PSYCHOSOCIAL AND SEXUAL PRACTICES, ATTITUDES AND CHALLENGES OF PERSONS LIVING WITH HIV/AIDS IN NAIROBI, KENYA

A DISSERTATION IN PART FULFILLMENT FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN CLINICAL PSYCHOLOGY OF THE UNIVERSITY OF NAIROBI.

BY

JAMES MWAURA, BScN (NRB)

DEPARTMENT OF PSYCHIATRY

UNIVERSITY OF NAIROBI, KENYA

NOVEMBER, 2004

DECLARATION

THIS DISSERTATION IS MY ORIGINAL WORK AND HAS NOT BEEN PRESENTED FOR AWARD OF DEGREE IN ANY UNIVERSITY.

Signed:.....

Date:.....30th NOVEMBER 2004.....

James Mwaura, BScN (NRB)

CERTIFICATE OF APPROVAL

THIS DISSERTATION HAS BEEN SUBMITTED FOR THE DEGREE OF MASTER OF SCIENCE IN CLINICAL PSYCHOLOGY WITH OUR APPROVAL AS UNIVERSITY SUPERVISORS.

Signed:.....

Date: 31/1/05

Dr. John Mburu, MBCHB (NRB.) MMed, Psychiatry, (NRB).

Lecturer and Ag. Chairman, Department of Psychiatry,

University of Nairobi.

Signed:.....

Date: 10/1/2005

Dr. Caleb Othieno, MBCHB, MMed, Psychiatry.

Senior Lecturer, Department of Psychiatry,

University of Nairobi.

Signed .....

Date: 17/1/2005

Prof. Elizabeth N. Ngugi

Professor, Department of Community Health,

University of Nairobi.

APPROVED BY THE CHAIRMAN, DEPARTMENT OF PSYCHIATRY, UNIVERSITY OF NAIROBI.

Signed ..... Date 14/1/05

DR John Mburu, MBCHB, Mmed (Psychiatry).

DEDICATION:

I dedicate this dissertation to the father of my education Mr. Joseph Ndirangu Kabuchwa, to my wife Anne Mwikali and our lovely children Sharon Kabura and Gideon Ndungu, to my parents, brothers and sisters and to my niece Elizabeth Kabura, to Hellen Wangui and to true friend Rosemary Igoki Kavinda No amount of words can adequately express my deep appreciation and gratitude for your unconditional encouragement, support and understanding. To all of you, God bless you.

ACKNOWLEDGEMENT

I am grateful to my supervisors Dr. John Mbuu, Dr. Caleb Othieno and Professor Elizabeth N. Ngugi for their advice, guidance, steadfast support and encouragement. They have with much thoroughness guided me through this dissertation.

I also extend my gratitude to Mr. Paul Nyachae for his expert advice and assistance in data analysis and presentation of results of this dissertation.

I acknowledge with much gratitude Mr. Peter Muchina Waithaka, Mr. Mark N. Onsase and Mrs. Lucy Bitok for their positive criticism and editing this dissertation, and Caroline Kamau for typing this work.

Much gratitude to Dr. Maj (Rtd) Dammas M. Kathuku and Dr. Danson N. Kibico for editing the final version of this dissertation.

I am thankful to the Kenyatta National Hospital Ethical and Research Committee, and the Ministry of Education Science and Technology for granting me the authority to conduct this research study.

Lastly but not the least, I thank all the respondents for agreeing to participate in this research.

Table of Contents

List of Figures

List of Tables

OPERATIONAL DEFINITIONS

Core-reservoir: In this study refers to the main source of Human Immunodeficiency Virus

High Transmitting Priority Groups: This term has been used to imply groups of persons who are more likely than the general population to transmit HIV.

Sexual Mixing: This terminology has been employed to mean sexual acts between younger girls and older men and between younger boys and older women.

Persons: This study has adopted this word to refer to HIV infected men and women aged 15 - 54 years.

Young subjects: In this study has been employed to imply persons aged 34.5 years and below.

Old subjects: In this study has been employed to imply persons aged above 34.5 years

LIST OF ABBREVIATIONS

AIDS	: Acquired Immune Deficiency Syndrome
CSW	: Commercial Sex Worker
FHI	: Family Health International
GDP	: Gross Domestic Product
HIV	: Human Immunodeficiency Virus
HRC	: High Risk Clinic
IDU	: Intravenous Drug Users
KENWA	:Kenya Network of Women living with AIDS
KICOSHEP	:Kibera Community Self Help Programme
MOH	: Ministry of Health
MSM	: Men who have Sex with Men
NACC	: National AIDS Control Council
NASCOP	: National AIDS Control Programme
SPSS	: Statistical Package for Social Sciences
STD	: Sexually Transmitted Disease
STI	: Sexually Transmitted Infection
TB	: Tuberculosis
UNAIDS	: United Nations Programme on HIV/AIDS
UNICEF	: United Nations Children Educational Fund
USA	: United States of America
VCT	: Voluntary Counselling and Testing
WHO	: World Health Organization
WOFAK	Women Fighting AIDS in Kenya

ABSTRACT

Introduction

HIV/AIDS pandemic remains the world's single most devastating epidemic particularly in developing countries where many governments have declared it a disaster. High risk practices of HIV infected persons serve as the principal source of HIV transmission in populations in Kenya, the worst hit being the sexually active and economically productive age group of 15 - 54 years (MOH NACC 2001).

This was a cross-sectional descriptive study that was executed over a period of 6 months from the month of January 2004 to June 2004. The study assessed the psychosocial and sexual practices, attitudes and challenges of persons living with HIV/ AIDS in Nairobi, Kenya. The research subjects were aged 15 - 54 years.

Objectives:

The study sought to establish whether persons living with HIV / AIDS in Nairobi, Kenya engaged in high-risk psychosocial and sexual practices. The study also sought to establish the psychosocial and sexual attitudes and challenges of persons living with HIV / AIDS in Nairobi, Kenya.

Methodology:

A total of 385 HIV infected persons aged 15 - 54 years, who have been diagnosed at least six months before and had received both pre-test and post test counselling and were living in Nairobi, Kenya, were recruited into the study. Clusters of organisations/institutions that render services to HIV infected persons in Nairobi were

chosen. From these clusters, research subjects are randomly selected. Their demographic data, data on their psychosocial and sexual practices, attitudes and challenges was collected using a semi structured questionnaire. The data was entered using Statistical Package for Social Sciences (SPSS), analysed by use of Chi square, Spearmans ranks order and Pearsons correlation coefficient and results presented in tables and figures.

Results:

Majority (71.2%, n=274) of persons living with HIV/AIDS in Nairobi were sexually active, and were heterosexual (96.9%) with half of them (50.4%) having multiple sex partners. Majority of research subjects did not know the HIV status of their sex partners (spouse/regular partner = 61.5%, and other partners = 61.6%). Most (71.4%) of persons living with HIV/AIDS in Nairobi accepted their own HIV positive status, however 38.8% were not in agreement with their own HIV positive status. Sixty one percent (61.0%)of their spouses had not been tested for HIV, 32.7% were concordant while 3.3% were discordant.

Persons living with HIV/AIDS in Nairobi engage in high risk practices, including having multiple sex partners 50.4%, erratic and condom non use with sexual partners other than the spouse 69.4%, high risk cultural practices 13.8%, psycho active substance use 57.9%, suffer from STDs 29.9%, violent sex (sexual masochism and sexual sadism) 8.6%, dry sex whereby methods are used to reduce the normal lubrication of vaginal mucosa 6.9% and wet kissing 18.6%.

In the post HIV positive diagnosis period, persons living with HIV/AIDS in Nairobi

face challenges that hinder their sexual fulfilment. These include negative feelings of self esteem and self evaluation, loss of desire (libido) for sex 46.14%, vaginal dryness 8.86%, dyspareunia 16.82%, impotence 6.59%, and failure to attain orgasm 8.64%.

Conclusions:

This study concluded that pre-test and post-test counselling is not achieving adequate behaviour change in person diagnosed in HIV infection in Nairobi, in terms of avoidance of high risk practices. These persons also experience challenges that hinder their sex fulfilment including negative feelings of self esteem and self evaluation, loss of desire (libido) for sex, vaginal dryness, dyspareunia, failure to attain orgasm and impotence.

Recommendations:

The researcher recommends that HIV/AIDS counseling services in Nairobi be evaluated with the objective of strengthening and making these services more effective in achieving better behaviour change in the post HIV positive diagnosis life. There is also an urgent need to strengthen post-HIV positive diagnosis follow-up care through concerted efforts of the psychiatric team in order to address the identified psycho-social and sexual challenges facing persons living with HIV/AIDS in Nairobi Kenya.

Chapter 1 INTRODUCTION

1.1 Introduction

Over the last decade, HIV/AIDS has become the world's single most devastating epidemic, particularly in developing countries, where many governments have declared it an emergency. HIV spreads rapidly within countries and across the borders. It affects people regardless of gender, geography, race, religion or sexual orientation. The worst hit is the sexually active and economically productive age group of 15-54 years (MOH, NACC 2001).

Worldwide, it is estimated that 42 million people are HIV infected; 22 million people have died of AIDS, out of these 70% live in Sub-Saharan Africa. In Kenya, the first AIDS case was observed in 1984 and by 1995, 63,179 cases had been reported. Presently, it is estimated that 1.5 million people are infected with HIV in Kenya (WHO, UNICEF, UNAIDS 2002).

Scientists, politicians, decision makers, individuals and the public at large have grappled with the puzzle posed by HIV/AIDS, eventually leading to control strategies and community programmes. Various conferences are held and publicized with a lot of resources put into implementation of projects and programmes against HIV infection. Researchers continue working on the HIV/AIDS vaccine, while the world hea'th community has put aside the 1st of December as the World AIDS day. With all these strategies, one would imagine our minds are fully occupied with information on HIV/AIDS, sadly, however, the pandemic has ravaged on unabated.

In Sub-Saharan Africa, several negative synergistic factors have interplayed to perpetuate the vicious chain of HIV transmission. These include knowledge deficiency, poverty, high incidences of sexually transmitted diseases, socio-cultural beliefs and practices, civil wars and deficient public health infrastructures(WHO, UNICEF, UNAIDS 2002).

There are three significant modes of HIV transmission in Kenya, namely heterosexual transmission accounting for 80%, vertical transmission (mother to child transmission) accounts for 6-10% and through blood transfusion and other blood products 7-10%. The contributions of drug injecting and homosexual practices to HIV Pandemic is not well documented in Kenya, but are appreciated as high-risk behaviours. Currently, out of every eight adults in rural Kenya, one is infected, while in urban areas, nearly one out of every five adult is HIV infected (MOH, NACC 2001).

In November 1999, HIV/AIDS was declared a National Disaster in Kenya by the then President, and in May 2000 Nation Aids Control Council (NACC) issued the National HIV/AIDS strategic plan, a blue print for multi-sectoral interventions for prevention, control and mitigation of HIV/AIDS pandemic. In the revised Kenya National HIV/AIDS strategic Plan launched in 2000, behaviour change to minimize risk of exposure to HIV infection and the use of condoms to protect against infection are recognized as the key interventions.

Those persons already infected with HIV are among the high-transmitting priority groups, as they are the core-reservoir of the HIV, hence the grave urgency to firmly integrated them in the fight against the epidemic.

1.2 Statement Of The Problem

Over 100 million new cases of sexually transmitted infections (STIs) excluding HIV occur each year among young people worldwide (WHO, UNICEF, UNAIDS 2002). STIs greatly facilitate HIV transmission between sexual partners, hence prevention and prompt treatment of STIs is important step in breaking the HIV/AIDS chain of infection. STIs that cause genital ulcers increase the risk of transmission the most. Even when they suspect that they have an infection, many people do not seek the appropriate medical care because they fear that their privacy will not be respected. They may also feel too embarrassed or feel too guilty to seek treatment (FHI 1996).

Sexual activity begins in adolescence for the majority of people. In many countries unmarried girls and boys are sexually active before the age of 15 years. Recent surveys of boys aged 15-19 years in Brazil, Hungary and Kenya found that more than a quarter reported having had sex before they were aged 15 years (WHO, UNICEF, UNAIDS 2002). In Kenya 15% girls and 35% boys have had sexual intercourse before age 15 years (Demographic and Health Surveys, 1998).

Adolescent girls are at very high risk of getting infected with HIV and other STIs especially in Sub-Saharan Africa where 2/3 of newly HIV infected persons aged between 15-19 years are girls. In major urban centre in Eastern Africa studies have shown that 17-22% of girls aged 15-19 years are already HIV infected, compared to 3-7% of boys in the same age group (WHO, UNICEF, UNAIDS 2002). This indicates a "sexual-mixing" pattern whereby older men are having sex with younger girls. ("sugar-daddy syndrome"). Young women in countries where economic

conditions make it difficult for young women to afford school fees, seek favours of "sugar daddies " (older men who offers compensation in cash or kind in exchange for sexual favours), engage in transactional sex (that is, exchange sex for money or goods on an occasional basis) or enter sex work (willingly or forced) to pay school fees, support their families or take care of themselves (WHO,UNICEF,UNAIDS 2002).

The age-mixing is fuelled by the dangerous myth among men in some places that having sex with a virgin can cure HIV in men. Many men also assume that younger girls are not yet infected. In addition, cultural norms relating to sexuality prevent many girls from taking active steps to protect themselves. In cultures where it is vital for girls to be virgins at marriage, some girls protect their virginity by engaging in unsafe sexual practices such as unprotected anal intercourse. (WHO, UNICEF, UNAIDS 2002).

The most sexually active and economically productive age group of the population is at the centre of the global HIV/AIDS pandemic. These people who are aged 15-54 years are the most sexually active among the population and are consequently the hardest hit by the HIV/AIDS pandemic. As they become aware of their sexuality, many young people become sexually active. Young people today encounter sexual images and messages everywhere in the media. They also experience social pressures that tempt them to experiment with casual sex, alcohol, psychoactive substances and other risky behaviours such as unprotected penetrative sexual intercourse.

Some people engage in unprotected sex because they lack the skills to negotiate, abstinence or condom use. They may be fearful or embarrassed to talk with their

sexual partners about sex. Still others may fail to adopt safer behaviours because they perceive that their individual risk is minimal or non-existent. People who smoke and drink alcohol are four times more likely than their peers to have multiple sex partners. Those who have coitus under the influence of drugs or alcohol are three times more likely not to use protection (WHO, UNICEF, UNAIDS 2002).

Being the majority of the HIV infected persons in the population, people aged 15-54 years are the worlds greatest hope in the struggle against this fatal pandemic. They have inherited a lethal legacy that is killing them, their families, friends, brothers, sisters, parents, teachers and role models. They have also demonstrated that they are capable of making responsible choices to protect themselves and other people, when provided with support and can educate and motivate others to make safer choices (FHI, 2002).

This study seeks to explore and establish the psychosocial and sexual challenges facing the already HIV infected persons aged 15-54 years, as the core reservoirs and transmitters of HIV among the population of Nairobi cosmopolitan urban social setting.

1.3 Study Justification

High-risk behaviour of HIV infected persons serve as the principal source and course of HIV transmission in the population, while also increasing their viral load as well as re-infecting themselves with new subtypes of HIV. Nearly two decades after the emergence of HIV/AIDS pandemic, far less has been researched on the psychosocial and sexual practices, attitudes and challenges facing people living with HIV/AIDS, as

evidence by limited available studies despite extensive literature search. Persons aged 15-54 years are most economically productive and sexually active group in populations worldwide. HIV infected people within this age bracket serve as high frequency HIV transmitters; hence the urgent need to establish psychosocial and sexual challenges facing them in relation to HIV transmission.

The HIV prevalence in Nairobi is one of the moderately high among the Kenyan urban centres. It is estimated at 16.8%, with the highest HIV cases and infection rates being among persons aged 15-54 years (MOH, NACC 2001). Being the capital city of Kenya, Nairobi represents a truly cosmopolitan city in sub-Saharan Africa, the residents having immigrated into the city from various geographical regions and cultural backgrounds in Kenya, and to a lesser extent from other parts of the world.

Young persons in Kenya are experimenting with sex, sometimes at a very early age; this is the discomforting truth. Among sexually active secondary school girls, 6% had sex before they turned 10 years; another 36% had sexual intercourse by the age of 14 years (Okumu and Chege 1994). It is no longer a good idea to give young persons information on how to resist pressures to have sex or how to practice safer sex, it is a matter of life and death, and this cannot be repeated often enough.

Studies in some cosmopolitan urban Centres in Kenya showed that more than 4 out of 10 sexually active young persons failed to seek treatment even when they had unmistakable symptoms of STI (Karuoru, et al 1998). Also 18% of young girls become infected with HIV within only one year of having sexual intercourse for the first time (NASCOP 1999). In addition, young people having unsafe sex are at very

high risk of contracting STIs and HIV because they are likely to have sexual intercourse more often (Ukweli, 2000).

The current ministry of health response to the HIV pandemic in its strategic plan 1999-2004 includes the introduction of voluntary counseling and testing (VCT) for HIV into public health care system (MOH, NASCOP 2001). There is then a need to establish the impact of VCT services on those that are confirmed to be HIV infected in terms of behaviour change.

This study seeks to explore and establish HIV infected persons' psychosocial and sexual challenges, attitudes and practices, and by so doing recommend ways and strategies to empower and motivate the sexually active HIV infected persons towards behaviors that will protect them from re-infection and increase in HIV load, and equally important to support them make decision not to transmit HIV to the uninfected population. This will enhance the involvement of people living with HIV/AIDS in the campaign and struggle against the pandemic, for they after all know best what it means to live with the HIV infection and AIDS.

1.4 Research Questions

1. Do persons infected with HIV engage in high-risk psychosocial and sexual practices?
2. What is the magnitude of high-risk psychosocial and sexual practices among persons living with HIV/AIDS in Nairobi?
3. What psychosocial and sexual challenges hinder sex fulfillment among persons living HIV/AIDS in Nairobi?

1.5 Objectives

1.5.1 Broad Objective

To determine the psychosocial and sexual practices, attitudes and challenges of the HIV infected persons and their importance on the causation and course of HIV transmission by the HIV infected persons among the populations in Nairobi.

1.5.2 Specific Objectives

1. To establish whether there exist high-risk psychosocial and sexual practices among HIV infected persons that predispose them to HIV re-infection and consequent increase in HIV load in their body.
2. To establish whether there exist high-risk psychosocial and sexual practices among HIV infected persons that predispose the people they interact with to HIV infection.
3. To determine the magnitude of high-risk psychosocial and sexual practices among persons living with HIV/AIDS in Nairobi.
4. To determine psychosocial and sexual challenges that hinder sex fulfillment among persons infected with HIV.
5. To assess the impact of pretest and posttest counseling on behaviour change of HIV infected persons in Nairobi, Kenya.

1.6. Hypotheses

1. There exists no significant psychosocial and sexual high risk practices among HIV infected persons in Nairobi, Kenya..
2. There exist no significant psychosocial and sexual challenges that hinder sex fulfilment in persons living with HIV/AIDS in Nairobi, Kenya.

Chapter 2 LITERATURE REVIEW

HIV infection is a chronic illness that terminates as AIDS and eventually death. As in any other chronic physical disorder such as cancer, acceptance of one's own positive status is significant as it leads to development of insight into one's diagnosis. With good insight, the individual is motivated to engage in healthy practices and lifestyles that mitigate the effects of the disorder. In HIV positive diagnosis, good insight of individuals who are infected with HIV ensures that they live positively with the infection and that they engage in practices that minimize the likelihood of spread of HIV to the uninfected population, and that they do not re-infect themselves and others with new clades of HIV.

The emergence and spread of HIV / AIDS pandemic remains one of the most significant challenge to the very existence of mankind. While every person is certain to face death at some time, those who are diagnosed to be HIV infected are certain to face death sooner rather than later. This is because the search for HIV / AIDS cure has remained elusive, while search for a vaccine is still a mirage.

Elizabeth Kubbler - Ross, (1969), postulated that when people are aware that they are going to die they go through several psychological stages during the process of dying, till finally they die. These stages are:

Denial

Anger

Bargaining

Depression

Acceptance.

Stage 1: Denial - ' No, Not me!'

This is the stage immediately after diagnosis of terminal illness is made. The person is usually in shock often followed by a feeling of isolation. In an attempt to prove that he is not HIV infected the person may engage in high risk practices which may lead to transmission of HIV to the uninfected population, while the patient may acquire new clades of HIV and increase the viral load to his body.

Stage 2: Anger - ' Why me?'

This stage is characterized by rage and anger towards oneself and other people. In this state of mind, the person has the potential to retaliate to those people who he perceives to have caused or played a part in the aetiology of his present predicaments. During this stage a person who is HIV infected can engage in high risk practices that may results in HIV transmission to the general population, while also increasing the viral load and acquiring new clades of HIV into his / her body.

Stage 3: Bargaining - ' Yes me, but .....'

The third stage is characterized by guilt and appeal to the supernatural power to cause the person to be cured, with the person promising to change his attitudes, behaviour and practices to please God.

During this stage the likelihood of the person engaging in high-risk behaviour is minimized, as the super ego tends to dominate the impulses and demands of id.

Stage 4: Depression - 'Yes, me. '

During this stage grief persistently remains the dominating emotion. Other emotions

that present during this stage are feelings of helplessness, worthlessness and hopelessness. Self-blame is also a feature during depression. The person is psychologically vulnerable to mental disturbance.

Stage 5: Acceptance - 'Yes, my time is close and it is ok'

This fifth stage is also referred to as the stage of self-reliance. The person has fully come to terms with his diagnosis and accepts the fact that he is sooner than later going to die. The person makes the appropriate plans for his final exit. This stage is characterized by increase in psychological stability because he feels peaceful with the prospect of facing death sooner rather than later.

The risks of intentional transmission by the infected person at this stage are least. The HIV' infected person is also more likely to engage in healthful lifestyles and practices.

Worldwide several studies have been carried out to establish psychosocial and sexual practices and attitudes of HIV infected persons in relation to HIV transmission among populations. Muga R, et al 1997 studied the gender-specific differences for syphilis and for the sexual transmission of HIV in a cross-sectional analysis of injecting drug users (IDUs) admitted for detoxification between February 1987 and January 1990. Of the 386 heterosexual IDUs, 68% were HIV-positive and 4.7% had serological syphilis. Syphilis was higher in women (12%) than in men (3%), and Men had an IDU as a sex partner more often than women did. Serological syphilis in women was associated with having had more than one sexual partner in the previous year but this association was not present in men. HIV infection was not associated with syphilis in male IDUs. However, HIV was present in all women with syphilis that reported more

than one partner. As a follow up to this study it would be useful to establish the magnitude of STDs and intravenous drug use (IDU) among persons who are diagnosed to be HIV infected and have received counseling.

A Minnesota longitudinal study of people diagnosed with a adolescent/adult HIV infection before 1993 and still alive as of December 31,1994 found that 30 (1.3%) of 2315 HIV- infected people were diagnosed with one or more STDs after HIV diagnosis. There were 31 episodes of gonorrhea, 7 episodes of chlamydia infection and 1 episode of secondary syphilis. The gonorrhea incidence among HIV infected people was high compared to the general population in Minnesota even after stratifying by gender, age, and county of residence.

In a cross-sectional medical record review of men who have sex with men (MSM) who attended an urban STD clinic from January, 1993 through December, 1994, Lafferty, W E et al 1997 established that among 1253 MSM, 196 (15.6%) had non-chlamydia NGU, 105 (8.4%) had gonorrhoea, 31(2.5%) had chlamydial infection, and 162 (12.9 %) had known or newly documented HIV infection. Know HIV infection was an independent predictor of urethral gonorrhoea. Oral insertive intercourse was independently associated with urethral gonorrhoea. Neither number of sex partners nor condom use was associated with any incident STD outcome, including new HIV infection. MSM who attend STD clinics represent a subgroup of homosexually active men who remain at high risk for STDs, including HIV infection. Fellatio, commonly thought to be a 'safe' sexual practice, was found to be an independent risk factor for urethral gonorrhoea and nonchlamydia NGU. The study recommended that a history of consistent condom use or few sex partners should not dissuade clinicians from

performing screening tests for HIV and other STDs. Repeated STD screening and counseling about safer sex were indicated for many HIV-infected MSM. The contribution of bisexuality to heterosexual HIV transmission however was poorly quantified. It was estimated that there were about 400 HIV infections transmitted annually from HIV - infected bisexual men in high risk cities to their female sex partners; two thirds of these infections were transmitted to main female partners and one third to casual partners. It was concluded that transmission via bisexuality was a relatively minor component of the estimated 40,000 annual infections in the USA. Although majority of HIV transmission among Kenyan population is through heterosexual practice, it is also important to determine the extent to which homosexuality, lesbianism and bisexuality prevail in HIV infected populations, and their contribution to HIV transmission.

In the study to determine the perceptions among patients with different rates of disease progression as to the reasons for a good outcome with HIV (Troop, M; et al 1997) when Non-progressors were asked " what do you feel are the reasons or your good outcome with HIV infection ?". Mental attitude, and in particular a positive outlook, was the reason most frequently given for a good outcome among both non-progressors (NP) 42%, and progressors (P) 40%, followed by lifestyle measures and personal action (NP 31%, P35%). Medical treatments such as antiretroviral drugs were rarely suggested (<3%). No significant differences were observed in the frequency of the different reasons given by non-progressors and progressors. The study found that a positive outlook, lifestyle and personal action among long-term HIV infected individuals were important determinants of a good prognosis.

Singh, N; et al (1997) studied Psychological stress and depression in older patients with intravenous drug use and human immunodeficiency virus infection, found that older patients exhibited greater emotional and psychological stress. Older patients had significantly greater depression, higher tension and anxiety, greater anger and hostility, greater confusion and bewilderment, and more fatigue compared with younger patients. Older patients were significantly more like to have intravenous drug use as HIV risk factor, less likely to be employed and more likely to use non-traditional therapies. Intravenous drug use was an independent predictor of psychological stress in older patients.

In a study to determine factors associated with condom use among women infected with human immunodeficiency virus, (Clark, R.A.; et al; 1997) found that most women had only one sexual partner. Factors found to be associated with condoms non-use included younger age, low education level, an HIV - positive partner, history of STD, and use of drugs or alcohol during sex. Although most subjects indicated that the decision was mutual when deciding not to use a condom, 20% stated that it was a partner decision. The study recommended that future intervention efforts should target these identified high-risk individuals and optimally involve the partners of HIV infected women.

Several other studies have been identified that reported on the sexual risk practices of non-IDU HIV positive people, for example, Cranson and Caron (1998) reported that 36% of HIV positive women had engaged in unprotected sex since learning of their HIV serostatus. In another study, DeHovitz et al. (1997) reported that one third of non-drug- using HIV positive women engaged in unprotected vaginal inter-course

during the previous year. Wilson et al. (1999) also reported that 32% of HIV positive engaged in unprotected vaginal sex during the previous 6 months. These studies also indicated that non - IDU heterosexual HIV positive women do not have a large number of sexual partners. In fact, most women reported long-term, monogamous relationships with only one partner (Clerk et al, 1997). In two studies that ascertained serostatus of the partner, the majority of women reported HIV negative or unknown status partners (Clark et al, 1997; DeHovitz et al., 1997). However, neither of these studies linked serostatus of partner with sexual risk practices.

In most of HIV positive women, partner refusal has been reported as a primary reason for not using condoms (Clark et al., 1997; Cranson and Caron, 1998; Hankins et al., 1997; Lai, 1994). A significant percentage of HIV positive women also reported that non-condom use was a mutual decision motivated by the long-term, commitment, and monogamous nature of their sexual relationship. Cultural influences on condom use were also noted. For example, HIV positive African American women have reported a variety of reasons for not using condoms, including: lack of trust in the reliability of condoms, male partner's refusal to use condoms, women's fear of negative partner reactions (e.g., violence), and interference with childbearing (Bedimo et al., 1998; Clark et al., 1997).

A study by Sherman and Kirton 1999 reported on the sexual risk practices of HIV positive heterosexual males. The study subjects reported periods of consistent condom use for vaginal and anal sex, but all indicated intermittent relapses to unsafe sex. A variety of barriers to condom use were identified. They included: no condoms available at the time, inability to impress partner when wearing a condom, delayed

ejaculation, lack of sensation, discomfort, and inhibition of romance. No data were reported on number or type of sexual partners.

A study by Prins, M; et al; 1997 compared the progression and non progression of HIV infection among 418 injecting drug users (IDUs) and 422 homosexual men with documented dates of HIV seroconversion from 12 cohorts. It was found that the risk of death from any cause of homosexual men compared with IDUs increased over time since seroconversion. Fifty IDUs died prior to AIDS, compared with seven homosexual men (unadjusted RH for homosexual men 0.10). Ignoring this pre-AIDS mortality, the crude RH of death for homosexual men. No differences in progression between subgroups aged 24 years or older could be demonstrated, but subjects below 24 years were found to be at a decreased risk. Proportions of non-progressors based on CD4+ slope ≥0 at 7 years following sero conversion were higher for IDUs than for homosexual men.

From the available literature, far too few studies have been published on HIV/AIDS related practices, attitudes and challenges of persons infected with HIV. This is particularly true for Kenya where there exists very few published studies and even for those that have been done, they have not exhaustively surveyed high-risk psycho social and sexual practices, attitudes and challenges among those who are infected with HIV. It will be helpful to policy makers if findings of existing studies could be either be corroborated or contrasted by similar other studies for this will enable them to sharpen their decision making, develop supportive policies and therefore facilitate provision of appropriate and effective services to HIV infected persons.

This study is designed to add on to the already existing body of knowledge on psychological and sexual practices, attitudes and challenges of persons living with HIV/AIDS specifically in Nairobi, Kenya.

Chapter 3 MATERIALS AND METHODS

3.01 Study Design and Time Frame

This was a cross-sectional descriptive study that was executed over a period of six months between January 2004 and July 2004.

3.02 Study setting

The study was carried out in Nairobi cosmopolitan social setting. The city is situated in the central highlands of Kenya at an altitude of 5450 feet above sea level. It covers an area of 690 square kilometers and is subdivided into 9 administrative divisions namely; Dagoretti, Embakasi, Industrial Area, Kahawa, Kasarani, Lang'ata, Makadara, Pumwani and Westlands.

Nairobi city is the capital town of Kenya and is situated in Nairobi Province. The population of Nairobi is estimated to be 2.137 million people. Of these, 1.5 million are males and 0.987 million are females. The population growth rate is 4.8 up from 4.7 in the 1989 population census (Central Bureau of Statistics, 1999).

Health care services are provided to the population of Nairobi by the Government of Kenya, the Nairobi City Council, Non - Governmental organizations, Private sector and faith-based organization.

3.03 Sampling Method

Clusters of organizations/ institutions that render services to HIV infected persons in Nairobi were chosen. These clusters included HIV screening centres (including

health institutions), HIV counseling and support centres and HIV peer support groups. From each of these clusters 55 subjects were randomly selected. Specific Study sites were:

a) Patient Support Centre of Kenyatta National Hospital (KNH PSC)

b) Kenya Network of Women Living With AIDS (KENWA)

c) Kibera Community Self - Help Programme (KICOSHEP)

d) Women Fighting AIDS in Kenya (WOFAK).

e) Society for Women with AIDS in Kenya (SWAK)

f) Kenya Medical Research Institute Clinic (KEMRI Clinic).

3.04 Inclusion Criteria

Study subjects met all the following criteria

a) HIV infected.

b) Aged between 15 to 54 years

c) Had received both pre-test and post-test counseling.

d) At least six (6) months after testing positive for HIV/AIDS.

e) Resided in Nairobi for at least the last six months.

3.05 Exclusion Criteria

Potential subjects with any of the following criterion were excluded from the study.

a) That not in possession of legal documents to confirm their age.

b) Those that were HIV positive but had not received pre-test or post-test counseling.

c) Those that were HIV positive received post-test counseling but had known their HIV positive status for less than six months

d) HIV negative.

e) HIV positive persons aged below 15 years or above 54 years.

f) HIV Positive persons who were not willing to take part in the study.

3.06 Sample size calculation

Sample size was estimated using the formula as recommended by Fisher et al 1998.

$$n = \frac{z^2 pq}{d^2}$$

Where Z = 1.96

n = Desired sample size (when population is greater than 10,000)

z = = 1.96 = Standard Normal Deviation corresponding to the 95% confidence limit

p = Prevalence of the issue under study,(i.e. high risk psychosocial and sexual practices of HIV infected young persons) hypothesized to be 50% hence P=0.5

d = Confidence limit of the prevalence (p) at 95% confidence interval = 1 - 0.95 = 0.05.

Degree of accuracy desired for the study is hence set at 0.05

Thus $n = \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.05)^2} = 385$

Hence sample size was estimated at 385.

3.07 Data Collection

The researcher and five (5) field assistants collected data, by use of a questionnaire designed for the study (appendix 1). The questionnaire which was in English language was originated by the researcher and covered the following themes; demographic characteristics of the study population, high risk sexual and cultural practices, perceptions and attitudes of the study population towards the general public, and psychosexual challenges facing the study population. The questionnaire was pre-tested on twelve subjects. Five field assistants who had attained secondary level of education and fluent in both written and spoken English, Kiswahili and their ethnic languages were recruited for the purpose of data collection. They were trained on the contents of the questionnaire, aim of the study and how to carry out interviews and fill out questionnaires. The need for reliable information was emphasized

Access to research subjects was facilitated by field and health facility guides who were assigned to the researcher and the five field assistants. They introduced the data collectors to potential study subjects. Upon consenting, study subjects were interviewed and the questionnaires filled out at the service delivery points, peer support group meetings or at their residences. Each interview took between twenty to thirty minutes. At the end of the day, incomplete and poorly filled questionnaires were discarded. In total seventy eight (78) potential study subjects who were approached refused to consent to participate in this research and were thus excluded from the study. Data collection, cleaning and field summary were completed in five weeks.

3.08 Data Analysis

For data entry and analysis, a computer based data file was developed and utilized

using SPSS (Statistical Package for Social Sciences). The results were then presented in descriptive form using frequency tables, cross tabulation, tables, bar charts, frequency polygons, pie charts and histograms. Univariate analysis was used to analyze each variable, while bivariate analysis was utilized to compare dichotomous variables. Chi square test for significance was used and the level of significance fixed at 0.05. Multivariate analysis was used to show relationship between variable as appropriate.

3.09 Ethical Considerations

a. Authority to conduct research in Kenyatta National Hospital was sought from and granted by the Ethical and Research Committee of the Kenyatta National Hospital.

b. Authority to conduct research in Nairobi was sought from and granted by the Government of Kenya through the Ministry of Education, Science and Technology.

c. Informed consent was sought from and obtained from potential study subjects before they were included in the study.

d. All information obtained from the study was treated with utmost confidentiality and used only in the study.

3.10 Study Limitations

Some difficulties were encountered in recruitment of study subjects because they were reluctant to diverge the information required. This was attributed to the sensitive and personal nature of the information sought by the study. The researcher and field assistant made all efforts possible to convince potential subjects by precisely

explaining the purpose of the study and the benefits that the study findings and recommendations could be to persons living with HIV/AIDS and the community as a whole.

The researcher would have liked to expand the study area but due to limitations in time and resources, this was not possible during this study.

Chapter 4 RESULTS

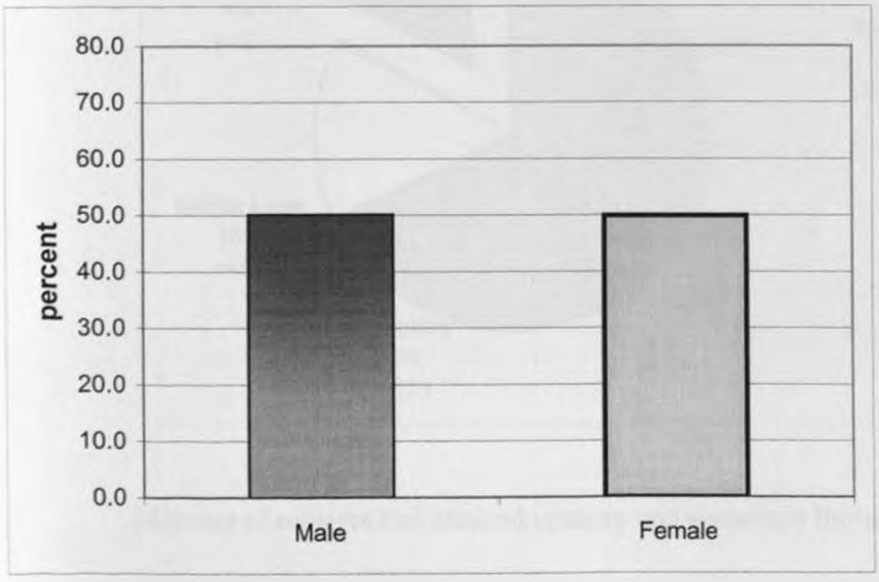
a. DEMOGRAPHIC CHARACTERISTICS OF STUDY POPULATION

1. **Table 1: Age Distribution of Study Population**

Age Group	Frequency	Valid Percent	Cumulative Percent
15 - 22 years	77	20.0	20.0
23 - 30 years	77	20.0	40.0
31 - 38 years	77	20.0	60.0
39 - 46 years	77	20.0	80.0
47 - 54 years	77	20.0	100.0
Total	385	100.0	

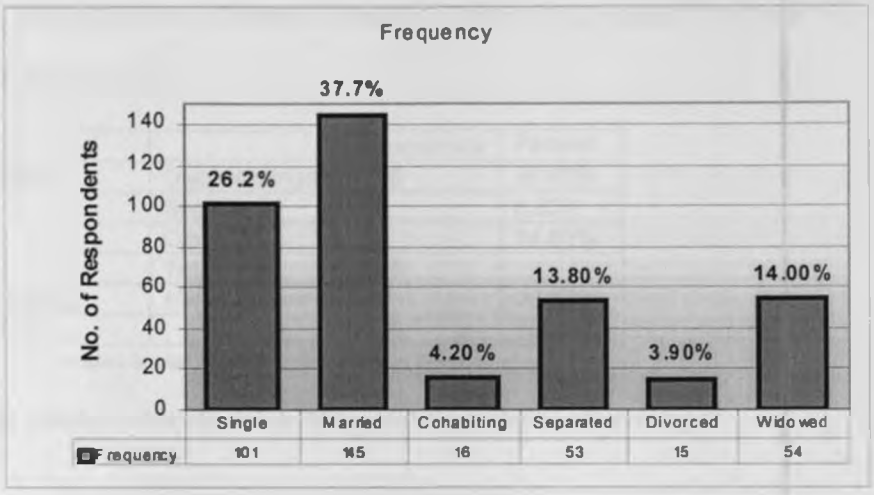
A total of 385 persons were interviewed. The age of the study population ranged from 15 years to 54 years with a mean age of 34.5 years and a standard deviation of 10.87 years . The median age was 34 years.

2. **Figure 1: Gender Distribution**



Approximately equal number of males (n=192) and females (n=193) were recruited in the study.

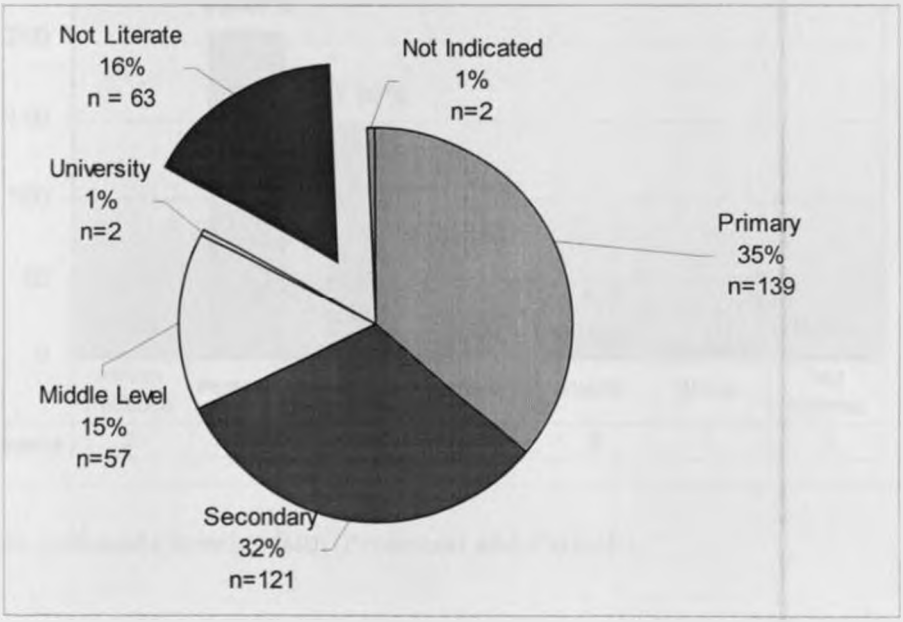
3. **Figure 2: Marital Status**



More subjects were either married or single.

4. **Figure 3: Literacy Status**

The study population had a varied literacy status as shown in figure 3 below.



Majority of subjects had attained primary and secondary literacy levels.

5. **Table 2: Source of Income**

The distribution of source of income in the study population is depicted in Table 2 below.

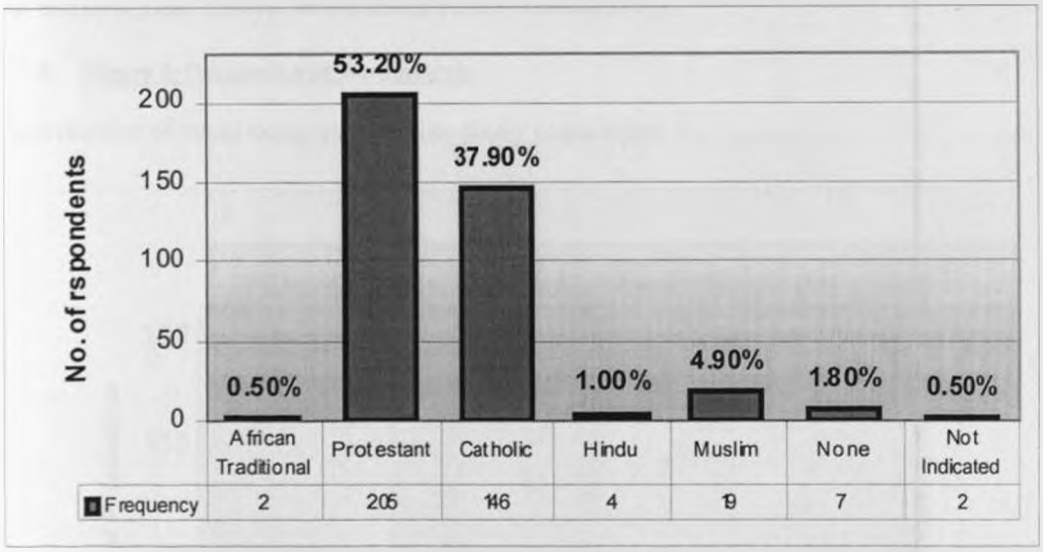
		Frequency	Percent
Valid	Own earnings	218	56.62%
	Spouse	34	8.83%
	Others [a]	54	14.03%
	Total	**306**	
Missing	*Not Indicated*	*79*	*20.52%*
Total		**385**	**100.00%**

[a] Includes income from Donations, Parents, Relatives e.t.c.

Over half the number of study subjects depended on their own earnings.

6. **Figure 4: Religion**

Religion / faith distribution of the study population.



Most subjects professed Christian faith (Protestant and Catholic).

7. **Table 3: Ethnic Background**

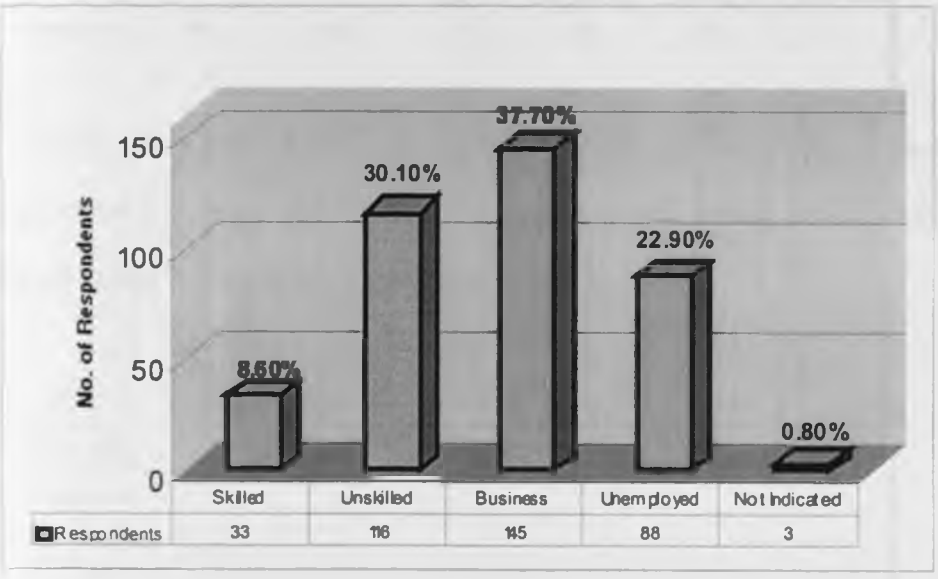
Most study subjects were of African Kenyan background with specific ethnic distribution shown in table 3 below.

Ethnic Group		Frequency	Percent
Valid	Not Indicated	1	0.3
	Embu	9	2.3
	Asians	4	1
	Kalenjin	9	1.3
	Kamba	50	13
	Kikuyu	114	29.6
	Kisii	12	3.1
	Luhya	53	13.8
	Luo	90	23.4
	Masaai	3	0.8
	Meru	15	3.9
	Mijikenda	6	1.6
	Pokomo	1	0.3
	Rendile	1	0.3
	Somali	7	1.8
	Taita	7	1.8
	Teso	3	0.8
	Total	**385**	**100**

A majority of study subjects were from African Kenyan origin with most being from the Kikuyu, Luo, Luhya and Kamba ethnic communities.

8. **Figure 5: Occupation of Respondents**

Distribution of usual occupation of the study population.

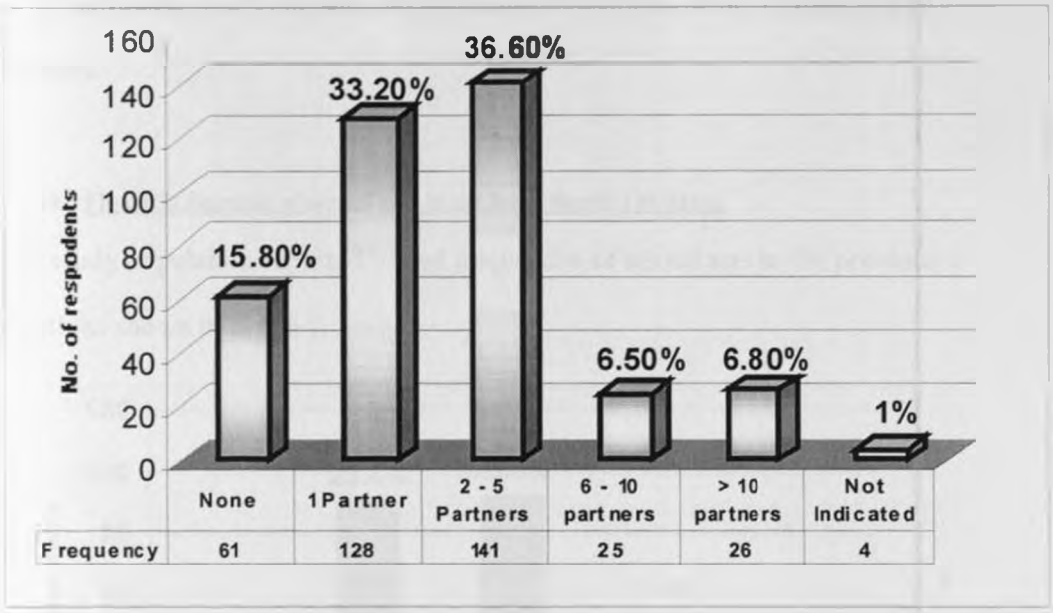


Most subjects engaged in business activities or served as unskilled workers. About a fifth of the subjects were unemployed.

b. PSYCHOSOCIAL AND SEXUAL PRACTICES, ATTITUDES AND CHALLENGES.

9. Figure 6: Number of Sexual Partners in the last 6 months.

The study subjects reported varied number of sexual partners ranging from 0 (Abstinence) to 1 (monogamous) to more than 10 sexual partners in the last six months. This is as shown in figure 6 below.



Over third of the subjects reported having had two to five partners, another third had practiced monogamy, about a sixth reported no partner while a further tenth reported having had six or more partners.

10. **Table 4: Knowledge of Partner HIV Status**

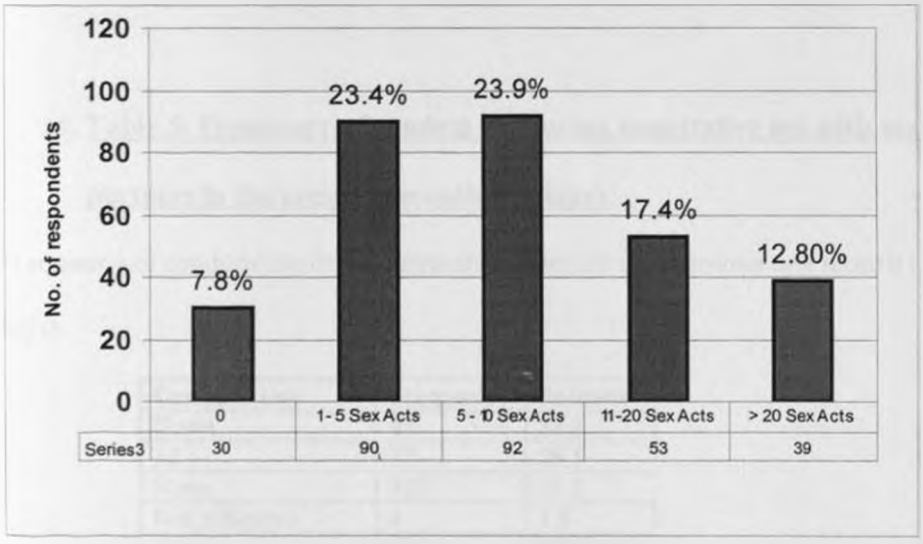
Distribution of subjects' knowledge / awareness of HIV status of their sexual partners.

	Frequency	Percent
Some partners	42	10.9
None	217	56.4
All Partners	61	15.8
Total	**320**	**83.1**
No Partner / Not Indicated	65	16.9
Total	**385**	**100.0**

Over half of the study subjects did not know HIV Status of any of their sexual partners.

11. **Figure 7: Number of sexual acts in the last 1 month (30 days).**

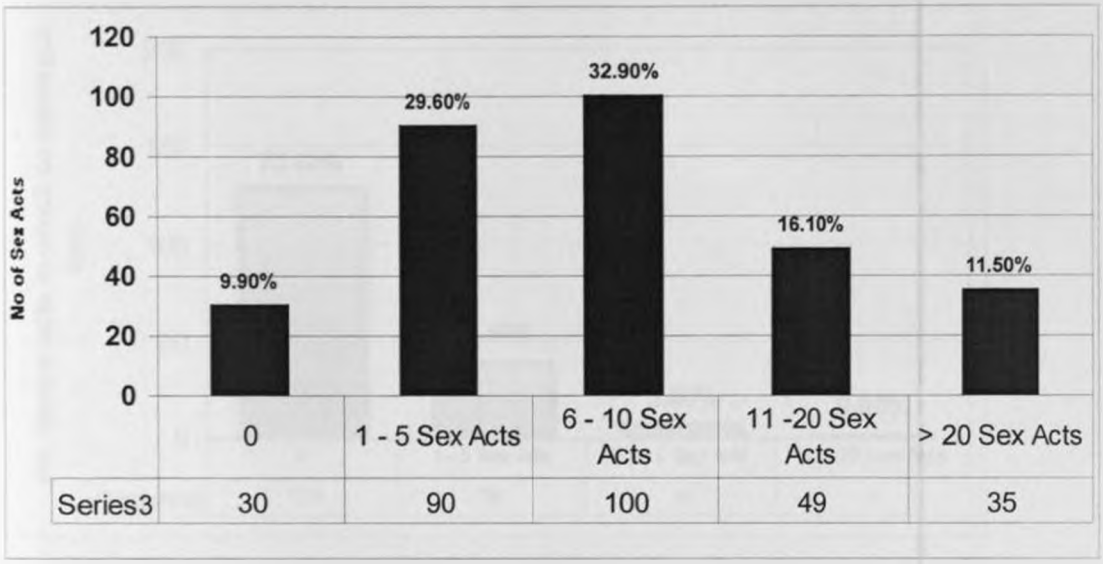
The study population reported varied frequencies of sexual acts in the previous 1 month as shown in figure 7.



Most subjects were sexually active.

12. **Figure 8: Number of Penetrative Sexual Acts (anal, vaginal, oral) in the last 1 month (30 days).**

Distribution of penetrative sexual acts that the study population engaged in the previous one month.



Most sexual acts were penetrative in nature.

13. **Table 5: Frequency of condom use during penetrative sex with sexual partners in the previous month (30 days).**

Frequency of condom use during penetrative sex in the previous one month (30 days).

Condom Use	Frequency	Percent
Some	91	33.2
All	77	28.1
None	102	37.2
Not Indicated	4	1.5
Total	274	100%

Majority (37.2%) of subjects did not use condoms in any sexual acts, 33.2% reported erratic condom use and 28.1% used condoms consistently.

14. **Figure 9: Frequency of Condom Bursting or getting lost in the previous 1 month (30 days).**

Distribution of condom bursting or getting lost during sexual intercourse.

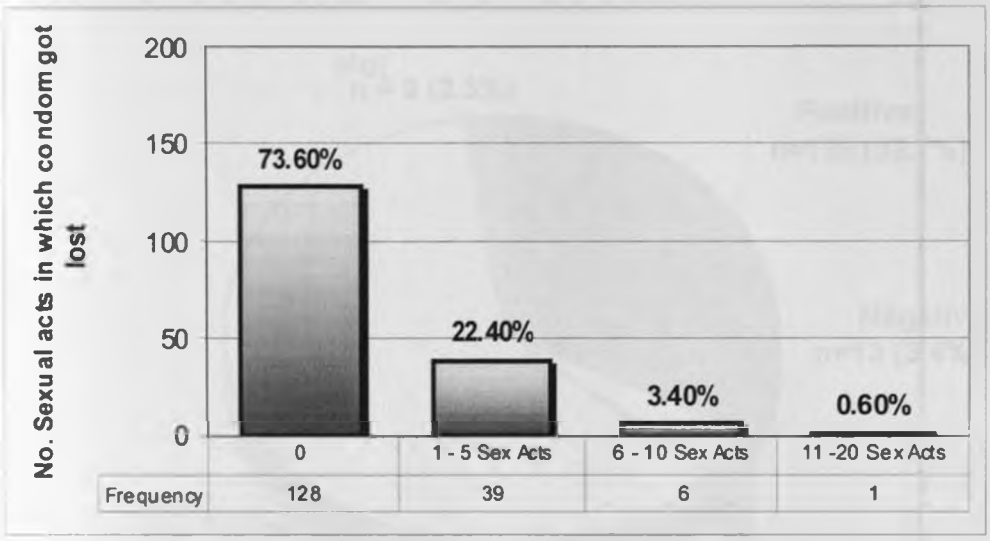
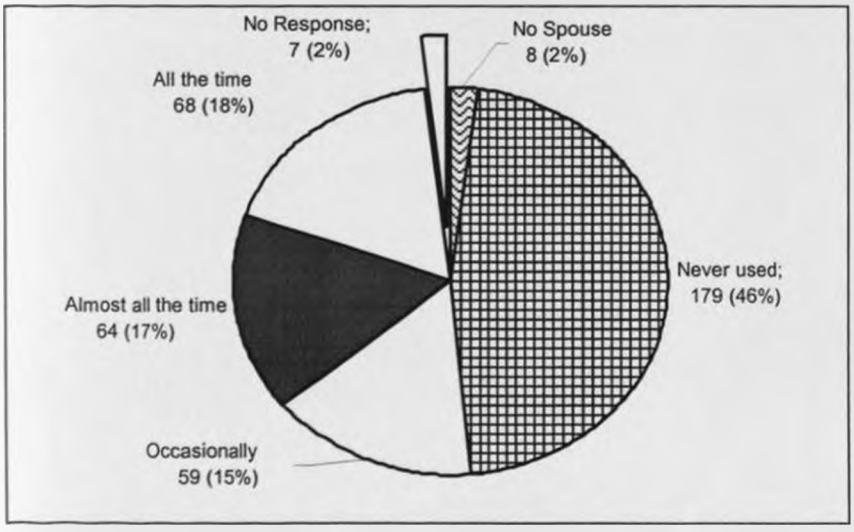


Figure 10 : Condom use with spouse / regular sexual partner.

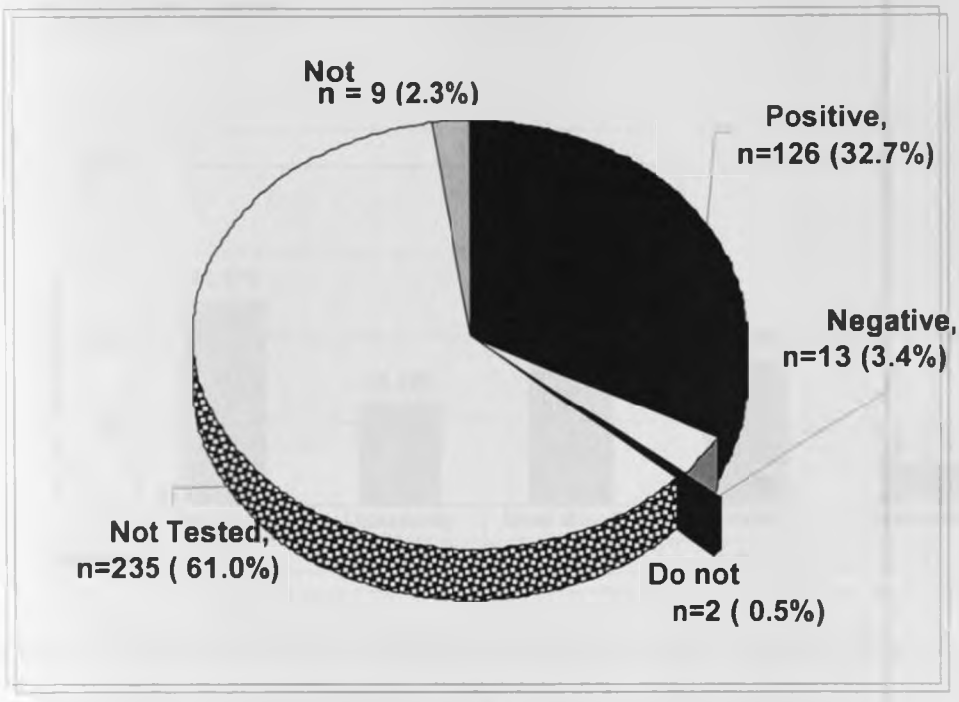
Frequency of condom use by the study population during sexual intercourse with spouse / regular sexual partner.



Most subjects had not been using condoms with spouse / regular sexual partner.

15. **Figure 11: HIV Status of spouse / Regular Sexual Partner.**

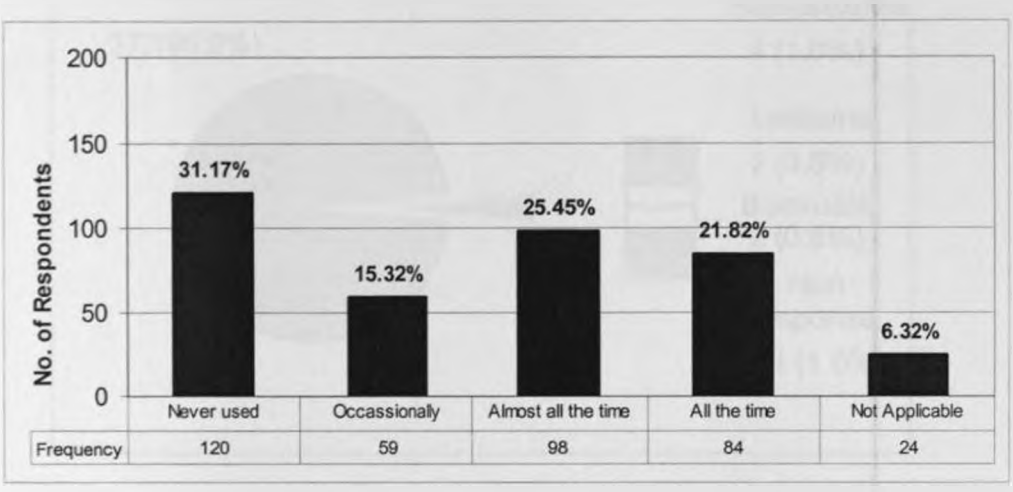
The distribution of HIV Status of spouses / regular sexual partners of study sample.



Majority of spouses / regular partners had not been tested for HIV.

16. **Figure 12: Condom use with other sexual partner(s) other than spouse / regular sexual partner.**

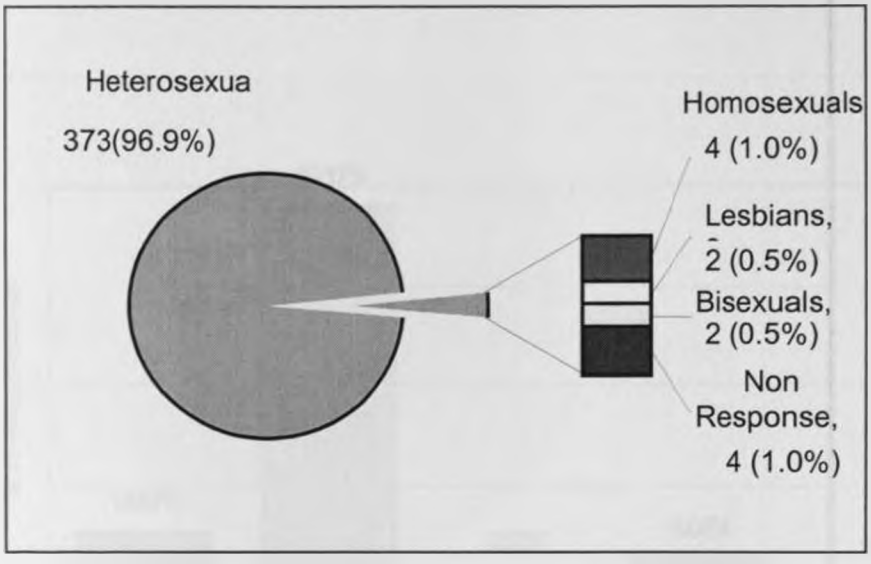
Distribution of frequency of condom use with sexual partners other than spouse / regular sexual partner.



About a third of study subjects reported having never used condom with other partners while two thirds reported using condoms either consistently or erratically.

17. **Figure 13: Sexual Orientation of Respondents**

Different sexual orientations were reported among the study population. Figure 13 below shows the distribution of various sexual orientations in the study population.



Majority (96.9%) of study subjects were heterosexual.

18. **Table 6: Paraphilias and other high risk sexual behaviours**

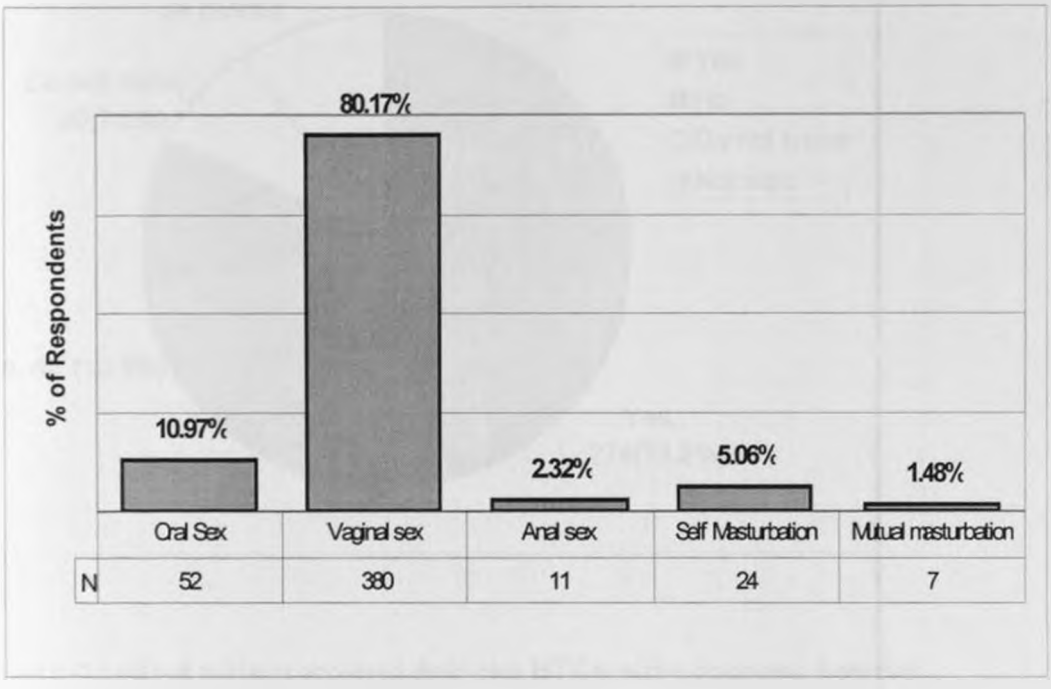
Paraphilias and other high-risk sexual behaviors were reported in the study population as depicted in Table 6 below.

	Count	Percent
Violent Sex	44	8.6%
Rubbing	144	28.2%
Watching others having sex / undressing	131	25.7%
Dry Sex	35	6.9%
Kissing	95	18.6%
Other modes [a]	61	12.0%
	510[b]	100.0%

[a] Includes caressing, watching sexual movies e.t.c [b] Based on 350 Respondents

19. **Figure 14: Modes of Sexual Gratification engaged in during sexual acts.**

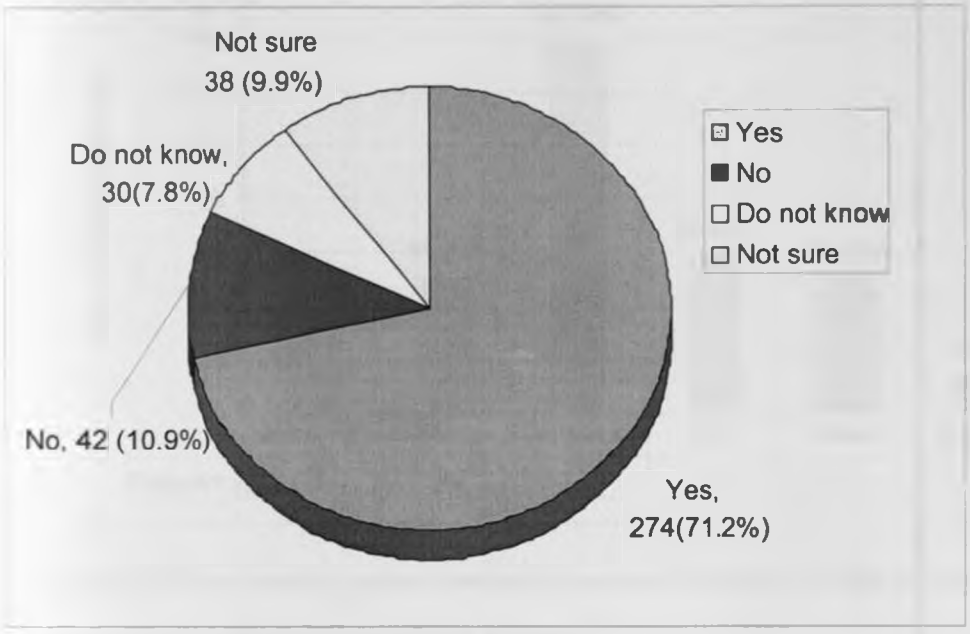
Distribution of the various modes of sexual gratification engaged during sexual acts.



Most (80.17%) of study subjects engaged in vaginal sex.

20. **Figure 15: Acceptance of own HIV Status.**

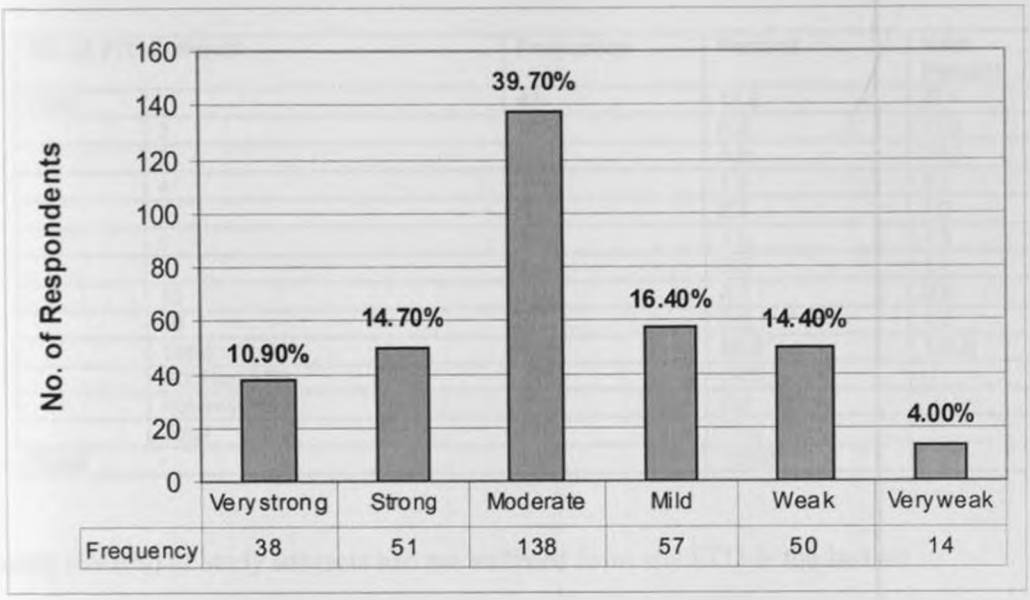
Distribution of various responses of the study sample in relation to acceptance or denial of their own HIV positive status.



Majority (71.2%) of subjects accepted their own HIV positive diagnosis, however 28.6% had not accepted their own HIV positive status.

21. **Figure 16: Perception of own immunity against HIV .**

Distribution of perception of own invincibility / susceptibility of immune system to HIV in the study population.



Most (65.3%) of research subjects tended to overate (moderate, strong or very strong) their body immunity to HIV infection.

22. **Table 7: Age at first sexual intercourse**

The distribution of age of debut of sexual activity among the study sample.

Age Set at First intercourse			
	Frequency	**Percent**	Valid Percent
Child 12 yrs and below)	22	5.7	6.1
Teenage (13 - 19 yrs)	287	74.5	79.1
Early Adulthood (above 19 yrs)	54	14.0	14.9
Total	**363**	**94.3**	**100.0**
Not Indicated	22	5.7	
Total	385	100.0	

Most (79.1%) of subjects reported that they had commenced sexual activity during their teenage period.

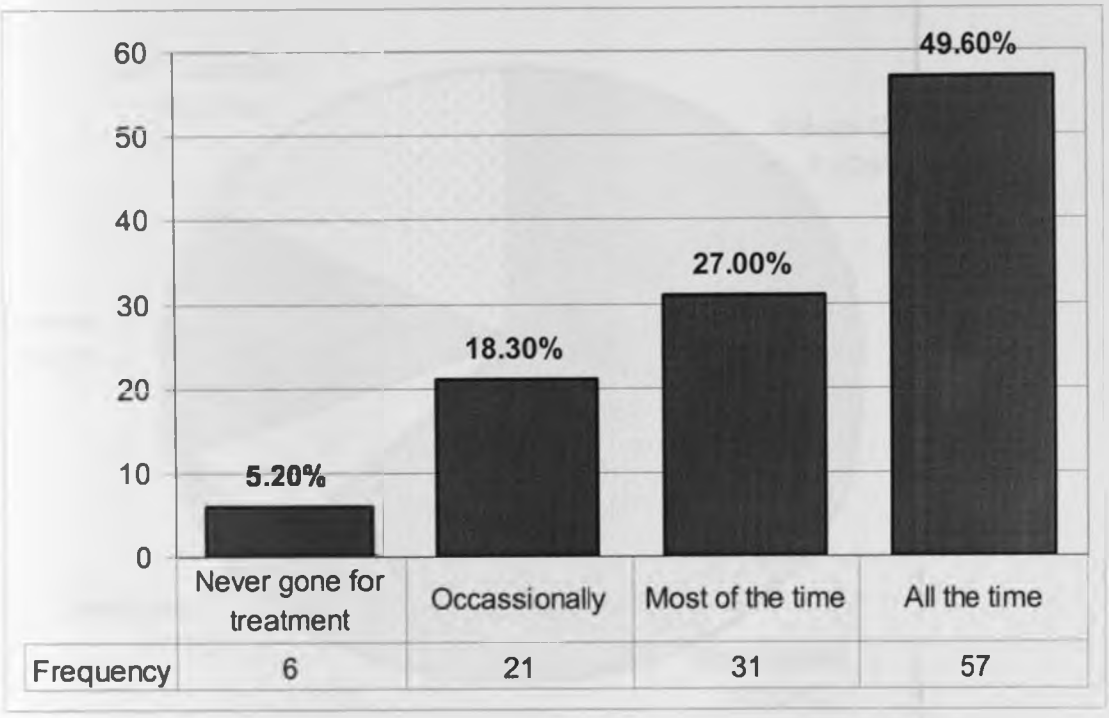
23. **Table 8: Frequency of STDs in the last 6 months.**

Frequency of STDs among the study population in the last six months.

No. of STD Suffered		Frequency	Percent	Valid Percent
Valid	1	43	11.2	37.4
	2	32	8.3	27.8
	3	15	3.9	13.0
	4	7	1.8	6.1
	5	8	2.1	7.0
	6	5	1.3	4.3
	7	2	0.5	1.7
	10	1	0.3	0.9
	16	2	0.5	1.7
	Total	**115**	**29.9**	**100.0**
	Not Had STD	268	69.6	
	Not indicated	2	0.5	
	Total	270	70.1	
Total		**385**	**100.0**	

Majority (69.6%) of study subjects had not suffered from any STD in the last six months, however 29.9% reported having suffered episodes of STDs with most of these having had either one or two episodes of STD.

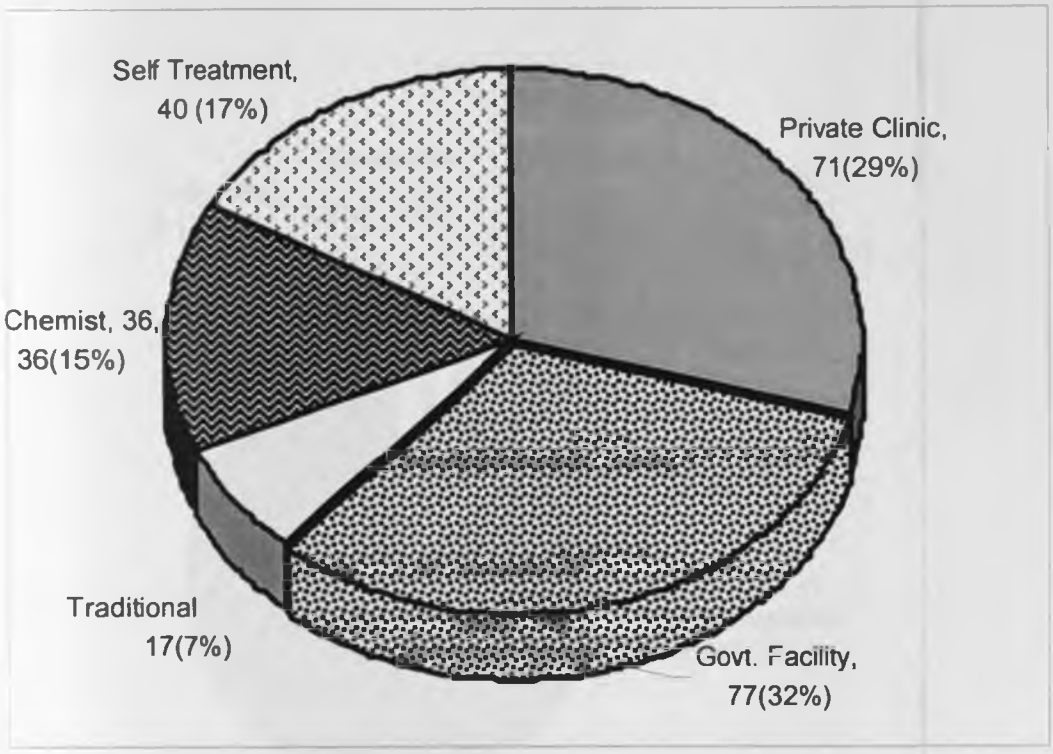
24. **Figure 17: Frequency of STD treatment seeking behaviour among the study population in the last 6 months.**



About half of those who had suffered from STDs reported having sought treatment consistently. A minority (5.20%) had never gone for treatment.

25. **Figure 18: Facility from which treatment is obtained.**

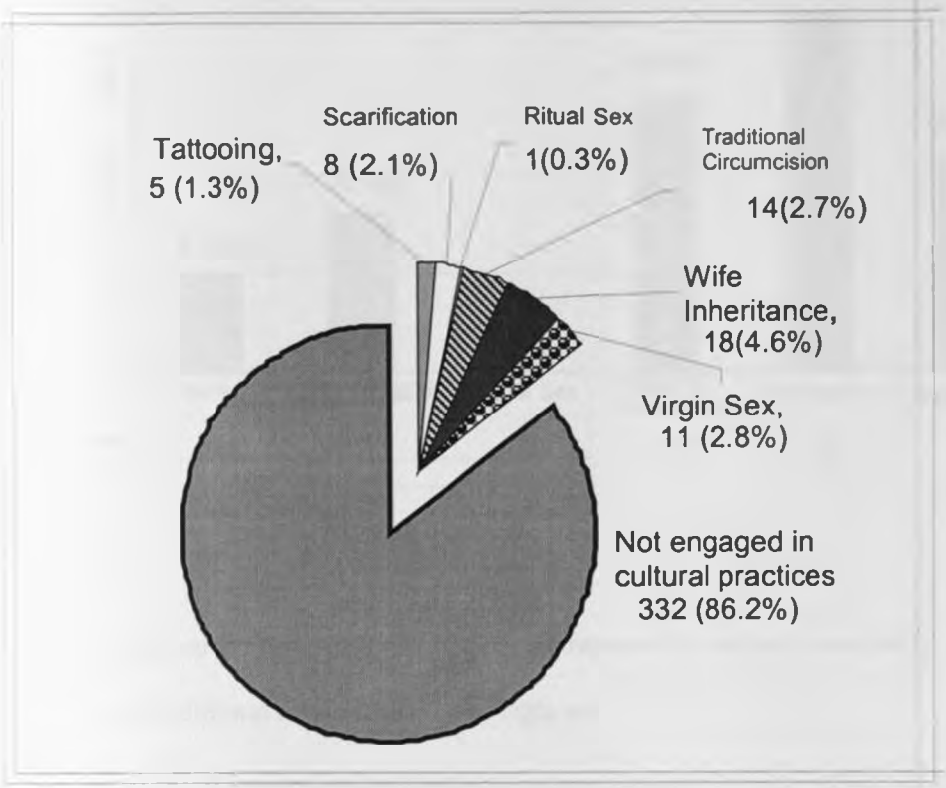
Distribution of facilities from which the study population obtain treatment for STDs.



The most preferred facilities from which STD treatment was sought were government facilities and private clinics. About a fifth preferred self-medication.

26. **Figure 19: Cultural Practices undergone in the last six months**

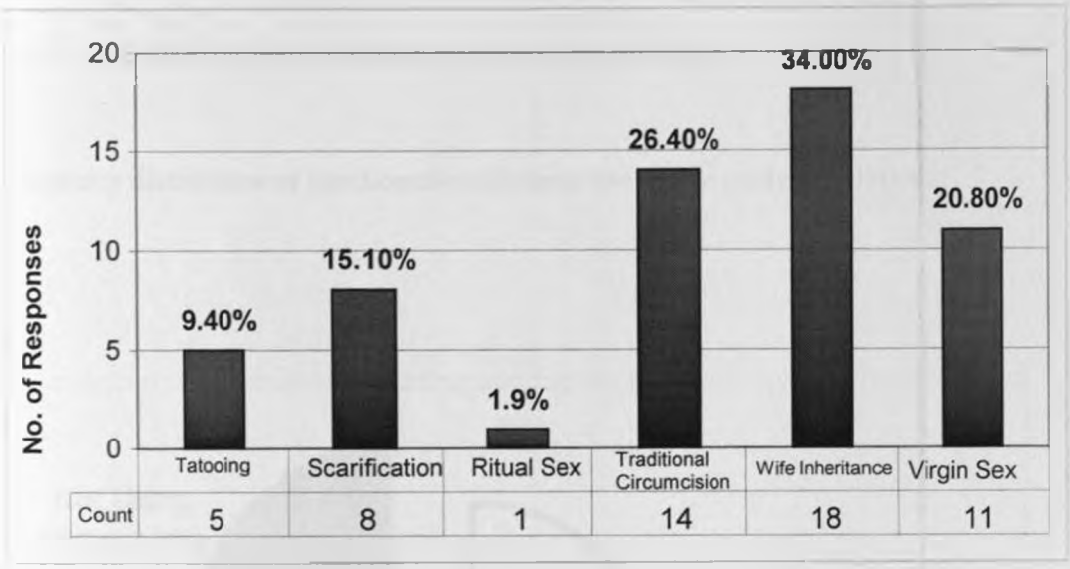
Frequency of cultural practices in the study sample.



Majority (86.2%) had not engaged in high-risk cultural practices, however 13.8% had undergone high-risk cultural sexual practices.

27. **Figure 20: Distribution of Reported Cultural Practices in the last six months.**

Distribution of reported cultural practices among the study sample.



The most frequently high-risk cultural practice reported by subjects were wife inheritance, traditional circumcision and virgin sex.

28. **Table 9: Frequency of Cross age - set sexual activity (sexual mixing pattern) among the study population in the last six months.**

Table 9 shows the frequency of sexual mixing between ages of subjects and their sexual partners.

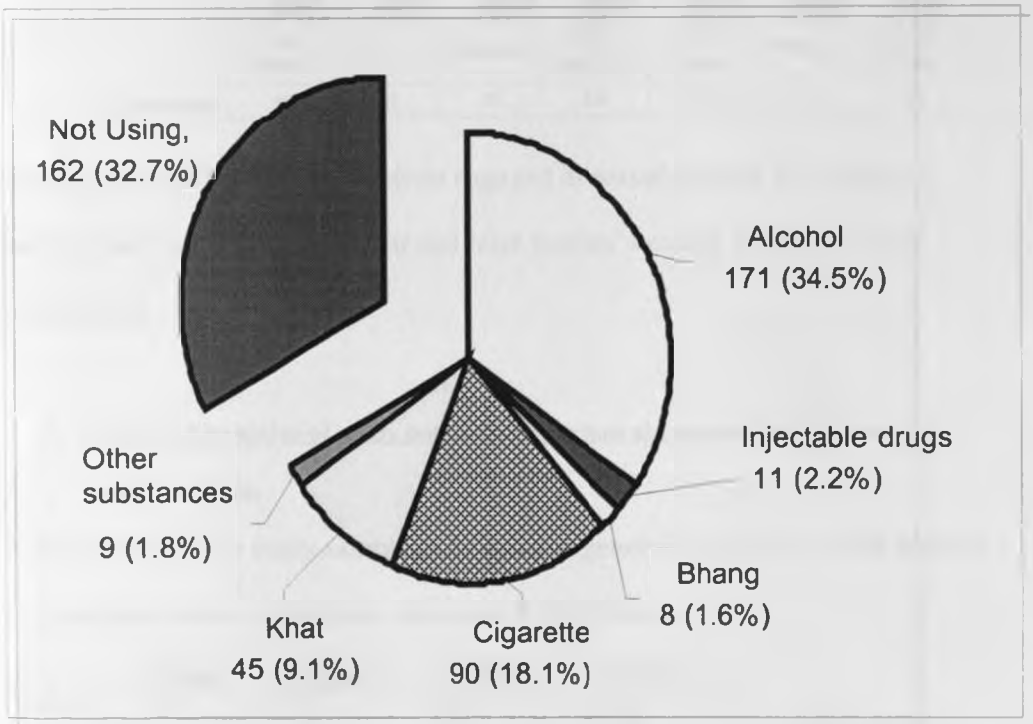
Age Set of Sexual Partner	Age Group of Study sample			
	15 - 22 years	23 - 30 years	31 - 3[redacted]	
Below 15	8	3	2	
15 – 22 years	56	33	15	[redacted]
23 – 30 years	32	52	57	32
31 – 38 years	15	26	40	46
39 – 46 years	4	11	25	36
47 – 54 years	2	5	12	19
Above 54 years	2	1	5	3
Total Count	**77**	**75**	**76**	**76**

Sexual mixing patterns in which study subjects engaged in are as tabulated in Table

9 above. 5 subjects aged 23 - 38 years had engaged in sexual activities with partners aged below 15 years.

29. **Figure 21: Psychoactive substance use in the last six months.**

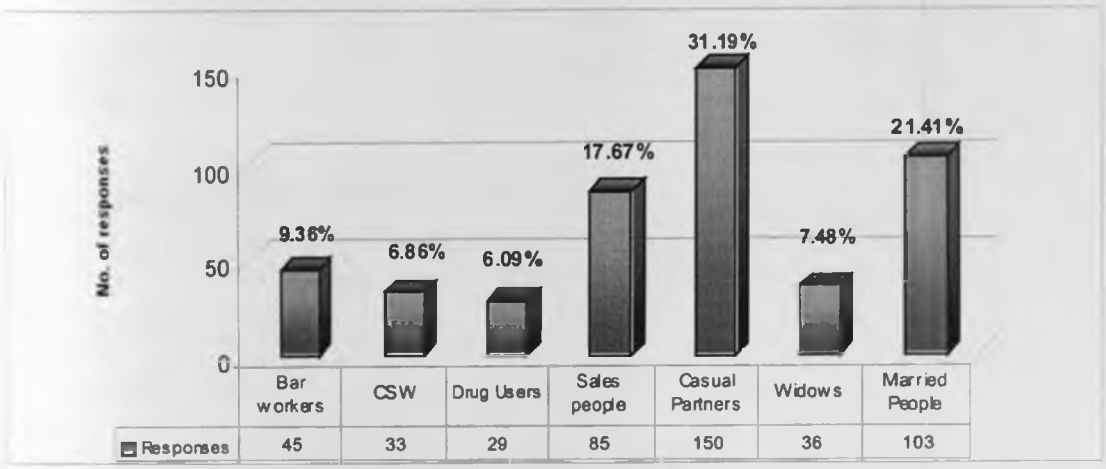
Frequency distribution of psychoactive substance use in the study population.



Majority (67.3%) of subjects used psychoactive substances, the commonly used substances being alcohol, cigarette and khat.

30. **Figure 22: Groups of People engaged in sexual activity with.**

The study population reported to have engaged various groups of people in sexual activity as illustrated in figure 22 below.



Among groups of people that subjects engaged in sexual activity with, casual partners, married people, salesmen and sales women were the most frequently encountered.

31. **Table 10: Perception of study population as to how the general public treats HIV positive persons.**

Perception of the study sample as to how the general public treats HIV positive persons in terms of rejection, discrimination and love.

	Mean	Mode	Median	Count
Rejection	3	3	3	385
Discrimination	3	2	3	385
Love	4	3	3	385

KEY
1 = Very strong
2 = Strong
3 = Moderate
4 = Mild
5 = Weak
6 = Very weak

32. **Table 11: Ratings of the feelings of the study population towards the general public**

Rated feelings of the study population towards the general public in terms of love, anger and rejection.

	Mean	Mode	Median	Count
Rejection	4	6	4	385
Anger	4	6	4	385
Love	3	3	3	385

KEY
1 = Very strong
2 = Strong
3 = Moderate
4 = Mild
5 = Weak
6 = Very weak

33. **Table 12: Rating of Feelings towards oneself.**

Table 12 below depicts the study populations' feelings towards oneself in terms of love, bitterness, self-esteem, helplessness and optimism about the future.

	Mean	Mode	Median	Count
Love	3	2	3	385
Bitterness	4	2	4	385
Self Esteem	4	3	3	385
Helpless	4	2	3	385
Optimism	4	6	5	385

KEY
1 = Very strong
2 = Strong
3 = Moderate
4 = Mild
5 = Weak
6 = Very weak

34. **Table 13: Changes in sex life since HIV Positive diagnosis**

The study population reported post HIV positive diagnosis changes in sex life as shown in Table 13 below.

	Male	Female	Total	
LIFE CHANGE	**Count**	**Count**	**Count**	**%**
Loss of desire	75	128	203	46.14%
Vaginal dryness	n/a	39	39	20.31%
Increased drive	41	12	53	12.05%
Excess erection	4	n/a	4	2.07%
Inability to erect	29	n/a	29	15.03%
Painful sex	27	47	74	16.82%
Failure of orgasm	9	29	38	8.64%
Total	**185**	**255**	**440[a]**	
[a] Based on 326 respondents				

Loss of desire for sex was the commonest post HIV positive diagnosis challenge that hindered sex fulfillment in study subjects.

Tables used for calculation of chi Square values.

	Young Respondents	Old Respondents	Total
Age at first Sexual			
Child 12 yrs and below	14	8	22
Adolescent (13 - 19 yrs)	155	132	287
Early Adulthood (above 19 yrs)	13	41	54
Total	182	181	363
Ever Had STD			
Yes	68	47	115
No	123	145	268
Total	191	192	383
Condom Use with Spouse/ regular Partner			
Yes	60	29	89
No	26	45	71
Total	86	74	160
Condom use with others			
Yes	108	66	174
No	85	126	211
Total	193	192	385
Female - Condom Use with spouse / regular partner			
Yes	68	31	99
No	3	75	78
Total	72	116	
Female - Condom Use with other partners			
Yes	56	39	95
No	35	41	76
Total	91	80	171
	Has had STD	**Not had STD**	**Total**
Condom Use	112	61	173
Condom Non use	45	165	210
Total	157	226	383
Female - Condom Use with other Partners.			
Condom use	30	90	120
Condom Non Use	33	37	70
Total	63	127	190
Female - Marital Status			
No Spouse	56	7	63
With Spouse	10	38	48
Total	66	45	111
Literacy Status			
Educated	108	221	329
Not Educated	7	45	52
Total	115	266	381

Income	Condom Use	Non Condom Use	
Own Earnings	101	117	218
Spouse Earnings	9	25	34
Total	110	146	252
Religion			
Catholics	48	98	146
Protestants	82	122	204
Total	130	220	350
Other Ethnics Groups	126	207	333
Total	136	246	382
1 partner	29	99	128
Multiple partners	79	112	191
Total	108	211	319

	Substance Use	No Substance Use	
Condom Use with others			
Yes	139	50	189
No	58	77	135
Total	197	127	324
No. of Sex partners			
1 sex partner	59	69	128
Multiple Sex partners	142	50	192
Total	201	119	320
No. of Sex Acts			
0 Sex acts	7	23	30
1 - 5 sex Acts	47	43	90
6 - 10 sex acts	59	33	92
11 - 20 sex acts	43	10	53
> 20 sex acts	35	4	39
Total	191	113	304

	Unemployed	Employed	
No. of Sexual partners			
0 - 1 Sex partners	26	158	184
Multiple Sex partners	62	135	197
Total	88	293	381
Condom use			
Never used	54	66	120
Occasionally	17	42	59
Almost all the time	17	81	98
All the time	22	62	84
Total	110	251	361

	Condom use with other partners	Condom use with Spouse / Regular Partner	Total
Occasionally	36	20	56
Almost all the time	52	22	74
All the time	40	17	57
Total	128	59	187
	Own earnings	Spouse earnings	
Condom Use			
Yes	99	0	99
No	119	34	153
Total	218	34	252
	No Partner	With Partner	
Agree with HIV test results			
Yes	120	59	179
No	5	19	24
Don't know	10	7	17
Not sure	10	16	26
Total	145	101	246
Condom use with others	Catholics	Protestants	
Yes	44	96	140
No	70	61	131
Total	114	157	271

SIGNIFICANCE TESTS AND CORRELATION

Important/Significant chi-square test findings include the following

	Young vs Old Respondents		
	Chi Sq. value	**Df**	**P value**
Age at sexual debut	17.689	2	0.00014
Suffered STD	5.325	1	0.021
Condom use with spouse / regular partner	15.067	1	0.0001
Condom use with other Partners	18.102	1	0.000021
FEMALE – Condom use with spouse	22.870	1	0.000002
FEMALE – Condom use with other Partners	12.703	1	0.000365

	Sexually Transmitted Disease presence		
	Chi Sq. value	**Df**	**P value**
FEMALE – Condom use with others	9.780	1	0.02
FEMALE - Martial Status (with partners/ no partners)	52.345	1	0.0000
Educational - Educated/Not Educated	7.991	1	0.005
Income – Spousal/own earnings	8.704	1	0.003
Religion – Catholic/Protestant	9.546	1	0.002
Condom use with other Partners.	16.356	1	0.00005
Number of Sex partners	11.974	1	0.00054

	Substance use		
	Chi Sq. value	**Df**	**P value**
Condom use with others	30.903	1	0.00000
No. of sexual acts	44.140	4	0.0000
No. of Sexual Partners	25.528	1	0.0000

	Employment		
	Chi Sq. value	**Df**	**P value**
Condom use with other partners	20.727	3	0.00012
No. of sexual partners	16.108	1	0.00006

	Religion		
	Chi Sq. value	**Df**	**P value**
Condom use with others	13.448	1	0.00025

	Marital Status		
	Chi Sq. value	**Df**	**P value**
Agree with own HIV positive test result	23.759	3	0.00003

CORRELATIONS

Important/Significant Correlation findings

	n	Pearson's Correlation (r)	Spearman's rho (R)
Marital Status / STD Treatment			
With Spouse	66	+ 0. 416	
Without Spouse	13	- 0.052	
Agree with test results			
With Spouse	223		+ 0.525
Without Spouse	161		- 0.098
Literacy/STD Treatment			
Educated	102	+0.640	
Not Educated	13	-0.097	
Income / STD Treatment			
Own Earnings	13	-0.048	
Spousal Earnings	71	+0.434	
Religion/STD Treatment			
Catholic	58		+0.541
Protestant	47		+0.002
Occupation/ STD Treatment			
Skilled	19	-0.337	
Unskilled	50	+0.037	
No. STDs / Age	108	-0.465	
No. of Sex Acts / Age at 1st sexual debut	284	-0.597	
No. STDs / Sex Acts	113	+ 0.559	

Chapter 5 DISCUSSIONS

1. Age

This study recruited 385 subjects aged 15 years to 54 years with mean age of 34.49 years and standard deviation of 10.87 years (Table 1). The median age was 34 years. Older subjects tended to have commenced sexual activity later than the young subjects (p=0.0001). Younger subjects were more likely to have commenced sexual activity at an earlier age than older subjects (p = 0.0001). They also used condom more often (p = 0.000021) and suffered more episodes of STDs than older subjects (p = 0.021).

2. Gender

Approximately equal number of males (193=50%) and females (192 = 50%) were included in the study (figure 1). In this study females used condom more often with other sex partners (66.7%, n = 128) as opposed to spouse/regular partner (30.7%, n = 59). This finding differs with what Clark R.A (1997) found in a study of HIV infected women in New Orleans USA that most subjects were more likely to use condom with main partner than with other partners. Younger age of female subjects was associated with condom use with spouse (p=0.000002) and with other partners (p=0.000356). This finding differs with Clark R.A 1997 who found younger age of female subjects to be associated with condom non-use. Further, this study found that history of STDs of female subjects was associated with condom non- use (p= 0.002). This concurs with Clark R.A (1997) who established the same finding.

3. Marital Status

Majority (37.7% n=145) of study subjects were married, 26.2% (n=101) were single, 4.2% (n=16) were cohabiting, 13.8% (n=53) were separated, 3.9% (n=15) were divorced and 14.0% (n-54) were widowed (figure 2). Subjects who had spouse (married or cohabiting) were less likely to acquire STDs (p=0.000) and tended to seek STD treatment more often than those who did not have spouse (single, separated, divorced, widowed) (r= +0.416 vs – 0.052). Further, those with spouses tended to accept their own HIV positive status than those that had no spouse (r= +0.525 vs - 0.098).

4. Literacy Status

Majority of study subjects (82% n=317) were literate with 35% (n=139) having attained primary level education, 32% (121) secondary level, 15% (n=57) middle level and 1% (n=2) University education. 16% (n=63) were not literate while 2 subjects did not indicate their literacy status (figure 3). Though the subjects that were not educated tended to suffer less STDs (p=0.005), their treatment seeking behaviour was worse than that of the educated subjects (r= - 0.097 vs + 0.640).

5. Source of Income

Fifty six and half percent (56.62%, n=218) of study population depended on their own earnings, while 8.83% (n=34) depended on spouse earnings. Other source of income that included donations, dependency on parents and relatives accounted for 14.03%(n=54) , while 20.52% (n=79) did not indicate their source of income. (Table 2). Study subjects who were dependent on spousal earnings used condoms less than

those who depended on their own earnings (p=0.0000). They were also more likely to have suffered from STDs in the last six months (p=0.003) and had better STD treatment seeking behaviour than those who depended on their own earnings (r= +0.434 vs – 0.048).

6. Religion

Majority of study population practiced Christian faith comprising 53.2%(n=205) Protestant and 37.9% (n=146) Catholic, while 4.9% (n=19) were Muslim, 1.0 Hindu (n=4), 0.5% (n=2) practiced African traditional religion and 1.8 (n=7) were Atheist (fig 4). Those who professed Catholic faith had poor condom use with other partners than those who professed Protestant faith (p=0.00025). They suffered more STDs in the last six months (p=0.002), however they had better STD treatment seeking behaviour than the Protestants (r = +0.541 vs +0.002).

7. Ethnic/Race Background

Most subjects were from African Kenyan origin mainly from Kikuyu (29.6% n=114), Luo (23.4% n=90), Luhya (13.8% n=53), Kamba (13.0% n=50). This is by virtue of being among the largest tribes in Kenya. Others that were represented include Embu 2.3% (n=9), Asian 1.0% (n=4), Kalenjin 2.3% (n=9), Kisii 3.1% (n=12), Mainsail 0.8% (n=3), Meru 3.9% (n=15), Mijikenda 1.6% (n=6), Pokomo 0.3% (n=1), Rendlie 0.3% (n=1), Somali 1.8% (n=7), Taita 1.8% (n=7) and Teso 0.8% (n=3), (Table 3) Among the four largest ethnic groups represented in the study subjects from the Akamba ethnic group had the least prevalence of STDs at 4% (n=2).

8. Usual Occupation

Majority, 37.7% (n=145) of subjects engaged in business activities, 30.1% (n=116) worked as unskilled workers, 8.6% (n=33) were skilled workers while 22.9% (n=88) were unemployed (figure 5). Those who were unemployed reported having had more sexual partners (p=0.000) and had poorer condom use with partners other than the spouse (p = 0.00012). Skilled workers had poorer STD treatment seeking behaviour than the unskilled workers (r= -0.237 vs 10.037).

9. Number of Sexual Partners in the last Six Months

During the previous six months 84% (n=320) of subjects had sexual partners while 16% (n=61) had none. Among those who had partners, majority 36.60% (n=141) reported to have had two to five partners. 33.2% (n=128) practiced monogamy (whether sustained or serial), 6.5% (n=25) had six to ten partners while 6.8% (n=28) have over 10 partners (fig.6). Having multiple sex partners is a recognized high-risk practice. Frequent change of sex partners, as can be the case in serial monogamous relationships is also appreciated as high-risk practice. Some (13.3%, n=51) respondents reported having had more than five sex partners though none indicated commercial sex work as her occupation, or having engaged in sexual activities with CSWs.

10. Awareness of HIV status of sexual partners in the previous six months

In relation to knowledge/awareness of HIV status of these sexual partners, majority, 56.4% (n=217) did not know the HIV status of any of these partners, 10.9% (n=42) knew the status of some of partners while only 15.8% (n=61) knew HIV status of all their partners (Table 4). This implies that in the last six months majority of the

subjects had engaged in sexual activities with partners that they did not know HIV status of. This is a significant factor that subject should consider in deciding whether or not to engage in sexual activities with those people. Knowing HIV status of a partner influences the nature of protection and precautions to observe when engaging into sexual activity with this particular partner.

11. Sexual acts and condom use in the previous one month (30 days)

In the previous 30 days (1 month), majority of the study subjects had been sexually active, accounting for 71.2% (n=274), 7.8% (n=30) had abstained while 21.0% (n=81) did not respond to the question. Of the 71.2% sexually active subjects 23.4% (n=90) had had one to five sexual acts, 23.9% (n=92) had engaged in six to ten sexual acts, 17.8% (n=53) had 11 to 20 sexual acts while 12.8% (n=35) reported an average of one or more sexual acts per day (fig. 7). Most 91.1% of these sexual acts were penetrative in nature (figure 8). Abstinence from sex is appreciated as one of the best method of controlling HIV transmission especially in Kenya where sexual mode accounts for over 80% of HIV transmission. This study found that HIV infected persons aged 15 to 54 years are quite sexually active with most of sexual acts being penetrative in nature. Penetrative sex carries high risk of HIV transmission due to high possibility of exchange of body fluids between partners. As a result of these findings, it follows that sexual abstinence alone may not be the best prescription for HIV infected persons.

For the sexually active subjects in the previous one month (30 days), 37.2% (n = 102) did not use condom at all while 33.2% (n = 91) used condom in some sexual acts and 28.1% (n = 77) used condom all the time they had sex, while 1.2 (n = 4) did not

indicate whether they used condom or not. Of these sexually active subjects, 26.4% (n = 46) reported condom bursting or getting lost during sexual act in some acts (figure 9). This probably could be attributed to improper technique in condom use by either the subject or the partner.

12. Knowledge of HIV status of spouse and condom use with spouse

This study found that 61.0% (n=235) spouses /regular partners of study subjects had not been tested for HIV, probably due to non disclosure of HIV status by this subjects. Of those who had been tested 32.7% (n=126) were found positive, 3.3% (n=13) were negative while 0.5% (n=2) had not disclosed their status. (Figure 11). Subjects who reported using condom all the time with their spouse/regular partner were only 16.6% (n=64) (figure 10), and majority 46.5% (n=179) had never used condom with their spouse. 16.6% (n=64) and 15.3% (n=59) reported using condom with their spouse almost all the time and occasionally respectively. This condom non-use/inconsistent use coupled with the finding that majority (61%) of these spouses had not been tested for HIV and 3.3% being negative implies that a big number of probably uninfected spouses/regular partners are exposed to high possibility of acquiring HIV from study subjects.

13. Condom use with other partners in the previous six months

Despite majority of subjects (56.4%) not knowing HIV status of their partners and a further 10.9% knowing HIV status of only some of their partners (table 4), those who reported using condom all the time they had sex with other sexual partners other than the spouse, were only 21.8% (n=84). In fact 31.2% (n=120) had never used condom with these partners, while 15.3% and 25.5% reported using condoms occasionally and

almost all the time respectively. (Figure 12) Coupled with the finding that significant incidences of condom bursting or getting lost during sex was established by this study, it then implies that exchange of genital secretions and fluids take place in significant number of sexual acts that subjects engage in with other partners. This exchange of genital fluids and secretions carry high risk of HIV transmission from the subject to their partners and vise versa.

14. Sexual orientation

In terms of sexual orientation, 96.9% (n=373) of subjects were heterosexual, 1%(n=4) were homosexual, 0.5%(n=2) were lesbians 0.5%(n=2) were bisexuals while 1% (n=4) did not disclose their sexual orientation (fig 13). It then follows that heterosexual practice being the commonly encountered sexual orientation among the study population, is then the commonest mode of HIV transmission in the study area. This concurs with the MOH, NACC 2001 report that heterosexual transmission of HIV accounts for majority (80%), of the total HIV transmission among populations in Kenya.

15. Enhancement of sexual gratification

Certain sexual practices carry a higher risk than others of HIV transmission due to exchange of body fluids and secretions between sex partners, while others have higher likelihood of tissue trauma occurring during sexual acts. These were reported in the study population as practices that enhance sexual gratification as follows; 8.6% (n=44) engaged in violent sex eg. Chaining to bed, beating etc, 6.9% (n=35) engaged in dry sex where they used methods that reduce the normal lubrication and wetness of vaginal canal, 18.6% (n=95) engaged in wet kissing while 27.8% reported to have

engaged in multiple of the these high risk practices (table 6). Frotteurism and Voyeurism are low risk practices in terms of HIV transmission; however, they are psychosexual deviation from the expected normal sexual behaviour.

16. Modes of sexual gratification

Modes of sexual practices that entail penetration either oral, vaginal or anal carry with them higher risk of HIV transmission compared to non-penetrative sex. This is by the virtue that contact and friction with consequent possible trauma of mucus membranes of this organs during penetrative sex is a reality. In this study 80.17% (n=380) practiced vaginal sex, 10.97% (n=52) oral sex while 2.32% (n=11) engaged in anal sex. Few subjects had engaged in non-penetrative sexual acts such as self-masturbation 5.06% (n=24) and mutual masturbation 1.48% (n=7), which are appreciated as low risk practices (figure 14).

17. Acceptance of own HIV positive status by research subjects

HIV/AIDS is a chronic terminal illness, and as in any other chronic physical disorder, HIV infected person passes through several psychological stages during the process of dying as postulated by Kubbler Boss E. 1969. In an attempt to prove that he/she is not infected with HIV this persons in the stage of denial may engage in high-risk practices and other unhealthful lifestyles. In this study 10.9% (n=42) of subjects did not agree with their own HIV positive diagnosis (figure 15). These were placed in the stage of denial (Kubbler, Ross E. 1969). A further 7.8% (n=30) said they did not know their diagnosis while 9.9% (n=38) said that they were not sure of their own positive diagnosis; these two categories of responses could be placed in the stage of anger. This stage is characterized by rage and anger towards oneself and other

people. Being in this state of mind, these persons have the potential to retaliate to those people who they perceive to have caused or played a part in the actiology of their present predicament. This revenge may be in form of engaging in high risk practices that may result in HIV transmission to the general population, while the subject may in the process acquire new clades of HIV into their bodies. Those who were in agreement with their own HIV positive diagnosis were 71.4% (n=274), and were placed in the stage of bargain, depression and acceptance. Subjects who have come into terms and have accepted their own HIV status are more likely to live positively and engage in healthful lifestyles and practices.

18. Perception of own body immunity to HIV

This study found that 10.9% (n=38) perceived their body immunity to HIV as being very strong, and 14.70% (n=51) felt that it was strong while majority 39.7% (n=138) perceived their immunity to HIV as moderate. (fig. 16). In total 65.3% (n=227) perceived their immunity to HIV as being moderate strong or very strong (figure 16). This is a distorted sense of invulnerability to HIV, which may cause the subject to be less motivated to make lifestyle and behaviour changes to avoid high-risk attitudes and practices.

19. Commencement of Sexual activity

In this study 5.7% (n=22) of study population had sexual debut during childhood years (age 12 years and below), 74.5% (n=287) commenced sexual activity during teenage period (13 - 19 years) and 14.0% (n=54) in early adult hood (age above 19 years), while 5.7% did not respond to this question (Table 7). The mean age at first sexual intercourse for the study population was 16.49 years. This finding concurs

with the WHO, UNICEF, UNAIDS 2002 report that sexual activity begins in teenage period for the majority of people.

This study also found that younger subjects were likely to have commenced sexual activity at an earlier age than older subjects (p=0.0001). Those subjects who commenced sexual activity earlier tended to have higher number of sexual partners (r= -0.512), were more sexually active (r= -0.597) and suffered higher episodes of STDs (r = - 0.465) despite having used condom more frequently (p=0.0001).

20. Episodes of STDs and STDs Treatment seeking behaviour.

This study established that 29.9% (n=115) of the study population had suffered from STDs (n=115) in the last six months. Of these who had suffered from STDs 62.6% (n=75) had contracted STDs two or more times (table 8). 50.4% (n=58) of the 115 subjects who had contracted STDs in the last six months did not seek treatment all time they were infected and in fact 5.2% (n=6) had never gone for treatment at all (figure 17). 17% (n=40) preferred self-medication while 7.0% (n=17) sought treatment from traditional methods that may not be effective. As pointed out earlier, higher episodes of STDs were associated with early age of sexual intercourse (p=0.0001), multiple sex partners (p=0.00054), high sexual activity (r = +0.559) and condom use (p = 0.00005). The 29.9% (n=115) prevalence rate of STDs found in this study contrasts with the Minnesota, USA study by Belonga E.A et al 1997 that found 1.3% of HIV infected people to have suffered one or more STDs after HIV diagnosis. However, the finding concurs with WHO 2000 report that sub-Saharan Africa has higher prevalence of STDs and STIs than the developed nations like USA.

21. High risk cultural practices

This study confirmed the existence of high-risk cultural practices among the study population. 13.8% (n=53) of the study subjects had undergone cultural practices that carry with them high risk of HIV transmission (figure 19). Of those who had engaged in virgin sex with cultural implications, 9 were males while 2 were females. 10 males and 8 females had engaged in wife/husband inheritance practice, and one female had engaged in ritual sex. Tattooing, Scarification and traditional circumcision have high risk of HIV transmission especially if cutting instruments are shared. This study found that eleven males and sixteen females had undergone these cultural practices of tattooing, scarification and circumcision. These findings confirm the WHO 2000 report that the issues surrounding HIV/AIDS are deeply embedded in cultural and social beliefs and practices, and that misconceptions about HIV/AIDS are widespread among populations such as it is witchcraft or curse which can be averted by having sex with a virgin.

22. Sexual age mixing

Sexual age mixing patter whereby older men engage in sex with younger girls and older women engage in sex with younger men was noted in this study. It was noted that 15.6% of adult men (aged 18 years and above) and 6% of adult females engaged in sexual activities with partners aged below 15 years (Table 9). These findings confirm the WHO 2000 report that sexual mixing patterns (sugar daddy/sugar mummy syndrome) do occur in African populations. This sex age mixing is fuelled by the dangerous myth among populations in some places that having sex with a virgin can cure HIV in men. Many men and women also presume that younger girls and boys are not yet infected with HIV. In cultures where it is vital for girls to be

virgins at marriage some girls protect their virginity by engaging in unsafe sexual practices such as unprotected anal sex. (WHO 2000).

23. Psychoactive substance use

This study found that 57.9% (n=223) of study population consumed psychoactive substances. 34.5% (n=171) consumed alcohol, 18.1% (n=90) smoked cigarette, 9.1% (n=45) chewed khat (miraa), 1.6% (n=8) smoked bhang while a further 2.2%(n=11) used injectable drugs (figure 20). This study found that psychoactive substance use was associated with condom use (p=0.000), this is because they were more sexually active (p=0.000) and tended to have multiple sex partners (p = 0.000) more than those who did not use psychoactive substances. Use of psychoactive substances has been associated with increased chances of indulgence in high-risk behaviour because the person becomes socially and morally disinhibited in his behaviors. People who smoke cigarette and drink alcohol are four times likely to have multiple sex partners, while those who have coitus under the influence of drugs or alcohol are 2.5 times more likely not to use protection (WHO, UNICEF, UNAIDS 2002) injectable drugs use is in itself a high risk practice due to likelihood of the users sharing injecting instruments, contamination and consequent exchange of blood between them. Kiragu K, 1996 found that in Kenya, the single most important predictor of sexual activity, among adolescent women was using alcohol, drugs or tobacco.

24. Groups of people engaged in sexual activities

Certain groups in the population have a higher possibility of being HIV Infected and / or transmitting HIV in the population. These include bar workers, commercial sex workers (CSW) drug users, sales men and women, casual sexual partners. This study

find that 9.36% (n=45) of study subjects had engaged in sex with bar workers, 6.80% (n=33) with CSW, 6.03% (n=29) with drug users, 17.67% (n=85) with sales men and women and 34.19% (n=150) with casual partners. 7.48% (n=36) and 21.4% (n=103) of subjects had exposed widows and other married people respectively to danger of HIV infection by engaging in sexual activities with them

25. Perceptions and feelings

Regarding the perception of the study population as to how the general public tricks HIV positive person in the areas of rejection, discrimination and love, the respondents indicated that rejection was moderate, discrimination was strong, and that they received very mild love from the general public. Generally therefore, the society has not been very receptive to the predicament of these HIV infected person.

Asked how they rated their feeling towards the general population, the respondents said that their rejection of general public was weak, anger towards general population was weak and they had moderate love for general public. Unlike the general public respondents had better outlook towards the general public. In addition, they had strong feelings of helplessness, very weak feelings of optimism about their future, mild self esteem and strong feelings of bitterness towards self. These findings generally paint a negative sense of self-esteem and self-evaluation among the study population. No strategy to reduce the spread of HIV/AIDS can be effective until it becomes unacceptable to discriminated against those living with HIV infection and until we overcome HIV/AIDS stigma.

26. Changes in Sex life since HIV Positive Diagnosis

This study found certain post HIV positive diagnosis challenges that hinder sex fulfillment of study subjects. These included that 45.14% of subjects reported loss of desire for sex since their HIV positive diagnosis, (Table 13). 20.31% (n= 39) of female subjects reported vaginal dryness, 15.03% (n=29) of men reported inability to erect (impotence) 16 % (n=74) of study subjects reported dyspareunia, and 8.64% (n=38) reported failure to attain orgasm. These findings are indicative of lack of fulfillment of HIV positive in their sex life since they were diagnosed to be HIV infected. 11.91% (n=53) of study subjects reported increase in sex drive since their HIV positive diagnosis. Of these 41 were males and 12 were females. In addition, 4 male reported excess penile erection since their HIV positive diagnosis. While these subjects may be experiencing more sex fulfillment since being diagnosed to be HIV infected, they need to be counseled on safer sex behaviour that will ensure that they do not spread HIV to the general population and that they do not acquire new clades of HIV or increase viral load in their bodies.

SUMMARY OF KEY FINDINGS

The key findings of this study include the following:-

1 Majority (71.2%) of persons living with HIV/AIDS in Nairobi were sexually active, 50.4% had multiple sex partners most (56.4%) of who they do not know their HIV status.

2 Majority of sexually active HIV infected persons in Nairobi used condoms during sexual intercourse (48.5% condom use with spouse and 62.6% condom use with other partners). Among those who used condoms, condom burst or condom getting lost during sex were common, which can be attributed to improper technique in condom use, resulting to moderate (29.9%) incidence of STDs among persons living with HIV/AIDS in Nairobi, Kenya.

3 Having a spouse (married or cohabiting) had a mitigating effect in terms of acquisition of STDs, STDs treatment seeking behaviour and acceptance of own HIV positive status among person living with HIV/AIDS in Nairobi, Kenya.

4 Majority 61.0% of spouse of persons living with HIV /AIDS in Nairobi had not been tested for HIV, 32.7% were concordant and 3.3% were discordant.

5 Younger persons living with HI/AIDS in Nairobi were more sexually active and suffered more STDs despite using condom more frequently than their older counterparts.

6 Poor (low) literacy status was associated with poor STD treatment seeking behaviour among persons living with HIV/AIDS in Nairobi, Kenya.

7 Financial (economic) independence of persons living with HIV/AIDS in Nairobi was associated with poor condom use with spouse, higher episodes of STDs and poor STD treatment seeking behaviour.

8 Persons living with HIV/AIDS in Nairobi who confessed Catholic faith had poor

condom use with other sexual partners and suffered more STDs, they however had better STD treatment seeking behaviour than Protestants counterparts.

9 Most (71.4%) persons living with HIV/AIDS in Nairobi accepted their HIV status. However 38.6% were not in agreement/acceptance of their own HIV positive diagnosis; coupled with the finding that majority (65.3%) had a distorted sense of invulnerability to HIV, it implies that the propensity of persons living with HIV/AIDS in Nairobi to engage in high-risk practices is a reality.

10 Most (96.9%) of persons living with HIV/AIDS in Nairobi had heterosexual orientation and engaged in penetrative sex (80.17% vaginal, 10. 97% oral, 2.32% anal penetration).

11 Some (13.8%) of persons living with HIV/AIDS in Nairobi engaged in high-risk cultural practice.

12 Fifteen and half percent (15.6%) of adult males (aged 18 years and above) and 6% of adult female engaged in sexual activities with partners aged below 15 years.

13 Sixty seven percent (67.3%) of persons living with HIV/AIDS in Nairobi used psychoactive substances, with alcohol and cigarette smoking being the commonly used substances.

14 There exist significant negative feelings of self-esteem and self-evaluation among persons living with HIV/AIDS in Nairobi.

15 In the post HIV positive diagnosis period, persons living with HIV/AIDS in Nairobi face challenges that hinder their sex fulfillment. These include loss of desire for sex, vaginal dryness, dyspareunia, impotence and failure to attain orgasm. Conversely, 11.9% reported increased sex drive in their post HIV diagnosis period.

16 There exist paraphilic tendencies (sexual masochism, sexual sadism, sexual frotteurism and voyeurism) among persons living with HIV/AIDS in Nairobi.

5.2 CONCLUSIONS AND RECOMMENDATIONS

5.2.1 Conclusions

In conclusion this study has revealed important findings that include the following: - One, that persons infected with HIV engage in high risk psychological, and sexual practices.

Secondly, the magnitude of such high-risk psychosocial and sexual practice is big. Despite being HIV positive sexual engagement and condom nonuse has not dramatically reduced among persons with HIV, all counseling not withstanding. Thirdly, the study also found that despite their feeling towards the general public being positive and receptive, HIV infected person feel that the general public has not reciprocated and in fact view the society as having not been very receptive to their predicament. Lastly, this study established that in the post HIV positive diagnosis period persons living with HIV/AIDS in Nairobi face challenges that hinders their sex fulfillment. These include loss of desire of sex, vaginal dryness, dyspareunia, impotence and failure to attain orgasm. Last but not the least, the study found that there exists Paraphilic tendencies including sexual masochism, sexual sadism, frotteurism and voyeurism among persons living with HIV/AIDS in Nairobi, Kenya.

5.2.2 Recommendations

The findings of this study indicate that pretest and post-test counseling is not achieving adequate behaviour change among persons living with HIV/AIDS in Nairobi. There is then an urgent need to evaluate the delivery of counseling services

to these persons with the objective of strengthening and making these services more effective in achieving better behaviour change in the post HIV positive diagnosis life. Strengthening follow up care, peer and social support could go a long way in enhancing positive living, improved attitude and behaviour change in persons living with HIV/AIDS in Nairobi, Kenya.

Following the finding that most HIV infected persons are sexually active, this study recommends that sexual abstinence alone is not the best prescription for these persons. Promotion of condom use and proper technique of condom use need to be emphasized both during counseling and follow up care of persons infected with HIV in Nairobi, Kenya.

Persons living with HIV/AIDS in Nairobi feel that the society has not been very receptive to their predicament. There is therefore a need to strengthen interpersonal interactions and relationships between HIV infected persons and the general population. Perhaps some of the ways of achieving this is by firmly integrating them in community activities such as campaigns again HIV/AIDS pandemic while appreciating their contributions society by providing them with more friendly services for instance making antiretroviral drugs (ARVs) available to them at subsidized costs.

The existence of paraphilic tendencies (sexual masochism, sexual sadism, frotteurism and voyeurism), and challenges that hinder sex fulfillment (loss of desire for sex, vaginal dryness, dyspareunia, impotence and failure to attain orgasm) among persons living with HIV/AIDS in Nairobi Kenya, calls for concerted efforts of health care providers in addressing these issues. There is therefore a need to strengthen post HIV positive diagnosis follow up care provided by the psychiatric team comprising the

psychiatrist, psychiatric nurse, psychologist and psychiatric social worker.

The researcher recommends further studies to be conducted to establish the reasons why pre test and post- test counseling services are not achieving adequate behaviour change among persons diagnosed with HIV infection in Nairobi, Kenya

REFERENCES

1. AIDS CAP/FHI., AIDS in Kenya, Social Economic Impact and Policy implications, 1996: pp 25- 48
2. Ainsworth, M. and Teokul, W., Breaking the silence. Setting realistic priorities for AIDS control in less-developed countries. *Lancet* 356(9223), 2000: pp55-60.
3. Bedimo, A.L.,and Foster, F., History of sexual abuse among HIV-infected women; *International Journal of STD & AIDS*; HIV outpatient clinic, Louisiana State University medical Center; New Orleans, LA, USA, 1997: pp 907- 1164
4. Cameron, D., D'costa, L., Cheang, M., Piot, P., Simonsen, J, Ronald,A., Gakinya, M., Ndinya-Achola, J., Brunham,R., and Plummer,F., Female to male transmission of human immunodeficiency virus type 1: Risk factors for seroconversion in men. Lancet 2(8660), 1989:403-407.
5. Clark, R.A; Russel, E. M, Determination of factors associated with condom use among women infected with human immunodeficiency virus, *International Journal of STD & AIDS*, Affiliated with the HIV Outpatient Program, Medical center of Louisiana, New Orleans, USA, 1997: pp 285- 361
6. Demographic and Health Surveys, Health behaviour in school - aged children, surveys.2001: pp 38 - 94
7. Family Health International Aids Control Prevention Project (FHI-AIDSCAP), How to create an effective peer education project: Guidelines for AIDS prevention projects. Arlington, Virginia, FHI, 1996: pp 33- 79.
8. FHI, *Qualitative Research Network Journal Volume 22 No. 2,2002: pp 1075-1113*
9. Foster, F. and Williamson, J., A review of current literature on the impact of

HIV/AIDS on children in sub-Saharan Africa. *AIDS 14*(Suppl3): S275-S284.2000: Pp 1460- 1487

10. Cranson, S and Caron, A.K , Condom and nonoxynol-9 use and incidence of HIV infection in serodiscordant couples in Zambia, *Internal Journal of STD & AIDS*, University Teaching Hospital, Lusaka, Zambia, 1998: pp 693- 728

11. Ukweli, *The Need to Know Newsletter* Vol. NO. 30, Nairobi, Kenya.2000: Pp 33-85

12. Joint United Nations Programme On HIV/AIDS (UNAIDS), 2000; AIDS and men who have sex with men. Geneva, UNAIDS, 8p (available: http://www.unaids.org/publications/documents/specifi/men/mentue2000.pdf.

13. Joint United Nations Programme on HIV/AIDS (UNAIDS), AIDS and young people, Geneva, UNAIDS, 2000: pp 12- 108p.

14. Joint United Nations Programme on HIV/AIDS (UNAIDS), Declaration of Commitment on HIV/AIDS, 2 August 2001. Proceedings of the United Nations Special Session on HIV/AIDS: Global Crisis-Global Action, New York, Jun. 25-27..Available:http://www.unaids.org/whatsnew/others/un_special/declaration0208 01_en.htm.

15. Kaimenyi J. T and Ndungu F, L., knowledge practices and attitudes towards HIV positive and AIDS patients, *The East African Medical Journal*, Vol II No. 5, 1994: pp. 304.

16. Karueru, J.K., Van Hulzen-Sieneke, C., Obwaka, E., and Odollo, D., Adolescent reproductive health needs in Kenya: a communication response. Evaluation of the Kenya youth initiatives project. Baltimore, Johns Hopkins School of Public Health, and Population Communication Services, 1998: pp 85- 230.

17 Kubler -Ross E., On/Death and Dying, New York, Macmillan.1969 pp 15- 103

18. Lafferty, W.E, King, R., Sexually transmitted diseases in men who have sex with men. Acquisition of gonorrhoea and nongonococcal urethritis by fellatio and implications for STD/HIV prevention, Sexually Transmitted Diseases; Department of Health Services, University of Washington, Seattle, 1997:pp 40-407

19. MOH and NACC, National Condom policy and strategy, Nairobi, Kenya. 2001:PP 3- 75

20. MOH, NACC, National Condom Policy Strategy, Government printer, Nairobi 2001.

21. Muga R., et al; Epidemiology of Mycobacterium avium infection in Northern Italy, *International Journal of STD & AIDS*, Service of Internal Medicine, Infectious Diseases Unit, Hospital Universitario Germans, Badalona, Barcelona, Spain, 1997:pp 41- 99.

22. Mukadi, Y.D. et al, Tuberculosis case fatality rates in high HIV prevalence populations in sub-Saharan Africa. AIDS 15(2): 2001:pp 143- 152

23. Murphy, D., Mann, T., Number of pregnancies, outcome expectancies and social norms among HIV infected young women, Health Psychology.1998: pp 15- 207

24. Nicolas, S., The lived experiences of Winnipeg women with HIV/AIDS' AIDS patient Care; Centre Medico Social DeSalaberry District Health Centre, Manitoba, Canada., 1997: pp 19- 79.

25. Okumu, J. O., Chege, P. Female adolescent health and sexuality in Kenyan Secondary School, AMREF, Nairobi, Kenya,.1994: pp 8- 59.

26. Perriens, J., Key Elements in HIV/AIDS Care and Support: A working Document., 2000; Geneva: WHO and UNAIDS. Available online at www.who.int.HIV_AIDS/HIV_AIDS_CARE/Key-elements_HIV-

AIDS_Care.html.

27. Poindexter, C.C, In the aftermath: serial crisis intervention for people with *HIV,* Health and Social work, Jane Adams School of Social Work, University of Illinois, Chicago, USA, 1997: pp 9- 89

28. Prins, M., and Russel E.M., AIDS *targeted Information journal,* CAB International Brooklyn, New York, USA; Vol 11, No. 5, 1997: pp 1204- 1245

29. Republic of Kenya, Central Bureau of Statistics National Development Plan 1997-2001, Government Printer, Nairobi.1997: pp 1-96.

30. Sieving, R., and Lesar, S., Cognitive and behavioural predictors of sexually transmitted disease risk behaviour among sexually active adolescents; Archives of Paediatrics & Adolescent medicine, Division of General Paediatrics and Adolescent Health, Department of Paediatrics, University of Minnesota, Minneapolis, USA, 1997: pp 74- 158.

31. Singh, N., Nicolas, S., Psychological stress and depression in older patients with intravenous drug use and human immunodeficiency virus infection: implications for intervention; *International Journal of STD & AIDS;* VA Medical Center, Infectious Disease Section, Pittsburgh, USA, 1997: pp 35-57.

32. Troop, M., Smith, R., Reasons given by patients for 'non-progression' in HIV infection, AIDS Care, HIV Epidemiology Unit, Chelsea & Westminster Hospital, London, UK,1997: pp 26- 70.

33. UNAIDS, AIDS Epidemic Update, UNAIDS and WHO, Geneva, December 2000: Pp 19- 68

34. UNICEF and UNAIDS, Children Orphaned by AIDS: Front-line Responses from Eastern and Southern Africa. New York: UNICEF and UNAIDS. 1999:pp1 -107

35. Vincke, J; et al, Younger versus older gay men: risks, pleasures and dangers of

oral sex; AIDS care; Department of Sociology, University of Ghent, Claremont, USA; 1997: pp 19- 40

36. WHO. HIV/AIDS, 2000: fear, stigma, and isolation. Fact Sheets on HIV/AIDS for Nurses and Midwives 6. Available online at www.who.int/ HIV_AIDS/Nursesmidwivesfs/ fact-sheet-6/index.html.

37. WHO, HIV AIDS IN AFRICA, Geneva, Switzerland, 2000.

38. WHO; UNICEF and UNAIDS;AIDS Epidemic update, Geneva, Switzerland, 2002 pp 24- 97

39. WHO, UNICEF, UNAIDS, Young people and HIV/AIDS, opportunity in crisis, 2002:pp 1-86

APPENDICES

APPENDIX I

INTERVIEW EXPLANATION FORM

Greetings

My Name is (Name of Interviewer) on behalf of James Mwaura, Second year student studying for Masters of Science in Clinical Psychology, Department of Psychiatry of the University of Nairobi. I am here to collect information on psychosocial and Sexual Practices Attitudes and challenges of people living with HIV/AIDS Nairobi.

Your participation involves answering questions that I will be asking you after you give your consent to participate in this study. I will be recording your responses and you are guaranteed in advance that the information you give will be treated in total confidence

Your name will not be written on the questionnaire. Feel free to answer or not to answer all questions. Information that you will give will go along way in enabling the research to make recommendations that may affect future policies of both government and non-governmental organizations in delivery of services to persons living with HIV/AIDS and the community at large. Feel free during the course of this study to revoke your consent and withdraw. Your participation or non-participation has no penalty or victimization whatsoever.

APPENDIX II

INTERVIEW CONSENT FORM

PSYCHOSOCIAL AND SEXUAL PRACTICES, ATTITUDES AND CHALLENGES OF PERSONS LIVING WITH HIV/AIDS IN NAIROBI, KENYA.

I do hereby volunteer to participate in the research study entitled PSYCHOSOCIAL AND SEXUAL PRACTICES, ATTITUDES AND CHALLENGES OF PEOPLE LIVING WITH HIV/AIDS IN NAIROBI, KENYA to be carried out by James Mwaura of the University of Nairobi. The implications of my participation, the nature, duration, method and purpose of the research study have been explained to me fully by the study interviewer.

I have been given an opportunity to ask questions concerning this study and any such questions have been answered to my full satisfaction. I have been assured that confidentiality shall be maintained of any information I will give in this study. I also understand that I may at anytime during the course of this study revoke my consent and withdraw from the study without any penalty, benefit or victimization.

Respondent's signature _____

Date _____

Respondent's witness _____

Date _____

Interviewer's signature: _____

Date _____

APPENDIX III

INTERVIEW CONSENT FORM BY PARENT/GUARDIAN

PSYCHOSOCIAL AND SEXUAL PRACTICES, ATTITUDES AND CHALLENGES OF PERSONS LIVING WITH HIV/AIDS IN NAIROBI, KENYA.

I hereby consent to the inclusion of my son/daughter/ward in the research study entitled PSYCHOSOCIAL AND SEXUAL PRACTICES, ATTITUDES AND CHALLENGES OF PEOPLE LIVING WITH HIV/AIDS IN NAIROBI, KENYA to be carried out by James Mwaura of the University of Nairobi. The implications of my son/daughter/ward participation, the nature, duration, method and purpose of the research study have been explained to my son/daughter/ward and me fully by the study interviewer.

We have been given an opportunity to ask questions concerning this study and any such questions have been answered to our full satisfaction. We have been assured that confidentiality shall be maintained of any information my son/daughter/ward will give in this study. We also understand that my son/daughter/ward may at anytime during the course of this study withdraw from the study without any penalty, benefit or victimization.

Respondent's signature _____

Date _____

Parent/Guardian signature _____

Date _____

Interviewer's signature: _____

Date _____

APPENDIX IV

QUESTIONNAIRE

PSYCHOSOCIAL AND SEXUAL PRACTICES, ATTITUDES, AND CHALLENGES OF PEOPLE LIVING WITH HIV/ AIDS IN NAIROBI, KENYA.

Participants are guaranteed in advance that information received during this interview will be treated in TOTAL CONFIDENCE, and are requested to participate with SINCERITY when giving this very important information.

Thank you and welcome.

SERIAL NO. _____

PEER SUPPORT GROUP/HEALTH FACILITY CODE _____

DATE _____

DEMOGRAPHIC DATA

1.Age _____ years

2.Sex. Male [1]

Female [2]

3.Marital status

Single [1] Separated [4]

Married [2] Divorced. [5]

Co-habiting [3] Widowed. [6]

4.Have you attended any formal education

Yes [1].....go to question 5

No [2].....go to question 6

5. If yes up to what level

Primary [1] Middle level college [3]

Secondary [2] University [4]

6. What is your main source of income?

Own earnings [1]

Spouse [2]

Others specify.....

7. What is your religion.....

8. What is your ethnic background.....

9. What is your usual occupation.....

PSYCHOSOCIAL SEXUAL PRACTICES, ATTITUDES, AND CHALLENGES.

10. How many sexual partners (other than your spouse/regular partner) have you had in the last six months.....

11. How many of these sexual partners (from Q 10) did you know their HIV status....

12. How many sexual acts have you had in the last one month (30 days).....

13. How many of these sexual acts (from Q 12) were penetrative in nature.....

14. In how many of these acts (from Q 12) was condom used.....

15. In how many of these acts (from Q 14) did the condom burst or get lost during the act.....

16. How regularly have you used condom during sexual intercourse with your spouse/regular sexual partner in the last six months

Never used [1] almost all the time [3]

Occasionally [2] All the time [4]

17. How regularly have you used condom during sexual intercourse with your other sexual partners in the last six months

Never used [1] almost all the time [3]

Occasionally [2] All the time [4]

18. Has your spouse /regular sex partner been tested for HIV at VCT or recognized health facility?

Yes [1] go to question 19

No [2] go to question 20

19. What were the results?

Positive [1] do not know [3]

Negative [2] Not Sure [4]

20. Indicate all groups of people that you have had sex with in the last six months.

Men only [1]

Women only [2]

Both men and women [3]

21. Indicate all that have enhanced your pleasure during sexual act(s) in the last six months.

Dry sex [1]

Watching people having sex [2]

Violent sex e.g. chaining to bed, beating etc [3]

Rubbing against another person [4]

Others specify .....

22 Indicate all modes of sex that you have used during sexual act(s) in the last six months.

Oral sex [1] Self masturbation [4]

Vaginal sex [2] Mutual masturbation [5]

Anal sex [3] others specify.....

23. Do you agree with the positive results of your HIV test?

Yes [1] Do not know [3]

No [2] Not sure [4]

24. How do you perceive your body immunity to HIV?

Very strong [1] Mild [4]

Strong [2] Weak [5]

Moderate [3] Very weak [6]

25. What was your age at first sexual intercourse.....

26. Have you suffered from any sexually transmitted disease in the last six months

Yes [1].....go to question 27

No [2].....go to question 29

27. How many times have you suffered from sexually transmitted disease in the last six months .....

28. How frequently have you sought for treatment for sexually transmitted diseases in the last 6 months?

Never gone for treatment [1] most of time [3]

Occasionally [2] all the time [4]

From where have you obtained treatment for sexually transmitted disease; indicate that apply

Private clinic	[1]	chemist	[4]
Government health facility	[2]	self medication	[5]
traditional herbalist	[3]	Others	[6]

Others (specify).....

30. Indicate all the cultural practices that you have undergone in the last six months

Tattooing	[1]	Tradition Circumcision	[4]
Scarification	[2]	Inherited wife/husband	[5]
Ritual sexual cleansing	[3]	Had sex with a virgin	[6]

Others (specify).....

31. Indicate all age sets of people that you have had sex with in the last six months.

Below 15 years	[1]	39 -46 years	[5]
15-22 years	[2]	47 -54 years	[6]
23-30 years	[3]	above 54 years.	[7]
31 - 38 years	[4]		

32. Indicate all substances that you have used in the last six months.

Alcohol	[1]	Cigarette	[4]
Injectable drugs	[2]	Miraa	[5]
Bhang	[3]	Others (specify).....	

33. Indicate all groups of people that you have had sex with in the last six months

Married people (Other than your spouse)	[1]	Salesmen/saleswomen	[5]
Bar workers	[2]	casual partners	[6]
Commercial sex workers	[3]	widowed people	[7]
Drug users	[4]	Others (specify)	

34. How does the general public treat people living with HIV/AIDS?

Use the following scale to rate the treatment of HIV positive people by the general public.

[1]very strong [2]strong [3]moderate [4] mild [5]weak [6]very weak

a. Rejection _____

b. Discrimination _____

c. Love _____

35. What are your feelings towards the general public; **use the following scale to rate your feelings towards the general public**

[1]Very strong [2] strong [3] moderate [4] mild [5] weak [6] very weak

a. Love _____

b. Anger _____

c. Rejection _____

36. Since your HIV positive diagnosis what is your feelings towards yourself. Use the following scale to rate your feelings towards yourself.

[1]very strong [2] strong [3] moderate [4] mild [5]weak [6] very weak

i) Love _____

ii) Bitterness _____

iii) Self esteem _____

iv) Helpless _____

v) Optimism about future _____

37. Since your HIV positive diagnosis how has your life changed; indicate all that apply to you:

Loss of desire to have sex	[1]	Inability to get and maintain erection	[5]
Dryness of vaginal canal	[2]	Painful sexual intercourse	[6]
Increased sex drive	[3]	Failure to get orgasm/ejaculation	[7]
Excessive erection of penis	[4]	others specify.....	

38. Any other comments

_____

_____

_____

_____

_____

Thank you

END

KENYATTA NATIONAL HOSPITAL
Hospital Rd. along, Ngong Rd
P O Box 20723, Nairobi

Tel 726300-9
Fax 725272
Telegrams "MEDSUP", Nairobi
Email KNHplan@Ken.Healthnet.org

Ref: KNH-ERC/01/2145 **Date: 5 February 2004**

Mr. James Mwaura
Dept of Psychiatry
Faculty of Medicine
University of Nairobi

Dear Mr Mwaura.

RESEARCH PROPOSAL "PSYCHOSOCIAL AND SEXUAL PRACTICES, ATTITUDES AND CHALLENGES OF PERSONS LIVING WITH HIV/AIDS IN NAIROBI, KENYA" (P92/8/2003)

This is to inform you that the Kenyatta National Hospital Ethics and Research Committee has reviewed and **approved** the revised version of your above cited research proposal for the period 5 February 2004 – 4 February 2005. You will be required to request for a renewal of the approval if you intend to continue with the study beyond the deadline given

On behalf of the Committee, I wish you fruitful research and look forward to receiving a summary of the research findings upon completion of the study.

This information will form part of database that will be consulted in future when processing related research study so as to minimize chances of study duplication.

Yours sincerely,

PROF A N GUANTAI
SECRETARY, KNH-ERC

Cc Prof. K M Bhatt, Chairperson, KNH-ERC
The Deputy Director (C/S), KNH
The Dean, Faculty of Medicine, UON
The Chairman, Dept. of Psychiatry, UON
CMRO
Supervisors: Dr. John Mburu, Dept. of Psychiatry, UON
Dr. Caleb Othieno, Dept. of Psychiatry, UON

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

Telegrams: "EDUCATION", Nairobi
Telephone: Nairobi 334411
In replying please quote
No. MOEST 13/001/34C 13/2
and date

JOGOO HOUSE "B"
HARAMBEE AVENUE
P.O. Box 30040
NAIROBI

23rd January....., 20 04.

JAMES MWAURA
University of Nairobi
P.O. BOX 30197
NAIROBI

Dear Sir

RE: RESEARCH AUTHORISATION

Please refer to your application for authority to conduct research on 'Psychosocial and Sexual Practices, Attitudes and Challenges of persons living with HIV/AIDS in Nairobi Kenya, I am pleased to inform you that you have been authorised to conduct research in Nairobi for a period ending 30th June, 2004.

You are advised to report to the Provincial Commissioenr, the Provincial Director of Education and the Provincial Medical Officer of Health, Nairobi before embarking on your research project.

You are further expected to avail two copies of your research report to this Office upon completion of your research project.

It is noted that the research is a a requiement in part fulfilment for the award of Msc Degree in Clinical Psychology by the University of Nairobi.

Yours faithfully

A. G. KAARIA
FOR: PERMANENT SECRETARY/EDUCATION

CC
The Provincial Commissioenr
Nairobi

The Provincial Direcotr of Education
Nairobi

The Provincial Medical Officer of Health
Nairobi