

**INFLUENCE OF SOCIO-CULTURAL AND ECONOMIC RISK FACTORS IN THE
SPREAD OF HIV/AIDS AND OTHER SEXUALLY TRANSMITTED DISEASES:
A CASE STUDY OF KISUMU MUNICIPALITY, NYANZA PROVINCE.**

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT FOR THE DEGREE OF MASTER OF ARTS IN
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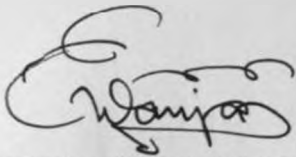
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2000



DECLARATION

This thesis is my original work and to the best of my knowledge has not been presented for the same award in any other university.



4th Sept. 2000

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This thesis has been submitted for examination with our approval as the University Supervisors.



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DEDICATION

This project is dedicated to my parents - people of wide vision in Academic lines and to the entire NJUE family. Their prayers, continued advice and encouragement has been the cornerstone of my success to this level of academic achievement.

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I wish to express sincere appreciation to the following individuals and organizations, for the part each played in bringing this work to completion.

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NJUE Carolyne Wanja

ABSTRACT

This study was carried out within Kisumu Municipality. It looks at the risk factors predisposing society and especially women to STDs/HIV/AIDS. Women, at the moment, are most vulnerable to HIV/AIDS; it has been found that women are more infected than men and at earlier ages and in Kenya. And majority of the rural inhabitants are women and children, who represent over half of the population and more than $\frac{3}{4}$ of the rural dwellers (CBS, 1989). The study's main objective was to document the influence of socio-cultural and economic risk factors in the spread of STD's/HIV within Kisumu Municipality.

In order to understand these factors, the following were set: establish the degree to which these risk factors were facilitating the transmission of STD's including HIV, explore the dynamics of HIV transmission and prevention such as the acceptability and impediment to the use of condoms. In order to assist in the investigations of the above objectives, a number of hypotheses were formulated.

These revolved around the hypothesis that cultural and economic issues are related to health and concurrently, that this affects community's health status, especially with the AIDS scourge as an intervening factor. The study also assumed that limited socio-economic options, the inability to negotiate risk increases the likelihood of exposure to the risk of infection. Failure to acknowledge risk deters the perceptions of preventive and protective strategies.

The methods used in data organization and analysis included both the quantitative and qualitative techniques. Quantitative data from a study carried out in Kisumu municipality (1997) was used. Cross tabulations and logistic regression were the main tools that were used

to analyze the data. Qualitative information was analyzed theme by theme in relation to the study objectives.

At an individual level, the sexual behavior was found to be one of the major risk factors. Findings indicate that the youth begin sexual activities at an early age, making pre-marital sex a major risk factor for HIV especially among young girls. Coercive sex, including rape, is relatively common. HIV prevalence in women is high within the first years of sexual activity, whereas in men, it rises more slowly. A higher number of lifetime sex partners was found to be a risk factor for HIV among both sexes in the main multivariate analysis.

Change of behavior was reportedly a difficult practice due to traditions and social attitudes, which militate against AIDS prevention. The sexually active youths on average had experienced intercourse by age 14 or younger and continue to have a series of sexual relations. There are also high levels of extra-marital and concurrent multiple sex partnerships among the respondents. Condom image was found to be poor for reasons that are inherent to the product or based on misconceptions increasing the chances of infection among this sexually active group. HIV levels increase markedly among young women and older men.

The study indicates that single or unmarried people have a higher risk of infection as compared to the married ones, however, marriage does not seem to protect an individual from infection. Possibly attributed to the large age-gap between men and women in marital or non-marital partnerships. Polygamy and wife inheritance (sexual cleansing practices) continues to play an important role in the people's lives and in the spread of HIV. Women respondents complained of the inability to take measures to protect themselves from possible infection due to culture norms, men's double standards (dominance) and economic constraints.

Unemployment status and contacts with CSW as seen from the HIV status of men who had contact with CSW, which was relatively high, were found to be risk factors for HIV. The study, therefore, recommends that concerted widespread IEC activities are promoted using appropriate channels and that widespread distribution of condoms be prioritized as an integral and vital part of enhancement of sexual health care for prevention of STD's and HIV infection.

The study also recommends further research in risk factors especially those affecting younger age groups, who are more, exposed and who will give a clearer picture of recent new infections and any behavior change characteristics. In conclusion, the study did achieve most of its objectives and we can conclude that the socio-cultural and economic factors prevailing in the study area have a great impact on the sexual behavior, the health decisions and exposes individuals to the risk of HIV/AIDS infection. And unless the economic situation is improved and harmful cultural practices and irresponsible and unprotected sex checked, the fight against AIDS will not be won.

Solutions, therefore, demand change in attitudes and behavior (emphasis the message of condom, fidelity and abstinence,' both at the personal and community level.

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CHAPTER ONE

GENERAL INTRODUCTION

1.0 Background to the study problem

Heterosexual activity, blood transfusions and mother to child transmission mainly characterize AIDS in Africa, which are hastened further by ignorance. Heterosexual relations are also the centre of the socio-cultural ideologies of marriage and procreation. Laga *et al.* (1994), Klovdahl (1985) and Hunt (1989), argue that much of the research that has been conducted on the pathways of transmission of other STD's in Africa apply also to HIV, since they follow the same pathways of transmission and are spread by the same sexual behaviors. According to Prual *et al* (1991), HIV has been classified as one of the twenty or more STD's currently known. Oyekanmi (1989), says that STD's make it easier for the virus to be transmitted during sexual intercourse with an infected person and these myriad diseases may have the added toll of reducing the general resistance of people to HIV/AIDS. The Global Programme on AIDS (1994), argues that over 90% of adult HIV infections in sub-Saharan Africa are attributable to heterosexual transmission.

The first AIDS case was diagnosed in Kenya in 1984 and at the end of July 1998, there were over 80,000 reported cases. It is estimated that the actual number of cases could be 3-5 times higher than the reported cases. Seven year trends of HIV prevalence rates show that the epidemic rose from 3.1% in 1990; 4.5% in 1991, 5.3% in 1992, 5.7% in 1993, 7% in 1995 to 9.0% at the end of 1997 (National AIDS Control Programme, 1998). The increase is highest in rural areas. HIV prevalence rate among blood donors has also increased from an average of 5.3% in 1990 to 6.2% in 1997. And the peak ages for AIDS cases is 25-34 for both men and women, indicating that infection occurs during adolescence and early adulthood (*ibid.*).

According to Nzyuko (1991), high prevalence of HIV/AIDS is in the region that borders Uganda, L. Victoria and along the major Trans-African transportation routes of Kitale, Busia and Kisumu and at the Coast province which includes Mombasa; the starting point of Trans-Africa highway. Obudho *et al* (1992), adds that the journey destined for Uganda, Tanzania, Rwanda, Burundi, eastern Zaire and southern Sudan, through the Trans-Africa highway, takes several weeks and through several countries, and the truck drivers stops at major towns, spreading the virus as they go. In 1995, NASCOP indicated that the epidemic was more advanced in Nyanza, Western, parts of Rift Valley and Central provinces. Nyanza had then the highest number of HIV/AIDS cases (12,284), followed by Coast province with 10,296 cases; Eastern province with 9,723 cases, Rift Valley province with 9,302 cases; Nairobi province, with 8,959 cases; Western province with 4,121 cases and lastly, North Eastern province with 282 cases. In 1997, Kisumu, Mombasa, South Nyanza and Nakuru were now cited as areas with highest prevalence rates in the country with Kisumu town having a prevalence rate of 34.9% (NACP, 1997).

The first AIDS case in Kisumu District was diagnosed in June 1985, at the Old Nyanza Hospital. In 1989, HIV screening of blood donors at several secondary schools in Kisumu district indicated 17% were HIV sero-positive and screening of 4,481 in-patients at the Nyanza Provincial Hospital showed 1,088 or 24.3% seropositivity for HIV. Of these 47% were males and 53% females. In the same year, 27.3% of the pregnant women attending antenatal clinic in Kisumu had tested HIV positive. The National AIDS/STD's Control Programme (1996), explains that, infection rates may be higher in Nyanza province because the epidemic started there earlier than in other parts of the country, a higher density of population, more movement of people due to trading and migration routes and culture.

The infection is spreading rapidly in most other areas of Kenya, the problem now transcends the boundary of being a problem of the health sector and now impacts negatively

on the economy, social life and cultural aspects of the country. According to the Sessional Paper No.4 of 1997, the increased spread of HIV has caused great concern to the government, NGO's, and other bodies, that it has become very necessary to emphasize behavior change and safer sex practices. This has led to the recognition of the AIDS epidemic as a national dilemma, hence its inclusion in the 8th National Development Plan of 1996 to 2000 and in the 6th edition of the District Development Plans of 1996.

1.1 Background information on study area.

Kisumu is situated on the L. Victoria basin and it covers an area of 2,660 sq. km, of which 567 sq. km is under water. It lies in a depression that is part of a large lowland and is embraced with various features on some of its sides. The North Western part, embraced by the Kisian-Nyando hills does not favor residential areas and therefore, is set aside for industrial purposes (Kisumu Town Planning Office, 1992). The remaining region on the eastern side is suitable for residential location.

The study was conducted in Kisumu municipality: situated within Winam Division, and covers an area of 417 sq. km which increased from a mere 20 sq. km to incorporate the peri-urban settlements of Manyatta, Kanyakwar, Kibuye, Obunga, and Nyawita. The municipality contains the old town (Central Business District), peri-urban zones containing slums, and the rural hinterland. It is further divided into locations namely: Town Centre, East Kisumu, Central Kisumu, S.W Kisumu, West Kanjulu, Central Kanjulu, Kondele, West Kolwa and East Kolwa. The CBD, the Industrial area, Kisumu Pier, railway station, District and Provincial offices, markets and residential areas are located at walking distances i.e. between 1-3 km.

Kisumu town is situated within Kisumu Municipality, and is split by two constituencies namely, Kisumu East and Kisumu West. It is the largest urban centre in Western Kenya,

and serves as the nerve centre of various commercial activities. In addition, it is the headquarters of Nyanza Province; and all the Provincial offices are located there. Its commercial, industrial and administrative position makes it attractive and has encouraged rural-urban, urban-urban migration as one of its major process of urbanization. Most of these people migrating to the town are young men and women in search of employment and others hoping to enjoy the existing social and other economic facilities.

The most common ethnic group in Kisumu town are the Luo, who are the indigenous group, followed by the Luhya, the Kisii and the Kikuyu, as indicated in the 1989 Census. The population of the Municipality stood at 255,371 in 1989, making it the third largest town in Kenya (Census, 1989). Figures provided by municipality officials are higher: 130,000 for the old town, 150,000 for the peri-urban and 220,000 for the rural zone (Economic Survey, Municipality of Kisumu, 1992). The creation of employment to sustain the fast growing population of Kisumu Municipality is a difficult task given the current economic situation. The District's annual population growth rate is estimated at 3.35% which has swelled the labor force significantly, and the town attracts job seekers from Nyanza, western province, Rift Valley and from the neighboring towns and countries. This increase in population has led to additional pressure on the existing facilities.

The district per capita income is below the national average and adult education has not received the priority attention it deserves. The Kenya Urban Labor Force survey (1986), revealed that Kisumu has the highest number of urban residents in the low income group as compared to other urban centers. The survey showed that Thika and Eldoret had over 85%, Mombasa had 63% and Kisumu had 94% in the lower income groups. According to the Welfare Monitoring survey (1994), the mean monthly income for Kisumu was Ksh. 4,392 from wages, Ksh. 6,597.8 from non-agricultural income, and Ksh. 1,029.3 from agricultural income.

Low levels of formal education and training, together with high rates of unemployment, limit the employment opportunities of the residents; whether they leave primary or secondary school, especially as land is not enough to make a living from. The young population is increasing faster than the town is growing: the youthful population comprised 57.3% of the total population in 1989, while the dependency ratio stood at 100:107. The Economic survey (1992) shows there is an acute housing shortage, high unemployment rates and slums have mushroomed in various parts of the municipality, such as parts of Nyalenda, Obunga and Manyatta. Although the district has 49 static health service facilities (2 missionary, 2 government and over 20 outreach centers based from static centers), majority of the people, especially those in slums cannot also afford adequate medical care.

Kisumu town is also a major stop along the trucking line. According to Brokensha (1988), truck drivers have been known to spread the HIV virus into Kenya, especially from Uganda and Tanzania. And by virtue of its position; being along these two borders, and due to cross-border migrations, Kisumu has been highly affected by the epidemic. The town has so much to offer in terms of business and relaxation, and as such, has attracted a great deal of tourists, migrants, businessmen, visitors and consequently, sex workers. Social interaction coupled with poverty, unemployment and dense population is a fertile ground for promoting risk behavior such as commercial sex work.

The peri-urban and rural areas for their part are deeply entrenched in their cultural beliefs and practices; some of which are harmful and tend to spread HIV unnoticed. Traditional customs are still observed and enforced in this community. Male dominance pervades the structural framework, for example, men are the acknowledged heads of households, men own the land and women only get access to land through marriage and polygamy and extended families are typical in the rural areas. Within the municipality,

nuclear families and many single parents (women) are common. According to the Central Bureau of Statistics (1986), a third of the households in Kisumu town are female-headed.

Poverty is an obstacle to development in the area and continues to influence the establishment of informal settlements. It has led to a decline in the family income, and to the lowered quantity and quality of food, which could also be blamed in a way to the poor climatic conditions prevailing in the area. In the lakeshore areas there is a sharp decline of rainfall, usually unpredictable and variable. The Lake has been infested by the water hyacinth thus affecting the fishing industry. Water shortage is common in the municipality, while in the peri-urban and rural areas, the situation is worse. The area is compounded by various problems, some of them directly related and others, indirectly, greatly affecting people's social welfare.

These problems include inadequate food security, chronic safe water shortages, high levels of malnutrition (ranging between 30-45%), endemic poverty, poor environmental sanitation, increased rate of communicable diseases, poor access to health facilities, high infant and child mortality rate estimated at 123 and 199 per 1,000 live-births respectively and these figures are said to be higher in slum areas (Ministry of Planning & National Development, 1995). Contraceptive prevalence rate is less than 10%, low immunization coverage and high prevalence of illiteracy (which stood at 30%, among women) (ibid.).

All these factors have aggravated the health problems in the area, and increased malnutrition levels, poor maternal health care, diarrhoeal diseases, typhoid, T.B, cholera, malaria and HIV/AIDS. All are of grave concern but the most worrying is the high rate of HIV prevalence (and its related illnesses), which is one of the highest rates of HIV prevalence in Kenya at 34.9% (NACP, 1997). It is upon this background that the study attempts to investigate the risk factors associated with STD's/HIV/AIDS in Kisumu Municipality.

1.2 Problem Statement.

For some years, Kisumu has had an overwhelming increase in the number of HIV/AIDS cases, despite the efforts put forth by both the government and NGO's to inform people about unsafe sex practices through widespread IEC campaigns. Official figures show high levels of HIV infection among two important groups within the population; young people and women. And according to NASCOP (1997), the most affected ages are between 25-34 years.

Unprotected sex has been cited as the major mode of transmission, and has exposed the community to high rates of pregnancies, STD's and/or HIV infection. STD patients -and in particular, recurrent attendees- have been found to be at an increased risk of HIV infection (Nyanza General Hospital, 1997). It has been reported that high levels of untreated STD's compound female vulnerability to the infection and especially ulcerative diseases make STD's an important factor in the context of AIDS. This study argues that it is not enough to get the epidemiological results (i.e. the measurable risks), on the contrary, health studies must take into account the perceived risks (the non-measurable risks) by conducting similar studies to complement sentinel surveillance data and to find out the root cause of the high figures. This thesis therefore addresses the problem of STD and how it is influenced by the combined role of the socio-cultural and economic environment of the people.

Studies indicate that health and sexuality are tightly woven into patterns of socio-culture while modernization has brought about social and economic changes, thus weakening traditional controls on sexual behavior (Ocholla-Ayayo, 1991). But today, AIDS link sex and death in ways which complicates traditionally meaningful ways of life. In this regard, the study examines the sexual relationships between females and males before, during and in marriage, customs such as wife-inheritance, marital status and power relations between men and women. For instance, earlier studies indicate that negotiation of safer sex

is not an exercise undertaken by equals. In relation to this, use of condoms, education, commercial sex contact and occupation are discussed.

Focus is mainly directed at the perceptions of women in relation to the socio-cultural, physical and economic environments, in an attempt to understand the challenges faced by women in coping with the epidemic. This is because, the manner, in which health is perceived, defined, experienced and practiced by society is largely a gender question. Gender shapes the opportunities one is offered in life, the roles one may play and the kinds of relationships one may have; and these social norms strongly influence the spread of HIV. NASCOP shows that both women and men become infected in similar numbers but women tend to become infected at a younger age than men, reflecting the biological and social vulnerability of young women.

Secondly is the cycle of dependency in which women are forced into activities that place them at risk of infection. For instance, how have these situations, especially in light of the lack of barriers or other options that women can use and control, predisposed them to the risk of HIV infection? Is it because these women cannot control the circumstances that give rise to the risk or in which prevention must occur? Are women allowed to make or contribute to decisions related to sex? Are the people ready to undertake the changes in personal daily life that promote health, such as abstaining from sex, 'zero-grazing' or using condoms? According to NASCOP, condom use is low, what are the impediments to its use and acceptability? Such issues are addressed in this study.

The study, therefore, finds it necessary to study the community's preventive strategies in reducing transmission risks and whether the cultural environment is such that people are in a position to implement the preventive and protective strategies. Concentrating the study on these important issues gives a clearer picture of the impact of risk factors on the HIV/AIDS prevalence in the Municipality and possibly in Nyanza province as a whole.

1.3 Objectives of the study

The general objective of this study is to identify risk factors that determine the extent of the spread of STD/HIV in Kisumu Municipality, where the predominant mode of transmission is heterosexual contact. And thereby document the influence of the socio-cultural and economic factors on sexual behavior and in facilitating the spread of HIV and to generate and make available information for academic and research purposes and also for policy implications.

1.3.1 Specific study objectives

- a) To identify important socio-cultural factors e.g. the sexual behavior characteristics, different forms of marriage and other beliefs and practices; that may explain the rapid spread of HIV.
- b) To identify important socio-economic risk factors (e.g. occupation, education, CSW contact); that may explain the high levels of HIV infection.
- c) To identify the individual's coping mechanisms; especially in STD prevention, control and treatment; the use of condoms and identify any impediments to its use; that may explain the spread of HIV infection.

1.4 Justification of study

According to Schofield (1993:209), he argues that *'choosing sites on the basis of their fit with a typical situation is far preferable to choosing it on the basis of convenience.'* The observation of long time co-existence between cultural factors, sexuality and rapid spread of HIV/AIDS in Nyanza province prompted the study. This co-existence was seen to exert unique constraints on behavioral change and to require different prevention campaigns. Most studies in the past have sidelined specific intricate socio-cultural symbolic meanings,

perceptions and practices that might have speeded up HIV/AIDS spread, in favor of demographic, economic and disease etiology reasons. Until recently, the 1980s, cultural studies related to HIV/AIDS have been taken for granted and little has been done in terms of inclusion of socio-cultural risk factors, yet they are very central to the problem.

In an endeavor to fill this gap, the study aims to establish the influence of socio-cultural and economic risk factors in the spread of STD's and HIV/AIDS in the study area. In addition, the women's world-view calls for exploration now more than ever before, in development and health strategies. The AIDS disease, given the greatly increased vulnerability of women to HIV infection has worsened their situation. The research would in this way, point to factors predisposing women in Kisumu Municipality to STD/HIV, and hope that these women will be offered some real solution to the underlying problem.

Kisumu Municipality as a study site, was chosen because of its uniqueness. It encompasses both the town centre and peri-urban areas and therefore has a rich cultural heritage. The peri-urban and rural areas are deeply entrenched in the Luo cultural beliefs and practices; some of which are reported to be harmful and tend to spread HIV unnoticed. At the same time the area provides a heterogeneous study sample, as it has migrants, occupants and visitors from different communities and nationalities. And like other major towns, it is affected by social, demographic, cultural, economic and environmental problems - the town is an area of immense interaction, a beach community, centre of trade, a major stop along the trucking line to Uganda and Tanzania, and as such the town has attracted a great deal of immigrants, businessmen, and travelers among others.

The choice of Kisumu municipality therefore came as a matter of typicality, and many other factors relevant to the research questions favored this choice such as cultural uniformity. Majority of the people in the area are Luo, Luhya and their culture is an attribute relevant to the research question. It also has certain advantages as a research site over other

towns, such as, its position in the country, being one of the centers of an HIV/AIDS transmission belt, it has a larger pool of people with HIV/AIDS than most other towns. It has a higher proportion of literate people vis-a-vis smaller towns and rural areas and majority can speak Kiswahili, minimizing use of interpreters and translators thus reducing further 'contamination' of the data.

There was need therefore to carry out a study to supplement data collected in previous studies, to provide a database with recent research material on the spread of STD and HIV/AIDS in Kisumu Municipality, with respect to young women and men in the general population, and not to a specific risk group. It is worth identifying the major risk factors that may explain the spread of HIV. A study of this dimension is also very useful to the government or NGO's in their programme development or in policy discussions.

1.5 Scope and limitations

AIDS prevention and control is a very crucial issue that virtually every organization or researcher is interested in addressing. However, it is problematic because its social aspect centers on sex, a form of social behavior with biological drive. Sexual behavior is almost universally a private affair and people are not generally inclined to talk about sexuality or to tell outsiders about their sexual behavior and experiences. Kisumu Municipality was selected because a large-scale district study was not possible due to time factor, funds and other logistical issues. The socio-cultural and economic conditions have created a conducive atmosphere for high-risk heterosexual relations exposing members of society to high risk of HIV/AIDS. The study has been derived from primary analysis of quantitative data from a population sample of 1799 respondents, with ages ranging from 15 to 49.

A number of questions required further exploration and because of the cultural or sensitive nature of these questions, an additional qualitative study was carried out in order to

gain better understanding of the mechanisms of the spread of HIV in the population. Socio-cultural and economic factors influencing the spread of HIV/AIDS were isolated for the study. Due to time factor, only 115 respondents participated in the qualitative study. Their ages ranged from 15 to 60 years. However, the selection of women and men was not balanced, the males were less than the female but their views were used in the analysis.

Tylor's definition of culture has been adopted. Tylor defines culture as 'that complex whole which includes knowledge, religion, beliefs, art, morals, laws, customs, and any other capabilities and habits acquired by man as a member of society' (Tylor, 1971:30). Culture here, refers to folk perceptions, beliefs, customs and laws about marriage systems, religion and sexual behavior and their implications in STD/HIV epidemic. The study was based on sample survey data, and estimates of sample surveys are affected by non-sampling errors i.e. where mistakes are made in data collection and processing (e.g. misunderstandings during the questionnaire session by respondents and interviewer and in data entry errors). These type of errors are impossible to avoid and difficult to evaluate statistically and they reduce the quality of data.

Secondly, sampling errors arise in sample surveys due to sampling bias arising from the design of the survey or failure to carry out the design precisely; as to design it may not be practical to sample the entire population hence coverage is not extended to certain population subgroups (Shyrock *et al*, 1991). The study included only sampled clusters within Kisumu Municipality. In sample surveys, people may not cooperate fully due to lack of publicity and government support. This reduces the quality of demographic data collected. For instance, due to inadequate and proper explanation to residents about the blood testing, ugly rumors arose. This affected their compliance to be tested, and affected their callbacks which inadvertently, affected the validity of the test results. Double counting

could also have been done among the CSW's who were said to be highly mobile, as they have no defined territories and always moved until the suitable place was found.

This study dealt with many personal and highly sensitive sex-related questions. It is therefore possible that the sex acts were under-represented among the respondents. Subsequently, the data on such issues (e.g. number of sexual partners), should be treated with caution because of possible errors of under and over reporting by sex of respondents. For instance, women have the tendency to underreport frequency and number of sexual partners. It was also difficult to distinguish between regular partner not living with respondent and occasional or one time partners. In the qualitative field study, a serious effort was made to overcome some of these problems; by first explaining the study's aim to curtail the general suspicion and some times hostility, by building a strong rapport with respondents, through in-depth studies, probing deeply into certain issues and continuously assuring them of the confidentiality with which their responses will be treated.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The recent emergence of a new sexually transmitted pathogen, the Human Immunodeficiency Virus (HIV), and its association with the fatal Acquired Immune Deficiency Syndrome (AIDS), has generated renewed interest in the prevention and control of STD's in general. While this new virus has presented many unique challenges to health programmers and providers, it has also revealed many of the old issues of inequality, power, and stigmatization that have long frustrated attempts to develop an effective public health response to STD's (Elias, 1991). World Health Organization reports that 16 million adults and 1 million children had been infected with HIV by June 1994 and sub-Saharan Africa currently bears the heaviest toll of HIV infections.

Africa has a higher proportion of its population infected than any other region of the world. The WHO (1994) estimated that 70% of all AIDS cases have occurred in Africa. The nature of sexual relationships and the context within which they are formed are central to the spread of HIV virus. The probability that a person becomes infected with HIV during a sexual contact is the product of the probability that a susceptible individual has sexual intercourse with an infected individual, and the probability that the infection is transmitted during this intercourse. Each of these probabilities is determined by a number of factors: such as demographic, social, cultural and economic factors;

2.1 Literature review related to demographic factors

The major mode of transmission of HIV in Kenya is through heterosexual relations and about 75% of AIDS cases occur to adults between the ages of 20 and 45. And the peak ages for AIDS cases are 20-29 for females and 30-39 for males. This is the most economically

productive group of the population, and these deaths constitute an important economic burden (NAS COP, 1996).

NASCOP argues that this is the age when investments in education are just beginning to pay off. These deaths also have important consequences for children since most people in this age group are raising children, the worst impact is an increase in the number of orphans. Both sexes become infected in similar numbers but women tend to become infected at a younger age than men, reflecting the biological and social vulnerability of younger women. The higher female to male sero-positive ratios in Kenya in ages 15-49 could mainly be because of the differential rates of transmission or susceptibility to infection.

Carael (1995) reports that risk behavior are associated with age. Over half of all those aged 15-19 are already sexually experienced in Kenya, Guinea-Bissau and Central African Republic and by age 20, the level of sexual experience is close to 90% among most of the populations studied in the WHO/GPA surveys. Mehryar (1995) states that condom use for sexually experienced men aged 20-24 varied from under 20% in Lesotho, Tanzania and Togo, however reported condom use for women in this age range was significantly lower.

Some traditionalists and churches have expressed strong statements against condom promotion among the youths. While such opposition may reduce sexual relation before marriage, there is concern by others that such opposition to condoms may condemn the youths who are sexually active to suffer unwanted pregnancies, STD's and especially HIV/AIDS. Brown and Xenos (1994) states that increase in single youth has been accompanied by decrease in the average age at first intercourse and the rising levels of pre-marital sex. Magadi (1996) shows the mean age for first sexual intercourse in Kenya at 13 and 14 for girls and boys respectively and by age 19 more than 80% of teenagers have initiated sex.

Fronck et al, in study on validity of the vaginal discharge flowchart in 3 clinic in Nairobi, found several risk markers (being single, younger than 20 years and having had more than 1 sex partner in the last 3 months) were associated with cervicitis and HIV infection. In addition, the Ministry of Education claims that about 10,000 girls drop out of schools every year due to pregnancies. Forsythe (1996) claims that one in twenty girls in Africa is HIV positive in the 10-14 age group and that two thirds of HIV/AIDS infection occur in the youth aged 24 and younger. Parkin (1966), argues that the sexual freedom in the urban areas is thus not necessarily brought about by the abandonment of custom or transgression of control on their sexuality, but may represent the adaptation of customary rules to a new environment.

2.2 Literature review related to socio-cultural factors

According to Agglelton *et al.* (1989) the AIDS phenomena is compounded by lay beliefs which encourage people to misconceive the risks associated with particular kinds of behavior. Umberson (1987) for instance shows that relationships of marriage and parenting provide the individual with a sense of meaning and obligations affecting the individuals motivations, lifestyle and health behaviors. Marital status is probably one of the major determinants of women's status. Schoepf states that there are people who avoid pre-and extra-marital sex on moral and religious grounds. In Kenya, there is a war between parents and churches on one side and those who want sex education.

The stand of the Catholic Church is clear, no use of condoms, or any other family planning practices. Condom use has acquired a negative reputation especially by the religious bodies against its promotion. Some of the church leaders keep removing the condom boxes and burning them. The stand of the National Council of churches of Kenya (NCK) is that contraceptives should be used only in marriage; premarital and extramarital sex and abortion are not accepted practices. However, National AIDS Control Programme

(1998) indicates that abstinence, zero grazing (having one uninfected faithful partner) and condom use as protective device is the only measures.

Ekanem (1996) argues that there are traditional practices, which expose one to the risk of HIV/AIDS. For instance, widow inheritance within African cultures was one of those social security nets put in place so that no child became destitute just because the father had died, where a close relative inherited the widow and was to shoulder responsibility of the deceased. Or where wife sharing among brothers or age-mates; sexual hospitality and ritualistic cleansing whereby a spouse of the dead has sex with a family member in order to be cleansed or freed of the evil spirit of the deceased. These customs are prone to abuse and expose one to the risk of HIV/AIDS infection.

According to Tuju (1996) polygamy in Africa today is a corruption of what otherwise was a respectable custom. Several marriages of convenience are forged, whereby a man in an urban area stays with a woman he calls his wife and could have several of such relationships. And Okeyo (1992) found that out of 92 widows interviewed, 47 (51%) were already inherited, 34 (36%) were planning to be inherited and only 11 (5%) refused to be inherited due to fear of spreading HIV. Their mean age was 31 years, their inheritors mean age was 44 years, most of the men were married, and about 80% (1/3) had divorced previous partners and had new ones.

According to Ocholla-Ayayo (1991) polygamy may allow women who have recently given birth to maintain a longer postpartum period, because the husband can turn to the second wife for sex. He argues that wife-inheritance may help to limit the widow's sexual movements and may protect her from contracting the disease from other persons outside the family assuming that the inheriting brother does not have the HIV/AIDS virus or the widow's husband did not die from the disease, thus leaving behind an infected widow. Nzyuko *et al.* (1991) argues that some people associated AIDS with breaking the traditional

incest taboos and is a retribution for wrongdoing by God or the ancestors. Ocholla-Ayayo (1991) says that among the Luo community, HIV/AIDS infection is believed to be a retribution for wrong doing by the ancestors. Ngwalla (1991:7) adds that it is difficult to convince the Luo that *chiira* and AIDS is not the same thing with different names. The virus that causes 'chiira' according to them, has yet to be found.

In many traditional societies, a man asserted his manhood by having many sexual partners. Nelson (1987: 219) and Buzzard (1982), in a study among the Kikuyu and the Luo, respectively, found a strongly held ideology that the male sex drive was strong necessitating frequent sex and with a variety of partners, while women, were expected to have sex with only their husband. Buzzard concludes that a dominant discourse emerges, which considers women as having less rights than men, hence unable to make sexual demands on their partners and female sexuality as needing to be controlled by men. He says further that 'people come to accept the status quo and often respond to the sexual behavior of men rather apologetically.'

Konde-Lule (1989) argues that the need for sexual abstinence during most of pregnancy and the post-partum period meant that women were unavailable for marital sex for a certain period of time. Caldwell (1995) states that the longer the duration of the post-partum abstinence in Ibadan, Nigeria, the more common were STDS. He shows how cultural practices such as post-partum period and the acceptance of family planning by level and type had some impact on sex. According to DHS (1993) the median length of postpartum abstinence was 3.0 months. In these circumstances society recognized the right of men to seek other sexual outlets. This was promoted by the insecure position of women with older husbands in polygynous marriages. These kind of sexual practices have a positive effect on the spread of HIV/AIDS infection.

Infertility in many cultures has led to the vulnerability of barren women to abuse by healers and sexual adventurers. In many cases the barren woman was returned to her parents. In cases where such women fail to remarry or to secure jobs, prostitution becomes a means of survival thereby getting trapped in dangerous sexual network. Ocholla-Ayayo (1991) states that in Luo-Nyanza, when fertility of the man was in question, elders or relatives secretly arranged a sexual network. This kind of sexual network put the woman and her husband at risk of HIV/AIDS infection.

According to Ahmed et al (1992) female circumcision continues to be widely practiced among some groups throughout Africa. In northern Sudan, 86% of women aged 15-19 was circumcised and/or had experienced infibulation. Cook et al (1994) reports that non-circumcision of males has increasingly become associated with STD's, including chancroid, syphilis, and gonorrhoea. In the mid 1980s researchers in Nairobi became aware that the uncircumcised men from Western Kenya mainly the Luo were more likely to be seropositive than the circumcised men from Central and Eastern Kenya (Plumber et al (1991) cited in Anarfi (1994). Caldwell (1993), also cited in Anarfi (1994), concludes "heterosexual AIDS epidemic can be sustained most easily where a significant proportion of men are uncircumcised." Henin (1980), reports that some pastoral societies in Africa do have wrong conception of when a woman is fertile, and are engaged in sex either too early or just at the beginning of menstruation, exposes the partners to STD's/HIV infection.

Contad (1986) argues that literacy levels in Kenya are relatively high and access to the mass media is a preserve of a few, so people may lack detailed information about AIDS. Caldwell (1989) contends that education is the greatest mechanism for social change. It does therefore, in changing people's way of life and their culture, influence their health life and consequent risks. Nzioka (1994) states that the dominant social construction of sexuality tends to problematize the social management of HIV/AIDS in Kenya, in that they inhibit

expressions of the risk of HIV infection, and constrain women's ability to challenge male domination. He adds that social contamination that results from HIV diagnosis affects the ways in which others deal with the threat and the way in which these people deal with those dying of AIDS.

When HIV/AIDS epidemic struck, condom use emerged as one of the protective measures of combating it. According to NACP (1996) condom use may not be 100% effective but it is the best way so far, for multiple partnering or else having one faithful sex partner to reduce the risk of STD's/HIV/AIDS. Tuju (1996) says that HIV/AIDS is linked with multiple partners and ones' chance of HIV increases geometrically each time one has sex with a different partner. Feyiseten and Pebly (1989:344) state that traditional values and social practices have undergone changes during the course of modernization and it is unlikely that traditional pre-marital sexual behavior would be an exception, in fact studies point to a gradual erosion of traditional pre-marital sexual norms.

2.3 Literature review related to socio-economic factors.

The current economic situation has created very many economic difficulties and hardships for many Kenyans, seen at its best in the dependency ratio, which is based on the fact that every member of a society is a consumer but that only some members are producers. According to Bwana (1995) unemployment rates have tremendously worsened to a situation of hopeless among the school and colleges graduates in Kenya. According to Obbo (1987) the low level of education is an indicator of early marriage, hence promoting divorce and separation resulting in multiple sex partners.

Nidbe (1987) pointed out that money is considered the fuel that keeps the engine of indiscriminate sexual relation running. The economic status of an individual/or of a community has significant influence on the situation where HIV may be transmitted. Economic consequences of sexual behavior resulting in HIV/AIDS are mainly interrupted

or limited education and career opportunities. These trigger main problems that include a high degree of dependency and low socio-economic status. According to Ochola-Ayayo (1996) school drop-out rates due to pregnancy compel young girls into early marriages which later end up in divorce, alternatively they may be compelled to enter into polygynous unions or end up with multiple sex partners exposing themselves to HIV/AIDS infection. However, Kivumbi (1993) in a study in Rakai, Uganda, shows a linear rise with education and occupational status for both sexes, with the exception of female bar and hotel workers.

Poverty places strains on marriages and lifestyles. It affects attitudes of risk-taking "to people struggling to meet their immediate needs for food and shelter, avoiding a disease which might not materialize for years can be low on their list of priorities". AIDSCAP/FHI (1996) argues that for many people the only means of escape from the harsh economic situation is alcohol, drugs and sex, and with AIDS in the scene the vicious circle has been intensified.

⊗ A study at the University of Nairobi (1990) revealed that the group with the highest multiple sexual partners was the unemployed. The unemployed men or women have abundant free time, resulting in idleness and lack of reliable income, which may drive individuals into commercial sex. Olowo-Freers et al. (1992), in a study in Uganda, found that alcohol and sexual activity are linked in both commercial and social spheres. Brewing of various forms of alcoholic beverages is major cash income for many women, particularly in urban slum areas and the trade is closely intertwined with commercial sexual activity.

Type of occupation has been found to play a big role in the transmission of HIV in Kenya. Persons in the transport industry, entertainment industry and other attendant personnel are particularly expelled to situations for casual sex, many of whom may be away from their regular partners for long periods (Ocholla- Ayayo and Muganzi, 1987).

There has been a heavy concentration of young people in the Kenya urban centers due to the increase in migration triggered by massive poverty and pathetic situation in the rural areas. Most of these young adults are not economically in a position to have commitments like marriage. According to Tuju (1996) the main reason why so many girls have sexual relationships with older and often married men, is the financial rewards they get from such men. And in the last few years a certain trend has developed among young women, who due to the economic hardships have also turned to commercial sex as a means of getting some money.

Caldwell et al. (1993) states that economic hardship, particularly that caused by structural adjustment programs, has increased the need for and incidence of transactional sex. However, both Weeks (1989) and Plummer (1988) argue that it is difficult to define prostitution in any strict sense in Africa, as most female-male relationships in Africa are characterized by exchange of gifts, money included. According to Plummer (1988) sexual relations with commercial workers (CSW) was cited as a probable source of infection by 90% of male patients with gonococcal gonorrhoea in Nairobi who declared that they had acquired their infections at the time of sexual contact with prostitutes. The Kenya-Belgium STD/HIV Control Program (1995) shows that about 50% of CSW's and food handlers in Lumumba Health Centre in Kisumu Municipality town are HIV positive.

2.4 Literature review related to methodology

Most people who have written on socio-cultural aspects of AIDS have done so through interviews and observations. The instruments that will be used in this study have been found to be valid and reliable when used to investigate other issues similar to those of the present study. Best and Kahn (1989) have described reliability as: "the degree of consistency that an instrument or procedure demonstrates." In this study, piloting the instrument in the area of interest and developing rapport with both the leaders and the community members will

ensure reliability. This procedure is also termed as effective by Moser and Kalton (1977:356), who argue that validity takes two forms, namely internal and external.

External validity refers to the extent to which data obtained in one study situation can be generalized to other situations while internal validity refers to the extent to which the scale or parameters employed are viewed by the researcher(s) as adequate for the purpose used. Thomson (1978:165), considers that 'interviewing is an ability to show an understanding and a sympathy for people's point of view; and a willingness to sit quietly and listen.' In-depth interviewing enables a person to speak freely and frankly and without digressing too much from the subject of interview.

According to Trostle *et al.*, (1990:18) focus group discussions (FGDs) are an ideal way to learn about participants' experiences and perspectives and are particularly good at uncovering why people think as they do, without specifically asking them why, because usually people cannot say why they do what they do. The 'why' in this research therefore, can best be inferred from verbal and non-verbal details of the discussion. Morgan *et al.*, (1993), also argue that FGDs are a good methodology to talk about a wide range of personal and emotional issues such as family size, sexuality and birth control, but with careful planning as it deals with sensitive areas, hence the need for pre-testing of the topic guides.

In concluding literature review, it is evident that a lot of research on HIV/AIDS has been done especially on risk factors associated with HIV infection in different parts of sub-Saharan Africa, including sexual behavior characteristics; occurrence of STD's; and certain socio-cultural practices. All these studies have contributed to the rich collection of ethnographic data for many African countries and are rich in the sense that they contain some information, which provides vital knowledge and understanding of the risk factors involved. Magadi (1995), shows how sex behavior can and indeed does influence reproductive health and perpetuate the risk of unwanted pregnancies, STD's including

HIV/AIDS infection. The understanding of the factors that influence sexual behavior is critical to the control of STD's and reproductive health in general. However, most of these studies have not adequately dealt with culture and the spread of HIV infection, yet this is very central to the problem in Kenya and Africa as a whole.

It is, therefore, important to address further and to fully understand the specific intricate socio-cultural and symbolic meanings that have influenced and speeded up HIV/AIDS. These issues include education, marital status, unemployment, occupation, gender relations, and other risk behaviors associated with increase in the epidemic proportions. For example, only few studies have examined the effects of alcohol consumption on sexual behavior, although, studies have often associated alcohol consumption with lower self-control and greater risk-taking behavior in regard to sex. The study therefore seeks to re-address some of the above issues with a view of bringing out more clearly their envisaged influence on STD's/HIV spread in Kisumu Municipality.

2.5 Theoretical framework

AIDS is a life-threatening disease and is synonymous to death, as a cure has currently not been found. HIV does not cause death by itself, it is driven by human beings who are definable in terms of the society, with his social, cultural, economic, demographic and environmental characteristics. HIV/AIDS epidemic consists of many separate individual epidemics, each with its own distinct characteristics that depend on geography, the population affected and the 'situation of risk'. However, a clear theory to understand the practice of HIV/AIDS prevention in Kenya has not been named in any policy document.

2.5.1 Justification and limitations of theoretical models used

This has necessitated the study to borrow from several theories to support its arguments and to understand human behavior in relation to sexual behavior and risk of HIV. The purpose of these theories is to describe, explain and predict the relationships between variables affecting given phenomena, (which in this study is the 'situation of risk' within the socio-cultural context). The study looks at three inter-related theories to understand human behavior; namely the socialization, reference group and eco-cultural theories.

The socialization theory, whose proponents are Zaltman and Marlowe (1971), assumes that every individual person and his or her behavior pattern is an outcome of a particular socialization process. According to them, socialization is that process through which individuals acquire knowledge, motives, beliefs, skills and other characteristics expected of the group in which they are or in which they seek to be members. It is that process through which the social cultural heritage is transmitted, essential skills acquired and skills of acting given, which are distinct to a society. It also reinforces established patterns and helps in the adoption of new ideas by ensuring minimal deviations. If then, socialization is a process of learning social norms, beliefs, skills, and behavioral patterns.

This theory could have potential explanation to the spread of HIV as it presents gender notions and notions of norms and values in a long history of complex codes 'designing' the cultural categories of male and female and of behavior. It can answer questions such as to whom does society ascribe or bestow more power in a cultural setting? Who makes decisions on matters regarding sexual and ritual practices? Does the process of socialization inculcate some new ideologies that increase or decrease the risk of infection? How has socialization has affected group coping mechanisms?

In addition, Siegel and Siegel (1969) in their reference group theory, postulate that the influence a group has on its members can be seen in the benefits, which each individual

group member derives from being a member. They see a group in general as playing various roles for the individual members. It serves as an agency through which members could obtain and appraise information about their surrounding. The group could also create some aspects of reality, which are relevant to the individual, and may control some aspects of the physical and social environment, which have consequences on individual members. It may fill a need for affiliation and affection.

Siegel and Siegel further argue that an individual's membership to a group has an important influence on the values and attitudes he or she holds. What individuals do, conform to the norms of their group. Thus human behavior is an acculturation process. The social environment, that is, the community or society in which one lives or regards as important, influences behavior. To understand how and why, or why not individuals change behaviors even when there is an HIV/AIDS risk; knowledge of their socialization, the social structure and their attitudes would help in changing such behavior patterns.

Socialization and reference group theories can be further complemented by environmental modification. The eco-cultural model has its general origins in the works of Charles Darwin (1859) which was adapted by other proponents to include the concept of cultural ecology, cultural and environmental determinism. In cultural ecology, ecology was equated to cultural adaptation to the environment. The eco-cultural theory states that to understand behavior, one has to look at the inter-play of the dynamics of the eco-cultural niche, namely: the activity setting or the physical setting. This is what the people are doing in that activity area, and the scripts of conduct for that activity setting and how the activity itself determines behavioral outcomes (Weisner 1991, 1984, Weisner and Gallimore 1985). In relation to the study, this theory therefore argues that sexual behavior is directly determined by the environment – both social and physical (Mwendwa, 1997).

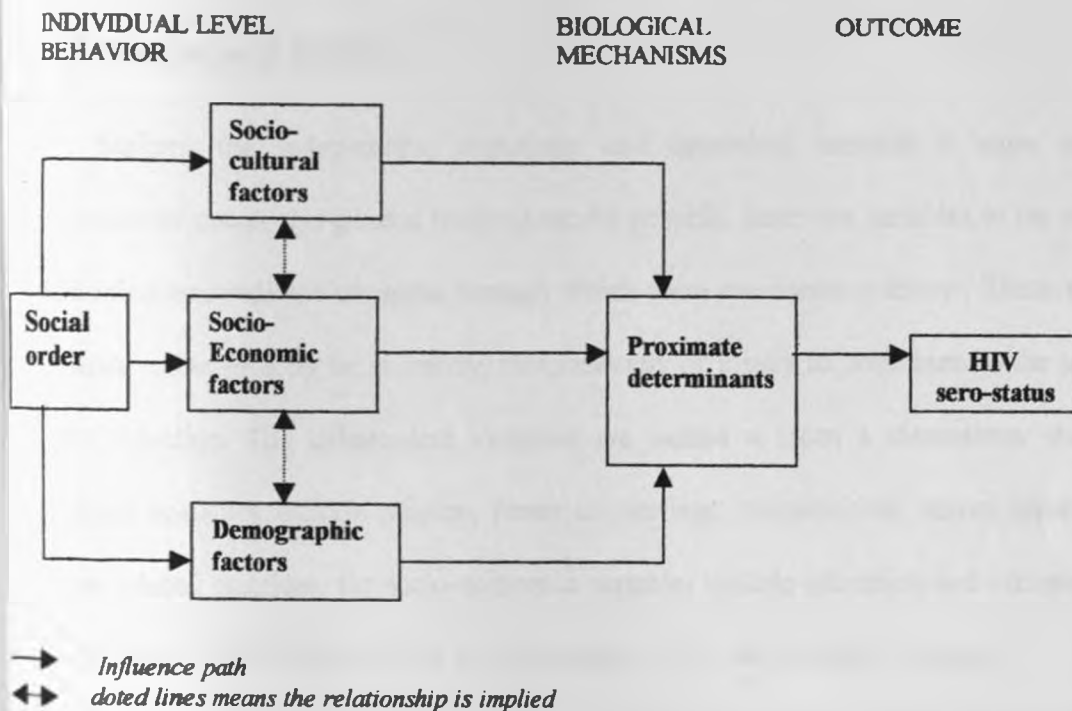
These 3 theories in conjunction build an argument surrounding socio-cultural relations, reasons for exposure to risk and processes affecting attitude formation and change, which are also power relations. For example, understand factors that have made it difficult for the existence of conducive learning conditions of acceptable sexual behavior among youth, resulting in ignorance, misinformation and confusion regarding sexual matters. Secondly, they are flexible and allow the researcher to identify those variables that are relevant in her/his study as dictated by the kind of society and environment she/he studying. The study examines the relationship between variables that are thought to be relevant to the kind of environment and society under study.

Whereas the arguments of these theories are fairly strong and rather convincing, they ignore the fact that humans are rational actors and that humans are not helpless victims of circumstances in their environment (ibid.). In addition, the socio-cultural mechanisms of STD/HIV transmission and especially efforts to understand sexuality in any society are difficult to measure. Nevertheless, these theories demonstrate that for conceptual clarity, the simultaneous influence of multiple predictor variables is required to understand this problem of HIV.

In view of this, the study adopts Ocholla-Ayayo's model for studying the risk mechanisms of STD/HIV transmission (1996:2-3). According to Ocholla-Ayayo, the model says that 'although sexual behavior is primarily a psycho-biological drive or instinct that human beings share with other animals, in a human being it can be influenced, affected, inhibited and even promoted by social, cultural, economic, demographic and environmental factors prevailing in a given society.' In view of time, environmental and psycho-biological drive have not been considered here. Hence, the conceptual model, for the purpose of this study has been modified as outlined: -

The model just looks at the reciprocal interrelationship between three of the factors (namely socio-cultural, economic and demographic factors). These factors (which influence society behavior and act as the independent variables) make their impact through a set of proximate variables (dubbed biological mechanisms) that in turn influence the risk of HIV/AIDS (the outcome), which acts the dependent variable.

Figure 1: A Conceptual Model for studying the Risk Mechanisms of STD/HIV Transmission



Source: Adopted from Ocholla-Ayayo's model of HIV/AIDS (1996)

2.5.2 Conceptual Hypotheses

Based on the above conceptual framework the following conceptual hypotheses can be established.

- 1) Socio-cultural factors influence the spread of sexually transmitted diseases (STD's) and including HIV infection.
- 2) Limited socio-economic options predispose society members to STD's, including HIV infection.
- 3) Demographic factors increase vulnerability to STD/HIV infection.

2.5.3 Theoretical Statement

In the literature review we found that the increase in STD's and HIV/AIDS is a function of many factors. These factors constitute the background of our theoretical and operational models. The study argues that the:

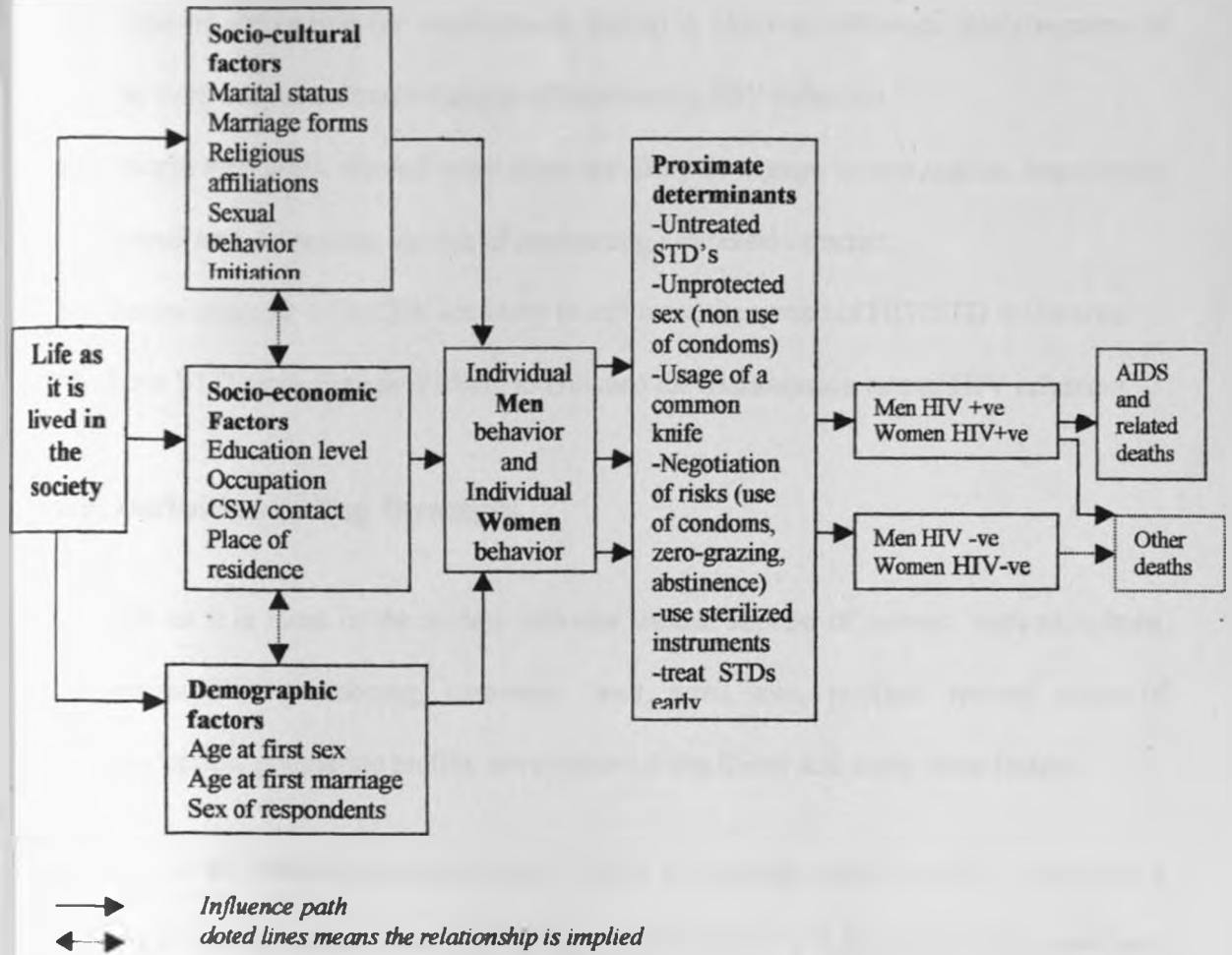
'Simultaneous occupancy of risk factors for HIV transmission determine how rapidly and to what level HIV spreads among a population and who becomes infected.'

2.6 Operational Model

Making the independent, proximate and dependent variable a more operative mechanism makes this general working model possible. Relevant variables to the study are identified and indicate the paths through which these mechanisms follow. These variables operate either directly or indirectly, independently or jointly to contribute to the spread of HIV infection. The independent variables are looked at from 3 dimensions: the socio-cultural variables include religion, forms of marriage, circumcision, sexual behavior and other related practices; the socio-economic variables include education and occupation and CSW contact, while age and sex are represented as the demographic variables.

At the operational level, the study seeks out to find out how these factors differently affect the male and female population? Through proximate determinants (which revolve around the safe or unsafe sex practices/methods, presence of untreated STD's and use of unsterilized ritual tools, a person is highly exposed to the risk of HIV infection. These determinants, therefore, influence a persons HIV status i.e. whether one gets HIV or not, and majority of those who become HIV positive eventually develop AIDS and die.

Figure 2: An Operational Model for studying the Risk-mechanisms of STD's and HIV/AIDS transmission



Source: Adopted and modified from Ocholla-Ayayo's model of HIV/AIDS (1996)

2.6.1 Operational Hypotheses

1. High number of sexual partners increases one's chance of getting STD's/HIV infection.
2. One's marital status is likely to increase or however to expose them to the risk of STD/HIV infection.
3. Women are more susceptible to infection and hence, tend to become infected at a younger age than men.
4. Lack of circumcision is likely to increase one's vulnerability to STD/HIV infection.
5. Religion is likely to influence one's attitude toward contraceptive use and sexual behavior.

6. Lack of condom use is likely to increase the chances of STD/HIV infection.
7. Type of occupation (or employment status) is likely to influence one's number of partners and hence one's chances of contracting HIV infection.
8. People who drink alcohol more often are likely to engage in non-regular, unprotected sexual acts, increasing the risk of contracting a venereal infection.
9. Sexual contacts with CSW are likely to influence the spread of HIV/STD in the area.
10. Poor STD management is likely to enhance the transmission rate of HIV infection

2.7 Definition of Key Concepts

- 1) Life as it is lived in the society includes various aspects of society, such as culture, geographical positioning, customary laws, acted laws, political system, mode of production, population profile, environmental conditions and many other factors.
- 2) HIV is the Human Immune Defense Virus, the causing agent of AIDS. Termed as a recent emergence of a new STD pathogen, transmitted through sexual intercourse with infected partners. It could also be transmitted through intravenous inoculation with contaminated needles or syringes, administration of infected blood or blood products, through transfusions and prenatal transmission from mother to child.
- 3) AIDS is the acronym representing Acquired Immune-Deficiency Syndrome, which results in a gradual and progressive impairment of the human immune system and the consequent emergence of recurrence of a variety of infections and neoplasm's and ultimately death (Curran, 1985; Friedland & Klein, 1987).
- 4) Exposure and transmission of STD's/HIV- A person is exposed to the risk of acquiring HIV infection if his/her sexual behavior puts himself/herself in contact with an HIV infected sex partner. Mathematical models have identified a number of parameters of

sexual behavior that may be crucial in the spread of HIV such as proportion of men and women engaged in different types of partnerships, frequency of change of sexual partners and frequency of sexual contacts with different types of partners and patterns of sexual mixing within and between classes of individuals.

- 5) Gender: is socially defined, is what it means to be female or male in a certain society, it shapes the opportunities one is offered in life, the roles one may play and the kinds of relationships one may have (UNAIDS, 1998). Social norms that strongly influence risk-taking and one's vulnerability to infection.
- 6) Sexual practices, in this study, include practices associated with '*chira*,' sexual cleansing such as found in widow inheritance (the ceremony known as *tero osuri*), ritual practices such as initiation, and other practices such as drying vagina, sex during menstruation etc.
- 7) While sexual behavior includes age at first sexual intercourse (as well as characteristics of the partner and circumstances of first sexual intercourse). The type of sexual partners in the 12 months preceding the interview; frequency of change, sexual contacts and type of sexual contacts with each type of partner (e.g. condom use); concurrent sexual partners and other possible co-factors for transmission of HIV (e.g. reported STDS).
- 8) Sexual relationships: may be classified as regular (long-term), casual (short-term) and commercial (on off). The proportion of men and women engaging in various combinations of these partnerships influence the spread of HIV infection.
- 9) Occupation: The main occupation in this context was defined as where an individual spends most of his time on regular basis, what the respondent does to earn a living,

economic activity in reference to work status and place of work and brings together individuals doing similar work.

- 10) **Commercial sex work:** engagement of an individual in sexual contacts that are basically forged to earn some income or benefit. A sex worker as used, is a person who provides sex services in exchange for payment: either in cash or gifts. However, there is no one profile of sex worker and they are from varied socio-backgrounds in terms of age, education, work, number of children and place of birth.
- 11) **Marital status:** marriage is a socially sanctioned union of one or more men with one or more women (Pressat, 1985). However, the study includes unsanctioned unions considered today as marriage such as 'come we stay,' and which too constitutes the interactive link for the main part of sexual and reproductive behavior.
- 12) **Religion** is a system of thought, feeling and action that is an object of devotion, a code of behavior by which an individual may judge the personal and social consequences of his action and a frame of reference by which an individual may relate himself to his group and his universe. Religious affiliation then refers to the religion of the individual (Columbia encyclopaedia, 1985).
- 13) Use of a common knife normally occurs during female or male initiation, whereby those being initiated at the same time use the same blade/knife, done in quick succession and usually without sterilization.

CHAPTER THREE

DATA AND METHODOLOGY

3.0 Introduction to the study design

This study was conducted within Kisumu municipality and was designed to investigate why Kisumu has a higher rate of HIV/AIDS infection and risk factors that contribute to this. The study has utilized both quantitative and qualitative components; the qualitative component was needed to supplement and to highlight variables that were not fully covered in the quantitative component. Use of a multi-disciplinary approach was considered crucial to develop a broad understanding of the complexities of the issues under investigation. Combination of both methods will hopefully produce a more interpretative report and contribute significantly to the establishment of an adequate empirical basis for understanding the individual risk of HIV infection.

3.1 Sources of data

3.1.1 Use of Quantitative data

To obtain a profile of the study sample, data was obtained from a study carried out in 1997; by a Multicenter-study group. This group included Population Council, department of Community Health of the University of Nairobi, the Ministry of Health, the Institute of Tropical Medicine in Antwerp, INSERM U88, ORSTOM, the London School of Hygiene and Tropical Medicine and the Global Programme on AIDS. This cross-sectional household study was done in Kisumu urban and peri-urban area between June-August, 1997 as part of a wider descriptive epidemiological survey involving 4 African towns (i.e. Kisumu in Kenya, Cotonou in Benin, Yaounde in Cameroon, and Ndola in Zambia).

Objectives were to determine the prevalence of important social and behavioral factors, to determine the prevalence of STI's in the studied population, and to establish important

social and behavioral factors that may explain the differential transmission of HIV. The main risk factors considered included sexual behavior characteristics, STD prevalence and male circumcision.

The Kisumu Multicentre HIV study site had 40 clusters. Twenty-three (23) of these clusters were adopted from the National Master Sample maintained by the Central Bureau of Statistics in Kenya, which follows a two-stage stratified cluster design stratified by urban-rural residence. To sample urban clusters, 1989 census enumeration areas (EAs) were selected with probability proportional to size and to select the required number of clusters per urban district, all the EAs in the urban district were segmented into the expected number of standard-sized clusters (of approximately 100 households).

The sampling interval was calculated by dividing the total clusters in the urban district by the number of clusters assigned to that particular urban district. And using the systematic sampling method, the required clusters were sampled. The remaining seventeen (17) clusters were sampled from the remaining (EAs) in Kisumu Municipality. It has a total of 30 Sub-locations and the 23 clusters selected through the National Master Sample frame are located in 15 of the Sub-locations in Kisumu. Therefore to ensure the representation of each Sub-location in the sample, the remaining 17 clusters were sampled from 13 Sub-locations (EAs in other 2 Sub-locations were excluded as they had been used for pre-testing and piloting); using stratified random sampling.

The households to be interviewed were selected using systematic random sampling method. The clusters had a total of 4635 households. These households had an average of 2.24 eligible members per household. Thus, to get the required 2,500 individuals (1,250 males and 1,250 females) to be interviewed, 1116 households were required. However, there were more female than male members in the households and to increase the chances of getting the required number of men, the households were over sampled by 38.

All eligible men and women (15-49years) in these households were selected for interview. The households selected were 1068 and the number eligible was 2214, however, those interviewed were 1889.

With consent from the participants, a structured questionnaire was administered to coded respondents. A clinical examination (men only) and taking of a blood and urine specimen was done. The clinical examination of the men was to establish the presence or absence of genital ulceration and confirm the circumcision status. The urine sample was tested for gonococcal infection and chlamydial infection by PCR. Blood taken was tested for syphilis and for HIV infection. Presence of antibodies against HIV was assessed using two different Elisa's. For the detection of recently acquired syphilis, serum was tested first with RPR and positive sera was subsequently tested with TPHA. A person was considered as having active syphilis if both the RPR and the TPHA were positive.

The raw data from this population-based survey study has been borrowed from the Population Council, for use in this study. However, some data (i.e. cultural and economic issues) was insufficient necessitating further fieldwork.

3.2 Methodology

This qualitative study was used to probe deeper into the risk factors influencing the spread of STD/HIV and to emphasize on some factors already tackled in the survey data. Some of the issues that needed further probing included beliefs and attitudes on sexuality, norms governing sexual decision making and behavior, barriers to prevention, negotiation of risks, belief in severity, sense of vulnerability, economic and cultural constraints among others. These factors are deemed important in explaining the degree to which socio-cultural and economic issues are related to sexual health.

3.2.1 Sampling

The primary target population for this phase was women respondents in their reproductive ages, whose emphasis stemmed from both practical and theoretical considerations. On the practical side, sexual relationships are a more sensitive topic and women's vulnerability makes its effect more profound. From the theoretical standpoint, it was assumed that women were more likely to provide more concrete and complete information on this problem. However, it was useful to interview at least a modest subset of youth and key leaders as a way of checking the plausibility of the information collected from the female sample, and as a potential way to gain additional insights into risk behavior and to the extent that it contributes to an understanding of women's vulnerability and the population as a whole.

The women and youth sample were mainly selected using purposive method, being our main study target. From listings of the District Socio-Cultural Office, six women groups were chosen. And from these six groups, about 8 participants were selected for the discussions (two groups had nine participants). In total, a sample of fifty women participated in the study. Youth were also randomly selected from 2 youth groups. A total of 24 youth members (14 boys and 10 girls were sampled). Using the mudball or snowball technique, 10 sex workers were further selected

The choice of the key informants was deliberate, using convenience method, to obtain valuable insights from those in position to provide expert and experiential information on the different issues under study. These key informants were people with differing points of view and included 5 medical staff, 5 administrative leaders, 6 civic and women group leaders, 4 were peer educators, a traditional practitioner, 4 church leaders and 6 social workers. In total, the study sample was 115 respondents, all from within the Kisumu Municipality.

3.2.2 Method of information collection

Method used for gathering the data included focus group discussions (FGDs) and interviews. For women and youth participants, group discussions were held. The group participants sat together in a group and discussed specific issues of interest. An FGD guide was used to facilitate the discussions, however, on some issues, the process was left open-ended and flexible in order to follow the concerns and issues that are brought up during the research. For the youth, group discussions were split along gender lines to ensure that the young men and women could feel freely to discuss issues affecting them.

The discussion groups were held in a flexible manner and were small enough to be managed by one facilitator. 6 discussions groups were held with the women and 2 meetings were held with the youth (one with boys and the other with girls). The respondents were assured of anonymity and confidentiality, this motivated rapport, enabled respondents to open up about sensitive issues and probably enhanced frank discussions. Among the youth, pocket voting (i.e. writing answers on small pieces of papers with no names given then dropping them into a box), was used to facilitate for personal answers on sensitive issues that could not openly be discussed and responses analyzed later.

Interviews were found best for the CSWs and key informants. The interview guide was not precisely structured; meaning that the interviews were conducted in an informal and conversational style. Questions were asked depending on the person and how well the interview session was proceeding and issues in this case were brought up as part of the conversation so that the responses would more accurately reflect how the respondents felt about the issues under study. The validity of the interviews and field guides and their effectiveness in soliciting the required information was administered to Widows' group; a women-group situated near the bus-park area of Kisumu town. Two research assistants were recruited to assist during the fieldwork.

This information from both the FGDs and the key informants created an opportunity for the community to talk more openly about what they understand as causing the rapid spread of HIV and what they are doing to inhibit its further spread. It yielded more in-depth information and strengthened the validity and consistency of the survey data to provide a more comprehensive understanding of the mechanisms of HIV spread and especially women's vulnerability within Kisumu.

3.3 Method of Data Analysis

Due to various methods used in data collection, different methods of analysis are taken into account, to best describe and summarize the phenomenon under study.

3.3.1 Quantitative data analysis

a) Bivariate analysis

Descriptive analysis at a population level allows the comparison of distribution of suspected risk factors (unlinked to HIV data). The statistical measures used here to interpret the association and test the levels of correlation between variables under study include frequency distributions, cross tabulations and chi-square. Frequency distributions showed a first level summary of the distribution of respondents by various background characteristics. Cross-tabulations provided a bivariate frequency distribution for the variables under study, and was useful in the initial examination of the nature of relationship between or among the variables, and to determine if there is an association between dependent variables and independent variables. However, it gives the percentage distribution of various variables but does not tell us anything about the relationship between the two variables. In order to do this; a chi- square analysis was done.

The chi-square test criterion, based on an underlying normal distribution of data is used to test the goodness of fit. It is a general test, testing whether or not frequencies, which have

been empirically obtained, differ significantly from those, which would be expected under a certain set of theoretical assumptions. It determines the level of association between the variables under study for all cross tabulations and isolates the significant independent variables. The calculated chi-square is designated by:

$$X^2 = \sum (O_i - E_i)^2 / E_i \dots\dots\dots (1)$$

where the expected frequencies are calculated by regarding the one-way marginal totals as fixed; and designated by:

$$E_i = (r_{1i} \times c_{1i}) / N \dots\dots\dots (2)$$

where r_{1i} and c_{1i} stand for totals in the *i*th. row and *i*th. column respectively and N represents the sample size.

It is necessary to state the assumptions, which include the null hypothesis (stated in form of a relationship or no relationship in the variables being tested. A significant level and degree of freedom is set and obtained as follows:

$$df = (row-1)(column-1) \dots\dots\dots (3)$$

Using the calculated chi-square, the test is then computed. If the calculated chi-square is greater than the one shown on the table, then we reject the null hypothesis; and if it is less than the one on the table, then we accept the null hypothesis. When the null hypothesis is rejected, it means that something non-random is happening and we conclude that there's a relationship between the variables under test. If the null hypothesis is accepted, then there is no conclusive evidence of a relationship between variables. On the SPSS program, if the observed significance level of test is less than 0.05 or 0.01, the hypothesis that the two variables are independent is rejected and we conclude that there is a relationship between the variables in the sense that they are dependent.

However, in making a true generalization, bivariate analysis is not adequate, in that there are likely to be many factors that influence any individual situation.

b) Logistic regression

The socio-cultural and economic factors in which this study is based are multi-variable in themselves, having a complex relationship amongst them and to the given HIV situation in the study area. This calls for the use of a multiple regression model that incorporates all the independent variables, which affect the dependent variable. In view of the fact that, the nature of the dependent variable is dichotomous, logistic regression is deemed to be the appropriate model. Besides, the nature of the independent variables under study which are categorical, aggregate or continuous calls for the application of this model.

In addition, from a mathematical point of view, the logistic model is an extremely flexible and easily used function. It lends itself to a biological meaningful interpretation (permits multivariate analyses of risk factors for estimating the probability of HIV occurring or not). The regression technique was taken as an improved method of testing the postulated hypotheses and also to measure the intensity of the relationships between the dependent and the regressor variables. The logistic model also applies maximum likelihood estimation after transforming the dependent into a logit variable (the natural log of the odds of the dependent occurring or not).

Interpretation of the Coefficients of the logistical regression model

According to Kleinbaum (1994), the principle of the logistical regression method is based on that of linear regression - aimed at relating a variable (**Y**) to one or several independent variables (**X_j**), postulated as:

$$Y = B_0 + B_1X_1 + B_2X_2 + \dots + B_kX_k + U \dots\dots\dots (4)$$

where **Y** represents the dependent variable, **X_j** is the independent variable of interest, **β₁** the regression coefficients, **U** the error term (the residual). For the dichotomous case, if the logit for a given independent variable is **β₁**, then a unit increase in the independent variable is associated with **β₁** unit increase in the log odds of the dependent variable.

Multiple logistic regression model deals with the logistic model of more than one independent variable i.e. the multivariate case. Y (takes the value of 1 for the reference modality and the value 0 for the other modalities): X_j ($j = 1, 2, \dots, n$) where n is the independent (or explanatory) variables; and P the probability that the event $Y=1$ takes place, therefore $\{P = \text{prob.}(Y=1) \text{ and } 1-p = \text{Prob.}(Y=0)\}$. The logit of multiple regression model is shown in the linear form:

$$\text{Logit}(P) = \text{Log}(P)/1-p = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_n X_n \dots \dots \dots (5)$$

where X_1, X_2, \dots, X_n represents the different independent variables of interest in the model. β_1 represents the change in the log odds that would result from a one-unit change in a variable when the other variables are fixed.

The logit is converted into a statement about odds ratio of the dependent rather than log odds by using the exponential function (raising the natural log to the β_1 power). The odds ratio has been used to compare the relative importance of the independent variables and the ratio of odds ratios of the independents is the ratio of relative importance of the independent variables in terms of effect on the dependent variable. Dummy variables have also been incorporated. A dummy variable is any variable in the equation that takes on finite number of values for the purpose of identifying different categories of a nominal variable (ibid.).

To test whether the hypothesized model fits the data, the expected frequencies are estimated under the hypothesized model and results compared to the observed frequencies using the chi-square based on the maximum likelihood ratio statistic. The Log-likelihood (LR) chi-square considers which variables to drop from the logistic regression model. In each case the log-likelihood is tested for the model with a given variable dropped from the equation. When the significance $\text{Log LR} > 0.05$, the variable is a candidate for removal from the model. The interpretations of the results are based on the sign of the regression coefficient (β_1) or on the likelihood relations (e^{β_1}).

Only key independent variables significantly contributing to HIV are finally included in the equation, as determined by the Statistical Package for Social Science (SPSS) programme and in their order of importance. This estimated probability gives us 'risk' and is always a number that lies in the range between zero and one. It also gives the combined effect of the independent variables (exposure status plus any covariates of interest) on the dependent variable (HIV status). The lack of association of a particular variable with HIV infection suggests that such a variable is unlikely to be a critical determinant of the spread and transmission of HIV infection. A strong association highlights potentially important determinants of HIV infection.

However, although the logistic regression model is said to be an asymptotically efficient estimator and an intuitively appearing criterion 'what underlying parameters would be most likely to have produced the observed data?' several limitations were encountered. The regression model may not confirm the variables that appeared significant in the chi-square test criterion due to the size of the sample and are therefore ignored in the subsequent analysis. The study has shown there are many factors at individual, family and community level which might have a significant contribution to HIV but which are unexplained by the data during analysis at the multivariate level.

This is because the model assumed by logistic regression requires a full set of data. SPSS provides for listwise deletion of cases with missing data and only includes the remaining full data set to calculate logistic parameters. Due to these missing cases, the regression analysis was based on 986 cases and this implies that not all factors with a significant contribution to HIV have been explained. Variables with incomplete sets of data were dropped from the regression and the results in the regression are likely to be biased due to these missing data. Probably the inclusion of these variables would have enabled us to see additional significant variables.

3.3.2 Analysis of qualitative information

Field data gathered through observations, through conducting FGD's, interviews, and by listening to key informants, was categorized based on the groups under study. To analyze the data obtained, appropriate data management was carried out and this involved making notes from the tape recordings, reviewing tapes (i.e. transcription, translation, and data reduction of taped discussions). All the notes, reports, and additional questions that occurred during the discussions and interviews were further studied, summarized and grouped into themes. Linked to this, direct quotes are used extensively in order to make women as well as men speak for themselves and with each other.

Material from interviews and FGD's helped uncover areas of agreement and dissent about health issues, gender relations, preventive behavior and perceptions of STD/AIDS risk. It also enabled the study to gain more insights into commercial sex work, assess how women view their position in society and other issues confronting them, with regard to HIV/AIDS, and especially to assess how cultural factors come into play in contributing to the epidemic. Emerging patterns and consensus, or lack thereof, within and between the interviews and FGDs were assessed and the information obtained tallied with the study hypotheses. The results were further linked to research questions and objectives to prove or disprove study hypotheses and hence to understand better the mechanisms of HIV spread in Kisumu. This data has been used to reinforce the quantitative data and to shed more light on preliminary findings.

3.4 Limitations of the study design

Some major limitations of the study design worth mentioning are that the quantitative study was a cross-sectional study and this study design has the potential to lead to biased conclusions regarding the associations between sexual behavior characteristics and HIV prevalence. Sexual behavior might have changed over time and the behavior characteristics

that are recorded now might not be the same as the ones that prevailed around the time of infection. This could introduce a bias in the conclusions about risk factors at the individual level as well as the population level.

Again, sex behavior is viewed as a private matter in most cultures. There are strong norms about not discussing one's own behavior with other people especially strangers and this could lead to falsification/underreporting. There is reluctance to admit to engaging in behaviors that are disapproved of, hence not honestly represent their actions out of fear of disapproval. For reasons of both privacy norms and social desirability, estimates of the prevalence of sexual behaviors may be biased. However, sexual behavior and evidence for any change in sexual behavior was better sought in further discussions and interviews.

It is also important to be aware of potential selectivity bias of the data, which may be either due to the nature of the sample or due to unrepresentativeness of the CBS data. The data could also be suffering from errors common to all data sets in sub-Saharan Africa such as biased interpretation of results by either the respondent or interviewer, making the data less reliable. Although, it was not possible to measure the extent of bias, it is important to recognize their potential effect on results obtained.

Such factors affect the quality of data under an accurate estimation of parameters. In addition to the quality of data, the statistical methods employed for analysis lay basic assumptions, which in some cases don't hold on the real situation of Kenya. The imperfection in the methods in line with the Kenyans tradition by limitation to accurate and comprehensive estimation of parameters and the relative effects of the variables on the estimated HIV parameter. Clinical results were not collected from all respondents and unavailability of these results i.e. HIV status information affected the overall results.

CHAPTER FOUR

RISK FACTORS INFLUENCING THE RAPID SPREAD OF STD/HIV

4.0 Introduction

This chapter gives the results on the associations between the independent and dependent variables addressed in this study. The first part gives a quick look at some of the significant factors contributing to the spread of HIV/AIDS. The chi-square technique has been set at $\alpha=0.05$ level for all the cross tabulations in the study. If the level of significance is more than 0.05 then we accept the null hypothesis, but if it is less than 0.05 we reject the null hypothesis and accept the alternative hypothesis, that there is a relationship between the dependent and independent variable. The second part gives the regression results between the dependent and independent variables.

4.1 Socio-demographic characteristics of the sample

The total size of the sample interviewed was 1889 respondents. However, 90 responses are not included in the analyses, leaving 1799 respondents; 59% were females and 41% of them were males. The survey covered a total of 7 ethnic groups and the dominant ethnic group was Luo, followed by the Luhya, the Kikuyu, and other groups. The Protestants (52%), form the largest group, followed by the Catholics (29%), Muslims (4%), traditional believers (1.2%), while 14% indicated other religions. Most of them (59%) were previously living in the rural areas, 36% were residing in other urban areas and only 2% lived in other countries. 27% moved due to work-related reasons, 25% moved due to marriage, 9% for visit, 19% due to family move, 7% for school and 12% indicated other reasons. With respect to age, more than half the men and women are aged 34 and below and their age range from 14 to 49 years as indicated below.

Table 1: Percentage distribution of the respondents according to age and sex

Age Group	Sex		Total (N)
	Female	Male	
14-19	26.5	24.2	459
20-24	22.7	23.9	417
25-29	17.7	15.0	298
30-34	13.5	14.0	247
35-39	8.5	10.7	169
40-44	5.9	7.4	117
45-49	5.3	4.9	92
Total	1058	741	1799

Chi-square D.F Significance Min.E.F. Cells with E.F.<5
7.12852 6 0.30913 37.894 None

Source: Primary Analysis from the Kisumu Study data (Population Council)

Table 2: Percentage distribution of respondents according to marital status and sex

Sex	Marital Status				Total (N)
	Single	Married	Sep./div	Widowed	
Female	0.8	85.4	5.0	8.9	779
Male	0.7	94.3	3.4	1.5	406
Total	9	1048	53	75	1185

Chi-square D.F Significance Min.E.F. Cells with E.F.<5
26.8452 3 0.00001 3.084 1 of 8 (12.5%)

Source: Primary Analysis from the Kisumu Study data (Population Council)

Table 2, shows 85% of the females are married, 0.8% are single, 9% widowed while 5% are either separated or divorced and 94% of the men are married. However, more women are separated/divorced or widowed as compared to men.

Table 3: Percentage distribution of the respondents by age and marital status

Marital Status	Age group of respondents							Total (N)
	<20	<25	<30	<35	<40	<45	<50	
Single	1.1	1.8	0.4	0.4		1.7		9
Marr.	97.8	91.9	88.5	90.3	84.1	82.8	80.4	1048
Sep/div	1.1	4.1	6.5	3.4	7.9	1.7	3.3	53
Widow	-	2.3	4.6	5.9	7.9	13.8	16.3	75
Total	92	222	262	237	164	116	92	1185

Chi-square D.F Significance Min.E.F. Cells with E.F.<5
60.68050 18 0.00000 0.699 9 of 28 (32.1%)

Source: Primary Analysis from the Kisumu Study data (Population Council)

The table shows that most respondents are in the age cohort 20-39, majority are married, indicating relatively low age at first marriage. The mean age at marriage for the

female respondents is 18.3 as compared to 23.8 of the male respondents. For the entire population the mean age at marriage is 20.1. The sharp contrasts between the sexes in the marriage market are revealed in the proportions of the widowed, the separated/divorced and the single. Majority of those widowed are young, with a mean age of 28 years, and hence, have a high possibility of entering into another union. However, entry into another union does not necessarily imply the termination of their first union (serial marriage) but could also be a transformation of a monogamous union into polygamous union.

Table 4: Percentage distribution of the respondents by level of education and sex

Education level	Sex of respondents		Total (N)
	Males	Females	
None	1.6	9.3	110
Pri. Incompl	23.8	34.0	536
Pri. Compl	40.9	37.4	699
Sec. & higher	16.9	19.3	454
Total (N)	741	1058	1799

Chi-square D.F Significance Min.E.F. Cells with E.F.<5
100.794 4 0.00000 26.773 None

Source: Primary Analysis from the Kisumu Study data (Population Council)

Generally, there is a widespread exposure to education. Majority have completed a schooling cycle (primary level), however, there is a significance difference between educational attainment of men and women. Men have had more educational exposure than women have.

Table 5: Percentage distribution of the respondents according to education and marital status

Marital Status	Educational level attained				Total (N)
	None	Pri. Incomp	Pri. compl	Sec. & higher	
Single	16.2	6.3	5.7	6.3	75
Married	74.3	86.9	89.8	94.2	1048
Sep./div	1.0	1.5	0.4	0.4	9
Widowed	8.6	5.4	4.0	2.8	53
Total (N)	105	335	453	292	1185

Chi-square D.F Significance Min.E.F. Cells with E.F.<5
33.55724 12 0.00079 349 8 of 20 (40.0%)

Source: Primary Analysis from the Kisumu Study data (Population Council)

This could be attributed to dropping out of school; women are more likely to drop out than men as result of unplanned pregnancies, preference for sons going on with the education than daughters, early marriages, lack of fees or a lack of interest.

There are significant differences in the marital composition on the basis of education. The lowest proportion of persons are the currently married with secondary and post-secondary level of education than at other levels. Widowhood is slightly higher among persons with primary and primary not complete than at other levels. Education has been postulated as resulting in the reduction in proportion married at higher levels, and the rising age at marriage, while school dropout may compel girls to early marriages.

Table 6: Percentage distribution of the mean age at first marriage by education

Level of education	Mean age at first marriage for both sexes					
	Males	(N)	Females	(N)	Entire popn.	(N)
None	23.40	10	17.56	95	18.1	105
Primary	22.75	248	17.76	539	19.3	787
Sec. & higher	25.05	147	20.57	145	22.8	292
Total (N)					20.1	1184

Source: Primary Analysis from the Kisumu Study data (Population Council)

Mean age at first marriage for males is higher than for females at all levels of education. It is highest for those with secondary and/or higher education. Table 6 shows that age at marriage rises with the educational level. The results are therefore consistent with the argument that the lower the educational level, the earlier the age at first marriage. Because age at first marriage has risen over time, one might speculate that this has led to increased pre-marital sex and an increased risk of unintended pregnancy, STDs including HIV infection.

According to Table 7, the majority of the men population are engaged in manual work, although a higher percentage (26%) are unemployed. Among women, majority of the employed were in sales while almost half of the women are unemployed.

Table 7: The percentage distribution of the respondents by sex and type of occupation

Type of occupation	Males	Females	Total (N)
Fishing/farmer	9.4	10.6	179
Manual worker	25.2	5.9	248
Soldier/driver	4.1	-	31
Professional/administration.	10.7	3.9	108
Clerical	2.8	0.8	28
Sales	16.3	27.0	403
Other	5.1	4.2	85
No employment	26.4	47.7	716
Total	741	1057	1798

chi-square D.F Significance Min.E.F. Cells with E.F.<5
268.258 9 0.00000 2.061 3 of 20 (15.0%)

Source: Primary Analysis from the Kisumu Study data (Population Council)

In addition, according to their current employment status 25.3% were self employed, 18.6% were regularly employed/full-time in job and 8.3% were employed seasonally or employed on a day-to-day basis. 11.2% were unemployed or looking for work, 12.8% were students while 13.5% and 75% were homemakers with no work outside and with some part-time work outside, respectively.

Table 8: Percentage distribution of respondents according to those who had multiple sex partners and type of occupation

Type of occupation	Sex		Total (N)
	Men	Women	
Fishing/farmer	10.0	11.6	186
Manual worker	27.0	5.8	256
Soldier/driver	4.5	-	33
Professional/admin.	11.5	4.2	125
Clerical	2.9	0.7	28
Sales	17.1	29.1	407
Other	5.5	3.9	78
No employment	21.6	44.6	589
Total (N)	741	961	1702

chi-square D.F Significance Min.E.F. Cells with E.F.<5
164.477 36 0.00000 0.018 31 of 50 (62.0%)

Source: Primary Analysis from the Kisumu Study data (Population Council)

One's type of occupation (or employment status) is likely to influence one's number of partners and hence one's chances of HIV infection. Table 8 above shows the association between occupation and multiple sex partners. Of those having another partner(s), high percentages are found amongst those unemployed, those in service, sales work, and those doing manual work. More men in the manual workers category reporting

having other partners than women in that category, while more women in sales category and those unemployed had more partners than men in the same category. This could possibly be explained by the fact that scarcity of steady employment is an attribute that affects attitudes of 'risk-taking' to people (and especially women) struggling to meet their immediate needs and avoiding a disease which might not materialize for years can be low on their list of priorities.

The respondents travel a lot outside and within the town. 30.9% made 1-2 trips within this period, 14.6% made 3-4 trips and 17.3% made 5 or more trips, while 23% did not make any trip of more than one night. Duration away from home in the last 12 months ranged from days to weeks and months. 29.3% of those who had 1-4 trips were away for more than a week while 72.5% were away for more than a month. 9.7% of those who had 5 and above trips were away for more than a week while 27.5% were away for more than a month. Men were found to travel out of town more than women and for longer periods. 30% of the respondents reporting multiple sex partners were outside the town (i.e. in another urban or the rural area).

According to table 9, proportion of women and men engaging in sex relationships is more frequently done within the town.

Table 9: Percentage of respondents reporting sexual partnerships within town and outside towns

Characteristics of irregular partnerships	Men		Women	
	Outside town	Inside town	Outside town	Inside town
Gave/got money for sex	14.2	17.5	27.7	44.9
Condom use in last sex act	36.1	26.6	27.6	25.9
Relationship on-going	58.0	62.0	68.4	75.3
Rel. With married partner	9.5	9.1	19.7	39.1
Total (N)	169	440	76	174

Source: Secondary data from the Kisumu Study data

The sexual relationships within the town were more characterized by exchange of money for sex, lower condom use levels and were on-going than those that occurred outside the town. However, for both sexes, condom use was less than 40%, a large

number had the relationships on-going and more women reported that these relationships were with a married partner. These sexual relations could be as a result of being away for long periods of time indicating that they see their spouse/partner(s) less frequently. And as a result of long separations, new sexual unions/relations outside their recognized union are began. With the use of condom reportedly low, among both sexes, this puts those having casual unprotected sex at risk of STDs including HIV.

4.2 High risk practices

4.2.1. Alcohol consumption

High-risk behavior practices are situations where there is a lowering of the normal resistance that controls people's actions increasing one's vulnerability. Drinking has often been associated with lower self-control and greater risk-taking behavior with regard to sex and violence. The understanding from several studies is that sex under the influence of alcohol may not be safe because alcohol may deprive one of reasoning power, diminishing self-control and the proper use of condoms. Some studies have indicated that lack of condom use predisposes one to possible STD/HIV infection. The results obtained indicate that alcohol consumption is a leisure activity and over 20% of the respondents reported consuming alcohol in the last four weeks. 50.9% drink alcohol at least once a week, 34.1% drink less than once a week while 14.5% drink alcohol at least once a day. However the differences between percentage of men (32.5%) and women (7.9%) who drink is pronounced, indicating that men are more likely to spend their leisure time drinking alcohol than women do.

Table 10: The percentage distribution of respondents according to alcohol intake by number of sex partners and HIV status.

Number Of sex partners	Alcohol consumption		
	Yes	No	Total (N)
1-5	16.1	83.9	1505
6-9	42.9	57.1	133
10 & above	58.2	41.8	55
Not stated	56.2	43.8	32
Total (N)	348	1377	1725
HIV status			
HIV positive	31.2	24.6	392
HIV negative	68.4	75.1	1123
Indeterminate	0.4	0.2	4
Total (N)	272	1247	1519

chi-square	D.F	Significance	Min.E.F.	Cells with E.F.<5
177.936	1	0.0000	133.9	None
11.681	6	0.069	0.00	6 cells (50.0%)

Source: Primary Analysis from the Kisumu Study data (Population Council)

Alcohol consumption is associated with a higher possibility of having multiple sex partner(s). As the number of sex partners increase, those drinking alcohol tend to have higher levels than those who do not. The high percentage of those having multiple partners could be attributed to the kind of social setting in beer drinking places, which enhances casual sexual activities. According to the data, those drinking alcohol tend to have a higher incidence of HIV than those who do not. This tends to agree with the hypothesis that people who drink more are likely to engage in risky, non-regular or casual unprotected sexual partnerships, and hence are more predisposed to the risk of HIV.

4.2.2 Male circumcision

The study hypothesized that 'uncircumcised males' are more likely to be at a higher risk of getting the HIV virus than the circumcised males. Some scholars (Plummer, 1991; Caldwell et al, 1995), have argued that non-circumcision of males has increasingly become associated with STD's. In this study, most of the male respondents (69%) reported that they were not circumcised, a factor attributed to the fact that the Kisumu Luo, is a non-circumcising community. However, 31% reported that they were

circumcised probably due to the fact that Kisumu is a metropolitan town, with many ethnic communities inhabiting the area. Of the latter, the proportion of men circumcised before age at first sex is 24.6% while the proportion circumcised after age at first sex is 17.2%. The median age at circumcision before age at first sex is 10 years. Analysis indicate that the uncircumcised men and circumcised men seem to have no much difference as far as the sexual behavior is concerned. In both categories, half or almost half of the male respondents report having had multiple sex partners.

Table 11: Percentage distribution of the male respondents' according to circumcision status and multiple sexual relations

Circumcision Status	Had multiple sex partners		
	Yes	None	Total (N)
Yes	47.9	52.1	213
No	50.4	49.6	466
Total (N)	198	461	679

chi-square 339.87 D.F 4 Significance 0.00000 Min.E.F. 0.003 Cells with E.F.<5 5 of 9 (53.6%)

Source: Primary Analysis from the Kisumu Study data (Population Council)

However, Table 12 below, indicates that more of the uncircumcised men (24.7%) were HIV positive as compared to those who were circumcised (9.7%). Of those reporting having had a STD, a higher percentage of the uncircumcised still report higher incidences than the circumcised men.

Table 12: The percentage distribution of the male respondents' according to circumcision status and the STD/HIV prevalence

Relationship between men' circumcision status and self-reported incidences of STD			
	Positive	Negative	Total (N)
No	7.0	93.0	359
Yes	2.3	97.7	132
Relation between men' circumcision status and presence of clinical STD found			
No	24.1	75.9	365
Yes	14.5	85.5	131
Relationship of men' circumcision status and HIV sero-status			
No	24.7	75.3	392
Yes	9.7	90.3	145

Source: Primary Analysis from the Kisumu Study data (Population Council)

Cross-checking this with the clinical results, 24.1% of the uncircumcised men had an STD while 14.5% of the circumcised had an STD. Incidence of STD's including HIV suggests that more of the uncircumcised as compared to the circumcised men are seropositive for both HIV and for other STD's. The HIV prevalence among circumcised men is 9.7% and among the uncircumcised men it is 24.7%. The table also indicates that STD's cases are higher when clinically tested than when self-reported, this could be attributed to low knowledge of STD symptoms, or the respondents did not say the truth or that they were asymptomatic. Lack of circumcision could therefore, be a factor in the high transmission probability as it seems to have a significant correlation with STD.

4.3 Sexual partners and relationships

4.3.1 Sex before marriage

75.0% of the respondents have had sexual intercourse while the rest (25.0%) reported that they have not yet had sex. Of those married (N=1243), 23.3% have had more than 4 partners before getting married for the first time, 15.8% reported having had 3 partners, 26.0% had 2 partners, 26.0% reported having had one partner before getting married for the first time, while 7.2% reported that they had not had any sex before getting married the first time. 72.7% of the young men (N=194) aged less than 20 have had sex while 70.1% of the young women (N=281) aged less than 20 years have had sex.

Both men and women report a significantly early age at sexual onset. A large proportion had their first sexual experience at around age 15, much lower than the national average (16.7) Onset of sex occurred more frequently in the age category 15-19 years and by 20 years, 94.9% had already had sexual intercourse. Early age at first sexual intercourse could possibly indicates a high duration of exposure to sex, increase in multiple partners and could imply some relationship with the current HIV prevalence.

4.3.2 Marital Status

65.9% reported that they were ever married or had ever lived as married while 89.0% were presently married. According to table 21, 79.3% of the married men were in their first marriages, 16.8% were in their second marriages, 2.8% were in their third marriages while 0.9% were on their fourth marriage. While women, 90.5% were in their first marriages, 8.6% were in their second marriage.

Table 13: Percentage distribution of respondents according to the number of unions by age and sex

Number of unions	Sex	
	Men	Women
0	79.3	90.5
1	16.8	8.6
2	2.8	-
3	0.9	0.8
4	-	0.1
Total (N)	464	780

Source: Primary Analysis from the Kisumu Study data (Population Council)

In addition, men are more polygamous, 32.1% of the men with polygamous marriages are in the age group 40-49, while 24.5% of the women in polygamous unions are in the age group 30-39. Among those aged less than 29, 16.3% men are polygamous as compared to 23.9% of the women in polygamous unions.

4.3.3 Non-spousal sex relations

More men seem to have non-spousal partners than women. 21% of the married women had an extra-marital relationship with more than one partner as compared to 50% of the married men. Among the men who reported at least one extra-marital relationship in the past 12 months; 1.2% of the never married men as compared to 3.1% of the ever or now married respondents reported at least one one-off contact. 15.9% of the never married respondents and 3.2% of the ever/now married men had more than one relationship ongoing. For all categories, married women report lower number of sex

partners than the men, nevertheless, non-spousal relationships seem to be common and condom use is not consistently used during these relationships.

4.3.4 Multiple sex partners (life-time)

The data is more revealing when examined in terms of total number of sexual partners (since onset of sex). Men and women report high numbers of life-time sex partners and the median lifetime partners for men was 5, for women was 2. According to age, sexual partnerships tend to concentrate in the younger cohorts. The age brackets less than 34 years had the highest number of multiple partners.

Table 14: Percentage distribution of the sexually active respondents' according to number of sex partners and age

Age group of Respondents	Sex partners			Total (N)
	< 6	6 - 10	10+	
15-19	91.7	7.1	1.2	324
20-24	81.7	13.9	4.4	396
25-29	80.8	16.2	3.0	297
30-34	67.6	27.4	4.9	241
35-39	66.1	26.8	6.7	168
40-44	64.7	29.3	6.1	116
45-49	73.9	18.5	7.6	92
Total	1278	288	68	1634

chi-square D.F Significance Min.E.F. Cells with E.F.<5
96.834 24 0.00000 0.338 16 of 35 (45.7%)

Source: Primary Analysis from the Kisumu Study data (Population Council)

However in the 10 plus category, the number of partners increase with age. This could be probably due to the fact that with age people have had more years of sex as compared to the younger cohorts. 96% have had 1-5 partners and 4% have had between 6-10 partners. Majority, then drop out of the large sexual partnership categories. Men report more partners than do women. This could be attributed to the fact that it is common for men to have more than one partner for social reasons and because it is culturally an accepted norm.

Table 15: Percentage distribution of respondents' according to marital status, number of sex partners and by sex

a) Among male respondents

Marital status	Number of sex partners			Total (N)
	< 6	6-10	10+	
Single	16.7	50.0	34.8	6
Married	41.0	45.4	12.8	381
Sep./div	66.7	33.3	-	3
Widower	30.8	61.5	7.7	13
Total (N)	166	185	52	403

chi-square 6.754 D.F 12 Significance 0.87344 Min.E.F. 0.030 Cells with E.F.<5 14 of 20 (70%)

b) Among female respondents

Marital status	Total number of partners			Total (N)
	< 6	6 -10	10+	
Single	92.6	7.4	-	68
Married	95.0	4.5	-	664
Sep./div	100.0	-	-	6
Widowed	89.7	10.3	-	39
Total (N)	738	39	-	777

chi-square 3.687 D.F 3 Significance 0.29725 Min.E.F. 0.301 Cells with E.F.<5 3 of 8 (37.5%)

Source: Primary Analysis from the Kisumu Study data.

Men continue to report a higher number of sex partners, majority reported more than 5 partners as compared to female respondents' majority of whom, report less than 6 partners. The married category, for both sexes, report a higher number of sex partners. However, in all status, women drop out and non of them reported more than 9 partners, while men have more than 10 partners. This could be attributed to the fact that consistent practices promoting multiple sexual partners among men are highly prevalent.

These include practices that would be considered violations of cultural norms as well as those, which are within the bounds of acceptability. STD/HIV has been linked with many sex partners and one's chance of getting an STD or HIV/AIDS increases geometrically each time one has sex with a different partner, a risk the respondents' are exposed to.

4.3.5 Contact with commercial sex worker

Although the cases of reported contacts seem to be low, contact with CSW was reported by 1.3% of the men interviewed. Married respondents seem to more contact with 4.0% in the 20-24 age range than in other marital groups. Only 0.1% among the married women category reported that they were CSW by marital status, while 0.8% were formerly married or never married.

Table 16: Percentage distribution of the respondents according to sex, duration of contacts involving exchange of money and condom use

CSW contacts	Short-term relationship	Regular Relationship	Condom use (in last act)	Total (N)
Men	5.2	0.8	26.4	250
Women	9.2	2.3	29.3	612

Source: Primary Analysis from the Kisumu Study data (Population Council)

Among these, 9.2% of the women and 5.2% of the men reported that the relationship was a short-term relationship, while 2.3% of women as compared to 0.8% of the men reported a regular relationship. The table displays the proportion of respondents who used a condom during their last intercourse. Generally, of the respondents who had used a condom, slightly over a quarter had used them during their last intercourse, still suggesting low usage of condoms.

4.4 Contraceptive use

The study indicates that only 20.6% of women reported having used or are using a method to delay or avoid pregnancy. The injectables, pills and IUD seem to be the most preferred method as reported by 31%, 21% and 12% respectively. 18% mentioned periodic abstinence (calendar method) or withdrawal and only about 17% mentioned condom use as a method. This could be attributed to the fact that condoms are seen as a method of protection from disease and not necessary for preventing pregnancy and also,

fear of conflict with the spouse/partner, or for reasons that are inherent to the product and sometimes based on misconceptions or myths.

4.4.1 Condom Use

Majority of the men and women report not using condoms. The table below portrays the frequency of condom use in the last 12 months.

Table 17: Percentage distribution of sexually active respondents' according to frequency of condom use in the last 12 months

Condom use	Men	Women
Always	15.5	18.4
Most of the time	6.6	5.9
Rarely	13.1	9.6
Never	61.9	69.0
Total (N)	548	239

Source: Primary Analysis from the Kisumu Study data (Population Council)

61.6% of the respondents report that they never use condoms. Only about a quarter report that they use condoms always or most of the time. These results suggests that while there is some substantial ever use of the condom, use of the method is not consistent and therefore not effective in preventing STD's including HIV and pregnancy. Slightly more women had protected sex always (18.4%) compared to men (15.5%). While 61.9% of the women never had any protected sex, the proportion was higher for men at 69.0%.

As mentioned earlier, this low usage of condoms could be attributed to the general mistrust of condoms due to the negative reputation promoted by the religious bodies, culture (myths), and personal prejudices. This reputation deters the acceptability and use of condoms and therefore increases the multiplier effect of HIV infection.

4.4.2 Religion and contraceptive use

Religion influences one's attitude towards contraceptive use and sexual behavior in general. Among the study population, 58% of the Protestant women were using contraceptives, 24% of the Catholics and 18% from other religious affiliations were using contraceptives. Women who belong to religions that are pronatalists and oppose the use of contraceptives seem less likely to use contraception to realize their fertility preferences or to protect themselves from STD's, for fear of going against their strongly held religious beliefs and teachings of their church. However, in all religious affiliations, the respondents indicate low condom use.

And although religion is grounded on ethical principles, which act as moral guidance, people continue to be involved in risky sexual behavior exposing themselves to infections. According to table 18, multiple sex partnerships cut almost through all religious affiliations, those in the 'other' category and Catholics have a higher percentage of its members with multiple partners.

Table 18: Percentage distribution of respondents' according to their religious affiliation, multiple sex relations and HIV status

Religious affiliations	Multiple partners		Total (N)	HIV status		Total (N)
	Yes	No		+VE	-VE	
Protestant	31.4	68.6	841	24.3	75.7	801
Catholic	35.2	64.6	472	29.3	70.7	441
Muslim	32.3	67.7	65	19.4	80.6	62
Traditional	26.3	73.7	19	33.3	66.7	18
Other	83.3	16.7	12	20.0	80.0	10
None	31.3	68.7	230	26.2	73.8	183
Total (N)	538	1099	1639	392	1123	1515

chi-square D.F Significance Min.E.F. Cells with E.F.<5
 17.207 10 0.06990 0.015 7 of 8 (38.9%)

Source: Primary Analysis from the Kisumu Study data (Population Council)

And neither does religious affiliation protect one from HIV infection, and in all categories the impact of HIV is evident. However, according to the table, traditionalists and Catholics have a higher percentage of its members HIV positive.

4.5 Management and treatment of STDs

The reported STD symptoms included pain during urination, discharge or sores. Those who reported pain during urination or discharge in last 12 months were 10.9%, however 88.9% had none of these symptoms. 2.7% reported that they were currently having pain when passing urine, 13% had the pain when passing urine for a week or less, 17.3% had suffered for about 8-14 days and 17.4% had pain for about one month, and 8.7% reported having pain for a whole year. While more than 98.6% had no discharge from the penis in the previous 24 hours, only, 1.2% reported discharge from the penis in last 24 hours. While 1.7% had painful sores, 1.0% had sores without pain, while 97.0% reported that they had no sores.

Table 19: Percentage distribution of male respondents according to their report on number of days, episodes and duration of discharge and sores

Number of days with discharge	%	Episodes of sores	%	Duration of sores	%
Days 7	18.2	0	90.7	<7	21.7
" 9	9.1	1	4.7	8-14	30.4
" 14	27.3	2	1.0	15-21	4.3
" 365	18.2	3	1.6	22-35	13.0
Don't know	27.3	4+	2.2	36+	26.0
Total (N)	11	Total (N)	23	Total (N)	23

Source: Primary Analysis from the Kisumu Study data (Population Council)

Slightly over a quarter (27.3%) had a longer duration of discharge for more than two years, while slightly below a fifth (18.%) had suffered for a week. Only 2.2% of those who had suffered any sores in the genital area in the previous 12 months had more than four episodes. 21.7% of the respondents had genital sores for less than a week, 30% for 8-14 days and the rest for about a month or for a longer period.

More than half (59.7%) of the men informed their sex partner(s) of their STD but 37.2% did not inform partner. While 63.6% had taken action to prevent infecting their spouses/partners, 33.3% did not. A small proportion 7.3% of STD patients (N=82), used

a condom as a measure to prevent passing infection 90% stop having sex, 2.4% use other measures to prevent passing infection.

Table 20: Percentage distribution of the male respondents' according to sexual relations, STD and HIV

Men found with an STD*	And had multiple partners			HIV status		
	Yes	None	(N)	+VE	-VE	(N)
Yes	46.6	53.2	111	31.3	68.8	32
No	49.0	51.0	359	19.2	80.8	522
Total (N)	228	242	470	110	444	554

chi-square	D.F	Significance	Min.E.F.	Cells with E.F.<5
23.615	2	0.00001	0.118	2 of 6 (33.3%)
8.868	1	0.003	27.17	-

*STD and HIV figures based clinical data

Source: Primary Analysis from the Kisumu Study data (Population Council)

47% of the men who had experienced an STD, had had multiple sex partners, and 31% of those with an STD were HIV positive as compared to 19% HIV positive men who did not have an STD infection. These findings seem to suggest that there is a significant relationship between STD and the risk of HIV, probably that it enhances the transmission rate of HIV. However, we find that 53% had an STD, although they report having no multiple sex partners. This probably could suggest partner or spousal infection, whereby the respondent's partner or spouse infected them.

In this regard, analysis was done on what action the respondents' took for their most recent episode or for previous episodes of STD symptoms. More than half 58.9% had taken some action during the last episode while 41.1% reported that they had taken no action. The probability of suffering consequences from an STD depends on whether or not the person received proper diagnosis and treatment. This is because poor management of an STD is likely to enhance the transmission rate of HIV infection. Majority of the respondents sought advice from friend or relative, sought advice from clinic, hospital or health worker, and a high percentage reported using traditional medicine and self medication/home treatment.

Table 21: Percentage distribution of respondents according to measures taken for latest episodes of a STD infection

Measures taken for STD symptoms	Percentage
Sought advice from friend or relative	52.5
Used medicine at home	18.0
Sought advice from traditional healer	35.6
Advice from clinic/hospital/health worker	44.1
Obtained free drugs from clinic/hospital/health worker	21.7
Bought medicine from clinic/hospital/health worker	37.7
Bought medicine from traditional healer	24.6
Bought medicine from pharmacy/shop	37.7
Used other methods	5.2
Did nothing	1.6
Total (N)	61

N - represents the total number of respondents' with an STD symptom. The total percentage could not equal to 100, due to multiple responses.

Source: Primary Analysis from the Kisumu Study data (Population Council)

The use of a combination of herbal remedies and modern medicine bought from drug stores (pharmacy or the local duka) could be attributed to the fact that patients who are pressed for both time and money do not, on the whole, seek help outside the home until these treatments have proved useless. The social stigma associated with STD's enhances respondents to take self-medication especially when confidentiality is not guaranteed.

61% of the men who had STD symptoms indicated that they told their partner(s) of their latest episode. And of those with an STD, 67% used condoms, 7% reported abstaining from sex during this period while 2.5% used other methods to prevent transmission to partner/spouse(s). The relationship of men with STD symptoms and condom use as a preventive method is significant at 0.04. The interpretation could be that people use condoms in response to an STD with visible symptoms.

4.6 HIV prevalence

In this section, prevalence of HIV infection in the study population is addressed. However, from the 1799 respondents, only 75% men and 84.2% women provided a blood sample. Of these percentages, 25.9% were found to be HIV positive.

Table 22: The percentage distribution of the HIV zero-positive respondents' according to age and sex

Age-group of Respondents	HIV zero-positivity		
	Males	Females	Total (N)
15-19	3.5	23.0	57
20-24	12.3	38.7	96
25-29	28.7	37.1	87
30-34	34.8	29.2	66
35-39	30.8	31.6	44
40-44	23.1	17.0	21
45-49	35.5	20.0	21
Total (N)	123	269	392

chi-square	D.F	Significance	Min.E.F.	Cells with E.F.<5
56.747	6	0.000	15.06	-
22.634	6	0.001	6.13	-

Source: Primary data from the Kisumu Study data (Population Council).

In general, prevalence of HIV/AIDS was found to be higher in females than in males. The percentage distribution of HIV cases by sex and age shows that between the male respondents register low zero-positive cases, as compared to their female counterparts in the same age bracket, except for those in the age group 40-44, whose zero-positivity figures are much higher. Female HIV percentages reduce after 39 onwards, unlike male percentages which remain steady. In the 15-19 year old women prevalence is already very high: almost as high as that in men over 25. The fact that majority of the respondents started sexual intercourse quite early, are not using any protective measures against STD's or HIV infection, and have more older partners at a younger age explain why the female respondents' HIV prevalence rates are high within the first few years of sexual activity.

In table 23, the risk of HIV is greater among those who are married than among those who are not married for men in all age groups and for women under 25. Among women of 25 and over there was a higher risk of HIV in those who were unmarried as compared to the married. This could possibly be attributed to the fact that there is an age gap between men and women in marital or non-marital partnerships such that young women are exposed to older men who are more likely to be infected.

Table 23: Percentage distribution of sexually active HIV positive respondents' according to marital status, age and sex

Marital Status	AGE <20		Age 20-24		AGE 25+	
	Male	Female	Male	Female	Male	Female
Single	3.9	22.3	8.3	34.8	23.1	53.9
Married mono.	25.0	31.7	24.2	37.3	27.6	20.8
Married polyg.	0.0	40.0	50.0	50.0	41.0	30.9
Div/sep./widow.	0.0	0.0	33.3	58.3	64.3	50.5
Total (N)	108	170	147	191	322	463

Source: Secondary data from the Kisumu Study data .

The high number of sex partners among the married women and men indicates the possibility that marriage does not appear to provide security from risk of infection of STD's including HIV. As long as the respondents continue to be involved in unprotected sex relationships with other partners or do not get to know their HIV status before marriage (not disregarding other transmission modes), the risk will continue to be there. For example, in the FGD's it was reported that the high prevalence of the epidemic has not radically altered the traditional patterns of sexual contacts with widows of those whose spouses may be known to have died of HIV/AIDS. Among the divorced, separated or widowed, those above age 20, had high HIV rates.

According to table 24 below, there is a high number of sex partners for both men and women testing positive; men had more non-marital partners than the women, but there is a marked difference in the number of HIV positive comparing men and women with a given number of partners. Although men had more partnerships, more women than men are HIV positive. This could explain the increased risk of HIV in young women compared to young men.

Table 24: Percentage distribution of sexually active HIV positive respondents' according to number of sex partnerships, age and sex

No. of partners	AGE <20		AGE 20-24		AGE 25+	
	Male	Female	Male	Female	Male	Female
1, 2	0.0	24.3	8.7	30.5	25.0	21.0
3-5	11.4	32.6	5.3	43.8	21.8	31.6
5-9	4.8	40.0	12.1	55.6	32.2	47.4
>=10	0.0	0.0	25.6	0.0	33.3	80.0
Total (N)	108	170	147	192	323	463

Source: Secondary data from the Kisumu Study data

4.7 Multivariate results of risk factors

So far, simple percentages, cross-tabulations and chi-squares have investigated the sexual behaviors of the study population and other risk factors. To look at the relative effects of factors having significant effects on HIV-zero-status of the sample population, we use the logistic regression analysis. Among the regressor variables entered for the analysis include age, multiple sex partners, extra-marital sex, respondent's sex, employment status, pre-marital sex, education, marital status, condom use, religion, alcohol consumption, circumcision and ethnicity.

Table 25: Chi-square values and other related statistics indicating the relative effects of factors having significant effects on HIV-sero status for a sample survey of the residents.

Explanatory variables	LRX ²	Log Odds (B)	Standard Error	d.f	p ≤ 0.05	Odds Ratio	No. of cases
<i>Respondents' age</i>	81.080			2	0.000		
<20		0.000				1.000	58
20-34		-0.436	0.2963	1	0.000	0.647	607
35-49		-2.114	0.3519	1	0.140	0.121	321
<i>Multiple sex partners</i>	66.662			1	0.000		
Less than 5		0.000				1.000	755
More than 5		1.950	0.2611	1	0.000	7.032	231
<i>Extra-marital sex</i>	46.313						
Yes		0.000				1.000	148
No		-2.489	0.2071	1	0.005	0.833	838
<i>Respondents' sex</i>	22.632			1	0.000		
Male		0.000				1.000	342
Female		1.132	0.2538	1	0.000	3.103	644
<i>Employment status</i>	11.159			2	0.004		
Unemployed		0.000				1.000	247
Employed		-0.665	0.2270	1	0.003	0.514	545
Seasonally empl.		-0.603	0.2001	1	0.002	0.547	194
<i>Premarital sex</i>	5.119			1	0.024		
Had partners		0.000				1.000	913
Had no partners		0.837	0.399	1	0.0363	0.433	73
<i>Constant = -0.9147; Standard Error = 0.3957</i>							

Source: Primary analysis from the Kisumu study data (Population Council)

Notes: The analysis is based on 986 cases, only those cases that the respondents gave a definite response to the question were considered. Model LRX²=162.859, 8 d.f. p=0.000 (X² ≤ 0.0208).

Of all the socio-cultural, economic and demographic factors incorporated in the logistic regression model, it is evident from table 26, that respondent's age has the greatest explanatory power. Those aged less than 20 have the greatest odds of being HIV positive than those in the other age categories. This indicates that those in the age category 20-34 have a higher odds of being positive than those in the 35-49 age category. Those less than 20 years are more exposed to the risk of HIV than in other age categories and agrees with the hypothesis that age has an impact on one's HIV status.

The number of sexual partners was found to have a statistically significant effect on whether one is HIV positive or not. Having many partners is significantly associated with increased likelihood of being HIV positive. According to the odds ratio, those who had multiple partners are about 7 times more likely to be HIV positive as compared to those who did not. These findings agree with the hypothesis that high numbers of sexual partners is likely to increase one's chance of HIV.

Having extra-marital sex increased the chances of being HIV positive. According to the table, having no extra-marital sex decreased the odds of being HIV positive by 17%. However this difference is still low, and could be attributed to one of the spouse(s) infecting the other(s); or with the high rates of HIV positive cases in the community, there is an increased chance of a person marrying a partner who is already infected and this makes marriage a risk factor for HIV due to possible infection by either of the spouse(s) and due to the fact that condoms are not commonly used within married unions.

The sex of the respondent was found to have a statistically significant effect on an individual's HIV sero-status. According to the odds ratio, female population is three times more likely to be HIV positive than the male population. The increased chance of being HIV positive in the female population as compared to the male population in itself suggests that women have a greater risk of getting HIV from an infected contact than

men do. An explanation is the large age-gaps between men and women in marital or non-marital partnerships is such, that younger women are more exposed to older men who are more likely to be infected as indicated in Table 21- more men are infected at older ages.

Employment status was found to have a statistically significant effect on whether one is HIV positive or not. Having no employment had the highest odds of being HIV positive. Being unemployed is associated with risk in that one is idle, there are few leisure options and being unemployed could create a feeling of disillusionment among people. This could influence their sexual behavior increasing their odds of being HIV positive. However, having seasonal employment or full employment had a 45% and a 49% chance of being HIV positive, respectively. This could be attributed to the fact that employment separates spouses or partners for long periods of time, provides resources such that it is easy to get/lure a partner or to buy sex etc... Therefore employment status is a risk factor for HIV among the study group.

Pre-marital sex has the lowest explanatory power, but is statistically significant and depicts a higher chance of being HIV positive. And according to the odd ratio, those who did not have pre-marital sex are still at risk, with a 57% odds of being HIV positive. The number of people having had pre-marital sex was relatively small at 73 cases. This finding is in accord with the hypothesis that early onset of sexual activity predisposes one to HIV and therefore pre-marital sex (usually coupled with low condom use) is a risk factor for HIV amongst the study population.

However, education, marital status, condom use, religion, alcohol consumption and circumcision were found statistically insignificant and the computation automatically dropped them from the analysis.

4.8 Conclusions

Overall, the regression results have isolated 6 statistically significant factors that are associated with increased likelihood of being HIV positive among the study population. First, that age is a significant predictor of risk behavior in the area. The ages 15-34 for female population and ages 25-44 for male the population tend to be the most HIV affected age categories. These are the ages where sexual activity is at its peak. Secondly, people with a large number of sex partners have a greater risk of getting HIV and the data shows that the relationships are characterized with large numbers of sexual partners.

Third, that people who had or were having extra-marital sex have a significantly higher chance of contracting the virus, although this does not rule out marital risk; whereby the spouse or steady partner could be HIV positive and infects the other(s) therefore passing it on. Therefore the sexual networking of the population is an important risk factor at the individual and community level and could explain the rapid spread of HIV in the area. Fourth, that the sex of an individual is an important factor and the risk of transmission in the study area is higher among the female population than among the male population. This can be observed in the HIV prevalence results of the study population whereby 31% of the female population is HIV positive as compared to 20.9% of the male population.

Fifth, that employment status of the population shows that those unemployed have the greatest risk of becoming HIV positive while those with some unemployment or occupation were also at risk, but to a lesser extent. Sixth, that people who had or who are experiencing pre-marital sexual liaisons have a significantly higher chance of contracting the HIV virus. A possible explanation is that pre-marital sex increases the probability of infection; with increase in a persons' number of sexual partners; possible contact with an HIV-infected person is high.

Marital status was not strongly associated with HIV and it did not show any significance. It could therefore be explained that the odds of being HIV positive is in all marital categories and not to any specific category. This could be attributed to the sexual networking and mixing within the community; leading to a vicious circle of infection. In addition, age at first sex or age at first marriage did not show any significant effect on the odds of whether one is HIV positive or not. Probably the circumstances surrounding the first sexual act and/or marriage and the number of unprotected sexual contacts that one has; would have a more significant effect.

Condom use was found to be insignificant (reported levels of use were too low and many respondents failed to give definite responses to the question), and therefore it was not considered in the multivariate analysis. However, from the high rates of HIV among the female and male respondents, we can argue that non-use of condoms is positively associated with the odds of being HIV positive or not. This could be attributed to poor condom image, either for reasons that are inherent to the product and/or sometimes based on misconceptions. Therefore, non-use, inconsistent use or improper use of condoms is a main factor for the spread of HIV in the area.

Many variables were dropped from the analysis, this could be as result of high number of missing cases or that they do not directly have an effect on an individual's HIV status. For instance, contacts with CSWs was dropped out of the multivariate analysis due to low levels of reported contacts or although the study suggests that non-circumcision is likely to increase male populations' exposure to HIV, this might not necessarily be the case, because the prevalence of circumcision among majority of the population is very low. And therefore we cannot be sure whether these factors could be major factors as to why the epidemic in Kisumu is sustained at such high levels.

CHAPTER FIVE

FURTHER INSIGHTS INTO MAJOR RISK FACTORS; FIELD DATA

5.0 Introduction

Having analyzed quantitative data on sexual behavior patterns and other risk-practices, a number of questions remain that require further exploration in order to gain a more holistic understanding of the mechanisms of the spread of HIV in the study area. And due to the sensitive nature of the research questions, qualitative studies were required. FGDs and semi-structured interviews were held with 24 youth (14 males and 10 females), aged between 15-24 from Pandipieri. 15 of them were out-of-school while 9 were school going youth.

A list of the women groups was got from the District Socio-Cultural Office and six groups were randomly selected within the Municipality. The groups chosen included Widows, Kondele Mitumba, Doya Okuodi, Magina Kodium, Pundo Rawana, and Otieno Samaki. Around 8 women were invited for an FGD from each group, all totaling 50 women. Most of the women were aged between 24-42, 27 were married, 14 were single mothers (either separated or never married) and 9 were widows.

In addition, 10 CSWs were recruited from nightclubs and bars and interviewed. They were in the age bracket 18-22, three were single, five were single mothers, while two, had been abandoned by their partners. In addition, a cross-section of 30 key informants and opinion leaders were interviewed. They were aged between 25-60 and majority of them were male respondents. In total, the study held interviews and focus group discussions with 115 respondents. Additional information was found in reports and existing literature.

Due to the similarity or overlap of views given by the different categories of people talked to in the field, their explanations on factors responsible for the high levels of HIV

in the area have been summarized and categorized under four main titles: social, cultural and economic factors and the health-seeking behavior. The discussions and interviews are discussed theme by theme in any of the 4 topics, which form the basis of our qualitative findings.

5.1 Social factors

The main themes discussed under social factors include: high levels of adolescent sexual activity, lack of leisure activities, low levels of condom use, lack of parental guidance (parental-youth gulf) and western influence.

5.1.1 Adolescent sexuality

The youth reported that sex is very important in life. 8 boys and 3 girls stated that premarital sex is a necessary pre-requisite for marriage. A few others (4) linked sex to procreation which ties closely with children and a family being a major goal for their futures. Five youth interviewees saw sex as a way of entertainment, relaxing and passing time, two stated that sex helps adolescents cope with emotional changes and 'brings people back to normal moods'. Four said that being sexually active signified maturity and was 'an expression of love', while seven respondents reported that sexual activity is an expression of manhood; a factor in feeling good about themselves.

The youth also reported of stories, which indicated that sexual activity helped a girl mature physically 'giving her larger breasts and bottoms', hence making a girl more attractive, eating a lot of groundnuts will make a man more virile and failure to engage in sex results in backaches. However, the majority (14), added that early sexual activity has negative repercussions and it has led to expulsion of girls from school due to early pregnancy, emotional trauma (e.g. if rape, abortions), contraction of STD's including risk

of HIV and the creation of adolescent headed families which usually fail and are encumbered with numerous problems.

The youth generally reported that initiation of sexual activities commonly began in the early and mid-teens (12-16). On number of sexual partners in the past year, seven reported having had more than two sexual partners, nine of them reported one, and four had not had sex yet. Eight of them had been influenced by their peers and five of them by much older friends e.g. some girls engaged in sex to keep their boyfriends happy and avoid their leaving them. While three cited influences by adult behaviors (e.g. sharing a bedroom with an adult/relative or being forced by housemaids). Other reasons include 'for the experience,' curiosity and playing mother and father, and these reasons influence the youth to have sex for the first time.

5.1.2 Recreation, western influence and parental guidance

The youth reported that the most enjoyable leisure activities were playing football, disco dancing, reading, drama, making jokes, socializing with friends, listening to radio, watching TV, video shows, outings, discos, having sex, drinking and smoking. 12 boys and girls reported that there are very few creative recreational facilities and boredom, financial constraints, parent-child gulf and loneliness is what drives them to early sexuality. As some girls stated:

'We have lots of energy but very few opportunities to enjoy ourselves creatively, only those nasty sugar daddies seem to notice us. People rarely listen to our views. We can longer communicate with our mothers. They don't listen to us or understand us. We are too shy to discuss our problems with them.'

For instance the nightclubs or bars in residential areas are popular places for the youth and young girls are lured into CSW, boys into alcoholism, promiscuity and drug taking. Such places have been blamed for spreading immorality among youth especially the school going children.

The youth agree that modernization 'western' culture has influenced their behavior to a large extent and they tend to assimilate 'western' lifestyles easier than retaining their traditions. Aspects that were mentioned of concern included the influence of negative behavior by dropouts; drugs, alcohol abuse, crime, promiscuity; girls dressing in a suggestive manner; short skirts, shorts, bare back tops, tights, which causes men to think they are an 'easy catch' therefore, exposing them to sexual harassment and abuse. The youth also blamed the adults and especially parents who are falling on their job and some are setting bad examples. Most of the respondents said that they would wish to discuss sexual matters with adults and parents in particular but reported shyness, lack of attention and time as a handicap and expressed a clear need for guidance.

Most women blamed their children's behavior on the corrosive influence of western culture, values and behavior and mentioned the harmful effects of TV, videos, drugs, alcohol and the tourist industry in general. They blame the breakdown of traditional forms of social and family life education which has left young people with no where to turn to for direction in life. A social worker also agree that the problem is that the youth are being pulled between two differently structured cultures, the traditional African culture and modern western culture. They try to maintain an unstable combination of the two, causing a lot of confusion. The discussants argue that all blame is heaped on the mother, for their children's failure, for their children's early sexuality and especially if a daughter gets pregnant. One married woman says that:

'We (parents) feel helpless to protect our children, especially daughters in situations like this - many of them have dropped out of school and are doing nothing and we are always worried what they doing out there.'

These women vent out their anger on the economy and government that cannot provide jobs for those who need them and with a society that does not care enough for its young to see to it that they are constructively occupied. They also blame irresponsible

teachers and men, who they say, leave them to carry unaided the entire burden of instilling proper morals in children, and at the opposite examples they set. However, some women admit that some parents have driven the young people to sexual experimentation through bad examples, parents' stubborn insistence on chastity, or rigidity in acknowledging that their children have boyfriends or girlfriends, and/or are unable to speak explicitly about sexual matters with their children. Some parents desperate out of poverty and hunger are sending their young children away to look for work. Others are pushing young daughters into unsuitable marriages while others with no work or study opportunities are driven into prostitution. These factors were reported to make the dilemma faced by young people more intense.

5.1.3 Low levels of condom use

Unprotected casual sexual relationships came out prominently as the main factor responsible for the high rate of the spread of HIV/AIDS in the area. School outings, parties, celebrations, discos, funeral ceremonies, agricultural shows and sports matches, were cited as the place where majority of the young people meet opposite partners. These opportunities are seen as a chance to interact, have some fun and they usually provide freedom and opportunities for sexual pleasure, sometimes forces people to look for sexual partners in a hurry. For instance, one respondent reported that during the agricultural shows there are many cases of sexual coupling and in most cases they involve forced sex (rape) especially during the evening or when returning home. In such a case precaution is not a prime factor, as one peer educator voiced:

'Only a small group is using condoms and many do not carry anything. Condoms are also not well favored and neither are they easily remembered or available when such a moment arises.'

On how to protect themselves from STD's/HIV, only seven reported having used a condom, five were abstaining from sex, five advocated sticking to one sexual partner, while three reported that they only have sex with a few trustworthy friends. Girls than considered sticking to one partner a more feasible method by boys. However, when asked how they felt about these options, condoms were considered the most feasible option for disease prevention and few boys saw abstinence as a viable option.

Nevertheless, respondents cited many negative concerns about condom use. Condoms can break or remain inside the vagina, wastes sperm, causes itchiness, destroys the purpose of sex and reduces pleasure and satisfaction. Women respondents add that condoms do signify a lack of love and trust in the relationship, they have the perception that condom can remain in the woman and cause her harm. There is also fear of violence from partner, difficulty in obtaining condoms and in negotiating use with partner and the perception that her partner would think she is sick or unfaithful were mentioned as critical.

About thirty-four women said they had never used condoms, but if their partner suggested using condoms they would agree. However, only twenty-one thought that their partner would agree. With regard to who should initiate condom use, fourteen said that women should, twenty-three said that men should, and twelve said it should be a joint decision, and the rest were undecided or did not respond to the question. In addition, these women argue that they do not have as many options in life as men because often, they do not benefit from equal education, employment opportunities, they do not inherit land or other significant properties and so are financially dependent on the husband or partner. In such cases, they are not given the recognition they deserve in society, such as in making decisions that affect their 'health and their daily life.' This increase in unequal gendered sexual relations leads to their inability to negotiate safer sex practices.

One key informant reported that usually condoms may be used at the start of what may be defined as regular relationships, but this is eventually forgotten. One reason cited for this is that the regular financial support that men provide is seen as being incompatible with the understanding and lack of responsibility implied by condom use. Regular relationships were reported as sometimes having a transactional component and condom use is seen as part of the exchange deal.

Some men and women leaders reasoned quite explicitly that the fact that the man provided regular and dependable financial support usually negates the need to use condoms, there is also the problem that condom use has been for a long time been associated with promiscuity. It was also reported that most couples find it difficult to discuss AIDS and STD's and what precautions one should take, and as stressed by one key informant:

'Communication barriers and the social uneasiness may be so great for both men and women that a condom is not always an easy proposition and neither is it easy to talk about sex as freely as engaging in the act'.

Therefore, a couple who would like to protect themselves from HIV during sex and who separately would prefer to use a condom, will go on to engage in unprotected sex without even considering the risks involved.

5.2 Cultural factors

Major themes discussed here include long term and occasional sexual partners before, during and in marriage, perceptions concerning norms governing sexual behavior, perceptions and types of marriage forms, decision making and male dominance and initiation practices.

5.2.1 Sexual permissiveness

Long term and occasional sexual relations before, during and in marriage was reported as a main factor in the spread of HIV infection. Multiple sex relations have been ingrained in African societies since time immemorial and socio-economic hardships have aggravated the situation even further. Sex was seen as a coping mechanism just as alcohol, nicotine, prayer or sports; as it was reported to help one cope with tensions and emotional pressures. However, 23 of the informants said that this was an excuse – especially for legitimizing extramarital affairs.

In addition, much talked about is the issue of 'sugar daddies' and 'sweet sixteen's.' The boys lament that their girlfriends cheat on them or girls cannot accept them, as they prefer to go out with older men who have money. Other youths report of cases where fathers lure their son's girlfriends, men as old as 70 marrying girls as young as 15 years. The society tolerates and does not mind this behavior and attitude (an attitude popularly referred to as the 'kufeelanga').

Infidelity was reported as the major factor responsible for the rapid spread of HIV/AIDS in the area. Eighteen women reported that culture dictates that regular sex with a variety of partners is a man's right -a logical extension of the commonly held view that men are naturally polygynous. Six of them are living away from their husbands and suspect that their husbands might have other relationships. For example, one schoolteacher, says that:

'I know my husband is having sex outside our marriage, but I have no power to refuse sex with him according to our tradition. He is my husband and has paid the dowry. And because of my children and lack of income I cannot not just walk away.'

From the statement, the impression is that children are considered a more central focus of marriage than the sexual and emotional intimacy of the conjugal bond. The risk

of losing a marriage seems to be very scary, due to the socio-economic loss and the stigma attached to women who are without. Another woman explained that:

'if you do not have a man, people say something is wrong with you. It is believed that as a woman, you need a man or your sexuality is questioned, if you have no children it is even worse.'

Such reports of submissive decisions and compromises may have served the womenfolk well before HIV came into the scene, but now such decisions are reported to be a cause of many death of women.

The women also argue that it is permissible for men to seek sexual pleasure with 'sex workers,' but the idea of women paying for sex is probably unimaginable. The discussants said that more women today are unfaithful to their husbands than was the case a few years ago. However, three argued that this is rare and occurs under extraordinary mitigating circumstances. The women add that it is widows, separated or divorced women who enter into such sexual liaisons and who usually try to take people's husbands.

It is therefore, not surprising that the financial threats posed by the husbands' extra-marital affairs involving a permanent mistress were the most feared aspect of male infidelity for the married women in Kisumu. This is not to argue that affairs between married men and 'prostitutes' have no emotional effect on the men's wives or that male infidelity does not engender a sense of emotional betrayal. These women added that they just prefer not to think about such issues, unless they get prove or hear rumors about their partners unfaithfulness while others said they can do nothing about such cases and just pray that God will protect them from such diseases as AIDS.

5.2.2 Norms governing male sexual behavior ('machismo')

One opinion leader said that the Luo social relationships are emphasized on the concept of 'hierarchical relations' based mainly on age and other status positions, with

women and children at the bottom. In relation to this, men's irresponsibility in prevention i.e. in multiple partnerships was mentioned as a great concern. However, a few discussants and opinion leaders argued that the blame should not be put wholly on men, but on the social construction within which they have been brought up. In this respect, sexual multi-partnership is endorsed by folklore, ingrained in jokes, language and traditional imagery. In the society, men are even expected to be a little 'reckless' in their sexual behavior otherwise they are seen as being too timid, soft and not macho enough.

Male children are required to display signs of 'manhood' like bravery in the face of danger, being impervious to pain, both physical and emotional and are supposed to only show a liking for culturally male associated chores as opposed to the traditional feminine chores. Due to this assumed superiority, men argue that they too, are under immense pressure. For instance, they cannot tolerate women who have done better than them in life. Severe socio-economic and political changes have also deprived them of their traditional leadership roles.

It was reported that many boys growing up in a traditional way, are socialized to contain their grief and frustration, which in the long term sometimes results to emotional immaturity. And not being able to cope with challenges of every day life, these men resort to excessive drinking, violence against women or something to else to keep going. This could be a reason why some adult men end up looking for emotional fulfillment from multiple sexual partners irrespective of their marital status and the risks they expose themselves to.

In addition, young boys are reported to see the prevalence of male domination, when they are growing up, through practices such as polygamy. A key informant reported that men sometimes lack the skills for exercising the power advantage which they have over women in a responsible manner. They are not socialized to realize that they are being

unfair to their wives or girl friends when they have multiple partners and put them at risk.

The vice versa was said to be the same.

Although, culturally, men are supposed to take the initiative of starting a relationship, society has not taught them adequate skills for introducing the topic of safer sexual practices. One Social worker argued that:

'The culture of using protective devices like condoms is relatively new in our social landscape. Neither has the culture of having one sexual partner really taken root beyond the confines of certain groups of religious adherents'.

Two peer educators cited upbringing, culture, male 'menopause' or mid-age crisis, and abstinence from sex with partner(s) during pregnancy and breast feeding as reasons why men seek other partners and/or visit prostitutes (which was especially reported as a crucial factor in the spread of HIV). These deeply ingrained attitudes on sexuality were said to be important factors facilitating the spread of HIV.

5.2.3 Perceptions of and marriage forms

Different marriage forms were reported to play a significant role in risk propagation. Marriage has influenced the risk to for most women due to the unprotected nature of sexual relations within marriage and the extent of extra-marital relationships. The payment of bride price (which is a major component in the legality of a marriage and is meant to strengthen the marriage) was one practice mentioned. Bride price was reported to minimize the woman's ability to opt out of an unsafe marriage, and such a woman was reported to be dependent on the ability and willingness of her family to return the bride price to her husband. As the bride price will have been used to pay the bride price for a son's wife or otherwise used up, the family will simply encourage her to stay in the marriage regardless of the risk involved.

Polygamy, for all the good things it stands for was also cited as a major risk factor for women with regard to HIV/AIDS. Polygamy is very prevalent in the area and

monogamy is just a legal position as men were reported as keeping 'out-side wives,' sugar-mummies and younger girlfriends. The reasons given by the FGD participants for polygamy, range from the first wife urging her husband to bring a young wife to assist her, particularly if she feels too old to continue with sex, to the man's greater need for sex. In relation to this, widow inheritance and its associated norms and rituals was cited as a practice of concern. The inheritance laws in Kenya states that 'tradition and customs still play a prominent role in burial and inheritance matters' and should be followed.

The participants reported that traditionally widow inheritance in Luoland was considered as a type of accepted marital system. It's intentions were to maintain the widow within the family by performing duties of a husband to her to prevent the widow from looking for another lover and thus bringing into the family children of unknown origin. It was also meant to continue the lineage of her husband by getting children with her for the dead husband in case they had not yet got any children by the time the husband died. All children born out of this relationship are automatically considered to be the deceased's and are accorded that right of property inheritance.

Even today in some areas of Luo-land, upon a husband's death, the clan elders still chooses the candidate for wife's inheritance, usually the brother of her late husband. If a widow refuses to do so, she is pressurized to leave the home, the children taken away, and her parents forced to return part of the bride price. Many women have been forced to give in to this pressure in order to protect themselves and the interest of their children, regardless of HIV knowledge. Still in this context, levirate marriage was mentioned, whereby if a man loses a wife she is replaced by one of her sisters. This is a form of 'widower inheritance' and the parents of the dead wife offers and gives a sister of the deceased to the widower in "replacement" of the dead one arguing that she is going to

take care of her sister's children. Eventually this sister finds herself playing the role of wife to the widower.

Widow inheritance is a major factor in the spread of HIV. It was reported that after a woman is widowed, she must be cleansed of her husband's spirit, which involves having sex with a stranger to avert misfortune befalling the widow and the family. This 'cleansing' ceremony is loosely referred to as "chodo kola" in Luo and is done to the widow before the official inheritance. In the official inheritance, the couple usually has sex to bond this inheritance. In all these cases, if one of the parties is infected, this has led to multiple infections, as condom is not favored in a union. Refusal to be inherited was also reported to pose a danger to some widows. The argument was that when a woman loses her husband a large gap is left and the widow usually acquires a new and very lonely status.

It was also revealed that although some widows have refused to be inherited either due to their religious affiliation or personal goals, some do seek professional cleansers' called 'jakowiny' meaning 'him of the birds,' to cleanse themselves of husband's spirit and avert misfortune (chiira). The jakowiny is a paid sex cleanser and this is usually done very secretly for the sake of the woman's social status. These men have specialized in the practice and end up performing the ritual on several widows. In such a case, it is possible that a healthy woman may end up being infected, or the jakowiny could get infected and further spread the disease to his clients. This practice of "chord cutting" as explained can therefore be seen as potentially dangerous as the 'chord cutter' may pick the virus from one widow and distribute it to all the subsequent widows he sleeps with or vice-versa; and this leads to a chain of infection.

The discussants claimed that when extended inheritance is accommodated within the same family, many stable marriages are never the same afterwards- there are conflicts

and leads to broken homes within the extended family. Widow inheritance can therefore be seen as having two sides like a coin; both a good and bad side after all not all deaths are AIDS-related. The respondents feel that the laws should be tuned to favor both males and females without being biased. Only those who are willing to participate in these rituals should be involved but those who are not willing should be exempted from the exercise and not coerced or blackmailed into it. It was report that many women are inherited against their will but they do not have a place or someone to take their grievances, who do they complain to when everything of their husband's is taken, who will provide for them and their children? was a question asked by the women. In such a case being inherited seems the best option open to them.

5.2.4 Initiation rites

Initiation practices such as male and female circumcision were mentioned as a possible channel for HIV transmission. However, it brought forth all sorts of arguments as majority of the discussants were the Luo, a non-circumcising community, with an exception of groups such as the Nomiya church, the Luo Muslims, the Suba and a few youth, especially those who have lived among other communities practicing male circumcision.

Generally, among discussants, reasons for circumcision were said to be religious, traditional (beginning of adulthood and identification in society), to avoid being looked down by the circumcised friends and hygienic purposes. For those not circumcised they argue that it is not part of their tradition, fear of the knife '*pala*' or fear of the associated pain and some indicate that the ritual is very dangerous and could lead to infertility.

However, as reported by some medical staff, they argue that although the Luo culture does not recognize circumcision, some young men have began to realize its 'hygienic and protective' importance and quite a number are going to the hospitals or

clinics. One argues that to some extent lack of circumcision could increase transmissibility, due to the higher propensity for fluid retention in the sex organ skin, making it easier for fluid to find its way into the blood stream especially if a person has developed genital ulcers.

Majority of the respondents did not know whether or not there is a relationship between circumcision or non-circumcision and infection, but some said that they had heard (or read) that research findings suggest that circumcision lowers the risks of contracting an STD including HIV. However, five key informants do not agree with this suggestion. One leader vehemently said that:

'Circumcision is not the issue here. Even our circumcised brothers are dying in large numbers. Of concern, should be one's behavior, the unprotected sexual relations and/or the presence of STIs.'

Female circumcision (FC) is not done in the Luo culture, but is reportedly done in the neighboring tribes or by a few of the migrant Bantu-tribes living in the area. Reasons against FC include religious prohibition, fasten to achieve sexual satisfaction, medical complications, painful personal experience, against dignity of woman, bleeding, and tetanus. However, some communities continue to uphold the practice. One such tribe is the Kisii, a neighboring community, where FC continues to be done and is a requirement for girls especially in the rural areas. In fact some Kisii families send their children upcountry for initiation. Three participants said that they had to take their daughters for the initiation ceremony, because the elders demanded it. Grandmothers and mothers were reported as the prime decision-makers regarding this, but it was also said to serve the interests of men in preserving and promoting a male-dominated society.

In most cases, fathers are consulted to ratify the decision made by the mothers and grandmothers. Mothers-in-law are also an important influence, in that they want their daughters-in-law to be 'just like them' and view the rite as a method of forcing respect for

themselves upon their sons' wives. The decision to circumcise is made by the girl's family, and the girl is taught from her earliest years that she must respect the wishes of her family elders. Some of those sending their children for these initiation rites are educated people who know the risks involved. As one health officer reasons:

'The continuation of the practice among the uneducated or unformed is to some extent understandable, but what most of us find puzzling is why families who are well aware of the dangers associated with the practice, still continue to uphold these practices - even away from their homeland.'

Majority of the study respondents believe that FC does not make a difference in a female's behavior but predisposes a young girl to numerous dangers such as excessive bleeding, complications and reproductive tract diseases. A number of girls/boys are normally circumcised at the same time using the same blade and is done in quick succession that the likelihood of the infection being transmitted from unknown infected persons or carrier undergoing such circumcision could be possible. In addition, it was reported that the ritual, is usually characterized by celebrations late into the night and this acts as an outlet for various activities such as over-indulgence in alcohol, drugs, sex, a result of which could be pregnancy, an STD or HIV.

5.3 Economic factors

Themes that continuously arose include poverty, lifestyles, commercial sex work and long absence of spouses/partners among others.

5.3.1 Poverty (economic constraints)

Poverty came out prominently as the main factor facilitating the spread of HIV. It was argued that poverty has led to the unstable family situations prevalent in the area. Slums have mushroomed, and most people cannot afford the basic necessities of life and this has limited their effective response to the HIV infection. This was made worse by the 'El-Nino' rains that increased the prices of food crops, and ethnic clashes in some parts of

the country, causing return-migration, especially from Kisii, Mombasa and the Rift valley. These factors play a part in the downward economic spiral and to provide a climate conducive to the spread of various diseases, HIV highest on the list.

The administrative leaders complained that economic and social conditions have worsened, there is inflation, high unemployment rates, high population growth that majority of the residents cannot afford basic social services such as medical, health care, sanitation and education. This has increased the illiteracy levels, and many women have opted for small businesses e.g. vegetable, hairdressing, fish businesses etc... as survival options. Some women get trapped in relationships which they would not wish to continue with but because they have no other source of income, they think that what they are doing is the best way to manage it.

Another leader argued that although men are expected to contribute to the needs of the household, in many households it is often left to the woman to support the household single-handedly. Some men do not pool whatever resources they may have (if any) for the common benefit of the household e.g. many spent most of their money out drinking. As a result, they ignore their social functions, and do not live up to their family expectations. Limited economic options have made it easier for women to take risks and a combination of the economic pressure, changing or contradictory social roles, old and new norms and values were all said to give women a raw deal.

The fish business reported as the main income earner for most of the residents, has failed to meet their basic financial needs. During the research period, the fish produced at the lake was not a lot and this created a lot of competition among the fish buyers. Buyers from Nairobi especially the multinational fishing companies got the first priority, as their prices were good and this rendered the local woman's chance of getting fish to sell as nil. This being their only source of livelihood, it was reported that some women even go to

great lengths and have sexual liaisons with the fishermen to be assured of a regular and cheap fish supply.

Most of these fishermen and middlemen take advantage of this situation, to them this a chance to have sexual liaisons, alcohol abuse and this has increased the number of sex workers in the area. In most cases, condom use is not negotiable and there continuous to be misconceptions about condoms. These people look at it from the family planning point of view, some feel condoms have AIDS in them, others argue that it is slippery and cannot be used by them. With the high rate of HIV in the area, this process could have possible contribution to the chain of infection as most of these women and men are either married or in a consensual union. According to a key informant, around the beaches e.g. Usiigu beach, the spread is not mainly due to poverty but because of the lifestyle and ignorance of the people in the area.

5.3.2 Separation of spouses/partners

Absence of partners for long periods, either working away or in search of employment has separated partners and families, thereby encouraging the establishment of secondary sexual relationships and increase in CSW contacts which was mentioned to further facilitate the spread of HIV infection. In addition, having to bring up children single handedly; being forcefully inherited and property grabbed by the husband's family or extended family after his death; was said to leave the woman vulnerable.

5.3.3 Commercial sex work ✕

Poverty has led to marked increase in prostitution, particularly that involving girls under 15. It is becoming rampant, women are making it their business and was reported to be one of the biggest problem faced by the community. It includes girls who have just left school, young widows and young wives whose husbands do not adequately maintain them.

The CSWs reported that they go to the bars, hotels or nightclubs in the evening to attract clients. At the beer belt (e.g. Fanana and Crescent), a lot of prostitution takes place. Others operate full-time in the town centre and are commonly referred to as the 'parking ladies' because every evening they hang around areas such as Kimwa, Octopus Club, Hotel Royale, Lakers, Donna among others. In most of these clubs, the girls are as young as 15 years, while majority are under 26 years.

The women are easily identifiable as they are provocatively dressed in very minimal clothing and most of their clients include husbands living away from their families, visitors (tourists), Asians, fishermen, factory workers, policemen, men from upcountry, men on transit such as truck drivers, single senior bachelors and students. According to the CSW's they ventured into this profession to earn a living or to supplement their meager income. Four of whom work as bar maids argued that their salaries are very low (between Ksh.800-2000/= per month) and this is often not paid on time or is paid in piecemeal. They argue that for many women like themselves, sex work is not an occupation but something they engage in, from time to time in order to support themselves and their families or to overcome a transitory economic hardship.

Others lack financial support either from their families or from the father of their child(ren) and they have to meet all expenses alone; rent, food, clothing, school fees, child upkeep, family obligations etc. For some, sex work is their only source of income as explained by this woman.

'I was married young, when we had two children, my husband went to town to get work and never came back. I began doing this after I failed to find any other kind of job.'

Others earn a little money through another source such as selling vegetables, fruits by the roadside, selling goods such as food and second hand clothes, doing laundry, housework, hairstyling or plaiting hair in saloons. Price per sex encounter varied, but mainly ranged between Ksh.200-600 depending on the time of the month or on the personality of client.

All the CSWs have heard of AIDS and know that it is a dangerous fatal disease, they report that they have seen their friends and neighbors succumb to the disease. They know that they are at a great risk of STD/AIDS and argue that they come to work carrying condoms or buy from the bar counter when they get a client. However, they argued that sometimes clients are unwilling to use condoms for various reasons such as condoms diminishes the sexual enjoyment, that some type of condoms causes itching, while some clients just want 'full servicing' (sex without a condom), and which they pay more money. However, although many CSWs say they are refusing clients who do not want to use condoms, some admit that condoms are sometimes forgotten as one CSW explains:

'There is a tendency for the condom stuff to go out the window. If one is familiar with client then it is harder to be assertive about using a condom, sometimes he is seen as being 'safe' and not the kind of guy to have AIDS. However, we try to be more careful'.

Apart from refusal to use condoms, other reasons given for rejecting a client include suspected STD, general physical appearance, ill health, price offer too low, or if client uses force or is aggressive as most of the clients are reported to be drunk.

From the CSWs viewpoint, society is biased, they condemn them but do not also condemn the men who make so much use of their services. Majority say their business is impossible, it's embarrassing and shameful to explain to anyone while others feel that their work is not only sexually fulfilling but also emotionally fulfilling. One lady argued that most clients need them to mend their battered egos, someone to listen to their woes, some clients have deeper psychological implications than just sexual gratification, many are just lonely while some do it for adventure.

And due to the nature of their trade many have often mastered the art of fulfilling these needs and know how to stroke their clients egos, which has rendered them popular and have a large clientele. As condom use does not seem to be effectively used, CSW's have a higher probability of being infected or infecting their clients and leading to the

high infection rates among male clients and subsequently to high infection rates among wives or other partner(s) they may have.

5.4 Health-seeking behavior

5.4.1 STD knowledge and management

STDs awareness including HIV/AIDS knowledge was high. The respondents knew and talked openly about AIDS. They knew of at least one or more people who had died of AIDS and their conditions were sometimes explained as serious weight losses, mysterious cancer, tuberculosis or what some called 'witchcraft.' While most understood it to be a distinct sexually transmitted disease, a few still believe that it is a new name for an old illness - chiira -which was reportedly treated and cured by a traditional healer using traditional medicine called '*manyasi*'. Some respondents still believe that AIDS can be treated in a similar manner, but a large number are now skeptical as many of their friends and relatives continue to die.

The respondents were very concerned about AIDS, however, they felt that there were other diseases such as malaria, malnutrition, typhoid and cholera which were serious and needed more immediate attention. Some respondents believe that AIDS has somehow replaced other sexually transmitted diseases. They report that although STD's do exist, it is difficult to tell these days; STD's are rarely spoken, what is on everybody's lips is AIDS and whoever dies, people say 'ayaki' (AIDS in Luo) is the one that killed him or her. In this regard, people are afraid to go for treatment even for other diseases. A woman remarked that:

'Whoever suffers from any serious ailment these days, thinks it could be AIDS, there is no cure and one usually keeps quiet about it or buys drugs from the shop.'

Fear of AIDS was a major reason given for not seeking treatment of a suspected STD. Other reasons given for delaying seeking treatment of STD include; lack of money;

inadequate services; shyness/shame associated with disease, stigma (people ashamed to be seen in the queue at an STD clinic). Ignorance or lack of education (patient may not know nature of disease); some clinics insist that you bring your sexual partner(s) in for treatment and this can be a source of embarrassment or marital difficulty for the patient. One of the youth leaders said that the young people failed to go to hospitals for treatment due to fear of being viewed as morally irresponsible or to avoid embarrassment and unwanted moral advice.

In addition, most family members only seek help outside the home when their patient fails to respond to home treatment, and especially when the condition gets worse, or when there are no signs of improvement. The persistence of symptoms throughout a long period is observed as one of the danger signs and usually determines whether a person should be treated outside the home (either medical clinic or traditional medicine). Lack of proper early treatment increases the risk of serious health consequences and enhances the probability of patient transmitting the disease to new partners.

Four health workers reported the predominant STD's in the area as genital ulcerative diseases, vaginal discharge, pelvic inflammatory diseases and urethral discharge. The youth say that having an STD is very shameful, but it is not a problem if one has money for proper treatment. Their first choice for treatment options was private clinic (if the person has money), as it provides better medical attention and privacy. The alternative is to go to the herbalist who can treat one with herbs. Herbalists were also appreciated, especially the 'old grandmas' because of their herbal treatment and in that they keep their patients' illness a secret.

The government hospital was mentioned as a last resort, as there are no drugs; the nurses are harsh and usually embarrass the patients especially if they are young people. Interesting responses such as 'take pain killers and hope to get well' 'go to church for

prayers' were also mentioned. It seems that the youth who are pressed for both time and money do not often seek help medical help, therefore, proper diagnosis and treatment is not effective.

5.4.2 Traditional medicine

Belief in traditional medicine to cure many illnesses was said to be a factor contributing to high levels of STD complications including AIDS. Some opinion leaders reported that HIV/AIDS symptoms has in many occasions been confused with 'Chiira', as they have similarities and many people do still visit the herbalists, given that AIDS has no cure and it manifests itself in many different and even strange ways. 'Chiira' was seen as a traditional curse that befalls members of the community who do socially unacceptable deeds in society.

'Chiira' was the explanation for any disease, which resulted in extreme loss of weight not associated with malnutrition and suffering from medically undiagnosable ailments such as skin conditions like rashes and finally dying. So it is easy to explain HIV/AIDS as witchcraft or 'chiira' (the taboo disease) because people do not understand what it is. They add that when one is bewitched, another witch doctor with an antidote for the witchcraft – in the form of herbs called 'manyasi' is called in. By the time the patients come to realize that the herbs and rituals will not help, it is usually too late. People infected succumb to AIDS, or spread the virus unknowingly.

They added that this trust in both herbalists and healers is because they have operated for so long that they have legitimized their service. The community respects them for it and usually consults them whenever one suspected evil causes or bewitchment. The herbalists' claim they can treat many ailments including STD's and opportunistic infections of AIDS (some claim to cure AIDS). Mwita, one of the herbalists, claims that has a large number of patients than the medical clinics because of

his potent treatment that 'never' fails. However most of these herbalists were reported to be more interested in money. A young man commented that:

'These herbalists only give half the dose so that a patient goes back again and again, some even lie that they can cure AIDS, giving many sick people false hope.'

On the other hand, there were complaints that some doctors and nurses at some government hospitals demand bribes before treatment of any kind is given, and patients end up spending more money at these hospitals. Neither can many patients afford private hospitals nor clinics, which offer better, care and drugs but are more expensive. It was reported that many residents resort to home treatment or traditional herbal medicine as an alternative. In addition, decisions to go to a doctor or a herbalist were said to be multi-varied and personal, including proximity, perceptions of social class differences, and social perceptions of acceptability of herbalists.

5.4.3 Stigma and fatalism

STDs are closely associated with AIDS, for many of the same reasons, but also because of the death sentence it carries with it. A health worker interviewed also reported that families do not want to announce that their kin died of AIDS-related illness due to stigma and problems with insurance claims. They are described, as dying after a short illness 'or in some cases' long illnesses bravely borne and this has helped perpetuate the myth about AIDS not being a serious disease. It was reported that many people are afraid of people living with AIDS (PWA's) due to a lack of proper understanding about the ways in which the HIV virus is transmitted, the expense, the trauma and in many cases ignore or hide their sick relatives, unfortunately this stigmatizes them.

Some of the infected people have been said to become aggressive or revengeful towards the society, and whereby they knowingly spread the virus. For instance, it was reported that some men who had found that they were HIV+ have resulted to raping girls

and women especially if they are travelling home in the late hours, others believe that having sex with young girls who they think are HIV free may increase their life span.

More widows are refusing to be inherited, and it was reported that some of these widows today are a stigmatized group, regardless of whether husband died of AIDS or not. People are scared of widows, assuming that their husbands have died of AIDS. This has led to some of these widows leading a very lonely life while others report abandonment by relatives. This has led to many of these widows relocating to urban or other areas to avoid everybody's questioning and suspicious eye.

In addition, due to lack of money majority end up in urban slums and some have resorted to risky lifestyles. Their children are no longer able to go to school and some those left behind with extended family left behind are mistreated and run away; and this has increased the number of orphans and street children in Kisumu Town. One Social Worker says that the government should react immediately to this and punish all sex offenders heavily and a law should be passed on these offenders who are knowingly infecting others.

Most of the youth believe that they or their friends could get AIDS and related this risk to their sexual behavior. Some based their vulnerability to fatalistic beliefs about getting AIDS. For example, a form four leaver who is awaiting results, says:

'Contracting the disease is accidental, when one leaves the house, they do not know they are going to have an accident, it's just bad luck and the same can be applied for HIV. Some get it others do not. Even those who abstain from sex could still get it from a 'bush' or 'quack' doctor. Anyway, eventually we are all going to die.'

We see there is already a strong stigma that is attached to STDs due to their connection with AIDS. This stigma has led to many residents not seeking medical attention and many are getting a fatalistic attitude, hence increasing the chances of STD's complications and probably HIV risk.

5.4.4 Conclusions

The interview and FGD sessions proved very effective not only in facilitating respondents' participation. The respondents are aware of some of the subtle and not-so-subtle seriousness of the AIDS epidemic, of the dangers they face, however, this has not to a large extent, changed their behavior. Their responses clearly underline major factors contributing to the increase in spread of STD/HIV cases in Kisumu.

According to this section, the reasons for the high incidence of AIDS in Kisumu are many. However, it is noteworthy to mention the crucial emergent issues such as traditional values, which tend to give room to the spread of HIV. Chief among these is wife inheritance, a practice which goes on because members of the local community fear being cursed for breaking cultural norms or due to coercion by family elders; polygamy and levirate marriages continues to play a significant role. Related to this phenomenon of wife inheritance, is "chira" which is a curse resulting from breaking cultural norms and taboos. The symptoms of "chira" are said to be closely similar to those of clinical AIDS, therefore, the confusion between "chira" and AIDS.

Poverty, attributed to joblessness emerges as a main factor. This has forced many young people to seek their own means of survival and forced married women to seek sexual partners outside of marriage or relationship. Young girls are lured into relations with older men, 'known as sugar daddies' because they come with gifts, money or other favors attached. Poor environmental conditions, migration and long-term spousal separations may condition one to multiple or non-marital sexual behavior. Others reasons include the prevailing gender relations, as entailed in men's double standards (entrenched beliefs that they should control and dominate in sexual relations), hence the inability of women to successfully negotiate risks in sexual relations in the interest of mutual safety.

The youth have been blamed as they begin sexual activities at a very young age and many girls have dropped out of school due to pregnancy. Premarital indiscriminate sex does not only expose them to early pregnancy but to STDs including HIV infection. More young girls are getting infected at earlier ages than boys their age are, this age gap at infection indicates that young girls are getting infected not by their age mates but probably by older men. However, some are simply powerless to resist (leading to cases of rape, coercion or force by relatives or partner).

This behavior of the youth has also been blamed on western influence, economic reasons (lack of employment), lack of constructive leisure activities, drug abuse, family instability, conflicts and loss of parents. This has led to many youth running away from home and into risky activities, some become street children, succumbing to exploitation. A discussion about sex between men and women or boys and girls or between parents and their children is also lacking. Some advertisements, T.V, and video shows (especially of pornographic nature) do not express the desired effect.

Findings also reveal interviewees' perceptions of AIDS-related risk. Women complain of inability to take measures to protect themselves from possible infection. From observation, regardless of the socio-economic circumstances in which they find themselves, the Luo men seem to be consciously and constantly preoccupied with the fact that they are men, and that this condition differentiates them radically from women. This domination inside and outside marriage continues to put women at risk of infection, however, this is not to suggest that women do not also infect men.

Finally, it can be argued that the actual risk of infection to individuals depends on the overall prevalence of HIV in the community as well as, the protective or preventive behavior adopted by the members of community to avoid infection. And as infection rises in the general population so does the likelihood of encountering an infected partner.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.0 Concluding summary

Kisumu town and its environs have seriously been devastated by HIV/AIDS and it is one of the regions in Kenya that is leading in HIV/AIDS infections. The major aim of this study was to document the influence of socio-cultural and economic risk factors facilitating the transmission and spread of STD's/HIV. This region though metropolitan (with major economic activities), is predominantly of Luo ethnic group, who are known to have deep-rooted cultural norms and values. It is important that the hypothesis put forward in this thesis be examined carefully based on the analysis, to enable us establish what the thesis has brought forward as contributing to the high rates of HIV infection and whether it has met its objectives. Both the quantitative and qualitative findings in this study provide useful insights into the factors predisposing the society to the spread of STD/HIV infection.

6.1 Link with study objectives

According to the **first objective** of the study, which was to identify important socio-cultural factors such as the sexual behavior characteristics, marital status, different forms of marriage, other beliefs and practices that may explain the spread of HIV. A number of factors have been identified to explain this. Early exposure to sexual experiences through cultural, economic and peer influence seem to predispose HIV to the youth and to the continued high levels of unprotected, multi-partner relationships among the adults. The majority of young, single, married women and men in the community have had a multiple partner(s), and as hypothesized, this increases their chance of getting HIV infection. The probability of an individual being in contact with an HIV-infected person increases with his/her total number of sexual partners.

Although, majority of the respondents reported to be monogamous: however, sex outside of marriage or permanent relationships was common. Some did admit that they had had non-spousal partner(s), some maintained as girlfriends, mistresses, or by visiting a CSW. Traditions continue to play an important role, for example, men having other partners is condoned and polygamy is still common. Data indicates that more men are married more than once and to much younger partners. In addition, married women also report that they had other partners for various different reasons ranging from adventure, financial constraints, and revenge and for pleasure. These concurrent partnerships probably have a moderate impact on the AIDS epidemic in the area.

Apart from pre-marital sex and a high level of extra-marital sexual contacts, there is unequal sexual mores for males and females, which makes the marital or sexual contacts of males such a dominant factor in the risk of infection within unions. Men seem to accumulate more partners in their lifetime and especially before first marriage, however, the data indicates that the HIV prevalence is highest among women than men, and especially at younger ages. This suggests that women are more susceptible to infection and hence, tend to become infected at a younger age than men. Some of these women at highest risk of infection are wives, some of whom have no risk factor other than being a wife. The inability of spouses/partners in a consensual union to raise and discuss the issue of protective behaviors, even when they perceive their spouse/partner(s) to be at risk of STD or HIV infection has also contributed to an increase in infection rates.

Some traditional practices were mentioned as having a positive effect on the transmission and spread of HIV. For instance, polygamy is a common practice and 'tero' widow inheritance, although, on the decline continues to be upheld. The study suggests that there is some evidence of a causal relationship between lack of male circumcision and incidence of infections. As indicated, there seemed to be a relationship between lack

of male circumcision, STD's and HIV. The discussants suggest that this relationship could be through lack of proper penile hygiene, hence, accumulation of smegma or microorganisms. These microorganisms could worsen a situation where an infection has set in, acting as a catalyst for HIV infection. Reports indicate that a few of the younger men seem to be taking up circumcision, for reasons varying from peer pressure to infections. Female circumcision as a possible danger was mentioned, although the practice is also not common in the study area.

Religious affiliation is likely to influence one's attitude toward contraceptive use and one's attitude to protect oneself. Women who belonged to religious affiliations that are pronatalists and oppose the use of contraceptives seem less likely to use contraception especially the use of condoms, even when exposed to the risk of STD/HIV. In addition, the belief or concept of '*chiira*' among the Luo continues to be held, and since sex, sanctions nearly all socio-economic activities among the Luo people, the link between '*chiira*' and AIDS arises especially through ritual sex (mentioned as one major factor in the transmission and spread of HIV). Although people continue to see their relatives, friends, neighbors and family die of AIDS or AIDS-related complications, some attribute this to witchcraft or account these deaths to '*chiira*.' Belief in '*chiira*' also affects the people's health seeking behavior (people do not seek for AIDS treatment in hospital); in that diseases, illnesses and their cure continue to be given traditional explanations. The confusion between "chira" and AIDS must be clarified and the clarification emphasized in the awareness campaigns.

The **second objective** of the study aimed at identifying important socio-economic risk factors (e.g. occupation, education, CSW contacts); that may explain the spread of HIV infection. The argument here, was that the type of occupation (or employment status) is likely to influence one's number of partners and hence one's chances of contracting HIV

infection. The study established that factors such as the rapidly increasing supply of job-seekers, the effects of harsh retrenchments in the public sector, unemployment and increased poverty, have forced individuals more and more to rely upon precarious forms of livelihood for survival.

It was, for example, reported that some fishermen, sugar belt workers among others (whenever there is a boom) or people on transit such as truck drivers, sales people have been known to drain their proceeds into commercial sex. Due to limited economic opportunities many residents have also sought employment away from their families or their rural base, and this has separated partners and families for varying lengths of time and further encourage multiple sex relationships (short-term, unprotected, opportunistic relationships), that facilitate the spread of HIV in the study area.

Women's perception of their own power to protect themselves from HIV infection is poor. Most women tend to feel that condom use should be initiated by partner/spouse, hence they lack decision-making power in sexual issues. Condoms have been associated with promiscuity, a factor that inhibits the women from carrying or enforcing its use with partner. And as such, many say they are not able to refuse sex or demand abstinence even when partner/self is infected with STD or HIV, but go on and put themselves or partner at risk.

Inequality in education has also seen many women drop out of school early either due to lack of fees, early pregnancy or for early marriages. Many women reach primary and mid-secondary level of schooling before dropping out. As a result, it was reported that many women are dependent on men for material and financial support. This influences their inability to insist on safer sex practices (such as fidelity and condom use) and exposing them to possible infections. This probably contributes to the high levels of HIV seen among the young women especially those in younger ages.

Use and abuse of alcohol, drugs and illicit brews was also identified. The hypothesis that people who more often drink alcohol are likely to engage in non-regular sexual liaisons, hence putting one at risk of contracting an STD/HIV infection. From field observation, alcohol consumption is a common, popular leisure activity in all most social venues (such as brewing dens, nightclubs, hotels and bars). It was therefore not surprising that over a half of the respondents report regular consumption of alcohol. Although not strongly indicated, data shows that there is some association between alcohol consumption, multiple partnerships and unprotected sex. Possibly as it acts as a catalyst for 'high risk' behavior i.e. it offers opportunity for respondents to participate in activities conducive to risk taking and/or to engage in sexual relations. However, I do not claim to have objective proof of the absolute extent of its validity in the spread of HIV.

The study further argued that sexual contacts with commercial sex workers are likely to influence the spread of HIV/STD's in the area. As evidenced, CSW was found to be on the increase as seen from the number of young girls on the streets, in nightclubs, bars or lodgings in search for potential clients. CSW is based on financial constraints and dependency on men; the outcome of which is all forms of prostitution. Many of the women come from rural areas with high expectations of finding a job in the town, which they do not find, resulting in their becoming CSWs.

Most of these women fear the inability to feed their children than the remote possibility of the risk of HIV infection. Their attitude can be summarized as "better die of AIDS than die of hunger," and this attitude makes some of them to prefer not using condoms as this generates more income and protection is no longer their concern, but the concern of the client. And as most of these sexual encounters occur under the influence of alcohol or other drugs, it can probably be argued that, for most clients, condom use would not easily be remembered or effectively used.

These women are dependent on their clients and their ability to take measures to protect themselves from possible infection is very limited. The conclusion is that there is a very strong link between economic need and exposure to infection. This vulnerability to HIV infection is once again, linked to women's status in society and in the family. The issue of power relations is raised once again, suggesting its' prominence in predisposing women to high levels of HIV infection.

The **last objective** of the study was to identify the coping mechanisms at an individual level. This included when and how they prevent ~~and~~ control and treatment STDs, negotiation of risk (abstinence, 'zero-grazing,' and the use of condoms) and identification of any impediments to condoms use; that may further explain the spread of HIV infection. The study establishes that STDs are common in the area, as seen by the infection rates among the sample population. The study also provides some evidence linking the presence of STD's with an increased risk of HIV infection.

While quite a number of men sought medical treatment on getting an STD, they rarely encouraged their partner(s) to do so. Respondents prefer to get self-treatment (i.e. buy drugs from kiosk/shop) rather than seek treatment from a medical facility. Literature has indicated that poor STD management could lead to recurrent cases and re-infection between partner(s), leading to a higher chance of exposure to HIV infection. The study concludes that this lack of proper STD management is a serious impediment to the control of the spread of HIV/AIDS in the study area.

Lack of proper condom use has been indicated severally as a major factor in the spread of HIV infection in the study area. Condom use is low, sporadic and inconsistent while 'zero-grazing' (having one faithful, uninfected partner) and abstinence were not favored. Some people argued that they began a sexual relationship by using condoms, but after a few days, protection was forgotten or sometimes ignored, and most of these

relationships are of a casual nature. One major constraint in the use of condom-use is the powerlessness of women to make partners use due to refusal by men to use them.

Some women indicated that they would like their partner to use condoms or would be agreeable to condom use if it was suggested by their partner(s). It was argued that it is inconceivable to think of a situation where a wife would refuse to grant sexual favors to her husband on demand or insist on condom use without incurring the wrath of the man. Other major constraints are. People also tend to look at the condom from the family planning point of view and this has still not been wholly accepted. Hence, condoms are viewed with suspicion and clouded with numerous negative rumors and myths.

6.2 Conclusions

From observation there is too much interaction between culture, religion and the family. The Luo culture is not quite dynamic, making it hard to implore change in attitudes and sexual behavior. For example, some older members of the society are still guided by traditional norms while among the younger population, there continues to be an erosion of sexual morals, norms and values. Lack of communication between parents and their children, between men and women, about sexual matters has been blamed for this. This has created a wide generational gulf leading to adolescents' widespread ignorance about behavior that exposes them to infection. Most of the youth get their first information about sexuality and HIV/AIDS from their peers whose views about sexuality are based on rumors.

Some people are still ignorant, and continue to predispose themselves to the risk of HIV. Some people do not care and such kind of people have a care free attitude towards their health. Findings are reflective of high engagement in unprotected multiple sexual behavior, whether among youth, spousal or non-spousal and the trend of condom use in such sexual relationships is still low despite condom promotion programs.

The rise in poverty is a yet another disturbing trend playing a major role in spread of

HIV or acting as a major obstacle to the effective control. Kisumu town is undergoing rapid urbanization, as more and more people migrate to the area in search of employment, business ventures, pleasure and settlement areas. The area has a high population of the urban poor, and as a result, risky behaviors are prevalent such as commercial sex work. Young girls seem to be the main target for this, some of them being naive and/or ignorant were reportedly easier to lure into sex (and especially into unprotected sex) with money, gifts, promise of a job or marriage among others.

With the high rates of HIV in the community, many women or men are found on their own. For a widow, this is a very trying time, as most of them do not have any source of income as they probably relied on their husbands' earnings. Some of those who have turned against inheritance have been forced to move to slum areas to cope and others into commercial sex work.

Lastly, conflicts within families (some leading to separation or divorce) were mentioned as worsening the situation. As a result of these broken homes, there has been an increase in street children, who have run away from home due to ill treatment or they had nobody to care for them, most of whom suffer from sexual abuse, most enter into risky, dangerous activities that highly predispose them to the risk of infection. These include relationships where some people use their economic power to infect them.

All these factors impact on the community members susceptibility to STD's and HIV prevalence and the findings warn of potential hazard for HIV infection within the society. These findings indicate the need for efficient actions to help combat the spread of HIV/AIDS. This study has made an important contribution to a better understanding of the scenario on socio-cultural and economic factors influencing the transmission and spread of HIV within Kisumu Municipality.

6.3 Recommendations for Policy makers

Most of the major findings are of direct relevance to policy, mainly in relation to reproductive health and for the district-level planning. The following are major recommendations emanating from the study, which are useful to policy makers:

Pre-marital sex is high among the adolescents, we recommend that Social Ethics studies be introduced in all schools, institutions of higher learning and in church or youth meetings, community 'barazas,' to bring STD/AIDS education into the school curriculum, with a view to increasing personal power to control one's vulnerability to infection and to encourage 'risk-reducing' behavior of the youth. Apart from introducing STD education, it would be equally pertinent to help the young to avoid idleness by organizing community activities that interest them, for example possibilities of starting clubs, associations, like football or drama groups, and to explore possibilities to generate income.

Adults also need to help young people to avoid the problems associated with adolescent sexuality by initiating free discussions with them on STD/AIDS. Parents should find a way of talking to their children freely. At the same time, if there is a wide generation gap between them, then maybe, parents should find younger relatives to talk to their adolescent children, for instance, aunts and uncles or cousins. In addition, to bridge the gap between adults and the youth, educational activities for parents as well as community education are desirable to create more awareness of the problems and needs of adolescents. This needs a consolidated effort by parents, teachers, social workers, and government to come into advice, counseling and giving material, skill, support, and continuous education. Prevention efforts could have a greater chance of success among adolescents before their initiation into sexual activities than when their sexual habits are well ingrained a reason why social ethics education should be started in primary school.

Since lack of condom use came out prominently, the study recommends that widespread IEC activities on condom use be promoted and widespread distribution of condoms be prioritized as an integral and vital part of enhancement of sexual health care for prevention of STD's, unwanted pregnancies and HIV infection. In addition, there is need for strategies involving both men and women in decision-making about condom use. It is not enough to convince people to use condoms, but to continuously sensitizing the community or villages on the subject. Family planning services and reproductive biology should be provided to everyone in need: including young women and young men, to avoid risk of unwanted pregnancies, untrained abortions and venereal diseases.

Heterosexual relations are the major subject matter of ethics of custom and this was expressed in socio-cultural beliefs, norms and values. The society has developed a set of norms and values that relate to and regulate their way of life, especially with regard to their sexual behavior, social and economic activities. The community needs to be more involved in culturally relevant strategies to protect themselves and their families against HIV as prevention depends on the co-operation of all society members'. The traditional customary rules, moral rules of procreation and behavioral are imperative factors that should be addressed by community elders and policy makers. Of immediate concern is the re-examining and redefining the system of sexual cleansing in widow inheritance and the subsequent problems associated with being a widow.

In addition, some cultural practices contradict health messages. For instance, many people must continually be made to know that AIDS is not 'chiira', that although the symptoms may be similar, the causes are different, and that AIDS has no cure yet, and that social, cultural and health education are the major means of combating the spread of AIDS disease. Many people must also be made to understand that as much as traditional medicine is an important factor, they also need to seek medical treatment for STDs, to get

prompt treatment and avoid complications due to delayed treatment. Most people therefore, need to be educated on the advantages of early diagnosis and treatment of STD's and the control of HIV syndromic infections.

The relationship of traditional initiation (FC) for females with multiple health complications, calls for strict measures to be given to those practicing or enforcing its continuation in secret. Putting in mind, that male circumcision is not a cultural practice of the Luo, (the major group in the area), this issue should be handled sensitively and with understanding. The practice can be introduced to young boys, as it assumed to be of more protective importance if done before onset of sexual activities (Multi-site study report).

Health educators need to be more innovative and made more culture-sensitive to the cultural values of the locals. This is because what is acceptable in the west, might not be acceptable in Kisumu, for example, as culture still plays a big role in the people's lives, decisions and outlook. Information, educational and communication (IEC) campaigns should be tailor made to suit the population in question. For instance, it was reported that some condom adverts convey a negative image, such as condoms are only found or used by promiscuous people, that condoms are for the young. This does not express the desired effect or is wrongly interpreted and could lead to many older people shying away from its usage. Supportive evidence of negative attitudes towards condom use has been repeatedly shown. In addition, there is need to use local terms or concepts in HIV/AIDS education including social values at different levels. In this case, campaigns should be done at the grassroots level, using vernacular (Dholuo) and should be held in the interior and not only in the urban areas to correct any misconceptions. Messages about sexual health therefore, have to use easily recognized 'codes' congruent with the socio-cultural context in which they are used, especially imaginative and culturally-relevant.

The influence of poverty has been reported as having the most devastating effect. It manifests itself in powerlessness, political apathy, subservience, sycophancy, illiteracy, hunger, and economic dependence *inter alia*. In other words, poverty, is not one problem but a series of inter-related problems. If poverty is not addressed in its entirety, no amount of effort aimed at alleviating economic hardship can proffer the magic solution every policy-maker desires. Real development should, imbue both individuals and the community with a strong sense of social purpose as human beings living in a dignified social set up. This is lacking in Kisumu. For instance, efforts to decrease women's vulnerability to HIV infection need to go hand in hand with interventions targeted at broader societal issues especially those concerned with improving the status of women in society and those that involve men to take responsibility for their role in the transmission of HIV.

One other problem in Luo-Kisumu is that many important decisions, which directly affect their lives, are made outside the area. For example, the Lake Victoria fishermen have little say in the marketing of their catch, the sugar farmer is at the capricious mercy of the unreliable factories and the cotton industry is virtually dead because the farmer has no say over pricing. For sustainable development to take place, ways and means must be found to correct such imbalances. Many people should be empowered to develop new coping strategies because the old ones have clearly failed. Education should also be intensified among the fishermen and fishmongers along the lake, some of the women fishmongers need to be protected from exploitation and helped to carry out their businesses safely. In addition, to change behavior one has to change the material conditions because these two are inter-linked. For instance, economic need has maintained the practice of commercial sex work and has lessened the likelihood that such a woman will protect herself or her partners through condom-use, despite AIDS dangers. In this regard, there is need to educate these women on negotiation for safer sex; to protect themselves and their clients adequately and

what they need is to be counseled, rather than judged or harassed by police. There is also a great need for alternative means of income through income generating activities to reduce dependency and change of behavior.

Socio-economic development is a powerful tool for STD management. Presence of STD's especially chancroid and/or other genital ulcerating diseases (e.g. chlamydia, gonorrhea and syphilis) have been found to make HIV infection more likely. There is need to launch or intensify expanded STD control programs as early as possible i.e. treat STD's or opportunistic infections in time and the importance of general hygiene enforced. The health units should be made more attractive and pleasant to the patients (both STD and HIV). The health personnel should discourage and/or avoid ill treatment and stigmatizing the health care users. This can be done through training and sensitization on health care provider-user relationships. There is also need for government and donors to improve and support community based organizations to deal more efficiently with the issue of stigma and help people with HIV/AIDS to come to terms with their infection, their need to use protective measures and avoid further spread. There is need to assist widows who do not want to be inherited find alternative means of earning an income to prevent them from entering into sex work. In addition, there is the need to address the place of interest groups like the church, and other groups in the fight against AIDS. The stand of the church is not clear and in some cases is not realistic and all groups involved in HIV/AIDS prevention and control activities should reach a consensus on how well to help the people.

Most importantly, the community should be accorded the chance to identify local opportunities and offer local solutions in relation to HIV/AIDS, with the assistance of the development agencies and not *vice versa*. Countless programs in the area have come to naught because they address the epidemic from their own perspective. For instance, a program can say poverty in the area is economic, but it is only partly economic. Many other

factors have to be taken into consideration and only the community can identify them best. Implementers therefore need to establish the real needs of the community, to come to terms with the people's culture and the root causes of the problems. In the context of Luo Kisumu, it would, therefore, serve well, any agency or policy-maker to understand these concepts from all possible perspectives, if the HIV problem is to be adequately addressed. In conclusion, the study therefore suggests that policy makers need to create an appropriate environment, provide clear national guidelines on HIV/AIDS management and provide direction on controversial issues. Of urgency is the need to address poverty, to empower women, to provide legal protection against exploitation and ethical issues, develop social policy on socio-cultural behavior.

6.4 Recommendations for further research

Based on study findings, certain questions arose, which we would recommend to those who wish to carry out further research on this area of HIV/AIDS in Kisumu. It is of great importance now to investigate what practical methods, tools and incentives can be evolved to address the above mentioned problems. Information, education and communication methods have already been used in campaign efforts, but their effects are not as pronounced, some have been known to harden existing prejudices and predispositions. Where are these campaigns going wrong? What can be done at this stage to ignite community and individual attitudinal change? What methods should be adopted to accelerate attitudinal change or what strategies will reflect creative and indigenous responses to the challenges? Studies should be done on this.

The study did not encompass the influence of political, environmental and psycho-biological factors, and their association with STD/HIV spread. It is recommended that for future AIDS research such effects should be taken into account: e.g. environmental factors should be explored if CSW's interventions are to be satisfying. There is need for more

insights into sexual mixing patterns to understand better the dynamics of the epidemic. Within the same 'risk behavior' groups why are certain people more likely to be HIV positive unlike others. How are these different individuals connected via risk networks? Future studies should pay special attention to targeting younger women who were found to be especially vulnerable to HIV because of multiple partners and other factors.

The study has also established the existence of very low condom use despite high levels of HIV/AIDS, hence there is need to research further to determine factors associated with non-use of condoms and ways use can be increased. Lack of male circumcision and alcohol consumption needs to be explored in a more quantified study and also do the study in a comparative manner (for instance, between equal numbers of those non-circumcised versus those circumcised) and to find out what implications such practices have for the transmission of STD/HIV before generalizations can be made.

More investigation should be done to help develop strategies to reduce high risk-behavior, increase IEC. This study did not look into the issue of commercial sex workers and their clients; a group of people who can be referred to as a 'high risk' category of people. Quite a lot has been done on commercial sex workers (UNICEF, 1996; Population Council, 1998), but no information has been documented about the clients, very little is known about their characteristics, their ways of life, social status, psycho-social factors and sexual preferences. And as such it is not possible to implement effectively intervention programs that include commercial sex workers and their clients. A study is needed to address this and these findings will assist in determining how the intervention programs should be organized to reach them too.

Appendix I

Table 1: KISUMU DISTRICT BASIC DEVELOPMENT INDICATORS

	KENYA	KISUMU
Total population	27,700,000	868,191
Population 0-14	11,832,000	335,935
% population under 16	54%	47%
% population 10-18	24%	24%
Population Annual Growth	4.1%	3.3%
Crude Birth Rate	5.4	N.A
Total Birth Rate	7.9	N.A
% completing Primary School	62%	80%
% of Population Urbanized	22%	32%
GNP per capita (USD)	300	131
GNP per capita of poorest 40%	65	59
% of Pop. Below absolute Poverty level:		
Rural	10%	N.A
Urban	55%	N.A
Number of AIDS cases	17,260	4,578
Immunization coverage	N.A	68%

Note: Number of AIDS cases in Kenya (officially reported to the World Health Organization as of May 31 1991, and in Kisumu, to the Ministry of Health as of 30 June 1991.

Source: *Kisumu District Development Plan 1987-1993 (1992)*.

Table 2: Divisional information

Division	Locations	Sub-locations
Winam	6	33
Muhoroni	10	26
Maseno	4	24
Nyando	6	7
Upper Nyakach	5	7
Lower Nyakach	8	10
Total (N)	51	159

Source: *Kisumu District Development Plan 1987-1993 (1992)*.

Table 3: Government health facilities/personnel data

Facility	Number	Health staff	Support staff
<i>District</i>			
Hospitals	3	628	385
Health centres	5	194	132
Dispensaries	26	-	-
<i>Municipality</i>			
Health centres	5	40	-
Dispensaries	5	-	-
Total (N)	44	871	517

Source: Kisumu District Development Plan 1987-1993 (1992).

Table 4: Data on schools, pupils and teachers

Schools	Number	Pupils	Teachers
Nursery			
Rural	269	18,118	300
Urban	129	14,000	164
Primary			
Rural	519	141,000	4,389
Urban	44	28,372	767
Secondary	86	17,171	86
Youth polytechnic	43	-	-
Others	10	-	-
Teachers centres	19	-	-

Note: These were not affected by the extension of the municipal boundaries in 1988.

Source: Kisumu District Development Plan 1987-1993 (1992).

Table 5: Prevalence of important STI's, 1997

Sex	Syphilis %	Chlamydia %	Gonorrhoea %	Trichomonas %	HIV %
Males	1.7	1.7	0	-	20.9
Females	3	4.6	0.9	29.1	31.0
Average	2.5	3.8	0.6	29.1 (f only)	25.9

Source: Preliminary results of the Multisite Kisumu Study (Biomedical data), by Population Council

Appendix II

QUESTIONNAIRES FOR THE FIELD STUDY

Indicated in all questionnaires

- Name of interviewer
- Place of interview
- Time of interview
- Date of interview

a) ADOLESCENTS/YOUTH QUESTIONNAIRE GUIDE

Biographical Information

1. What is your name?
2. How old are you?
3. What is your occupation?
4. For how long have stayed in Kisumu?
5. Ethnic group

General attitude towards life and values

1. What do you do to have fun? Why? (Activity/why)
2. What do you want out of life?
3. What makes you feel good or bad about yourself?
4. What is it that makes one popular/unpopular?
5. Is sex important in life? (If it has not been mentioned up to this point)

Initiation of sexual activities and STD's

(To give privacy to some of these questions use pocket voting i.e. writing on small papers the answer then dropping in a box, with no names).

1. At what age do you think adolescents start engaging into sexual activities? Male/female
2. What is it that makes one popular/unpopular?
3. Have you ever had sexual intercourse? If yes, at what age did you start having sex?
4. How many sexual partners have you had in the past 12 months?
5. What usually makes them decide to have sex the first time? What drives them into it?
6. What types of STD do have you heard of? How does someone know if he/she has a STD?
7. How would you feel if you found out that you had a STD? And about the person who gave you the STD?
8. Where would one go for treatment? Why?
9. Do most people go for treatment as soon as they discover they have a STD or do they wait, and why?
10. What can someone do to protect himself/herself from getting a STD?
11. How do you feel about these methods of prevention?

HIV/AIDS knowledge

1. Which is the most frequent source of HIV/AIDS information?
2. Do you know the mode of transmission?
3. How do you protect yourself against it?
4. What kind of people get AIDS? Do you think you or one of your friends could get AIDS?
5. What are some reasons for youth engaging in promiscuous behavior? What drives them into it?
6. Finally what other factors do you feel are the major contributors to the spread of HIV/AIDS?

End of interview

Thank you for your time and co-operation.

b) COMMERCIAL SEX WORKERS QUESTIONNAIRE GUIDE

Biographical Information

1. How old are you?
2. What is your profession?
3. What made you venture into this profession?
4. Is it an occupation or an occasional engagement?
5. What other occupation(s) do you have?
6. For how long have lived in Kisumu?
7. Where do you live?

Social issues

1. Where do most CSW's live and commonly work?
2. Are there different categories of CSW's?
3. Has the presence of AIDS changed any of your sexual experiences? If yes, which ones and how?
4. Have you ever used condoms during sex? If yes, how often?
5. Have you ever refused to have sex with client(s) until he agreed with you on a matter? If yes, why?
6. Who are commonly your clients?
7. Why do think men visit CSW's? (Give reasons/views)?
8. Finally what other factors do you feel are the major contributors to the spread of HIV/AIDS?

End of interview

Thank you for your time and co-operation.

c) KEY INFORMANTS/MEN QUESTIONNAIRE GUIDE

Biographical Information

1. What is your name?
2. What is your profession?
3. Type of marriage/marital status
4. How old are you?
5. For how long have you been in Kisumu?

Perception of social issues:

Kindly comment on the following: -

1. What is the situation in Kisumu as concerns, impact of HIV/AIDS?
2. Are there unacceptable sexual relationships/behaviors that are now common in the community? If yes please state which ones and how common they are.
3. Are there any traditional practices that you feel put people at risk of getting AIDS? If yes, give reasons.
4. Are there any traditional practices that protect people from getting AIDS?
5. Are there some rituals, ceremonies and practices that involve sex? Explain? Are they mandatory/optional?
6. Do people know about AIDS in the community? What do they think it is? How is it looked at culturally?
7. Do you know or have you heard about the cure of the disease? (Maybe modern or tradition medicine)
8. Do you think traditional medicine is effective in treatment of STD's and HIV/AIDS?
9. Why do you think people prefer home treatment or a herbalist medication?
10. Is it common for men in this community to have more than one partner? Give reasons (multiple sex partnerships and extra-marital affairs).
11. In general, how do people in society view it? Do they accept it? Why or why not?
12. How common is it for men to go to prostitutes (CSW's)?

13. In general, why do you think people go for such affairs?
14. Do the community practice circumcision? Why? Is there a cultural attachment to this?
15. What do you think about F.C? Is this practice allowed? Does the practice increase the chance of getting HIV?
16. Has the presence of AIDS changed people's sexual practices? If yes, which ones and how?
17. Do you think that women have the right to refuse sex if their partner(s) refuse to use a condom?
18. What other suggestion do you have that may be a factor facilitating the spread of HIV/AIDS?

Additional questions for church leaders

We have a few more questions we would like to ask you.

1. Is the church involved in prevention campaigns? How?
2. If yes, what does the church teach?
3. What are your feelings about condom use?
4. Do you think the cultural practices mentioned above, are still important or redundant?
5. How are the above situations being controlled and what are the drawbacks?

Additional questions for the health officials

1. Do you carry out male circumcision? Is it commonly done?
2. How common is female circumcision? How is it practiced?
3. In your opinion, is there a link between non-circumcision, STD's and HIV? Explain
4. What are the common causes of STD's? Are many STD patients coming for treatment?
5. If no, why do you think the STD patients take so long to seek medical attention?
6. How are the relations between health care providers and seekers?
7. Is there stigma towards STD/HIV patients? Explain
8. If yes, do you think this enhances the spread of AIDS? How?
9. How are the above situations taken, controlled and what are the drawbacks?

Additional questions for traditional practitioners and elders

1. Should give more insight on traditional views: about widow inheritance (*tero*), ritual sex, chira, circumcision ...
2. And their relationship with HIV/AIDS: based on the local community (Luo) perspective.
3. Address the issue of traditional medicine (its effectiveness, acceptability and use, AIDS treatment)

End of interview

Thank you for your time and co-operation.

d) FOCUS GROUP DISCUSSION GUIDE

Introductions:

Researchers to introduce self, purpose of discussions and length of discussion. Individuals to introduce themselves by Name, Age, and Place of origin.

Discussion questions

1. What are the reasons for adolescent sexuality
2. Are there unacceptable sexual relationships/behaviors (sexual abuse, harassment, adolescent sex etc.) that are common in the community? If yes please state which ones and how common they are.
3. How do you view contraception? Do you think this has enhanced or reduce the spread of HIV/AIDS?
4. When people get involved sexually, why is it that sometimes they have safer sex and sometimes they don't?
5. (Check safer sex experiences and social interactions)
6. Are there any traditional practices that you feel put people at risk of getting AIDS? If yes, state them and reasons.
7. Are there any traditional practices that protect people from getting AIDS?
8. Are there some rituals, ceremonies and practices that involve sex? explain? Are they mandatory/optional?
9. (If not mentioned yet, ask) Do ceremonies such as wife inheritance, dry sex practice, "chiira," sexual cleansing during funeral rights still exist? If yes, explain and give reasons, how do people understand each?.
10. Does the community practice circumcision? Why? Is there any cultural attachment to it?
11. Do you think that female circumcision should continue?
12. Are there problems due to circumcision
13. What is your opinion on female circumcision? Who decides on circumcision issues?
14. Do you think these practices increase the chance of getting STD's including HIV? How?
15. Is it common for men in this community to have more than one partner? give reasons.
16. (multiple sex partnerships and extra-marital affairs).
17. In general, how do people view it? do they accept it? Why or why not?
18. In general, where do the people go for such affairs? CSW's, girlfriends, and boyfriends? Why?
19. How common is it for men to go to prostitutes (CSW's)?
20. What reasons might there be for a woman to refuse to make love with her partner?
21. (Women's rights under specific conditions, bargaining)
22. In general are women willing to use condoms? Are men willing to use condoms? Does a woman have the
23. right to ask the partner to use condoms? How will he respond?
24. Has HIV/AIDS changed or influenced your life in anyway? How? And generally speaking, has the presence of AIDS changed people's sexual practices? If yes, which ones and how? If no, why do you think so,

End of discussion

Thank you for your time and co-operation.

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