



## **EAC/AMREF LAKE VICTORIA PARTNERSHIP (EALP) PROGRAMME**

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

## **HIV SERO-BEHAVIOURAL STUDY IN THE FISHING COMMUNITIES ALONG LAKE VICTORIA IN UGANDA**



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**Recommended Citation:** HIV&AIDS Baseline Sero-behavioural Study in the Fishing Communities along Lake Victoria in Uganda

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Lake Victoria Fisheries Organization (LVFO)

Interuniversity Council for East Africa (IUCEA)

African Medical and Research Foundation (AMREF)

**Funding Agency**

Swedish International Development Agency (Sida)

## **ACKNOWLEDGEMENT**

This survey report has been produced as an undertaking of the Lake Victoria Basin Commission (LVBC) Secretariat; it is an output of a consultancy which was commissioned by LVBC Secretariat. The LVBC Secretariat together with its partner organizations initiated and funded the survey whose conduct led to the development of this report. The consultants are highly indebted to LVBC Secretariat for all the support extended to them during the assignment.

The consultants are also grateful to everybody who contributed in one way or another to the success of the survey. The survey went through a number of phases, namely; survey planning, design and preparation, fieldwork implementation, laboratory testing of samples, data management and analysis, as well as report writing and dissemination of the survey report. During these phases, the consultants interacted with a number of stakeholders. The cooperation and input of these stakeholders was very invaluable. Special thanks go to the survey respondents from the forty six surveyed fish landing sites. Without their support and cooperation, the survey would not have been successful. We are also grateful to the management and workers of Kajansi Rose Flower Plantation for providing support and facilities for pre-testing the survey. The National Technical Team (NTT) reviewed the protocol and gave input towards its finalization. For this, the consultants are highly indebted.

Special tribute goes to the fieldworkers (research assistants) who conducted the fieldwork (mobilization for the survey, conducting interviews, counseling of the respondents, sample preparation, and performing HIV testing). The central level laboratory personnel who performed the laboratory tests and the data entry clerks who entered the survey data made enormous contributions. The consultants are grateful for this.

The LVFO office in Jinja provided an invaluable support. The HIV focal person of LVFO provided technical support supervision during the survey fieldwork implementation. Last but not least, the survey was funded and supported by the East Africa Lake Victoria Project (EALP) based at the Lake Victoria Basin Commission Secretariat in Kisumu. AMREF provided logistical support in form of vehicles for supervision and transporting the survey teams to the field. The LVBC Secretariat provided a ship which was used to access the hard-to-reach islands. Great appreciation goes to the crew of the ship that was able to safely deliver the survey team members to and from the very hard to reach islands. Sida also provided support for the study. Without the above support, the survey implementation would not have been possible

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## **ABBREVIATIONS**

ABC	-	Abstinence, Be Faithful and Condom use
AIDS	-	Acquired Immunodeficiency Syndrome
AMREF	-	African Medical Research Foundation
ANC	-	Antenatal clinic
ART	-	Antiretroviral treatment
ARVs	-	Antiretroviral drugs
BCC	-	Behaviour Change Communication
BMU	-	Beach Management Unit
CBOs	-	Community based organizations
CORPs	-	Community Owned Resource Persons
CSOs	-	Civil society organizations
CSWs	-	Commercial sex workers
DBS	-	Dry blood spots
EAC	-	East Africa Community
EALP	-	East Africa Lake Victoria Project
EIA	-	Enzyme immunoassay
FAO:	-	Food and Agricultural Organization
FGDs	-	Focus group discussions
HB HCT	-	Home based HIV counseling and testing
HCT	-	HIV counseling and testing
HIV	-	Human Immunodeficiency Virus
ID NOs	-	Identification numbers
IEC	-	Information-Education-Communication
KI	-	Key Informants
LC1	-	Local council 1
LVB	-	Lake Victoria Basin
LVBC	-	Lake Victoria Basin Commission
LVFO	-	Lake Victoria Fisheries Organization

MAAIF	-	Ministry of Agriculture, Animal Industry and Fisheries
MARPs	-	Most-at-risk-populations
MOH	-	Ministry of Health
MoLG	-	Ministry of Local Government
MMC:	-	Medical male circumcision
NTT	-	National Technical Team
NSRL	-	National STD Reference Laboratory
NGOs	-	Non-governmental organizations
OIs	-	Opportunistic infections
PLWHA	-	People Living With HIV and AIDS
PPS	-	Probability Proportional to Size
RCTs:	-	Randomized clinical trials
STI	-	Sexually transmitted infections
PMTCT	-	Prevention of mother to child transmission
STD	-	Sexually transmitted diseases
UBOS	-	Uganda Bureau of Statistics
UHSBS	-	Uganda HIV Sero-Behavioral Survey
UNAIDS:	-	United Nations Joint Programme on AIDS

## **GLOSSARY OF COMMON TERMINOLOGIES**

**Casual sex:** Sex with a non-marital, non-cohabiting partner.

**Comprehensive HIV knowledge:** The percentage of respondents who gave correct answers to three specific questions: (1) people can reduce their risk of getting the AIDS virus by using a condom every time they have sex and by having sex with just one partner who is not infected and who has no other partners; (2) people cannot get the AIDS virus from mosquito bites or from sharing food with a person who has AIDS, and (3) a healthy-looking person can have the AIDS virus.

**Cross-generational sex:** Non-spousal sex by a woman age 15-19 years with a man 10 or more years older.

**Extramarital sex:** Sex by currently married people with casual partners.

**Higher risk sex:** Sex with non-marital, non-cohabiting partner.

**Fishing community:** A community that is substantially dependent on, or substantially engaged in the harvest of fishery resources to meet social and economic needs; the fishing vessel owners, operators, crew and fish processors that are based in such a community.

**Median age at first sexual intercourse:** The age by which 50% of the respondents had initiated sex, calculated from cumulative single-year percent distribution of age at first sexual intercourse.

**Multiple sex partnership:** Concurrent or serial sex with multiple partners over the last 12 months; and during lifetime.

**Paid sex:** Sex in exchange for money, favor or gift.

**Premarital sex:** Sex before marriage. All premarital sex is automatically characterized as higher-risk sex because it involves having sex with non-marital/non-cohabiting partner.

**Primary abstinence:** No sexual experience over lifetime; the proportion of youth (age 15-24) who have never had sex.

**Secondary abstinence:** The proportion of youth who have ever had sex but not in the past 12 months.

# EXECUTIVE SUMMARY

## Background, aim and survey methods

The survey fieldwork was conducted in forty six fishing communities of the Lake Victoria Basin of Uganda in August 2010. The main aim was to establish HIV prevalence among fishing communities, the associated drivers of risk and vulnerability; and the effectiveness of HIV and AIDS response.

The survey methods consisted of individual interviews, focus group discussions and key informants interviews. A desk-review was conducted to document HIV service availability and utilization, as well as institutional policies and structures for the coordination and delivery of HIV services. Laboratory testing for HIV was conducted both in the field and at central level.

A total of 911 women and men aged 15-59 years were randomly selected and interviewed by four fieldwork teams. Of the 911 respondents, 559 (61 percent) are men and 352 (39 percent) are women. Each fieldwork survey team consisted of 4 interviewers, 1 counselor, 1 laboratory technician and 1 supervisor. Before the main survey, a pretest was carried out. All respondents provided written consent before the interviews and blood draw. The survey protocol was approved by the Science and Ethics Committee of the Uganda Virus Research Institute; and cleared by the Uganda National Council for Science and Technology. Data was captured using EPIINFO following a double data entry strategy.

## Main findings

**HIV prevalence and risk factors for HIV infection:** Twenty two percent of the surveyed fishing community members are infected with HIV; HIV prevalence among women is higher (25.1 percent) than among men (20.5 percent). HIV prevalence is highest among widows/widowers (40 percent) followed by that among divorced people (32 percent). Furthermore, HIV prevalence is highest among respondents who had their first sex before the age of 15 years; where it is 36 percent in women, 21 percent in men and 30 percent in both women and men. HIV prevalence is higher among those respondents who engaged in higher risk sex compared to those who did not do so. Additionally HIV prevalence is higher among respondents who reported three or more lifetime sexual partners, compared to those who reported one or two lifetime sexual partners.

Overall, HIV prevalence is higher among uncircumcised men and respondents with STI than in circumcised men and respondents without STI, respectively. HIV prevalence is 11 percent in circumcised men and 27 percent in uncircumcised men. Furthermore, among men with STI, HIV prevalence is 10 percent in circumcised men and 34 percent in uncircumcised men. Among men without STI, HIV prevalence is 12 percent in circumcised men and 25 percent in uncircumcised men.

**Source of HIV information:** Radio is the commonest source of HIV/AIDS information and education. Of all information acquired on HIV prevention methods, limiting sex to one partner is perceived as the most important information acquired from the radios.

**HIV-related knowledge:** Knowledge of single HIV prevention methods is almost universal among the surveyed populations; and the knowledge is similar in both women and men. Correct knowledge of single HIV prevention method ranges from 84 percent among respondents who say that abstaining from sexual intercourse protects against HIV infection to 97 percent among respondents who say that their chances of getting the AIDS virus can be reduced by limiting sex to one partner who is not infected. The level of comprehensive knowledge is however moderate; being 38 percent among women and 41 percent among men. The level of comprehensive knowledge is higher among those with secondary or higher level of education compared to those who stopped at primary level. Knowledge of PMTCT is reasonably high; more than two thirds of the respondents (84 percent of women and 73 percent of men) know that HIV can be transmitted from a mother to her child by breastfeeding. Knowledge about antiretroviral drugs (special drugs) for PMTCT is high; 73 percent of women and 69 percent of men know that there are such drugs that a doctor or nurse can give to a pregnant woman infected with the AIDS virus to reduce the risk of transmitting the virus to the baby. Overall, women have a higher level of PMTCT knowledge than their male counterparts.

**HIV-related attitudes:** Misconception about HIV/AIDS is low in the surveyed fishing communities. The proportion of respondents who know that a healthy-looking person can have the AIDS virus is 91 percent in both women and men. The proportion who knows that AIDS virus cannot be transmitted by supernatural means is 88 percent in men and 83 percent in women. Furthermore, the percentage of women and men who knows that AIDS virus cannot be transmitted by mosquito bites is 48 and 54 percent.

The majority of respondents have a caring attitude. The percentage of respondents who says that they would be willing to care for a relative who is sick with AIDS in their own household is 96 and 97 percent in women and men, respectively. The vast majority of respondents, 87 percent of women and 85 percent of men say that they would buy sugar or fresh vegetables from a vendor if they knew that he/she is HIV positive. On whether to allow a female teacher who has the AIDS virus but is not sick to continue teaching in the school, 76 percent of women and 79 percent of men agrees with this position. About 56 percent of women and 63 percent of men say that if a member of their family got infected with the AIDS virus, they would not necessarily want it to remain a secret. When analysis is done combining all the four indicators, the result shows that 40 percent of women and 45 percent of men express positive attitudes on all four indicators.

**HIV-related behaviors:** Only 2 percent of all the surveyed respondents reported that they are practising primary abstinence. The proportion of the 15-24 year old group reporting never playing sex is 7 percent overall, 7 percent in women and 8 percent in men. Overall, 5 percent of the respondents aged 15-24 years reported secondary abstinence; among women and men of similar age, the indicator is 2 and 7 percent, respectively. The percentage of respondents who had first sexual intercourse by age 15 years is 46 percent in women, 26 percent in men and 34 percent in both women and men. The median age at sexual debut is 16 years in women and 17 years in men. Among women and men aged 15-24 years, the proportion of respondents reporting condom use at first sex is 48 and 36 percent, respectively. Overall, condom use at first sex is higher among those who know a source of condom than in those who do not know a source of condom.

In respondents aged 15-49 who had sexual intercourse in the last 12 months, the proportion who had intercourse with more than one partner is 11 percent in women, 46 percent in men and 33 percent in both women and men. The mean number of lifetime sexual partners is 3 in women and 11.4 in men. Thus, multiple sexual partnerships are more common in men than in women. Those respondents whose origin is 100 kilometers or more from the current place of residence are more likely to report engagement in multiple sexual relationships than those born in the area of current residence.

The proportion of women and men aged 15-49 years who engaged in higher-risk sex is 24 and 43 percent, respectively. As expected, the indicator is highest among the never married. Overall, the proportion of respondents who say they used a condom every time they had sexual intercourse with non-marital, non-cohabiting partners in the last 12 months is 41 percent in women, 47 percent in men and 45 percent in both women and men. The proportion of men aged 15-49 years who reported sex with a commercial sex worker in the last 12 months is 10.4 percent.

The proportion of sexually active women and men who reported having experienced STIs over the last 12 months is 24 and 28 percent, respectively. Among those who reported STIs, the proportion who sought for advice/treatment is 76 in women and 74 percent in men. Forty percent of the surveyed men are circumcised.

**HIV testing and care:** Virtually all respondents (98 percent) said that they are willing to share their HIV test results with others. Of those respondents who had received their HIV test results, about 16 percent reported that they are HIV positive. Among those who shared their results, 76 percent said that they are taking Cotrimoxazole daily; and 34 percent said that they are taking antiretroviral drugs daily. Overall, 77 percent of women and 62 percent of men reported that they have ever had HIV tests. Therefore, women were more likely than men to have received HIV testing. About one third of respondents said that they got tested in the last 12 months and received their results.

## **Conclusion**

The survey has unraveled the magnitude of HIV infection and risk factors for HIV infection in the fishing communities. In order to tackle the above, there is need to design and implement interventions that address the issues identified.

# CHAPTER 1: INTRODUCTION

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## 1.1. Background

In Uganda, the first case of AIDS (Slim disease) was reported in 1982 in Kansensero, a fishing village located in the Southwestern part of the country (Serwadda et al 1995). Since then, the HIV/AIDS epidemic has spread to all parts of the country, with some parts more affected than others. Similarly, some population sectors are affected more than others. As per the 2004-05 Uganda HIV sero-behavioral survey, HIV prevalence among adults aged 15-49 years was 6.4 percent (Ministry of Health 2006). The same survey showed that women had a higher HIV prevalence than men. Furthermore, the survey revealed that HIV infection was associated with multiple concurrent sexual partnerships, having sexually transmitted infections (STI) and not using condoms during higher risk sex.

On the other hand, at the global and regional levels, following the report of the first AIDS cases, new cases have been reported in all parts of the universe covering different regions, countries and population sectors. Of all the regions, Sub-Saharan Africa has suffered most from, and bears the greatest toll of the epidemic. As reported by the United Nations Joint AIDS Programme (UNAIDS) in December 2008, of the 33.4 million people who were living with HIV in the whole world in 2008, the majority (22.4 million – 67.1 percent) was reported in Sub-Saharan Africa (UNAIDS 2008 World AIDS Epidemic Update December 2008).

While all population sectors are vulnerable to getting HIV infection, other population sectors are at a higher risk. For instance, it has been observed that any kind of profession which involves migration and being away from home makes people more vulnerable to getting infected (Seeley et al 2005). Fishing communities, agricultural plantation workers and long-distance truck drivers are some examples of the mobile populations who often work away from home. Surveys that have been conducted in fishing communities located in a number of countries have revealed that HIV infection among people in fishing communities are between 4 and 14 times higher than the national average prevalence for adults aged 15-49 years. It has also been observed that fishing communities are at much more risk of acquiring HIV infection than agricultural communities and long-distance truck drivers.

In order to explain the above observations, some efforts have been made to identify factors that promote HIV infection in fishing communities. In a review paper to assess the social, economic and cultural factors that shape fisher folks' lifestyles and their vulnerability to HIV transmission, it was reported that fishing communities have a higher risk of HIV transmission because of multiple factors, namely; the time fishermen spend away from home, their high mobility, their access to daily income in an overall context of poverty, their background characteristics, the ready availability of commercial sex in fishing ports and risk taking behavior (Seeley and Allison 2005). These researchers further suggested that the same characteristics of fishermen also affect attitudes and access to

treatment; and that for mobile workers, and remote communities, the inequalities in access to services are a continuing fact of life.

Additionally, violence has been cited amongst the risk factors that contribute to contracting HIV infection by mobile populations (Gazi et al, 2008). In their study to determine risk factors of HIV transmission among boatmen who travel back and forth between Teknaf and Myanmar, Gazi et al reported that they found high prevalence of symptoms related to sexually transmitted infections; and that condom use was rare, HIV knowledge and personal risk perception for acquiring HIV was low and boatmen participated in risky sexual activities.

Yet another risk factor for HIV infection among fisherfolks is high prevalence of STIs. In 2008, Ngayo and colleagues in their study entitled “Epidemiology of human papilloma virus infection among fishermen along Lake Victoria Shore in the Kisumu district, Kenya.” reported that they found high prevalence of HPV among the surveyed fishermen; and that HPV was associated with HIV infection. HPV are the causative agents of benign and malignant lesions of cutaneous and mucosal epithelial tissues; and are a significant source of morbidity and mortality worldwide. On the basis of the findings, these researchers recommended that the surveyed community could benefit from enhanced STI and HIV prevention interventions.

Gender inequality is another risk factor for HIV infection among fishing communities. A relatively higher level of HIV prevalence among women than in men has been attributed to gender inequality. Moeniebe and Mafaniso in a South African Policy Brief 27 asserted that “the subordinate position of women within fishing communities makes them vulnerable to abuse and exploitation”. They suggest that due to their vulnerability arising from high unemployment rates and lack of alternative livelihood opportunities, women in fishing communities may be forced into short term survival strategies such as transactional sex and may be unable to insist on condom use. To address these concerns, they recommend the following: 1) Accelerate programs to empower women and educate men on women’s rights. 2) Reduce the vulnerability of women and girls to HIV infection by reducing poverty among women. 3) Ensure that existing policies and laws protecting women and girls from gender-based violence are implemented. 4) Ensure that policies and customs do not discriminate against women and girls.

Furthermore, in 2008, it was observed that a sex-for-fish practice within some Kenyan fishing communities in which young female fish sellers develop sexual relationship with fishermen and middlemen in exchange for fish was exposing a new generation to HIV. Martin Odit also flagged gender inequality as a driving factor for HIV infection in women of fishing communities. In his desk review report, he observed that the general lack of income generating opportunities in fishing communities have been associated with women engaging in beer brewing, commercial sex work and that small-scale fish trading is often carried out with transactional sex. Odit concluded that women in fishing communities are susceptible to HIV infection and are very vulnerable to the impact of infection.

To address the burden of HIV infection in fishing communities, Moeniebe and Mafaniso among other recommendations indicated the following: 1) Identify and develop champions

within fishing communities for peer-to-peer education. Peer educators should be community members that can identify with others of the same age and social group within their communities. In line with this recommendation, in Uganda, the management of beach management units (BMUs) is being involved in service deliveries to fishing communities. 2) Find ways of tackling fatalism (refusal to change behaviors even though aware of the potential fatal consequences) in fishing communities by promoting positive attitudes about life. Fishermen's attitudes may affect their uptake of HIV prevention services. Some of them view HIV infection as less risky than drowning during fishing. Hence, their concern do center on survival in water than to taking preventive measures against HIV infection. 3) In collaboration with the health sector, make health services more easily accessible to remote fishing communities, for example by improving infrastructure. 4) In developing responses, involve the fishing communities because the communities will be best placed to define the changes that will reduce vulnerability to HIV/AIDS.

## **1.2. Interventions targeting fishing communities**

In view of the aforesaid vulnerability of fishing communities to HIV infection, there is need to take appropriate steps to address the magnitude of HIV infection among the fisher folks. This is so because HIV infection has a lot of ramifications ranging from that at household level to national level. At the affected household level, HIV infection leads to increased health expenditure due to AIDS, reduction in work hours or unemployment resulting from illness, lower incomes as a result of lower capacity to earn a living; thus causing an increase in poverty, social exclusion within their communities and funeral expenses in case of loss of the HIV infected person. Furthermore, when the HIV infected person eventually dies, the dependants may have no one to depend on. At the national level, HIV infection in fishing communities can lead to economic loss due to reduction in fishing.

The need for interventions that respond to the HIV/AIDS epidemic among fishing communities has been underscored (Ann Gordon 2005). In her review paper, she noted that more and more information is becoming available on HIV/AIDS in the fisheries sector, and that experience in tackling it is growing too. Nevertheless, the efforts that have been made so far have been patchy and insufficient. In view of this, she recommended that there is need for a much larger and more coordinated effort by a wide range of organizations and groups to develop, resource and implement policies to reduce and counter the effects of HIV/AIDS in fishing communities. She further noted that in its absence, many African countries with important fisheries will be hard-hit by HIV/AIDS, with all human suffering, loss of life and falling productivity this entails; and that, consequently, these countries will also forego the important and much needed opportunity for rural economic growth and poverty reduction that fisheries can provide.

The above recommendation underscores the need for a comprehensive approach of addressing HIV/AIDS in the fishing communities that requires a multisectoral approach. For example, cooperating with sectors such as health, education, gender and agriculture is necessary in dealing with the impact of HIV/AIDS (FAO). Promoting gender awareness and empowerment to enable women to play a greater role in the sector and share in the benefits is another strategy. In 2005, FAO convened a meeting of experts to offer policy solutions to the HIV/AIDS problem in the fishing sector. The experts noted that due to the

high HIV prevalence and the alarming death rate from AIDS in fishing communities, a special consideration is required to fight against HIV/AIDS in these communities (FAO expert meeting 2005). The meeting also noted that working with international donor agencies like UK's DFID and Germany's GTZ, FAO is supporting country-specific and sectoral studies on HIV/AIDS in the fisheries. The experts produced a policy brief aimed at providing governments, international donors, relief agencies and others with recommendations on how to better respond to AIDS in fishing communities. One of the recommendations is the tailoring health outreach programmes to match the rhythms of daily life in fishing communities; that Health Ministries need to improve access to testing and care facilities by adapting them to the mobility and irregular working hours in fishing communities. It was noted that "Free testing or counseling won't do much good if it is scheduled at a time when everybody is out fishing".

Currently, there are, however, only some small-scale HIV prevention, care and mitigation initiatives that have been started among fishing communities in some countries. In Namibia, workplace-based prevention measures have been established in seafood companies. In the Democratic Republic of Congo (DRC) and Benin, peer group education has been successful in raising awareness of HIV/AIDS and in changing behaviors. Saving schemes have been established in Congo for vulnerable women and girls in fishing communities, to mitigate the need for casual sex and prostitution. In Tanzania and Congo, primary health services are now being provided to mobile and migrant fishers. However, in view of the small-scale nature of the above interventions, they are unlikely to have impact given the scale of the epidemic (New Agriculturalist 2005).

### **1.3. Rationale of the survey**

Fisheries industry plays a significant role in the national economic development. Fishing contributes to food security, as well as income that boost the domestic product. At the level of local fishing communities, fishing has a pivotal role in the survival of people. A regional study done in the Lake Victoria basin of Uganda, Kenya and Tanzania showed that the main source of household income at the beaches comes from fisheries. Fisheries on the average were the main source of household income for 87% of respondents (Nunan et al 2007).

Given that fishing is the main source of livelihood in fishing villages, there is need to sustain the capacity for fishing by ensuring HIV-free fishing communities. HIV/AIDS has been recognized by fishing communities to be a hindrance to fishing industry. Akumu and colleagues reported that the high incidences of HIV-related diseases crippled fishing activities around Lake Albert. The surveyed fishers said that sometimes they would not have enough energy to carry out comprehensive fishing and instead they would spend a lot of time out of fishing activities, one to several months and fishing hours were significantly reduced.

Therefore, in order to guide the planning of HIV/AIDS services targeting the fishing communities at the Lake Victoria Basin, it is prudent to determine HIV prevalence and HIV-

related behavioral risks in the fishing communities located in the area. Similarly, there is need to establish the range, availability and utilization of HIV/AIDS services, as well as existence of HIV-related policies and coordination structures; because they have a bearing on both HIV prevalence and behaviors. It is in this context that the current survey was organized. To date, comprehensive HIV information is lacking in the region. Moreover, most of the interventions target the general population as a whole leaving the fishing communities inadequately targeted.

In line with above, the Lake Victoria Basin Commission (LVBC) has taken steps to establish a framework for improving the effectiveness of the HIV/AIDS responses targeting mobile populations; including migrant workers in fisheries and agricultural plantations. It commissioned baseline studies in Uganda, Kenya and Tanzania with four major dimensions; namely, to determine a) HIV sero-prevalence, (b) behavioral risks among the populations of focus, (c) service availability and utilization, and (d) coordination, institutional policies and structures.

This study was designed to address the information gap alluded to earlier. The study has shed light on HIV status in, and the availability of HIV/AIDS services in fishing communities. The data generated will be used for planning; as well as to facilitate the formulation of an evidence-based framework. The information generated will also complement the national HIV/AIDS database. This report captures the highlights of the results and key recommendations arising from them.

#### **1.4. Objectives of the survey**

The purpose of the survey is to establish the HIV prevalence, the associated drivers of risk and vulnerability and the effectiveness of HIV and AIDS response for fishing communities in the Lake Victoria Basin. Specific objectives include:

1. To determine HIV sero-prevalence in fishing communities in the Lake Victoria Basin in Uganda in fishing communities.
2. To establish the demographic and behavioral risk factors, knowledge and attitudes regarding HIV and STI transmission among fishing communities.
3. To establish the range, breadth, availability and utilization of HIV and AIDS related services in fishing communities.
4. To determine the existence and effectiveness of policies, programs and coordination structures on HIV and AIDS in the fishing communities.

#### **1.5. Organization of the report**

This report is organized according themes representing the different aspects covered by the survey.

The first chapter provides background information; including studies that have been conducted in fishing communities, the interventions targeting fishing communities and the rationale of the survey.

Chapter 2 presents the survey objectives and methods used for data collection. In addition, the sample size estimation approach, survey design, sampling procedures, the data collection tools used, survey mobilization strategies and the procedures for data management and analysis are described.

Chapters 3 to 10 present the results of the survey starting with the survey response rates followed by the characteristics of the respondents, and then the HIV-related knowledge, attitudes and behaviors, HIV prevalence, HIV care, findings of the key informants and focus group discussion interviews; as well as the HIV/AIDS policy and services; and their coordination structures.

Finally, the report concludes with the last chapter by a presentation of the discussion of the key issues that were unraveled by the survey; as well as the recommendations made. Sample data collection tools and consent forms are included in the report as appendices in case of interest of some readers.

# CHAPTER 2: METHODOLOGY

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## 2.1. Overview of Survey Design

The study was cross-sectional in design with a focus on forty six (46) fishing communities located in the Lake Victoria Basin of Uganda (Table 2.1). To allow generation of comprehensive data, a combination of survey methods was used. This approach was adopted after recognizing that no single method by itself would yield sufficient information and understanding of the HIV risks and vulnerabilities among the fishing communities. A fishing community is defined as a social and economic group of persons living together in a locality and who derive their livelihood directly or indirectly from fishing activities. According to LVFO, the fishing communities of Lake Victoria are made up of boat owners, boat crew, fish processors, boat makers, local gear makers or repairers, fishing equipment dealers and managers, and fish monger or traders.

The survey methods included desk review of documents, structured questionnaire interviews, focus group discussions and key informant interviews. The structured questionnaires were administered to respondents to obtain quantitative information on demographic characteristics, HIV-related behaviors, knowledge and attitudes, and STI. Focus group discussions (FGDs) were used to obtain a deeper understanding of sensitive topics such as sexual behaviours. The key informant's interviews were used to engage policy makers, managers, programme people and funding agencies to provide information on HIV/AIDS policies, HIV/AIDS services, and coordination structures for the delivery of HIV services to the fishing communities. Each of the specific survey methods is further discussed below.

## 2.2. Study sites, sample size determination and sample selection

The study area consisted of forty six fish landing sites located in nine districts (Table 2.1). Some of landing sites are in the mainland, while others are in the islands.

The main variable used for sample size determination is HIV prevalence. The HIV prevalence figure used was obtained from the Uganda HIV Sero-Behavioral Survey 2004-05 (UHSBS 2004-05). The following assumptions were taken into consideration during sample size estimation:

1. HIV prevalence among the fishing communities was estimated at 8.5 percent (HIV prevalence for Kampala and Central Region in the Uganda HIV Sero-Behavioral Survey 2004-05).
2. The permissible error allowed was 2.5%.
3. The response rate among fishing communities was estimated at 70 percent.
4. A confidence level of 95 percent.
5. Design effect. Considering that sample of the fishing communities was to be drawn

from multiple clusters (fish landing sites), a design effect (d) was applied during the sample size estimation.

The sample size estimation formula used is;  $n = \frac{z_{\alpha}^2 pq}{\ell^2} \times d$ ,

Where  $z_{\alpha} = 1.96$  at 95% confidence level,

$p = 0.085$  (8.5%) = HIV prevalence,

$q = 1 - p = 0.915$

$\ell$  = The permissible error = 0.025

$d = 1.3$

On the basis of above, an estimate of a minimum representative sample size of 920 respondents was obtained for all the 46 landing sites. The 920 consisted of 20 members from each of the landing sites. The 46 landing sites were selected from a total of 431 landing sites that existed in the Uganda Lake Victoria Basin then, using systematic sampling. The approach ensured that a district with more landing sites had a higher representation in the sample. For the survey implementation, the sampling frames in the selected 46 landing sites were updated prior to the selection of the 20 members. The above was done in collaboration with the BMUs' leadership, fishing department and the village council leadership.

## **2.3 Sample selection**

### **2.3.1 Inclusion criteria**

The inclusion criteria for the survey were:

1. Women aged 15-59 years.
2. Men aged 15-59 years.
3. Persons involved in direct fishing work or fish industry supporting work at the selected fish landing sites (fishers, fish traders, boat crews, etc).
4. Other persons who were residents of the selected fish landing sites.
5. Consent for the survey.

### **2.3.2 Exclusion criteria**

Following the above criteria, anybody who did not meet the criteria was excluded from the study (Figure 2.1). On the other hand, the samples for the survey covered all women and men aged 15-59 years who met the above criteria.

### **2.3.3 Sample selection procedures**

As shown in figure 2.1, a multi-stage sampling procedure was used to get the required sample. The Primary Sampling Unit (PSU) was the fish landing site and the Secondary Sampling Unit (SSU) was an individual residing in the landing site. As mentioned earlier, in order to obtain an adequate minimum sample size, a total of 46 landing sites were selected and in each, 20 members were selected; yielding a sample size of 920 respondents. We opted for the landing sites instead of the Beach Management Units (BMUs) because using BMUs would leave out landing site members who are unregistered with the BMUs. Although some of the unregistered BMU members may not be involved in direct fishing work, they may be involved in supporting services for the fish industry. For example, they may be involved in food vending, transportation and work in recreational facilities such as bars.

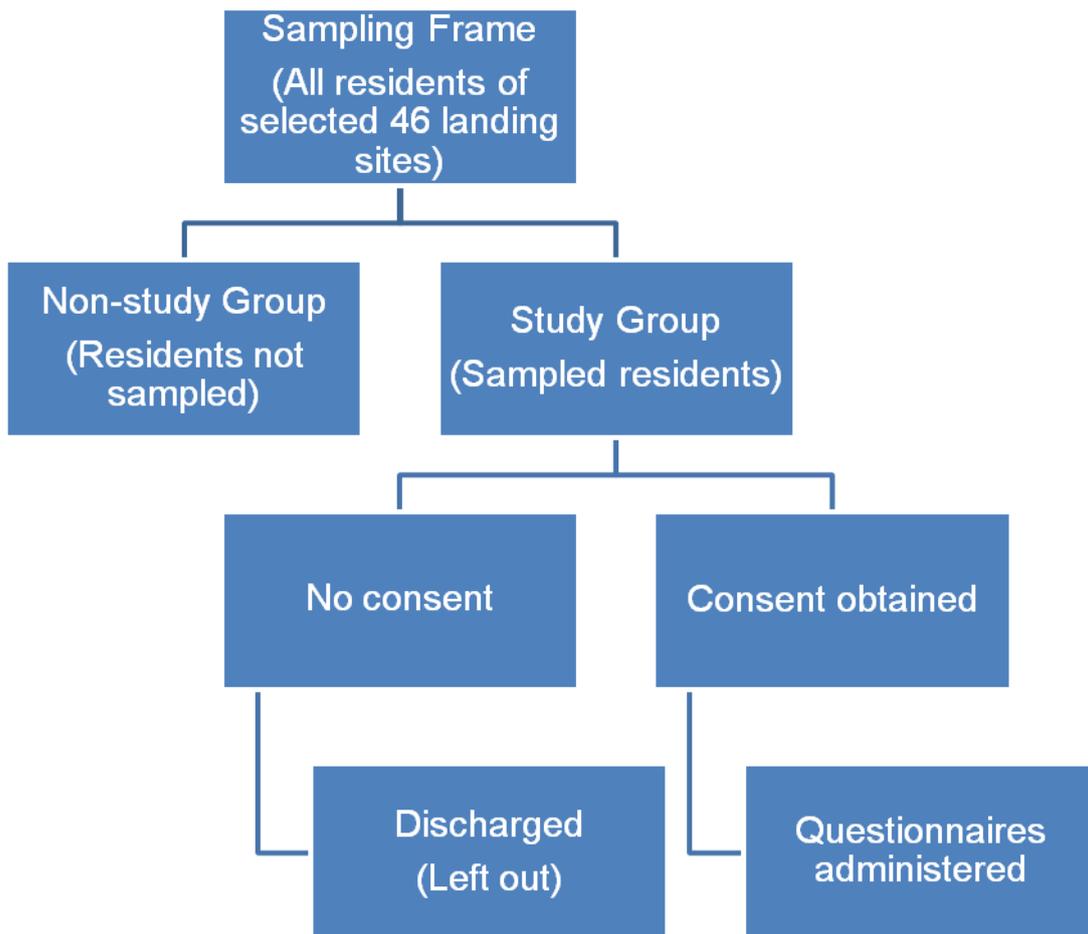
The 46 landing sites were selected from a total of 431 landing sites that existed then in the Lake Victoria Basin using systematic sampling method. This approach ensured that a district which had more landing sites had a higher representation of landing sites (PPS).

Before the individual respondents were selected, the sampling frames of the 46 landing sites were updated to ensure that all residents and those engaged in earning their livelihood from fishing related work; and who are aged 15 years and above were registered. The updating of these lists was done by the Fisheries Department in collaboration with the leadership of the BMUs. The lists consisted of individuals; and not households. In essence, the updated lists comprised of both BMU members and non-BMU members.

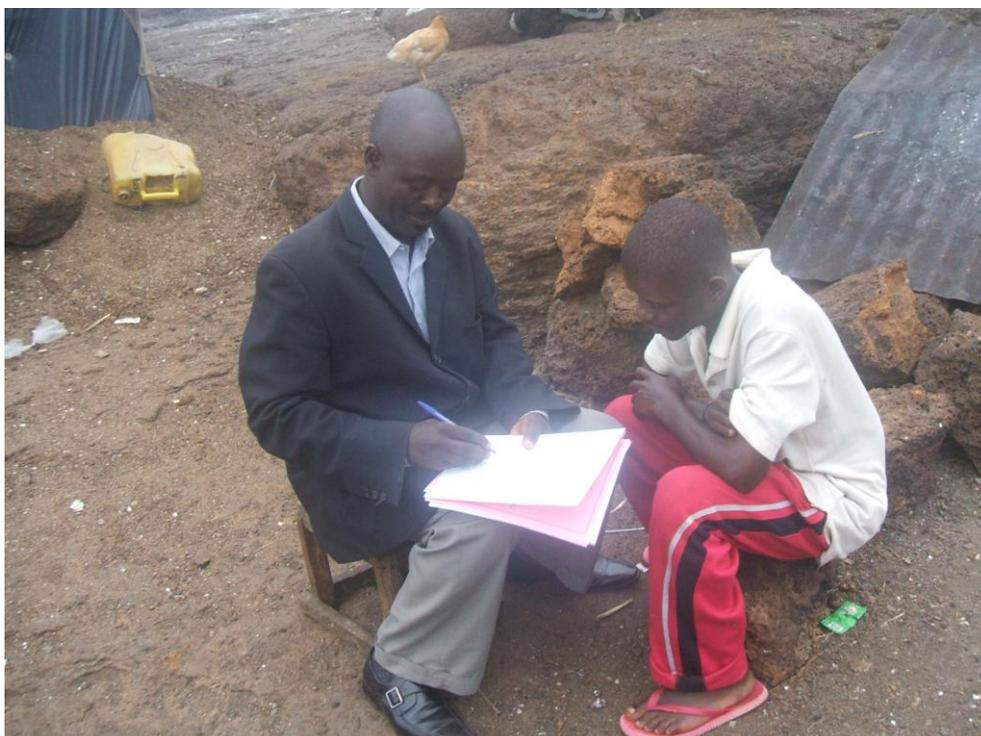
When it came to the selection of the 20 individuals from every landing site, the following procedures were used:

1<sup>st</sup>, all the landing site members were listed. 2<sup>nd</sup>, all the household heads located in the LC1 zone(s) where the landing site is located were listed. 3<sup>rd</sup>, the heads of the households were requested to list all the household members in the age bracket of 15-59 years. Arising from above, a final list of eligible respondents was obtained. From the final list, 20 respondents were selected randomly from a random list that had been generated.

**Figure 2.1; Schematic flow of the sampling procedures**



**Interview in progress**



**Table 2.1: Study sites**

No.	District	Name of Landing Site	Location
1	Bugiri	Buyondo	Mainland
2	Bugiri	Matiko	Mainland
3	Bugiri	Sidome	Mainland
4	Bugiri	Namavundu	Island
5	Bugiri	Bukana Beach	Island
6	Bugiri	Bumalange	Island
7	Bugiri	Malindi	Island
8	Bugiri	Kandege	Island
9	Bugiri	Bububi	Island
10	Kalangala	Lwazzi	Island
11	Kalangala	Misonzi	Island
12	Kalangala	Mukalanga	Island
13	Kalangala	Lwabaswa	Island
14	Kalangala	Ddajje	Island
15	Kalangala	KasekuloTtubi	Island
16	Kalangala	Kasenyi	Island
17	Kampala	Ggaba	Mainland
18	Masaka	Lambu	Mainland
19	Masaka	Bulingo	Mainland
20	Mayuge	Iguluibi	Mainland
21	Mayuge	Bwonda	Mainland
22	Mayuge	Musoma	Mainland
23	Mayuge	Kabuuka	Mainland
24	Mayuge	Maganda	Mainland
25	Mpigi	Nabisukiro	Mainland
26	Mukono	Ssenyi	Mainland
27	Mukono	Katosi	Mainland
28	Mukono	Ssenya	Mainland
29	Mukono	Ziru	Island
30	Mukono	Kaziru	Island
31	Mukono	Kiwololo	Island
32	Mukono	Kinagaba	Island
33	Mukono	Namugambe	Island
34	Mukono	Nvuza	Island
35	Mukono	Lubya	Island
36	Mukono	Lukaale	Island
37	Mukono	Kitamiro	Island
38	Mukono	Ndotwe	Island
39	Mukono	Kokola	Mainland
40	Mukono	Sowe Paradise	Mainland
41	Mukono	Butembe	Mainland
42	Rakai	Sango-Bay	Mainland
43	Wakiso	Kigungu	Mainland
44	Wakiso	Lwamunyu	Island
45	Wakiso	Buganga	Mainland
46	Wakiso	Busabala	Mainland

## **2.4. Data collection procedures**

As alluded to earlier, the generation of information and data collection was done using a combination of methods; including desk review, key informants interviews, focus group discussions and structured questionnaires interviews. The sections that follow present a description of each of these methods in more details.

### **2.4.1. Desk review**

Desk review of a number of relevant documents was conducted. The documents included those on HIV service availability and utilization, HIV programme coordination; as well as institutional policies and structures for the delivery of HIV services to the fishing communities. Where available, and given their importance, institutional HIV-related policies and plans were also reviewed. The coordination structures and service delivery outlets were also examined to determine their relevance in the delivery of services related to HIV interventions for fishing communities. To get information on coordination structures and outlets for services, a select group of officials were approached to avail any written policies and plans which describe such structures and services. In addition, regional and national level policies and plans were reviewed to determine whether there are any which articulate HIV services that target fishing communities. Policies and plans from the Ministry of Health, Uganda AIDS Commission, Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) and EALP were also reviewed.

### **2.4.2. Key informant's interviews**

Key informant's interviews were conducted using topic guides. During the interviews, discussions were held to determine the existing institutional HIV policies and services, as well as the coordination structures for the delivery of HIV services to the fishing communities. Additionally, a checklist was used to assess and determine the comprehensiveness of the available services. Information was also sought on their assessment of the magnitude of the HIV problem, the risk factors and behaviours and preferred means of getting health information.

In order to generate relevant and comprehensive information, participants of KI were purposively selected. The participants were drawn from the nine host districts to the fish landing sites, Ministry of Health, Uganda AIDS Commission, MAAIF, UNAIDS and LVFO Secretariat (Table 2.2). The interviews were conducted by the survey coordination team.

### **2.4.3. Focus group discussions (FGDs)**

To supplement information from the structured questionnaires, a number of FGDs were conducted using topic guides. In each of the four fishing communities, one FGD was performed. Each of the FGDs was composed of ten to twenty members including both men and women. In total, 4 FGDs were conducted in the 4 fishing communities (Table 2.2). The FGD interview sessions were moderated by the behavioral scientist.

### **2.4.4. Structured questionnaire interviews.**

The individual survey respondents were interviewed using structured questionnaires. The questionnaires were adapted from that of the AIDS Indicator Survey (AIS). The AIS has been done in all the countries of East Africa. This adaptation has enabled uniformity in

questions asked such that the results of this survey can be compared with the results of AIS and other surveys that have been conducted in the general population. The questionnaire adaptation however took into consideration the uniqueness of fishing communities. The questionnaires were translated into Luganda and Kiswahili (the main local languages spoken around LVB) and back translated into English. To ensure that the meanings of the questions were not lost, back-translation into English was done by people other than the initial translators. The questionnaires were pre-tested before the actual survey was done. After the pretest, translation related issues which had been identified were addressed. In addition, all aspects of the survey data collection were pre-tested before the main survey commenced. All respondents provided written consent before the interviews.

From the structured questionnaires, the survey was able to generate quantitative information. Specifically, the individual interviews were used to collect information from all women and men aged 15-59 and it covered the following topics:

- Background characteristics (age, sex, ethnic background, educational attainment, marital status, for the married whether staying together with spouse, occupation, main source of income, length of stay in study area, mobility in the last 12 months, etc)
- Reproduction
- Marriage and sexual activity
- HIV-related behaviors
- HIV-related knowledge
- HIV-related attitudes
- HIV/AIDS care services (range, breadth, availability, utilization) – HCT services, condom availability, PMTCT, ART, OI treatment.
- Health seeking behaviors for Sexually transmitted infections (STI)

## **2.5. Field Procedures**

The fieldwork procedures consisted of questionnaire interviews, focus group discussions, key informant interviews blood draw and laboratory testing of samples for HIV. Blood samples were processed for temporary storage in the field and onward transportation to the central laboratory where central level HIV testing was later performed. Field based HIV testing was done to enable respondents know their results. However, reporting of the overall HIV prevalence for the survey has been based on the central level test results. In all stages of the fieldwork procedures, measures were taken to enforce standards and quality control. In line with this, the survey coordination team prepared interviewers' manual, supervisors' manual, HCT manual, laboratory standard operating procedures, field control forms and data processing manual to guide the conduct of fieldwork and data analysis.

### **2.5.1. Pretest:**

A complete pretest of all field procedures including data collection, laboratory activities and HIV counseling and testing (HCT) was carried out. Both the English and the translated

versions of the questionnaires were pre-tested for acceptability, feasibility, question flow, and the duration of the interview. Before the pretest and survey main fieldwork was implemented, training of all the field workers was done. The training consisted of plenary presentations, role plays and practical work during the pre-testing of the survey instruments and procedures. The pretest was done at Kajjansi Rose Flower plantation, a setting which is outside of survey areas but has setting similar to that where the actual survey was done. Lessons which were learnt from the pretest were documented and used to modify the survey data collection instruments and the field procedures.

### **2.5.2. Main survey data collection**

Data collection commenced soon after the refresher training and pretest. It was carried out by the same field workers that had earlier conducted a similar survey among plantation workers. The fieldwork and data collection took place in August 2010; it took a total of 24 days. During the survey implementation, daily work schedules for the survey teams were coordinated by the survey coordination team to ensure efficiency in data and blood sample collection. Workplans for the survey teams were discussed in detail during training. Discussions were held with the District Fisheries Officers (DFOs) to solicit their support. Interview schedules were drawn by the survey teams in consultation with the DFOs and the survey focal person at MAAIF. This approach facilitated a smooth running of and efficiency in the conduct of the interviews.

At the interview time, interview teams followed a standard interview procedure. After identifying the potential respondents, the interviewers would introduce themselves and inform them of the purpose of the visit. Thereafter, the interviewers would respond to any questions which arose and then proceed to seek a written consent for the individual interviews using consent form. Following the consent, the respondents would then be interviewed in privacy using the individual questionnaire.

Before leaving the interview site, checks were made to ensure that the completed questionnaires were filled well and the dry blood spot samples had been labeled. The questionnaires were also checked for mistakes and completeness. Where eligible respondents were absent at the time of scheduled interview, an additional attempts were made to interview the sampled person. The second and third visits were made on different days. This situation was however very rare since virtually all the sampled persons were around at the interview time.

### **2.5.3. Field laboratory procedures and laboratory tests**

All women and men aged 15-59 who were interviewed were asked to voluntarily provide a blood sample for subsequent testing for HIV. Blood draw was done using capillary tubes. The protocol for the blood specimen collection and analysis was developed by the study team in consultation with the National Technical Team

For the purpose of blood collection, one laboratory technician was included in each of the teams. As part of the informed consent, the laboratory technician explained the procedure to be used, the fact that the equipment to be used was sterile, confidentiality of data and the tests to be performed on the blood. After obtaining consent, capillary blood draw was performed. Sample collection and preparation was done according the standard operating

procedures (SoPs). The technician collected 200 microlitre of blood from a fingerpick, using a capillary tube, for the tests that were to be performed in the field and 250 microliter on a filter paper card (dry blood spot – DBS) for central level testing. Blood tubes and specimen collection filter paper cards were labeled with the participant's bar-coded identification number (IDNO). In the temporary field laboratory, the DBS was air-dried overnight and stored at ambient temperature in lots of 20 separated by glassine paper in zip lock bags containing desiccant. The bags carried labels listing the IDNOs they contained. The processed specimens were delivered to the central laboratory (National STD Reference Laboratory based at Mulago) where the central level HIV testing was performed.

In the field, HIV counseling and testing (HCT) was offered free of charge to all respondents who wanted to know their HIV sero-status. This service enabled these respondents to know their sero-status. The national HIV rapid testing algorithm was used. Those respondents who were found to be HIV positive were referred for follow-up care at the nearest health facility.

For the purpose of reporting of the overall HIV prevalence for the survey, central level testing of HIV was conducted on eluted serum from the 6 mm discs punched from the dry blood spots. The central level HIV testing was based on the national HIV surveillance testing algorithm. Serum samples were tested by a two HIV EIA parallel testing algorithm (Vironostika HIV + Genetic Systems rLAV) following the manufacturer's recommendations and in accordance with national guidelines. Specimens with unambiguously positive or negative results on both assays were reported without further testing, while all others were tested by Western blot.

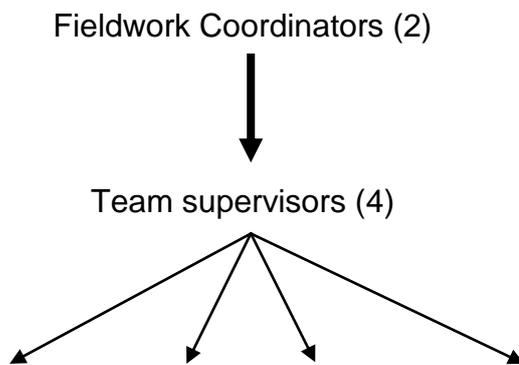
## **2.6. Quality control issues**

To ensure quality in the survey data collection, quality control activities were implemented. They included supervision and training.

### **2.6.1. Supervision**

Survey supervision was an important component of the survey. It was recognized that the quality of information to be obtained from the survey depended on the quality of the questionnaires interviews and blood samples collected; which in turn depended on the level of supervision. To ensure good and effective supervision, two members of the survey coordination team were available fulltime to coordinate all the fieldwork operations.

The fieldwork coordinators oversaw the fieldwork operations; including data collection, specimen collection and field laboratory activities. The central laboratory coordinator also participated in the support supervision. In addition, a senior staff from the Fisheries Department of MAAIF and a senior staff from the Jinja based LVFO participated in the survey supervision. The Lead Consultant provided oversight and guidance to fieldwork teams. Survey supervision was done at various levels as below.



Interviewing teams (4) including laboratory technicians

The fieldworkers were recruited based on their previous participation in household surveys, willingness and commitment to work away from home, inter-personal skills, fluency in at least one local language, and ability to understand the survey procedures. The entire fieldwork team consisted of two fieldwork coordinators and four survey teams. Each of the four survey teams consisted of 7 members, namely; 1 supervisor, 4 interviewers, 1 counselor and 1 laboratory technician. The laboratory technician drew the blood samples, carried out HCT and prepared the samples for shipment to the central laboratory for HIV testing. The counselor conducted pretest and posttest counseling. The team supervisors carried out spot checks on the questionnaires before the interviewers left the study sites.

### **2.6.2. Training of Field Teams**

Training of all survey team members was done to ensure quality in fieldwork procedures. All the survey teams participated in an earlier one and half week re-orientation training programme in various aspects of the survey; including questionnaire administration and laboratory work. Sometimes during the training, separate sessions were held for the interviewers, counselors and laboratory technicians.

Training of the laboratory technicians covered capillary blood collection, preparation of dried blood spots, use of barcodes, HIV testing using rapid tests, universal infection control precautions and waste disposal. The training was facilitated by senior laboratory technicians based at the NSRL.

In order to equip the survey team supervisors with management and supervisory skills, two days were set aside during the earlier training to specifically take them over the training materials. They were trained on how to conduct monitoring of the performance of the interviewers in the field and how to edit and compile completed questionnaires. During the training, the roles and responsibilities of the team supervisors were discussed. Supervisors were also trained in the use of the relevant instruction manuals. The instruction documents included interviewers' manual, supervisors' manual, HCT manual, laboratory standard operating procedures, field control forms and data processing manual.

### **2.6.3. Quality control for blood testing**

For quality control of blood testing, 5 percent of HIV positive and 10 percent of HIV negative specimens were re-tested at the HIV Reference Laboratory at the Uganda Virus Research Institute, Entebbe using the same testing algorithm; specimens with discordant results were resolved by repeating the testing algorithm. The results of this QC showed concordance with the testing done at the main central laboratory.

### **2.7. Data processing, entry and management**

Completed questionnaires were received at the central level, registered and checked against the shipping inventory to verify that what was sent from the field had been received. Two data entry clerks were recruited to enter data. Data entry was done using EPIINF0. As a quality assurance measure, double data entry strategy was employed. A statistician oversaw data entry and conducted data management and analysis. Data cleaning included the checking of ranges, structure and internal consistency.

To facilitate data analysis, a comprehensive data analysis plan was developed ahead of time. In the case of FGDs and key informants' interviews, the proceedings were transcribed and summarized into themes (thematic analysis). The predetermined themes were the basis of the initial analysis and thereafter any emerging issues were addressed using the new sets of themes. The analysis started from the field at the level of reviewing the transcribed notes and observations. The analysis process ended with a selection of the key statements from the different informants in the respective themes. The process also utilized the principle of triangulation for enhancement of validation of the data where information from key informants was compared with that from FGDs.

### **2.8. Survey Mobilization**

Advocacy and mobilization for the survey was done immediately before the commencement of the survey and throughout the survey period to ensure smooth and successful implementation. The mobilization took different forms and employed different themes and messages depending on the target audiences. During the mobilization, the purpose of the survey, its design, implementation, use of survey data and the need for community participation were discussed. Issues related to confidentiality during the survey and reasons for the need for anonymity of HIV testing were also discussed.

Posters, pamphlets and manuals were developed and distributed to the survey sites to facilitate mobilization. In addition, local community mobilizers and leaders were trained to equip them with mobilization skills to enable them assist the survey team in the identification of the selected individuals in their respective selected places. The chairpersons of BMUs were very instrumental in the smooth running and success of the survey mobilization.

### **2.9. Ethical Considerations:**

The survey protocol was submitted to and approved by the Uganda Virus Research Institute Scientific and Ethical Committee (UVRI SEC); and cleared by the Uganda

National Council for Science and Technology. Written informed consent was obtained from all potential participants for both individual interviews and blood draw and testing.

No risky procedures were performed during the survey. Although taking a finger stick blood sample poses minimal physical risk to the subject, this did not pose any problem during the survey. The survey team took measures to minimize risks such as excessive bleeding and fainting. In addition, clean and sterile supplies for blood draw were used by the laboratory technicians. Furthermore, a high level of confidentiality and anonymity was adhered to while handling data.

In respect to benefits from the survey, all participants benefited from oral and written HIV and STI education and prevention messages that were provided by interviewers during the survey. Participants who consented to sample collection and HCT at the field level received free HIV counseling and testing.

### **2.10. Consent procedures**

The core guiding principle that was followed during the conduct of the survey was the concept of protection of human subjects in the survey. Consent was obtained from all participants in the study. In all cases, the information provided was described in; and consent form read out loud to participants either in Luganda, Kiswahili or English, depending on the language which was understood best by the respondent. The interviewer and interviewees appended their signatures at the bottom of the consent form to confirm that consent has been obtained. Separate consent forms for blood draw and HIV testing were issued by the laboratory technician.

### **2.11. Limitations of the Study**

The study had one limitation. Forty six (46) fish landing sites around the Lake Victoria Basin of Uganda were surveyed. Fish landing sites from other regions such as those in the Lake Albert, Lake Kwanja and Lake Kyoga basins were not considered. Therefore, although the results obtained from the survey are representative of fishing communities of the Lake Victoria Basin of Uganda, they are not representative of all fishing communities in Uganda. Never-the-less, a number of general findings and the recommendations made are still applicable to any fishing community in the whole of Uganda; and the region.

# CHAPTER 3: RESPONSE RATE & RESPONDENTS' CHARACTERISTICS

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## 3.1 Key Findings

- Overall, the survey had a high response rate (99 percent); a total of 911 respondents were enrolled and successfully interviewed compared to the estimated sample size of 920.
- The response rate for the blood draw was high; of the 911 respondents who were interviewed, 893 (98 percent) agreed to the blood draw.
- Of the 911 respondents who were surveyed, 559 (61 percent) are men and 352 (39 percent) are women.
- The majority of the respondents (88 percent) are in the age groups 20-44 years; only 6.4 percent of the respondents are in the age group 15-19 years.
- Slightly under two thirds (58 percent) of the respondents reported that they were married; while 16 percent said they were living together as man and wife; and only a very small proportion of respondents (4.2 percent) was widowed. Women are more likely to be widowed (6.5 percent) than men (2.7 percent).
- The majority of respondents (64 percent) had stopped at primary level and about a fifth (21 percent) had stopped at secondary level; less than 1 percent of the respondents reached college or university.
- The majority of the respondents are Christians (Roman Catholics 38 percent and Protestants 36 percent); one fifth (20 percent) of the respondents are Muslims. There is no apparent difference in the distribution of women and men by religion.
- The respondents are engaged in a variety of fishing related or fishing support work, namely, fish monger/factory agent (23.6 percent), food vendor (16.4 percent), barrier/worker (12.2 percent), boat owner/manager (8 percent), boat crew (6.6 percent), artisanal processor (2.4 percent), transporter (2.1 percent) and others (27.3 percent).
- Members of the surveyed fishing communities are very migrant people; the majority of the respondents (88 percent) came from elsewhere other than their current places of residence; only 12 percent of the respondents were born in the current place of residence.
- The surveyed population is somehow mobile; the proportion of men and women who ever slept away from home during the last 12 months is 66 percent among all the respondents. Men are more mobile (70 percent) than women (58 percent). Of all the respondents, 20 percent have ever stayed away from home for more than a month.

## **3.2 Introduction**

This chapter describes the background characteristics of the respondents, including; age, marital status, sex, ethnic background, educational attainment, religious background, distance to former place of residence, length of stay in study area, mobility and duration of staying away from home during the last 12 months. For the married respondents, they were asked whether they were staying together with their spouses. On the basis of the above information, the relationships between demographic, socioeconomic and HIV-related indicators have been examined. The response rates for both interviews and blood draw were also calculated in comparison to the sample estimates.

During the survey, the sample covered women and men aged 15-59 years. However, due to the need to compare the results of this survey with those of similar surveys done in Uganda and internationally, this report focuses on the age group 15-49 years. Most surveys use indicators based on this age group.

## **3.3. Survey response rates**

Table 3.1 shows the number of respondents selected, number of respondents interviewed, number who refused interviews, number of respondents who moved away for extended period, number of respondents who provided blood samples and the survey response rates.

The sample estimate for the survey was 920 respondents. During the survey, a total of 911 respondents were interviewed; thus, showing that the response rate in the context of estimated sample size is 99 percent. A total of 9 respondents were not interviewed because 6 (0.7 percent) refused interviews and 3 (0.3 percent) had moved away for extended period during the survey. Of the 911 respondents interviewed, 893 (98 percent) agreed to the blood draw. Thus, the data show that the overall response rate, the interview response rate and the blood draw response rate are very high.

### **3.3.0. Background Characteristics**

The distribution of respondents aged 15-49 by background characteristics is shown in Tables 3.2 and 3.3; and in Figure 3.1.

#### **3.3.1. Age distribution of the de facto population**

As shown in Table 3.2, the distribution of the survey respondents by age group shows that the larger proportions of the respondents (88 percent) are in the age group 20-44 years. The age group 15-19 years constituted only 6.4 percent of the respondents.

Figure 3.1 shows a graphic representation of the distribution of the de facto population, that is, those people who were found at the time of interview. The chart shows that the distribution of the respondents is skewed towards the right (older age groups), thus, implying that the surveyed population consists mostly of younger age groups. For both women and men, the peaks were reached in the age group 30-34 years.

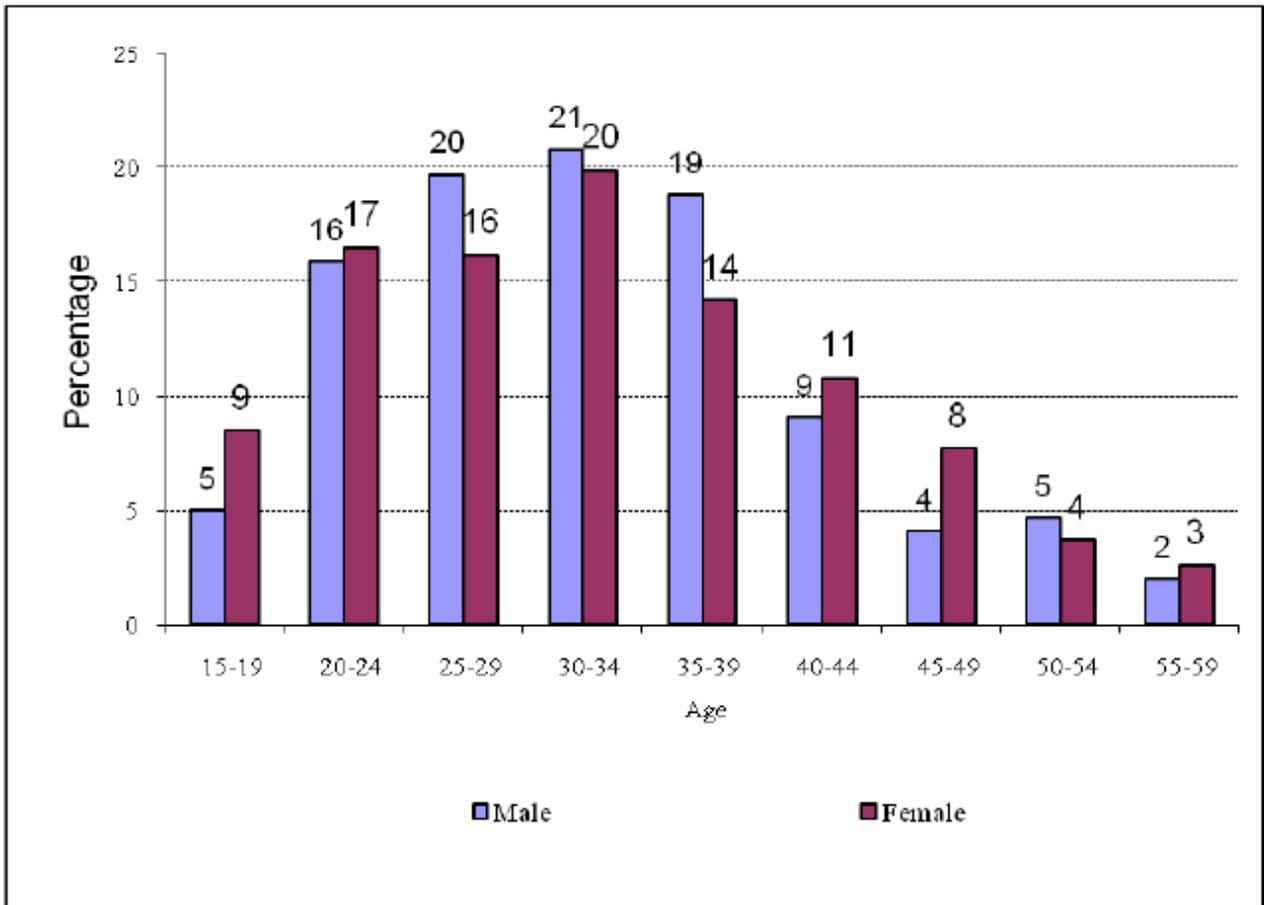
**Table 3.1: Results of Individual Interviews and blood draw**

Item	Total Number/ Percent
Number of selected respondents identified (A)	920
Number selected respondents interviewed (B)	911
Number refused interview (C)	6
Moved Away/Absent for extended period (D):	3
Number of selected respondents from whom blood was collected (E)	893
Response rate for interview = (B/A) x 100	99%
Response rate for blood draw = (E/B) x 100	98%

**Table 3.2: Percent distribution of women and men by age**

Percent distribution of women and men by age						
Background characteristic	Women		Men		Total	
	Percent	Number	Percent	Number	Percent	Number
<b>Age</b>						
15-19	8.5	30	5.0	28	6.4	58
20-24	16.5	58	15.9	89	16.1	147
25-29	16.2	57	19.7	110	18.3	167
30-34	19.9	70	20.8	116	20.4	186
35-39	14.2	50	18.8	105	17.0	155
40-44	10.8	38	9.1	51	9.8	89
45-49	7.7	27	4.1	23	5.5	50
50-54	3.7	13	4.7	26	4.3	39
55-59	2.6	9	2.0	11	2.2	20
Total 15-49	97.4	343	98.0	548	97.8	891
Total 15-59	100.0	352	100.0	559	100.0	911

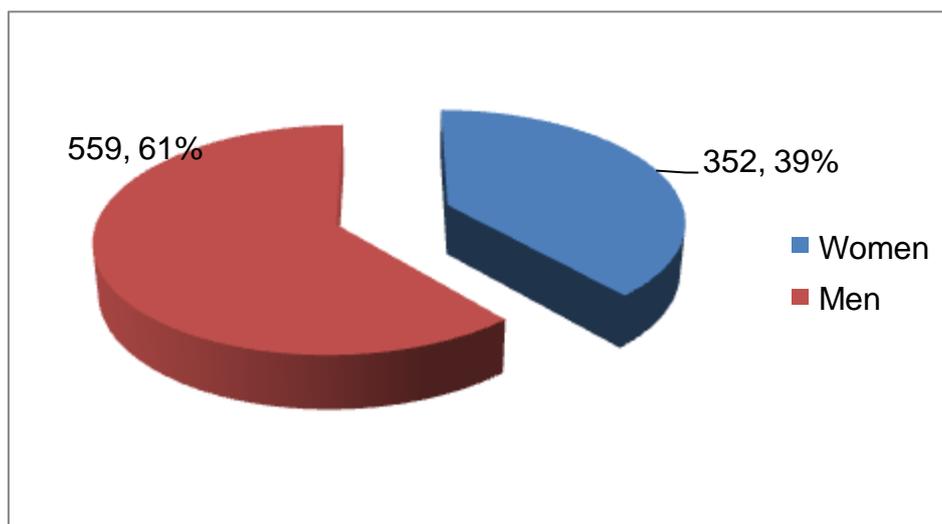
**Figure 3.1: Percent distribution of the de facto survey population by five-year age groups and sex**



### 3.3.2. Sex distribution

Of the 911 respondents who were surveyed, 559 (61 percent) are men and 352 (39 percent) are women (Figure 3.2). This finding may imply that work at fish landing sites may be more of a men’s affair than that of women.

**Figure 3.2: Sample distribution by sex (Age 15-59 years)**



### **3.3.3. Marital status**

Given that sexual intercourse is a major source of HIV infection in Uganda; and that sex is common in marriage, marital status was included amongst the variables studied in this survey. Marriage was defined on the basis of consensual union (informal union) or union based on civil ceremony (formal union). An informal union is when a man and women have been living together with the intention of having a lasting relationship, but have not been through civil or religious ceremony.

Analysis conducted on marital status revealed that 58 percent of the respondents reported that they were married; while 16 percent said they were living together as man and wife. Comparison of women and men revealed that a higher proportion of men (75 percent) than women (70 percent) reported that they were married or living together. The results further show that a very small proportion (4.2 percent) was widowed. Women are more likely to be widowed (6.5 percent) than men (2.7 percent).

### **3.3.4. Educational attainment**

In order to assess the level of school attainment of the respondents, they were asked to indicate the highest level of school attended; primary, vocational, secondary or higher. The results show that the majority of respondents (64 percent) had stopped at primary level and about a fifth (21 percent) had stopped at secondary level; while less than 1 percent had reached college or university. There was no marked difference in educational attainment between women and men. However, a slightly higher proportion of men than women attained either primary or secondary level education.

### **3.3.5. Religion**

Analysis was also conducted to determine the religion of respondents. The religions considered included Roman Catholic, Protestant/other Christians, Muslim or no religious denomination (non-believer). The results show that the majority of Christians (Roman Catholics 38 percent and 36 percent are Protestant). The results further show that one fifth

(20 percent) of respondents were Muslims; with the remainder (1 percent) falls into the category of no religion/others.

### **3.3.6. Work category**

Analysis was done to examine the distribution of respondents by work category. The analysis revealed that the fishing communities surveyed are engaged in a various types of work, most of which are related to fishing or fish trade. As shown of Table 3.4, the respondents fall in the following work categories; fish monger/factory agent (23.6 percent), food vendor (16.4 percent), baria/worker (12.2 percent), boat owner/manager (8 percent), boat crew (6.6 percent), artisanal processor (2.4 percent) and transporter (2.1 percent) and others (27.3 percent).

### **3.4. Mobility characteristics**

Mobility has been cited as an important risk factor for HIV transmission. During the survey, a number of questions were asked to measure mobility related indicators. In line with above, analysis of three related variables was conducted (Table 3.3); the variables considered are; distance of the current place of stay to former place of residence, the number of times a respondent traveled away from home during the last 12 months and duration (length) of stay away from home during the last 12 months.

The results show that the surveyed fish landings consist of a very mobile population. The majority of respondents came from far from their current places of residence. The proportion of respondents who were born in the current place of residence is 9 percent among women, 14 percent among men and 12 percent among all respondents. Men were more likely to have been born in the current place of stay. Overall, the above results show that the majority of respondents (approximately 88 percent) were not born in the area where the survey was done.

In respect to those respondents who ever traveled away from home during the last 12 months; the analysis revealed that the proportion of men and women who ever slept away from home during the last 12 months is 66 percent among all the respondents. When data are disaggregated by sex, there is marked difference between women and men; the indicator is 58 percent in women and 70 percent in men.

In respect to the duration (length) of stay away from home for more than a month during the last 12 months, analysis shows that 20 percent of the respondents have ever stayed away from home for more than a month. Furthermore, the results show that there is marked difference in the indicator between women and men; the proportion of women and men who stayed away from home for more than a month during the last 12 months is 14 percent among women and 24 percent among men.

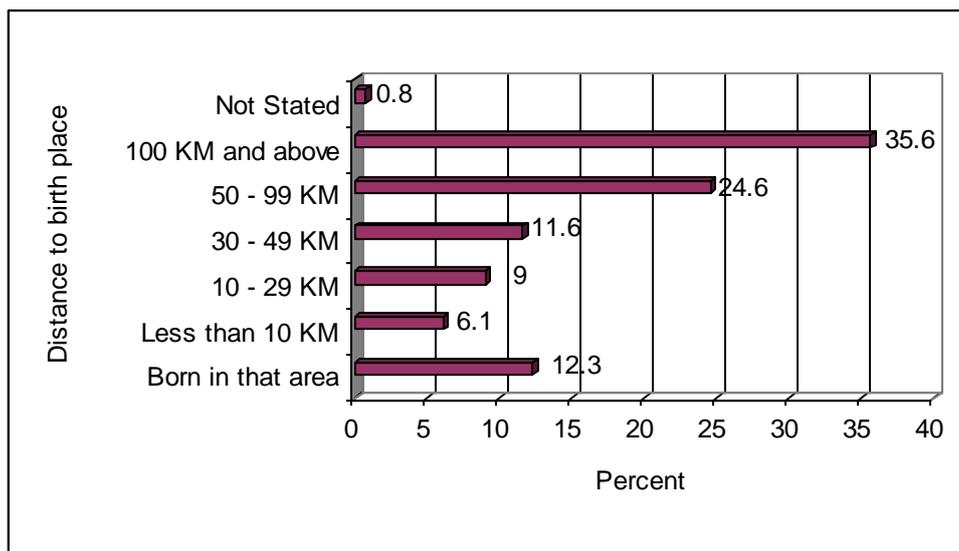
**Table 3.3: Percent distribution of women and men by selected background****Characteristics (N = 911)**

<b>Table 3.3. Percent distribution of women and men by selected background characteristics</b>			
	Female	Male	All
<b>Background characteristic</b>			
<b>Age</b>			
15-19	8.5	5.0	6.4
20-24	16.5	15.9	16.1
25-29	16.2	19.7	18.3
30-34	19.9	20.8	20.4
35-39	14.2	18.8	17.0
40-44	10.8	9.1	9.8
45-49	7.7	4.1	5.5
50-54	3.7	4.7	4.3
55-59	2.6	2.0	2.2
<b>Marital status</b>			
Never married	6.0	11.3	9.2
Married	51.4	61.4	57.5
Living together	18.2	14.0	15.6
Divorced/Separated	17.9	10.7	13.5
Widowed	6.5	2.7	4.2
<b>Education</b>			
Nursery	0.9	0.5	0.7
Primary	62.8	64.2	63.7
Post Primary/Vocational	3.7	4.3	4.1
Secondary/'A' Level	17.6	22.7	20.7
College	0	0.7	0.4
University	0.3	0.4	0.3
Not Stated	14.8	7.2	10.1
<b>Religion</b>			
Roman Catholic	37.2	38.3	37.9
Protestant/Other Christian	37.2	35.6	36.3
Muslim	16.5	21.5	19.5
No Religion	0.3	0.2	0.2
Other	8.5	4.5	6.0
<b>Distance to former place of residence</b>			
Born in that area	9.1	14.3	12.3
Less than 10 KM	6.0	6.3	6.1
10 - 29 KM	9.7	8.6	9.0
30 - 49 KM	14.5	9.8	11.6
50 - 99 KM	25.9	23.8	24.6
100 KM and above	34.1	36.5	35.6
Not Stated	0.9	0.7	0.8
<b>Mobility during last 12 months</b>			
Ever slept away	58.2	70.3	65.6
Never slept away	41.8	29.7	34.4
<b>Duration of Staying Away from Home During Last 12 Months</b>			
Ever been away for a month	13.9	23.6	19.9
Never been away for a month	86.1	76.4	80.1
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Number</b>	<b>352</b>	<b>559</b>	<b>911</b>

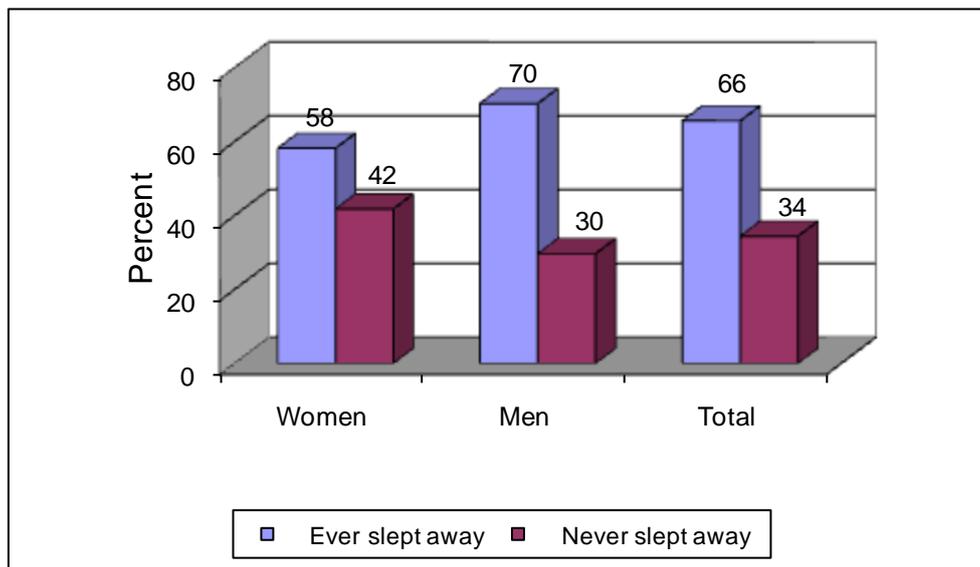
**Table 3.4: Respondents by Category of Work at Landing Site (n = 911)**

Respondents by Category of Work at Landing Site (n = 911)						
Category of Work	Women		Men		Total	
	Percentage	Number	Percentage	Number	Percentage	Number
Boat owner/manager	3.1	11	11.1	62	8.0	73
Fish monger/factory agent	13.1	46	30.2	169	23.6	215
Barrier (worker)	6.3	22	15.9	89	12.2	111
Boat constructor	0	0	2.3	13	1.4	13
Boat crew	0.3	1	10.6	59	6.6	60
Artisanal processor	2.8	10	2.1	12	2.4	22
Transporter	0.9	3	2.9	16	2.1	19
Trader (food vendor)	30.4	107	7.5	42	16.4	149
Other	43.2	152	17.4	97	27.3	249
<b>Total</b>	<b>100.0</b>	<b>352</b>	<b>100.0</b>	<b>559</b>	<b>100.0</b>	<b>911</b>

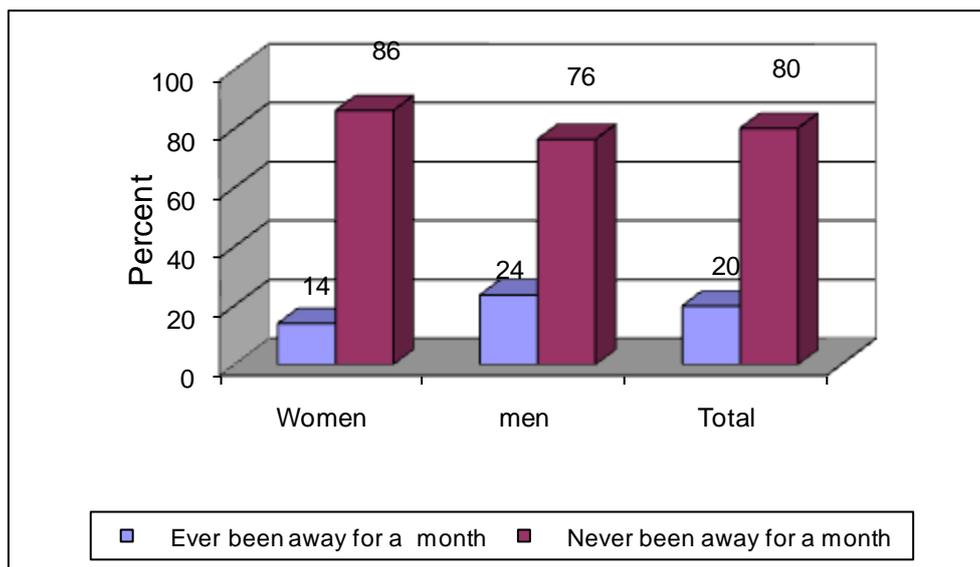
**Figure 3.3; Distance away from former residence (n = 911)**



**Figure 3.4; Mobility during the last 12 months (Women = 352, Men = 559)**



**Figure 3.5; Duration of stay away from home during the last 12 months (Women = 352, Men = 559)**



# CHAPTER 4: HIV RELATED KNOWLEDGE

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## 4.1. Key Findings

- Radio is the commonest source of HIV/AIDS information and education. Limiting sex to one partner is the perceived most important information acquired from radios on HIV prevention methods.
- Knowledge of single HIV prevention methods is almost universal among the surveyed populations; and the knowledge is similar in both women and men. Correct knowledge of single HIV prevention method ranges from 84 percent in respondents who say that abstaining from sexual intercourse protects against HIV infection to 97 percent in respondents who say that their chances of getting the AIDS virus can be reduced by limiting sex to one partner who is not infected.
- The level of comprehensive knowledge among the respondents is moderate; the proportion of respondents aged 25-49 years with comprehensive knowledge about HIV/AIDS is 38 percent among women and 41 percent among men. The level of comprehensive knowledge is higher among those with secondary or higher level of education compared to those who stopped at primary level.
- Knowledge of PMTCT is reasonably high; more than two thirds of the respondents (84 percent of women and 73 percent of men) know that HIV can be transmitted from a mother to her child by breastfeeding.
- Knowledge about antiretroviral drugs (special drugs) for PMTCT is high; 73 percent of women and 69 percent of men know that there are such drugs that a doctor or nurse can give to a pregnant woman infected with the AIDS virus to reduce the risk of transmitting the virus to the baby.
- The combined indicator of knowledge of PMTCT shows that 67 percent of women and 57 percent of men know that HIV can be transmitted through breastfeeding and that the risk can be reduced by special drugs. Overall, women have a higher level of PMTCT knowledge than their male counterparts.

## 4.2. Introduction

HIV-related knowledge is important in HIV prevention and control. Knowledge of how HIV is transmitted is one of several factors that enable people to protect themselves from HIV. In addition, correct knowledge can reduce stigma and discrimination against people living with HIV/AIDS. Knowledge is also an important prerequisite for positive behaviour change or adoption of risk reduction behaviours such as abstinence, reduction in premarital sex, avoiding non-spousal sex, and condom use during non-spousal sex. In line with above, the national response to the HIV/AIDS epidemic includes promotion of HIV/AIDS prevention

and control interventions, including promotion of their availability and access to them, as well as behavior change communication (BCC). In addition, the programme discourages misconception about the modes of HIV transmission. Behavior change communication facilitates the adoption of HIV prevention behaviours and uptake of HIV prevention, care and treatment services.

In this survey, knowledge information was obtained through an assessment of the level of knowledge regarding transmission of the AIDS virus among fishing communities. Survey respondents were asked if they had ever heard of AIDS, about their main source of information, about specific means of transmission of the virus, and if they were aware of mother-to-child transmission. Respondents were also asked about antiretroviral therapy, and sources of mother-to-child HIV transmission. Specifically, the following variables were examined; proportion of respondents who knows that abstaining from sex reduces risk of HIV infection (prompted), proportion who knows that having only one sexual partner who is HIV un-infected reduces risk of HIV infection (prompted), proportion who knows that using condoms when having sex reduces risk of HIV infection (prompted), proportion with comprehensive knowledge of HIV/AIDS, proportion who knows that HIV can be transmitted from mother to child, proportion who knows that ARV drugs can reduce mother-to-child transmission and proportion who knows source of condoms.

#### **4.3. Knowledge of Methods of avoiding HIV Infection**

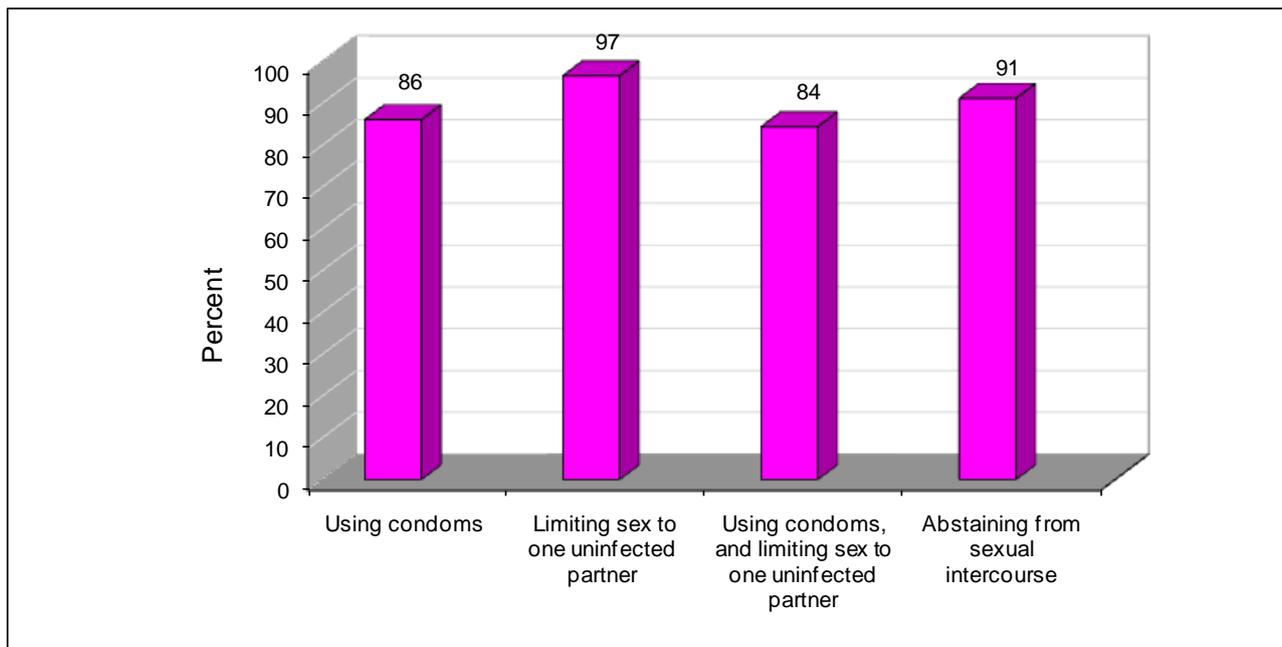
Analysis was done to determine the percentage of women and men who, in response to a prompted question, say that people can reduce the risk of getting the AIDS virus by using condoms, by having sex with just one partner who is not infected and has no other partners, and by abstinence. The results of the analysis are shown in Table 4.1; knowledge of HIV prevention is categorized by selected background characteristics

The results show that in response to prompted questions, knowledge of single HIV prevention methods is very high among both men and women aged 15-59 years; and that HIV knowledge of single prevention methods is more or less the same in both women and men (Figures 4.1 and 4.2). The proportion of women who indicated that their chances of getting the AIDS virus can be reduced by limiting sex to one partner who is not infected with HIV is 97 percent among women and 95 percent among men. The proportion of respondents who say that using condoms, and limiting sex to one uninfected partner protects against HIV infection is 84 percent among women and 88 percent among men. The proportion of respondents who says that limiting sex to one uninfected partner protects against HIV infection is 97 percent among women and 95 percent among men. The proportion of respondents who says that abstaining from sexual intercourse protects against HIV infection is 84 percent among women and 88 percent among men.

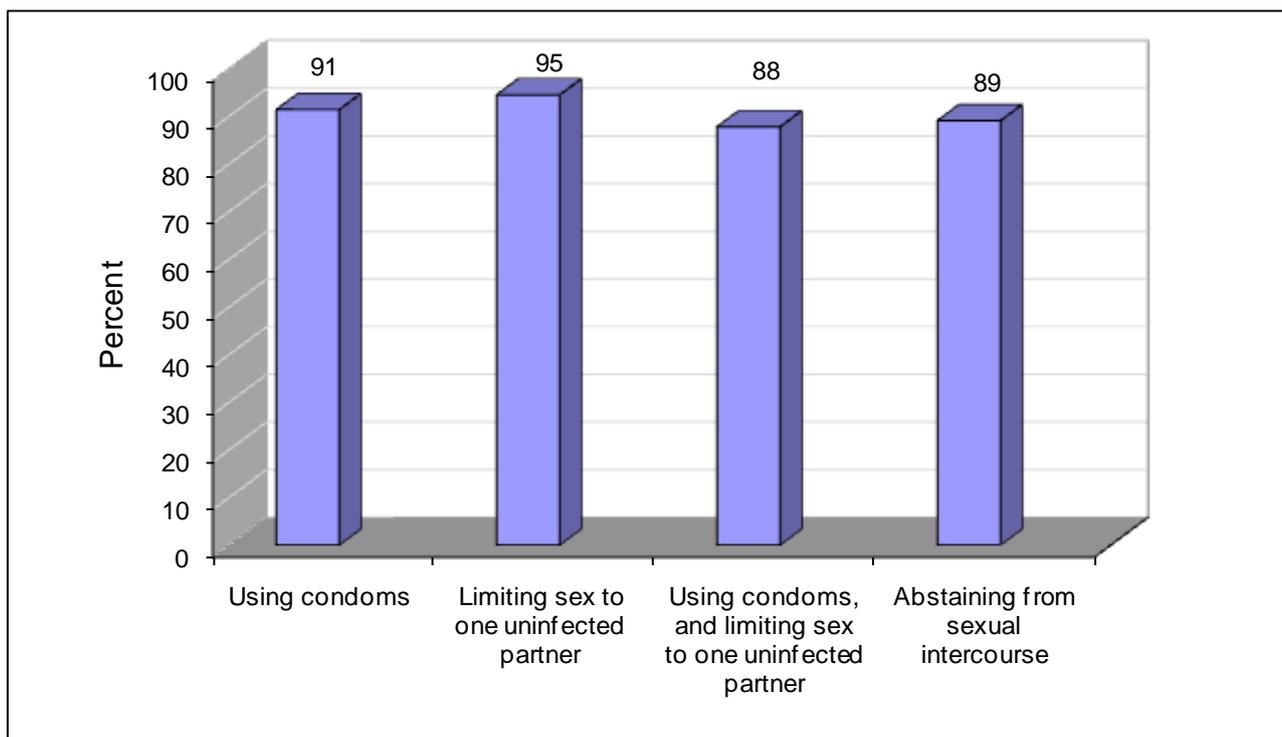
When HIV knowledge is disaggregated by age groupings, the results show that in both women and men, the level of knowledge does not vary significantly with age, except for women age 55-59 that are found to be with a lower level of knowledge of all HIV prevention methods when they are compared with the younger age groups (Figures 4.3 and 4.4).

When HIV knowledge was cross-tabulated with marital status, educational attainment and religious background, there was no particular pattern.

**Figure 4.1: Knowledge of single HIV prevention methods among women (n=352)**



**Figure 4.2: Knowledge of single HIV prevention methods among men (n=559)**



**Table 4.1. Knowledge of HIV prevention methods**

Percentage of women and men who, in response to a prompted question, say that people can reduce the risk of getting the AIDS virus by using condoms, by having sex with just one partner who is not infected and has no other partners, and by abstinence, by selected background characteristics

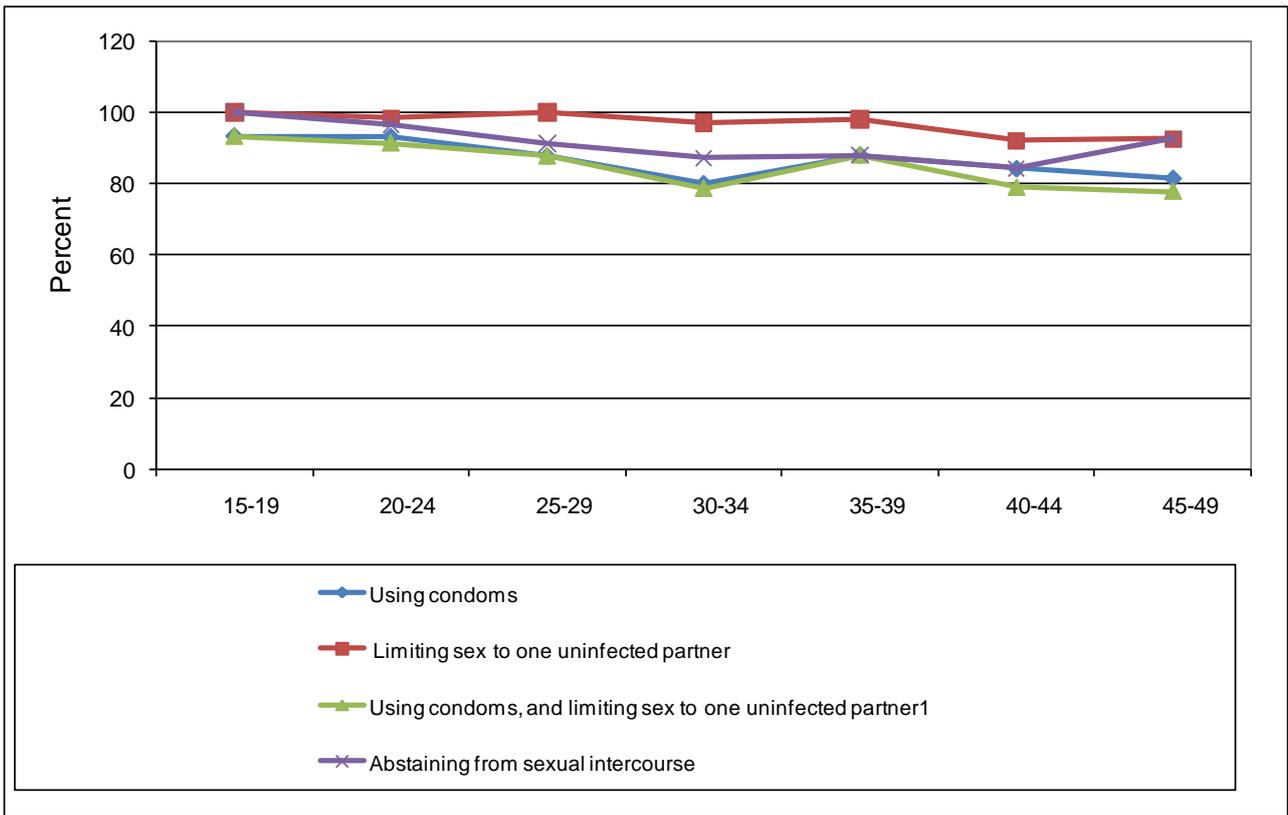
Background characteristic	WOMEN					MEN				
	Knowledge of HIV prevention by:				Number of women	Knowledge of HIV prevention by:				Number of men
	Using condoms	Limiting sex to one uninfected partner	Using condoms, and limiting sex to one uninfected partner <sup>1</sup>	Abstaining from sexual intercourse		Using condoms	Limiting sex to one uninfected partner	Using condoms, and limiting sex to one uninfected partner <sup>1</sup>	Abstaining from sexual intercourse	
Age										
15-19	93.3	100.0	93.3	100.0	30	(85.7)	(89.3)	(82.1)	(71.4)	28
20-24	93.1	98.3	91.4	96.6	58	93.3	93.3	88.8	89.9	89
25-29	87.7	100.0	87.7	91.2	57	92.7	93.6	89.1	83.6	110
30-34	80.0	97.1	78.6	87.1	70	92.2	96.6	88.8	91.4	116
35-39	88.0	98.0	88.0	88.0	50	94.3	95.2	91.4	93.3	105
40-44	84.2	92.1	78.9	84.2	38	88.2	94.1	86.3	88.2	51
45-49	(81.5)	(92.6)	(77.8)	(92.6)	27	*	*	*	*	23
50-54	*	*	*	*	13	(88.5)	(96.2)	(84.6)	(96.2)	26
55-59	*	*	*	*	9	*	*	*	*	11
Marital status										
Never married	*	*	*	*	21	88.9	95.2	87.3	79.4	63
Married	85.1	97.2	83.4	90.1	181	93.6	94.8	88.9	90.7	343
Living together	93.8	100.0	93.8	93.8	64	83.3	89.7	80.8	84.6	78
Divorced/Separated	85.7	96.8	84.1	95.2	63	91.7	98.3	91.7	93.3	60
Widowed	*	*	*	*	23	*	*	*	*	15
Education										
Nursery	*	*	*	*	3	*	*	*	*	3
Primary	85.1	96.8	83.7	89.1	221	90.8	94.4	87.2	89.7	359
Post Primary/Vocational	*	*	*	*	13	*	*	*	*	24
Secondary/'A' Level	96.8	98.4	95.2	96.8	62	94.5	94.5	89.8	89.8	127
College	*	*	*	*	0	*	*	*	*	4
University	*	*	*	*	1	*	*	*	*	2
Not Stated	75.0	92.3	71.2	92.3	52	82.5	90.0	80.0	82.5	40
Religion										
Roman Catholic	88.5	95.4	85.5	91.6	131	93.0	93.9	89.7	91.1	214

Protestant/Other Christian	83.3	97.7	82.6	87.9	132	91.5	96.0	88.4	86.9	199
Muslim	93.1	98.3	93.1	94.8	58	88.3	92.5	82.5	90.0	120
Other	74.2	93.5	71.0	96.8	31	(92.3)	(96.2)	(92.3)	(84.6)	26
Distance to former place of residence										
Born in that area	90.6	93.8	84.4	84.4	32	93.8	95.0	90.0	86.3	80
Less than 10 KM	*	*	*	*	21	85.7	100.0	85.7	88.6	35
10 - 29 KM	88.2	91.2	85.3	94.1	34	91.7	93.8	87.5	83.3	48
30 - 49 KM	90.2	98.0	88.2	100.0	51	92.7	89.1	83.6	89.1	55
50 - 99 KM	93.4	96.7	91.2	96.7	91	95.5	94.7	90.2	94.7	133
100 KM and above	75.0	97.5	75.0	84.2	120	88.7	94.6	87.3	88.2	204
Not Stated	*	*	*	*	3	*	*	*	*	4
Mobility during last 12 months										
Ever slept away	88.3	97.6	87.3	91.7	205	92.6	95.4	89.3	89.6	393
Never slept away	83.0	95.2	80.3	90.5	147	88.6	92.2	84.3	88.0	166
Duration of Staying Away from Home During Last 12 Months										
Ever been away a month	89.8	98.0	89.8	89.8	49	93.9	94.7	90.9	91.7	132
Never been away a month	85.5	96.4	83.5	91.4	303	90.6	94.4	86.9	88.3	427
Total	86.1	96.6	84.4	91.2	352	91.4	94.5	87.8	89.1	559

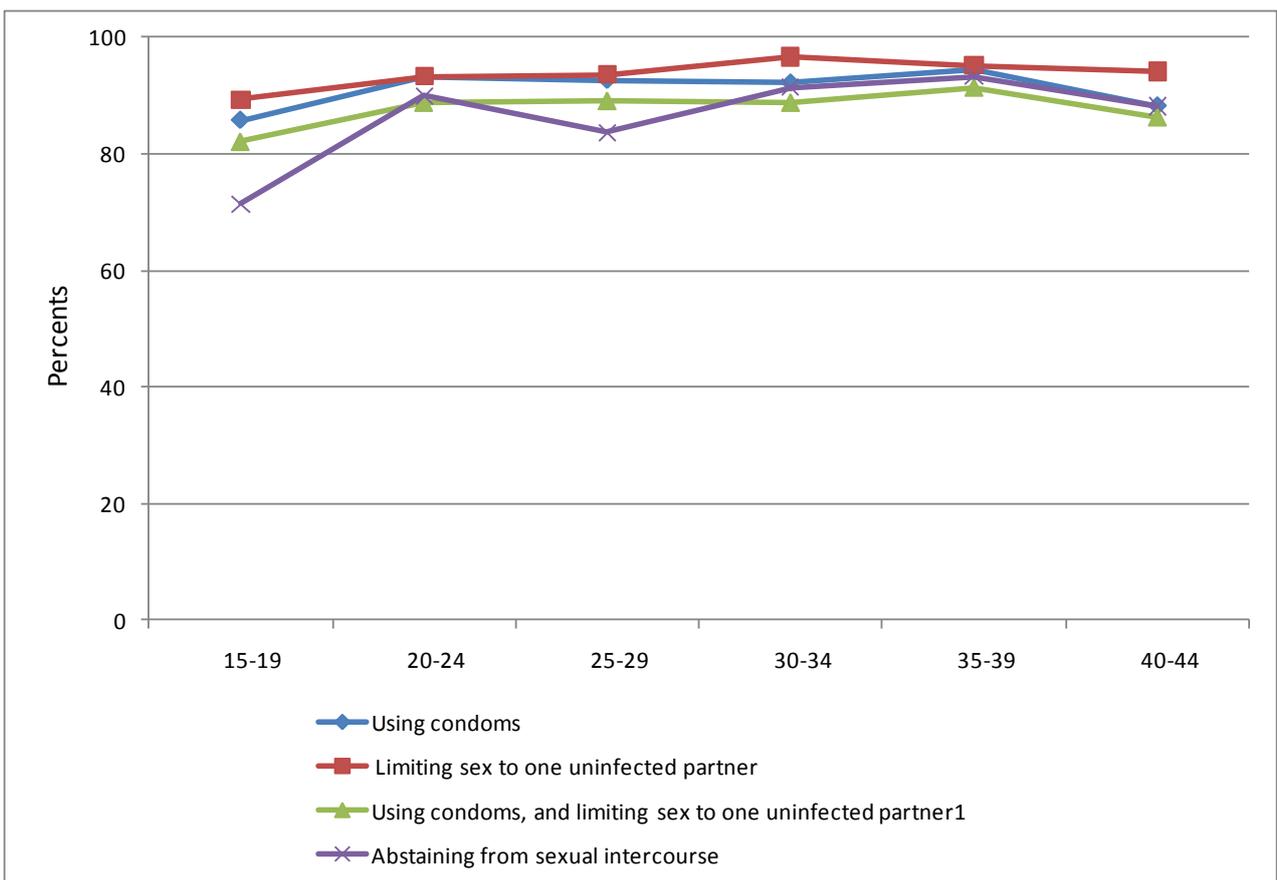
<sup>1</sup>Corresponds to UNAIDS Knowledge Indicator 1 "Knowledge of HIV prevention methods".

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

**Figure 4.3: Knowledge of HIV Prevention by age among women**



**Figure 4.3: Knowledge of HIV Prevention by age among men**



#### **4.4. Knowledge of a Source of a Condom**

Before one can use condoms, the commodity should be available. Condoms are dispensed from different sources (outlets); both public and private facilities. Therefore, knowledge of a source of condoms is crucial to facilitate its use. Knowing a place to get condoms helps people to obtain and use condoms. In this survey, analysis was conducted to determine the respondent's knowledge of source of condoms. This analysis was done because condom use among sexually active people plays an important role in the prevention of transmission of HIV and other sexually transmitted infections. In youth, it is also useful in preventing unwanted pregnancies.

The results of the analysis reveal that knowledge of a source of condoms is widespread among the surveyed population (Table 4.2). The proportion of respondents who know at least one source of condoms is 79 percent among women, 94 percent among men and 88 percent in both women and men. Thus, men are more knowledgeable of source of condoms than women. There are also some variations in the knowledge of source of condoms by age and educational attainment. Knowledge of source of condoms is higher among the younger respondents and those who attained college or University education than in older respondents and those with lower level of education, respectively. There are no clear patterns in the indicator when other demographic variables are considered.

**Table 4.3. Knowledge of a source for condoms**

Percentage of respondents who know at least one source of condoms

Background characteristic	WOMEN		MEN		TOTAL	
	Know a source for condoms <sup>1</sup>	Number of women	Know a source for condoms <sup>1</sup>	Number of men	Know a source for condoms <sup>1</sup>	Number
<b>Age</b>						
15-19	73.3	30	85.7	28	79.3	58
20-24	94.8	58	96.6	89	95.9	147
25-29	78.9	57	99.1	110	92.2	167
30-34	85.7	70	95.7	116	91.9	186
35-39	82.0	50	94.3	105	90.3	155
40-44	71.1	38	96.1	51	85.4	89
45-49	(63.0)	27	*	23	78.0	50
50-54	*	13	69.2	26	64.1	39
55-59	*	9	*	11	*	20
<b>Marital status</b>						
Never married	*	21	92.1	63	88.1	84
Married	77.9	181	95.0	343	89.1	524
Living together	85.9	64	96.2	78	91.5	142
Divorced/Separated	79.4	63	88.3	60	83.7	123
Widowed	*	23	*	15	73.7	38
<b>Education</b>						
Nursery	*	3	*	3	*	6
Primary	78.7	221	92.8	359	87.4	580
Post Primary/Vocational	*	13	*	24	91.9	37
Secondary/'A' Level	91.9	62	97.6	127	95.8	189
College/ University	*	1	*	6	*	7
Not Stated	61.5	52	90.0	40	73.9	92
<b>Religion</b>						
Roman Catholic	84.0	131	93.5	214	89.9	345
Protestant/Other Christian	75.8	132	94.5	199	87.0	331
Muslim	77.6	58	94.2	120	88.8	178
Other	71.0	31	(92.3)	26	80.7	57
<b>Duration of Staying Away from Home During Last 12 Months</b>						
Ever been away a month	83.7	49	93.9	132	91.2	181
Never been away a month	77.9	303	93.9	427	87.3	730
<b>Total</b>	<b>78.7</b>	<b>352</b>	<b>93.9</b>	<b>559</b>	<b>88.0</b>	<b>911</b>

<sup>1</sup> The following sources are not considered sources for condoms in this table: friends, family members, and home.

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

**Table 4.4. Consistent condom use in higher risk sex during past 12 months**

Among all women and men reporting high risk sex (had sex with a non-marital, non-cohabiting partner) in the last 12 months, percentage who say they used a condom every time they had sexual intercourse with such partners, by background characteristics

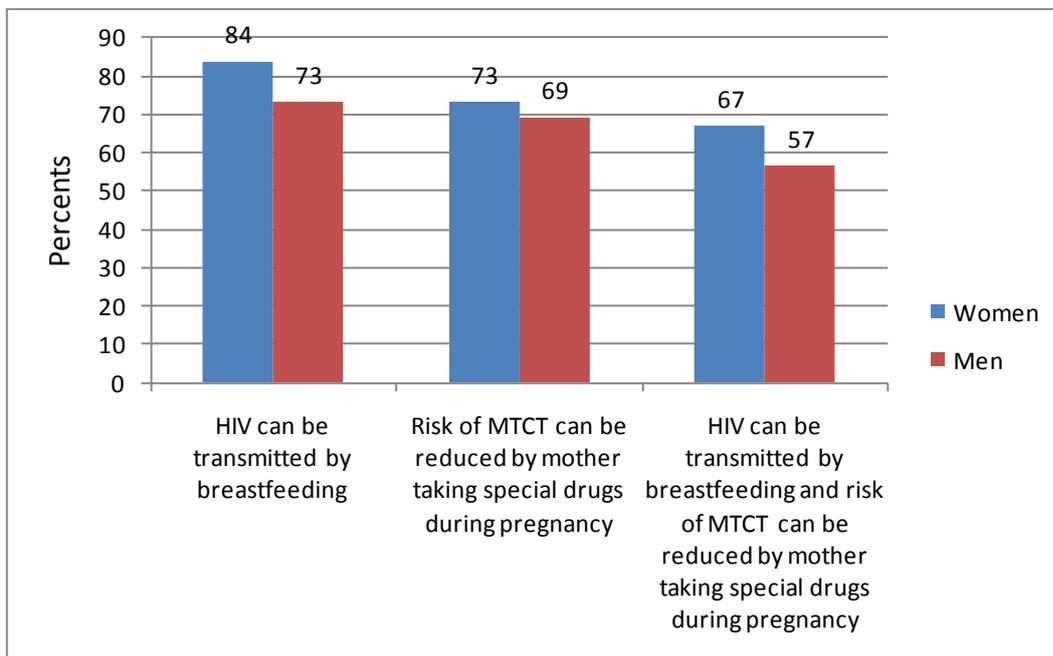
Background characteristic	WOMEN		MEN		TOTAL	
	Percentage consistently using condom at higher risk sex in last 12 months	Number of women with higher risk sex in the last 12 months	Percentage consistently using condom at higher risk sex in last 12 months	Number of men with higher risk sex in the last 12 months	Percentage consistently using condom at higher risk sex in last 12 months	Number with higher risk sex in the last 12 months
<b>Age</b>						
15-19	*	8	*	16	*	24
20-24	*	19	45.8	48	47.8	67
25-29	*	11	53.7	54	50.8	65
30-34	*	17	47.2	36	47.2	53
35-39	*	4	(50.0)	26	43.3	30
40-44	*	8	*	13	*	21
45-49	*	3	*	11	*	14
50-54	*	1	*	4	*	5
55-59	*	0	*	2	*	2
<b>Marital status</b>						
Never married	*	13	34.9	43	39.3	56
Married	*	10	51.5	97	50.5	107
Living together	*	9	*	22	41.9	31
Divorced/Separated	36.4	33	43.9	41	40.5	74
Widowed	*	6	*	7	*	13
<b>Education</b>						
Nursery	NA	0	NA	0	NA	0
Primary	40.0	50	43.0	128	42.1	178
Post Primary/Vocational	*	4	*	9	*	13
Secondary/'A' Level	*	11	57.4	54	56.9	65
College/ University	*	0	*	3	*	3
Not Stated	*	6	*	16	*	22
<b>Religion</b>						
Roman Catholic	(30.8)	26	46.3	80	42.5	106
Protestant/Other Christian	(44.0)	25	41.1	73	41.8	98
Muslim	*	15	57.7	52	58.2	67
Other	*	5	*	5	*	10
<b>Duration of Staying Away from Home During Last 12 Months</b>						
Ever been away a month	*	13	46.2	52	47.7	65
Never been away a month	37.9	58	46.8	158	44.4	216
<b>Total</b>	<b>40.8</b>	<b>71</b>	<b>46.7</b>	<b>210</b>	<b>45.2</b>	<b>281</b>

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

#### 4.5. Knowledge of Methods of Prevention of Mother-to-child HIV Transmission

Knowledge of PMTCT was assessed among the respondents. As shown in Table 4.8 and Figure 4.1; the results show that more than three quarters of women (84 percent) and two thirds of men (73 percent) know that HIV can be transmitted from a mother to her child by breastfeeding. The results further show that knowledge about antiretroviral drugs (special drugs) that a doctor or nurse can give to a pregnant woman infected with the AIDS virus to reduce the risk of transmitting the virus to the baby is slightly less widespread, 73 percent of women and 69 percent of men know that there are such drugs. The combined indicator shows that 67 percent of women and 57 percent of men know that HIV can be transmitted through breastfeeding and that the risk can be reduced by special drugs. Overall, the results show that women have a higher level of PMTCT knowledge than their male counterparts.

**Figure 4.4; Knowledge of Methods of Prevention of Mother-to-child HIV Transmission (PMTCT)**



**Table 4.5: Knowledge of prevention of mother to child transmission of HIV**

Percentage of women and men who know that HIV can be transmitted from mother to child by breastfeeding and that risk of maternal to child transmission (MTCT) of HIV can be reduced by mother taking special drugs during pregnancy, by selected background characteristic

Background characteristic	WOMEN				MEN			
	Percentage who know that:				Percentage who know that:			
	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy <sup>1</sup>	Number of women	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy <sup>1</sup>	Number of men
<b>Age</b>								
15-19	86.7	73.3	66.7	30	57.1	53.6	39.3	28
20-24	84.5	77.6	70.7	58	75.3	71.9	58.4	89
25-29	80.7	73.7	63.2	57	74.5	64.5	54.5	110
30-34	92.9	80.0	75.7	70	78.4	73.3	62.9	116
35-39	86.0	76.0	70.0	50	67.6	74.3	56.2	105
40-44	73.7	60.5	55.3	38	80.4	66.7	58.8	51
45-49	(85.2)	(70.4)	(63.0)	27	*	*	*	23
<b>Marital status</b>								
Never married	*	*	*	21	66.7	61.9	50.8	63
Married	85.1	74.6	69.1	181	73.8	69.7	58.6	343
Living together	90.6	81.3	75.0	64	74.4	76.9	56.4	78
Divorced/Separated	81.1	71.4	66.7	63	75.0	63.3	51.7	60
Widowed	*	*	*	23	*	*	*	15
<b>Education</b>								
Nursery	*	*	*	3	*	*	*	3
Primary	83.7	73.8	67.9	221	72.1	68.2	54.9	359
Post Primary/Vocational	*	*	*	13	*	*	*	24
Secondary/'A' Level	91.9	83.9	77.4	62	78.7	78.7	66.9	127
College/ University	*	*	*	1	*	*	*	6
Not Stated	71.2	59.6	50.0	52	57.5	60.0	42.5	40
<b>Religion</b>								
Roman Catholic	88.5	71.0	69.5	131	72.4	69.6	55.6	214
Protestant/Other Christian	84.1	76.5	70.5	132	75.9	69.3	60.3	199
Muslim	81.1	79.3	63.8	58	74.2	69.2	54.2	120
Other	67.7	58.1	48.4	31	(53.8)	(65.4)	(46.2)	26
<b>Total</b>	<b>83.8</b>	<b>73.3</b>	<b>67.0</b>	<b>352</b>	<b>73.2</b>	<b>69.2</b>	<b>56.5</b>	<b>559</b>

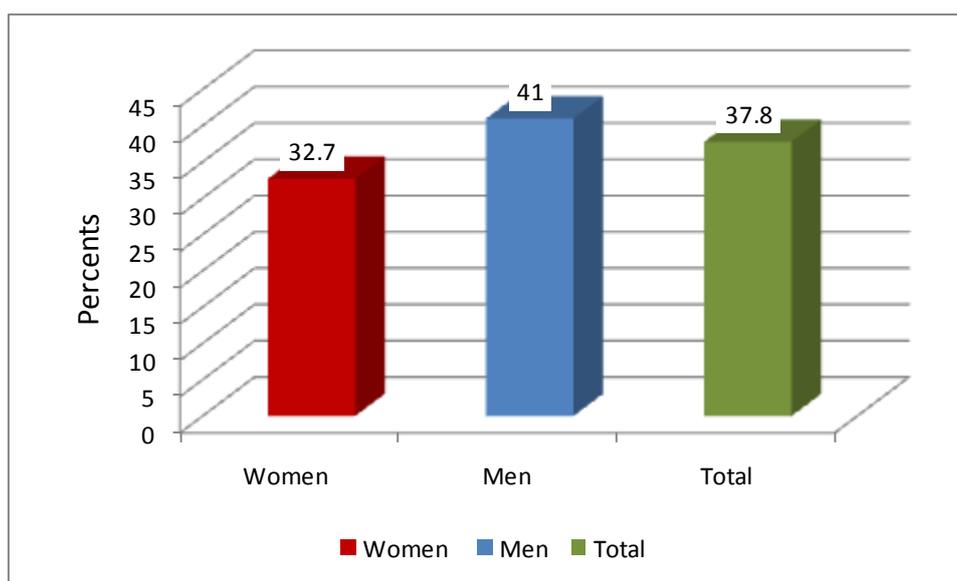
Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

#### 4.6. Comprehensive Knowledge about HIV/AIDS

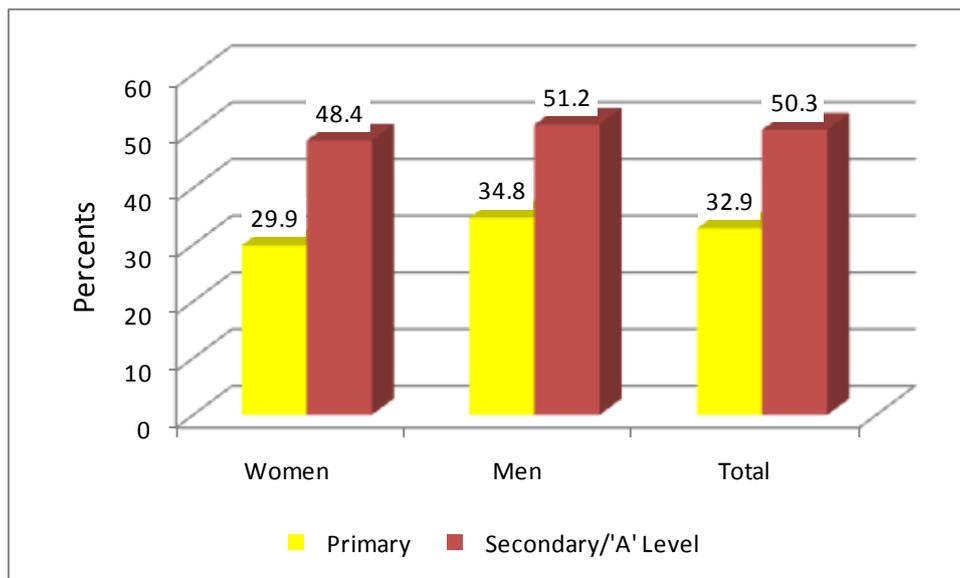
Analysis was made to assess comprehensive knowledge of HIV/AIDS. This indicator, referred to as comprehensive HIV/AIDS knowledge, combines five individual indicators of knowledge about HIV/AIDS; namely: the percentage of respondents aged 15-49 who say that: 1) people can reduce the chances of getting the AIDS virus by using a condom every time they have sex, 2) people can reduce the chances of getting the AIDS virus by having sex with just one partner who is not infected and who has no other partners, 3) that people cannot get the AIDS virus from mosquito bites, 4) that people cannot get the AIDS virus from sharing food with a person who has AIDS, and 5) that a healthy-looking person can have the AIDS virus.

As shown in Table 4.4 the surveyed population has a moderate level of comprehensive knowledge about HIV/AIDS. The proportion of respondents aged 25-49 years with comprehensive knowledge about HIV/AIDS is 38 percent among women and 41 percent among men; indicating that men have a slightly higher level of comprehensive knowledge. When educational background is considered, the level of comprehensive knowledge is higher among those with secondary or higher level of education compared to those who stopped at primary level (Figure 4.6). The indicator also varies with age; it is highest in the age group 35-39 and lowest in the age group 50-59 years (Figure 4.7).

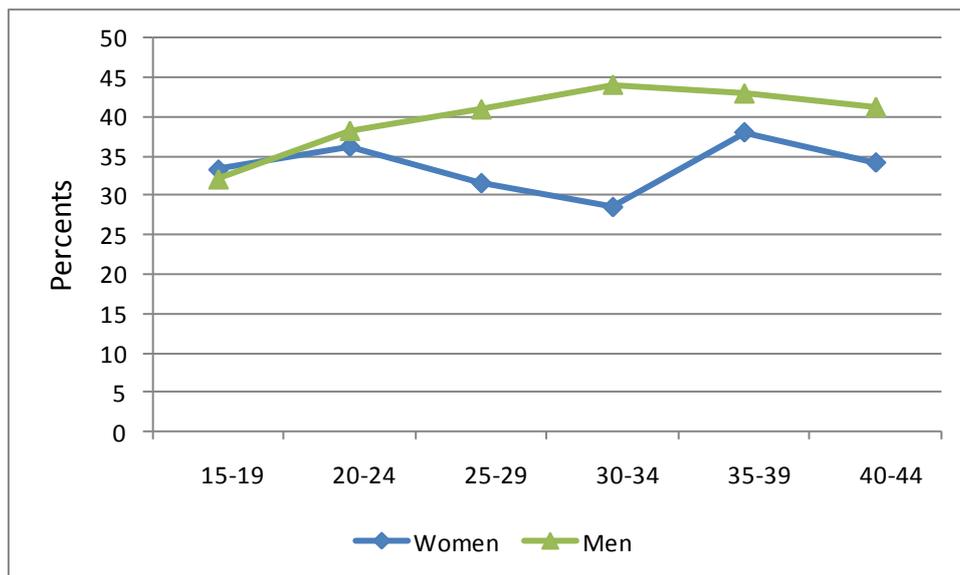
**Figure 4.4; Comprehensive HIV knowledge by sex (Women;330 and Men;522)**



**Figure 4.5; Comprehensive HIV knowledge by educational attainment**



**Figure 4.6; Comprehensive HIV knowledge by sex and age**



**Table 4.2: Comprehensive Knowledge about HIV/AIDS**

Background characteristic	Women		Men		Total	
	Comprehensive Knowledge <sup>1</sup>	Number of women	Comprehensive Knowledge <sup>1</sup>	Number of men	Comprehensive Knowledge <sup>1</sup>	Number of respondents
<b>Age</b>						
15-19	33.3	30	(32.1)	28	32.8	58
20-24	36.2	58	38.2	89	37.4	147
25-29	31.6	57	40.9	110	37.7	167
30-34	28.6	70	44.0	116	38.2	186
35-39	38.0	50	42.9	105	41.3	155
40-44	34.2	38	41.2	51	38.2	89
45-49	(25.9)	27	*	23	32.0	50
50-54	*	13	(23.1)	26	20.5	39
55-59	*	9	*	11	*	20
<b>Marital status</b>						
Never married	*	21	44.4	63	44.0	84
Married	33.1	181	38.8	343	36.8	524
Living together	31.3	64	37.2	78	34.5	142
Divorced/Separated	30.2	63	41.7	60	35.8	123
Widowed	*	23	*	15	28.9	38
<b>Education</b>						
Nursery	*	3	*	3	*	6
Primary	29.9	221	34.8	359	32.9	580
Post Primary/Vocational	*	13	*	24	64.9	37
Secondary/'A' Level	48.4	62	51.2	127	50.3	189
College/ University	*	1	*	6	*	7
Not Stated	11.5	52	25.0	40	17.4	92
<b>Religion</b>						
Roman Catholic	30.5	131	38.3	214	35.4	345
Protestant/Other Christian	34.8	132	44.7	199	40.8	331
Muslim	24.1	58	35.0	120	31.5	178
Other	35.5	31	(38.5)	26	36.8	57
<b>Distance to former place of residence</b>						
Born in that area	31.3	32	38.8	80	36.6	112
Less than 10 KM	*	21	42.9	35	41.1	56
10 – 29 KM	26.5	34	37.5	48	32.9	82
30 – 49 KM	23.5	51	38.2	55	31.1	106
50 – 99 KM	35.2	91	43.6	133	40.2	224
100 KM and above	33.3	120	38.7	204	36.7	324
Not Stated	*	3	*	4	*	7
<b>Mobility during last 12 months</b>						
Ever slept away	36.6	205	40.5	393	39.1	598
Never slept away	24.5	147	38.6	166	31.9	313
<b>Duration of Staying Away from Home During Last 12 Months</b>						
Ever been away a month	24.5	49	36.4	132	33.1	181
Never been away a month	32.7	303	41.0	427	37.5	730
Total 15-49	32.7	330	41.0	522	37.8	852
Total 15-59	31.5	352	39.9	559	36.7	911

<sup>1</sup> Percentage who say that people can reduce the risk of getting the AIDS virus by using a condom every time they have sex and by having sex with just one partner who is not infected and who has no other partners, who say that people cannot get the AIDS virus from mosquito bites or from sharing food with a person who has AIDS, and who say that a healthy-looking person can have the AIDS virus.

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

#### **4.7. Source of HIV/AIDS information**

Analysis was done to determine the percentage of respondents receiving AIDS information and education from the different channels of communication. A respondent was allowed to cite as many channels as he/she could. As a follow up, respondents who cited the channels of information were asked to name the most important message they learned from the main source of AIDS information. The results are shown on Tables 4.6 and 4.7.

In regard to the main channels of AIDS information (Figure 4.8), the top five (5) channels of communication cited by the respondents include radio (78%), health workers (44%), friends (15%), teachers (13%) and newspapers/magazines (10%). On the other hand, the percentage of respondents citing the channel as the source of learning for most of the AIDS information is 58 percent for radio, 18 percent for health workers, 3 percent for friends, 12 percent for teachers and 1 percent for newspapers/magazines.

Respondents also cited the messages they learnt from the different sources of AIDS information. In order of ranking (Figure 4.8), the most important messages cited by the respondents from the top five sources of AIDS information include limiting sex to one partner/staying faithful to one partner (32%), use of condoms (31%), abstaining from sex (9%), get tested for HIV/AIDS (8%) and be faithful to one sexual partner (5%).

The above results show that radio is the most common source of AIDS information and that the message which is perceived to be most important by the surveyed respondents is limiting sex to one partner/staying faithful to one partner. The results further show that health workers are the second most common source of AIDS information. There is also a perception of respondents that, condom use is the second most important message that is obtained from the common source of AIDS information.

**Table 4.6: Main channels of communication for HIV/AIDS information and education.**

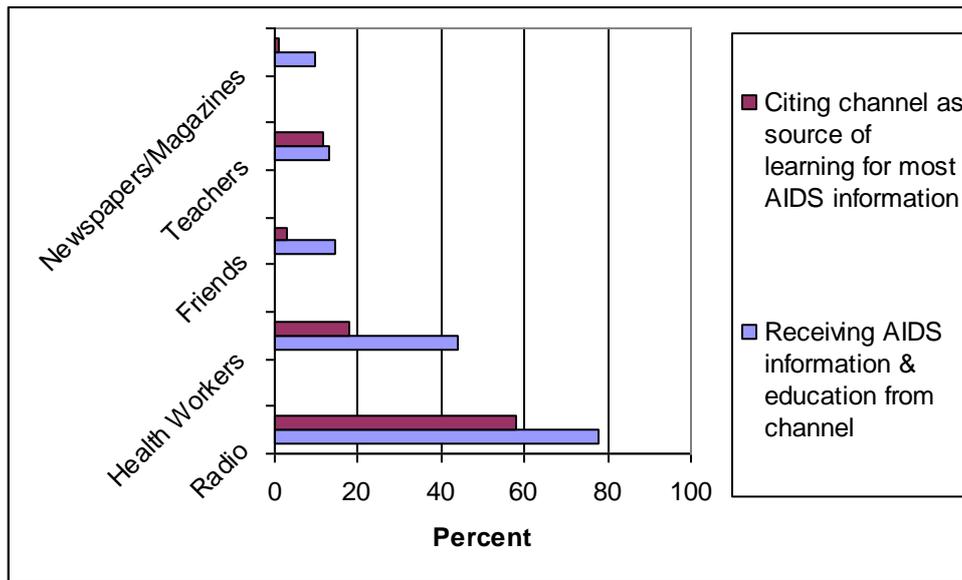
Main Channels of Communication	Percentage of respondents receiving AIDS information and education from the channel **	Percentage of respondents citing the channel as the source of learning for most of the AIDS information
Radio	78.0	58.2
Health Workers	43.8	17.7
Friends	14.5	3.0
Teachers	13.2	11.5
Newspapers/Magazines	9.8	1.2
Television	8.2	0.8
Family	7.9	2.5
Peers	5.7	2.1
Political Leaders	3.0	1.3
Community Notices	2.4	0.5
Religious Leaders	2.3	0.7
Drama	2.1	0.2
Posters	1.5	0.2
Billboards	1.0	0.2
Film	0.8	0.2
Brochures	0.8	0.1
Traditional Leaders	0.8	0.3
Seminars	0.5	0.1
Internet	0.2	0
Number of respondents	911	911

\*\* A respondent was allowed to cite as many channels as he/she could

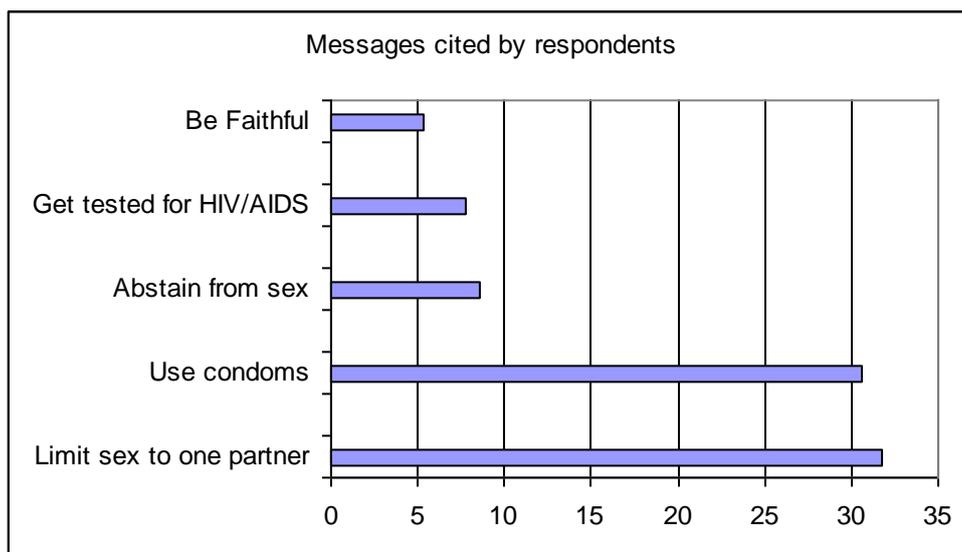
**Table 4.7: Most important message learned from main source of AIDS information.**

Message learned from the main source of AIDS information	Percentage of respondents citing the message as the most important one they have learned
Limit Sex to one Partner/Stay Faithful to one Partner	31.7
Use condoms	30.6
Abstain from sex	8.6
Get tested for AIDS (HIV)	7.8
Faithful to one Partner	5.3
Limit Number of Sexual Partners	3.4
AIDS is a Killer	2.9
Avoid Injections	1.7
Anyone can get AIDS	1.7
Don't take chances	1.2
Avoid Sex with Prostitutes	1.0
Avoid Discrimination against Persons Living with AIDS	0.8
Follow the ABC's	0.3
Anti-Retroviral Drugs Available Prevent Mother to Child transmission	0.3
Avoid Blood Transfusions	0.1
Others	2.6
Number of respondents	911

**Figure 4.8; Top five sources of HIV/AIDS information (n=911)**



**Figure 4.9; Top five most important messages obtained from most common source of information (n=911)**



**Table 4.8: Knowledge of Condom Source**

Percent of respondents knowledgeable of source of condoms, by type of source

Item	Percentage
Knowledge of source of a man's condom	87.7
<b>Type of Source<sup>1</sup></b>	
<u>Public Sector</u>	
- Government Hospital	32.7
- Government Health Center	26.8
- Government Dispensary	2.6
<u>Private Medical Sector</u>	
- Mission/Church Hospital	1.2
- Family Planning Health Center	4.1
- Private Hospital/Clinic	29.1
- Pharmacy/Chemist	5.0
- Nursing/Maternity Home	1.1
- Mobile Clinic	4.0
- Community-based distributor	11.0
- Shop	65.0
- Friends/Relatives	3.0
- Bar/Hotel/Restaurant	4.2
Knowledge of source of a woman's condom	8.5
<b>Type of Source<sup>1</sup></b>	
<u>Public Sector</u>	
- Government Hospital	4.4
- Government Health Center	2.1
- Government Dispensary	0
<u>Private Medical Sector</u>	
- Mission/Church Hospital	1.5
- Family Planning Health Center	4.1
- Private Hospital/Clinic	2.1
- Pharmacy/Chemist	0.2
- Nursing/Maternity Home	0
- Mobile Clinic	0.1
- Community-based distributor	0.1
- Shop	1.5
- Friends/Relatives	0.1
- Bar/Hotel/Restaurant	0.2

<sup>1</sup> A respondent was allowed to mention more than one source.

# CHAPTER 5: HIV RELATED ATTITUDES

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## 5.1. Key Findings

Misconception about HIV/AIDS is low.

- The proportion of respondents who know that a healthy-looking person can have the AIDS virus is 91 percent in both women and men.
- The proportion of respondents who knows that AIDS virus cannot be transmitted by supernatural means is 88 percent in men and 83 percent in women.
- The percentage of women and men who knows that AIDS virus cannot be transmitted by mosquito bites is 48 and 54 percent, respectively.

The majority of respondents have a caring attitude.

- The percentage of respondents who says that they would be willing to care for a relative who is sick with AIDS in their own household is 96 and 97 percent in women and men, respectively.
- The vast majority of respondents, 87 percent of women and 85 percent of men say that they would buy sugar or fresh vegetables from a vendor if they knew that he/she is HIV positive.
- On whether to allow a female teacher who has the AIDS virus but is not sick to continue teaching in the school, 76 percent of women and 79 percent of men agrees with this position.
- About 56 percent of women and 63 percent of men say that if a member of their family got infected with the AIDS virus, they would not necessarily want it to remain a secret.
- When analysis is done combining all the four indicators of misconceptions, the result shows that 40 percent of women and 45 percent of men express positive attitudes on all four indicators.
- About 97% of the respondents believed that a woman is justified to refuse sex or propose a condom if she suspects that husband has an STI.

## 5.2. Introduction

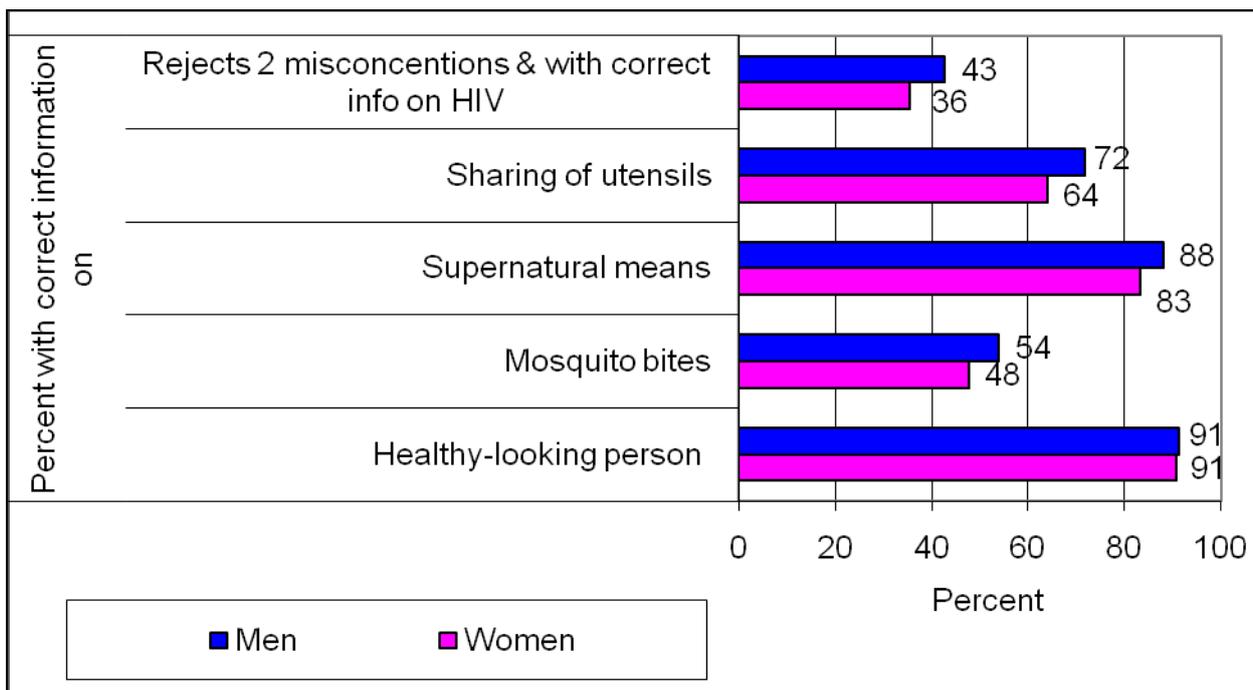
Getting to know the attitudes of the public towards PLWHA is important in fighting stigma and discrimination. It is also important to facilitate the designing of the key strategies for HIV/AIDS care and support services. This survey reports some information on HIV-related attitudes among fishing communities. The variables studied include the percentage of

respondents who know that; 1) A healthy-looking person can have the AIDS virus, 2) AIDS virus cannot be transmitted by mosquito bites, 3) AIDS virus cannot be transmitted by supernatural means and 4) A person cannot become infected with HIV by sharing utensils with someone who has AIDS. A composite indicator related to the above beliefs was constructed; namely, the percentage who rejects the two most common local misconceptions and say that a healthy-looking person can have the AIDS virus. The results are shown on Tables 5.1 and 5.2.

### 5.3. Misconception about HIV/AIDS

As shown on Tables 5.1 and 5.2, the percentage of women and men who rejects the two most common local misconceptions and says that a healthy-looking person can have the AIDS virus is 36 and 43 percent, respectively. However, the percentages of respondents that reject individual measures of misconception are very high in both men and women. For instance, the proportion of respondents who knows that a healthy-looking person can have the AIDS virus is 91 percent in both women and men. The proportion who knows that AIDS virus cannot be transmitted by supernatural means is 88 percent in men and 83 percent in women. Additionally, the percentage of women and men who knows that AIDS virus cannot be transmitted by mosquito bites is 48 and 54 percent, respectively. Generally, when data is disaggregated by demographic characteristics, the results show that the proportion of respondents who rejects the common misconceptions varies with age, marital status, religion and educational attainment.

**Figure 5.3; Percent who rejects two most common local misconceptions and say that a healthy-looking person can have the AIDS virus by sex and age**



**Table 5.1: Beliefs about AIDS: Women**

Percentage of women who, in response to a prompted question, correctly reject local misconceptions about AIDS transmission or prevention, and who know that a healthy-looking person can have the AIDS virus, by selected background characteristics

Background characteristic	Percentage of women who know that :				Percentage who reject the two most common local misconceptions and say that a healthy-looking person can have the AIDS virus <sup>1</sup>	Number of women
	A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites (Country specific)	AIDS cannot be transmitted by supernatural means (Country specific)	A person cannot become infected by sharing utensils with someone who has AIDS		
<b>Age</b>						
15-19	90.0	53.3	76.7	70.0	40.0	30
20-24	94.8	53.4	87.9	67.2	39.7	58
25-29	91.2	43.9	84.2	59.6	33.3	57
30-34	92.9	45.7	87.1	65.7	32.9	70
35-39	94.0	54.0	76.0	54.0	40.0	50
40-44	84.2	57.9	84.2	68.4	47.4	38
45-49	(85.2)	(37.0)	(92.6)	(63.0)	(25.9)	27
50-54	*	*	*	*	*	13
55-59	*	*	*	*	*	9
<b>Marital status</b>						
Never married	*	*	*	*	*	21
Married	93.4	51.9	84.5	61.3	38.7	181
Living together	92.2	39.1	82.8	71.9	31.3	64
Divorced/Separated	92.1	44.4	88.9	65.1	33.3	63
Widowed	*	*	*	*	*	23
<b>Education</b>						
Nursery	*	*	*	*	*	3
Primary	92.3	47.5	83.7	63.8	35.7	221
Post Primary/Vocational	*	*	*	*	*	13
Secondary/'A' Level	95.2	64.5	91.9	79.0	50.0	62
College/ University	*	*	*	*	*	1
Not Stated	75.0	23.1	69.2	46.2	11.5	52
<b>Religion</b>						
Roman Catholic	93.1	48.9	84.0	62.6	35.9	131
Protestant/Other Christian	90.9	49.2	82.6	65.9	37.9	132
Muslim	87.9	37.9	86.2	60.3	25.9	58
Other	83.9	54.8	77.4	67.7	41.9	31
<b>Total</b>	<b>90.6</b>	<b>47.7</b>	<b>83.2</b>	<b>63.9</b>	<b>35.5</b>	<b>352</b>

<sup>1</sup>Corresponds to UNAIDS Knowledge Indicator 2 "No incorrect beliefs about AIDS". The two most common local misconceptions involve transmission by mosquito bites and sharing utensils with someone who has AIDS (both country specific).

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

**Table 5.2: Beliefs about AIDS: Men**

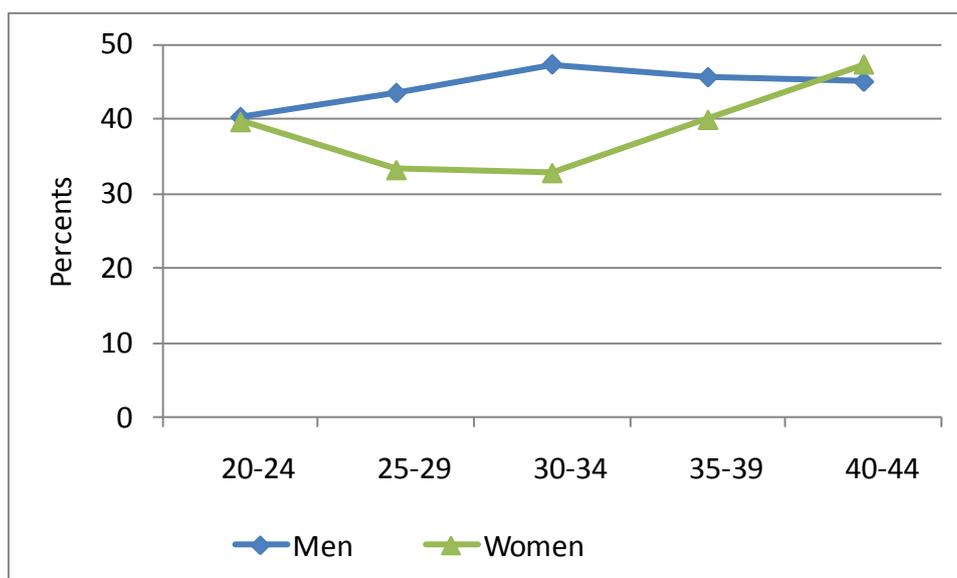
Percentage of men who, in response to a prompted question, correctly reject local misconceptions about AIDS transmission or prevention, and who know that a healthy-looking person can have the AIDS virus, by selected background characteristics,

Background characteristic	Percentage of women who know that :				Percentage who reject the two most common local misconceptions and say that a healthy-looking person can have the AIDS virus <sup>1</sup>	Number of men
	A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites (Country specific)	AIDS cannot be transmitted by supernatural means (Country specific)	A person cannot become infected by sharing utensils with someone who has AIDS		
<b>Age</b>						
15-19	(82.1)	(46.4)	(75.0)	(64.3)	(32.1)	28
20-24	86.5	53.9	91.0	66.3	40.4	89
25-29	88.2	58.2	87.3	75.5	43.6	110
30-34	94.8	55.2	87.9	75.0	47.4	116
35-39	95.2	57.1	87.6	73.3	45.7	105
40-44	94.1	56.9	94.1	76.5	45.1	51
45-49	*	*	*	*	*	23
50-54	(88.5)	(26.9)	(84.6)	(61.5)	(26.9)	26
55-59	*	*	*	*	*	11
<b>Marital status</b>						
Never married	85.7	65.1	81.0	69.8	47.6	63
Married	92.1	53.4	88.6	71.1	42.0	343
Living together	88.5	51.3	88.5	71.8	39.7	78
Divorced/Separated	95.0	46.7	90.0	76.7	43.3	60
Widowed	*	*	*	*	*	15
<b>Education</b>						
Nursery	*	*	*	*	*	3
Primary	91.1	46.8	86.9	68.8	37.9	359
Post Primary/Vocational	*	*	*	*	*	24
Secondary/'A' Level	91.3	70.1	90.6	78.0	53.5	127
College/ University	*	*	*	*	*	6
Not Stated	87.5	45.0	90.0	60.0	27.5	40
<b>Religion</b>						
Roman Catholic	90.2	51.4	88.3	71.5	39.7	214
Protestant/Other Christian	94.0	58.8	87.4	73.9	49.2	199
Muslim	88.3	52.5	90.8	69.2	38.3	120
Other	(88.5)	(46.2)	(76.9)	(69.2)	(38.5)	26
<b>Total</b>	91.1	54.0	88.0	71.7	42.8	559

<sup>1</sup>Corresponds to UNAIDS Knowledge Indicator 2 "No incorrect beliefs about AIDS". The two most common local misconceptions involve transmission by mosquito bites and sharing utensils with someone who has AIDS (both country specific).

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

**Figure 5.5; Proportion of the respondents who rejects two most common local misconceptions and say that a healthy-looking person can have HIV**

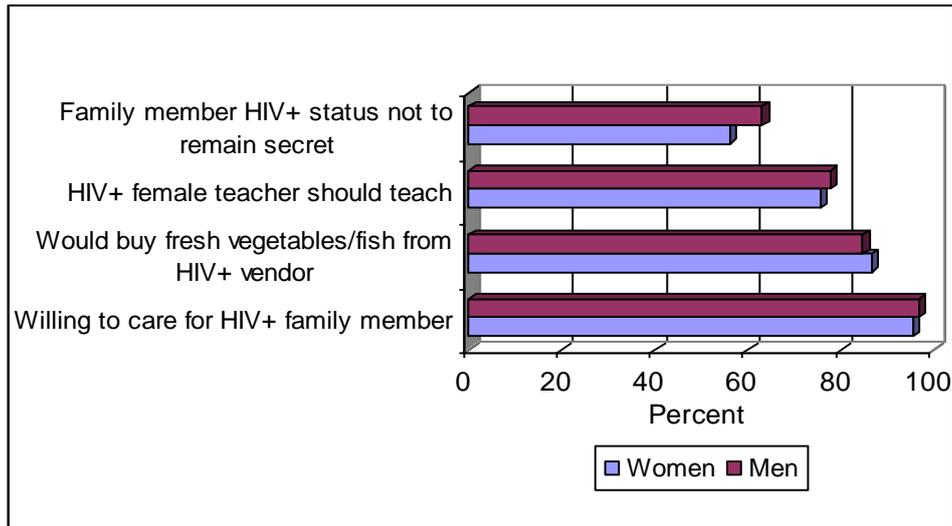


#### **5.4. Stigma related attitudes and willingness to care for a family member with AIDS**

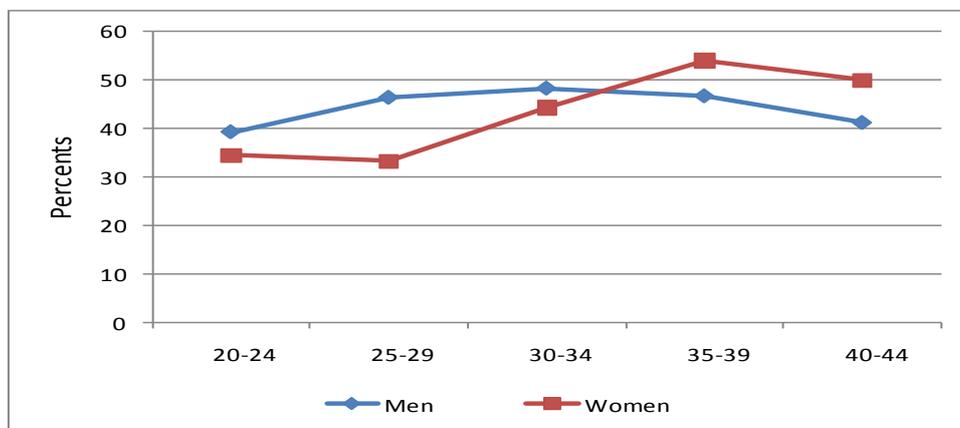
To assess the level of stigma, the survey respondents who had heard of AIDS were asked a set of four questions, namely; a; if they would be willing to care for a relative sick with AIDS in their own households, b; if they would be willing to buy sugar, fresh vegetables, or other food from a market vendor who had the AIDS virus, c; whether respondents thought that a female teacher who has the AIDS virus but is not sick should be allowed to continue teaching, and d; if a member of their family got infected with the virus that causes AIDS, whether they would want it to remain secret or not.

The results of the assessment of the 4 measures of accepting attitudes toward those living with HIV are shown on Tables 5.3 and 5.4. They show that overall, among women who have heard of HIV/AIDS, the percentage of respondents who say that they would be willing to care for a relative who is sick with AIDS in their own household is 96 and 97 percent in women and men, respectively. Additionally, 87 and 85 percent of women and men say they would buy sugar or fresh vegetables from a vendor if they knew that he/she is HIV positive, respectively. On whether to allow a female teacher who has the AIDS virus but is not sick to continue teaching in the school, 76 percent of women and 79 percent of men agrees with this position. Furthermore, about 56 percent of women and 63 percent of men say that if a member of their family got infected with the AIDS virus, they would not necessarily want it to remain a secret. When analysis is done combining all the four indicators, the result shows that 40 percent of women and 45 percent of men express positive attitudes on all four indicators. Based on the above analysis, the findings show that, overall, the fishing communities have a reasonable level of accepting attitudes towards persons living with HIV.

**Figure 5.1; Proportion of women and men expressing accepting attitudes on all four measures (Male;558, Female;352)**



**Figure 5.2; Proportion of women and men who express accepting attitudes on all 4 measures by age**



**Table 5.3: Accepting attitudes toward those living with HIV: Women**

Among women who have heard of HIV/AIDS, percentage expressing accepting attitudes toward people with HIV, by selected background characteristic

Background characteristic	Percentage of women who :				Percentage expressing accepting attitudes on all four measures <sup>1</sup>	Number of women who have heard of HIV/AIDS
	Are willing to care for a family member with HIV at home	Would buy fresh vegetables or fish from a vendor who has HIV	Believe HIV positive female teacher should be allowed to keep teaching	Would not want HIV+ status of a family member to remain a secret		
<b>Age</b>						
15-19	96.7	83.3	66.7	36.7	13.3	30
20-24	94.8	84.5	67.2	55.2	34.5	58
25-29	96.5	78.9	73.7	50.9	33.3	57
30-34	97.1	94.3	78.6	58.6	44.3	70
35-39	94.0	90.0	88.0	62.0	54.0	50
40-44	94.7	86.8	76.3	60.5	50.0	38
45-49	(96.3)	(88.9)	(77.8)	(59.3)	(44.4)	27
50-54	*	*	*	*	*	13
55-59	*	*	*	*	*	9
<b>Marital status</b>						
Never married	*	*	*	*	*	21
Married	96.7	82.3	75.7	54.7	38.1	181
Living together	95.3	90.6	75.0	50.0	35.9	64
Divorced/Separated	93.7	88.9	81.0	69.8	55.6	63
Widowed	*	*	*	*	*	23
<b>Education</b>						
Nursery	*	*	*	*	*	3
Primary	95.0	83.3	73.8	56.1	39.8	221
Post Primary/Vocational	*	*	*	*	*	13
Secondary/'A' Level	95.2	95.2	83.9	61.3	43.5	62
College/ University	*	*	*	*	*	1
Not Stated	96.2	90.4	75.0	53.8	40.4	52
<b>Religion</b>						
Roman Catholic	96.9	84.0	73.3	61.1	42.7	131
Protestant/Other Christian	95.5	86.4	84.1	53.0	43.2	132
Muslim	94.8	91.4	65.5	50.0	31.0	58
Other	90.3	90.3	67.7	61.3	32.3	31
<b>Total</b>	<b>95.5</b>	<b>86.6</b>	<b>75.6</b>	<b>56.3</b>	<b>40.1</b>	<b>352</b>

<sup>1</sup>Corresponds to Emergency Plan Policy and Systems Strengthening (Capacity Building) Indicator 2 "Percent of the general population with accepting attitudes toward persons living with HIV/AIDS" and to UNAIDS Stigma and Discrimination Indicator 1 "Accepting attitudes toward those living with HIV".

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

**Table 5.4: Accepting attitudes toward those living with HIV: Men**

Among men who have heard of HIV/AIDS, percentage expressing accepting attitudes toward people with HIV, by selected background characteristic

Background characteristic	Percentage of men who :				Percentage expressing accepting attitudes on all four measures <sup>1</sup>	Number of men who have heard of HIV/AIDS
	Are willing to care for a family member with HIV at home	Would buy fresh vegetables or fish from a vendor who has HIV	Believe HIV positive female teacher should be allowed to keep teaching	Would not want HIV+ status of a family member to remain a secret		
<b>Age</b>						
15-19	(92.6)	(88.9)	(81.5)	(70.4)	(51.9)	27
20-24	96.6	79.8	74.2	60.7	39.3	89
25-29	97.3	87.3	77.3	64.5	46.4	110
30-34	99.1	82.8	78.4	64.7	48.3	116
35-39	95.2	87.6	79.0	61.0	46.7	105
40-44	96.1	88.2	76.5	64.7	41.2	51
45-49	*	*	*	*	*	23
50-54	(96.2)	(76.9)	(88.5)	(61.5)	(50.0)	26
55-59	*	*	*	*	*	11
<b>Marital status</b>						
Never married	93.5	85.5	80.6	72.6	51.6	62
Married	96.5	84.5	79.0	65.6	46.9	343
Living together	98.7	83.3	74.4	43.6	29.5	78
Divorced/Separated	98.3	88.3	70.0	61.7	43.3	60
Widowed	*	*	*	*	*	15
<b>Education</b>						
Nursery	*	*	*	*	*	3
Primary	96.9	84.4	75.4	63.1	45.5	358
Post Primary/Vocational	*	*	*	*	*	24
Secondary/'A' Level	96.9	86.6	81.9	66.9	46.5	127
College/ University	*	*	*	*	*	6
Not Stated	97.5	80.0	75.0	42.5	30.0	40
<b>Religion</b>						
Roman Catholic	97.2	85.4	78.9	62.9	46.9	213
Protestant/Other Christian	96.5	86.9	82.9	65.8	48.2	199
Muslim	96.7	81.7	68.3	63.3	40.8	120
Other	(96.2)	(76.9)	(73.1)	(42.3)	(26.9)	26
<b>Total</b>	<b>96.8</b>	<b>84.8</b>	<b>77.8</b>	<b>63.1</b>	<b>45.2</b>	<b>558</b>

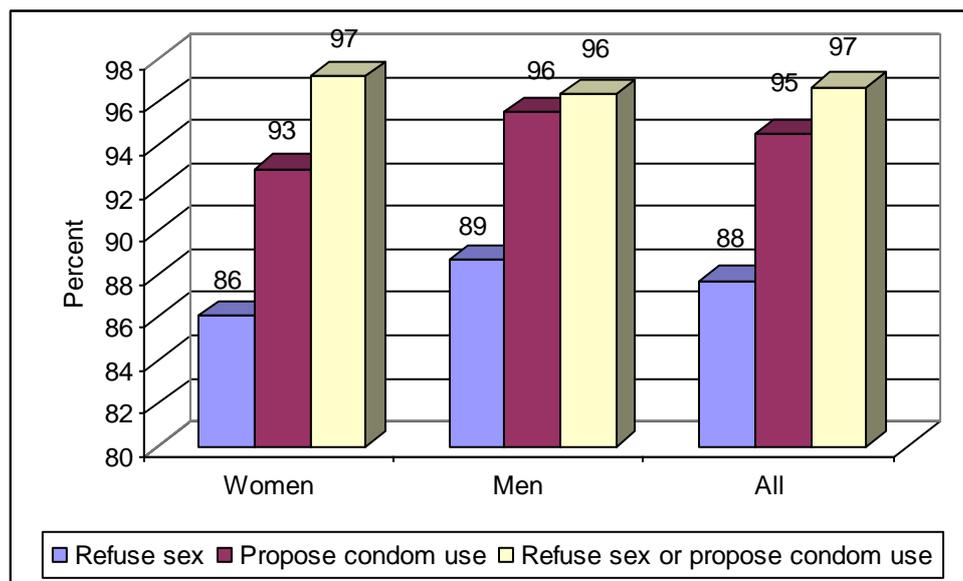
<sup>1</sup>Corresponds to Emergency Plan Policy and Systems Strengthening (Capacity Building) Indicator 2 "Percent of the general population with accepting attitudes toward persons living with HIV/AIDS" and to UNAIDS Stigma and Discrimination Indicator 1 "Accepting attitudes toward those living with HIV".  
Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

### 5.5; Attitudes toward negotiating safer sex with husband

Empowering women to have the right attitudes toward women negotiating safer sex with husband is crucial in HIV prevention. During the survey, analysis was done to show the percentage of women and men who believe that, if a husband has a sexually transmitted disease, his wife is justified in either refusing to have sex with him or asking that he uses a condom. As shown in Table 6.5 and Figure 6.4, the results show that the proportion of

women and men who believe that, if a husband has a sexually transmitted disease, his wife is justified in refusing to have sex with him is 86 and 89 percent, respectively. The proportion of women and men who believe that, if a husband has a sexually transmitted disease, his wife is justified in asking that the husband to use a condom is 93 and 96 percent, respectively. Furthermore, the proportion of women and men who believe that, if a husband has a sexually transmitted disease, his wife is justified in refusing him sex or proposing condom use is 73 and 96 percent, respectively. Interestingly, in all the 3 indicators, women's performance is lower than that of men, implying that women are probably less empowered than men.

**Figure 5.5. Percentage of women and men who believe in sexual negotiation  
(Women; 352, Men; 559 Total; 911)**



**Table 6.5: Attitudes toward negotiating safer sex with husband**

Percentage of women and men who believe that, if a husband has a sexually transmitted disease, his wife is justified in either refusing to have sex with him or asking that he uses a condom

WOMAN IS JUSTIFIED TO:	WOMEN	MEN	ALL
Refuse sex:	86.1	88.7	87.7
Propose condom use	92.9	95.5	94.5
Refuse sex or propose condom use <sup>1</sup>	97.2	96.4	96.7
Number	352	559	911

<sup>1</sup>Corresponds to UNAIDS Sexual Negotiation Indicator 1 "Women's ability to negotiate safer sex with husband".

# CHAPTER 6: HIV RELATED BEHAVIOURS

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## 6.1. Key Findings

- Of all the surveyed respondents, 2 percent is still a virgin practising primary abstinence.
- The proportion of the 15-24 year old group reporting never playing sex is 7 percent overall, 7 percent in women and 8 percent in men.
- Overall, 5 percent of the respondents aged 15-24 years reported that they did not have sex in the past 12 months (practising secondary abstinence); among women and men of similar age, the indicator is 2 and 7 percent, respectively.
- The percentage of respondents who had first sexual intercourse by age 15 years is 46 percent in women, 26 percent in men and 34 percent in both women and men.
- The median age at sexual debut is 16 years in women and 17 years in men.
- Among women and men aged 15-24 years, the proportion of respondents reporting condom use at first sex is 48 and 36 percent, respectively.
- Overall, condom use at first sex is higher among those who know a source of condom (43 percent) than in those who do not know a source of condom (17 percent).
- Among the respondents aged 15-49 who had sexual intercourse in the last 12 months, the proportion who had intercourse with more than one partner is 11 percent in women, 46 percent in men and 33 percent in both women and men. Therefore, the data show that multiple sexual partnerships are more common in men than in women.
- Among respondents aged 15-49 who had sexual intercourse in the last 12 months, the proportion who had intercourse with more than one partner is 11 percent in women, 46 percent in men and 33 percent in both women and men.
- The mean number of lifetime sexual partners is 3 in women and 11.4 in men; indicating that men are much more likely than women to engage in multiple sexual partnerships.
- Those respondents whose origin is 100 kilometers or more from the current place of residence are more likely to report engagement in multiple sexual relationships than those born in the area of current residence.
- The proportion of women and men aged 15-49 years who engaged in higher-risk sex is 24 and 43 percent, respectively. As expected, the indicator is highest among the never married.
- Overall, the proportion of respondents who say they used a condom every time they had sexual intercourse with non-marital, non-cohabiting partners in the last 12 months is 41 percent in women, 47 percent in men and 45 percent in both women and men.
- The proportion of men aged 15-49 years who reported sex with a commercial sex worker in the last 12 months is 10 percent.

## **6.2. Introduction**

In sub-Saharan Africa including Uganda, heterosexual contact is the most predominant route of HIV transmission. Therefore, age at sexual debut has a direct connect with the risk of exposure to HIV transmission. Furthermore, risk taking sexual behaviors such as multiple sexual partnerships, higher risk sex; non-use of condoms and engagement in transactional sex also put people at risk of HIV transmission.

Arising from above, it is crucial to determine the age at which people do initiate sex. It is also important to assess other sexual behaviors. During this survey, the key HIV-related behavioral variables that were examined include primary abstinence, median age at sexual debut, secondary abstinence, premarital sex, casual sex, multiple sex partnership and condom use. Primary abstinence was defined as the proportion of youth (age 15-24) who have never had sex. Median age at first sexual intercourse was defined as the age by which 50% of the respondents had initiated sex, calculated from cumulative single-year percent distribution of age at first sexual intercourse. Secondary abstinence was defined as the proportion of youth who have ever had sex but not in the past 12 months. Cross-generational sex was defined as non-spousal sex by a woman age 15-19 years with a man 10 or more years older. Other variables studied are; the number of sexual partners in last 12 months (among those who had sex in last 12 months aged 15-49 years old), non-spousal sex: Proportion who engaged in sex with non-marital, non-cohabiting partner in the past 12 months (who had sex in last 12 months, aged 15-49), proportion who used condom at last sex (15-49 years old, who had sex in last 12 months), proportion who used condoms during last non-spousal sex (15-49 years old who had non-spousal sex in last 12 months), proportion who reported consistent condom use in the last 12 months (15-49 years old, who had sex in last 12 months), proportion who had sex in exchange for money or fish or sugar in the last 12 months.

## **6.3. Primary and Secondary Abstinence**

The results of the analysis of primary abstinence and age at first sex are shown on Table 6.1; it shows that among all respondents, the percentage who have ever had sex is 98 percent; meaning that only two percent of the surveyed population is still a virgin practising primary abstinence. When data is disaggregated by age, the proportion of the 15-24 year old group reporting never playing sex is 7 percent overall, 7 percent in women and 8 percent in men.

In regard to secondary abstinence, the results show that overall, 5 percent of the sexually experienced respondents aged 15-24 years reported that they did not have sex in the past 12 months. Among women and men of similar age, the indicator is 2 and 7 percent, respectively (Table 6.2).

## **6.4. Age at sexual initiation**

Analysis of age at first sexual intercourse by single ages was done (Table 6.3); it shows that the percentage of respondents who had first sexual intercourse by age 15 years is 46 percent in women, 26 percent in men and 34 percent in both women and men.

When the 18 years cut-off point is considered, the proportion of respondents who had first sexual intercourse by age 18 years is 90 percent in women, 75 percent in men and 81 percent in both women and men. The results further show that by the age 20 years, virtually all respondents (99 percent) had initiated sex. Overall, the results show that women initiate sex earlier than men. This finding is consistent with the analysis of median age at sexual debut, whereby the median age at sexual debut is 16 years in women and 17 years in men (Table 6.4).

**Table 6.1: Primary Abstinence: Respondents aged 15-24 years, that have never played sex**

ITEM	WOMEN		MEN		TOTAL	
	Number aged between 15-24 years	Percent	Number aged between 15-24 years	Percent	Number aged between 15-24 years	Percent
Never Had Sexual Intercourse	6	6.8	9	7.7	15	7.3
Ever Had Sexual Intercourse	82	93.2	108	92.3	190	92.7
TOTAL	88	100.0	117	100.0	205	100.0

**Table 6.2: Secondary Abstinence: Sexually experienced respondents aged 15-24 years, that did not have sex in the past 12 months**

ITEM	WOMEN		MEN		TOTAL	
	Number aged between 15-24 years	Percent	Number aged between 15-24 years	Percent	Number aged between 15-24 years	Percent
Had no sex during last 12 months	2	2.4	7	6.5	9	4.7
Had sex during last 12 months	80	97.6	101	93.5	181	95.3
TOTAL	82	100.0	108	100.0	190	100.0

**Table 6.3: Age at first sexual intercourse**

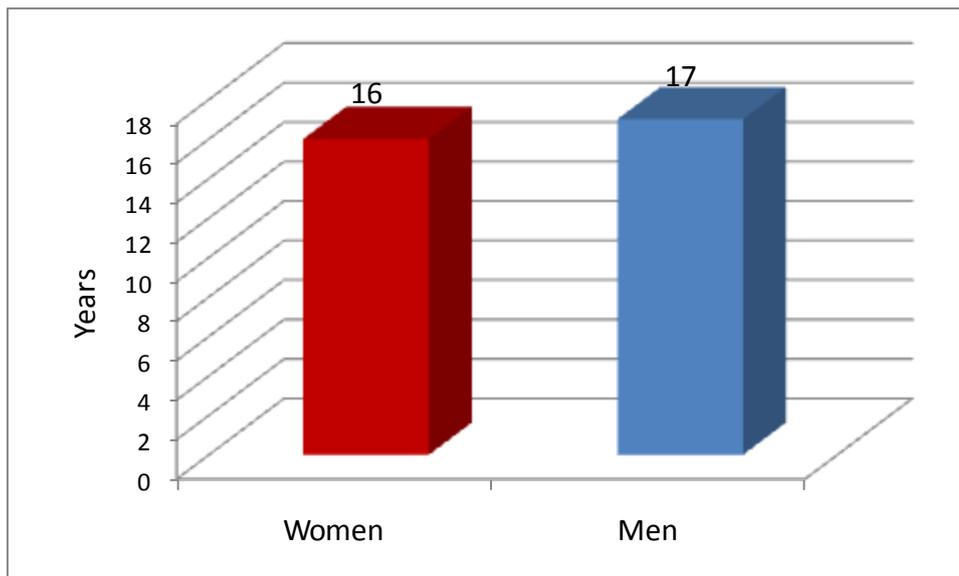
Percentage of respondents who had first sexual intercourse by specific exact ages and median age at first intercourse

ITEM	WOMEN	MEN	TOTAL
Percentage who had first sexual intercourse by age:			
10	0.6	2.6	1.8
15	46.2	26.2	34.0
18	89.8	74.7	80.6
20	97.7	89.4	92.6
25	99.7	98.1	98.8
Number Reporting Age At First Sex	342	538	880

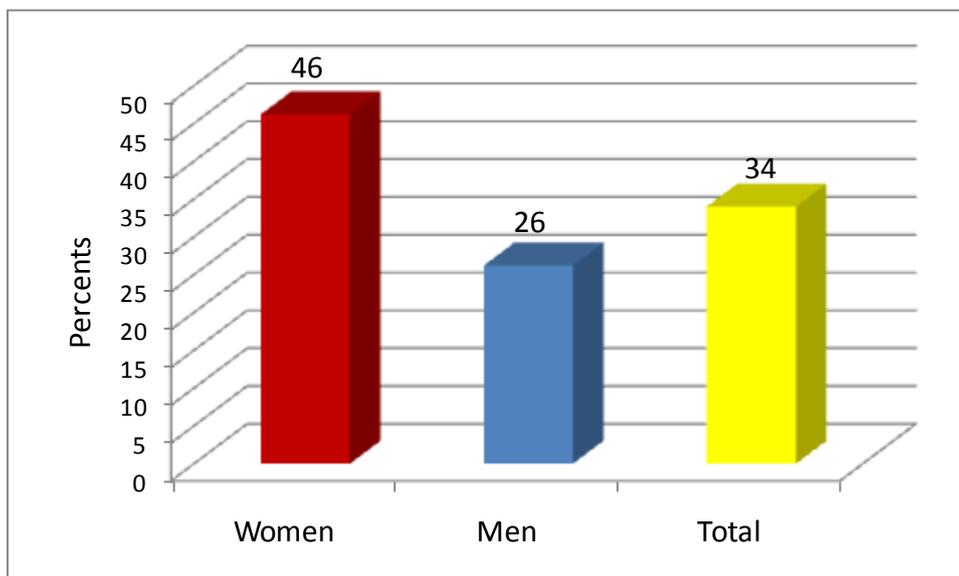
**Table 6.4: Mean and median ages at sexual debut in those aged 19-24 years**

ITEM	WOMEN	MEN	TOTAL
Mean Age at Sexual Debut	15.6	16.5	16.1
Standard Deviation	3.7	6.6	5.6
Median Age at Sexual Debut (50% Mark in years )	16.0	17	16
Number Reporting Age At First Sex	66	96	162

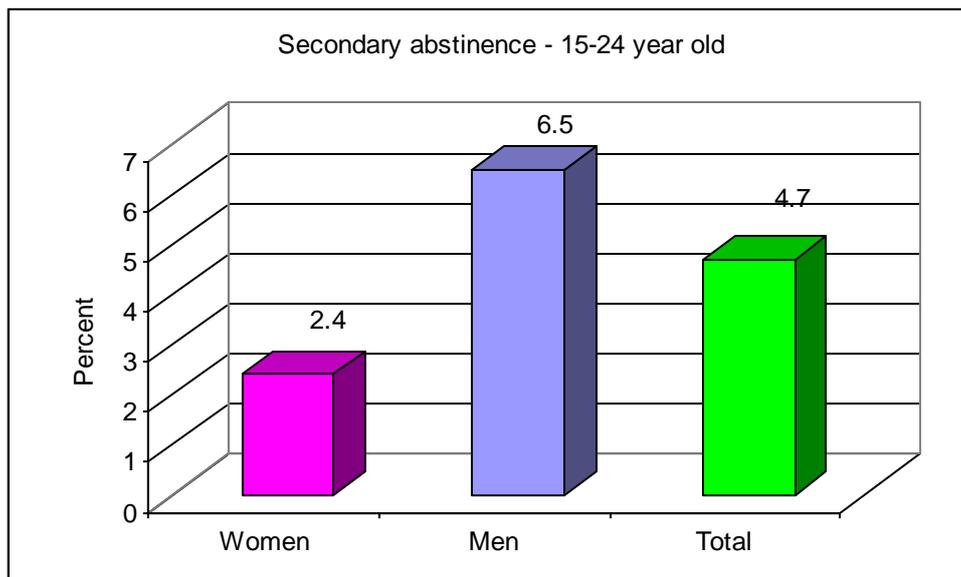
**Figure 6.1; Median age at first sexual intercourse (Women; 324, Men; 513)**



**Figure 6.2; Proportion of respondents reporting having sex by age 15 years (Women;342, Men;538, Total; 880)**



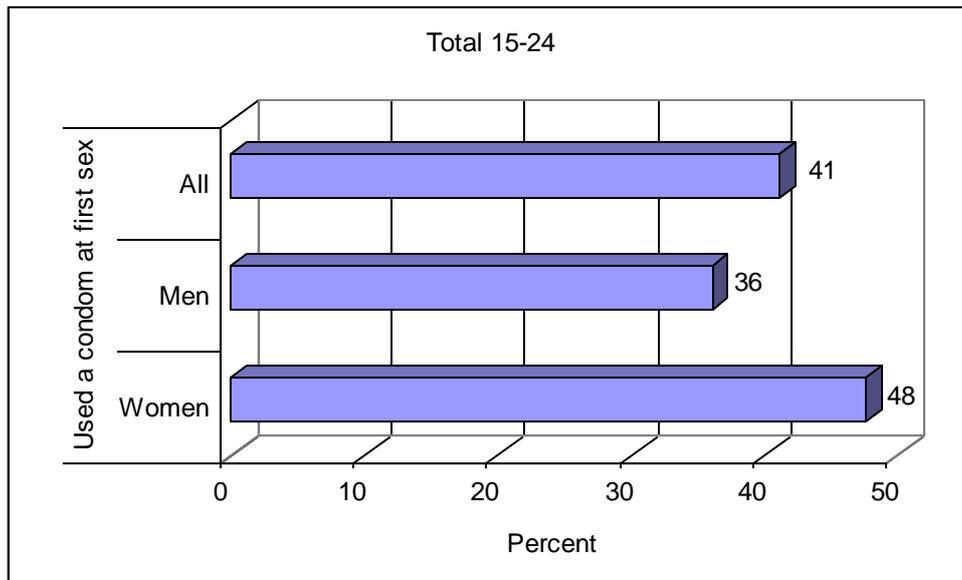
**Figure 6.3; Proportion of 15-24 year old sexually experienced respondents reporting no sex in the last 12 months (Women;82, Men;108 Total; 190)**



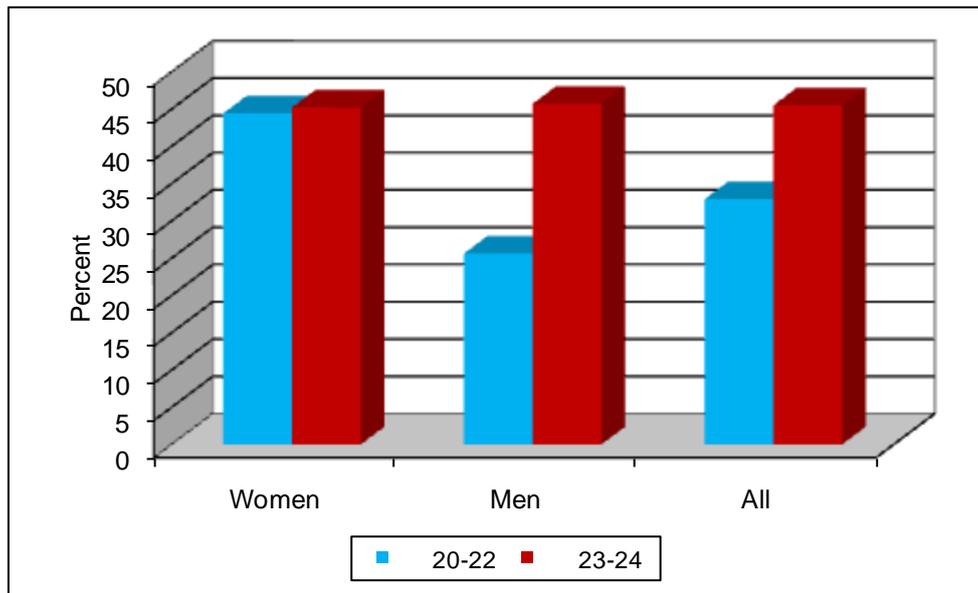
### 6.6. Condom use at first sex

Condom use at first sex reduces the risk of both HIV acquisition and pregnancy in young girls. During the survey, analysis was conducted to determine the percentage of respondents who used a condom the first time they ever had sex. This indicator was cross-tabulated by background characteristics of women and men age 15-24 that have ever had sex. The results (Table 6.6 and Figures 6.6 and 6.7) indicate that less than half of the 15-24 year old respondents that have ever had sex reported condom use at first sex. Among women and men, the proportion of respondents reporting condom use at first sex is 48 and 36 percent, respectively. Furthermore, overall, condom use at first sex is higher among those who know a source of condom (43 percent) than in those who do not know a source of condom (17 percent). In women, the proportion of respondents reporting condom use at first sex is 51 percent among those know a source of condom, compared to 13 percent in those who do not know a source of condom. In men, the proportion of respondents reporting condom use at first sex is 37 percent among those know a source of condom, compared to 25 percent in those who do not know a source of condom (Figure 6.8).

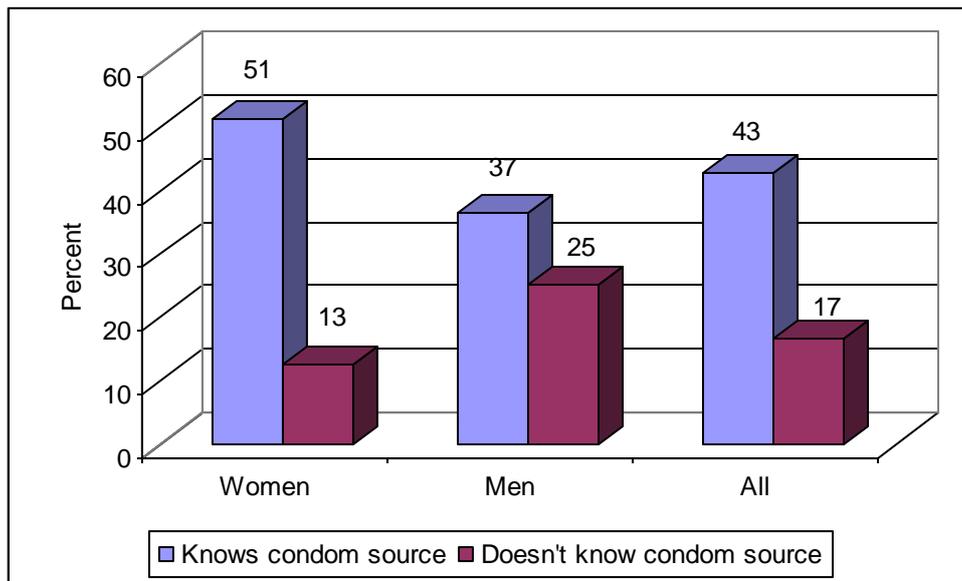
**Figure 6.6; Proportion of 15-24 year old respondents who used condoms at 1<sup>st</sup> sex (Women;82, Men;108 Total; 190)**



**Figure 6.7; Condom use at first sex by age grouping**



**Figure 6.8; Use of Condom during first sex among the 15-24 year old respondents by Knowledge of source of condoms (Women;82, Men;108 Total; 190)**



**Table 6.6: Condom use at first sex among young women and men**

Among women and men age 15-24 who have ever had sex, percentage who used a condom the first time they ever had sex, by background characteristics

Background characteristic	WOMEN		MEN		TOTAL	
	Used a condom at first sex <sup>1</sup>	Number of women age 15-24 who have ever had sex	Used a condom at first sex <sup>1</sup>	Number of men age 15-24 who have ever had sex	Used a condom at first sex <sup>1</sup>	Number of respondents age 15-24 who have ever had sex
Age						
15-19						
15-17	*	7	*	6	*	13
18-19	*	17	*	13	53.3	30
20-24						
20-22	(44.4)	27	25.6	43	32.9	70
23-24	45.2	31	45.7	46	45.5	77
Marital status						
Never married	*	13	34.2	38	41.2	51
Ever married	44.9	69	37.1	70	41.0	139
Education						
Nursery	*	1	*	1	*	2
Primary	43.5	46	35.7	70	38.8	116
Post Primary/Vocational	*	7	*	4	*	11
Secondary/'A' Level	*	23	(39.3)	28	47.1	51
College/ University	*	0	*	1	*	1
Not Stated	*	5	*	4	*	9
Religion						
Roman Catholic	46.9	32	40.0	35	43.3	67
Protestant/Other Christian	43.3	30	37.5	40	40.0	70
Muslim	*	16	(32.1)	28	43.2	44
Other	*	4	*	5	*	9
Know condom source <sup>2</sup>						
Yes	51.4	74	36.5	104	42.7	178
No	*	8	*	4	*	12
Total 15-24	47.6	82	36.1	108	41.1	190

<sup>1</sup> Corresponds to UNAIDS Young People's Sexual Behavior Indicator 6 "Condom use at first sex".

<sup>2</sup> The following sources are not considered sources for condoms in this table: friends, family members, and home. Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

## 6.7. Cross-generational sex

Analysis was also done to determine the magnitude of cross-generational sex among young women. This kind of analysis highlights the effect of gender disparity on HIV transmission. Young girls who are much younger than their male counterparts are much vulnerable to the risk of HIV transmission because they are not empowered to negotiate for safer sex such as condom use. During this survey, analysis was done to determine the percentage of women age 15-19 who have had sexual intercourse with a non-marital non-cohabiting partner (higher risk sex) who was 10 years or more older than themselves in the last 12 months. As shown in table 6.7, the results show that there are only 8

respondents who fall under this age bracket. Of these 8 girls, none reported sex with a man 10 years or older than themselves. This result indicates that the surveyed population is composed of mainly older women.

**Table 6.7: Age-mixing in sexual relationships**

Percentage of women age 15-19 who have had sexual intercourse with a non-marital non-cohabiting partner (higher risk sex) who was 10 years or more older than themselves in the last 12 months, by background characteristics

Background characteristic	Percentage who had higher risk sex with a man 10+ years older <sup>1</sup>	Number of women 15-19 having higher risk sex in the last 12 months
Age		
15-17	*	2
18-19	*	6
<b>Total 15-19</b>	*	<b>8</b>

<sup>1</sup>Corresponds to UNAIDS Young People's Sexual Behavior Indicator "Age-mixing in sexual relationships" (Among the last three partners in the last 12 months). This is an Additional Indicator.

Note: An asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

## 6.8. Multiple Sexual Partnerships

Sexual networking contributes to the spread of HIV infection. Therefore, assessment of the number of sexual partners of sexually active people is important because having many sexual partners widens sexual network and increases the risk of HIV transmission. Each new partner is expected to bring with it new risk of HIV transmission. Therefore, it was deemed necessary to ask questions on multiple sexual relationships during this survey. Related to this, condom use among respondents who engage in multiple sexual relationships was also examined. This was done in recognition of the fact that use of condoms during this act reduces the risk of HIV transmission.

Tables 6.8, 6.9 and 6.10 show that, among the respondents aged 15-49 who had sexual intercourse in the last 12 months, the proportion who had intercourse with more than one partner is 11 percent in women, 46 percent in men and 33 percent in both women and men. Therefore, the data show that multiple sexual partnerships are more common in men than in women (Figure 6.10). Additionally, the results show that in women, there are some variations in multiple sex relationship by age, marital status, religion and place of origin. The indicator is highest among the 20-39 year old, never married people, those who are divorced/separated, widows, Muslims and those whose origin is 100 kilometers or more from the current place of residence. In men, there are also some variations in multiple sex relationship by age, marital status, religion and place of origin. The indicator is highest

among the 20-39 year old, never married people, those who are divorced/separated, widows and Muslims.

The mean number of lifetime sexual partners is 3 in women and 11.4 in men, further indicating that men are much more likely than women to engage in multiple sexual partnerships.

### **6.9. Multiple sex partnership and mobility.**

Analysis was conducted to assess the pattern of multiple sexual relationships according to mobility background. This was so because mobility is one of the risk factors for HIV transmission. When people move away from home, loneliness sets in. This one form of social disruption at times leads to engagement in risky sexual behaviors; for instance, having sex with commercial sex workers. This act contributes to multiple sexual relationship and higher risk sex; thus creating risk for HIV transmission.

The analysis revealed that in women, those respondents whose origin is 100 kilometers or more from the current place of residence are more likely to report engagement in multiple sexual relationships than those born in the area of current residence. Although the results are more or less similar in men, multiple sex is highest in two categories; namely, those born in the area (49 percent) and those whose origin is 100 kilometers or more from the current place of residence.

**Table 6.8: Multiple Sexual Partnerships**

Percentage of respondents aged 15-49 who had sexual intercourse in the last 12 months, and among them, the percentage who have had intercourse with more than one partner in the last 12 months, and mean number of lifetime sexual partners among those who have had intercourse, by sex

ITEM	WOMEN	MEN	TOTAL
1. a) Percentage who had sex in last 12 months	88.2	92.0	90.5
b) Number aged 15-49	330	522	852
2. a) Percentage who had 2+ partners in the last 12 months <sup>1</sup>	11.3	45.6	32.7
b) Number who had sex in last 12 months	291	480	771
3. a) Mean number of lifetime sexual Partners	4.1	11.4	8.5
b) Median number of lifetime sexual partners	3	6	4
c) Number aged 15-49 who ever had sex	324	513	837

<sup>1</sup> Corresponds to Emergency Plan Core Prevention Indicator 4 "Percent of women and men aged 15-49 who had sex with more than one partner in the last 12 months"

**Table 6.9: Multiple sexual partnerships among women, by background characteristics**

Percentage of women aged 15-49 who had sexual intercourse in the last 12 months, and among them, the percentage who have had intercourse with more than one partner in the last 12 months, and mean number of lifetime sexual partners among those who have had intercourse, by background characteristics

Background characteristic	Percentage who had sex in last 12 months	Number of women aged 15-49	Percentage who had 2+ partners in the last 12 months <sup>1</sup>	Number who had sex in last 12 months	Mean number of lifetime sexual partners	Median (50% mark) number of lifetime sexual partners	Number of women aged 15-49 who ever had sex
<b>Age</b>							
15-19	73.3	30	*	22	2.3	2	24
20-24	100.0	58	19.0	58	3.4	3	58
25-29	94.7	57	13.0	54	3.1	3	57
30-34	91.4	70	14.1	64	4.8	4	70
35-39	92.0	50	4.3	46	3.2	3	50
40-44	81.6	38	3.2	31	6.4	3	38
45-49	(59.3)	27	*	16	5.0	4	27
<b>Marital status</b>							
Never married	*	21	*	14	2.3	2	15
Married	97.1	172	7.8	167	4.0	3	172
Living together	96.8	62	8.3	60	4.2	4	62
Divorced/Separated	72.4	58	26.2	42	4.8	4	58
Widowed	*	17	*	8	3.3	3	17
<b>Education</b>							
Nursery	*	3	*	2	2.0	2	3
Primary	88.9	208	11.9	185	4.3	3	205
Post Primary/Vocational	*	12	*	11	3.2	2	12
Secondary/'A' Level	91.7	60	12.7	55	3.5	3	59
College/ University	*	1	*	1	2.0	2	1
Not Stated	80.4	46	5.4	37	4.1	3	44
<b>Religion</b>							
Roman Catholic	94.5	121	11.4	114	3.8	3	119
Protestant/Other Christian	87.9	124	9.2	109	4.6	3	124
Muslim	83.9	56	21.3	47	3.7	3	54
Other	(72.4)	29	*	21	3.3	3	27
<b>Distance to former place of residence</b>							
Born in that area	71.0	31	*	22	4.0	5	26
Less than 10 KM	*	20	*	19	2.6	3	20
10 - 29 KM	(82.8)	29	*	24	4.0	4	29
30 - 49 KM	87.5	48	11.9	42	3.9	5	48
50 - 99 KM	90.7	86	6.4	78	3.8	5	85
100 KM and above	91.2	113	15.5	103	4.5	5	113
Not Stated	*	3	*	3	4.3	6	3
<b>Duration of Staying Away from Home During Last 12 Months</b>							
Ever been away a month	97.9	47	10.9	46	4.4	4	47
Never been away a month	86.6	283	11.4	245	4.0	3	277
<b>Total 15-49</b>	<b>88.2</b>	<b>330</b>	<b>11.3</b>	<b>291</b>	<b>4.1</b>	<b>3</b>	<b>324</b>

<sup>1</sup> Corresponds to Emergency Plan Core Prevention Indicator 4 "Percent of women and men aged 15-49 who had sex with more than one partner in the last 12 months"

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

**Table 6.10: Multiple sexual partnerships among men, by background characteristics**

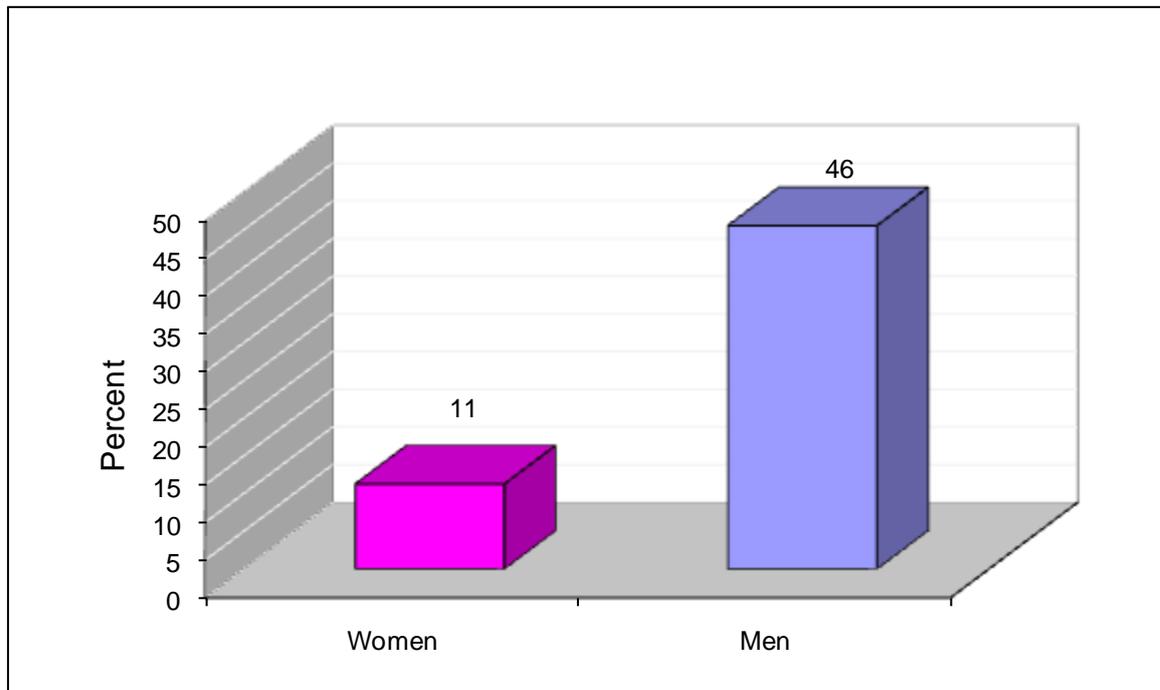
Percentage of men aged 15-49 who had sexual intercourse in the last 12 months, and among them, the percentage who have had intercourse with more than one partner in the last 12 months, and mean number of lifetime sexual partners among those who have had intercourse, by background characteristics

Background characteristic	Percentage who had sex in last 12 months	Number of men aged 15-49	Percentage who had 2+ partners in the last 12 months <sup>1</sup>	Number who had sex in last 12 months	Mean number of lifetime sexual partners	Median (50% mark) number of lifetime sexual partners	Number of men aged 15-49 who ever had sex
<b>Age</b>							
15-19	(57.1)	28	*	16	5.2	2	19
20-24	95.5	89	42.4	85	7.7	4	89
25-29	95.5	110	47.6	105	10.2	6	110
30-34	96.6	116	43.8	112	10.6	6	116
35-39	92.4	105	48.5	97	12.3	7	105
40-44	84.3	51	58.1	43	17.6	10	51
45-49	*	23	*	22	23	10	23
<b>Marital status</b>							
Never married	68.3	63	20.9	43	5.0	4	54
Married	99.1	319	51.3	316	12.4	6	319
Living together	98.6	73	34.7	72	9.1	5	73
Divorced/Separated	78.2	55	46.5	43	15.4	8	55
Widowed	*	12	*	6	8.7	5	12
<b>Education</b>							
Nursery	*	3	*	3	5.3	5	3
Primary	92.5	332	48.5	307	11.5	6	326
Post Primary/Vocational	*	24	*	23	7.1	5	24
Secondary/'A' Level	89.9	119	43.9	107	11.1	6	117
College/ University	*	6	*	5	4.2	5	6
Not Stated	92.1	38	42.9	35	15.7	6	37
<b>Religion</b>							
Roman Catholic	89.2	203	40.3	181	11.7	6	199
Protestant/Other Christian	95.6	181	46.8	173	11.1	6	181
Muslim	91.2	114	55.8	104	11.6	6	111
Other	*	24	*	22	10.2	4	22
<b>Distance to former place of residence</b>							
Born in that area	88.5	78	49.3	69	7.4	5	75
Less than 10 KM	85.3	34	(31.0)	29	9.8	6	34
10 - 29 KM	95.8	48	47.8	46	15.0	7	48
30 - 49 KM	93.8	48	57.8	45	21.2	10	48
50 - 99 KM	91.8	122	38.4	112	9.0	6	119
100 KM and above	93.6	188	47.7	176	11.5	6	185
Not Stated	*	4	*	3	6.7	7	4
<b>Duration of Staying Away from Home During Last 12 Months</b>							
Ever been away a month	87.9	124	44.0	109	11.0	6	122
Never been away a month	93.2	398	46.1	371	11.5	6	391
<b>Total 15-49</b>	<b>92.0</b>	<b>522</b>	<b>45.6</b>	<b>480</b>	<b>11.4</b>	<b>6</b>	<b>513</b>

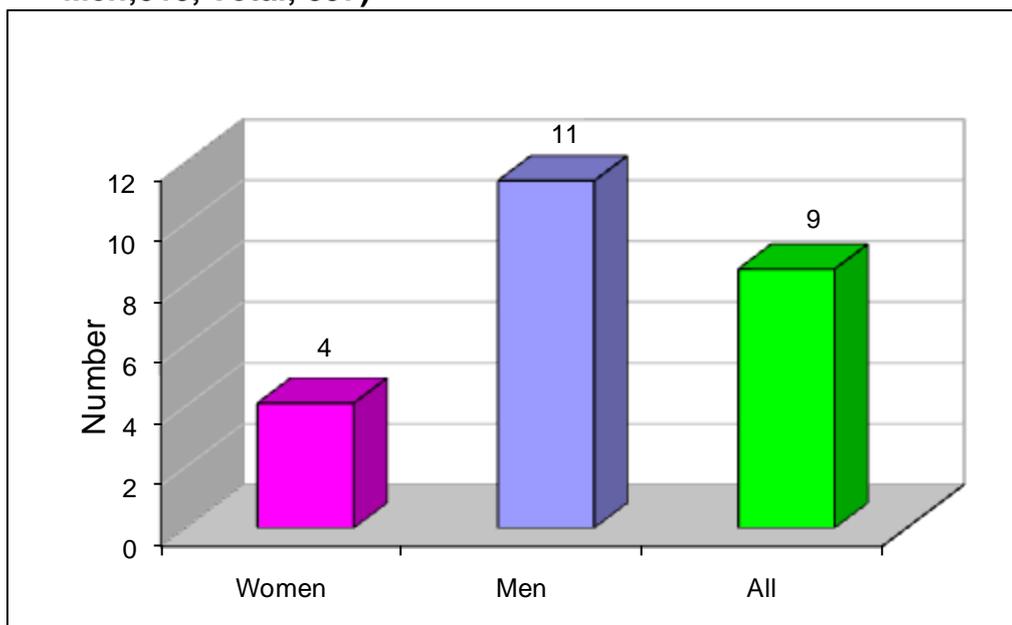
<sup>1</sup> Corresponds to Emergency Plan Core Prevention Indicator 4 "Percent of women and men aged 15-49 who had sex with more than one partner in the last 12 months"

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

**Figure 6.10; Proportion of 15-49 year old respondents who had 2+ partners in the last 12 months (Women; 291, Men;480)**



**Figure 6.11; Reported mean number of lifetime sexual partners by sex (Women;324, Men;513, Total; 837)**



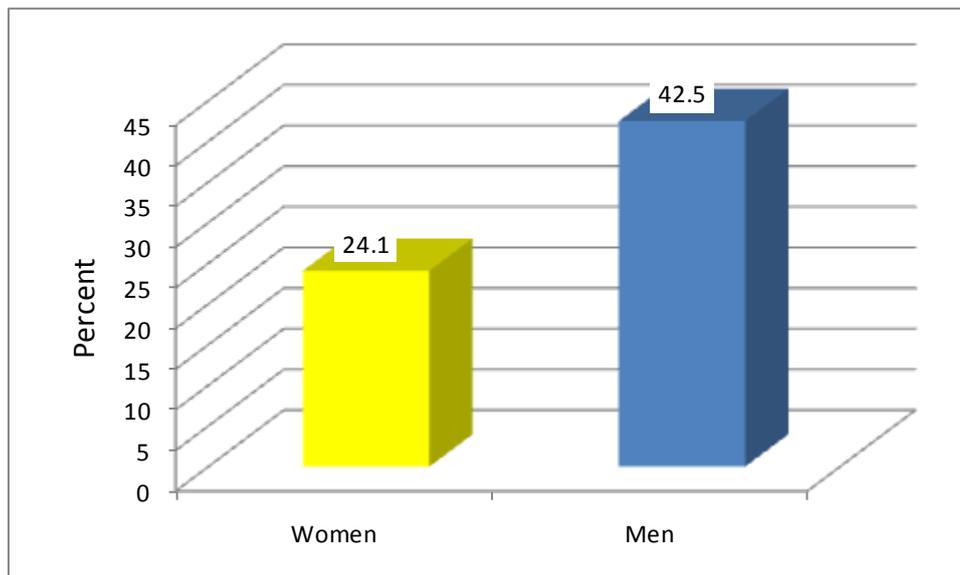
### **6.10. Higher Risk Sex**

Higher risk sex is yet another risk factor for HIV transmission. It is defined as having sex with a non-marital/non-cohabiting partner. All premarital sex is automatically characterized as

higher-risk sex. To determine the magnitude of “higher risk sex” among women and men who were sexually active in the 12 months preceding the survey, analysis was conducted by the research team.

As shown in Tables 6.11 and figure 6.12, higher risk sex was more common in men than in women. The proportion of women and men aged 15-49 years who engaged in higher-risk sex is 24 and 43 percent, respectively. As expected, the indicator is highest among the never married. When age grouping is considered, there are some variations in the proportion of women and men practising higher risk sex (Figure 6.13). When respondents’ mobility is considered, those who in the last 12 months were ever away from home for more than a month are more likely to report engagement in higher risk sex. Among the respondents who in the last 12 months were ever away from home for more than a month, the proportion who reported higher risk sex is 28 percent among women and 45 percent among men. Among the respondents who in the last 12 months never travelled away from home for more than a month, the proportion who reported higher risk sex is 23 percent among women and 40 percent among men.

**Figure 6.12: Among all women and men reporting sexual activity in the last 12 months, percentage who have had higher risk sex (Women;291, Men;480)**



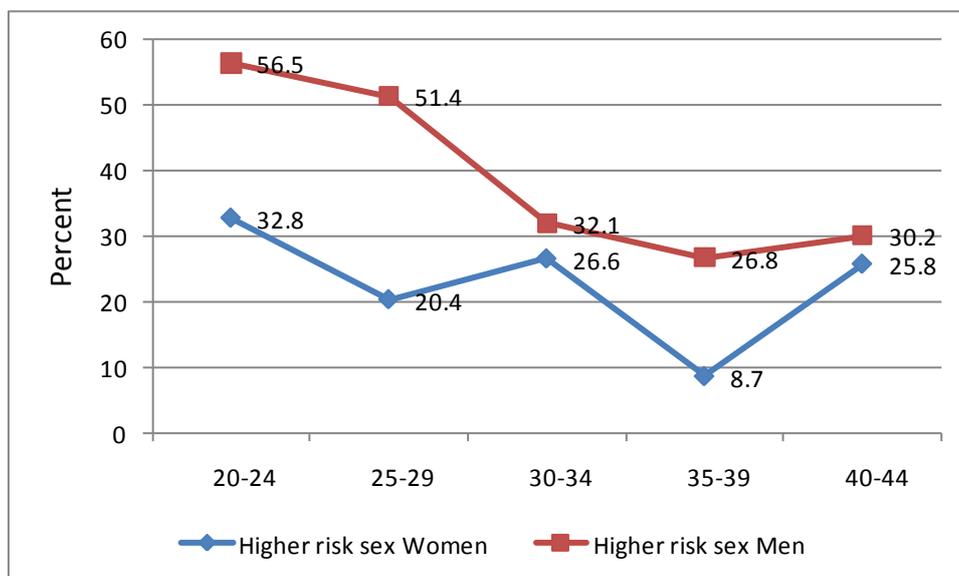
### 6.11. Condom Use during Higher Risk Sex

It has been documented that condom protects against HIV infection. For it to be effective, it should be used correctly and consistently. Condom use is especially important in HIV prevention during higher risk sex. In view of this, analysis was conducted to determine condom use during the last higher risk sex (Table 6.11). Specifically, respondents who were sexually active in the preceding 12 months were asked whether they used a condom every time they had sexual intercourse with a non-marital, non-cohabiting partner.

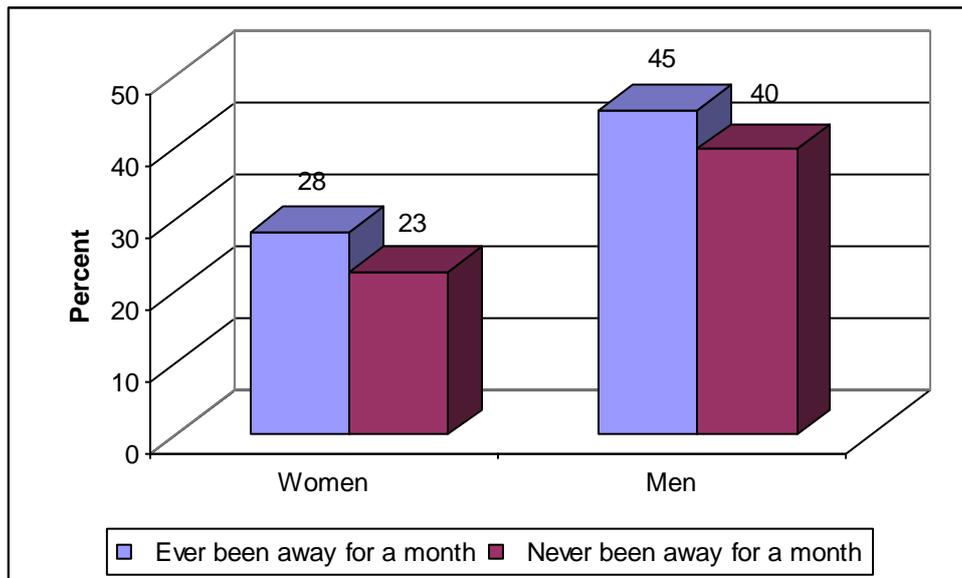
The results show that among all women and men reporting higher risk sex, the percentage of respondents who say they used a condom the last time they had such act is 48 percent among women and 59 percent among men of age group 15-49 years (Figure 6.15). There are some variations in condom use by age; among women and men, the percentage that reported condom use at last higher risk sex is highest in the younger age groups, compared to in the older age groups.

Analysis was also done to determine the percentage of respondents who say they used a condom every time they had sexual intercourse with non-marital, non-cohabiting partners. As shown on Table 6.12, among all women and men reporting higher risk sex in the last 12 months, consistent condom use is highest among women, widows, Muslims and respondents who in the preceding one year were ever away from home for more than a month. Overall, the proportion of respondents who say they used a condom every time they had sexual intercourse with non-marital, non-cohabiting partners in the last 12 months is 41 percent in women, 47 percent in men and 45 percent in both women and men. When mobility is considered, consistent condom use in respondents who were ever away from home for more a month in the last 12 months is higher than that in respondents who were never away from home for more a month. For instance, in women, the proportion who reported consistent condom use is 54 and 38 percent among those respondents who were ever away from home for more than a month in the last 12 months and in those respondents who were never away from home for more than a month, respectively. In both women and men, the indicator is 48 and 44 percent in respondents who were ever away from home for more than a month in the last 12 months and in respondents who were never away from home for more than a month, respectively.

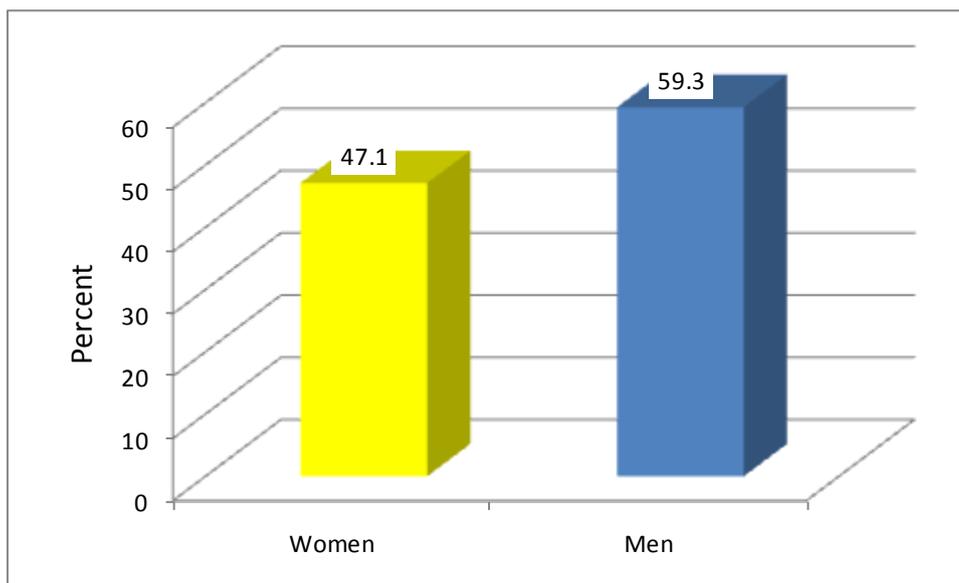
**Figure 6.13: Among all women and men reporting sexual activity in the last 12 months, percentage who have had higher risk sex by age and sex**



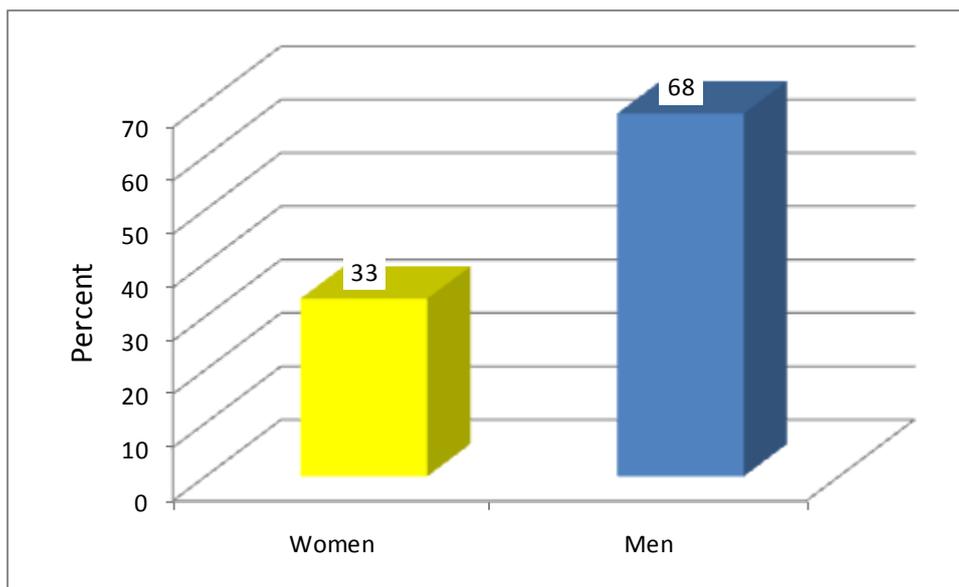
**Figure 6.14: Among all women and men reporting sexual activity in the last 12 months, percentage who have had higher risk sex by mobility over last 12 months (duration of being away)**



**Figure 6.15: Proportion of women and men reporting condom use at last higher risk sex (Women; 70, Men;204)**



**Figure 6.16; Condom use during last higher risk sex in women and men that came from 100Km and above from former place of residence**



**Table 6.11: Higher risk sex and condom use at last higher risk sex in the last year**

Among all women and men reporting sexual activity in the last 12 months, percentage of women and men who have had sex with a non-marital, non-cohabiting partner in the last 12 months (higher risk sex), and among them, percentage who say they used a condom the last time, by background characteristics

Background characteristic	WOMEN				MEN			
	Percentage engaging in higher risk sex in the last 12 months <sup>1</sup>	Number of women sexually active in the last 12 months	Percentage used condom at last higher risk sex <sup>2</sup>	Number of women with higher risk sex in the last 12 months	Percentage engaging in higher risk sex in the last 12 months <sup>1</sup>	Number of men sexually active in the last 12 months	Percentage used condom at last higher risk sex <sup>2</sup>	Number of men with higher risk sex in the last 12 months
<b>Age</b>								
15-19	*	22	*	8	*	16	*	16
20-24	32.8	58	*	19	56.5	85	58.3	48
25-29	20.4	54	*	11	51.4	105	64.8	54
30-34	26.6	64	*	17	32.1	112	66.7	36
35-39	8.7	46	*	4	26.8	97	(65.4)	26
40-44	25.8	31	*	8	30.2	43	*	13
45-49	*	16	*	3	*	22	*	11
50-54	*	10	*	1	*	22	*	4
55-59	*	2	NA	0	*	11	*	2
<b>Marital status</b>								
Never married	*	14	*	13	100.0	43	44.2	43
Married	5.7	176	*	10	28.6	339	60.8	97
Living together	14.5	62	*	9	28.6	77	*	22
Divorced/Separated	76.7	43	48.5	33	87.2	47	58.5	41
Widowed	*	8	*	6	*	7	*	7
<b>Education</b>								
Nursery	*	2	NA	0	*	3	NA	0
Primary	26.0	192	48.0	50	38.7	331	53.1	128
Post Primary/Vocational	*	12	*	4	*	23	*	9
Secondary/'A' Level	19.6	56	*	11	47.4	114	70.4	54
College/ University	*	1	*	0	*	5	*	3
Not Stated	15.0	40	*	6	43.2	37	*	16
<b>Religion</b>								
Roman Catholic	(21.8)	119	(42.3)	26	41.7	192	63.8	80
Protestant/Other Christian	(22.1)	113	(52.0)	25	38.4	190	50.7	73
Muslim	31.3	48	*	15	48.1	108	63.5	52
Other	*	23	*	5	21.7	23	60.0	5
<b>Distance to former place of residence</b>								
Born in that area	*	23	*	9	49.3	71	40.0	35
Less than 10 KM	*	20	*	3	26.7	30	*	8
10 - 29 KM	(15.4)	26	*	4	41.3	46	*	19
30 - 49 KM	22.7	44	*	10	49.0	51	(64.0)	25
50 - 99 KM	18.8	80	*	15	38.8	121	53.2	47
100 KM & above	28.0	107	33.3	30	39.3	191	68.0	75
Not Stated	*	3	NA	0	*	3	*	1
<b>Duration of Staying Away from Home During Last 12 Months</b>								
Ever been away a month	28.3	46	*	13	45.2	115	59.6	52

Never been away a month	22.6	257	43.1	58	39.7	398	58.9	158
Total 15-49	24.1	291	47.1	70	42.5	480	59.3	204
Total 15-59	23.4	303	47.9	71	40.9	513	59.0	210

<sup>1</sup>Corresponds to UNAIDS Sexual Behaviour Indicator 1 "Higher risk sex in the last year"

<sup>2</sup> Corresponds to Emergency Plan Core Prevention Indicator 5 "Percent of women and men age 15-49 who say they used a condom the last time they had sex with a non-marital, non-cohabiting partner, of those who have had sex with such a partner in the last 12 months" and to UNAIDS Sexual Behaviour Indicator 2 "Condom use at last higher risk sex".

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

**Table 6.12: Consistent condom use in higher risk sex during past 12 months**

Among all women and men reporting high risk sex (had sex with a non-marital, non-cohabiting partner) in the last 12 months, percentage who say they used a condom every time they had sexual intercourse with such partners, by background characteristics

Background characteristic	WOMEN		MEN		TOTAL	
	Percentage consistently using condom at higher risk sex in last 12 months	Number of women with higher risk sex in the last 12 months	Percentage consistently using condom at higher risk sex in last 12 months	Number of men with higher risk sex in the last 12 months	Percentage consistently using condom at higher risk sex in last 12 months	Number with higher risk sex in the last 12 months
Age						
15-19	*	8	*	16	*	24
20-24	*	19	45.8	48	47.8	67
25-29	*	11	53.7	54	50.8	65
30-34	*	17	47.2	36	47.2	53
35-39	*	4	(50.0)	26	43.3	30
40-44	*	8	*	13	*	21
45-49	*	3	*	11	*	14
50-54	*	1	*	4	*	5
55-59	*	0	*	2	*	2
Marital status						
Never married	*	13	34.9	43	39.3	56
Married	*	10	51.5	97	50.5	107
Living together	*	9	*	22	41.9	31
Divorced/Separated	36.4	33	43.9	41	40.5	74
Widowed	*	6	*	7	*	13
Education						
Nursery	NA	0	NA	0	NA	0
Primary	40.0	50	43.0	128	42.1	178
Post Primary/Vocational	*	4	*	9	*	13
Secondary/'A' Level	*	11	57.4	54	56.9	65
College/ University	*	0	*	3	*	3
Not Stated	*	6	*	16	*	22
Religion						
Roman Catholic	(30.8)	26	46.3	80	42.5	106
Protestant/Other Christian	(44.0)	25	41.1	73	41.8	98
Muslim	*	15	57.7	52	58.2	67
Other	*	5	*	5	*	10
Distance to former place of residence						
Born in that area	*	9	31.4	35	31.8	44
Less than 10 KM	*	3	*	8	*	11
10 - 29 KM	*	4	*	19	*	23
30 - 49 KM	*	10	(56.0)	25	60.0	35
50 - 99 KM	*	15	42.6	47	41.9	62
100 KM & above	30.0	30	54.7	75	47.6	105
Not Stated	NA	0	*	1	*	1
Duration of Staying Away from Home During Last 12 Months						
Ever been away a month	*	13	46.2	52	47.7	65
Never been away a month	37.9	58	46.8	158	44.4	216
Total	40.8	71	46.7	210	45.2	281

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

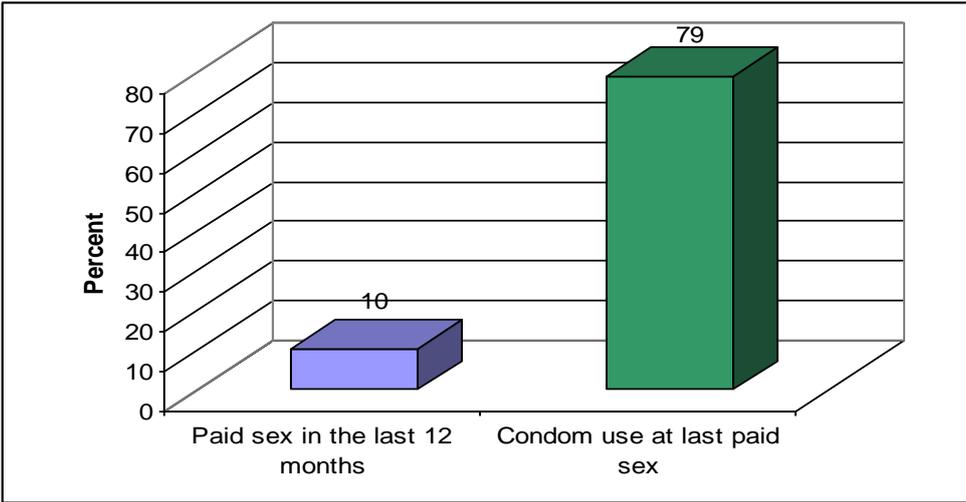
## 6.12. Paid Sex (Commercial Sex)

Transactional sex is a risk factor for HIV transmission because it is associated with multiple sexual partnerships. Paid sex was defined as having sex in exchange for money or gift (sugar, fish, favour and so forth). Some clients of transactional sex prefer not to use condom during the act, thus leaving them exposed to the risk of HIV transmission in case one of the partners is HIV infected. During this survey, male respondents were asked whether they engaged in paid sex over the preceding one year; and if so, whether they used condom during the last such act. Paid sex is also a risk factor for contracting other sexually transmitted infections. The specific questions asked were; men were asked, "In the past 12 months, did you pay anyone to have sex?" women were asked, "In the past 12 months, did any man pay you to have sex?" As a follow up, for those who answered in affirmative, they were asked whether they used condoms during the last such act.

As shown in Table 6.13, in response to the above questions, 10.4 percent of men reported sex with a commercial sex worker in the last 12 months. When the data are cross-tabulated with the demographic variables, paid sex is found to be commonest among the divorced/separated respondents (25 percent) and those who had attained college or university education (13 percent). On the other hand, paid sex is found be least common among the respondents who were either born in the current place of residence or staying less than 10 kilometers from their current place of origin. There is however no difference in the practice of paid sex when mobility in the last 12 months is considered; those respondents who have ever been away from home for more than a month and those who have never away from home for more than a month have more or less the same level of paid sex practice; the indicator being 11 and 10 percent, respectively.

Additional analysis was done to determine the percentage of men reporting paid sex who reported condom use at the last paid sex, the result show that 79 percent of such men reported condom use at the last paid sex (Figure 6.17), this result implies that up to 20 percent of men who engaged in paid sex did not take precautionary measures of prevention.

Figure 6.17; Reported paid sex and condom use during the last paid sex



**Table 6.13: Paid sex in last year and condom use at last paid sex**

Percentage of men reporting sex with a commercial sex worker in the last 12 months and, among men reporting sex with a commercial sex worker in the last 12 months, Percentage reporting condom use the last time they had sex with a commercial sex worker, by background characteristics

Background characteristic	Percentage reporting sex with a commercial sex worker in the last 12 months <sup>1</sup>	Number of men	Percentage reporting condom use at last sex with a commercial sex worker <sup>2</sup>	Number of men reporting sex with a commercial sex worker in the last 12 months
<b>Age</b>				
15-19	(3.6)	28	*	1
20-24	10.1	89	*	9
25-29	17.3	110	*	19
30-34	9.5	116	*	11
35-39	12.4	105	*	13
40-44	5.9	51	*	3
45-49	*	23	*	0
50-54	(3.8)	26	*	1
55-59	*	11	*	1
<b>Marital status</b>				
Never married	7.9	63	*	5
Married	7.3	343	(80.0)	25
Living together	14.1	78	*	11
Divorced/Separated	25.0	60	*	15
Widowed	*	15	*	2
<b>Education</b>				
Nursery	*	3	NA	0
Primary	10.9	359	82.1	39
Post Primary/Vocational	*	24	*	2
Secondary/'A' Level	9.4	127	*	12
College/ University	*	6	*	1
Not Stated	10.0	40	*	4
<b>Religion</b>				
Roman Catholic	8.9	214	*	19
Protestant/Other Christian	11.6	199	*	23
Muslim	13.3	120	*	16
Other	(0)	26	NA	0
<b>Distance to former place of residence</b>				
Born in that area	8.8	80	*	7
Less than 10 KM	8.6	35	*	3
10 - 29 KM	12.5	48	*	6
30 - 49 KM	14.5	55	*	8
50 - 99 KM	4.5	133	*	6
100 KM & above	13.2	204	(81.5)	27
Not Stated	*	4	*	1
<b>Duration of Staying Away from Home During Last 12 Months</b>				
Ever been away a month	10.6	132	*	14
Never been away a month	10.3	427	79.5	44
<b>Total</b>	<b>10.4</b>	<b>559</b>	<b>79.3</b>	<b>58</b>

<sup>1</sup> Corresponds to UNAIDS Sexual Behavior Indicator 3 "Commercial sex in the last year"

<sup>2</sup> Corresponds to Emergency Plan Core Prevention Indicator 6 "Percent of men reporting sex with

a sex worker in the last 12 months who used a condom during last paid intercourse" and to UNAIDS Sexual Behavior Indicator 4 "Condom use at last commercial sex, client report".

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

# CHAPTER 7: HIV PREVALENCE, INCIDENCE OF SEXUALLY TRANSMITTED INFECTIONS AND THE PREVALENCE OF CIRCUMCISION

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## 7.1. Key Findings

- Twenty two percent of fishing communities' members aged 15-59 years are infected with HIV.
- HIV prevalence is higher among women (25.1%) than among men (20.5%).
- There is no clear pattern in HIV prevalence by educational attainment, religious background and mobility pattern over the last 12 months.
- HIV prevalence varies significantly with marital status; being lowest among the unmarried and highest amongst the widowed respondents.
- HIV prevalence is highest among respondents who had their first sex before the age of 15 years; where it is 36 percent in women, 21 percent in men and 30 percent in both women and men.
- HIV prevalence is higher among those respondents who engaged in higher risk sex compared to those who did not engage in higher risk sex. Specifically, HIV prevalence in those who engaged in higher risk sex is 32 percent in women, 23 percent in men and 25 percent in both women and men. On the other hand, among respondents who never engaged in higher risk sex, HIV prevalence is 24 percent in women, 20 percent in men and 22 percent in both women and men.
- HIV prevalence is higher among respondents who reported more than three lifetime sexual partners (27 percent), compared to those who reported two lifetime sexual partners (21 percent).
- The proportion of sexually active women and men who reported having experienced STIs over the last 12 months was 24 and 28 percent, respectively. Among those who reported STIs, the proportion who sought for advice/treatment is 76 in women and 74 percent in men; thus indicating disparity in the indicator by sex.
- Forty percent of the surveyed men are circumcised.
- Overall, HIV prevalence is higher among uncircumcised men and respondents with STI than in circumcised men and respondents without STI, respectively. HIV prevalence is 11 percent in circumcised men and 27 percent in uncircumcised men. On the other hand, among men with STI, HIV prevalence is 10 percent in circumcised men and 34 percent in uncircumcised men. Among men without STI, HIV prevalence is 12 percent in circumcised men and 25 percent in uncircumcised men.
- Virtually all respondents (98 percent) said that they are willing to share their HIV test results with others. Of those respondents who had received their HIV test results, about 16 percent reported that they are HIV positive. Among those who shared their results, 76 percent said that they are taking Cotrimoxazole daily and 34 percent said that they are taking antiretroviral drugs daily.

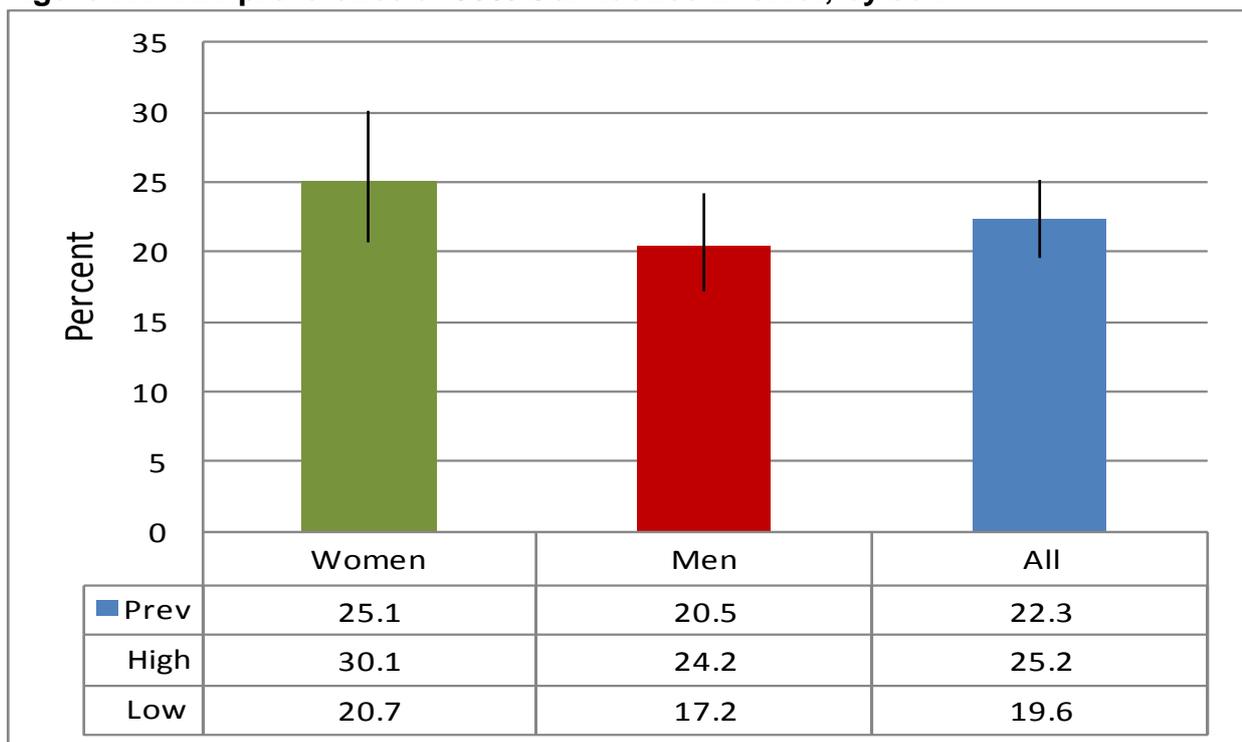
## 7.2. Introduction

Among the important data that constitute comprehensive HIV information is that on HIV prevalence. Comprehensive HIV information is vital to inform HIV policy formulation, planning and programming. The above information can be generated using a number of methods including cross-sectional studies, prospective studies and mathematical projections. In Uganda, HIV prevalence has mainly been obtained from sentinel surveillance among pregnant women and attendees of sexually transmitted diseases clinic. Other important sources include national and sub-national population based surveys. Generally, the sources referred to do have information on the mobile populations (plantation workers and fishing communities). This study was designed to address the above information gap. It has generated information on HIV prevalence and its distribution by demographic characteristics. Similarly, it has generated information on prevalence of sexually transmitted infections (STI) and its distribution by demographic characteristics.

## 7.3. HIV Prevalence in fishing communities

HIV testing was performed both in the field and at the central laboratory based at the National STD Reference Laboratory at Mulago. In this report, the HIV test results reported and considered for various analyses are those from the central laboratory. On the basis of above, the results from this study show that about twenty two percent of fishing community members aged 15-59 years is infected with HIV (Table 7.1). The results further show that HIV prevalence is higher among women (25 percent) than in men (21 percent). Figure 7.1 shows the distribution of HIV prevalence among fishing communities by sex.

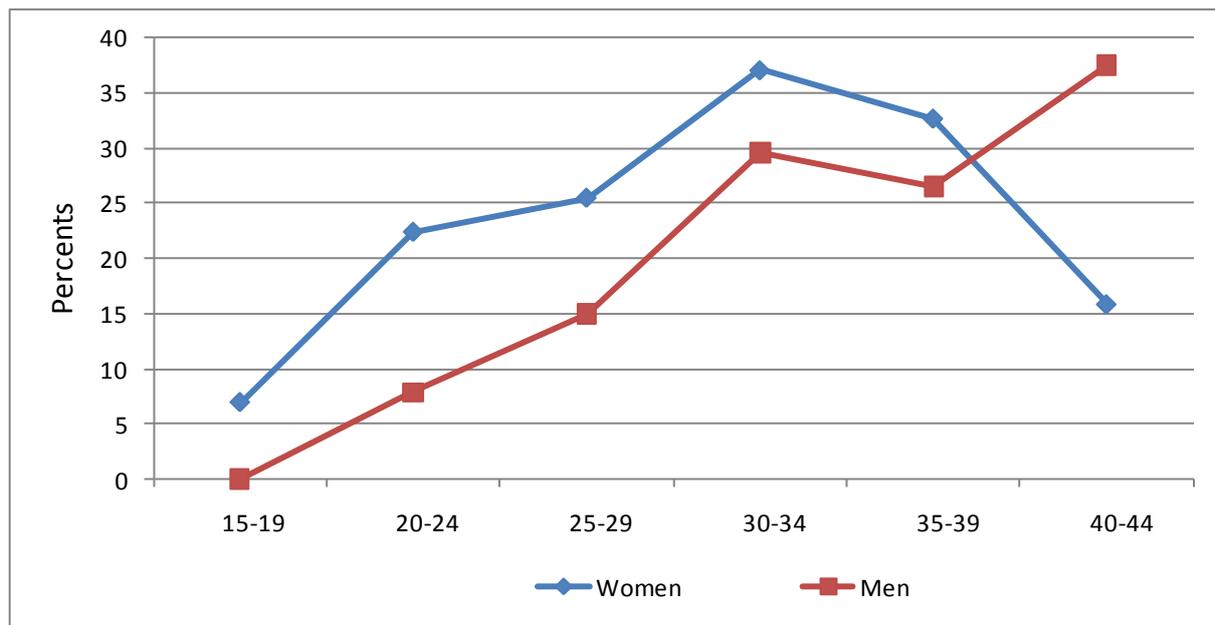
**Figure 7.1: HIV prevalence at 95% Confidence Interval, by sex**



#### 7.4. Age Specific HIV Prevalence

Analysis of age-specific HIV prevalence shows that overall; HIV prevalence for both men and women is lowest among the younger age groups. In both men and women, HIV prevalence is lowest among the age group 15-19 years; thereafter, HIV prevalence increases steadily until it reaches the peak, which for women is reached at the age group 30-34 and in men is attained at the age group 40-44 years (Figures 7.2). After the peak, HIV prevalence drops steadily. From the age groups 15-39, HIV prevalence is higher among women compared to that of men. The picture then changes thereafter without any clear pattern.

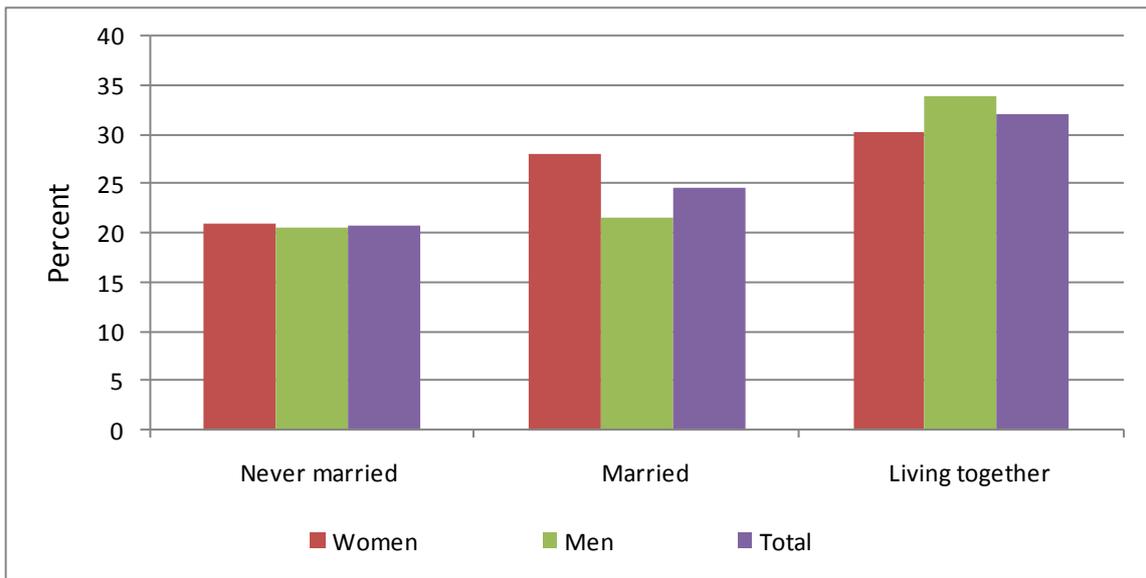
**Figure 7.2: HIV prevalence by sex and age**



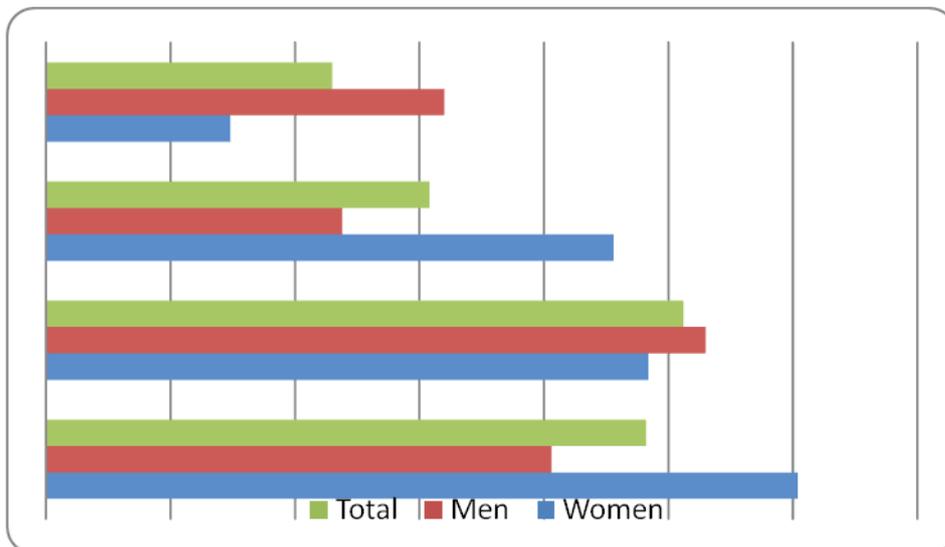
#### 7.5. HIV Prevalence by Educational Background, Religion, Marital Status, distances to respondent's birth place and mobility during the last 12 months

Analysis was done to determine the distribution of HIV infection by educational background, religion and marital status. The results show that HIV prevalence varies by marital status. HIV prevalence is 6.2 percent among the never married respondents, 20.7 percent in married people and 24.6 percent in those respondents living together as man and wife. Overall, HIV prevalence is highest among the widowed respondents (40 percent); followed by in the divorced respondents (32 percent). Furthermore, the results show that there is no clear pattern in HIV prevalence when educational and religious backgrounds are considered. Similarly, there is no difference in HIV prevalence when distances to respondent's birth place and mobility during the last 12 months are considered.

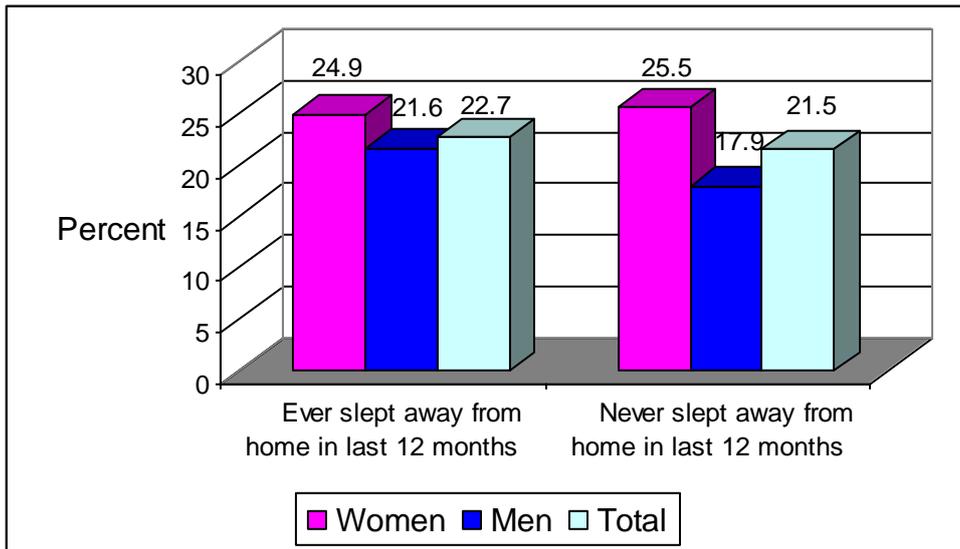
**Figure 7.3: HIV prevalence by marital status**



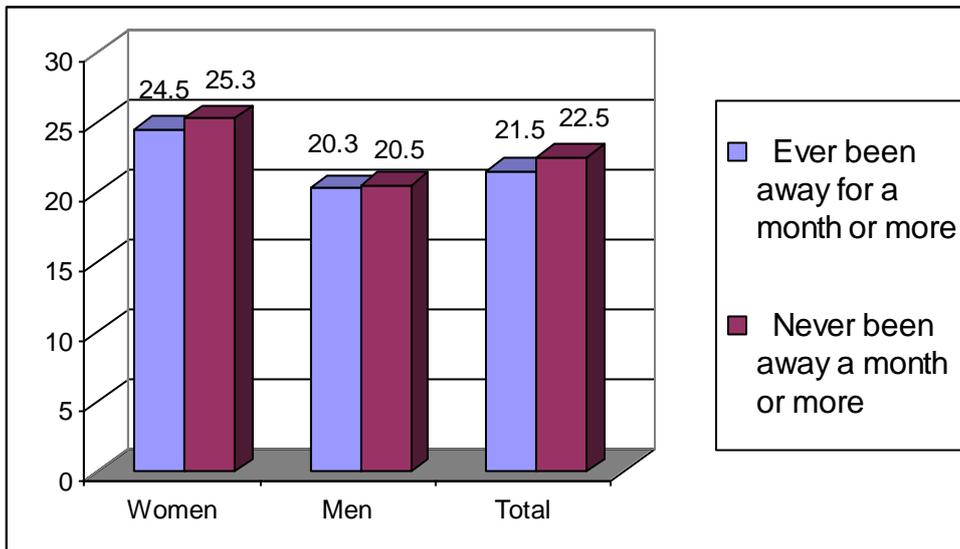
**Figure 7.4: HIV prevalence by religion**



**Figure 7.5: HIV prevalence by history of sleeping away from home in the past 12 months**



**Figure 7.6: HIV prevalence by duration of being away from home in the past 12 months**



**Table 7.1: HIV Prevalence by sex and background characteristics (n = 893)**

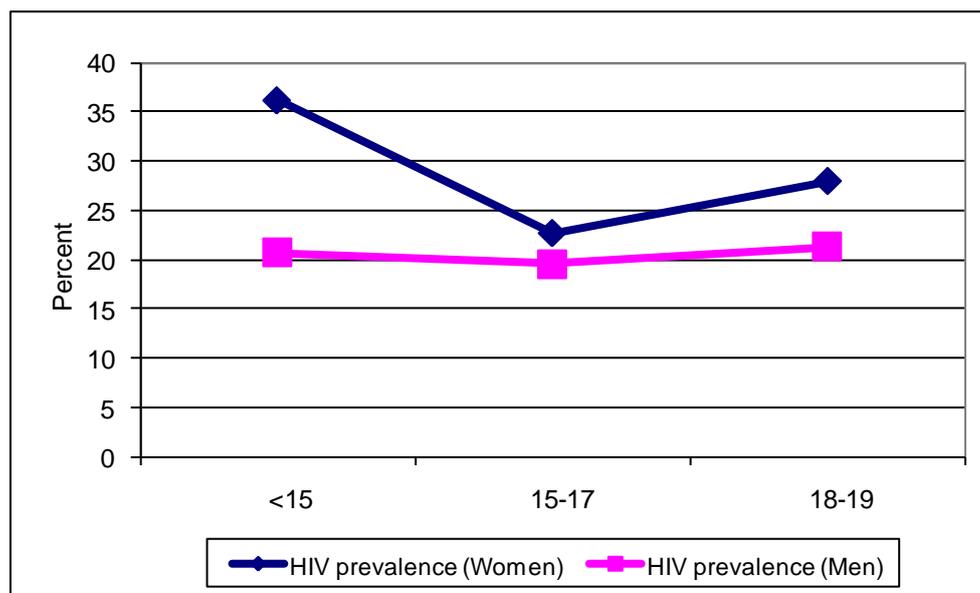
Background characteristic	Women		Men		Total	
	Percentage HIV positive	Number Tested	Percentage HIV positive	Number Tested	Percentage HIV positive	Number Tested
<b>Age</b>						
15-19	(6.9)	29	(0)	27	3.6	56
20-24	22.4	58	7.9	89	13.6	147
25-29	25.5	55	15.0	107	18.5	162
30-34	37.1	70	29.6	115	32.4	185
35-39	32.7	49	26.5	102	28.5	151
40-44	15.8	38	37.5	48	27.9	86
45-49	(22.2)	27	*	22	16.3	49
50-54	*	12	(26.9)	26	2.3.7	38
55-59	*	8	*	11	*	19
<b>Marital status</b>						
Never married	*	20	3.3	61	6.2	81
Married	20.9	177	20.6	340	20.7	517
Living together	28.1	64	21.6	74	24.6	138
Divorced/Separated	30.2	63	33.9	59	32.0	122
Widowed	*	22	*	13	40.0	35
<b>Education</b>						
Nursery	*	3	*	3	*	6
Primary	25.8	217	21.0	352	22.8	569
Post Primary/Vocational	*	13	*	23	19.4	36
Secondary/'A' Level	21.3	61	16.1	124	17.8	185
College	*	0	*	4	*	4
University	*	1	*	2	*	3
Not Stated	31.4	51	30.8	39	31.1	90
<b>Religion</b>						
Roman Catholic	30.2	129	20.3	207	24.1	336
Protestant/Other Christian	24.2	132	26.5	196	25.6	328
Muslim	22.8	57	11.9	118	15.4	175
No Religion	*	1	*	1	*	2
Other	(7.4)	27	(16.0)	25	11.5	52
<b>Distance to former place of residence</b>						
Born in that area	18.8	32	17.9	78	18.2	110
Less than 10 KM	*	20	33.3	33	24.5	53
10 - 29 KM	17.6	34	27.1	48	23.2	82
30 - 49 KM	31.4	51	20.8	53	26.0	104
50 - 99 KM	31.0	87	17.7	130	23.0	217
100 KM and above	24.4	119	19.9	201	21.6	320
Not Stated	*	3	*	4	*	7
<b>Mobility during last 12 months</b>						
Ever slept away	24.9	201	21.6	385	22.7	586
Never slept away	25.5	145	17.9	162	21.5	307
<b>Duration of Staying Away from Home During Last 12 Months</b>						
Ever been away a month	24.5	49	20.3	128	21.5	177
Never been away a month	25.3	297	20.5	419	22.5	716
<b>Total</b>	<b>25.1</b>	<b>346</b>	<b>20.5</b>	<b>547</b>	<b>22.3</b>	<b>893</b>
95% C.I for Total	20.7 - 30.1		17.2 - 24.2		19.6 - 25.2	

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

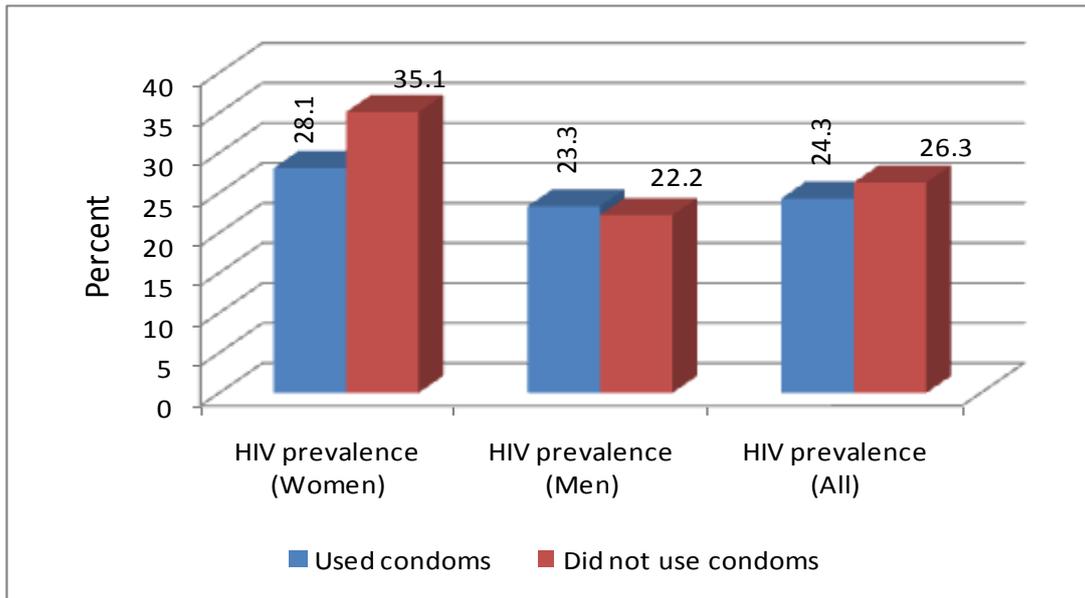
## 7.6. HIV Prevalence by Sexual Behaviours

Analysis of HIV prevalence by sexual behavior characteristics show that there is some variability; as shown in Table 7.2, HIV prevalence varies by age at sexual debut, engagement in higher risk sex, number of lifetime sexual partners and condom use. In women, HIV prevalence is highest among respondents who had their first sex before the age of 15 years; where it is 36 percent. HIV prevalence is higher among those respondents who engaged in higher risk sex compared to those who did not engage in higher risk sex (Figure 7.3). In men, there is no difference. Specifically, HIV prevalence in those who engaged in higher risk sex is 32 percent in women, 23 percent in men and 25 percent in both women and men. On the other hand, HIV prevalence in those who never engaged in higher risk sex is 24 percent in women, 20 percent in men and 22 percent in both women and men. In regard to linkage between HIV prevalence and multiple sexual partnerships, the results show that HIV prevalence is higher among respondents who reported more than three lifetime sexual partners (27 percent), compared to those who reported two lifetime sexual partners (21 percent). The results also show a paradoxical finding; HIV prevalence is higher in respondents who reported condom use in the last 12 months (27 percent) than in those who did not report condom use (22 percent). This unexpected finding may be an expression of reliability in reported sexual behaviours as opposed to observed behaviours. It could also be that the people who reported condom use engaged in risky sexual behaviours such as multiple sexual partnerships and higher risk while not using condoms properly.

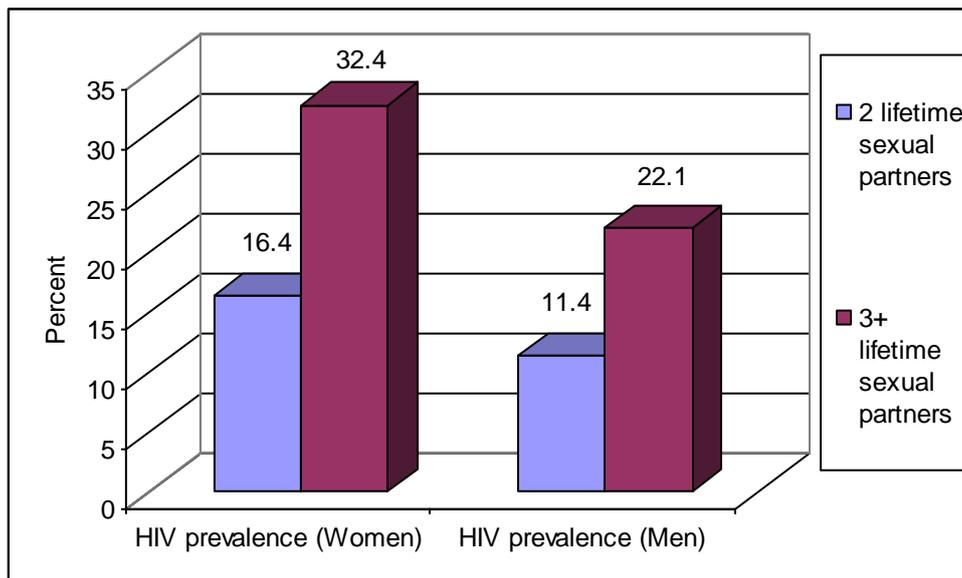
**Figure 7.7; HIV prevalence by age at first sex**



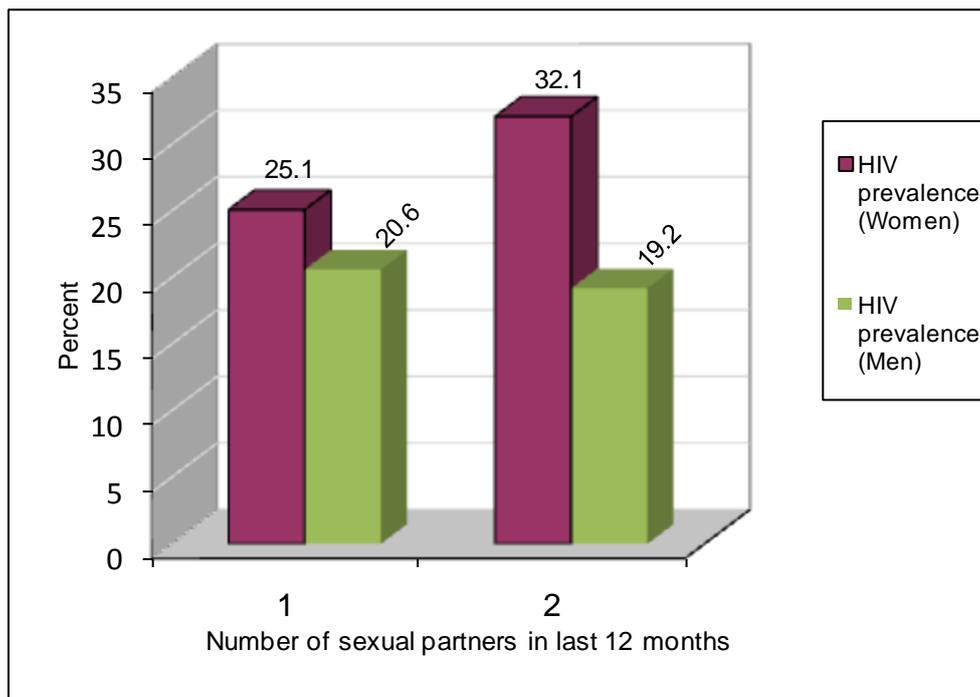
**Figure 7.8; HIV prevalence by condom use**



**Figure 7.9; HIV prevalence by number of lifetime sexual partners**



**Figure 7.10; HIV prevalence by number of sexual partners in the last 12 months**



**Table 7.2: HIV prevalence by sexual behaviour characteristics**

Background characteristic	Women aged 15-49 who ever had sex		Men aged 15-49 who ever had sex		Total aged 15-49 who ever had sex	
	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
<b>Age at first sex</b>						
<15	36.1	83	20.7	58	29.8	141
15-17	22.6	168	19.5	215	20.9	383
18-19	27.9	43	21.3	127	22.9	170
20+	*	23	22.6	93	20.7	116
<b>Higher-risk sex in past 12 months</b>						
Had higher-risk sex	31.9	69	22.8	197	25.2	266
Had sex, not higher-risk	24.0	217	19.5	266	21.5	483
No sex in past 12 months	29.0	31	16.7	30	23.0	61
<b>Number of partners in past 12 months</b>						
0	29.0	31	16.7	30	23.0	61
1	25.1	255	20.6	253	22.8	508
2	32.1	28	19.2	146	21.3	174
3+	*	3	26.6	64	26.9	67
<b>Number of life time partners</b>						
1	5.6	36	*	22	3.4	58
2	16.4	67	11.4	34	14.9	101
3+	32.4	213	22.1	425	25.5	638
Not stated	*	1	*	12	*	13
<b>Any condom use ever</b>						
Used condom	32.7	205	21.1	393	25.1	598
Never used condom	14.3	112	19.0	100	16.5	212
<b>Condom use at last sex in past 12 months</b>						
Used condom	22.9	50	23.2	142	27.1	192
Did not use condom	24.0	267	19.7	351	21.5	618
<b>Condom use at last higher-risk sex in past 12 months</b>						
Used condom	28.1	32	23.3	116	24.3	148
Did not use condom	35.1	37	22.2	81	26.3	118
No higher risk sex	24.6	248	19.3	296	21.7	544
Total 15-49	26.2	317	20.7	493	22.8	810
Total 15-59	25.8	337	20.9	527	22.8	864

Note: An asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

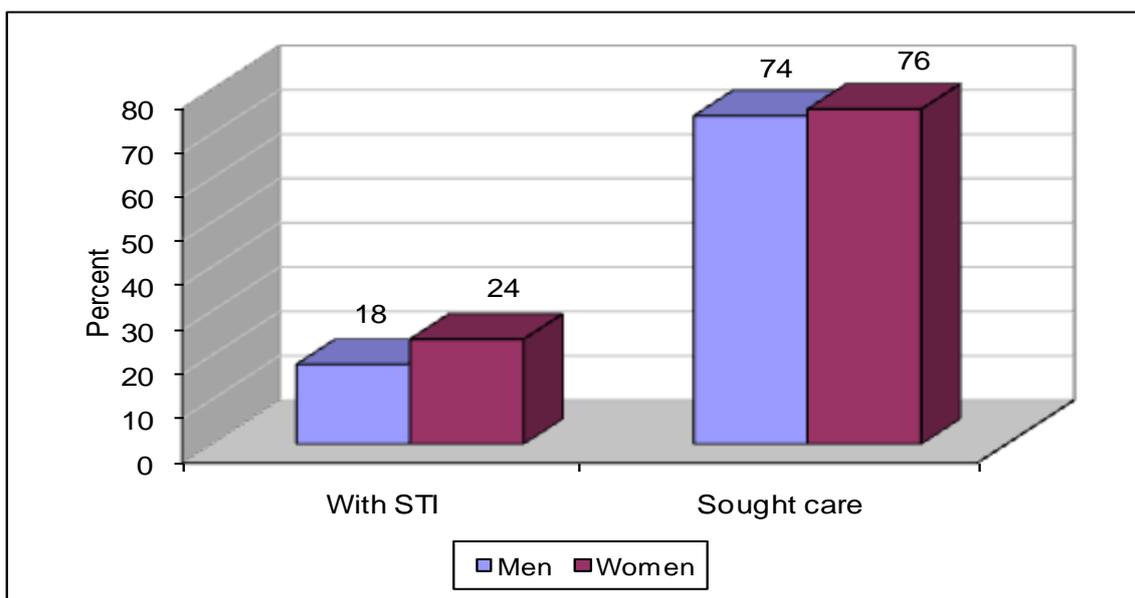
## 7.7: Incidence of reported sexually transmitted infections

Due to a close relationship between STIs and HIV infection, analysis was performed to determine the prevalence of STI among the surveyed population. Two variables were considered; namely, proportion of respondents reporting abnormal genital discharge and the proportion of respondents reporting genital sores/ulcer. In addition, those men and women who reported having experienced STIs were asked whether they sought for advice/treatment.

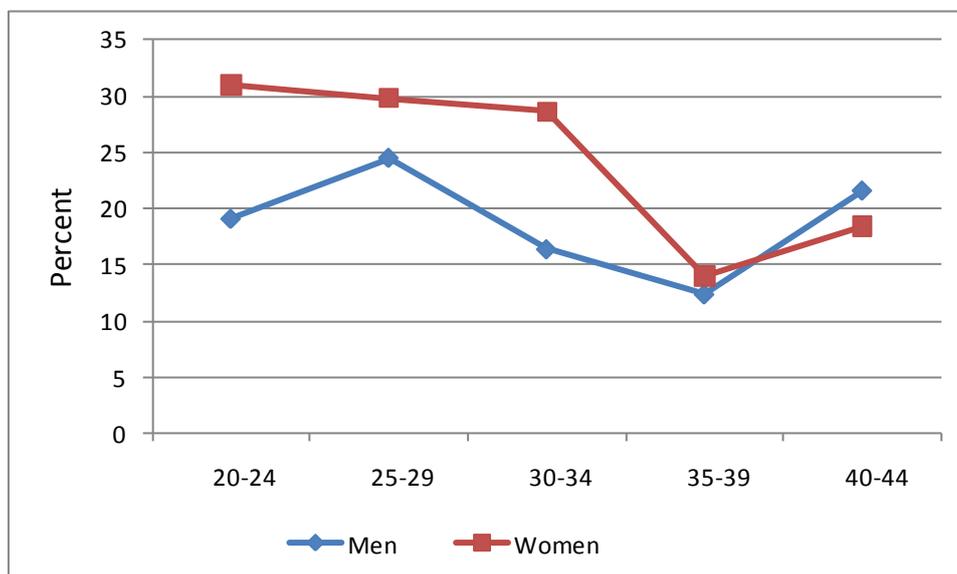
The results (Tables 7.3.1 and 7.3.2) show that the proportion of sexually active women and men who reported having experienced STIs over the last 12 months is 24 and 28

percent, respectively. Among those who reported STIs, the proportion who sought for advice/treatment is 76 in women and 74 percent in men; thus indicating disparity in the indicator by sex. When data is disaggregated by age groups, the results do not show any specific patterns in both women and men. However, STI incidence in both women and men is highest among the divorced/separated respondents compared to that in other marital categories.

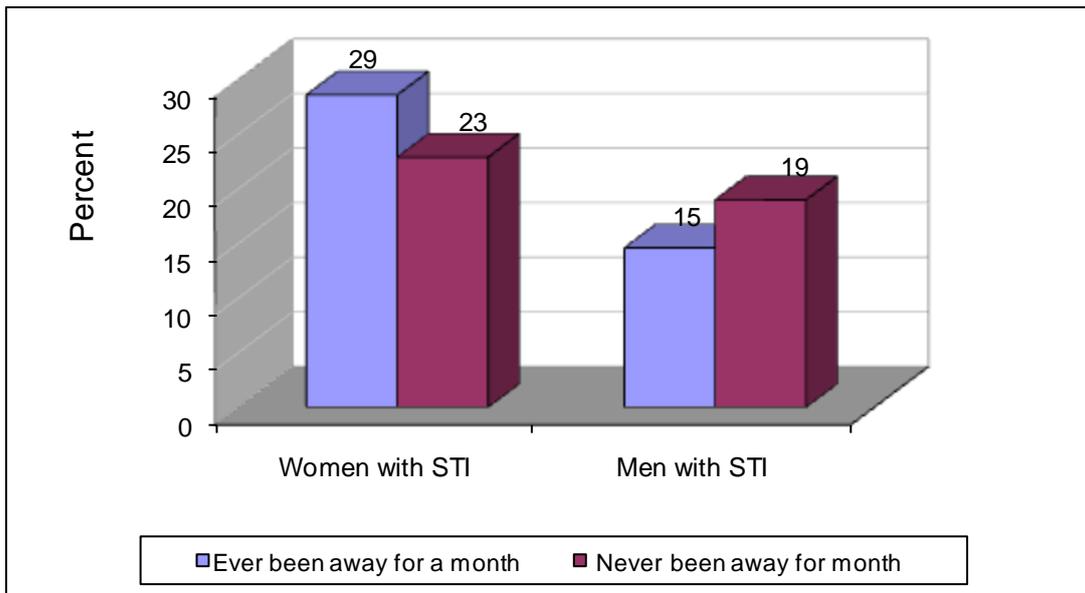
**Figure 7.11; Incidence of reported sexually transmitted infections and care seeking behaviour in men and women**



**Figure 7.12; Age-specific incidence of reported STI by sex**



**Figure 7.13; Incidence of sexually transmitted infections by history of being away from home for more than a month**



**Table 7.3.1: Self-reporting of sexually-transmitted infection (STI) and STI symptoms; Men**

Among men who ever had sex, percentage self-reporting an STI and/or symptoms of an STI in the 12 last months, by background characteristics

Background characteristic	Percentage with an STI	Percentage with abnormal genital discharge	Percentage with genital sore/ulcer	Percentage with STI/discharge/ genital sore/ulcer	Number of men who ever had sex	Percentage who sought advice/treatment	Number of men who had STI/discharge/ genital sore/ulcer
<b>Age</b>							
15-19	*	*	*	*	19	*	5
20-24	19.1	15.7	18.0	29.2	89	(84.0)	26
25-29	24.5	18.2	27.3	35.5	110	84.6	39
30-34	16.4	13.8	22.4	27.6	116	73.3	32
35-39	12.4	11.4	19.0	24.8	105	(47.8)	26
40-44	21.6	19.6	21.6	29.4	51	*	15
45-49	*	*	*	*	23	*	7
50-54	(7.7)	(7.7)	(7.7)	(11.5)	26	*	3
55-59	*	*	*	*	11	*	1
<b>Marital status</b>							
Never married	11.1	5.6	11.1	20.4	54	*	11
Married	19.8	16.9	21.0	29.7	343	79.4	102
Living together	9.0	1.3	19.2	20.5	78	*	16
Divorced/Separated	28.3	25.0	26.7	36.7	60	*	22
Widowed	*	*	*	*	15	*	3
<b>Education</b>							
Nursery	*	*	*	*	3	*	1
Primary	17.8	16.1	19.5	26.9	353	74.4	95
Post Primary/Vocational	*	*	*	*	24	*	12
Secondary/'A' Level	15.2	8.0	20.0	26.4	125	81.3	33
College/ University	*	*	*	*	6	*	1
Not Stated	25.6	20.5	17.9	30.8	39	*	12
<b>Religion</b>							
Roman Catholic	15.7	13.3	20.0	27.1	210	77.8	57
Protestant/Other Christian	17.6	14.1	21.1	27.1	199	68.6	54
Muslim	21.4	17.1	18.8	30.8	117	74.3	36
Other	*	*	*	*	24	*	7
<b>Distance to former place of residence</b>							
Born in that area	15.6	16.9	22.1	27.3	77	*	21
Less than 10 KM	22.9	14.3	25.7	31.4	35	*	11
10 - 29 KM	12.5	8.3	14.6	20.8	48	*	10
30 - 49 KM	16.4	12.7	20.0	23.6	55	*	13
50 - 99 KM	22.3	14.6	25.4	33.8	130	61.0	44
100 KM and above	16.4	14.4	16.4	26.4	201	76.9	53
Not Stated	*	*	*	*	4	*	2
<b>Duration of Staying Away From Home During Last 12 Months</b>							
Ever been away for a month	14.6	14.6	19.2	26.2	130	75.8	34
Never been away for month	19.0	14.3	20.7	28.6	420	73.7	120
<b>Total</b>	<b>18.0</b>	<b>14.4</b>	<b>20.4</b>	<b>28.0</b>	<b>550</b>	<b>74.1</b>	<b>154</b>

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

**Table 7.3.2: Self-reporting of sexually-transmitted infection (STI); Women**

Among women who ever had sex, percentage self-reporting an STI in the 12 last months, by background characteristics

Background characteristic	Percentage with an STI	Number of women who ever had sex	Percentage who sought advice/treatment	Number of women who had STI
<b>Age</b>				
15-19	*	24	*	6
20-24	31.0	58	*	18
25-29	29.8	57	*	17
30-34	28.6	70	*	20
35-39	14.0	50	*	7
40-44	18.4	38	*	7
45-49	(14.8)	27	*	4
50-54	*	13	*	1
55-59	*	9	*	2
<b>Marital status</b>				
Never married	*	15	*	1
Married	26.0	181	77.8	47
Living together	29.7	64	*	19
Divorced/Separated	23.8	63	*	15
Widowed	*	23	*	0
<b>Education</b>				
Nursery	*	3	*	0
Primary	25.7	218	75.9	56
Post Primary/Vocational	*	13	*	4
Secondary/'A' Level	24.6	61	*	15
College/ University	*	1	*	0
Not Stated	14.0	50	*	7
<b>Religion</b>				
Roman Catholic	27.9	129	82.4	36
Protestant/Other Christian	23.5	132	79.3	31
Muslim	17.9	56	*	10
Other	(17.2)	29	*	5
<b>Distance to former place of residence</b>				
Born in that area	(18.5)	27	*	5
Less than 10 KM	*	21	*	4
10 – 29 KM	17.6	34	*	6
30 – 49 KM	33.3	51	*	17
50 – 99 KM	22.2	90	*	20
100 KM and above	24.2	120	77.8	29
Not Stated	*	3	*	1
<b>Duration of Staying Away From Home During Last 12 Months</b>				
Ever been away for a month	28.6	49	*	14
Never been away for month	22.9	297	75.0	68
<b>Total</b>	<b>23.7</b>	<b>346</b>	<b>75.6</b>	<b>82</b>

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

### **7.8: Relation between sexually transmitted infections and HIV infection**

Analysis was done to determine the linkage between HIV infection and STIs. The findings show that, generally, HIV incidence is higher among respondents who reported having had STI in the last 12 months than in those who did not report having had STI. In men, HIV incidence is 24 and 20 percent among those with history of reported STI and those without history of reported STI, respectively. This scenario is maintained when age, marital status, educational attainment, religion, migration and mobility are considered.

In women, an unexpected finding is seen; whereby HIV prevalence is lower (20 percent) among respondents who reported having had STI in the last 12 months than in those who did not report having had STI (27 percent). Again, the same trend is maintained when age, marital status, educational attainment, religion, migration and mobility are considered

**Table 7.3.3: HIV Prevalence by status of self-reported STI and background characteristics (Men).**

HIV prevalence among men who ever had sex and self-reported an STI /symptoms of an STI versus men not reporting any STI /symptoms in the 12 last months, by background characteristics

Background characteristic	Men with STI		Men with no STI		ALL	
	Percentage with HIV	Number of men who reported STI/discharge/genital sore/ulcer that were tested	Percentage with HIV	Number of men who didn't report any STI /symptoms that were tested	Percentage with HIV	Number of men who ever had sex and were tested
<b>Age</b>						
15-19	*	5	*	13	*	18
20-24	(7.7)	26	7.9	63	7.9	89
25-29	20.5	39	11.8	68	15.0	107
30-34	37.5	32	26.5	83	29.6	115
35-39	(20.0)	25	28.6	77	26.5	102
40-44	*	15	33.3	33	37.5	48
45-49	*	7	*	15	*	22
50-54	*	3	*	23	26.9	26
55-59	*	1	*	10	*	11
<b>Marital status</b>						
Never married	*	11	2.4	41	3.8	52
Married	20.6	102	20.6	238	20.6	340
Living together	*	16	20.7	58	21.6	74
Divorced/Separated	*	21	23.7	38	33.9	59
Widowed	*	3	*	10	*	13
<b>Duration of Staying Away From Home During Last 12 Months</b>						
Ever been away a month	20.6	34	20.7	92	20.6	126
Never been away a month	25.2	119	19.1	293	20.9	412
<b>Circumcised</b>						
Yes	9.8	61	11.6	155	11.1	216
No	34.1	91	24.7	223	27.4	314
Not stated	*	1	*	7	*	8
<b>Total</b>	<b>24.2</b>	<b>153</b>	<b>19.5</b>	<b>385</b>	<b>20.8</b>	<b>538</b>

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

**Table 7.3.4: HIV Prevalence by status of self reported STI and background characteristics (Women).**

HIV prevalence among women who ever had sex and self-reported an STI Vs women not reporting any STI in the 12 last months, by background characteristics

Background characteristic	Women with STI		Women with no STI		ALL	
	Percentage with HIV	Number of women who reported STI and were tested	Percentage with HIV	Number of women who didn't report having STI and were tested	Percentage with HIV	Number of women who ever had sex and were tested
<b>Age</b>						
15-19	*	6	*	18	*	24
20-24	*	18	25.0	40	22.4	58
25-29	*	16	28.2	39	25.5	55
30-34	*	20	44.0	50	37.1	70
35-39	*	7	35.7	42	32.7	49
40-44	*	7	16.1	31	15.8	38
45-49	*	4	*	23	(22.2)	27
50-54	*	1	*	11	*	12
55-59	*	2	*	6	*	8
<b>Marital status</b>						
Never married	*	1	*	14	*	15
Married	19.6	46	21.4	131	20.9	177
Living together	*	19	31.1	45	28.1	64
Divorced/Separated	*	15	33.3	48	30.2	63
Widowed	*	0	*	22	*	22
<b>Distance to former place of residence</b>						
Born in that area	*	5	*	22	(22.2)	27
Less than 10 KM	*	4	*	16	*	20
10 - 29 KM	*	6	(14.3)	28	17.6	34
30 - 49 KM	*	17	32.4	34	31.4	51
50 - 99 KM	*	19	32.4	68	31.0	87
100 KM and above	(13.8)	29	27.8	90	24.4	119
Not Stated	*	1	*	2	*	3
<b>Duration of Staying Away From Home During Last 12 Months</b>						
Ever been away a month	*	14	28.6	35	24.5	49
Never been away a month	20.9	67	27.1	225	25.7	292
<b>Total</b>	<b>19.8</b>	<b>81</b>	<b>27.3</b>	<b>260</b>	<b>25.5</b>	<b>341</b>

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

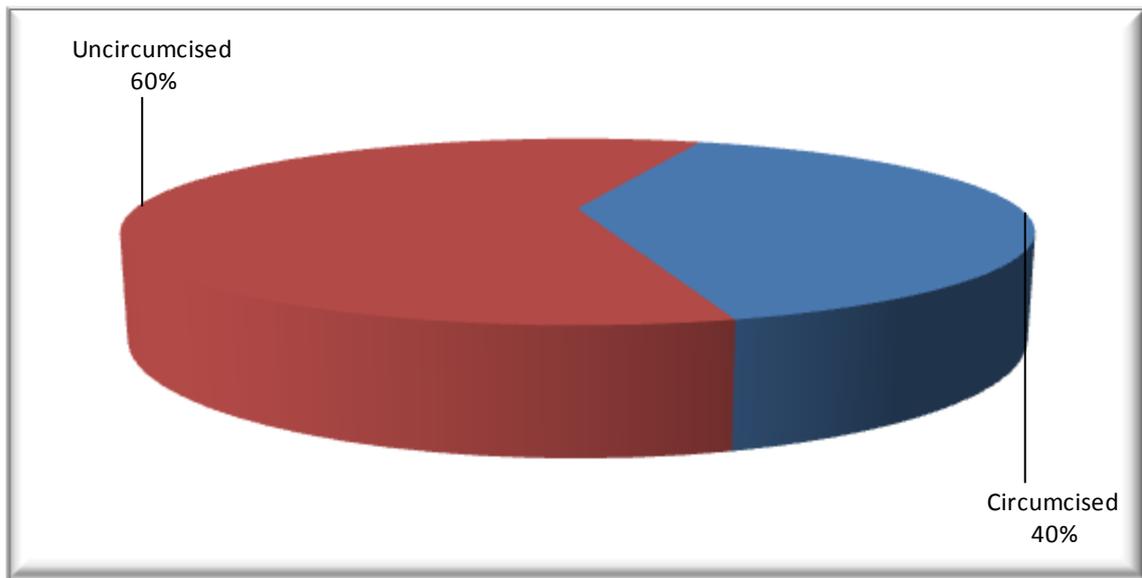
## 7.9. Male circumcision

Three randomized clinical trials (RCTs) conducted in Uganda, Kenya and South Africa have shown that medical male circumcision leads to a 60 percent reduction of the risk of HIV acquisition by circumcised men. Following the release of the results, medical male circumcision (MMC) has now been incorporated into the comprehensive HIV prevention package. A number of countries have developed policies and guidelines to scale up the implementation of MMC programmes. However, MMC can only have impact on HIV transmission if it is conducted in big numbers. Therefore, it is important to keep track of men who are being circumcised and the proportion of men who have been circumcised.

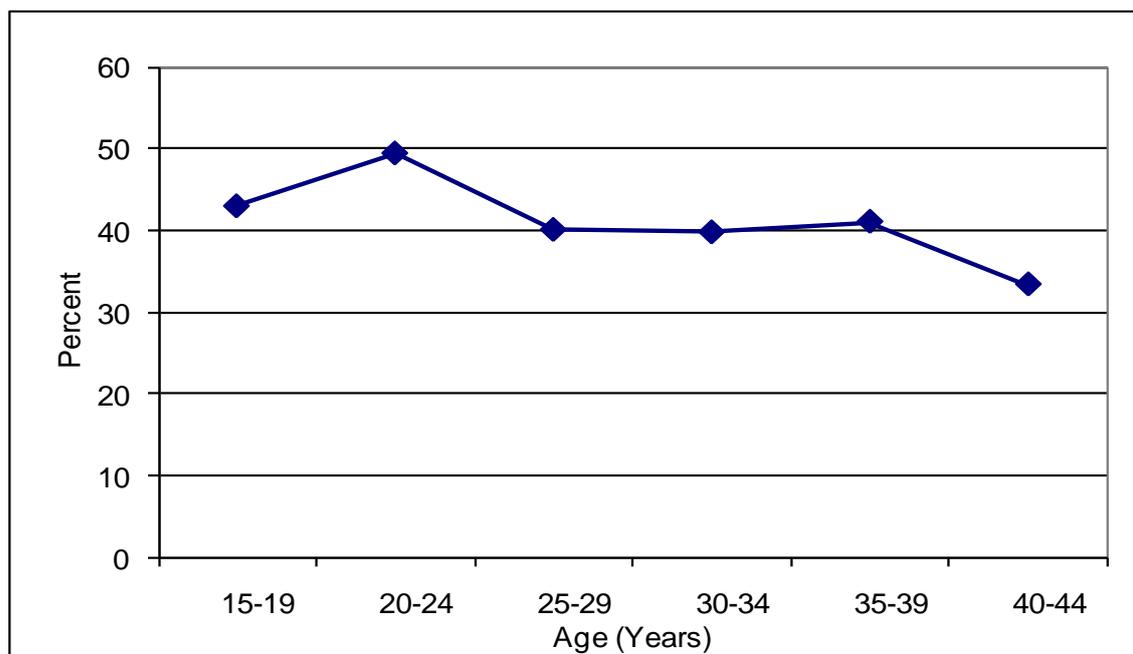
During the survey, male respondents were asked whether they are circumcised. In line with this, analysis was conducted to find out the percentage of men who have been circumcised. The results of the analysis (Table 7.4 and Figure 7.15) show that 40 percent of the men reported that they are circumcised. When data is disaggregated by age, circumcision prevalence is found to be highest (49 percent) among the 20-24 age group and lowest (18 percent) among the 55-59 age group. Generally, circumcision prevalence is higher in the lower age group than in the higher age groups; implying a cohort effect (Figure 7.16). When religion is considered, as expected, Muslims have the highest circumcision prevalence (97 percent). The circumcision prevalence in Roman Catholics and Protestants is 22 and 26 percent, respectively. Educational attainment does not lead to any specific pattern on circumcision prevalence.

Bivariate analysis was also done to assess the relationship between circumcision and HIV infection. Similarly, analysis was done to assess the relationship between circumcision and sexually transmitted infections. As shown on Table 7.3.3, the results indicate that the HIV prevalence is lower in circumcised men than in uncircumcised men. The trend is the same whether a respondent has or does not have sexually transmitted infections. Overall, HIV prevalence is 11 percent in circumcised men and 27 percent in uncircumcised men. On the other hand, among men with STI, HIV prevalence is 10 percent in circumcised men and 34 percent in uncircumcised men. Among men without STI, HIV prevalence is 12 percent in circumcised men and 25 percent in uncircumcised men.

**Figure 7.15; Prevalence of reported circumcision among male respondents (n=559)**



**Figure 7.16; Prevalence of reported circumcision in men by age**



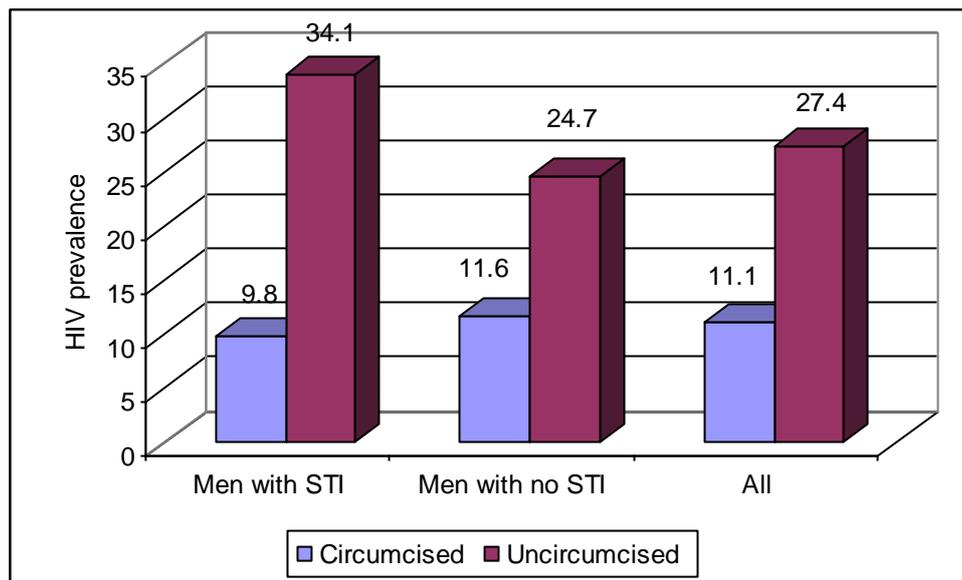
**Table 7.4: Male circumcision**

Percentage of men who have been circumcised, by background characteristics

Background characteristic	Percent Circumcised	Number of Men
<b>Age</b>		
15-19	(42.9)	28
20-24	49.4	89
25-29	40.0	110
30-34	39.7	116
35-39	41.0	105
40-44	33.3	51
45-49	*	23
50-54	(38.5)	26
55-59	*	11
<b>Marital status</b>		
Never married	41.3	63
Married	40.8	343
Living together	39.7	78
Divorced/Separated	35.0	60
Widowed	*	15
<b>Education</b>		
Nursery	*	3
Primary	39.3	359
Post Primary/Vocational	*	24
Secondary/'A' Level	37.8	127
College/ University	*	6
Not Stated	42.5	40
<b>Religion</b>		
Roman Catholic	22.4	214
Protestant/Other Christian	26.1	199
Muslim	96.7	120
Other	(30.8)	26
<b>Distance to former place of residence</b>		
Born in that area	31.3	80
Less than 10 KM	31.4	35
10 - 29 KM	39.6	48
30 - 49 KM	40.0	55
50 - 99 KM	42.9	133
100 KM and above	43.6	204
Not Stated	*	4
<b>Duration of Staying Away From Home During Last 12 Months</b>		
Ever been away for a month	43.2	132
Never been away for month	39.1	427
<b>Total</b>	<b>40.1</b>	<b>559</b>

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

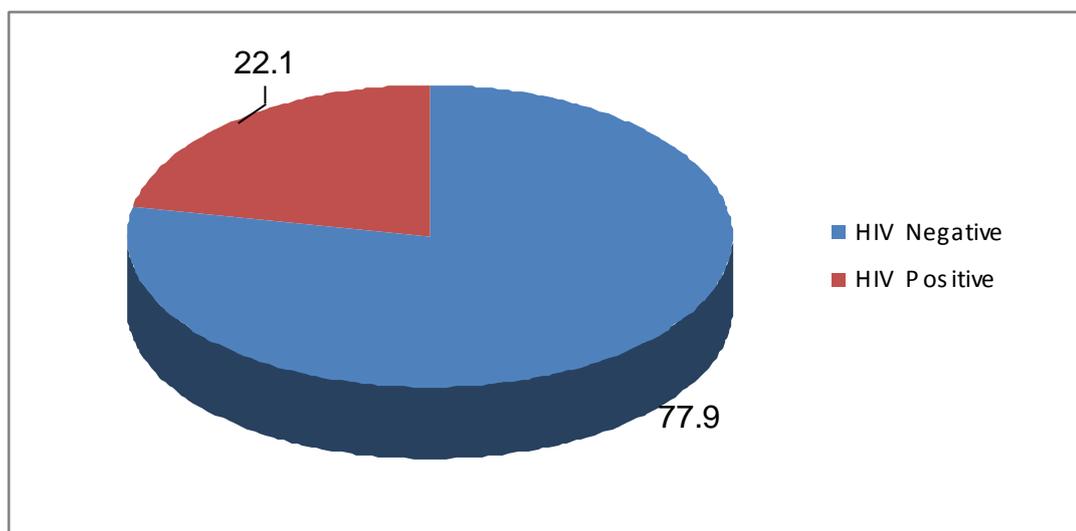
**Figure 7.17; HIV prevalence in men by reported circumcision status**



### **7.10: Field based HIV testing**

As indicated earlier, field-based HIV testing was carried out to enable respondents who wanted to know their HIV sero-status do so. A total of 896 respondents opted for the HCT. Of these, 22.1 percent tested HIV positive (Figure 7.18). This level of HIV positively rate determined in the field is not significantly different from the overall HIV prevalence of 22.3 percent found at the central laboratory. This implies that all population-based surveys with HCT as a component should always include field-based HCT so as to offer HCT services to study participants. This approach will especially benefit those clients who have never had HCT. Furthermore, the comparability of the two HIV testing approaches can in a way act as a validation of one another. The similarity of the results of the two HIV testing methods gives confidence in the validity of the figures and quality of information reported from this survey.

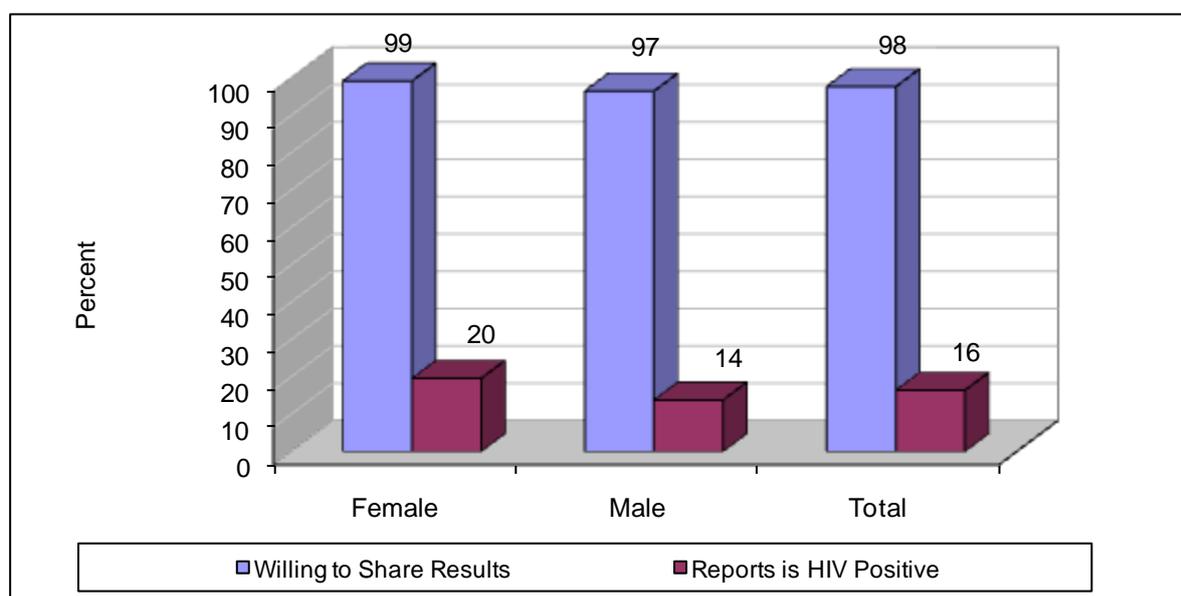
**Figure 7.18: Field-based HIV test results (HIV prevalence)**



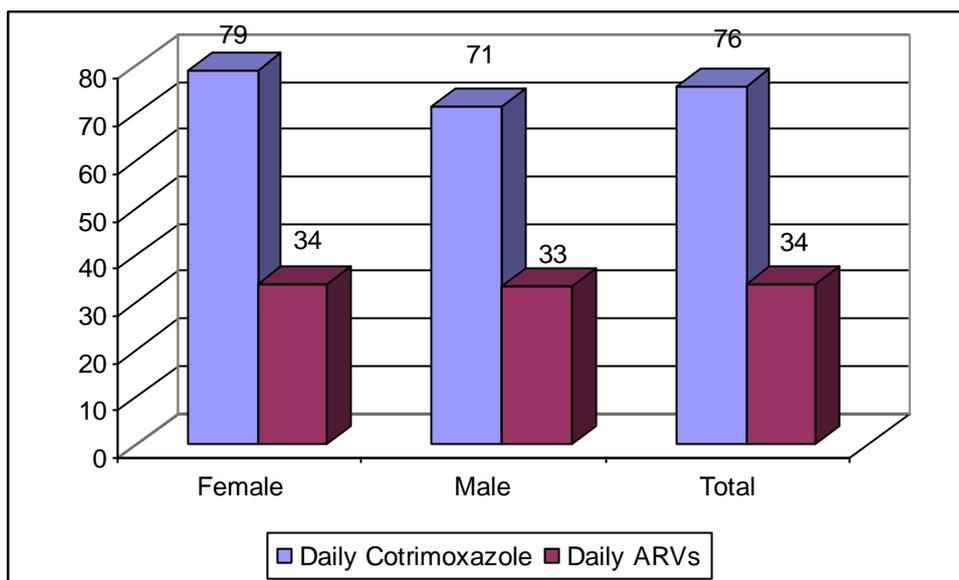
**7.11. Self-reported HIV prevalence, Care and Treatment**

Willingness to disclose ones HIV sero-status paves way to accessing HIV treatment and support services. During the survey, respondents were asked whether they are willing to share their HIV test results. In response, virtually all respondents (98 percent) said that they are willing to share their HIV test results with others (Table 7.5 and Figure 7.19). Of those respondents who had received their HIV test results, about 16 percent reported that they are HIV positive. Among those who shared their results, 76 percent said that they are taking Cotrimoxazole daily and 34 percent said that they are taking antiretroviral drugs daily (Figure 7.20). Overall, the results show that in all the parameters, there is no difference between women and men.

**Figure 7.19; Self-reported HIV Prevalence and willingness to share ones HIV sero-status with other people**



**Figure 7.20; Proportion of AIDS patients on daily doses of Cotrimoxazole or ARVs**



**Table 7.5: Self-reported HIV prevalence, Care and Treatment by sex**

Sex	Percentage Willing to Share Results	Number Received results	Percentage HIV positive	Number sharing results	Percentage taking Septrin or Cotrimoxazole daily	Percentage taking ARVs daily	Number HIV positive
Female	99.2	247	19.6	245	79.2	34.0	48
Male	96.5	315	13.8	304	71.4	33.3	42
Total	97.7	562	16.4	549	75.6	33.7	90

# CHAPTER 8: HIV COUNSELING & TESTING

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## 8.1. Key Findings

- Overall, 77 percent of women and 62 percent of men reported that they have ever had HIV tests. Therefore, women are more likely than men to have received HIV testing.
- About one third of the respondents (36 percent of women and 31 percent of men) said that they got tested in the last 12 months and received their results.
- Among women who gave birth in the two years preceding the survey, the proportion that was counselled during antenatal care is 61 percent.
- Among women who gave birth in the two years preceding the survey, 29 percent were offered and accepted an HIV test during antenatal care; while 71 percent did not get the offer.
- Twenty six percent of pregnant women reported that they received their HIV results while 3 percent said that they did not receive the results.

## 8.2. Introduction

Almost three decades into the HIV epidemic, Uganda has had a significant number of its citizens infected with HIV. Of the infected persons, a great proportion has died; and others are still alive requiring support, treatment and care of varying nature. Currently, the national response emphasizes both comprehensive HIV prevention, as well as care and support services. These services can however only have impacts if their coverage is adequate and the quality is good. Therefore, understanding the coverage of HIV care and support services is important. Services such as HIV counseling and testing (HCT) and prevention of mother-to-child-transmission (PMTCT) are important in the reduction of HIV transmission. Knowing one's HIV sero-status is an entry point for prevention and care. According to UNAIDS/WHO, counseling and testing eases acceptance of sero-status and coping, facilitates behavior change, reduces mother-to-child transmission, promotes management of opportunistic infections, enables preventive therapy and contraceptive advice, facilitates referral to social and peer support, normalizes HIV/AIDS and reduces stigma; and promotes planning and orphan care. On the other hand, a number of factors act as barriers to HIV testing; including denial of HIV risk, fear of positive results, lack of perceived benefits from knowing sero-status, lack of affordability, lack of treatment availability, not knowing where to test from, clinic location being inconvenient, lack of time, repeated HIV negative test results, reluctance to provide blood samples and having been bled many times.

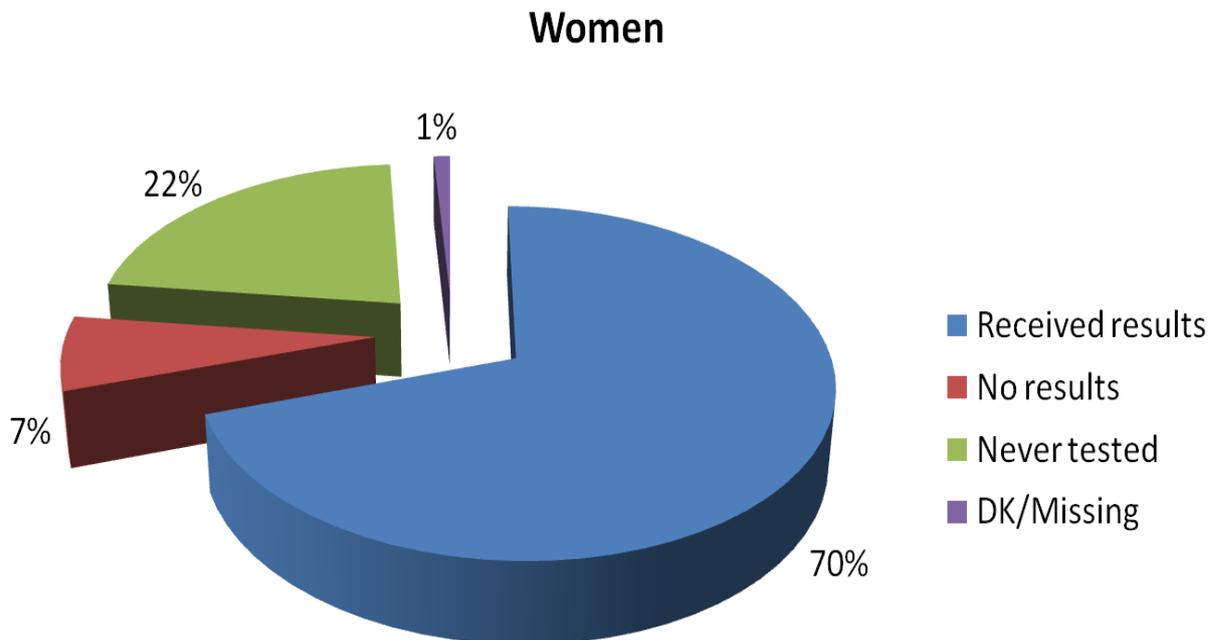
In this survey, a number of variables were assessed. The variables that were assessed included the proportion of respondents aged 15-49 who reported having ever tested for HIV (15-49 year olds), proportion of pregnant women aged 15-49 who received HIV

counseling during antenatal care (among women who had one or more births within last 2 years and received ANC) and proportion of pregnant women aged 15-49 who received HIV testing during antenatal care (among women who had one or more births within last 2 years and received ANC).

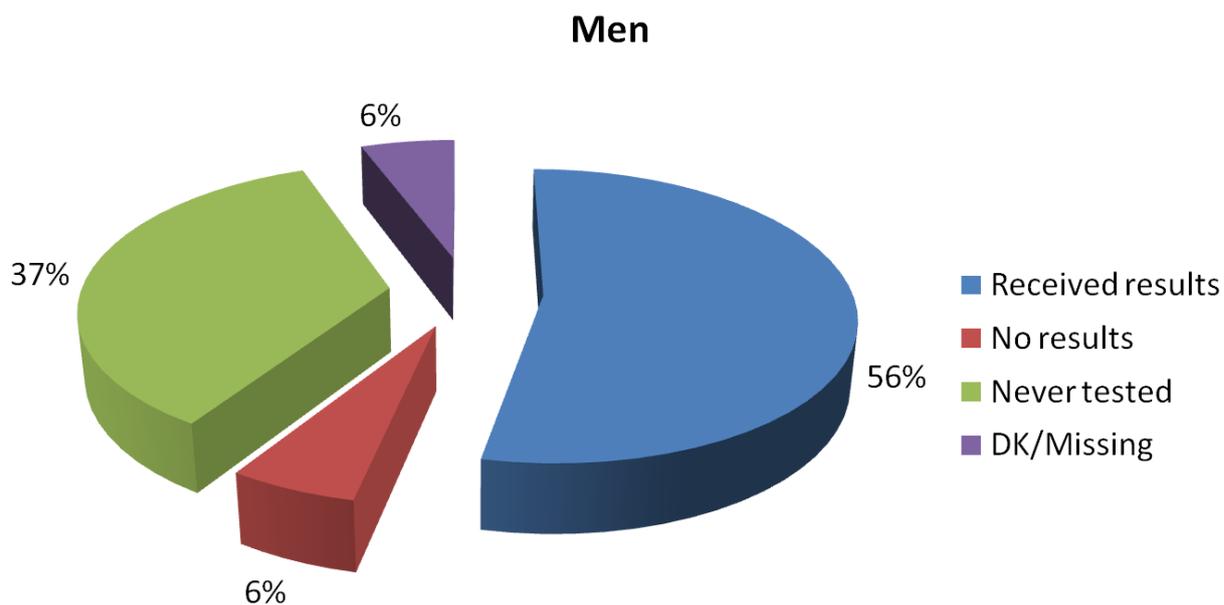
### 8.3. HIV Counseling and Testing in the Study Population

Table 8.1 shows the proportions of respondents who have ever had HIV tests and those that obtained their test results. Overall, the results show that 77 percent of women and 62 percent of men reported that they have ever had HIV tests. Therefore, women were more likely than men to have received HIV testing. The findings further show that while some tested people got their results, some did not. For instance, 7 percent of women got tested and never got results; in men, 6 percent got tested and did not get their results. These results therefore show that there is a big missed opportunity for care and support services.

**Figure 8.1; Percent of respondents who ever tested for HIV and received results (n=352)**



**Figure 8.2; Percent of respondents who ever tested for HIV and received results (n=559)**



Respondents were also asked whether they got tested and received results in the last 12 months. In response, 36 percent of women and 31 percent of men said that they got tested and received results in the last 12 months. When data is disaggregated by age, no marked variation is seen in the proportion of respondents who had HIV test and received results in the last 12 months across the different age groups; except for the age group 45-49 year old who had the lowest figures.

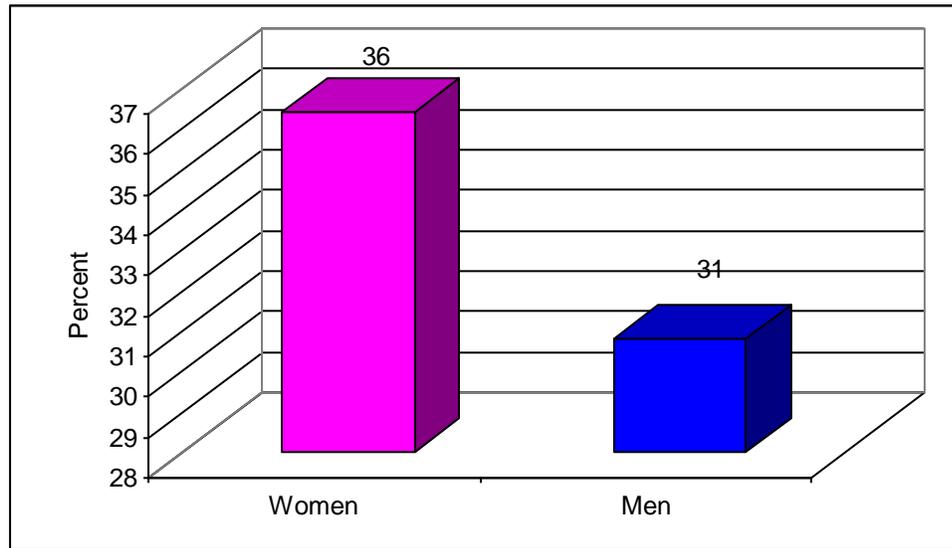
**Table 8.1: Population who had an HIV test and received test results**

Percent distribution of women and men by status of HIV testing, and percentage of women and men who were tested for HIV and received test results 12 months prior the survey, by selected background characteristic

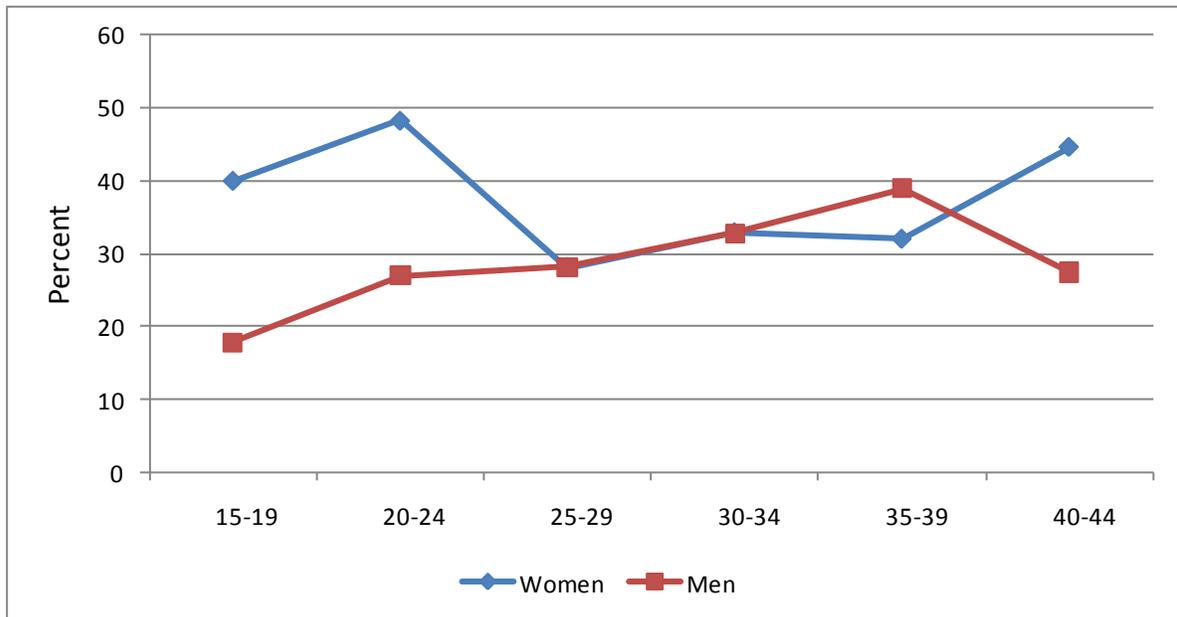
Background characteristic	WOMEN							MEN						
	Ever tested					Percentage who were tested and received results in the last 12 months <sup>1</sup>	Number of women	Ever tested					Percentage who were tested and received results in the last 12 months <sup>1</sup>	Number of men
	Received results	No results	Never tested	DK/ Missing	Total			Received results	No results	Never tested	DK/ Missing	Total		
Age														
15-19	56.7	3.3	36.7	3.3	100.0	40.0	30	(35.7)	(10.7)	(50.0)	(3.6)	100.0	(17.9)	28
20-24	79.3	10.3	8.6	1.7	100.0	48.3	58	46.1	3.4	49.4	1.1	100.0	27.0	89
25-29	68.4	10.5	19.3	1.8	100.0	28.1	57	55.5	5.5	37.3	1.8	100.0	28.2	110
30-34	71.4	10.0	18.6	0	100.0	32.9	70	64.7	3.4	31.9	0	100.0	32.8	116
35-39	80.0	2.0	16.0	2.0	100.0	32.0	50	62.9	5.7	31.4	0	100.0	39.0	105
40-44	65.8	0	34.2	0	100.0	44.7	38	54.9	11.8	33.3	0	100.0	27.5	51
45-49	(81.5)	(11.1)	(7.4)	(0)	100.0	(33.3)	27	*	*	*	*	*	*	23
50-54	*	*	*	*	*	*	13	(61.5)	(7.7)	(30.8)	(0)	100.0	(34.6)	26
55-59	*	*	*	*	*	*	9	*	*	*	*	*	*	11
Marital status														
Never married	*	*	*	*	*	*	21	34.9	4.8	57.1	3.2	100.0	17.5	63
Married	70.2	7.2	20.4	2.2	100.0	38.1	181	61.2	5.5	32.9	0.3	100.0	34.4	343
Living together	73.4	6.3	20.3	0	100.0	29.7	64	48.7	3.8	46.2	1.3	100.0	29.5	78
Divorced/Separated	69.8	9.5	13.0	0	100.0	27.0	63	58.3	6.7	35.0	0	100.0	26.7	60
Widowed	*	*	*	*	*	*	23	*	*	*	*	*	*	15
Education														
Nursery	*	*	*	*	*	*	3	*	*	*	*	*	*	3
Primary	70.1	6.8	23.1	0	100.0	33.0	221	52.4	5.6	41.2	0.8	100.0	27.0	359
Post Primary/Vocational	*	*	*	*	*	*	13	*	*	*	*	*	*	24
Secondary/'A' Level	77.4	8.1	11.3	3.2	100.0	45.2	62	68.5	4.7	26.8	0	100.0	40.2	127
College/ University	*	*	*	*	*	*	1	*	*	*	*	*	*	6
Not Stated	65.4	5.8	26.9	1.9	100.0	40.4	52	37.5	7.5	52.5	2.5	100.0	22.5	40
Total	70.2	7.1	21.6	1.1	100.0	36.4	352	56.4	5.5	37.4	0.7	100.0	30.8	559

Note: Figures in parentheses are based on 25-29 cases while an asterisk indicates that a figure is based on less than 25 cases and has been suppressed.

**Figure 8.3; Proportion of respondents who had HIV test and received results in the last 12 months by sex (Women;352 and Men;559)**



**Figure 8.4; Proportion of respondents who had HIV test and received results in the last 12 months by sex and age**



## 8.4. HIV Counseling and Testing in Pregnancy

Counseling during pregnancy, be it, general, health and HIV related is very important. During the survey, analysis was conducted to determine the proportion of pregnant women who had received counselling, were offered HIV testing, accepted HIV testing and received their HIV test results. A woman is considered to have received counseling only if she was spoken to about all three of the following topics: transmission of the virus to babies, preventing the virus, and getting tested for the virus.

As shown on Table 8.2, the results show that among women who gave birth in the two years preceding the survey, the proportion that was counselled during antenatal care is 61 percent (Figure 8.5). Among women who gave birth in the two years preceding the survey, 29 percent were offered and accepted an HIV test during antenatal care and 71 percent did not get the offer (Figure 8.6).

**Table 8.2: Pregnant women counselled and tested for HIV.**

Among women who gave birth in the two years preceding the survey, percentage who received HIV counselling during antenatal care for their most recent birth, and percentage who accepted an offer of HIV testing, whether or not they received their test results

Item	Percentage
Counseled during antenatal care <sup>1</sup>	61.4
Condition for having a test for HIV as part of antenatal care:	
- Asked for the test	19.3
- Offered and accepted	28.6
- Required	15.7
- Not stated	36.4
HIV counselling and testing during antenatal care:	
- Received results <sup>2</sup>	25.7
- Didn't receive results <sup>2</sup>	2.9
- Not offered test	71.4
Counseled, accepted an offer for HIV testing, and know results <sup>3</sup>	20.0
Number of women who gave birth in the last 2 years	140

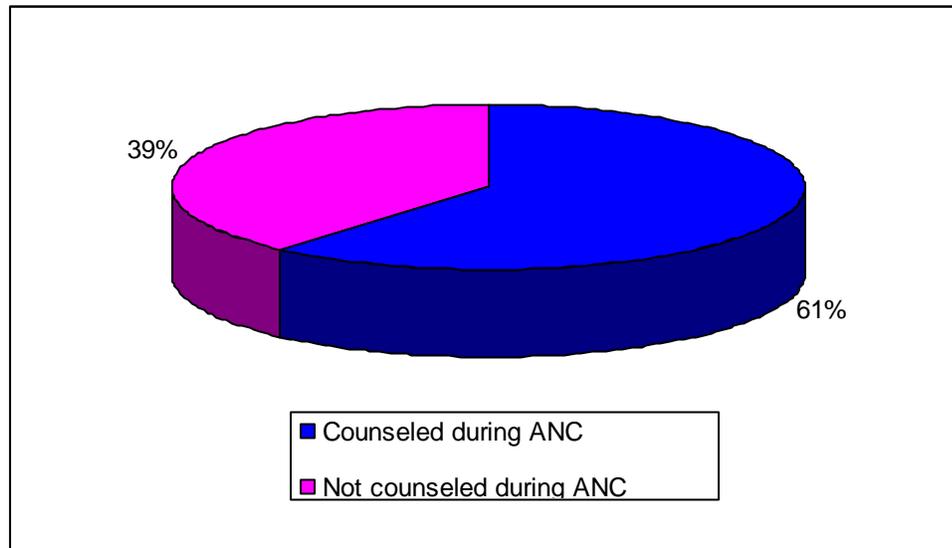
<sup>1</sup> A woman is considered to have received counseling only if she was spoken to about all three of the following topics: transmission of the virus to babies, preventing the virus, and getting tested for the virus.

<sup>2</sup> Only women who were offered the test are included here; women who were either required or asked for the test are excluded from this measure.

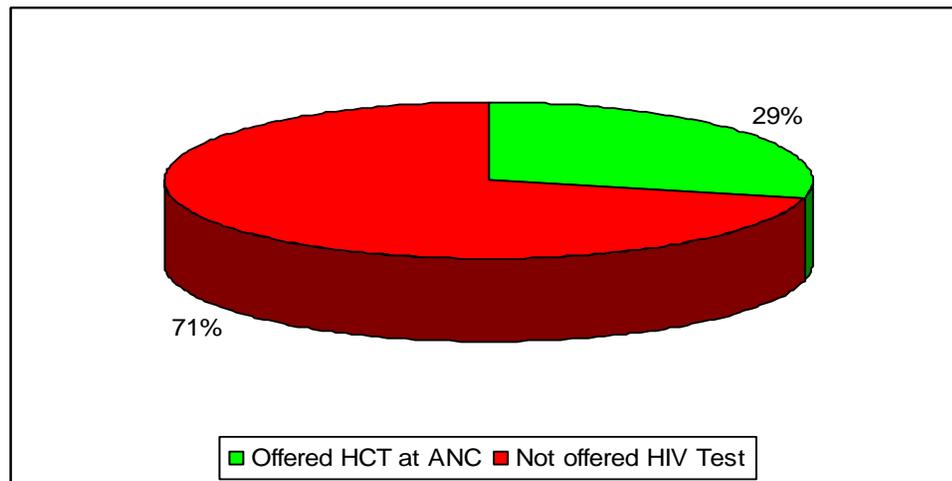
<sup>3</sup> Corresponds to UNAIDS Mother to Child Transmission Indicator 1 "Pregnant women counseled and tested for HIV".

Furthermore, the results show that 26 percent of pregnant women received results while 3 percent did not receive results. Only women who were offered the test are included here; women who were either required or asked for the test are excluded from this measure.

**Figure 8.5; Pregnant women who gave birth in the last 2 years who were counseled during ANC (n = 140)**

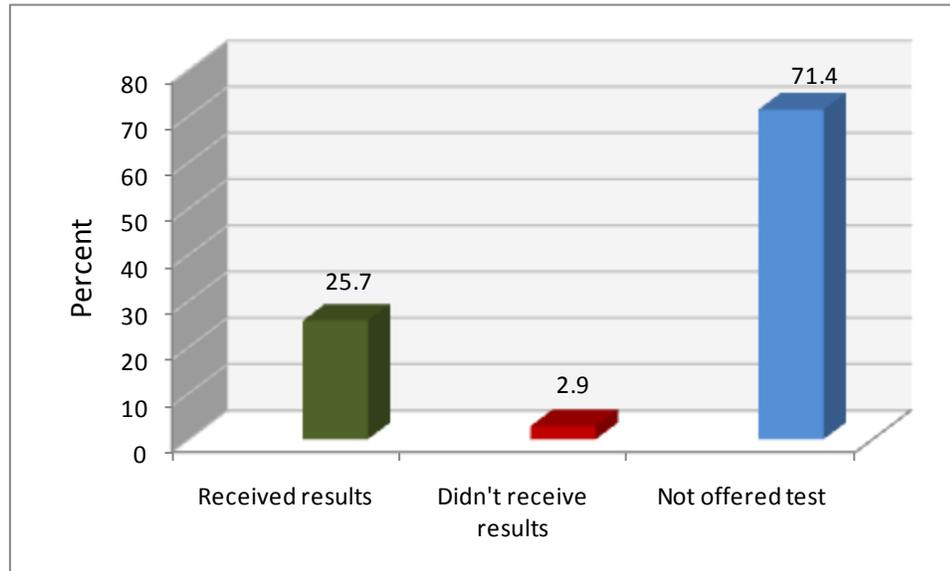


**Figure 8.6; Pregnant women who gave birth in the last 2 years who were offered HIV test during ANC (n = 140)**



On the other hand, the proportion that was counseled, accepted an offer for HIV testing, and knows results are 20 percent. Overall, about 71 percent of the pregnant women were not offered HIV tests.

**Figure 8.7; Pregnant women who gave birth in the last 2 years who were offered and accepted an HIV test during antenatal care (n = 140)**



# CHAPTER 9: QUALITATIVE STUDY FINDINGS

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## 9.1. Key Findings

- There is a general agreement by the KI and FGD respondents that the burden of HIV/AIDS is high in fishing communities; thus, leading to reduction in productivity, loss of income, death and dependency of orphans.
- The FGD respondents have high HIV awareness and are knowledgeable about the modes of HIV transmission; despite this knowledge, the fishing communities still engage in risky sexual behaviours such as higher risk sex, multiple sexual relationships and non-use of condoms. Transactional and commercial sex is very common. Defilement is also noted to be very common.
- High alcohol consumption, poverty, gender inequality and despair are among the factors identified to be driving HIV infection in fishing communities.
- Men are dominant and control fish production; they sell fish through bidding; the highest bidder takes it all. Due to this, women are compelled to provide sex to have fish.
- There is some despair among fishing communities due to fishing itself being risky; as a result, the fishermen feel that once they have survived the water, they need to celebrate when they come back. This situation makes them behave recklessly. Due to the risk of water, the fishermen feel that they live one day at a time.
- Sexual behaviour change is reported to be very limited due to complacency arising from the availability of ARVs; it may also be attributed to the limited service outlets for the dissemination of, and access to accurate HIV information.
- HIV services are limited in the surveyed fishing communities. There are also inadequate numbers of health workers. Stock-outs of drugs are common accompanied by limited infrastructure.
- Most of the fish landing sites are hard to reach areas. Transport facilities on the water are inadequate. The available services are mainly on the main land yet the majority of the people live on the islands. On the average, people seeking services would need between 2-6 hours of travel before accessing services.

Community based structures are being used in some circumstances to deliver HIV-related services. Peers living with HIV remind their friends through telephone calls; others use “Barazas”/Community meetings. Community radios are also used for discussions or announcements. BMU executives are used to pass over messages.

## 9.2: Introduction

The key informant interviews and focus group discussions (FGDs) were organized to provide opportunity to get insights into, and to obtain a deeper understanding of, as well as generate explanations for the key behavioral indicators that the survey revealed. It also facilitated the analysis of the policy environment of the fishing communities. The samples were purposively selected, and involved fishing communities of different categories. The list of the participants for the KI and FGDs are presented on Table 9.1.

The FGDs were conducted in four fish landing sites. On the average, each of the FGDs was comprised of 10 people drawn from each of the fishing communities. To facilitate triangulation of information, deliberate efforts were made to collect information from various categories of residents of the fishing communities.

The Key informant (KI) interviews were conducted at the national, regional and district levels. The selected districts are among the nine host districts to the surveyed fishing communities. The KI participants comprised a mix of people, including policy makers, programme coordinators, programme implementers and community representative.

The information generated from the above interviews is summarized and presented under the following thematic areas;

- Burden of HIV and AIDS.
- HIV/AIDS awareness, risk behaviours and influencing factors.
- Myths about HIV infection.
- Behavioural change; and
- HIV/AIDS services availability.

From the above, key messages arising from the interviews and discussions are captured. Finally, recommendations are made as way forward to improve HIV-related services.

**Table 9.1; List of the Participants for the Key Informants Interviews and Focus Group Discussions**

<b>Site</b>	<b>Category and positions of persons interviewed</b>	<b>Number of Study Participants</b>
<b>National level/Regional Level</b>	<b>Key Informants</b> <ol style="list-style-type: none"> <li>1. HIV/AIDS Prevention Coordinator UAC</li> <li>2. Assistant Commissioner for Fisheries - MAAIF.</li> <li>3. Senior Economist LVFO.</li> </ol>	<b>03</b>
<b>Mayuge</b>	<b>Key Informants</b> <ol style="list-style-type: none"> <li>1. Assistant District Health Educator</li> <li>2. Assistant District Fisheries Officer</li> </ol>	<b>02</b>
	<b>FGD</b> <ol style="list-style-type: none"> <li>1. Malindi Landing Site</li> </ol>	<b>20</b>
<b>Kampala</b>	<b>Key Informants</b> <ol style="list-style-type: none"> <li>1. District Fisheries Officer</li> <li>2. Community Representative</li> </ol>	<b>02</b>
	<b>FGD</b> <ol style="list-style-type: none"> <li>1. Ggaba Landing site</li> </ol>	<b>10</b>
<b>Wakiso</b>	<b>Key Informants</b> <ol style="list-style-type: none"> <li>1. HIV Focal Person</li> <li>2. District Fisheries Officer</li> </ol>	<b>02</b>
	<b>FGD</b> <ol style="list-style-type: none"> <li>1. Nakiwogo landing site</li> <li>2. Kigungu landing site</li> </ol>	<b>20</b>

### **9.3; Burden of HIV and AIDS**

The survey respondents were asked to give an opinion on the burden of HIV/AIDS. In response most of them indicated that HIV/AIDS is a big problem as shown by the loss of life due to and the impact of HIV/AIDS on the fishing population. HIV was observed to be increasing the demand for health services. It was also noted that through death, HIV/AIDS is increasing the number of orphans in fishing communities and reduction of human work force for fishing. The dependency levels have also increased as a result of HIV/AIDS; there is also a decline in the standard of living due to reduction in income. This situation was worsened by the reported limited availability of social services.

Entrepreneurship and likelihood for destructive tendencies among the infected persons was noted to reduce after appropriate counseling is provided. Some of the excerpts and statements that illustrate the above positions are;

- *HIV is a big problem in fishing communities; it is manifesting by increasing the demand for health services. We have also noted an increase in the number of orphans in these communities. Standards of living also drop because of loss of income among affected households.*
- *In the eyes of health workers, it is a big problem, but for the communities, they do not take HIV as a big problem. Actually communities seem to fear pregnancy more than HIV infection.*
- *HIV prevalence is noted to be relatively higher in fishing communities compared to other communities; this is noted from previous studies.*
- *The HIV problem is quite serious as shown by an estimate of HIV prevalence of 12% in fishing communities; moreover, this is on the increase. This is worsened by limited interventions as reported in the inventory of services in fishing communities.*
- *The ability and entrepreneurship of especially the young labour force has been negatively affected. This limits the sustenance of fisheries.*
- *In my opinion, HIV/AIDS may lead to destructive tendencies if proper counseling is not provided. Some PHAs may use the illegal gears while fishing because of a belief that they may not live for long.*
- *The problem is quite big and we have had reports that the HIV prevalence is as high as 40% in some communities.*
- *The problem is still big in this area because we have many AIDS orphans and widows who live in this place; many of them work in the market but cannot afford to cater for the basic needs of their children. We also bury many people dying of AIDS in this community.*
- *HIV/AIDS can at times lead to increased vulnerability and promiscuity tendencies among some people because some of the infected people have lost hope.*
- *HIV/AIDS may create a disincentive to save money among some people, whereas other individual entrepreneurship is negatively affected; this situation is compounded by lack of comprehensive interventions in fishing communities.*

#### 9.4; HIV/AIDS Awareness, Risk Behaviours and Influencing Factors

Knowledge on HIV/AIDS is taken to be a facilitating factor for behavioural change. During the FGD, participants went through a guided discussion so as to bring out information of their level of knowledge, risk behaviours and the factors influencing this.

Overall, the results show that the respondents had HIV knowledge; and that the common modes of HIV transmission in fishing communities include unprotected sex, mother to child transmission and breast feeding. There were also reports of limited information of service outlets especially in the rural settings.

The risk behaviours reported by most of the participants were: unprotected sex, multiple sexual partnerships, extramarital sex, sharing of women, defilement, cross generational and alcoholism. The influencing factors to the above behaviours were: availability of excess money; low number of women compared to men; high libido among men; community acceptance of multiple sexual partnerships for men; high mobility in the community; the unfavourable nature of housing and bathing arrangements; Influence of blue movies; A feeling that they are already infected with HIV; male dominance and control of resources; and peer influence. Statements that illustrate the above are:

- *Awareness on the modes of transmission is high; the common risky behaviours are multiple sexual relationships and extra marital sex. In these communities, you can't call yourself married because when their husbands are away, the women get involved in sexual relationships.*
- *Defilement is common yet it is unnoticed because parents are given money and they keep quiet. The nature of housing is also a problem; it influences sexual promiscuity where there is congestion both within the communities and in the neighborhoods. The bathing arrangements also promote reckless sex. The people bathe in the water openly; this provides room for attraction between men and women. Blue movies also have a negative effect; during their free time, the communities watch blue movies and they tend to put in practice what has been seen in these movies.*
- *I think awareness on the modes of HIV transmission is high; however, most of the fishing communities don't stay with their spouses. They have a lot of free time and disposable income which they use to drink and buy sex with, and in most cases they practice unprotected sex.*
- *Some of them don't want to use condoms because they want to enjoy sex to the maximum; others feel shy to access condoms. Extramarital sex is the order of the day and this is mainly because the majority of women go to landing sites to earn money and sell sex to supplement*

*their incomes. Some women have extramarital sex to revenge while others do it for fun and status. Some feel more secure if they have had sex with the persons with high authority in the community. Early initiation of sex by girls is common as men tend to feel that they are free of HIV infection while others intentionally infect them.*

- *Some men have multiple sexual partners for competition and money. The fishing sites normally have fewer men so the men end up sharing those women.*
- *Some of these people know that they are already infected so they see no reason to use condoms. Witchcraft is also used by women to attract men.*
- *Most of these landing sites have criminals who may have committed crimes like rape; and others in the areas they were previously living. So, rape is common in these areas. The fishing communities have a lot of money and sex workers go to those areas to earn these monies through selling sex. Alcohol and redundancy make them end up having unplanned sex. They live like travelers most of the time without their spouses and therefore end up having extra marital sex.*
- *Commercial sex is common and they also have nude dancers "Kimasulo" in the commercialized islands; this promotes reckless sex. Redundancy leads to some of them exploring to find out the intimate aspects of the girls since they live without their spouses.*
- *Multiple sexual relationships, transactional and commercial sex are very common and this goes with defilement which is the order of the day.*
- *Sex is one of the biggest businesses in fishing communities; it is the second trade to fishing. In these communities they drink heavily, live alone and the women belong to nobody once they receive money they use it without saving.*
- *Fishing itself is risky; so the fishermen feel that once they have survived the water, they need to celebrate when they come back. Thus, this makes them behave recklessly. Due to the risk of water, the fishermen feel that they live one day at a time.*
- *Drunken people are less likely to use condoms. Most of them feel they are already infected and see no reason of protection against HIV.*
- *Early initiation of sex is common; they start having sex as early as 12years because they have few options. The girls having sex with older men are common and this is mainly driven by money. These communities have transient marriages; thus, if a fisherman is in a*

*particular fishing community, he marries there whereas he may have left another wife in his village of origin.*

- *Dominance of the men especially in fishing communities; so they use this to lure women who are not in control. The men control the factors of production and the fish is sold through bidding; so the highest bidder takes it all. Due to this, women are compelled to provide sex to have fish.*
- *Alcoholism is responsible for many cases of unprotected sex because it becomes very difficult to use condoms after drinking; sometimes women entice us to pay more for unprotected sex. The fishing business is also seasonal; so during the bad seasons the women opt for those who can provide money.*
- *Peer Influence is a problem; it is very difficult for a girl or a boy to fit in their peer group if they have never had sex. They would regard them to be impotent for boys while for girls they would be regarded to be too ugly.*
- *There is a mentality of changing a “meal”; women also tend to revenge especially if their husbands are neglecting them.*
- *Men don't feel satisfied with only one spouse and they feel they need a change in sexual diet.*
- *Sometimes because of stress levels at home especially by their wives and other family issues, they engage in extramarital sex for relaxation.*

### **9.5: Myths about HIV infection**

The participants were asked to mention some of the common myths in the fishing communities. The myths mentioned include the perception that the “fish harvest” is better after sex with particular females; showing of breasts among girls as a sign of maturity for sexual intercourse and extension of life span if you have sex with a young girl. The related statements are:

- *Some of these people believe that particular women have good harvest luck once you have sexual intercourse with her.*
- *A girl with breasts is ready for sex and marriage. Having sex with a young girl makes you to live longer. If you have sex with a virgin you may end up with a heavy harvest though this belief has reduced now.*
- *Young girls growing into women should be taken to the bush by their aunts or “sengas” or else they will find difficulty in their sex life in future.*

## 9.6: Behavioural Change

The feedback sought showed that behavioural change in communities was quite limited and this was attributed to mainly the availability of ARVs and protective gear like condoms. Other factors included feelings that they may be already infected with the HIV virus. There were also indications that there is some positive change as seen from increased demand for HCT and apparent demand and use of condoms. The statements below illustrate the above:

- *Behaviour change is very limited as only a few people are now using condoms and this is because of complacency due to the availability of ARVs. The limited change may also be attributed to the limited service outlets, as such affecting the access to accurate HIV education. There has been some change but limited at least some people have started using condoms.*
- *These populations are very mobile so tracing their behaviour change is very difficult. There have been reports that condom use is in the increase, but because of alcohol sharing of sexual partners is not changing.*
- *I am not sure whether there is behaviour change. The people show concern but I think in these communities, HIV/AIDS is invisible since those who fall very sick are transferred to their original villages so people may not witness death and the problem may appear small yet big.*
- *There is a feeling that HIV and AIDS is no longer a serious problem and can be dealt with anytime. Many people have now learnt to use condoms and proudly speak of how they will use condoms in “away matches”. Multiple sexual partnership and cross generational sex has cropped up not only in these communities but even other places.*
- *People here are very much willing to test and know their HIV status whenever we have VCT outreaches here. It is also common practice for couples to test before marrying. The perception that AIDS is a result of witchcraft has changed; and people are trying to use condoms and also the sick are on ARVs.*

## 9.7; HIV/AIDS Services Availability

Discussion was held with the respondents on the availability of HIV services and source of HIV information. The focus was to assess the main source of information and the availability of services; especially HCT services. The common sources of information identified were radio, TV and community outreaches. Interpersonal communication

(IPC) was the most preferred communication channel. The demand for HIV/AIDS services was noted to be high in the fishing communities yet the services are limited.

The general feedback is that the services were generally limited especially on the islands where the number of health workers is inadequate. Where they existed, the quality of services was reported to be poor. On disclosure of HIV status, the common feedback was that people are comfortable with the disclosure at spouse and family level; while most are very uncomfortable with disclosure at community level.

The relevant statements are:

- *The communities receive information mainly through PHAs/Expert patients, ABC promoters, VHTs and peer educators; while others listen to radio and/or are educated at HIV/AIDS outreach services.*
- *The services are limited as about 20% of the landing sites have health facilities. It is very difficult to attract health workers for some of these fishing communities, especially the islands. Most of the facilities are managed by health assistants; this therefore affects the quality of services yet outreaches are very expensive because of the fuel costs to islands.*
- *Disclosure of the HIV status is still a problem though it has improved with family support groups in this area; some people now discuss openly and even give testimonies.*
- *On the basis of the demand, condom use seems to be high although we may not tell the exact level of use. Basing on the outreaches conducted in these communities, the demand for HIV testing services seems to be high.*
- *The common sources of health information are sensitization meetings, outreaches and radio. I think it would be appropriate to combine channels of communication for effectiveness.*
- *The HIV services are not available and to me only a few people are willing to take their HIV tests. It is mainly those ones who have started having health problems that do go for HCT while the rest fear and prefer to remain in darkness. Disclosure is appropriate because it enables you to receive services; so I support it. These services are not available at most landing sites because on the average people seeking services would need between 2-6 hours of travel before accessing services.*
- *The HIV services are limited because these are hard to reach areas. Stock-outs of drugs are common accompanied by limited infrastructure and this makes the quality of services to be compromised.*

- *Communication to some areas is very difficult and some of the islands can only access radio messages from Kenya-based radios so they end up in message blackouts.*
- *The services in these communities are inadequate and this is one of the drivers of HIV transmission in these communities. There are inadequate personnel and infrastructure where the facilities exist. Very few health workers like working on the islands.*
- *The available services are through projects; there are limited interventions through the public sector. It becomes difficult to assess quality where services are very limited. I think the demand for HIV and STD services is quite high.*
- *Inter personal communication is the most appropriate approach for these communities and I think radio may not be appropriate since the population is mobile.*
- *The peers living with HIV remind their friends through telephone calls, others use “Barazas”/Community meetings. Community radios are also used for discussions or announcements. BMU executives are also used to pass over messages. Workshops, seminars and radios have been previously used. NGO meetings have also been used. I doubt the effectiveness of radios and I would propose the use of interpersonal communication and use of local film venues like Bibanda to disseminate HIV information.*
- *The services are mainly on the mainland yet the majority of the people live on the islands. The communities would be willing to receive services but it would be better if they had proper sensitization. Some prefer the services at night to avoid pointing accusing fingers at them and they also need assurances that once they are tested and found positive, they would be treated if not they prefer to remain untested. I think it easier to share HIV test results with your spouse; but this is difficult with other members which I think could be disorganizing. We need to research more on the effects of disclosure.*
- *It’s your partner’s right to know everything about you including your health. Some partners are very aggressive, so if you don’t tell them, they will still find out and either throw you out of the home or divorce you. It’s also good because it is definitely your partner who will give you hope and encourage you to go for treatment or both of you can go together if he is also positive.*
- *The community is very unpredictable, when you tell somebody, they will seem very understanding and then the following day when you*

*have disagreements with some members of the community, they use your status to disgrace and stigmatize you.*

- *There is free access to ARV for infected people. There are testing services all over the place though most of them are private, but the testing costs are quite affordable, Uganda shillings 2000 only or you can go to Buziga health centre. Sometimes when there are outreach programs here, you find that they target specific groups of people may be the men only or women or youth rather than the whole community. Those days, condoms were frequently given out and you could even get them from BMU offices but this eventually stopped.*

### **9.8: Summary of the key findings**

1. The respondents said that the burden of HIV/AIDS is high in fishing communities; and that this has led to reduction in productivity, loss of income, death and dependency of orphans.
2. HIV awareness is high and the modes of HIV transmission areas known; yet the fishing communities still engage in risky sexual behaviours such as multiple sexual relationships and non-use of condoms, transactional and commercial sex are very common. Defilement is the order of the day.
3. High alcohol consumption, poverty, gender inequality and despair are among the factors identified to be driving HIV infection in fishing communities.
4. Men are dominant and control fish production; they sell fish through bidding; the highest bidder takes it all. Due to this, women are compelled to provide sex to have fish.
5. Fishing itself is risky; so the fishermen feel that once they have survived the water, they need to celebrate when they come back. Thus, this makes them behave recklessly. Due to the risk of water, the fishermen feel that they live one day at a time.
6. Sexual behaviour change is reported to be very limited due to complacency arising from the availability of ARVs; and it may also be attributed to the limited service outlets for the dissemination of, and access to accurate HIV information.
7. HIV services are limited and there are inadequate numbers of health workers. Stock-outs of drugs are common accompanied by limited infrastructure.
8. Most of the fish landing sites are hard to reach areas. Transport facilities on the water are inadequate. The available services are mainly on the

mainland yet the majority of the people live on the islands. On the average, people seeking services would need between 2-6 hours of travel before accessing services.

9. Community based structures are being used in some circumstances to deliver HIV-related services. Peers living with HIV remind their friends through telephone calls; others use “Barazas”/Community meetings. Community radios are also used for discussions or announcements. BMU executives are used to pass over messages.

### **9.9: Recommendations (suggestions for Improvement)**

The following is a summary of the recommendations made by the participants as a way of improving services:

1. There is need to introduce female condoms because more women are demanding for these condoms. There is also need to increase condom outlets.
2. Provide special funding for islands because primary health care provision is grossly inadequate in the islands.
3. Strengthen the coordination of community response and collaboration through holding regular review meetings with village health teams (VHTs), the promoters of the abstinence, being faithful and condom use (ABC) strategy, community base organizations (CBOs) and non-governmental organizations (NGOs). Should identify HIV focal persons at community level.
4. Scale-up IEC/BCC services in the fishing communities; including print media and entertainment education.
5. Improve the infrastructure and provision of supplies for service delivery in these underserved fishing communities.
6. Introduce byelaws to address defilement and promote labour laws to protect especially the girl child.
7. Mainstream HIV/AIDS in the fishing sector at all levels.
8. Since women sell sex to supplement their income, initiate empowerment programmes that mitigate the effects of poverty.
9. A special comprehensive HIV prevention and care programme for fishing communities is needed to address the unique characteristics of these communities.
10. Establish and strengthen financial institutions to promote the saving culture as women are used as banks. Innovative approaches like mobile money transmission needs to be introduced.

11. Establish partnership with the private health care providers in order to provide HIV education and care.

# CHAPTER 10: HIV/AIDS POLICY AND PROGRAMS

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## 10.1. Key Findings

- At the national level, Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) has a “Strategy for reducing the impact of HIV/AIDS on fishing communities”.
- At the regional level, the Lake Victoria Fisheries Organization (LVFO) Secretariat based at Jinja has a strategy to control and manage HIV/AIDS among fishing communities. The strategy is entitled “HIV/AIDS in fishing communities of Lake Victoria: A Strategy and Action Plan”.
- At community level, community-based Beach Management Units (BMUs) are being used to improve livelihoods in a range of areas, including HIV prevention and control.
- Of the 46 surveyed fish landing sites, only 7 (15.2 percent) have health units.
- Of the 46 surveyed fish landing sites, only 7 (15.2 percent) have schools.

## 10.2. Introduction

In order to document any existing HIV/AIDS policy and programmes targeting the fishing communities, a desk review was conducted. Fishing community related HIV/AIDS policy is crucial to provide a framework for guiding the delivery of HIV-related services targeting the fishing communities. The policy can also provide guidance on the institutional framework for the delivery of HIV interventions targeting the fishing communities. Furthermore, the policy can provide a framework for strengthening the monitoring and evaluation of HIV/AIDS programmes and for resource mobilization. Such policy can however only be meaningful if it is evidence-based. This report represents a body of information related to HIV/AIDS situation in the fishing communities. It will be an invaluable source of information for the planning, strengthening and monitoring and evaluation of HIV/AIDS programmes in the fishing communities of the Lake Victoria Basin in particular, and Uganda in general. Following the onset of the HIV/AIDS epidemic in Uganda, a national response was mounted, initially targeting public education and surveillance, and later evolved into a comprehensive response. Subsequently, many sectors have gotten involved in the national response which cover HIV prevention strategies, treatment, care and support services. Institutional capacity strengthening, as well as monitoring and evaluation of the epidemic also still remain a cornerstone in the national response.

In relation to above, the focus of the desk review was to determine the existence and effectiveness of fishing communities related HIV/AIDS policies, programs and coordination structures. In addition, the desk review attempted to establish the range, breadth, availability and utilization of HIV/AIDS related services. The key findings are described below and summarized in Table 10.1 below.

### **10.3. National level policy and programmes**

At the national level, Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) has a “Strategy for reducing the impact of HIV/AIDS on fishing communities”. This strategy was developed in 2005. MAAIF also produced an implementation and financing plan for the strategy to cover the period 2005/6-2015/2016. The plan has three main sets of activities; namely;

1. Start-up activities; including awareness creation, lobbying and advocacy, strengthening the capacity of Department of Fisheries Resources and fisheries management bodies to respond to the impact of HIV/AIDS in fishing communities, profiling of fishing communities, conducting HIV sero-prevalence surveys, conducting knowledge, attitudes, practices and beliefs surveys, mapping of social and physical infrastructure and HIV/AIDS support services, conducting mobility studies, as well as adapting MAAIF/DFR’s core business to respond to the epidemic.
2. A second set of activities consists of implementation of interventions; including HIV/AIDS specific interventions, provision of HIV/AIDS treatment and care, vulnerability reduction interventions, fisheries development and improving access to facilities and services.
3. The third set of activities of the plan is related to financing, as well as monitoring and evaluation of the plan.

In the Ministry of Health (MoH), there is no HIV/AIDS policy. However, activities that relate to HIV/AIDS in the fishing communities are being implemented. For instance, Ministry of Health recently conducted a HIV sero-behavioral survey among fishing communities in the districts of Mukono and Wakiso (Ministry of Health, 2010). The main aim of the survey was to generate data for planning, and monitoring and evaluation.

Another revelation is on the National HIV&AIDS Strategic Plan 2007/8-2011/12 developed by the Uganda AIDS Commission (UAC). The above plan clearly identifies fishing communities to be among the vulnerable groups to HIV infection. However, there are no specific strategies that have been proposed to target the fishing communities.

### **10.4. Regional level policy and programmes**

At the regional level, it was found that the Lake Victoria Fisheries Organization (LVFO) Secretariat based at Jinja is committed to provide HIV/AIDS services in the fishing communities. On the directive of the Council of Ministers meeting held in June 2006, LVFO developed a strategy to control and manage HIV/AIDS among fishing communities. The document is entitled “HIV/AIDS in fishing communities of Lake Victoria: A Strategy and Action Plan“. The vision of the strategy is to see fishing communities free from HIV/AIDS; its purpose is, HIV prevalence reduced and its impacts mitigated in fishing communities. There are eight outcomes that must be achieved to meet this purpose.

They are:

1. Fishing communities recognized as a vulnerable group at all levels.

2. Appropriate resources mobilized, disbursed and utilized.
3. Effective coordination and networking for lesson learning and joint action.
4. HIV/AIDS, gender and rights based approaches mainstreamed into fisheries management.
5. High levels of HIV/AIDS awareness in the fishing communities of Lake Victoria.
6. Reduction in the risk-taking behavior.
7. Increased access to, and provision of, services for people living with HIV/AIDS (PLWHA) in fishing communities.
8. Targeted interventions provided for young men and for women in fishing communities.
9. Livelihoods, coping mechanisms and capacity to address HIV/AIDS strengthened within fishing communities.

In addition, to facilitate the coordination, planning and implementation of HIV/AIDS activities, LVFO has designated a Health & HIV/AIDS Officer to oversee implementation of the EAC/AMREF Lake Victoria Basin HIV&AIDS Partnership (EALP) Programme activities in the fisheries sector within the Lake Victoria Basin. The duties and responsibilities of this officer include:

1. In collaboration with LVBC, IUCEA and AMREF, participate in developing and reviewing EALP work plans and budgets.
2. Support dissemination of HIV Sero-behavioural study results in the fisheries sector.
3. Liaise with the National Fisheries Institution and the EALP Partners to develop strategies for the successful implementation of best practice HIV&AIDS interventions for the fishing communities in the Lake Victoria Basin.
4. In consultation with the EALP M&E Officer and the LVFO Information & Database Officer, provide HIV&AIDS related data on the fishing communities/sectors for the EALP M&E and regional Health Management Information System (HMIS)
5. In collaboration with the National Technical Teams support the National Fisheries Institutions in mainstreaming EALP activities into the Fisheries Sector HIV&AIDS Strategic Plans, including selected networks of fisheries organizations and communities.
6. Assist in the sensitization and coordination of Gender and Rights Based Approaches (RBA) activities in the fisheries sector.
7. Build and maintain strategic partnerships with local, national and international agencies involved in advocacy for the advancement of HIV&AIDS interventions for the fishing communities of Lake Victoria.
8. Participate in the documentation and scaling up of EALP best practices.
9. Performs any other duties as may be directed by the Executive Secretary of the Organization.

The strategy's institutional framework for implementation recognizes the use of community-based Beach Management Units (BMUs) as an entry point to working with fishing communities by bringing together all beach-based fisheries stakeholders and by having and implementing their own plans.

### **10.5. District level policy and programmes**

The districts do not have their own policies, but do follow the national level policies; for instance, the District Fisheries Officers subscribe to the policy of MAAIF. The HIV/AIDS strategies cover HIV prevention, treatment, care and support services.

**Table 10.1; Highlights of Fishing Communities HIV/AIDS Policies and Programmes at Central, District and Regional Levels**

Policies and Programmes	Central Level Institutions	District level	Regional level
<b>Policies</b>			
Existence	At the national level, Ministry of Agriculture, Animal Industry and Fisheries has a “Strategy for reducing the impact of HIV/AIDS on fishing communities”.	District Fisheries officers follow the policy and strategy of Ministry of Agriculture, Animal Industry and Fisheries.	At the regional level, LVFO Secretariat has a strategy to control and manage HIV/AIDS among fishing communities.
Emphasis	<ol style="list-style-type: none"> <li>1. Advocacy and resource mobilization of stakeholders to respond to the impact of HIV/AIDS in fishing communities.</li> <li>2. Profiling of fishing communities, conducting HIV sero-prevalence surveys, conducting knowledge, attitudes, practices and beliefs surveys, mapping of social and physical infrastructure and HIV/AIDS support services, conducting mobility studies, as well as adapting core business to respond to the epidemic.</li> <li>3. Provision of HIV/AIDS treatment and care, vulnerability reduction interventions, fisheries development</li> </ol>	Consistent with the national level areas of emphasis.	<ol style="list-style-type: none"> <li>1. Fishing communities recognized as a vulnerable group at all levels.</li> <li>2. Appropriate resources mobilized, disbursed and utilized.</li> <li>3. Effective coordination and networking for lesson learning and joint action.</li> <li>4. HIV/AIDS, gender and rights based approaches mainstreamed into fisheries management.</li> <li>5. High levels of HIV/AIDS awareness in the fishing communities of Lake Victoria.</li> <li>6. Reduction in the risk-taking behavior.</li> <li>7. Increased access to, and provision of, services for people living with HIV/AIDS (PLWHA) in fishing communities.</li> </ol>

<b>Policies and Programmes</b>	<b>Central Level Institutions</b>	<b>District level</b>	<b>Regional level</b>
	and improving access to facilities and services. 4. Financing and monitoring & evaluation of the strategy.		8. Targeted interventions provided for young men and for women in fishing communities. 9. Livelihoods, coping mechanisms and capacity to address HIV/AIDS strengthened within fishing communities.
Effectiveness	The strategy is being used to guide the planning and implementation of HIV/AIDS activities directed to fishing communities.		In the Uganda, the strategy is being used to guide the planning and implementation of HIV/AIDS activities directed to fishing communities.
<b>Programmes</b>			
Existence	HIV/AIDS programmes that target fishing communities do exist.	Fishing communities also benefit from the HIV/AIDS programmes that target the general public.	There is a EAC/AMREF Lake Victoria Basin HIV&AIDS Partnership (EALP) Programme being implemented by LVFO.
Range	The strategy covers HIV prevention, treatment, care and support services.	The strategy covers HIV prevention, treatment, care and support services.	The strategy covers HIV prevention, treatment, care and support services.
Effectiveness	There is a HIV Focal Person to facilitate the implementation of activities.	At community level, community-based Beach Management Units (BMUs) are being used to improve livelihoods in a range of areas, including HIV prevention and control.	LVFO has designated a Health & HIV/AIDS Officer to oversee implementation of the EAC/AMREF Lake Victoria Basin HIV&AIDS Partnership (EALP) Programme activities

**Table 10.2; The distribution of health facilities and schools by landing site**

NO.	DISTRICT	NAME OF LANDING	LOCATION	HEALTH CENTRE PRESENT	NUMBER	TYPE / LEVEL	GOVERNMENT/ PRIVATE	NAMES	SCHOOLS AVAILABLE	NUMBER	TYPE	GOVERNMENT/ PRIVATE
1	BUGIRI	BUYONDO	MAINLAND	NONE					NONE			
2	BUGIRI	MATIKO	MAINLAND	NONE					PRESENT	1	PRIMARY	GOVERNMENT
3	BUGIRI	SIDOME	MAINLAND	NONE					NONE			
4	BUGIRI	NAMAVUNDU	ISLAND	NONE					NONE			
5	BUGIRI	BUKANA BEACH	ISLAND	NONE					NONE			
6	BUGIRI	BUMALANGE	ISLAND	NONE					NONE			
7	BUGIRI	MALINDI	ISLAND	NONE					NONE			
8	BUGIRI	KANDEGE	ISLAND	NONE					NONE			
9	BUGIRI	BUBUBI	ISLAND	NONE					NONE			
10	KALANGALA	LWAZZI	ISLAND	NONE					NONE			
11	KALANGALA	MISONZI	ISLAND	PRESENT	1	HC II	GOVERNMENT	MISONZI H/C	NONE			
12	KALANGALA	MUKALANGA	ISLAND	NONE					NONE			
13	KALANGALA	LWABASWA	ISLAND	NONE					NONE			
14	KALANGALA	DDAJJE	ISLAND	NONE					NONE			
15	KALANGALA	KASEKULO TTUBI	ISLAND	PRESENT	1		PRIVATE - NGO	CHILD CARE	PRESENT	1	PRIMARY	GOVERNMENT
16	KALANGALA	KASENYI	ISLAND	NONE					NONE			
17	KAMPALA	GGABA	MAINLAND	PRESENT	1	HC II	GOVERNMENT	GGABA H/C	PRESENT	1	PRIMARY	GOVERNMENT
18	MASAKA	LAMBU	MAINLAND	NONE	1	HCII	PRIVATE	GENERAL CLINIC	PRESENT	1	PRIMARY	GOVERNMENT
19	MASAKA	BULINGO	MAINLAND	NONE					NONE			
20	MAYUGE	IGULUIBI	MAINLAND	NONE					NONE			
21	MAYUGE	BWONDA	MAINLAND	PRESENT	1	HC II	GOVERNMENT	BWODA H/C	PRESENT	1	PRIMARY	GOVERNMENT
22	MAYUGE	MUSOMA	MAINLAND	NONE					NONE			
23	MAYUGE	KABUUKA	MAINLAND	NONE					NONE			
24	MAYUGE	MAGANDA	MAINLAND	NONE					NONE			

NO.	DISTRICT	NAME OF LANDING	LOCATION	HEALTH CENTRE PRESENT	NUMBER	TYPE / LEVEL	GOVERNMENT/ PRIVATE	NAMES	SCHOOLS AVAILABLE	NUMBER	TYPE	GOVERNMENT/ PRIVATE
25	MPIGI	NABISUKIRO	MAINLAND	NONE					NONE			
26	MUKONO	SSENYI	MAINLAND	Y	1	HC II	GOVERNMENT	SSENYI H/C	NONE			
27	MUKONO	KATOSI	MAINLAND	Y	1	HC II	GOVERNMENT	KATOSI H/C	PRESENT	1	PRIMARY	GOVERNMENT
28	MUKONO	SSENYA	MAINLAND	NONE					NONE			
29	MUKONO	ZIRU	ISLAND	NONE					NONE			
30	MUKONO	KAZIRU	ISLAND	NONE					NONE			
31	MUKONO	KIWOLOLO	ISLAND	NONE					NONE			
32	MUKONO	KINAGABA	ISLAND	NONE					NONE			
33	MUKONO	NAMUGAMBE	ISLAND	NONE					NONE			
34	MUKONO	NVUZA	ISLAND	NONE					NONE			
35	MUKONO	LUBYA	ISLAND	NONE					NONE			
36	MUKONO	LUKAALE	ISLAND	NONE					NONE			
37	MUKONO	KITAMIRO	ISLAND	NONE					NONE			
38	MUKONO	NDOTWE	ISLAND	NONE					NONE			
39	MUKONO	KOKOLA	MAINLAND	NONE					NONE			
40	MUKONO	SOWE PARADISE	MAINLAND	NONE					NONE			
41	MUKONO	BUTEMBE	MAINLAND	NONE					NONE			
42	RAKAI	SANGO-BAY	MAINLAND	NONE					NONE			
43	WAKISO	KIGUNGU	MAINLAND	NONE					NONE			
44	WAKISO	LWAMUNYU	ISLAND	NONE					NONE			
45	WAKISO	BUGANGA	MAINLAND	NONE					NONE			
46	WAKISO	BUSABALA	MAINLAND	PRESENT	1	HC II	GOVERNMENT	BUSABALA H/C	PRESENT	1	PRIMARY	GOVERNMENT
<b>Grand Total</b>					<b>8 Health facilities</b>					<b>7 Schools</b>		

**Table 10.3; Health facilities and types of services provided**

No.	District	Name of landing site	Location	Health Facility	No	Type	Ownership	Name	HIV/AIDS Care services	Comments
1	Kalangala	Misonzi	Island	Present	1	HC II	Govt.	Lulamba H/Centre	VCT Counselling Condoms	
2	Kalangala	Kasekulo-Ttubi	Island	Present	1	HC II	Private	Child Care	Not offered	But gives referral information to clients
3	Kampala	Ggaba	Mainland	Present	1	HC II	Govt.	Ggaba H/Centre	Counselling VCT	
4	Masaka	Lambu	Mainland	Present	1	HCII	Private Clinic		Not offered	But 3 Kms away there is a Health Centre IV at Bukakata Sub-county where the following services are offered; <ul style="list-style-type: none"> <li>✓ Counselling</li> <li>✓ VCT</li> <li>✓ ARV Treatment</li> <li>✓ PMCT</li> <li>✓ Condoms</li> </ul>
5	Mayuge	Bwonda	Mainland	Present	1	HC II	Govt.	Bwonda H/Centre	Counselling VCT Condoms	
6	Mukono	Katosi	Mainland	Present	1	HC II	Govt.		Not offered	But 2 Kms away there is a Health Centre IV at Ntejenjeru Sub-county where the following

No.	District	Name of landing site	Location	Health Facility	No	Type	Ownership	Name	HIV/AIDS Care services	Comments
										services are offered; <ul style="list-style-type: none"> <li>✓ Counselling</li> <li>✓ VCT</li> <li>✓ ARV Treatment</li> <li>✓ PMCT</li> <li>✓ Condoms</li> </ul>
7	Mukono	Ssenyi	Mainland	Present	1	HC II	Govt.		Not offered	But 7 Kms away there is a Health Centre IV at Ssenyi Sub-county where the following services are offered; <ul style="list-style-type: none"> <li>✓ Counselling</li> <li>✓ VCT</li> <li>✓ ARV Treatment</li> <li>✓ Condoms</li> </ul>
8	Wakiso	Busabala	Mainland	Present	1	HC II	Govt.		Not offered	But 5 Kms away there is a Health Centre HC II at Zanta where the following services are offered; <ul style="list-style-type: none"> <li>✓ Counselling</li> <li>✓ VCT</li> <li>✓ ARV Treatment</li> <li>✓ Condoms</li> </ul>

## **10.6. Social services at the fish landing sites**

The District Fisheries Officers in the 9 host districts to the surveyed fishing communities were interviewed through telephone to determine the availability of health facilities and schools in those fishing communities. Specifically, they were requested to provide information of the following:

1. Health facilities available, their numbers and type/level (Hospital, Health Centre III or Health Centre II); the ownership (Government or private).
2. Whether there are health-related NGOs, number and names.
3. Schools available, their numbers and type (Secondary and Primary); the ownership (Government or private).

In response, it was reported that of the 46 landing sites, only 8 (17.4%) had health facilities. Six of the health facilities are public facilities, whereas two are private facilities. All the Government facilities are of Health Centre level II; and the two private facilities are said to be equivalent to Health Centre level II.

In regard to schools, the situation is more or less similar; only 7 (15.2%) of the surveyed landing sites have schools; and all of them are government primary schools.

# CHAPTER 11: DISCUSSION & RECOMMENDATIONS

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## 11.1 Key Recommendations

- Use the results of this survey to raise people's awareness of the impact of the HIV/AIDS epidemic on women and men in the fishing communities, and also to highlight the vulnerability of women in the fisheries sector.
- Develop and implement innovative service delivery initiatives which would include: Surgical camps for male circumcision, mobile service delivery teams/Outreaches condom vending machines, STI screening and treatment.
- Initiate tailored IEC/BCC programmes using peer-education, life skills promotion, local radio programmes, mobile phones for message dissemination, and entertainment education approaches.
- Implement income generation initiatives targeting women. Consider establishing income saving approaches using mobile banking.
- Develop and implement a gender mainstreaming advocacy strategy targeting promotion of policies and laws that protect women against violence and exploitation.
- Innovative approaches should be sought to address the transport and communication barrier so as to increase access to health services to the hard-to-reach fishing communities. For instance, mobile phones could be used as an avenue to disseminate general health and HIV-related messages.
- A special comprehensive HIV prevention and care programme for fishing communities is needed to address the unique characteristics of these communities.
- A special funding for primary health care provision needs to be provided in the islands because PHC services are grossly inadequate in the islands. Also, improve the health infrastructure and the provision of drugs and supplies to support service delivery.
- Establish a regional hub of good practices for interventions among fishing communities.
- Coordination of community response needs to be strengthened through holding regular review meetings with VHTs, CBOs and NGOs. Identify community's HIV focal persons.
- Repeat a similar survey 3 to 5 years later. This strategy will facilitate trend analysis, and therefore, determination of change over time in HIV-related variables.

## 11.2. Introduction

Conducting HIV/AIDS research among fishers is crucial because HIV/AIDS research can be used to raise awareness not only of the impact of the HIV/AIDS epidemic on the fishing communities, but also to highlight the vulnerability of women in the fisheries sector (Edward Allison). This particular survey has shed more light into the HIV/AIDS situation in fishing communities. It has specifically documented the magnitude of the epidemic in fishing communities of the Lake Victoria Basin of Uganda; showing that just under a quarter of the respondents have HIV infection, and that women are more affected than men. The HIV prevalence of 22 percent found among the surveyed fishing communities is about three times higher than the HIV prevalence of 6.4 percent reported in the general population adults aged 15-49 years.

The survey also revealed that HIV-related knowledge is widespread, but not universal. This finding is similar to that reported in Ghana (2008); Thomas Korankye in his study to examine knowledge of fisherfolks, as well as determine the extent to which their livelihood influences their susceptibility to HIV infection reported that he found high HIV awareness but low level of knowledge among fisher folks. Korankye also expressed a concern that the widespread HIV infection among fisherfolks could significantly deprive the country of fish food as a result of loss of fishers' lives.

Based on the survey results, specific recommendations have been made; and are presented according to the different thematic areas in the sections that follow below:

## 11.3. Discussion

### **Raise awareness of the HIV/AIDS burden in fishing communities:**

The results of this survey should be used to raise awareness not only of the impact of the HIV/AIDS epidemic on women and men in the fishing communities, but also to highlight the vulnerability of women in the fisheries sector. Uganda needs to take action to address the documented high burden of HIV infection among the fishing communities. This is so because HIV infection has a lot of ramifications ranging from that at household level to national level. At the affected household level, HIV infection leads to increased health expenditure due to AIDS, reduction in work hours or unemployment resulting from illness, lower incomes as a result of lower capacity to earn a living; thus causing an increase in poverty, social exclusion within their communities and funeral expenses in case of loss of the HIV infected person. Furthermore, when the HIV infected person eventually dies, there is economic loss and dependency due to orphans.

**Scale up HIV/AIDS programmes targeting fishing communities:** Currently, strategies for addressing HIV in the fishing sector exist in the Ministry of Agriculture, Animal Industries and Fisheries. The strategies were developed in 2005 along with a financing

strategy. Whether the strategy is effective is not clear. However, what is needed now is the wide spread implementation of the strategy in the fishing communities.

**Strengthen infrastructure for delivering social services:** One of the main stumbling blocks in accessing social services by the inhabitants of the fishing communities, and especially those in the islands is lack of proper transport facilities.

The most common means of transport are power driven canoes. Traveling in these canoes however is coupled with a lot of risk such as capsizing. Therefore, even if health services are available in neighboring islands, some of which may be quite far, there would still be challenges in accessing the services. During the survey, a ship provided by LVBC was used to access fish landing sites located in islands which are far from the lake shore. At times, the ship had to travel for a period of 5 to 8 hours to reach the island. This situation therefore implies that the transport arrangements are unlikely to improve in the near future because, although providing a similar transport facility could be a solution for the hard to reach islands, it may not be feasible.

An alternative approach for increasing access to services would be to have a health facility on every island. This approach is not feasible at the moment; because currently there is an embargo on the policy of the Ministry of Health on construction of new health facilities. The focus is to consolidate existing health facilities by making them fully operational instead of constructing new ones whose functionality will take long to be realized. Innovative approaches should therefore be sought to address the barrier so as to increase access to health services to the hard-to-reach fishing communities. For instance, mobile phones could be used as an avenue to disseminate general health and HIV-related messages.

**Figure: Ship transport for survey teams**



**Figure: Boat transport**



### **11.3.1 HIV/AIDS Knowledge**

#### **11.3.1.1 Develop and Implement tailored IEC/BCC package**

Knowledge acquisition is regarded as an influencing factor in behaviour change. However, the study noted that the level of comprehensive knowledge was moderate at 38% among women and 41% among men. A higher number of respondents rejected misconceptions on HIV/AIDS apart from the misconception that HIV could be transmitted through a mosquito bite. Radio was found to be the most common source of information.

To address these knowledge gaps, tailored IEC/BCC approaches are proposed. These include the scaling-up of the use of radios including local FM and community radios, Peer Education for MARPs, Entertainment Education, use of mobile phones for dissemination of key messages and Community Owned Resource Persons (CORPs) to promote risk reduction approaches amongst the target populations.

## **11.4 HIV Service Delivery**

### **11.4.1 Design and Implement Innovative Service Delivery Initiatives**

The study shows that the fishing communities are underserved with HIV services compared to other communities. Specifically, there were key service gaps on PMTCT, HCT, STD Management, SMC and ART which demonstrated the need to scale-up and repackage these services.

### **11.4.2 PMTCT and HIV Counseling and Testing**

Among those women in the study population who had been pregnant in the 2 years preceding the survey, 29% were offered and accepted an HIV test during antenatal care while the majority (71 percent) was not offered HCT. This therefore calls for a need to scale-up PMTCT services as well as address the barriers leading to the limited HIV test services. On the other hand, HCT overall uptake was 77% among women and 62% in men. However, only 36% of women and 31% of men reported to have tested and received their results in the last 12 months. Therefore, against the background that HCT is an entry point to HIV prevention and care, there is need to promote annual HIV counseling and testing amongst fishing communities. This will promote health seeking behaviours especially among those persons who are HIV positive. The numbers of HIV positive persons are many; this is indicated by the HIV prevalence of 22% found by this study in fishing communities.

### **11.4.3 Sexually Transmitted Infections and Safe Male Circumcision**

The study established that HIV infection among the uncircumcised males with STI was 34.1% compared to 11.6% among the circumcised men without STIs. This finding reaffirms the increased HIV risk associated with sexually transmitted infections and increased HIV risk associated with presence of penile foreskin. This situation is made worse with results showing that multiple sexual relationships are common amongst fishing communities; and especially among men.

In view of above, there is need to scale-up and implement tailored service delivery approaches like surgical camps at key islands for male circumcision and service outreaches/mobile service delivery teams, Community Owned Resource Persons/Village Health Teams for mainly provision of HIV education related to referrals. In addition, there is need to promote STI screening and treatment programmes targeting fishing communities.

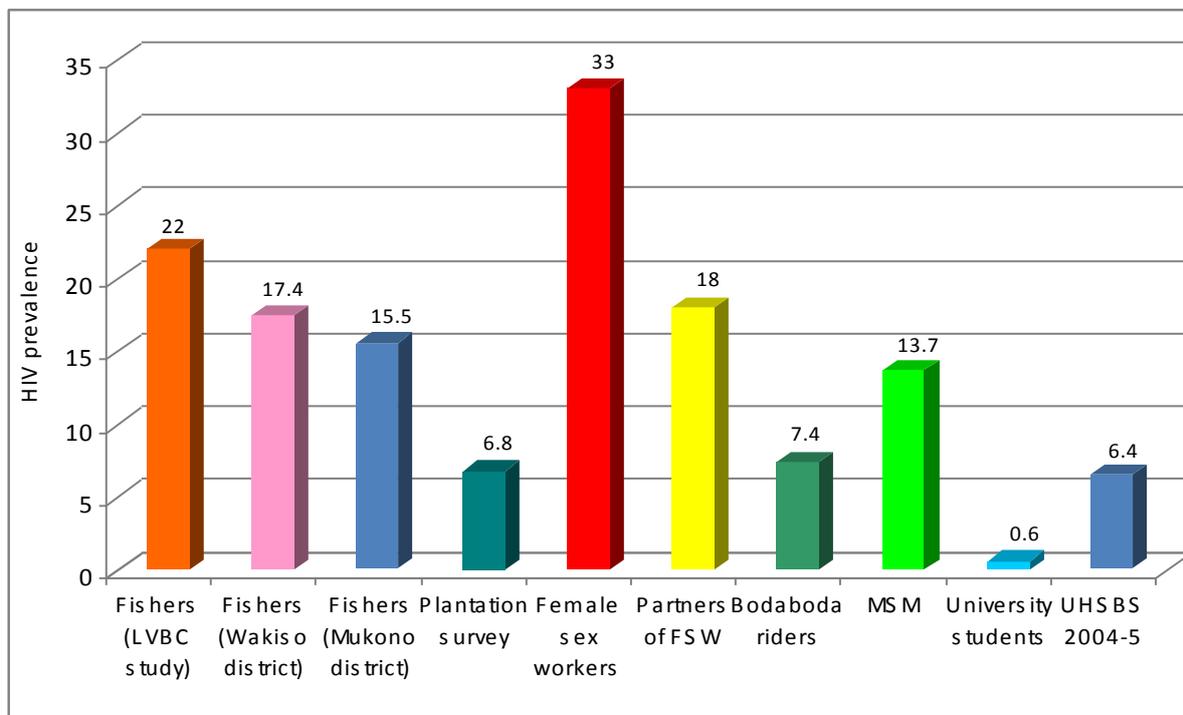
## **11.5. HIV Response Programming and Coordination**

### **11.5.1 Need to Address Fishing Communities as a Special Group in the National Response to the HIV/AIDs Epidemic**

The burden of HIV infection in the surveyed fishing communities has been found to be high; almost one in every four persons is HIV infected; and women have a higher HIV prevalence than men. As has been documented by others, this survey has confirmed that

fishing communities are amongst the populations with the highest HIV prevalence. The HIV prevalence of 22 percent found in this study is almost three times higher than the HIV prevalence of 6.4 percent reported in the UHSBS 2004-05 (figure 11.1). When this figure is compared with that found in a study conducted in MARPs in Kampala, it is found to be lower than the HIV prevalence reported among commercial sex workers; but higher than HIV prevalence in clients and partners of female sex workers, men having sex with men (MSM), commercial motor cycle (boda boda) riders and University students (Makerere University 2010: Crane survey). Recently, the Ministry of Health conducted HIV sero-survey in fishing communities in the districts of Wakiso and Mukono; and found them to have HIV prevalence of 17.4 and 15.5 percent, respectively (Ministry of Health 2010). In view of above, fishing communities should be taken as a special group since they have a much higher HIV prevalence compared to the general population; implying that they are more vulnerable to HIV infection than the general population. Special programmes that target fishing communities are required. On the other hand, if no action is taken, since fisheries is an important economic factor, inaction in countries that are hard-hit by HIV/AIDS will result into human suffering, loss of life and falling productivity. Consequently, the region will forego the important and much needed opportunity for economic growth and poverty reduction that fisheries can provide.

**Figure 11.1; HIV prevalence among different population sub-groups in Uganda**



### 11.5.2. Strengthen Coordination of HIV activities

The study found that coordination of HIV services especially at community level was limited. Therefore, there is need to utilize local structures like BMU for the coordination of HIV services. This approach is sustainable at the community level of fish landing

sites/fishing communities. Regular review meetings at community and district level are also proposed.

### **11.5.3 Need to develop the social Infrastructure**

The survey has revealed that the infrastructure for transport, health and education are grossly inadequate, only 8 (17.4%) of the surveyed landing sites have health facilities. Similarly, of the 46 landing sites, only 7 (15.2%) have schools. In addition, transport facilities are grossly inadequate. Hence, a meaningful delivery of social services; including health and HIV prevention and control services, will only be possible when the social infrastructure is further developed and improved. Action should be taken to address this problem.

### **11.5.4 Establish a Regional Hub for Sharing Good Practices**

Worldwide, literature shows that there are good practices for HIV prevention and control that target fishing communities. In line with above, at regional level, it would be important to document the good initiatives for HIV prevention and care for fishing communities in the East African Community. When compiled, the information would be shared and replicated especially in countries with limited interventions.

## **11.6. Gender Main Streaming**

### **11.6.1 Design and Implement appropriate Income Generating and Saving Initiatives**

Whereas poverty was documented as a driver of the HIV epidemic especially among women, the extra fish money was noted to be an HIV driver especially amongst the men. Women are more vulnerable to HIV acquisition due to lack of, or little income. Therefore, there is need to introduce gender sensitive income generating initiatives for women to reduce on their vulnerability; and also initiate innovative tailor made banking services such as mobile banking to promote savings of the extra funds. These approaches however need to be accompanied with an education programme on the benefits of the initiatives.

### **11.6.2 Advocacy for gender sensitive customs, Policies and Laws.**

Whereas there may be laws, customs and laws that protect women and girls from gender violence and exploitation, they may not have been wholly harnessed. On the other hand, there may be other polices and laws which promote gender violence and discrimination. To address this issue, stakeholders need to design and implement an advocacy strategy which promotes protection of women and girls against violence and exploitation. This strategy could be spearheaded by the Ministry of Gender, Labour and Social Development; but working closely with the Ministry of Agriculture, Fisheries and Animal Industry and NGOs that operate among the fishing communities.

### **11.7 Conduct Repeat Studies**

Being one of the first surveys done in fishing communities of the Lake Victoria Basin, the study has provided good benchmark data. However, after some years, there will be need to gauge how the HIV infection and other HIV-related variables is changing in this area by examining the trends of the different variables in the study population. To obtain these trends, there is need to conduct repeat studies after every 3-5 years .

### **11.8 Dissemination and Utilization of the Study Findings**

Finally, the report of this survey needs to be disseminated widely. To facilitate the use of the survey results by policy makers and programme people; EALP should provide support for the development of a policy paper and briefs arising from the survey report. In addition, EALP should fund dissemination workshops at regional and country levels.

# REFERENCES

1. Serwadda D, Sewankambo NK, Carswell JW, Bayley AC, et al.: Slim disease: a new disease in Uganda and its association with HTLV-III infection. *Lancet* 1985; Vol.326 (8460):849-852.
2. Ministry of Health (MOH) [Uganda] and ORC Macro. Uganda HIV/AIDS Sero-behavioural Survey 2004-2005. Calverton, Maryland, USA: Ministry of Health and ORC Macro; 2006
3. UNAIDS (December 2008). AIDS Epidemic Update. Accessed from <http://www.unaids.org>. on 10/20/2010.
4. Kissling E, Allison EH, Seeley JA, Russell S, et al.: Fisherfolk are among those most at risk to HIV: a cross-country comparison of estimated prevalence and numbers infected among groups at risk. *AIDS* 2005; 19:1939-1946.
5. Seeley JA and Allison EH.: HIV/AIDS in fishing communities: challenges to delivering antiretroviral therapy to vulnerable groups. *AIDS Care* 2005 Aug; 17(6):688-697.
6. Gazi R, Mercer A, Wansom T, Kabir H, et al.: An assessment of vulnerability to HIV infection of boatmen in Teknaf, Bangladesh. *Confl. Health* 2008;vol.2.5.  
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2329603/?tool=pubmed> (Accessed on 10/21/2010).
7. Ngayo MO, Bukusi E, Rowhani-Rahbar A, Koutsky LA, et al.: Epidemiology of human papilloma virus infection among fishermen along Lake Victoria Shore in the Kisumu district, Kenya. *Sexually Transmitted Infections* 2008; 84:62-66
8. Moeniebe and Mafaniso. Mainstreaming of HIV and AIDS into South African Fisheries Policy. Institute of Poverty, Land and Agrarian Studies. School of Government, University of the Western Cape, Cape Town, South Africa.
9. Medical News TODAY. Sex-for-fish practice in Kenyan fishing communities contributing to spread of HIV. 2008.  
Accessed from <http://www.medicalnewstoday.com/articles/121771.php>. on 10/20/2010.

10. Odit M.: Report of a Desk Review of Existing data and information on HIV&AIDS in Lake Victoria fishing communities. 'Addressing Mobility – induced Vulnerabilities and Gaps in Harmonized responses to HIV/AIDS in the Lake Victoria region'. March 2008.
11. Food and Agricultural Organization. Responding to the HIV/ADS in the fisheries sector. FAO HIV/AIDS Programmes. Accessed from <http://www.fao.org/hivaids> on 10/20/2010.
12. Gordon Ann (2005). HIV/AIDS in the fisheries sector in Africa. WorldFish Center, Cairo, Egypt. Accessed from <http://sites.google.com/a/ms-hiv-gdc.org/mainstreaming-hiv-in-german-development> - on 10/20/2010.
13. Food and Agricultural Organization. AIDS in fishing communities: a serious problem frequently overlooked. FAO Newsroom 2005. Accessed from <http://www.fao.org/newsroom/en/news/2005/100061/index.html> on 10/20/2010.
14. New Agriculturalist. Wasting away: tackling HIV/AIDS in fishing communities. November 2005.
15. Nunan F, Abila R, Lwenya C, Odongkara K, et al.: Regional synthesis of the socio-economic baseline survey of the fishing communities of Lake Victoria. 2007 Lake Victoria Fisheries Organisation.
16. Akumu J, Odongkara K, Masette M, Khaidhiwa M, et al.: Prevalence and impacts of HIV/AIDS and other diseases, indigenous knowledge and nutritional status of fisher communities of Lake Albert (Uganda). 2006 National Fisheries Resources Research Institute (NaFIRRI), Jinja. National Agricultural Research Organisation
17. Odongkara K, Akumu JK, Masette M, Khisa G, et al.: Prevalence of HIV/AIDS among fisher communities and its impact on fisheries management. 2006 National Fisheries Resources Research Institute (NaFIRRI), Jinja. National Agricultural Research Organisation.
18. Toyin O, Adebola AJ, Motunrayo OO, Mohammed SA, et al.: Knowledge, attitudes and practices of HIV/AIDS in selected fishing communities of Kainji Lake Basin. Nature and Science 2009:7(10):1-9 Accessed from <http://www.sciencepub.net>.

19. Korankye T. Dealing with HIV/AIDS and poverty in fishing communities: How risky are artisanal marine fisher-folks at Elimna in Ghana. IFM Thesis on HIV/AIDS and Poverty. 2008 University of Tromso. (Accessed from <http://www.ub.uit.no/munin/bitstream/10037/1429/1/thesis.pdf> on 10/20/2010.
20. Nalweyiso O and Nalule S. Mobile phones to stop HIV from mother-to-child. i-network 2010. Accessed from [http://www.i-network.or.ug/index.php? Option=com\\_content&view=article&id=388](http://www.i-network.or.ug/index.php? Option=com_content&view=article&id=388) on 10/20/2010.
21. Lake Victoria Fisheries Organization (2007). HIV/AIDS in fishing communities of Lake Victoria: A Strategy and Action Plan. Lake Victoria Fisheries Organization. 2007.
22. Lake Victoria Fisheries Organization (2007). People in Lake Victoria Fisheries: Livelihoods, Empowerment and Participation. Information sheet No.1. By Lake Victoria Fisheries Organization. 2007.
23. Ministry of Agriculture, Animal Industry and Fisheries (2005). Uganda Strategy for reducing the Impact on HIV and AIDS on Fishing Communities. Ministry of Agriculture, Animal Industry and Fisheries. 2005.
24. Ministry of Agriculture, Animal Industry and Fisheries. Implementation and Financing Plan for the Strategy to Reduce the Impact of HIV/AIDS on Fishing Communities. 2005/6-2015/16. Ministry of Agriculture, Animal Industry and Fisheries.
25. Uganda AIDS Commission (2007). National HIV & AIDS Strategic Plan 2007/8-2011/12. 2007.
26. Makerere University School of Public Health. The crane survey report. High risk group surveys conducted in 2008/9, Kampala, Uganda. 2010.
27. Ministry of Health. Survey report. HIV sero-behavioral survey in fishing communities in Wakiso and Mukono districts. 2010.

## APPENDIX 1 – INFERENTIAL STATISTICS WITH P-VALUES

**Table 1: Inferential Statistics for Selected Variables: Women versus Men**

Variable	Women			Men			p-value
	95% Confidence Limits			95% Confidence Limits			
	Proportion (p)	Lower	Upper	Proportion (p)	Lower	Upper	
Know that people can prevent getting the AIDS virus by using a condom every time they have sex	0.863	0.830	0.896	0.919	0.892	0.946	0.013*
Know that people can prevent getting the AIDS virus by having one uninfected partner who has no sexual intercourse with other partners	0.966	0.949	0.983	0.951	0.930	0.973	0.041*
Able to cite that; people can prevent getting the AIDS virus by using condoms and limiting sex to one uninfected partner	0.841	0.807	0.875	0.878	0.844	0.912	0.067
Know that people can prevent getting the AIDS virus by abstaining from sexual intercourse	0.912	0.885	0.943	0.891	0.871	0.939	0.485
Comprehensive knowledge of HIV transmission	0.315	0.259	0.372	0.399	0.350	0.447	0.006*
Know that a healthy-looking person can have the AIDS virus	0.903	0.865	0.942	0.911	0.881	0.940	0.793
Know that AIDS cannot be transmitted by mosquito bites	0.477	0.428	0.526	0.540	0.488	0.593	0.291
Know that AIDS cannot be transmitted by supernatural means	0.830	0.788	0.871	0.880	0.843	0.918	0.124
Know that AIDS cannot be transmitted by sharing utensils with someone who has AIDS	0.636	0.592	0.680	0.717	0.669	0.765	0.011*
Reject the two most common local misconceptions and say that a healthy-looking person can have the AIDS virus	0.355	0.298	0.413	0.428	0.374	0.481	0.017*
Know that HIV can be transmitted by breastfeeding	0.835	0.787	0.883	0.732	0.688	0.775	0.002*
Know that risk of MTCT can be reduced by mother taking special drugs during pregnancy	0.733	0.675	0.791	0.692	0.648	0.737	0.425
Know that HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	0.606	0.564	0.648	0.565	0.518	0.613	0.001*

Willing to care for a family member with HIV at home	0.954	0.927	0.982	0.968	0.953	0.983	0.450
Would buy fresh vegetables or fish from a vendor who has HIV	0.869	0.834	0.903	0.848	0.813	0.883	0.437
Believe HIV positive female teacher should be allowed to keep teaching	0.755	0.705	0.805	0.778	0.743	0.813	0.083
Would not want HIV+ status of a family member to remain a secret	0.561	0.513	0.609	0.631	0.590	0.672	0.061
Accepting attitudes toward those living with HIV	0.399	0.353	0.445	0.452	0.410	0.493	0.067
Tested for HIV in the last 12 months and received their test results the last time they were tested	0.364	0.303	0.425	0.308	0.246	0.369	0.047
Primary Abstinence: Respondents aged 15-24	0.068	-0.022	0.158	0.077	0.016	0.137	0.518
Secondary Abstinence: Sexually experienced respondents aged 15-24 years, that did not have sex in the past 12 months	0.024	-0.006	0.055	0.065	0.024	0.105	0.171
Had sex with more than one partner in the previous 12 months (15-49 years)	0.113	0.073	0.154	0.456	0.408	0.504	0*
Higher risk sex in the last year (15-59 years)	0.234	0.179	0.290	0.409	0.358	0.461	0*
Higher risk sex in the last year (15-49 years)	0.241	0.182	0.299	0.425	0.372	0.478	0*
Used condom at last higher risk sex (15-59 years)	0.479	0.375	0.583	0.590	0.509	0.672	0.067
Used condom at last higher risk sex (15-49 years)	0.471	0.368	0.575	0.593	0.510	0.676	0.052
Consistently used condom at higher risk sex in last 12 months	0.408	0.289	0.528	0.467	0.383	0.550	0*
Had first sex by age 18 years	0.898	0.865	0.931	0.747	0.713	0.781	0*
Self-reporting an STI and/or symptoms of an STI in the last 12 months	0.237	0.185	0.289	0.180	0.149	0.211	0.024*
HIV prevalence	0.251	0.193	0.310	0.205	0.157	0.252	0.061

An asterisk indicates that the p-value is significant at level of significance  $\alpha = 5\%$ ; that is, there is a significant difference between the proportion for women and that of men.

**Table 2: P-Values on Testing Relationship between HIV Prevalence with Some Variables**

<b>Variable on which HIV Prevalence Relationship Test is Done</b>	<b>p-value</b>
Age	0*
Marital status	0*
Education	0.065
Religion	0.019*
Distance to former place of residence	0.782
Mobility during last 12 months, that is whether ever slept away	0.375
Duration of Staying Away from Home During Last 12 Months	0.429
Age at first sex	0.093
Lifetime sexual partners	0*
Number of sexual partners in the last 12 months	0.708
Higher risk sex in 12 months	0.153
Ever used condom	0.006*
Condom use at last sex in 12 months	0.067
Condom use in risk sex in past 12 months	0.501
Reported having an STI (Women)	0.111
Reported having an STI (Men)	0.137
Male circumcision	0*
An asterisk indicates that the p-value is significant at level of significance $\alpha = 5\%$ ; that is, there is a significant difference in the different categories considered for a given variable.	

## APPENDIX 2 – SAMPLE ERRORS ESTIMATION

### Estimates of Sampling Errors

As shown on table below, sample error estimation was performed. Ordinarily, estimates obtained from a sample survey are affected by two types of errors; i) non sampling errors and ii) sampling errors. Non sampling errors are the errors that are caused not by sampling but by mistakes made during implementation of the survey. They are systematic errors arising at every stage of data production process and can be much higher in censuses as compared to sample surveys. They include coverage errors, non-response errors, response contents, measurement errors and processing errors. These errors arise mainly because of specific problems that arise during data collection and handling. Non sampling errors exist both in sampling and in complete enumeration (censuses). Non sampling errors cannot be controlled by the increase in the sample size, and they are impossible to avoid and evaluate statistically. However, these errors can be controlled (minimized) for instance through: extensive pre-testing of survey instruments and data processing system; use of pre-coded questions as much as possible; training of all staff involved in the survey; supervision of both fieldwork and data entry; editing of questionnaires both in the field and office; and conducting callbacks.

On the other hand, sampling errors arise basically because sample results are used instead of using results from a complete inquiry. Sampling errors are minimized by increasing the sample size. There are many possible samples that would be selected from the target population. For all the probable samples, a statistic (for instance proportion) for a given variable would vary from sample to sample. Thus, in this case a statistic is a random variable with a probability distribution. This probability distribution gives rise to a standard error which is the standard deviation of the sampling distribution and it is the square root of variance of the values from the different samples.

However in practical terms not many samples are selected. For instance, in this survey, only one sample was selected, thus there were not many values of a statistic/proportion ( $p$ ) that were generated for a given variable. Statisticians have however used the concept of sampling distribution to develop formulas to compute variance of a given statistic. Computer packages like SPSS, Epi-Info and STATA save the bother of tracing the many steps in computing this variance and standard error.

The standard error is used to estimate confidence intervals within which the true value of the population parameter (like proportion  $P$ ) is assumed to fall. In this survey, the proportion  $P$  is estimated to fall within a range of about two (1.96) times the standard error (SE) of a given proportion  $p$  estimated from the survey results ( $p \pm Z_{\alpha/2} SE = p \pm 1.96 SE(p) \approx p \pm 2SE$ ). Also, related to standard error is the Relative Standard Error (RSE) which is obtained by dividing the standard error of the estimate by the estimate itself ( $SE/p$ ). RSE in simple terms measures the contribution of the estimate to the noise (dispersion) surrounding the data that have generated it. In other words it is a measure of the reliability of the estimate. Estimates with large RSEs (greater or equal to 30%) are considered unreliable. The design effect has also been computed for each variable. Design effect is the factor by which a sample obtained

by using a complex sample design should be multiplied in order to obtain survey results with same precision as those of a Simple Random Sample. A complex sample design is the one where the selection of elements from the population into the sample is done by a method which is not simple random sampling (SRS). Examples of complex designs include; cluster sampling, multistage sampling and systematic sampling. Mathematically, design effect can be computed as:

$$\text{Design Effect} = \frac{\text{Var}(p)_{\text{complex design}}}{\text{Var}(p)_{\text{SRS}}}$$

The design effect of value 1.0 will imply that the sample design that was used to obtain the estimate is as efficient as SRS. On the other hand, if the design effect assumes a value that is greater than 1.0 it indicates that the complex design yielded a bigger variance than that of SRS and thus it was a statistically less efficient design, which led to a bigger sampling error.

The results for estimates (proportions) with their standard errors, confidence limits, design effects and the respective number of cases are presented in the annex.

## Sampling Errors for Selected Variables: All

Variable	Value (p)	Standard Error (SE)	Confidence Limits		Design Effect	Relative Standard Error (SE/p)	Number of Cases
			Lower	Upper			
Never married	0.092	0.014	0.065	0.119	1.981	0.146	911
Married	0.575	0.024	0.527	0.623	1.981	0.042	911
Living together	0.156	0.014	0.129	0.183	1.981	0.087	911
Divorced/separated	0.135	0.015	0.105	0.165	1.981	0.109	911
Nursery or no education	0.007	0.003	0.001	0.012	0.903	0.387	911
Primary level	0.637	0.017	0.602	0.671	0.903	0.027	911
Post primary/Secondary and higher level	0.256	0.019	0.218	0.294	0.903	0.074	911
Born in that area	0.123	0.021	0.080	0.166	3.834	0.173	911
Came from a place that is 30 KM away	0.151	0.018	0.116	0.187	3.834	0.116	911
Came from a place that is between 31-49 KM away	0.116	0.014	0.088	0.145	3.834	0.121	911
Came from a place that is between 50-99 KM away	0.246	0.018	0.209	0.283	3.834	0.075	911
Came from a place that is 100 KM or more away	0.356	0.025	0.305	0.406	3.834	0.070	911
Ever slept away during last 12 months	0.656	0.020	0.617	0.696	1.561	0.030	911
Ever been away for a month during last 12 months	0.199	0.016	0.167	0.230	1.418	0.079	911
Know that people can prevent getting the AIDS virus by using a condom every time they have sex	0.897	0.011	0.875	0.920	1.201	0.012	911
Know that people can prevent getting the AIDS virus by having one un infected partner who has no sexual intercourse with other partners	0.957	0.008	0.940	0.974	1.489	0.009	911
Able to cite that; people can prevent getting the AIDS virus by using condoms and limiting sex to one uninfected partner	0.864	0.013	0.838	0.890	1.321	0.015	911
Know that people can prevent getting the AIDS	0.909	0.014	0.882	0.936	2.000	0.015	911

virus by abstaining from sexual intercourse

Comprehensive knowledge of HIV transmission	0.367	0.021	0.324	0.409	1.716	0.057	911
Know that a healthy-looking person can have the AIDS virus	0.908	0.013	0.881	0.934	1.881	0.014	911
Know that AIDS cannot be transmitted by mosquito bites	0.516	0.019	0.478	0.554	1.323	0.037	911
Know that AIDS cannot be transmitted by supernatural means	0.861	0.016	0.828	0.893	1.932	0.019	911
Know that AIDS cannot be transmitted by sharing utensils with someone who has AIDS	0.686	0.017	0.652	0.720	1.234	0.025	911
Reject the two most common local misconceptions and say that a healthy-looking person can have the AIDS virus	0.400	0.022	0.356	0.444	1.814	0.055	911
Know that HIV can be transmitted by breastfeeding	0.772	0.018	0.736	0.808	1.658	0.023	911
Know that risk of MTCT can be reduced by mother taking special drugs during pregnancy	0.708	0.020	0.669	0.747	1.689	0.028	911
Know that HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	0.606	0.021	0.564	0.648	1.630	0.034	911
Willing to care for a family member with HIV at home	0.963	0.007	0.948	0.977	1.343	0.008	909
Would buy fresh vegetables or fish from a vendor who has HIV	0.856	0.013	0.829	0.882	1.255	0.015	909
Believe HIV positive female teacher should be allowed to keep teaching	0.769	0.015	0.738	0.800	1.181	0.020	909
Would not want HIV+ status of a family member to remain a secret	0.604	0.016	0.572	0.636	0.933	0.026	909
Accepting attitudes toward those living with HIV	0.431	0.016	0.400	0.462	0.891	0.036	909
Tested for HIV in the last 12 months and received their test results the last time they were tested	0.329	0.025	0.279	0.380	2.569	0.076	911
Primary Abstinence: Respondents aged 15-24	0.073	0.028	0.017	0.129	2.341	0.381	205
Secondary Abstinence: Sexually experienced respondents aged 15-24 years, that did not have sex in the past 12 months	0.047	0.012	0.024	0.071	0.582	0.249	190
Had sex with more than one partner in the previous 12 months (15-49 years)	0.327	0.016	0.294	0.360	0.932	0.050	771

Higher risk sex in the last year (15-59 years)	0.344	0.022	0.300	0.389	1.786	0.065	816
Higher risk sex in the last year (15-49 years)	0.355	0.023	0.310	0.401	1.722	0.064	771
Used condom at last higher risk sex (15-59 years)	0.562	0.033	0.496	0.628	1.228	0.058	281
Used condom at last higher risk sex (15-49 years)	0.562	0.034	0.494	0.630	1.254	0.060	274
Consistently used condom at higher risk sex in last 12 months	0.452	0.033	0.385	0.519	1.239	0.073	281
Had first sex by age 18 years	0.806	0.010	0.785	0.826	0.596	0.013	880
Self-reporting an STI and/or symptoms of an STI in the last 12 months	0.202	0.016	0.169	0.235	1.452	0.080	896
HIV prevalence	0.223	0.020	0.182	0.263	2.093	0.090	893

## Sampling Errors for Selected Variables: Women

Variable	Value (p)	Standard Error (SE)	Confidence Limits		Design Effect	Relative Standard Error (SE/p)	Number of Cases
			Lower	Upper			
Never married	0.060	0.015	0.029	0.091	1.482	0.258	352
Married	0.514	0.032	0.449	0.579	1.482	0.063	352
Living together	0.182	0.021	0.139	0.224	1.482	0.116	352
Divorced/separated	0.179	0.023	0.132	0.226	1.482	0.130	352
Nursery or no education	0.009	0.005	-0.001	0.018	0.961	0.565	352
Primary level	0.628	0.028	0.572	0.684	0.961	0.044	352
Post primary/Secondary and higher level	0.216	0.024	0.168	0.264	0.961	0.111	352
Born in that area	0.091	0.024	0.043	0.139	2.381	0.260	352
Came from a place that is 30 KM away	0.156	0.024	0.108	0.205	2.381	0.154	352
Came from a place that is between 31-49 KM away	0.145	0.020	0.105	0.185	2.381	0.136	352
Came from a place that is between 50-99 KM away	0.259	0.025	0.209	0.308	2.381	0.095	352
Came from a place that is 100 KM or more away	0.341	0.028	0.285	0.396	2.381	0.081	352
Ever slept away during last 12 months	0.582	0.030	0.522	0.643	1.287	0.051	352
Ever been away for a month during last 12 months	0.139	0.019	0.102	0.177	1.010	0.133	352
Know that people can prevent getting the AIDS virus by using a condom every time they have sex	0.863	0.017	0.830	0.896	0.806	0.019	352
Know that people can prevent getting the AIDS virus by having one uninfected partner who has no sexual intercourse with other partners	0.966	0.009	0.949	0.983	0.783	0.009	352
Able to cite that; people can prevent getting the AIDS virus by using condoms and limiting sex to one uninfected partner	0.841	0.017	0.807	0.875	0.738	0.020	352
Know that people can prevent getting the AIDS	0.912	0.014	0.885	0.943	0.918	0.016	352

virus by abstaining from sexual intercourse

Comprehensive knowledge of HIV transmission	0.315	0.028	0.259	0.372	1.293	0.089	352
Know that a healthy-looking person can have the AIDS virus	0.903	0.019	0.865	0.942	1.452	0.021	352
Know that AIDS cannot be transmitted by mosquito bites	0.477	0.024	0.428	0.526	0.830	0.051	352
Know that AIDS cannot be transmitted by supernatural means	0.830	0.020	0.788	0.871	1.034	0.025	352
Know that AIDS cannot be transmitted by sharing utensils with someone who has AIDS	0.636	0.022	0.592	0.680	0.726	0.034	352
Reject the two most common local misconceptions and say that a healthy-looking person can have the AIDS virus	0.355	0.029	0.298	0.413	1.251	0.080	352
Know that HIV can be transmitted by breastfeeding	0.835	0.024	0.787	0.883	1.450	0.029	352
Know that risk of MTCT can be reduced by mother taking special drugs during pregnancy	0.733	0.029	0.675	0.791	1.468	0.039	352
Know that HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	0.670	0.029	0.612	0.729	1.330	0.043	352
Willing to care for a family member with HIV at home	0.954	0.013	0.927	0.982	1.457	0.014	351
Would buy fresh vegetables or fish from a vendor who has HIV	0.869	0.017	0.834	0.903	0.879	0.020	351
Believe HIV positive female teacher should be allowed to keep teaching	0.755	0.025	0.705	0.805	1.163	0.033	351
Would not want HIV+ status of a family member to remain a secret	0.561	0.024	0.513	0.609	0.804	0.042	351
Accepting attitudes toward those living with HIV	0.399	0.023	0.353	0.445	0.769	0.058	351
Tested for HIV in the last 12 months and received their test results the last time they were tested	0.364	0.030	0.303	0.425	1.393	0.083	352
Counseled during antenatal care	0.614	0.044	0.526	0.703	1.134	0.072	140
Counseled and tested for HIV during antenatal care	0.507	0.047	0.412	0.603	1.249	0.093	140
Primary Abstinence: Respondents aged 15-24	0.068	0.045	-0.022	0.158	2.725	0.654	88

Secondary Abstinence: Sexually experienced respondents aged 15-24 years, that did not have sex in the past 12 months	0.024	0.015	-0.006	0.055	0.771	0.617	82
Had sex with more than one partner in the previous 12 months (15-49 years)	0.113	0.020	0.073	0.154	1.161	0.177	291
Higher risk sex in the last year (15-59 years)	0.234	0.027	0.179	0.290	1.272	0.117	303
Higher risk sex in the last year (15-49 years)	0.241	0.029	0.182	0.299	1.343	0.121	291
Used condom at last higher risk sex (15-59 years)	0.479	0.051	0.375	0.583	0.743	0.107	71
Used condom at last higher risk sex (15-49 years)	0.471	0.052	0.368	0.575	0.737	0.109	70
Consistently used condom at higher risk sex in last 12 months	0.408	0.059	0.289	0.528	1.014	0.145	71
Had first sex by age 18 years	0.898	0.016	0.865	0.931	0.992	0.018	342
Self-reporting an STI and/or symptoms of an STI in the last 12 months	0.237	0.026	0.185	0.289	1.270	0.109	346
HIV prevalence	0.251	0.029	0.193	0.310	1.545	0.115	346

## Sampling Errors for Selected Variables: Men

Variable	Value (p)	Standard Error (SE)	Confidence Limits		Design Effect	Relative Standard Error (SE/p)	Number of Cases
			Lower	Upper			
Never married	0.113	0.018	0.076	0.149	1.818	0.160	559
Married	0.614	0.031	0.552	0.675	1.818	0.050	559
Living together	0.140	0.016	0.108	0.171	1.818	0.113	559
Divorced/separated	0.107	0.016	0.076	0.139	1.818	0.146	559
Nursery or no education	0.005	0.003	-0.001	0.011	0.956	0.562	559
Primary level	0.642	0.021	0.600	0.684	0.956	0.032	559
Post primary/Secondary and higher level	0.281	0.023	0.235	0.326	0.956	0.081	559
Born in that area	0.143	0.027	0.090	0.197	3.205	0.185	559
Came from a place that is 30 KM away	0.148	0.020	0.107	0.190	3.205	0.137	559
Came from a place that is between 31-49 KM away	0.098	0.016	0.066	0.130	3.205	0.162	559
Came from a place that is between 50-99 KM away	0.238	0.023	0.191	0.285	3.205	0.099	559
Came from a place that is 100 KM or more away	0.365	0.029	0.306	0.424	3.205	0.081	559
Ever slept away during last 12 months	0.703	0.023	0.657	0.749	1.398	0.033	559
Ever been away for a month during last 12 months	0.236	0.020	0.195	0.277	1.263	0.086	559
Know that people can prevent getting the AIDS virus by using a condom every time they have sex	0.919	0.013	0.892	0.946	1.345	0.015	559
Know that people can prevent getting the AIDS virus by having one uninfected partner who has no sexual intercourse with other partners	0.951	0.011	0.930	0.973	1.375	0.011	559
Able to cite that; people can prevent getting the AIDS virus by using condoms and limiting sex to one uninfected partner	0.878	0.017	0.844	0.912	1.480	0.019	559
Know that people can prevent getting the AIDS	0.891	0.017	0.871	0.939	1.824	0.019	559

virus by abstaining from sexual intercourse

Comprehensive knowledge of HIV transmission	0.399	0.024	0.350	0.447	1.352	0.060	559
Know that a healthy-looking person can have the AIDS virus	0.911	0.015	0.881	0.940	1.508	0.016	559
Know that AIDS cannot be transmitted by mosquito bites	0.540	0.026	0.488	0.593	1.521	0.048	559
Know that AIDS cannot be transmitted by supernatural means	0.880	0.019	0.843	0.918	1.821	0.021	559
Know that AIDS cannot be transmitted by sharing utensils with someone who has AIDS	0.717	0.024	0.669	0.765	1.560	0.033	559
Reject the two most common local misconceptions and say that a healthy-looking person can have the AIDS virus	0.428	0.027	0.374	0.481	1.611	0.062	559
Know that HIV can be transmitted by breastfeeding	0.732	0.021	0.688	0.775	1.311	0.029	559
Know that risk of MTCT can be reduced by mother taking special drugs during pregnancy	0.692	0.022	0.648	0.737	1.270	0.032	559
Know that HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	0.565	0.024	0.518	0.613	1.257	0.042	559
Willing to care for a family member with HIV at home	0.968	0.008	0.953	0.983	1.017	0.008	558
Would buy fresh vegetables or fish from a vendor who has HIV	0.848	0.017	0.813	0.883	1.304	0.021	558
Believe HIV positive female teacher should be allowed to keep teaching	0.778	0.017	0.743	0.813	0.974	0.022	558
Would not want HIV+ status of a family member to remain a secret	0.631	0.021	0.590	0.672	1.006	0.033	558
Accepting attitudes toward those living with HIV	0.452	0.021	0.410	0.493	0.947	0.045	558
Tested for HIV in the last 12 months and received their test results the last time they were tested	0.308	0.030	0.246	0.369	2.436	0.099	559
Primary Abstinence: Respondents aged 15-24	0.077	0.030	0.016	0.137	1.473	0.390	117
Secondary Abstinence: Sexually experienced respondents aged 15-24 years, that did not have sex in the past 12 months	0.065	0.020	0.024	0.105	0.706	0.309	108
Had sex with more than one partner in the previous 12 months (15-49 years)	0.456	0.024	0.408	0.504	1.095	0.052	480

Higher risk sex in the last year (15-59 years)	0.409	0.026	0.358	0.461	1.404	0.063	513
Higher risk sex in the last year (15-49 years)	0.425	0.026	0.372	0.478	1.360	0.062	480
Used condom at last higher risk sex (15-59 years)	0.590	0.041	0.509	0.672	1.418	0.069	210
Used condom at last higher risk sex (15-49 years)	0.593	0.041	0.510	0.676	1.428	0.069	204
Consistently used condom at higher risk sex in last 12 months	0.467	0.041	0.383	0.550	1.443	0.089	210
Had first sex by age 18 years	0.747	0.017	0.713	0.781	0.811	0.023	538
Self-reporting an STI and/or symptoms of an STI in the last 12 months	0.180	0.016	0.149	0.211	0.902	0.087	550
HIV prevalence	0.205	0.024	0.157	0.252	1.851	0.115	547

# Annex 1: TOPIC GUIDE FOR KEY INFORMANT INTERVIEW (PROGRAMME AND KEY FISHERIES STAFF)

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## Introductory note

I would like to thank you for accepting to be interviewed by my team. The interview is going to focus on the following topics:

1. The views you have on how big a problem is HIV/AIDS in plantations communities.
2. The range, breadth, availability and utilization of HIV/AIDS related services in AIDS in plantations communities.
3. The existence and effectiveness of policies, programs and coordination structures on HIV/AIDS services in AIDS in plantations communities.
4. Any suggestions on how services for HIV prevention and care can be improved in your community.

I would now like to go over them one by one.

### 1. Burden of HIV/AIDS:

- a. In your own assessment, how big a problem is HIV/AIDS in plantations?
- b. If it is a big problem, what are the factors that promote the spread of HIV infection in the community?

### 2. HIV/AIDS related services:

- a. Are HIV/AIDS related services available in this community?
- b. If yes, what services are available, can you enumerate them?
- c. Are these services being used?

### 3. Policies, programs and coordination structures on HIV/AIDS service in plantations:

- a. Are there specific policies for HIV in your organization?
- b. Is HIV testing a requirement before a worker is employed in your organization?
- c. How do you handle a worker who is found to have HIV infection? What I mean is, is he/her allowed to continue working?
- d. Does the company pay for treatment of people found to suffer from AIDS?
- e. What coordination structures for HIV/AIDS services are there?
- f. Are there HIV-related NGOs/CBOs in this area?

### 4. Quality of services:

- a. Are you satisfied with what is being done on HIV prevention and care in this area?
- b. If not, could you please make suggestions on how services can be improved.

## Thank you

May I proceed with the blood draw? Yes..... No.....

# Annex 2: CONSENT FORM FOR INDIVIDUAL INTERVIEWS

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## Introduction

Hello. Good morning/afternoon. My name is..... I am working for the East Africa Lake Victoria Project who is working in collaboration with the Ministry of Health. We are interviewing some people in agricultural plantations and fishing communities. The main aim of the interviews is to find out information about HIV/AIDS and sexual reproductive health of people in these communities. The information collected will help the East Africa Lake Victoria Project and Government to plan for health services which specially target plantation workers and fishing communities. This exercise will cover four plantations and 46 landing sites in 9 districts. A total of about one thousand eight hundred (1800) people both male and female will be interviewed by the end of the exercise in the 4 plantations. In the fish landing sites, approximately 932 respondents will be interviewed by the end of the exercise.

All interested respondents will be provided with free HIV counseling and testing services from their places of work or residences. Those found to be HIV positive will be referred to the nearest health care facility for follow up and care.

**Confidentiality and consent:** During the interview, I will ask you some very personal questions that some people may find difficult to answer. The answers you give will be completely confidential; and your name will not be written on the interview form. In any case, you do not have to answer any questions that you do not want to answer, and you may end this interview at any time you wish to when you become uncomfortable to continue with the interview. However, your honest answers to these questions will help us better understand the HIV/AIDS situation in your community; and what people think, say and do about certain kinds of behaviors. We would greatly appreciate your help in responding to these questions. The interview will take less than one hour to complete.

## Persons to contact

If you have any additional questions after this interview you may contact the study team **or the Ethics Committee at Entebbe:**

Ministry of Health	Dr Alex Opio	0414-340874/0414-259669/0414-348278
	NoordinMulumba	0414-340874/0414-259669/0414-348278
	Michael Muyonga	0414-340874/0414-259669/0414-348278

**Chair UVRI Science and Ethics Committee**      **0414-321962**

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Thank you,

Would you be willing to participate in this interview?" Yes..... No.....

**Signature or Thumb print of the interviewee certifying that he/she has provided consent for the interview.....**

Signature of the interviewer..... Date.....

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## **Annex 3: CONSENT FORM FOR HIV TESTING AND BLOOD DRAW**

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Hello. My name is ..... and I am also working for the East Africa Lake Victoria Project, an organization which is working with the Ministry of Health. I am part of the survey team which has been talking to you.

As part of this survey earlier mentioned, we are asking you to give a little blood for HIV testing. If you agree to participate, you will be counseled by trained counselors before the blood draw and before receiving your HIV results. You will be able to receive your HIV test results here in the interview place within a period of one hour.

While collecting the blood, we will use only new and sterile needles. You may get some pain where the blood is taken from. If you get any discomfort, some bleeding or swelling at the site which may be of concern to you, please contact our study staff or a nearby health worker.

Some of the blood you provide will also be sent to the National STD Reference Laboratory based at Mulago Hospital; for HIV testing to provide further information about HIV in your community. We will ensure confidentiality. We will put a study number, not your name on the blood tube. That way, we can make sure that nobody can tell to whom the blood belongs from the national laboratory or anywhere else.

In addition the information we shall obtain from this survey will help the East Africa Lake Victoria Project and the Ministry of Health to see how big the HIV/AIDS problem is in your community and will be used for planning and improving the delivery of HIV services.

This study presents a good opportunity for you to know your HIV status and to get advice from our trained counselors on what you can do about it.

At this stage, do you have any questions so far?

**It is your choice to accept the blood being taken off or not. There is no problem if your refuse. Do you still have any questions?**

May I proceed with the blood draw? Yes..... No.....

**Signature/Thumb print of interviewee certifying that he/she has provided consent for the blood draw.....**

Signature of technician..... Date.....

# Annex 4: HIV COUNSELING AND TESTING CLIENT CARD

Date .... / .... / ....	Client ID # (Insert counselors control form number in Col 1) _ _
District..... County..... Sub-county..... Parish..... LC1.....	Date of Birth _ _ / _ _ _ _ _  <i>mm yr</i> Sex M[ ] F[ ]
<b>Marital status</b> 01[ ] Single      02 [ ] Married      03 [ ] Co-habiting 04 [ ] Divorced/separated      05 [ ] Widowed	<b>Occupation</b> 01 [ ] Peasant    02 [ ] Employed    03 [ ] Small-scale trade 04 [ ] None      04 [ ] Other (specify) _____
<b>1. TESTING HISTORY</b>	
<b>1a. Ever had an HIV test?</b> 1[ ] Yes (go to 1c)                      2[ ] No                                      3[ ] Don't Know	
<b>1b. If No, why? <u>Don't prompt.</u> Tick all that apply.</b> 01 [ ] No perceived HIV risk      02 [ ] VCT services expensive      03 [ ] Transport costs      04 [ ] Stigma of going to VCT facility 05 [ ] Afraid to know status      06 [ ] Not a priority      99 [ ] Others (specify) _____	
<b>If No go to 3</b>	
<b>1c. Date of last HIV test:</b>  _ _ / _ _ / _ _ _ _ _  <i>dd mm yr</i>	
<b>1d. Where did you go for the test the last time?</b> 01 [ ] AIC                      02 [ ] Gov't Hospital/Health Center      03 [ ] Private hospital/clinic 04 [ ] Out reach              99 [ ] Others (specify) _____	
<b>1e. Do you wish to share your results?</b>  _ _ _  01 -Yes      02-No (go to 2)	
<b>1f. What was the result of this HIV test?</b> 01 [ ] Positive 02 [ ] Negative 03 [ ] Don't know	
<b>1g. Have you disclosed your HIV test result to your spouse or partner(s)?</b> 01 [ ] yes to all    02 [ ] yes to some    03 [ ] No    04 [ ] Not applicable ( <i>don't have a spouse or partner</i> )	

## SERO-BEHAVIORAL SURVEY IN PLANTATIONS AND FISHING COMMUNITIES

**2. Other than the reason that we have offered you testing here today, what is the main reason you would like a test?**

Main Reason:  (Tick other reasons applicable)

- |  |   |   |
|--|---|---|
| 01[ <input type="checkbox"/> ] Current HIV risk                      | 02[ <input type="checkbox"/> ] HIV risk in past         | 03[ <input type="checkbox"/> ] Feel ill/AIDS symptoms                 |
| 04[ <input type="checkbox"/> ] STD symptoms                          | 05[ <input type="checkbox"/> ] HIV+ parent              | 06[ <input type="checkbox"/> ] Pregnancy                              |
| 07[ <input type="checkbox"/> ] Lost partner/child /parent/co-partner | 08[ <input type="checkbox"/> ] Confirm Prev. HIV status | 09[ <input type="checkbox"/> ] Ill partner/co-partner/child/parent    |
| 10[ <input type="checkbox"/> ] New partner                           | 11[ <input type="checkbox"/> ] To get Married           | 12[ <input type="checkbox"/> ] There is treatment for AIDS these days |
| 99[ <input type="checkbox"/> ] Others (specify) _____                |   |   |

**3. TYPE OF COUNSELING:**

**3a. How would you like to receive your results?**

- 01 [  ] Individual    02 [  ] Couple

**34a. Where would you like to receive your results?**

- 01[  ] Home    02[  ] Nearest HC    03[  ] Outreach    04[  ] Other preferred place (specify)\_\_\_\_\_

**3a. What time is convenient for you to receive your test result? (min 2 days and max 6 days-period in cluster)**

- 01[  ] Tomorrow: Time \_\_\_\_\_    02 [  ] Other date (specify)\_\_\_\_\_ Time \_\_\_\_\_

**4. Results**    Positive [  ] Negative [  ]

**4a. Results given?** 01[  ] Yes    02[  ] No. **Why not, specify** \_\_\_\_\_

**4b. Referral made to (specify)** \_\_\_\_\_

**Counselor's comments:**

*Counselor Name* . . . . .

*Date dd...../mm...../yyyy.....*

*Signature* . . . . .

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**CLIENT SLIP**

**District Code**...../...../..... **Centre Code**...../...../.....

**Client Name**..... **Sex**  Male  Female **Age**:.....

Date of HIV test.....

**Results**  Positive  Negative

**Reason for referral:** 01  Repeat test      02  Medical Care

03  Psycho-social support    99

Other(specify).....

Referral made by: **Counselor name:** .....

## **Annex 5: LIST OF RESEARCH TEAM MEMBERS**

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### **Central Coordination Team (Consultants)**

Dr. Alex Opio – Lead Consultant  
NoordinMulumba – Biostatistician  
Michael Muyonga – Behavioral Scientist

### **Supervisors**

Patrick Kusemererwa  
NyendeHirone Paul  
Samuel Wangalwa  
Kasimbi Willy

### **Interviewers**

KirabiraMuzafalu  
Kyoziira Allen  
Nangira Evelyn  
Businge Jones  
Namubiru Mary Josephine  
Daniel Byaruhanga  
Busuulwa Phillip  
Busingye Florence  
Nkugwalbrahaim  
Balwanaki Carol  
Byaino Jonathan  
Bazaale Jennifer  
Kadisi Suzan  
David Okimait  
Mutambo Fred  
Nansambu Ruth

### **Counselors**

Robert Kanyike  
Janet Nerima  
Naluzze Juliet  
NakkaziAminahAngella

### **Laboratory Technicians**

Mirembe Rebecca  
Nakayiza Sarah  
Agaba Richard  
Maziga John

### **Central Laboratory**

Tom Tenywa

### **Partners' local liaison team**

Eva Musimenta - AMREF  
Naela Kigozi – AMREF  
Olive Mukumbo – LVFO  
Aventino Bakunda - MAAIF

## **Annex 6: QUESTIONNAIRES**

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