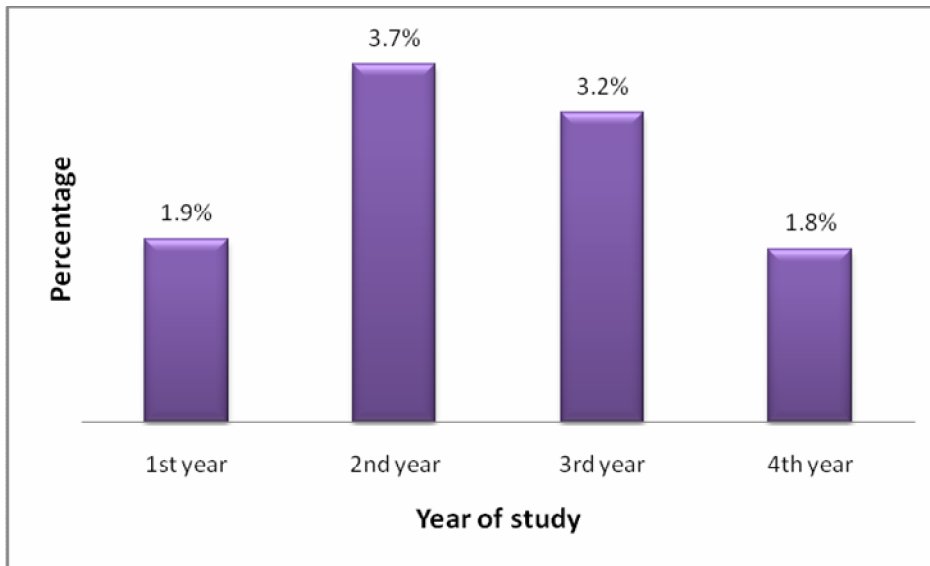


Figure 5.21 Proportion of academic wives/husbands by year of study, EALP/IUCEA 2009 (n=3388)

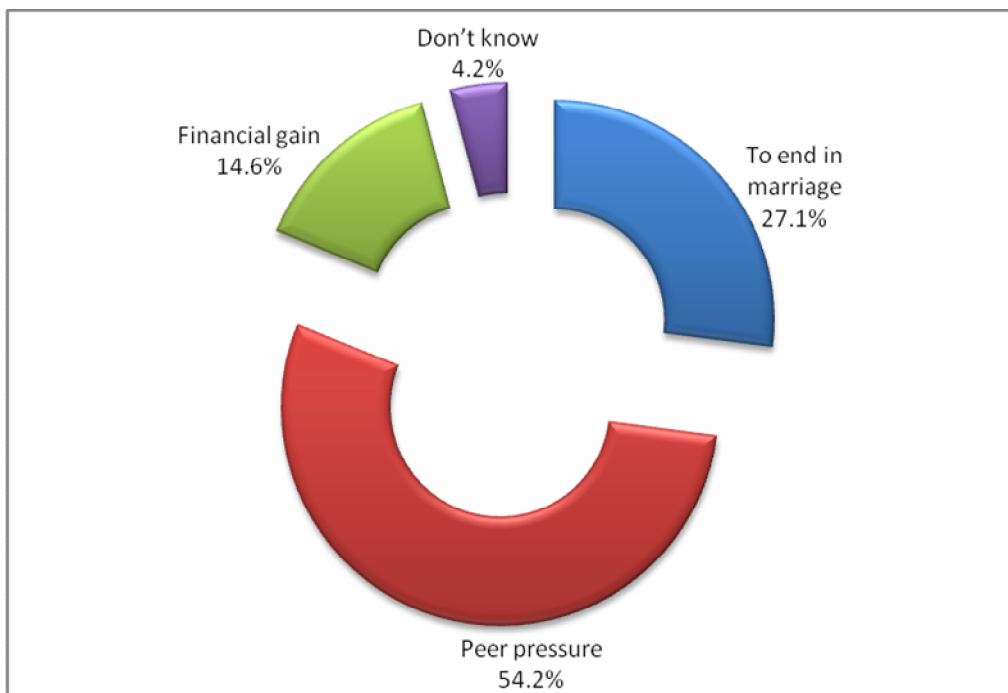


Figure 5.22 Reasons for being academic wives/husbands, EALP/IUCEA 2009 (n=48)

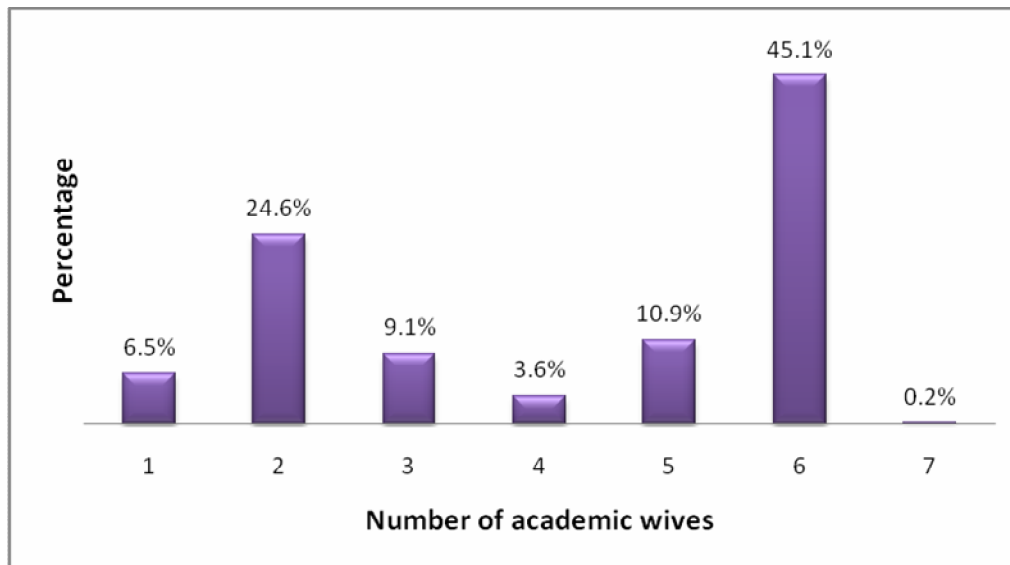


Figure 5.23 Proportions knowing other academic wives/husbands, EALP/IUCEA 2009 (n = 585)

5.7 Influence of drugs and alcohol

The influence of alcohol and or drugs into undesired sex was reported by 16.2% of respondents. The influence was much greater in males (21.4%) than in females (7.8%). Fourth year (20.7%) respondents had the highest proportion, followed by second (17.0%), third (15.5%) and first years (13.1%) (Table 5.5). Among the sero-positives, 43.8% reported having been influenced by drugs and alcohol to have undesired sex. This proportion was about two and half times the overall average.

5.8 Infection by and knowledge about STI's

Some 4.2 % of respondents reported having been previously infected by sexually transmitted infections (STI's), of which 4.4% were males and 3.9% females. Third (5.2%) and fourth (5.2%), year respondents had the highest rates, followed by second (4.0%) and then first years (3.1%). Gonorrhoea (30.7%) was the most reported, followed by urinary tract infection (UTI) (24.5%), and then syphilis (15.0%). (Table 5.6). Majority of the STI's occurred more than a year ago (Figure 5.24). Treatment rates were at 75.4%. The respondent's listed 9 STIs other than HIV. These included Gonorrhoea, syphilis, Herpes simplex, Hepatitis A, Hepatitis B, Mumps, Chlamydia, Human Papilloma Virus and Candidaiasis.

Among these, Gonorrhoea was the most known (54.3%) while HPV was mentioned by only one respondent while mumps was mentioned by 5 respondents (Figure 5.25). STI infection among the sero-positives was reported at 25%, six times more than the overall average (Table 5.6).

Table 5.5 Proportion reporting undesired sex due to drugs and alcohol, EALP/IUCEA 2009

CATEGORY	n	%
Undesired sex due to drugs and alcohol	3633	16.2%
Males	2249	21.4%
Females	1369	7.8%
Sero-positives	16	43.8%
Undesired sex by year of study	3543*	
1st year		13.1%
2nd year		17.0%
3rd year		15.5%
4th year		20.7%

* The **n** represents pooled number of respondents from all years of study

Table 5.6 Proportion reporting infection by other STI's, EALP/IUCEA 2009

INFECTION BY OTHER STI'S	n	%
Infection by other STI's	3642	4.2%
Males	2252	4.4%
Females	1371	3.9%
Sero-positives	16	25%
Other STI infection by year of study	3551*	
1st year		3.1%
2nd year		4.0%
3rd year		5.2%
4th year		5.2%
Type of STI reported	111**	
Gonorrhoea		30.7%
UTI		24.5%
Syphilis		15.0%

* The **n** represents pooled number of respondents from all years of study

** The **n** represents pooled number of respondents from all universities

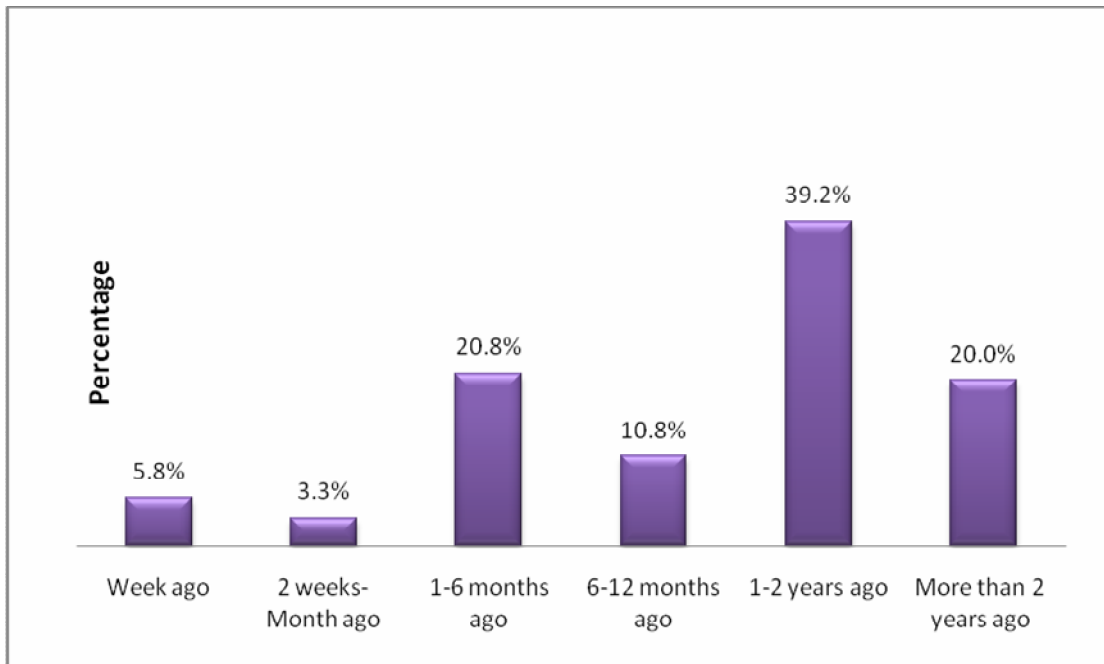


Figure 5.24 Period when other STI's occurred, EALP/IUCEA 2009 (n = 120)

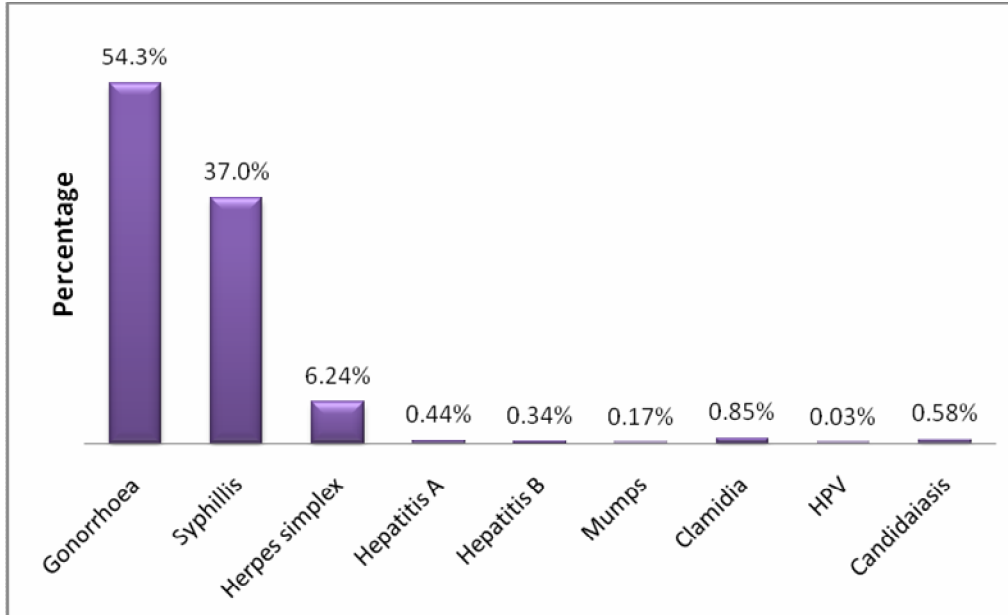


Figure 5.25 Proportion mentioning other STI's, EALP/IUCEA 2009 (n = 2945)

5.9 Sharing of sexual partners, needles for injectable drugs, and sex with sero-positives

Sharing of sexual partners with a friend was reported by 15.0% of respondents, and was common among males (19.0%) than females (8.3%) Sharing of needles for injectable drugs was reported by 2.5%, but with slight majority being females (2.6%) over males (2.5%). Some 35 individuals reported having knowingly had unprotected sex with those having HIV, 30 of them males and 5 females (Table 5.7). Among the sero-positives, 33.3% reported having shared a sexual partner with a friend, double the overall average. However, they never shared needles or knowingly had sex with infected persons.

5.10 Sexual assault

Sexual assault was reported in 8.9% of those who responded to the question, and was disproportionately higher in females (12.9%) than males (6.4%) (Figure 5.26).

Table 5.8 Proportion sharing sexual partners and needles for injectable drugs, EALP/IUCEA 2009

CATEGORY OF SHARING	n	%
Sharing sexual partner with friend	3724	15.0%
Males	2303	19.0%
Females	1403	8.3%
Sero-positives	18	33.3%
Unprotected sex with HIV positive persons	35	
Males	30	
Females	5	
Sharing of needles for injectable drugs	3717	2.5%
Males	2306	2.5%
Females	1409	2.6%

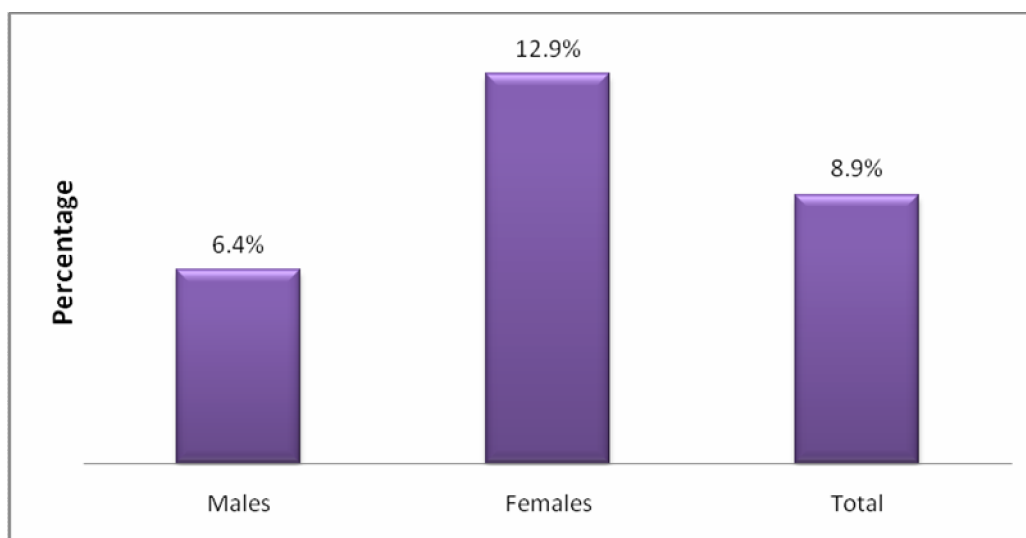


Figure 5.26 Proportion who have been sexually assaulted, EALP/IUCEA 2009 (n=3631)

5.11 Best approaches to HIV prevention

The best approaches to HIV prevention are shown in table 5.9. Abstinence (48.9%), distantly followed by condom use (29.1%) were the most cited.

Table 5.9 Proportion indicating various approaches to HIV prevention, EALP/IUCEA 2009 (2n = 3731)

APPROACHES	%
Abstinence	48.9%
Condom use	29.1%
Health education and awareness	19.1%
Faithfulness in relationships	15.2%
Frequent updates on ones HIV status	6.5%
Positive behaviour change	4.5%
Stopping of drug abuse	1.6%
Efficient use of HIV prevention and management funds	0.4%

5.12 Summary of findings

- **Sexual debut was at 18 years and was earlier in males than females**
- **Sexual debut for those testing HIV positive was one year earlier at 17 years**
- **Primary abstinence was reported in quarter of the respondents and was higher in females**
- **Primary abstinence decreased with increase in year of study**
- **The main reasons given for abstinence was religion (70%), followed by waiting for marriage (66.5%) and fear of contracting HIV (62.3%)**
- **The prevalence of the high risk anal sex was generally low at 2.5%**
- **Anal sex for HIV positive respondents was four times higher than the overall prevalence rate**
- **Overall use of condoms was generally high with two thirds of respondents having used them during their last sexual episode.**
- **Most respondents knew where to obtain condoms on campus**
- **Multiple sexual partners was reported by nearly half of the respondents, and was more common in males**
- **Sex for favours was generally low at 8.6% and more common among males**
- **Among those testing HIV-positive, 23.5% reported having had sex for favours, almost three times higher than the overall average**
- **Intergenerational sex was fairly low at 15.4% and higher among males**
- **Among those testing HIV-positive, 35.3% and 35.3%, reported having had sex with persons 10 years older and 5 years younger respectively, about double the overall average**
- **Sex with lecturers was very low at 1.8% and more common among males, and largely attributed to attraction**
- **Prevalence of academic wives or husbands was low at 2.7% and was more common among males**
- **Influence of drug and alcohol into undesired sex was low at 16.2% and greater among males**
- **Among those testing HIV positive, 43.8% reported having been influenced by drugs and alcohol to have undesired sex, which was about two and half times the overall average.**
- **Reports of infection with other STI's other than HIV was low at 4.2%**

- ***STI infection among those testing positive was reported at 25%, six times more than the overall average***
- ***Sexual partner sharing with friend was at 15.0% and more common among males***
- ***Among those testing HIV positive, 33.3% reported having shared a sexual partner with a friend, double the overall average***
- ***Sexual assault was reported by 8.9% higher in females***

CHAPTER 6: KNOWLEDGE AND PRACTICES RELATED TO HIV PREVENTION

6.1 Introduction

Knowledge, attitudes and practices related to HIV prevention are essential in making informed decisions and choices that may reduce risk of acquiring, re-infection and transmitting HIV. Many universities have responded to the HIV pandemic by instituting Aids Control Units, whose mandate, among others, is to promote activities and programmes for the prevention of new infections using every possible, socially and ethically acceptable means. This section examines the efficacy of such programmes, and generally gauges the level of knowledge, attitude and practices aimed at the prevention of new infections among the university community.

6.2 HIV and AIDS Courses

Some 63.1 % of respondents reported have taken while 36.9% have never taken university level course on HIV and AIDS (Figure 6.1). The proportions were highest at JKUAT (90.8%) and MMUST (90.2%) and lowest at Moi (19%). Majority of the respondents had undertaken the course on HIV and AIDS as a common university unit (92.9%) while the other 7.1% as subject specific unit (Figure 6.2).

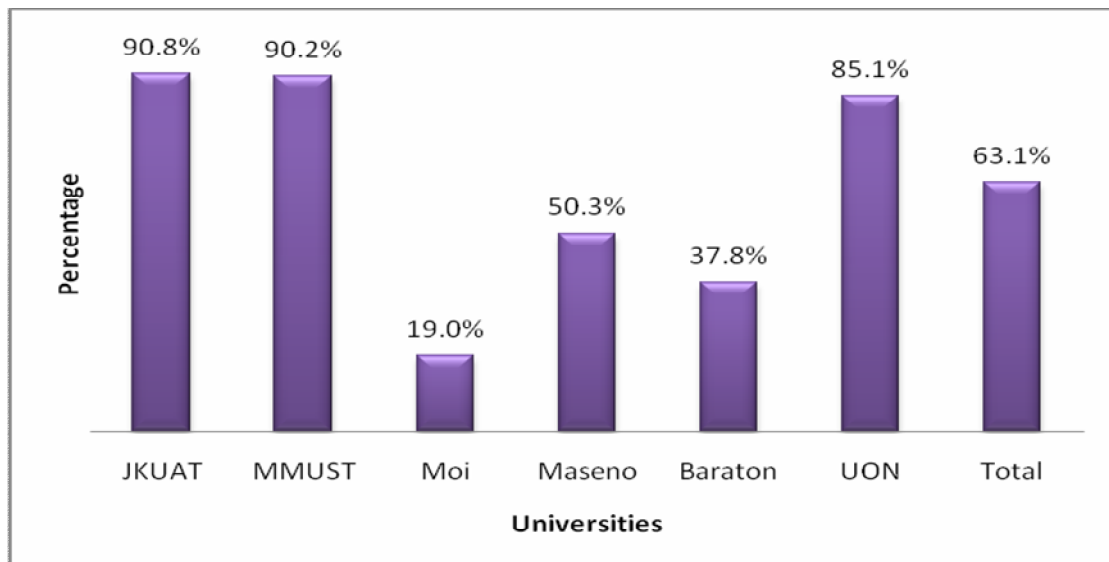


Figure 6.1 Proportion of respondents who have taken university level courses on HIV by University, EALP/IUCEA 2009 (n=3841)

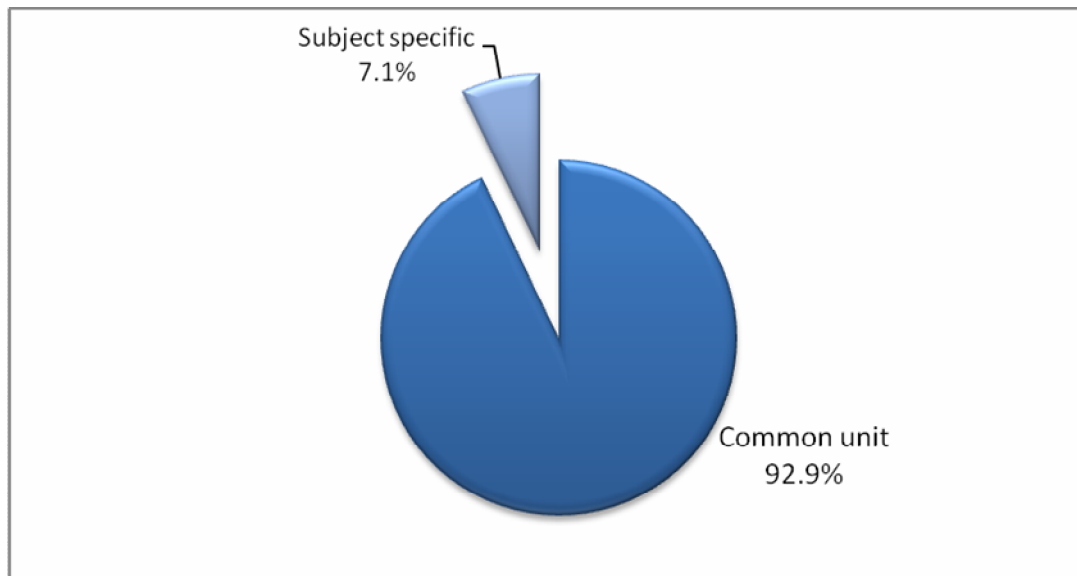


Figure 6.2 Mode of teaching of university level courses on HIV, EALP/IUCEA 2009(n=3841)

6.3 Modes of HIV Transmission and Prevention

With regard to the various modes of HIV transmission, 63.3% mentioned blood transfusion, 92.2% mentioned unprotected sexual intercourse, 60.2% listed sharing of sharp equipment, deep kissing by 7.4%, breast feeding by 8.8%, mother to child during birth by 39.7%, and contact with infected body fluid by 12.8% (Figure 6.3)

Findings indicate that the methods of HIV prevention methods abstinence was listed by 83.5%, use of condoms by 82.7%, testing blood before transfusion by 10.7%, reducing intake of drugs and alcohol by 0.6%, prevention of mother to child transmission by 5.5%, screening of HIV virus or testing before having unprotected sex by 2.9%, sterilizing of needs and sharp equipment by 16.5%, being faithful by 35.7%, and HIV awareness campaigns by 1.8% (Figure 6.4).

On whether they would recommend a friend to abstain from sexual intercourse, 80.1% were affirmative, with females at 85.9% and males at 76.5% (Figure 6.5). Regarding whether they would recommend the use of condoms to friends, 86.1% were affirmative, with 87.2% of the females and 83.7% of males supporting (Figure 6.5).

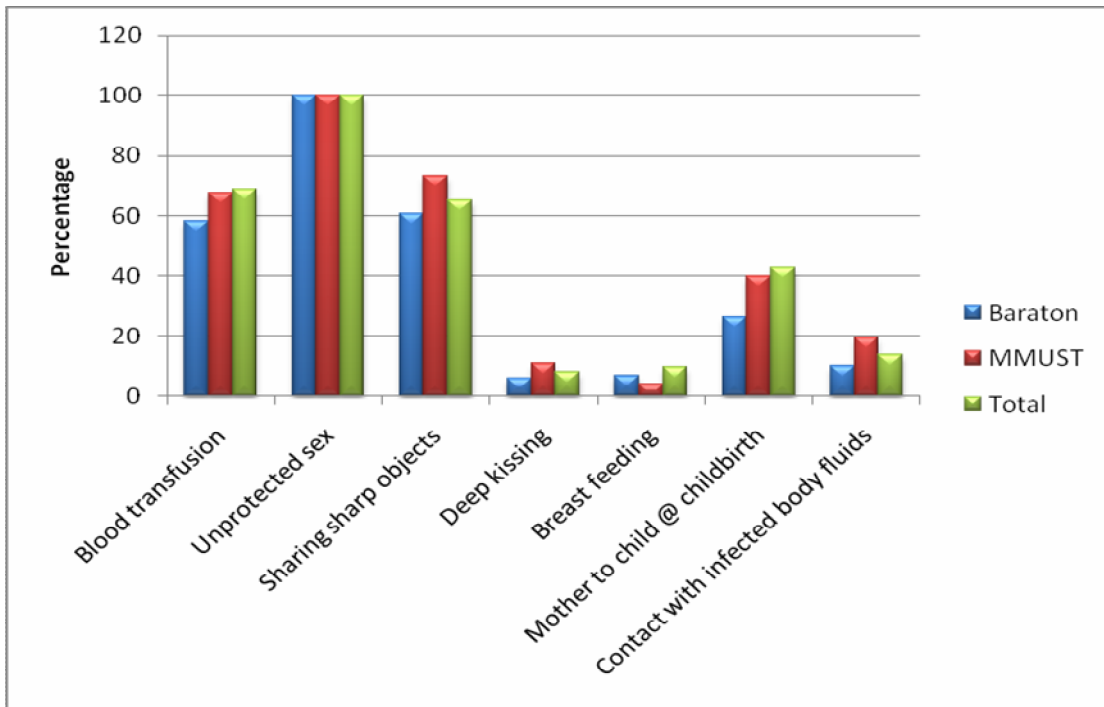


Figure 6.3 Knowledge on modes of HIV transmission EALP/IUCEA 2009

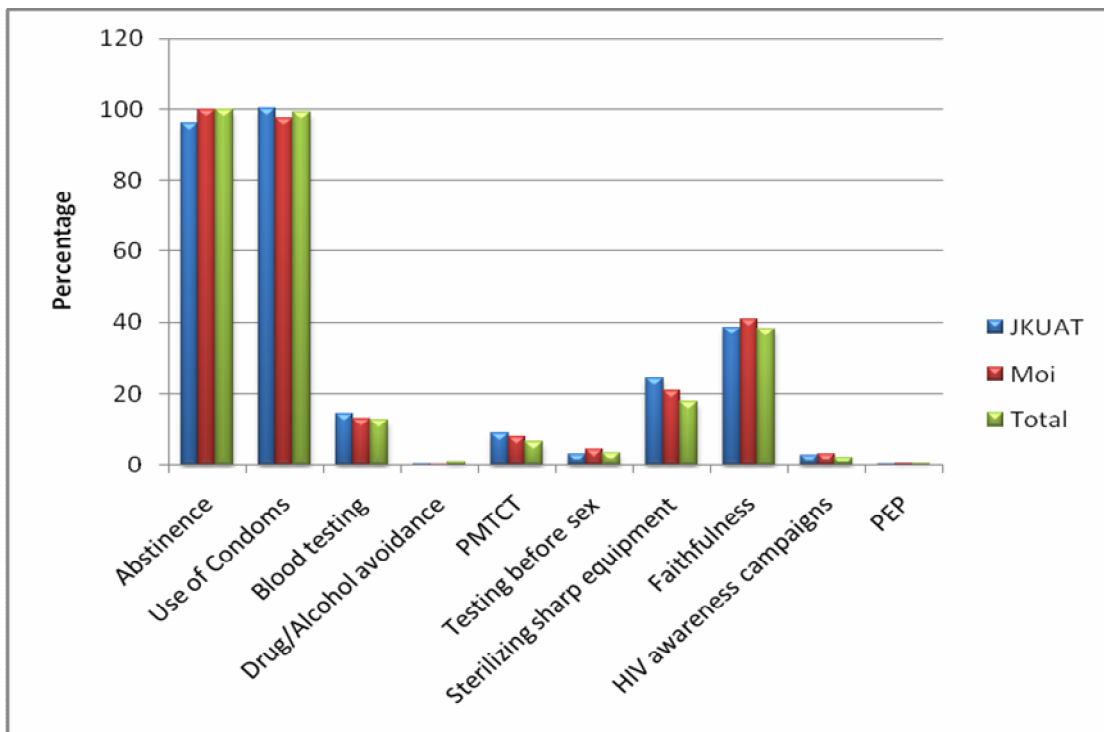


Figure 6.4 Knowledge on modes of HIV prevention, EALP/IUCEA 2009

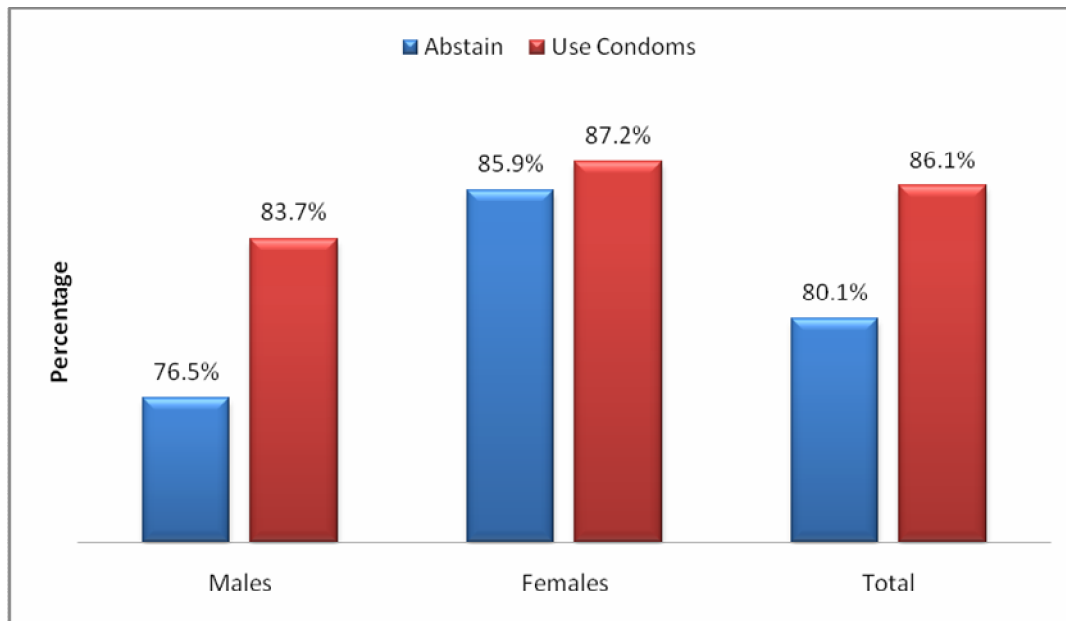


Figure 6.5 Proportion recommending abstinence and use of condoms to friends, EALP/IUCEA 2009 (n = 3857 & 3789 respectively)

6.4 Chances of contracting HIV

Chances of contracting HIV was reported as high in 9.7%, moderate in 21.9%, low in 54.7% and no risk at all in 13.7% of respondents. For males, high in 9.4%, moderate in 23.0%, low in 55.9% and no risk at all in 13.8%. For females high in 10.1%, moderate in 20.0%, low in 56.3% and no risk at all in 13.5%. This same pattern was observed in all universities (Figure 6.6). Similarly, 52.6% of the seropositives rated themselves having a low chance of contracting HIV while 15.9% ranked themselves high risk.

6.5 Reasons for risk rating of contracting HIV by sex

Reason given for rating was use of condom by 91.7%, being born again Christian by 7.3%, trust in one self by 30.4%, trusting one sexual partner by 82.2%, being less sexually active by 22.2%, frequent testing for HIV by 21.8%, blood transfusion by 6.8%, abstinence by 99.7%, having unprotected sex by 40.6%, having been exposed to many ways of contracting HIV by 32.2% (Figure 6.7). Use of condoms was given as reason for rating by 31.6% of sero-positive respondents.

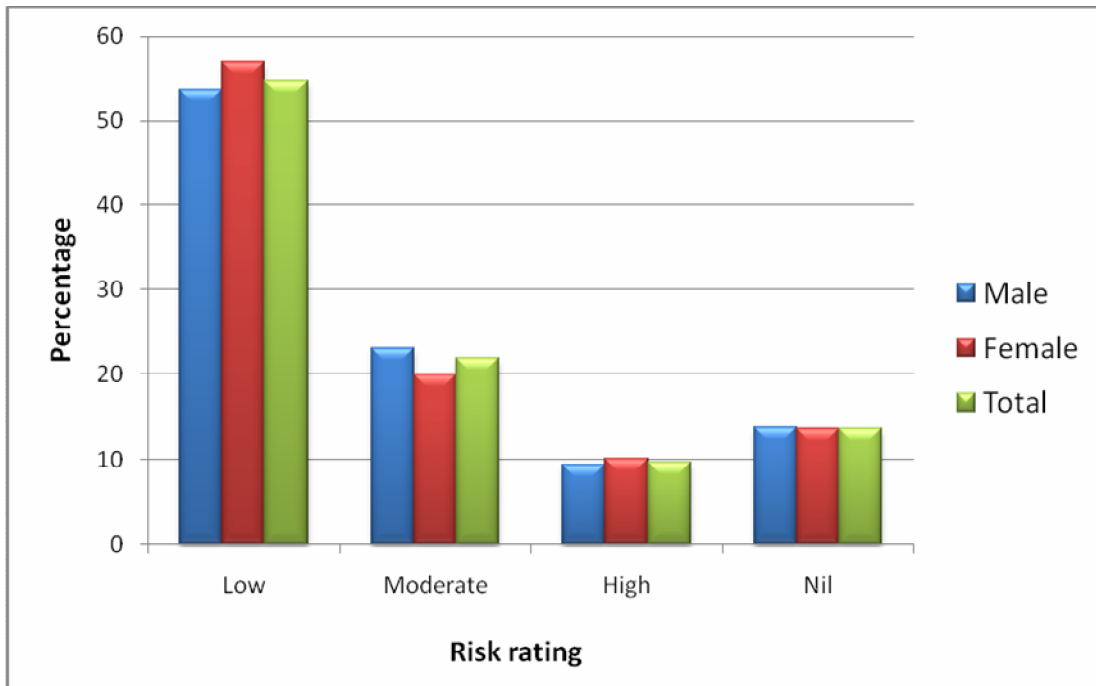


Figure 6.6 Chances of contracting HIV by sex, EALP/IUCEA 2009 (n=3761)

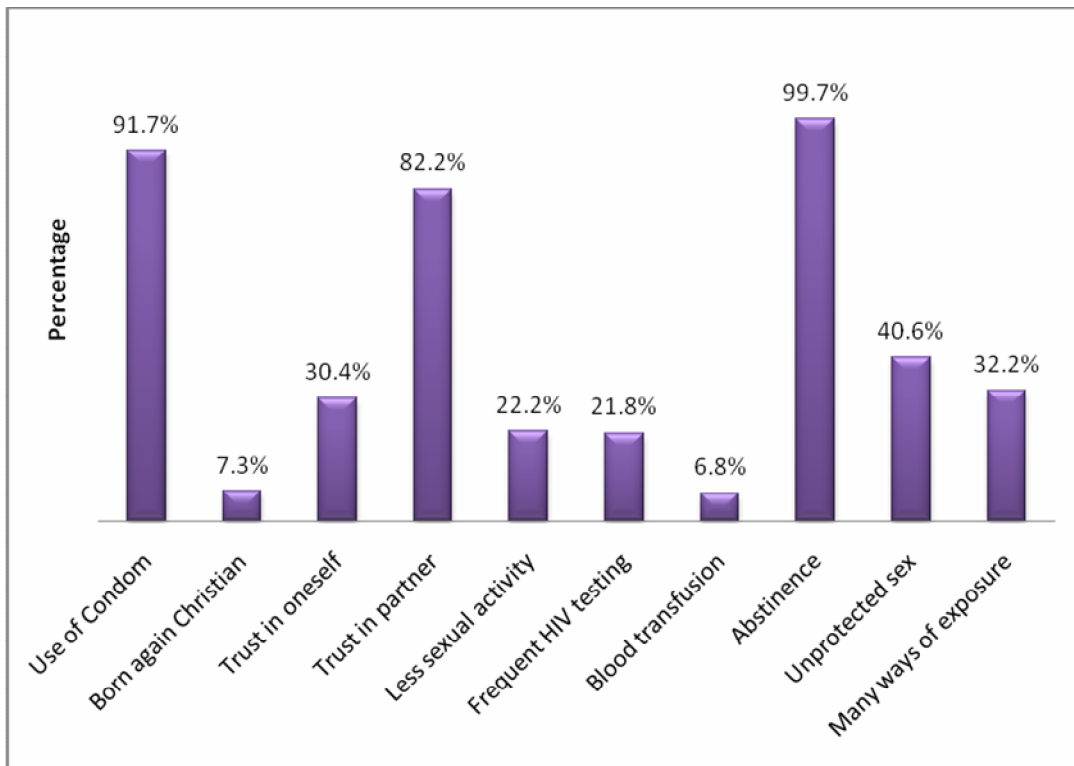


Figure 6.7 Reason for rating of risk of contracting HIV, EALP/IUCEA 2009

6.6 HIV testing and Behaviour Change

Respondents who have ever tested for HIV before were 63.6% while those not tested before were 36.3%, with males ever tested at 63.1 % and females at 64.8% (Table 6.1). First year respondents ever tested comprised 60.4%, second years' 61.3%, third years 65.8% and fourth years 69.9%, indicating the average rate of increase of 3.1% per year. Testing was highest at UON (73.6%) and lowest at JKUAT (47.4%). On when they were last tested, 49.5% mentioned less than 6 months ago, 28.3% 6-12 months ago, and 22.2% more than 12 months ago (Table 6.1). Among the sero-positive respondents, 85% have undergone HIV testing. Some three individuals had not.

Respondents never tested for HIV before gave the following reasons: Do not feel at risk (61.4%), no particular reason (69.2%), do not know where to go for test (4.5%), afraid of results (48.6%), do not like the testing environment (35.0%), afraid of other people knowing results (19.5%), my partner has already been tested (10.8%), do not trust those HIV tests (21.0%), and planning to get tested (84.1%) (Table 6.1).

On the location at which respondents have undergone VCT tests, 19.2 % cited the university VCT centre, 12.0% at university organized VCT drives, 14.0% at private clinic, and 1.7% at a district hospital. Some 90.1% of respondents said they would go for another HIV test while 8.9% would not. Some 22.2% of the sero-positives said they would not. Reasons given by those who said they would not go for another test include not being at risk (63.3%), being afraid of results (20.4%), not being sure of status (12.2%), and no reason (4.1%) (Table 6.1).

Those who had taken HIV tests and now knew their sero-status indicated various ways in which they had changed their sexual behaviour which included: committed to abstinence (55%), used condoms during every sexual episode (46.8%), used condoms more often (32.9%), used condoms for the very first time (9.0%), reduced the number of sexual partners (40.9%), have discussed HIV with sexual partners more than before (50.0%), have discussed condoms with sexual partners more than before (35.3%), have sought HIV counseling (27.5%), have strengthened resolve not to have sex (37.4%), have joined a behaviour change group (22.6%), have joined a support group of people living with HIV (9.8%), have resolved to spread the virus as much as possible (3.0% or 73 individuals) (Figure 6.8). Among the sero-positives, the most popular sexual behaviour change was use of condoms (70.6%) followed by reduction of number of sexual partners (67.7%). But notably, 41.1% had joined a behaviour change group, while another 35.3% had joined support group of people living with HIV.

Table 6.1 HIV testing and Behaviour change, EALP/IUCEA 2009

CATEGORY	n	%
Proportion that have tested for HIV		
Ever tested	3825	63.6%
Males	2356	63.1%
Females	1450	64.5%
Sero-positives	20	85%
Never tested	3825	36.4%
Proportion tested for HIV by university	3825*	
JKUAT		47.4%
MMUST		74.3%
Moi		52.9%
Maseno		66.8%
Baraton		66.0%
UON		73.6%
Proportion tested for HIV by year of study	3825**	
1 st year		60.2%
2 nd year		61.4%
3 rd year		65.8%
4 th year		69.9%
When last tested for HIV	2434*	
Less than 6 months ago		49.5%
6 – 12 months ago		38.3%
More than 12 months ago		22.2%
Proportion taking HIV tests at various locations	3808*	
University VCT		31.5%
VCT in town		53.5%
University VCT drives		16.3%
Private clinic		18.9%
District Hospital		2.3%

Table 6.1 continued

Proportion that would go for another HIV test	2480*	
Willing		91.1%
Unwilling		8.9%
Sero-positives unwilling	18	22.2%
Reason for not willing to take another test	147*	
Being not at risk		63.3%
Not sure of HIV status		12.2%
No reason		4.1%
Afraid of results		20.4%

* The **n** represents pooled number of respondents from all universities

** The **n** represents pooled number of respondents from all years of study

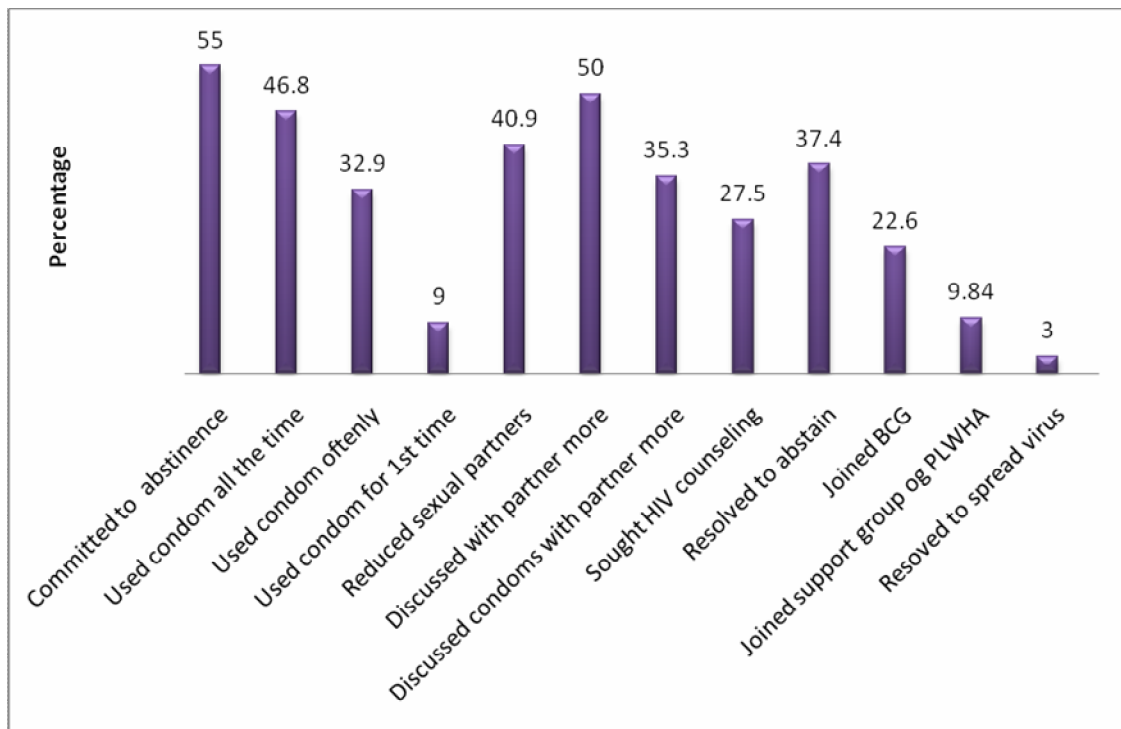


Figure 6.8 Decision made after testing, EALP/IUCEA 2009

6.7 Summary of findings

- ***Slightly less than two thirds of respondents had taken university level course on HIV and AIDS, mainly as a common university unit***
- ***Only 19% of students from Moi University had undertaken university level course on HIV and AIDS compared to 90.8% at JKUAT***
- ***Knowledge of HIV transmission and prevention was similar irrespective of university or undertaking of course on HIV and AIDS***
- ***Unprotected sex was mentioned by all respondents as the main mode of HIV transmission***
- ***Abstinence and condom use were the most preferred mode of HIV prevention and were highly recommended by respondents***
- ***Slightly over half of the students rated themselves as being at low risk of contracting HIV, with abstinence, followed by condom use and partner trust being cited as reasons for the low rating***
- ***HIV testing was reported by 63.6% which was nearly double the national average of 33.9% (KAIS, 2007)***
- ***15% of those testing HIV positive had never taken an HIV test***
- ***Use of condoms and abstinence were the most popular behaviour change choices cited after HIV testing***
- ***Among those testing HIV positive, 41.1% had joined a behaviour change group, while another 35.3% had joined support group of people living with HIV.***

CHAPTER 7: MOBILITY AND SEXUAL BEHAVIOUR

7.1 Introduction

Several studies, notably from rural areas, have shown an association between mobility and HIV infection. Available literature on HIV risk factors has documented the relationship between mobility and HIV spread in sub-Saharan Africa. In a cross-sectional population study in the Mwanza region of Tanzania, Barongo *et al.* (1992) found the highest prevalence rates among those individuals who had moved to their present residence from another village or ward in the previous 2 years. In rural Uganda, change of residence was strongly associated with an increased risk of HIV-1 infection (Nunn *et al.*, 1995). However, similar studies targeting students in institutions of higher learning and associated behaviours and risks are generally lacking. Here, we describe the nature of students' mobility, their sexual behaviour during such travelling, and report on real and perceived risks associated with their movement to and from college and between their residences and lectures

7.2 Means of travelling and sexuality

The most popular means of travelling to and from college was by road (97.3%) (Figure 7.1). It takes most of the respondents less than half a day (55.1%) to travel from their home base to college, with 26.4% taking half a day, 6.0% a full day and 2.6% more than a full day (Figure 7.2).

Having sex during transit to school or during field trips was reported by 10.1% of respondents, which was more prevalent in males (14.0%) than females (3.9%). Such episodes had occurred only once (36%) with most of the respondents, and multiple times in the other 64%. Such sex was usually with fellow student (95.2%), boyfriend/girlfriend (30.3%), person met during the journey (28.6%), commercial sex worker (19.8), house maid (4.3%) and lecturer (2.9%). Condom use during transit sexual encounters was at 72.8%, with males (75%) recording higher usage than females (64.5%). Condom use was all the time in 66.3% of the cases, sometimes in 23.2% and never in 10.5% of cases (Table 7.1). Sex during transit among sero-positives was slightly more than double the average at 23.5% mainly with fellow student (75%), person met during journey (75%) and commercial sex worker (50%). The latter was three times higher than the overall average, while condom was not used in 33.3% of the cases.

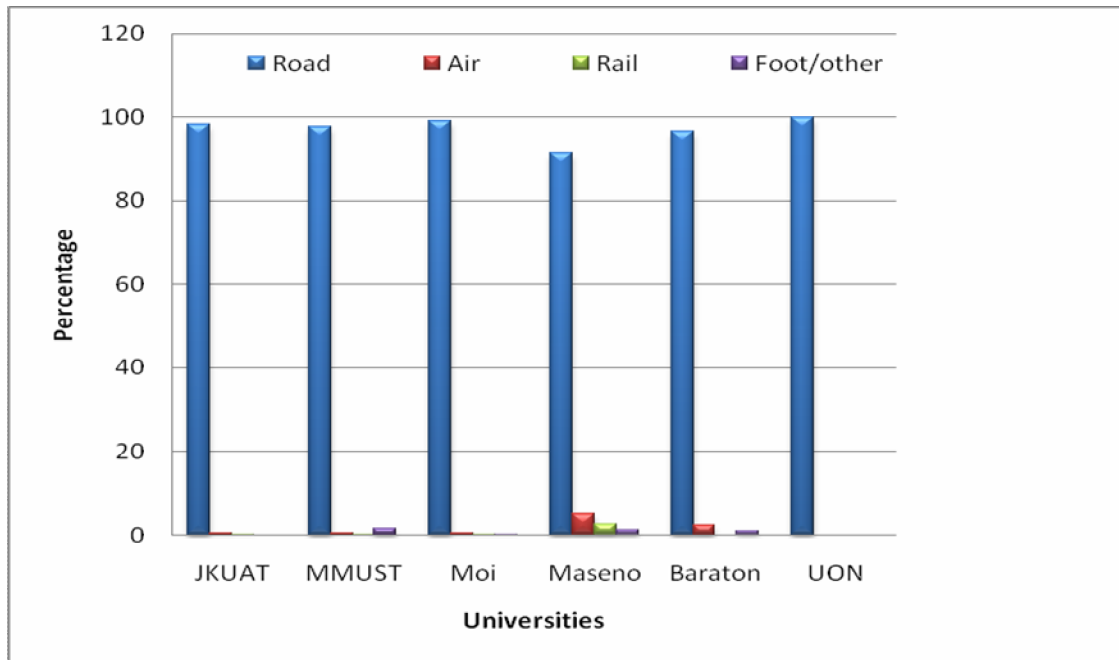


Figure 7.1 Means of travelling to and from college, EALP/IUCEA 2009
(n = 3819)

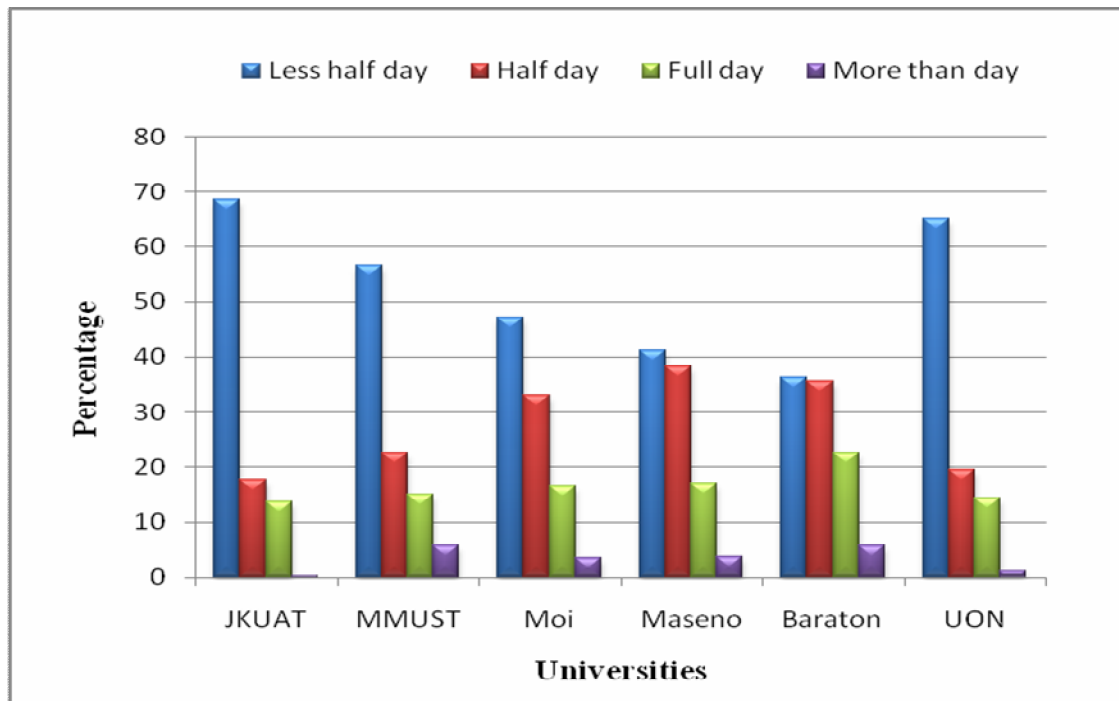


Figure 7.2 Time taken to travel from home to college, EALP/IUCEA 2009
(n = 3801)

Table 7.1 Sex and condom use while on transit, EALP/IUCEA 2009

CATEGORY	n	%
Sex during transit	3799	10.1%
Males	2327	14.0%
Females	1445	3.9%
Sero-positives	17	23.5%
Number of sexual episodes while on transit	419*	
Once		36.0%
Twice		23.2%
Thrice		6.7%
More than thrice		15.8%
Cannot remember		18.4%
Sexual partner	419*	
Fellow student		95.2%
Lecturer		2.9%
Person met on journey		28.6%
Commercial sex worker		19.8%
Housemaid		4.3%
Boyfriend/Girlfriend		30.3%
Condom use while on transit		
Male	569	75%
Female	138	64.5%
Total	707	72.8%
Frequency of condom use while on transit	642*	
All the time		66.3%
Sometimes		23.2%
Never		10.5%

* The **n** represents pooled number of respondents from all universities

7.3 Local transportation and risks

The most common mode of transportation between lectures was walking (76.4%), public means (14.5%), university bus (7.9%), and bicycle (1.2%) (Figure 7.3). Some 26.1% reported some form of risk with transportation between lecturers, most common being Physical harassment/sexual assault by strangers (46.8), closely followed by accidents (45.8%), and finally, harmful inhalations/contagious diseases (7.4%) (Figure 7.4)

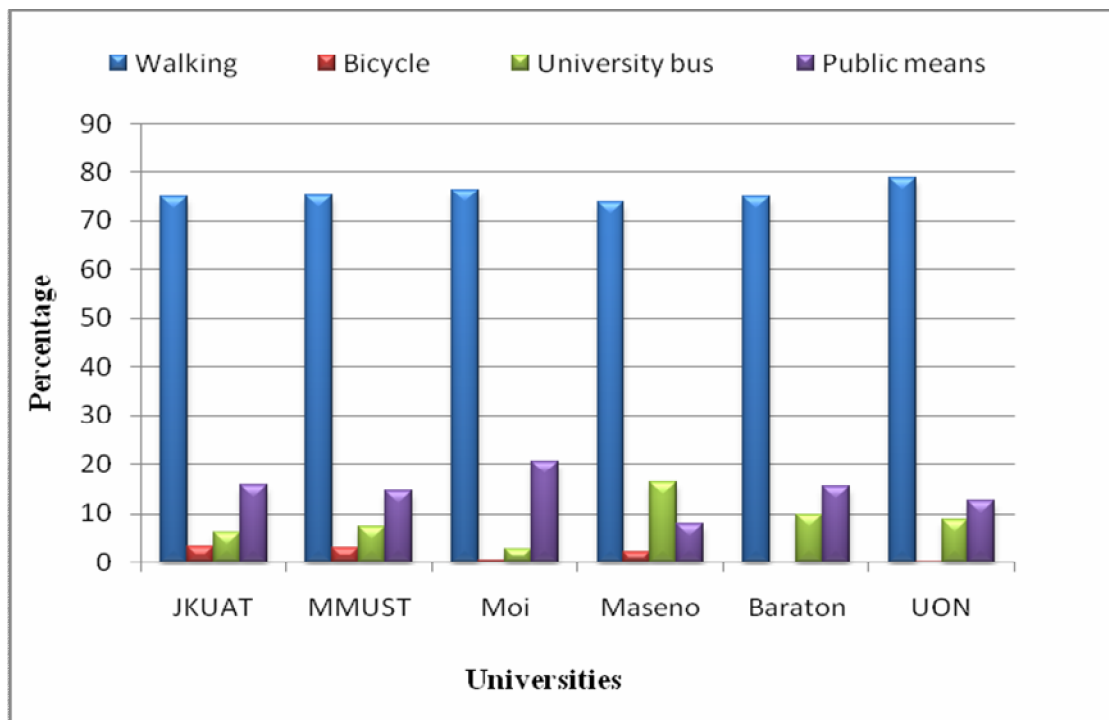


Figure 7.3 Means of travelling between lectures by, EALP/IUCEA 2009 (n = 2923)

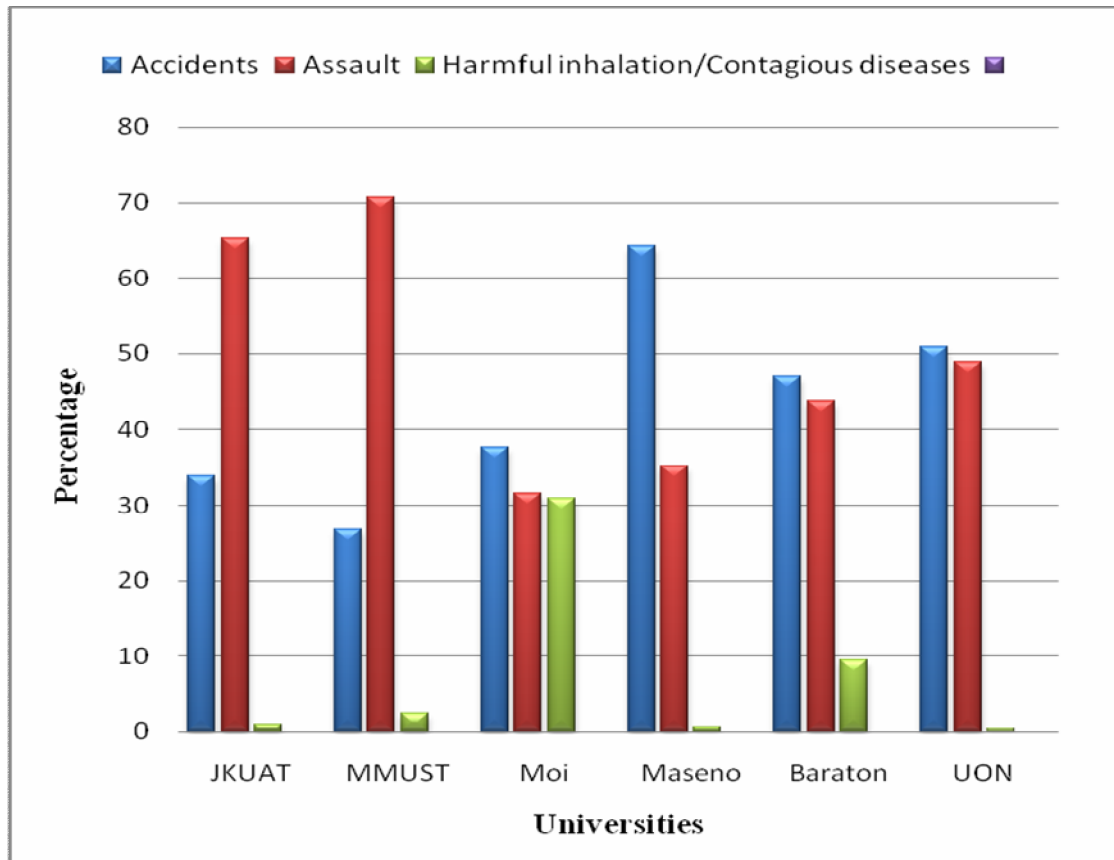


Figure 7.4 Risks associated with transport between lectures, EALP/IUCEA 2009 (n = 3488)

7.4 Summary and Conclusions

- *Most respondents travel by road to and from college, and it takes majority less than half a day to make the journey*
- *Sex during travelling was reported in 10.1% and more common among male respondents, and often involved boyfriend or girlfriend*
- *Sex during transit among HIV positive respondents was slightly more than double the average*
- *Walking was the most common means of travelling between lectures*
- *Physical and sexual assault and accidents were the greatest risks associated with travelling between lectures*

CHAPTER 8: PROGRAMMES AND STRUCTURES FOR HIV/AIDS WITHIN UNIVERSITIES

8.1 Availability and Utilization of HIV and AIDS related services

Most of the universities investigated realize that HIV/AIDS is a real problem among both staff and students. Students are affected and infected, and therefore Universities have institutionalized programmes to deal with HIV/AIDS. Table 8.1 summarises the types of services available within the six selected universities. These include; availability of HIV & AIDS Control Units (ACU), provision of Male condoms, STI Care and treatment, Peer Counseling, HIV/AIDS common course, informal HIV/AIDS education, referral services and mentoring programme. Most of the HIV and AIDS related activities are coordinated from the ACU's that are vested with formulating and sensitising the university on HIV and AIDS policy, as well as programming of activities.

According to observations and views from respondents condom usage among university students was high. However, condom dispensers on campuses across various universities were not adequate. An informant at a campus of Moi University indicated "that *there was only one condom dispenser in the entire campus*". In other Universities investigated, condoms were only available in dispensers during the first two weeks of the semester. During the rest of the semester students bought them as need arose. The use of male condoms was improper according to some respondents since "*there is lack of knowledge on their usage*." Furthermore, some asserted that occasionally male condoms were small in size and the quality was poor as illustrated by "an informant at University of Nairobi." *the condoms provided are of poor quality and are small in size as it is alleged that they are from China.* "The African man is well endowed in penile size and he needs a large size". Another informant had this to say about condoms "*the quality is low and they are smelly and ukianza kutumia, they burst even before you finish*". As for the female condoms, it came out that most students had never seen one, and were not available in the universities investigated.

Onsite VCT facilities were available in all universities, but not in every campus of Moi university and university of Nairobi. However, their location was seen as a hindrance to access, in addition to the fact that many open during working hours only and therefore are not easily accessible to students at all the times. The use of these onsite VCT's was low in most campuses. Many students prefer using external VCTs due to perceived lack of confidentiality of those on campus. At Moi University, moonlight VCTs are offered and this is popular with students.

I choose life (ICL) is one of the NGOs reported to facilitate training seminars on HIV/AIDS, particularly with respect to peer education and life skills training and positive behaviour change and communication. These seminars/activities

were reportedly very popular with students since they are delivered by ICL staff who are as young as students themselves, and therefore understand youth dynamics and “language”. An informant from the University of Nairobi said “ICL is synonymous with HIV/AIDS Control Units in my university”. At Moi and Maseno Universities and the University of Nairobi, ARVs are provided to the infected persons.

Psychosocial support for the infected and the affected was often reportedly offered by church leaders who often offer prayers and counselling services on campus. Furthermore, certain human rights organizations fight for the rights of the infected through various campaigns. They also do offer financial and moral support to those infected and affected. Peer counselling is well developed and some groups have since come up such as “women of eve” advocating for abstinence (Moi University), behavioural change group (Masinde Muliro University). Students have also come up with innovative ways of supporting the current efforts through student academic clubs.

Table 8.1. Range of services available in the six Kenyan universities

SERVICES AVAILABLE	UNIVERSITY					
	Nairobi	Baraton	Masinde Muliro	JKUAT	Maseno	Moi
AIDS Control Unit	No	No	Yes	Yes	Yes	Yes
VCT Facility	Yes	Yes	Yes	Yes	Yes	Yes
Male Condoms	Yes	No	Yes	Yes	Yes	Yes
Chaplaincy	Yes	Yes	Yes	Yes	Yes	Yes
STI's Care and Treatment	Yes	No	Yes	Yes	Yes	Yes
Peer Counseling	Yes	No	Yes	Yes	Yes	Yes
HIV/AIDS Common course	Yes	No	Yes	Yes	Yes	Yes
Informal HIV/AIDS education	Yes	Yes	Yes	Yes	Yes	Yes
Referral services	Yes	Yes	Yes	Yes	Yes	Yes
Mentoring	Yes	Yes	Yes	Yes	Yes	Yes

NB: Some of these services were offered in partnership with other organizations, while referrals were made to other medical facilities/service providers

8.2 Vulnerability and Risk Factors for HIV and AIDS within Universities

University students are vulnerable to HIV and AIDS both within and off campus. According to the study findings, there were many factors contributing to the spread of HIV and AIDS. The most common factor across universities investigated included; peer pressure, drug abuse, media that displays sex messages as *"the in-thing"* poverty, naivety by some students especially from up country, institutional culture such as *"Gold Rush"* when older students pursue first years students for sexual activities, cohabitation, the existence of mixed halls especially in urban universities, sharing of partners, stress, disco nights and boredom. For example, *"the need to belong"* is so strong especially among first years. According to an informant *"most students just want to make their peers happy and so they do things to be seen as "men"* (JKUAT). In five of the universities, students cohabit or engage in what is known as academic *"wife/husband"*. On the other hand, the concept of *"hit and run"* was a common phenomenon in some of the universities. This happens because it is hard to maintain a relationship on campus due to economic hardships, and is experienced more by female students. Both parties in the *"hit and run"* sexual venture *are simply interested in satisfying their sexual needs* (MMUST). It was surprising to learn that even males who were known to be in serious relationships or are married, do engage in the *"hit and run"* activities especially during the *"gold rush"* period. The *"hit and run"* phenomenon leads to low self-esteem on the part of females because after the episode, females feel used and dumped.

It was also revealed by a majority of students that during *"fresher's nights"*, most students especially females, may be exposed to drugs/alcohol for the first time, and therefore more likely to engage in unprotected sex with senior male students who tend to take advantage, and be at higher risk of HIV infection. Additionally, the mounting of discos on campus subjects students to the risk of HIV/AIDS. This is because during these occasions, students are exposed to alcohol and drugs. One informant had this to say regarding the presence of disco on campus; *"Whenever I go to a bash on campus I always bring a woman to my room for the night"* (informant MMUST). This quote demonstrates the pattern of multiple sex partners on the part of male students.

It was reported that the availability of male condoms within the halls of residence tend to encourage students to engage in sex. However, according to a FGD *"most male students do use condoms at the beginning of a relationship but discard the use when they do feel that they sufficiently know each other and trust their partners"* (MMUST). Females often do not demand that boyfriends use condom with the

assumption they are the only partner in the relationship.

In two universities investigated it was reported that the pressure to pass examination does expose female students to HIV and AIDS. It was reported that in some cases female students seduce male lecturers and engage in sex for good grades. A female student has this to say about sex for good grades *"If passing an examination means dating one of my lecturers I don't see anything wrong with that"* (informant from JKUAT). This phenomenon is commonly referred to as "Sexually Transmitted Degrees" (STD's).

Financial hardships are rampant within Universities especially for students who come from poor backgrounds. This leads to female students to cohabit with males on campus. This situation is more pronounced towards the end of each semester when resources do run out for most students. As a result, the female students do move in with male students and cook and wash for them. This is also a period when many female students do engage in prostitution to support their daily needs. This is was reportedly more common among urban universities.

Other cited reasons for vulnerability to HIV and AIDS are; availability of emergency contraceptives where female students fear pregnancy than contracting HIV and AIDS. The relatively easy access to emergency contraceptives has encouraged female students to engage in casual sex.

In all the universities investigated, it was reported that many students engage in sex with students within campus and from other universities and have multiple sex partners. Unprotected sex with multiple sexual partners, often encouraged by pornography, does subject students to HIV and AIDS. It was reported that students do watch pornographic movies and eventually practice the same on each other (FGD, UON). Thus, media does contribute to HIV and AIDS vulnerability among university students. Furthermore, male students at the UON indicated that they do engage in 'group' sex especially with prostitutes, and this commonly happens over the weekends to supposedly release academic stress. For example, students contribute money to pay for sex with a prostitute, and they share the same person, thus posing risk for HIV infection. Another form of higher risk multiple sexual partnerships is through a phenomenon referred to as *"kuachua"* which is practised by older female students who lure a series of fresh male students into short term, and often unprotected sexual relationships. It was also widely reported that student leaders have multiple sexual partners owing to their financial endowment. Thus, from the scenario presented above, it is clear that university campuses provide a higher risk environment for HIV infection.

8.3 Top management commitment and budgetary allocation (funding)

The commitment and budgetary allocation towards HIV and AIDS programmes within the university community was extensively discussed with top university administrators in the six universities to establish the level of commitment to HIV and AIDS prevention efforts. It is widely acknowledged that HIV and AIDS requires high level commitment owing to financial implications of most of the activities.

It was evident that there is goodwill from top management to fight the pandemic and the Vice Chancellors have taken the lead demonstrated through speeches they give to new students, creation of university support structures such as ACU's, ensuring mainstreaming of HIV and AIDS into university programmes and supporting policies geared towards prevention, care and support.

However, universities face difficulties in financing HIV and AIDS activities and there are no clear structures for resource mobilization. Despite this, some universities had clear budgetary allocation for HIV and AIDS activities. For instance, at MMUST, it was revealed that 1% of the university budget is allocated to HIV related services mainly prevention, and a few cases for treatment. In another case for 2008/2009 financial year, the Moi University allocated Kshs 317,775 to the ACU.

The key sources of funding varied from university to university, but in 2008, all received Ksh 300.000 from the Ministry of Education. By and large, sources range from grants, income generated through the module 11 (parallel) programme, APHIA II, Ministry of Public Health and Sanitation, NASCOP (condoms and dispensers), FKE (training), AAU/AWSE (training). It was noted that funds channelled through the university is subjected to the laid down university rules, which sometimes causes unnecessary delays to service delivery.

8.4 HIV/AIDS prevention reinforcing policies and regulations

In all the universities visited, HIV and AIDS policies had been developed, but not fully implemented. At UON and JKUAT, gender and sexual Harassment policies were also available (Table 8.2). These policies encouraged infected students to access treatment and care. With regard to sexual harassment, the Key Informants pointed out that most cases go unreported for lack of solid evidence or fear of serious reprisals from their assailants. A few reported cases included lecturers harassing students or male students harassing female students or even the female students harassing male students. Sexual harassment is treated as an offence. At Maseno University, gender policy and sexual harassment policy is still being developed. It should be pointed out that although many of the universities investigated had HIV and AIDS policies, the implementation had not

been smooth.

In all the universities, the academic division has designed a compulsory common unit on HIV and AIDS for undergraduate students. Apart from policies, 10-10 rule was widely cited as one of the rules that aim to reduce infection. However, this rule is flouted from time to time as no checks are conducted to flush out students who visit their friends and spend a night in their rooms. The exception was the faith-based Baraton University where this rule seems to apply effectively.

Table 8.2. Range of policies available in six Kenyan universities

POLICY TYPE	UNIVERSITY					
	Nairobi	Baraton	Masinde Muliro	JKUAT	Maseno	Moi
HIV /AIDS Policy	Yes	Yes	Yes	Yes	Yes	Yes
Gender and Sexual Harrassment Policy	Yes	No	No	yes	No	No
Drug and Substance Abuse Policy	No	No	No	No	No	No

8.5 Partnerships and linkages to national HIV/AIDS programmes

It was revealed that university HIV and AIDS programmes are linked to various organisations and bodies for purposes of financial support, information sharing, and quality assurance. Linkages and partnerships have been established with MoPHS, NACC, and NASCOP. On monthly basis, the universities submit reports to the MoPHS showing trends, type of diseases treated, number of people treated and VCT records. Reporting to these National bodies is compulsory as this also helps in requisition of ARVs and testing kits for VCT. Individual universities have also established specific partnerships. For instance, Moi University has links with AMPATH, ICL (I choose Life Africa) and Walter Reed, ACCESS – Canada, Red Cross, CIDM PEACE & Rotary club. Baraton University has links with Access –Kenya, APHIA II, KANCO, Association of African Universities African Union/Agriculture Water Use Survey, UNESCO, CHE, and FKE.

8.6 Programmes and coordination structures of HIV/AIDS

The study revealed that most universities have set up clear structures to coordinate HIV and AIDS activities. This is done mainly by Health Units, ACUs (except UON which is yet to set up one) Chaplaincy and Dean of Students. Whereas the ACU are mandated with issues of policy, capacity building, research and resource mobilization, the Dean's office mainly deals with issues of counselling as well as coordination of student's initiatives. The Health Unit deals mainly with management and care. This helps to avoid duplication. The chaplaincy provides spiritual and psychosocial support to all the students including those infected and affected by HIV and AIDS.

Apart from the above, it was revealed that the academic division has also taken a leading role in prevention efforts. In various fora, lecturers are called upon to give talks either at club level or just in class discussions. Organization of seminars and conferences on HIV related issues is one other area.

The student fraternity have also contributed to the efforts in combating HIV and AIDS. Various student clubs as well as student leaders are in the forefront in HIV and AIDS awareness creation and support efforts. For example, during the World AIDS Day (December 1st), students in various universities do mount various activities including testing. An informant from JKUAT illustrated the level of students' participation as follows *"the student community has taken on the fight against HIV and AIDS from the head front unlike their lecturers who are still silent about this pandemic"*.

CHAPTER 9: CONCLUSIONS, LESSONS LEARNT AND RECOMMENDATIONS

This was the first baseline survey in institutions of higher learning (universities) in Kenya and East Africa at large. The survey was supported by EALP/IUCEA through AMREF and was carried out according to the national Demographic Health survey (DHS) protocol. The target population was university students who are considered as a 'high risk group' for HIV exposure and infection. A total of 3942 students; of which 2422 were males and 1500 females (hereafter referred to as respondents) and key informants (such as lecturers, chaplains, leaders of student and religious clubs, university academic union, student unions, wardens and halls managers, academic advisors and deans of students) were enrolled in this study and interviewed using one of the instruments designed to collect data in six universities in the country. This concluding chapter summarizes key conclusions, lessons learned, challenges and programmatic recommendations for action and future research.

9.1 Conclusions

9.1.1 HIV/AIDS awareness

Significant awareness was observed among students in the surveyed universities but the impact of this on risky behaviour remains unknown. There are risky behaviours among students that can provide the engine that drives the spread of HIV in the university. The risks include unprotected sex, multiple sexual partners, sex for favours, intergenerational sex, sex with lecturers, anal sex, mobility and sexual assault, influence of drugs and alcohol, decline in primary abstinence with increase in year of study, as well as infection with other STI's, among others.

9.1.2 Prevalence

The study revealed that the overall HIV prevalence rate is 0.51 % among students in Kenyan universities. This rate is lower than expected for the population where the host communities record a prevalence rate of 3.8% for similar age group of 15-24 years (KAIS, 2007). Whether this is a transient feature or whether it is a symptom of an impending crisis in universities has yet to be established and so needs more attention and research.

The study finds that HIV prevalence is higher among the male students than female students contrary to national reports (KAIS, 2007; KNASP, 2005). However, the study showed that the HIV prevalence among male students was within the national range of 0.4% to 2.6% for the same age group while prevalence among female students was well below the national range of 3% to 12% for the same age group. As expected, the HIV prevalence among total orphans was higher than other parenthood groups.

The differential prevalence rates observed would generally support the notion that HIV and AIDS related behaviour change communication (BCC) programmes in secondary schools are likely contributing components to the decline of prevalence rate in university level and therefore national programmes should put more emphasis in secondary schools for youth targeting. Follow-up research to assess the impact of BCC on HIV prevalence in secondary schools would seem to be a most useful confirmatory exercise.

These findings underscore the need for comprehensive HIV prevention and AIDS response, including qualitative research and behavioral surveillance survey to regularly map the most at-risk students and inform HIV and AIDS programming within universities.

9.1.3 Sexual experiences and risky behaviours

There are risky sexual behaviours among students that drive the spread of HIV in the university. The risks include unprotected sex, multiple sexual partners, sex for favours, intergenerational sex, sex with lecturers, anal sex, mobility and sexual assault, influence of drugs and alcohol, decline in primary abstinence with increase in year of study, as well as infection with other STI's, among others. For instance, among those testing HIV positive, 33.3% had multiple sexual partners and were more common in males. The risk pattern is the same for students engaged in anal and intergenerational sex as well as alcohol and drug abuse (Chapters 5 and 6).

The assessment therefore suggest that the current BCC programme has enormous mitigation benefits if put forward for implementation in universities, provided all the necessary structures are in place along with the required financial and human resources. In addition, the wide-ranging risks necessitate coordination by ACU and consideration of integrated approach including interventions such as abstinence, condom use and peer education, among others. This combination is likely to sustain the low prevalence rate of 0.51% reported in this study.

9.1.4 Practices related to HIV prevention

Access to HIV information on HIV and AIDS through university level course as a common unit, abstinence, and condom use, as well as HIV testing was identified as key interventions related to HIV and AIDS prevention in universities in the country. The assessment showed that slightly less than two thirds of respondents had taken university level course on HIV and AIDS and that abstinence and condom use were the most preferred modes of prevention by respondents (Chapter 6). In addition, HIV testing had 63.6% response rate, which is nearly double the national average of 33.9% (KAIS, 2007). Among those testing HIV positive, 41.1% had joined a behavior change group, while another 35.3% had joined support group of people living with HIV.

The findings are encouraging signs that institutionalized HIV/AIDS programmes and services are beginning to have a positive impact on the prevention and health-seeking behaviour of students. If these trends continue and the priority programme needs are implemented and the areas of concerns addressed, it is possible that universities can overcome the reproductive health and HIV and AIDS challenges facing students today. The findings are also crucial for decision making regarding the appropriate intervention packages over time. It is therefore of utmost importance to strengthen and scale up HIV/AIDS prevention programmes within universities. In addition, a behavioral surveillance survey (BSS) to map determinants and protective factors for HIV spread should be regularly undertaken in universities.

9.1.5 HIV and AIDS related services

The study demonstrated that all of the universities investigated have institutionalized programmes to deal with HIV and AIDS challenges. These include: distribution of male condoms, HIV and AIDS awareness talks, HIV and AIDS testing, HIV and AIDS week activities, provision of ARVs to infected students, VCT services, counselling, and a HIV and AIDS policy although the policy has not been implemented yet.

The analysis also finds that churches and NGOs like "I Choose Life (ICL)" provide psychosocial support to different groups of students. Through these activities, students have come up with innovative ways of supporting these efforts through student academic clubs. Peer counselling is well developed and other groups have since come up such as "*women of eve*" advocating for abstinence.

There are, however, shortcomings in condom use. The gaps include a lack of knowledge on their usage, small size proportional to the African penile size and low quality. Further the condoms dispenser availability on campuses across various universities was not accessible. As for the female condom, it came out that this is a foreign concept as most students have never seen it.

Although VCT services are available, their locality is not convenient to students, and further, many open during working hours only and therefore are not easily accessible to students all the time leading to minimal service utilization and stigma. As a result, most students prefer using either external VCTs or 'moonlight testing' due to lack of confidentiality in VCTs on campus.

9.1.6 Policies and Coordination Structures

The study revealed that there is goodwill from top management to fight the pandemic in the investigated universities. This has resulted in the following significant improvements listed below:

- The establishment of HIV/AIDS control units which are mandated with co-ordination of HIV/AIDS activities within and without campus.
- The provision of VCT services and mainstreaming of HIV and AIDS into university common compulsory course for increased awareness.
- High incidence of abstinence among female students and enhanced linkages with other organizations.

Despite the successes above, a number of key issues related to institutional response to HIV and AIDS were identified. Limited finances had a very large impact on HIV and AIDS prevention, even for those who tried their best to mobilize resources from different sources. The study also found that many policies and regulations are ignored or not implemented and only focus on gender-based violence as well as sexual harassment and most of them are being flouted by the students.

Although stigma and discrimination are not a major problem overall in universities, they still exist at local levels and sometimes pose a problem for students living with HIV and AIDS. While partnerships and linkages to other national programmes was identified as a good motivator which can boost HIV and AIDS prevention within universities, lack of coordination exist and can have a negative impact on multiple efforts to HIV and AIDS programmes and services within universities.

9.2 Lessons Learned

A number of useful lessons are appreciable from the baseline survey in six universities in Kenya. These include:

9.2.1 Problem of contextual factors affecting students

There is the problem of contextual factors that influence and shape students HIV and AIDS knowledge, attitudes and behaviors within universities. The task of preventing HIV/AIDS may be undermined by a number of these factors. The major issues of concern are gender disparities, poverty, alcohol and drug abuse and weak social support systems as well as communication gap between students and administration.

9.2.2 Problem of risky behaviors

The problem of students' risky behaviors including multiple sexual partners, sex for favours, cross-generational sex, and sexual assault, drugs and alcohol as well as infection with other STI's, among others is a major challenge to fighting HIV and AIDS in universities. Weak BCC programme as well as its inadequate skill-building activities to help reach large number of students with abstinence and faithfulness messages constituted another challenge to HIV and AIDS response at university level.

9.2.3 Limited provision of student-friendly services

There is a limited human and infrastructural capacity to provide student-friendly programmes and services at campus level. For instance, there is shortage of trained counsellors to offer VCT services and referral systems are weak. In addition, the facilities offering services are not adequately distinguished with other activities in order to draw students in and ensure privacy and confidentiality to students. The programmes and services are also not integrated to offer reproductive health (RH) and HIV and AIDS services to meet the needs of students. Another issue of concern is stigma and discrimination, faced by infected and affected students when seeking services. To address a number of these issues raised, mobile services and 'moon light' testing were advocated for.

9.2.4 Institutional arrangement and HIV and AIDS policies

Although there are HIV and AIDS policies in place or under development in universities but a major source of weakness is a lack of effective implementation. The challenge is therefore how to fully operationalize the existing policies that is in place. Weakness in budgetary allocation to ACU and support services for HIV-positive students is also an issue of concern. There is also the problem of coordination among different stakeholders providing multi-sectoral services to curb HIV and AIDS in universities.

9.2.5 Lack of student-host community HIV and AIDS planning

An existing weakness of HIV and AIDS programming process has been the lack of joint planning, programme coordination and integration of surrounding host populations into institutional efforts in order to effectively address transmission among these two populations.

9.2.6 Lack of integrated HIV and Reproductive Health

Although the health facilities have the capacity to integrate HIV prevention counselling and provision of or referral for counselling and testing (CT) services within existing RH services, the integration process is limited within university settings.

9.2.7 Weak support and referral systems

As the disease progresses, some students may not be able to go to the clinic to get a medicines refill. Such persons should be attended to through referral systems for both refills and counselling services. Unfortunately, both systems are weak to meet HIV and AIDS needs of students.

9.2.8 Too much academic and social freedom

There is too much social freedom which makes it difficult to implement the 10-10 rule within the halls of residence and dress code. Despite the institution curtailing access to pornographic sites on campus at the university students are still accessing such material on phone. For instance, campus bashes have turned out to be sex orgies.

9.2.9 Lack of M&E of programmes

Provision of regular statistics on HIV and AIDS prevalence on regular basis to arouse change of attitude and behaviour is lacking.

9.3 Recommendations

Based on the analysis of findings from the study and lessons learned, recommendations by priority HIV and AIDS programme needs to improve health and well-being of students within universities are:

9.3.1 Give priority to the contextual factors affecting students

The assessment identified several contextual factors (Chapters 5 and 6) that influence and shape students RH and HIV and AIDS knowledge, attitudes and behaviors at campus. These factors can increase (risk factors) the chances that a student will have risky and unhealthy behaviors. They operate at the individual, institutional and community level and include multiple sexual partners, intergenerational sex, mobility, drugs and alcohol abuse as well as sexual assault,

among others. While students need to be empowered to behave responsibly, the great urgency for institutional HIV and AIDS programming is to address the societal factors influencing their sexual behaviors. High priority should be given to:

9.3.2 Gender Norms

During the assessment, gender issues were raised frequently by respondents and key informants – some examples are cross-generational sex, academic wives, gender-based assault, unplanned pregnancies and lack of female condoms. Although mentioned, there are very few, if any, programmes dedicated to specifically addressing these issues. Therefore there is great need to increase university and public discourse around these problems by equipping girls with the skills to say ‘no’ and target lecturers, male students and older men with messages that aim at reducing the practice of cross-generational sex.

9.3.3 Poverty and economic opportunities

Poverty and economic opportunities were identified as major factors for early sexual debut and unprotected sexual activity, encourage cross-generational and commercial sex, amplify other risky behaviours such as alcohol and drug abuse leading to unplanned pregnancies and drop-out of college especially among orphans, girls and students from poor families. Providing students with ‘seed money’ for creative micro-enterprise development such as the ‘tuck shops’ should be expanded. Other areas where economic opportunities could be better exploited for students include: **(i)** creating ‘labour office’ where the students could do university services and get paid **(ii)** initiating social funds for vulnerable students and **(iii)** increasing HELB loan provision to address financial status among students.

9.3.4 Alcohol and drug abuse within campus

Alcohol and drug abuse is widely considered to be on the rise in Kenya and one of the major problems facing youth today. The findings indicate that many students living in and out of campus use and abuse alcohol and drugs exposing them to HIV risks. Yet there are no drug and alcohol rehabilitation programmes and counselling centres available to students in universities to address the problem.

Universities and student programmes should therefore work to incorporate the issue of substance abuse into ongoing and future programming and create linkages with groups and organizations working in this area, such as National Agency for the Campaign Against Drug Abuse (NACADA). In addition, availing

funds to establish rehabilitation programmes and counselling centres will help to reach most vulnerable students.

9.3.5 Social support systems

During the qualitative assessment, the need to bridge the communication gap between students and administration as well as lecturers was reported. This was attributed to lack of information and skills needed to do so by both administration and lecturers. It was also recognized that mentoring of students by both administration and lecturers is critical in guiding and supporting students to make safe choices about their sexual and health seeking behavior. To bridge this gap in the fight against HIV and AIDS should involve (i) training administrators and lecturers to understand 'student culture' and their language (ii) training administrators and lecturers in mentorship, effective communication, and interpersonal skills and (iii) empowering administrators and lecturers to talk with students about sex and sexuality.

9.3.6 Campus and non-campus residence

Depending on where students live, their vulnerability and exposure to HIV risks is enhanced as shown in Chapter 7. Living on campus can offer some protection against sexual assault and too-early sex as a result of mobility. Possible activity for this area of need is expanding capacity of student hostels within and around campus in partnership with private developers.

9.3.7 Change emphasis from awareness to behavior change and abstinence

The need to expand behaviour change communication (BCC) efforts was evident throughout both quantitative and qualitative stages of the study. The identified risk factors to HIV infection including multiple sexual partners, sex for favours, cross-generational sex, mobility and sexual assault, influence of drugs and alcohol as well as infection with other STI's, among others suggest that greater emphasis must be put on skill-building related to protecting oneself from HIV infection. In addition, there is great need to scale up educational efforts that promote four protective strategies of condom use, abstinence, faithfulness and VCT. The assessments found that risk perception continues to be a problem for students, in that most students know about HIV and AIDS, but were engaging in what are considered high risk sexual behaviours such as multiple sexual partners or using alcohol and drugs.

The major challenge ahead is to ensure that the BCC programme selected to influence specific sexual behaviours are the most cost effective means to reach

priority audience, convey well designed messages effectively and measure impacts on behaviour. More information is also needed to understanding why universities fail to offer condoms to all students regularly, since at least in Kenya, condom supply appears adequate.

The BCC programmes should focus on skill-building related to negotiation, decision making and communication to help reach large number of students with abstinence and faithfulness messages. Greater emphasis must also be placed on monitoring and evaluation (M&E) and sustainability of BCC programmes.

9.3.8 Expand the provision of student-friendly services

The need for student-friendly services was raised consistently throughout the assessment. While there are some examples of effective services, such as VCT being run by I Choose Life (ICL) and other NGOs, the need to expand student-friendly HIV/AIDS services is widespread in universities. Quality improvement, expanded VCT services, increasing referrals (especially with abstinence strategy), improved training of counsellors, and policy implementation were listed as issues to be addressed. Reaching infected and affected students with care and treatment services was also identified as critical during the assessment.

The facilities offering services should be distinguished with other activities in order to draw students in and ensure privacy and confidentiality to students. They should also offer integrated services and employ younger health workers and counsellors because they will better understand and identify with the students. For integrated services, more operational research should be conducted to compare their effectiveness and cost of different combinations or models of service interventions in different contexts in universities.

Under the leadership of ACU, there should be greater student involvement in designing, and delivering services and more emphasis should be placed on reaching males with reproductive health (RH) services, and females with condoms as well as VCT services. Because of stigma and discrimination, faced by infected and affected students when seeking services, sensitizing/educating service providers and administration by ACU about this would help break down barriers for students. To address a number of issues raised above mobile services, 'moon light' and hostel room testing should be promoted.

9.3.9 Operationalize HIV and AIDS policies

Previous international experience demonstrates that a positive policy environment can be an important factor in improving youth sexual behaviour and health. It is therefore imperative that universities make HIV and AIDS policy implementation a priority. However, during the assessment, it was confirmed that there are HIV and AIDS policies in place or under development in

universities but the primary concern was lack of effective implementation. The challenge is therefore how to fully operationalize many of the progressive policies that is in place but are ignored or not implemented due to financial constraints.

There is a need to review existing financing strategies for ACU's and programmes. In addition, adopt policies that protect the infected and affected as well as most vulnerable students, enable poor orphaned students to stay in college, prohibit stigma and discrimination based on HIV status, and protect the education rights of infected students. By placing emphasis on improved quality of care, strengthened support systems for service providers, training and supervision, and utilization of up-to-date HIV and AIDS guidelines, as well as adequate funding, there is greater likelihood of ensuring increased access to and availability of programmes and services for students within universities.

9.3.10 Strengthen coordination and partnerships

Together, there are a number of government ministries and agencies, local NGOs and donors collaborating on HIV and AIDS issues with universities which creates a challenge for coordination. Related concerns include: (i) limited dissemination and sharing of results and lessons learnt; (ii) duplication of efforts; (iii) lack of harmonization among donors to address priority student's needs among others. It is therefore important to put in place better mechanisms for coordinating the multiple student HIV and AIDS efforts underway in universities. Partnership with NGOs such as I Choose Life (ICL) should be also strengthened.

Universities should increase the effectiveness and impact of programmes through information sharing and coordination, developing policies to guide activities, defining roles and mobilizing resources. Monitoring the epidemic and its effects by regularly collecting and reporting key information on trends should also be conducted.

9.3.11 Enhance student-host community HIV and AIDS planning

Students are often wrongly perceived to *always* have higher HIV prevalence than that of the surrounding host populations. Evidence suggests that the opposite may be more likely but it is always context-specific; each situation must be addressed individually. It is well known that the interaction between both populations is very common. Therefore, joint planning, programme coordination and integration of surrounding host populations into institutional efforts are

recommended in order to effectively address transmission among these two populations.

9.4 Successes

The following are the successes reported by informants

- The establishment of HIV and AIDS control units which are mandated with co-ordination of HIV and AIDS activities within and without campus.
- Publication of HIV and AIDS policy although its implementation is slow and problematic.
- The provision of VCT services that have increased the level of testing
- The mounting of a common compulsory course on HIV and AIDS that has increased awareness.
- At the University of Nairobi there is restricted access to pornographic websites in all computers within the institution.
- Due to high level of sensitization some students opt to abstain from sex till marriage.

9.5 Challenges Universities Face in Dealing with HIV and AIDS on Campus.

All the universities investigated reported that they experience many challenges in dealing with HIV and AIDS on campus. Some of the challenges experienced include;

- The inability to know who is HIV positive so that universities can plan accordingly.
- Too much academic and social freedom among students which make it difficult to implement the 10-10 rule within the halls of residence.
- Shortages of counsellors and even for those available, students do not trust University counsellors because of the generation gap.
- Maintaining confidentiality of information.
- HIV and AIDS stigma is still a problem.
- Academic staff fear testing and yet students view them as role models.
- Despite the high HIV and AIDS awareness students are still careless in their behaviour about sex.

- Although VCT facilities are available on campus they are not easily accessible due to their locality and limited working hours. Most students use external VCTs.
- Campus bashes that offer entertainment on campus that turn out to be sex orgies.
- Spread of HIV and AIDS among those known to be positive is worry some.
- Many students do not believe they can be victims of HIV and AIDS.
- In some universities there is little support for HIV and AIDS activities by administrators.
- Most universities have a HIV and AIDS policy but this has not been implemented.
- Low response from students during HIV and AIDS related activities on campus.
- There is a misconception among university students that unprotected sex cements the relationship and gives maximum pleasure.
- Universities with widely spread campuses have a challenge in covering all of them effectively (Moi, UON, Maseno).
- Some universities do not have adequate space to carry out their counselling.
- Some students who report to college are young and do not make informed decisions hence they follow their friends and eventually to irresponsible behaviour.
- There are conflicting information on prevention of HIV and AIDS whereas the ACUs emphasize condom use; CUs are against the idea, only support abstinence. This causes some confusion. A chaplain had this to say,

"Ours is to pass the message, the students are our recipients. The students are to make their own decision whether to abide or not. It's therefore hard to force the students to change their behaviour, at times when we are hard on them they say CU is for the chaplain".

- Male students look for sex from among girls from around universities because they are cheap.
- Some HIV and AIDS coordinators have several responsibilities and therefore are overloaded and cannot execute their work effectively
- Issues of sexual harassment and rape are hardly reported

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11.0 ANNEX

ANNEX 1: CONSENT FORM: EALP/IUCEA HIV/AIDS BASELINE STUDY IN INSTITUTIONS OF HIGHER LEARNING IN KENYA, EAST AFRICA

Introduction

Good morning/afternoon. My name is (*Interviewer*), part of this CT conducting a study on '**EALP/IUCEA HIV/AIDS Baseline Study in Institutions of Higher Learning in Kenya**'. Before we proceed, I would like to seek your permission, please read the consent form below.

Purpose of the study is to provide information a) the HIV risks and the vulnerabilities related to internal and cross-border movement of university students (b)an assessment of the HIV-related impacts of the interactions with the surrounding host communities, c) establish the nature, extent and impact of HIV and AIDS on the universities in particular, and the education sector in general, d) identify existing policies, coordination structures and standards for responding to HIV and AIDS in institutions of higher learning; and ascertain their relevance, effectiveness and impact, e) assess the availability, utilization and efficacy of HIV and AIDS- related services for students and staff of universities in East Africa.

Procedure and Confidentiality

Participation in this study is *voluntary*; the purpose of this form is to obtain your consent to participate. If you choose to take part, I will provide a *questionnaire* for you to complete. **You are not obliged to answer any questions if you do not feel comfortable to do so.** The questionnaire will be stored in a sealed envelope and will not be accessible to anyone else in this campus in order to ensure confidentiality. It will take you up to 30 minutes to answer all the questions. For most questions, there is no right or wrong answer; what is important is your *opinion*. To ensure **confidentiality**, your name will not appear anywhere on the *questionnaire* and it will not be possible to know which responses came from any individual. In addition to questionnaire, I will also take **3 drops of blood from a finger prick** for sero-prevalence study. Apart from a **slight pain** during the prick, there are no known **risks** in participating in this study. The management in this campus agreed to co-corporate in this study and allows individuals to participate in the study. The **benefit** of the study will be to inform the University, Government and Partners on how best to improve HIV and AIDS care and support for students and host communities in the region.

Once you begin the exercise and wish to stop at anytime, you are free to do so. If you do not intend to participate please inform me now. Your decision to participate will not affect your position in this campus and/or community. If you have questions before you proceed, please ask me.

Benefit

The findings of this study will be used to strengthen the HIV and AIDS programmes at the institutions of higher learning in East Africa. For those participants interested in knowing their status they will be referred to service providers.

Please after reading, **circle** Yes or **No**.

I have been informed that completion of this form is voluntary and I therefore make my decision.

Signature: _____ Date: _____

For any enquiries please contact Prof. J. Kimiywe Kenyatta University Tel. 0722-915459 or 810901 ext. 57537 and/or KEMRI/NERC tel. 2722541 ext. 3307, 0722205901, 0733400003

AGREE..... 1 DO NOT AGREE.....END