VOLUNTARY COUNSELING AND TESTING SERVICES UTILIZATION AND ASSOCIATED FACTORS IN FISHING COMMUNITIES IN SENGEREMA MWANZA, TANZANIA

By

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CERTIFICATION

The undersigned certifies that has read and hereby recommends for acceptance by the Muhimbili University of Health and Allied Sciences a dissertation entitled **Voluntary Counseling and Testing Services Utilization and Associated Factors in Fishing Communities in Sengerema Mwanza, Tanzania,** in fulfilment of the requirements for the degree of Mater of Public Health of the University of Dar es Salaam.

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Date: 01-11-2007

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DEDICATION

This work is dedicated to my wife Faustina Mahwago, my father Antony Ngambakubi, my mother Sabina Lutalala and my young child Sabina for their love and continuous moral support.

ABSTRACT

Voluntary counseling and testing is known to be an effective intervention in combating the spread of HIV/AIDS worldwide. Voluntary counseling and testing services were first established in Sengerema district in 2005. Sengerema district is one of the areas with high prevalence of HIV/AIDS (8.6%). The district is subject to high risk of HIV/AIDS infection in particular the fishing community bordering Lake Victoria. So far the VCT utilization in Sengerema district is still low (1.6% per population per year) despite the high prevalence of HIV in the district.

Because there is no study on VCT that has been done in the past in the fishing communities of Sengerema district, we were not sure about the level of VCT utilization and community awareness on VCT services. Also we didn't know exactly what factors facilitate or hinder utilization of VCT services in these communities.

A cross sectional study was conducted in Fishing communities in Sengerema Mwanza, Tanzania from June to July 2007 to determine; the utilization of VCT services, factors associated with utilization of VCT services, assess community awareness on VCT, explore community reasons influencing utilization of VCT and to explore community observations and suggestions regarding VCT services.

A total of 660 respondents were interviewed using questionnaires with closed and open-ended questions. Of all the respondents 58.8% were males. The minimum age was 18

years and the maximum age was 59 years with mean of 30 ± 9 years and median of 29 years. The highest proportions of respondents were Youth aged 20 to 29 years comprising 44.7% of all the respondents.

The results of this study show that 42% of respondents knew places where VCT services were available and 80.3% of the respondents had heard about VCT services, of these, 96.2% felt that VCT has some benefits and were willing to utilize VCT services if available at a convenient time and place. However, only 12% of the study participant had attended VCT and tested for HIV, this indicates low utilization of VCT services.

As recorded from respondents, utilization of VCT services varied with demographic characteristics, accessibility to VCT sites, perceived benefits of VCT services, attitudinal characteristics towards VCT services and history of HIV infection related risk practices.

However, participants with secondary education and above were more likely to utilize VCT services compared to participants with lower level of education and the difference was statistically significant (P= 0.005). The results show a significant association between VCT utilization and the time taken to reach the nearest VCT site where by the shorter the time taken to reach the nearest VCT site the more likely for one to utilize VCT services (P= 0.005). Also utilization of VCT services was significantly higher among respondents with history of blood transfusion than those with no history of blood transfusion (P= 0.014).

Among the respondents, 45.6% mentioned need to know own HIV status as a reason for attending VCT and testing for HIV. Other reasons mentioned were, for becoming pregnant (22.8%), for getting married (16.5%), observed signs and symptoms of HIV/AIDS (6.3%), need for ART (6.3%) and advice from friend (6.3%).

Reasons cited by respondents as hindering utilisation of VCT services included, VCT centers being located too far away from their homes (86%), fearing of HIV positive results (6.2%), high cost of VCT services (5%), stigma and discrimination (1.2%), knowing people who work at VCT (1%) and fear of spouse (1%).

Regarding the observed quality of VCT services, 98.9% of respondents reported VCT staff as friendly, caring, helpful or understanding. Also 97.6% of the respondents said counselors do observe confidentiality, 95.3% said VCT rooms are suitably located in terms of privacy, 88.4% said waiting time was reasonable and 88.2% said days and hours of services were convenient. Among study participants, 8% said clients had to pay fee for VCT services and out of these 54.9% felt the fee was high or too high.

Suggestions to improve VCT services included; total duration of services per person not to exceed half an hour (mentioned by 52.3% of the respondents) and services should be near homes (mentioned by 84.5% of the respondents).

From the study findings where by the utilization of VCT services is still low, it is important to address all possible factors that hinder utilization of VCT services and at the same time increase accessibility of VCT services through establishment of new VCT centers more close to the people, establishing mobile VCT programs, and the government to take care of the VCT cost to enable provision of VCT services without any fees.

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LIST OF ACRONYMS

AIDS ----------Acquired Immunodeficiency Syndrome

ART ----------Antiretroviral therapy

BCC ----------Behavior Change Communication

BORA ----------Bergen Open Research Archive

CDC ----------Center for Disease Control

DC ----------District Commissioner

DED ----------District Executive Director

DMO ----------District Medical Officer

ELISA ----------Enzyme Linked Immunoassay

HAART----------Highly Active Antiretroviral Therapy HIV

HIV----------Human immunodeficiency Virus

IPPF ----------International Planned Parenthood Federation

MPH ----------Master of Public Health

MUHAS----------Muhimbili University of Health and Allied Sciences

NURRU ----------Network of Uganda Researchers and Research Users

PLWHA ---------- People living with HIV/AIDS

PMTCT ----------Prevention of mother to child transmission

SGBV ----------Sexual Gender Based Violence

SPHSS ----------School of Public Health and Social Sciences

STD ----------Sexually Transmitted Disease

STI ----------Sexually Transmitted Infections

TACAIDS ----------Tanzania Commission for AIDS

TB ----------Tuberculosis

UNAIDS ----------United Nations Programme on HIV/AIDS

VCT ----------Voluntary Counseling and Testing of HIV

WHO ----------World Health Organization

CHAPTER 1

1.0 INTRODUCTION

1.1 Background

1.1.1 Global overview of HIV/AIDS

HIV/AIDS has become the most devastating pandemic ever seen. It is one of the major health problems in the world; it has now created a development problem threatening the economic and social foundation of many third world countries. Close to 40.3 million people were estimated to be living with HIV/AIDS by the end of 2005, and that over 25 million people have already died (UNAIDS and WHO, 2005). About 90% of people who have contracted HIV are from developing countries. Several countries in sub-Saharan Africa have seen HIV prevalence rates of 20–40% among antenatal clinic attendees in urban areas, (UNAIDS March, 2003). About 70% of all HIV/AIDS cases in the world are found in sub-Saharan Africa. Around the world, 13 500 new cases of HIV are estimated to occur daily (WHO December, 2005), 10% of them among children, (UNAIDS March, 2003).

The life expectancy for most developing countries also has dropped significantly. It is estimated that, 60% of the under 15 years old children we have today will not reach the age of 60 years (Timaeus, 2004). For example, in 2002 the estimated life expectancy of

South Africa was 48.8 years and is expected to drop to 36.5 years by 2010. Without HIV/AIDS the life expectancy would have been 67 years (UNAIDS, 2002).

1.1.2 Overview of HIV/AIDS in Tanzania

The first three AIDS cases were identified in Kagera Tanzania in 1983. By the end of 2004, more than two million people were estimated to be living with HIV /AIDS in Tanzania Mainland. This makes the estimated prevalence of about 11.9% (Kipitu, 2005). Urban residents have considerably higher infection levels (10.9%) compared to rural residents (5.3%), (TACAIDS report 2003–2005). More than two (2) million AIDS orphans had been registered. There is regional variation in HIV/AIDS epidemic; the region with the highest HIV prevalence is Mbeya (14%), followed by Iringa (13%) and Dar es Salaam (11%). Regions with lowest prevalence are Kigoma (2%) and Manyara (2%) (TACAIDS report 2003–2005).

1.1.3 HIV/AIDS prevention

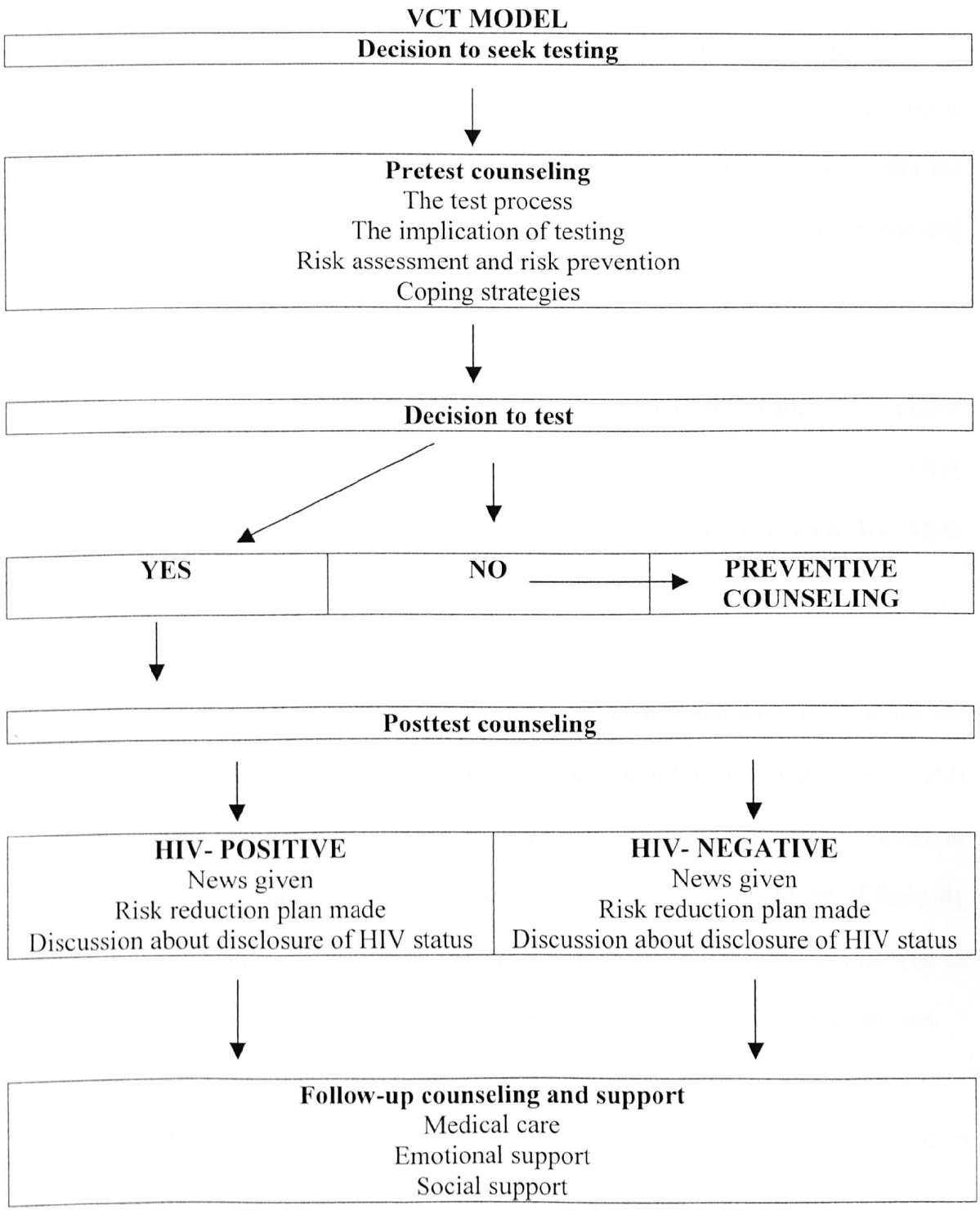
The main mode of transmission of HIV is un-protected sexual intercourse. Other methods of HIV transmission include Mother to Child Transmission, blood transfusion and sharing of blood-contaminated instruments. All the reported HIV/AIDS cases in Tanzania for the year 2003/04, 77% of all the cases the mode of transmission was un-protected sexual intercourse, five percent (5%) was mother to child transmission and zero point five percent (0.5%) was blood transfusion (TACAIDS report 2003–2005). So

far there is no evidence to prove if insect bites may transmit HIV (AIDS AFRICA: Action Not Silent, 2000).

Voluntary counseling and testing of HIV (VCT) and community health education on prevention of HIV/AIDS are the key strategies for empowering the community on the control of the HIV/AIDS pandemic.

Main methods of HIV prevention include; abstinence, being faithful to one uninfected partner, condom use, prevention of mother to child transmission of HIV (PMTCT), safe blood transfusion and universal precautions in health facilities.

1.2 Voluntary counseling and testing (VCT)



Voluntary counseling and testing (VCT) for HIV refers to a process where by an individual, couple or group of people undergo a series of information about HIV/AIDS and HIV testing from a counselor to enable them to make an informed choice on being tested for HIV (Nicola, 2002). Through voluntary counseling and testing the person is physically and psychologically prepared to understand and accept the results from the HIV test. The key elements of VCT sessions include; risk assessment, risk reduction and referral to care, treatment and social support.

Voluntary counseling and testing influence the acceptability of the available prevention and care options. Hence VCT services are important and effective in HIV/AIDS prevention and also an entry point to care and support for people living with HIV/AIDS (PLWHA)

Voluntary counseling and testing (VCT) services are being used as referral points for clients. Services where PLWHA may be referred include initiation of highly active anti retroviral therapy (HAART), Prevention of Mother to child Transmission (PMTCT) of HIV, early treatment and prophylaxis of opportunistic infections, treatment of Sexually Transmitted Infections (STIs), diagnosis and treatment of tuberculosis (TB), as well as referral for social support to humanitarian organizations and community based groups.

Through VCT the clients is educated on how to avoid infecting other people and to prevent re-infection. Re-infection may lead to acquiring of more virulent multiple

species leading to severe illness and early death. Once the individual is aware of his/her positive HIV status, uses this advantage to plan and prepare for the future. The client is also educated on proper feeding practices in order to promote nutrition status.

Family Health International in collaboration with UNAIDS and WHO conducted researches in Kenya, Tanzania and Trinidad which proved that VCT is both effective and cost effective as strategy for facilitating behavioral change. The research demonstrated that VCT reduced unprotected sexual contact with non-primary partners by 35% among men and 39% among female compared to 13% and 17% reductions respectively among those who received health education only, (Philippe, 2000).

Voluntary counseling and testing (VCT) services for HIV in Tanzania started as stand-alone site before being integrated with other health services. The common testing method used during that period was Enzyme –Linked Immunoassays (ELISA). Only few VCT centers were available mainly in urban area. The clients had to wait up to two weeks before getting result. From June 2002 VCT services in Tanzania have been integrated in the existing district health care system. In several districts HIV testing is done using the rapid HIV-Testing technique at lower level health facilities and the clients get results on the same day, (Mbando *et al*, 2004).

Programs are now in place to extend VCT services to cover most of the rural areas as much as possible. These efforts can only have impact if factors influencing utilization of VCT services in these areas are identified and well addressed. Availability of services alone is not a sufficient factor to ensure high turn up of people to VCT services. Even in some places where VCT services can be easily accessible still the turn up for VCT services is still low. This gives indication that there are other factors that need to be addressed, and this is very important when considering expanding VCT services to cover more population groups in rural and urban communities.

A study conducted in Zambia in 1995-1996 on VCT demonstrated that 7% of people mainly living in urban area reported to have previously undergone HIV testing, (Fylkesnes *et al*, 1999). Recent studies have estimated only about 1% of the sexually active urban populations in Africa who have been tested for HIV, (Kipitu, 2005).

A study conducted in Mwanza district in 2004 on factors influencing women to access VCT found that 86.6% of female surveyed were aware of the availability of VCT services, 78.2% were aware of the sites where VCT services can be obtained but only 19.8% had sought the services, (Bwibo, 2004).

Barriers for utilization of VCT services include lack of knowledge about its advantage, stigmatization, geographical accessibility, lack of social promotion, fears of knowing

one's status, self efficacy expectations, inefficient counseling and testing practices as well as cost of the service, (Nathan *et al*, 2006).

1.3 The fishing Communities

Fishing communities are located along the mainland areas bordering Lake Victoria and within the islands of Lake Victoria. These communities comprise indigenous people as well as people from different neighboring villages, from outside the district, outside the region and outside the country. These communities represent a complex heterogeneous population with people of different age groups, different sex, different social and cultural backgrounds, different economic status and different levels of education.

Wives or husbands do not normally accompany spouses who move into fishing communities, and this practice predisposes them to HIV/AIDS high-risk sexual behaviors. The newcomers have sexual interaction with the indigenous population and hence the local people are also at risk for HIV infection.

Members of fishing communities have a tendency of moving from one location to another depending on the availability of fish, as a result they act as bridge population transferring infection from one area to another and then back to their families.

Apart from fishing activities, members of fishing communities are also involved in petty business. The indigenous people are involved in farming activities, and there is fish

trading involving long distance truck driving which connect these communities with other regions, as well as neighboring countries.

Fishing activities have attracted several entertainments in these communities such as; bars, restaurants, night dances and commercial sex workers. After working hours most of the people join these entertainments. Apart from the fish markets and shops that are open throughout the week, at the weekends there are common markets that attract people from neighboring areas for business and entertainments.

So far there is no specific data regarding the prevalence of HIV/AIDS and utilization of VCT services for fishing communities in Sengerema district. However the data for the general population in Sengerema district estimate the prevalence of HIV/AIDS in the district as 8.6%. The district has one VCT center located at the district hospital. The total number of clients attended VCT services for the year 2006 in the district was 3,621; this makes the estimated VCT utilization rate of 1.6% per population per year (Sengerema district HIV/AIDS report 2006). The denominator used is the population aged from 18 to 69 years (225,091), (Tanzania National Census report, 2002).

1.4 Research questions

The key questions for this study were:

To what extent are the people in the fishing communities utilizing VCT services?

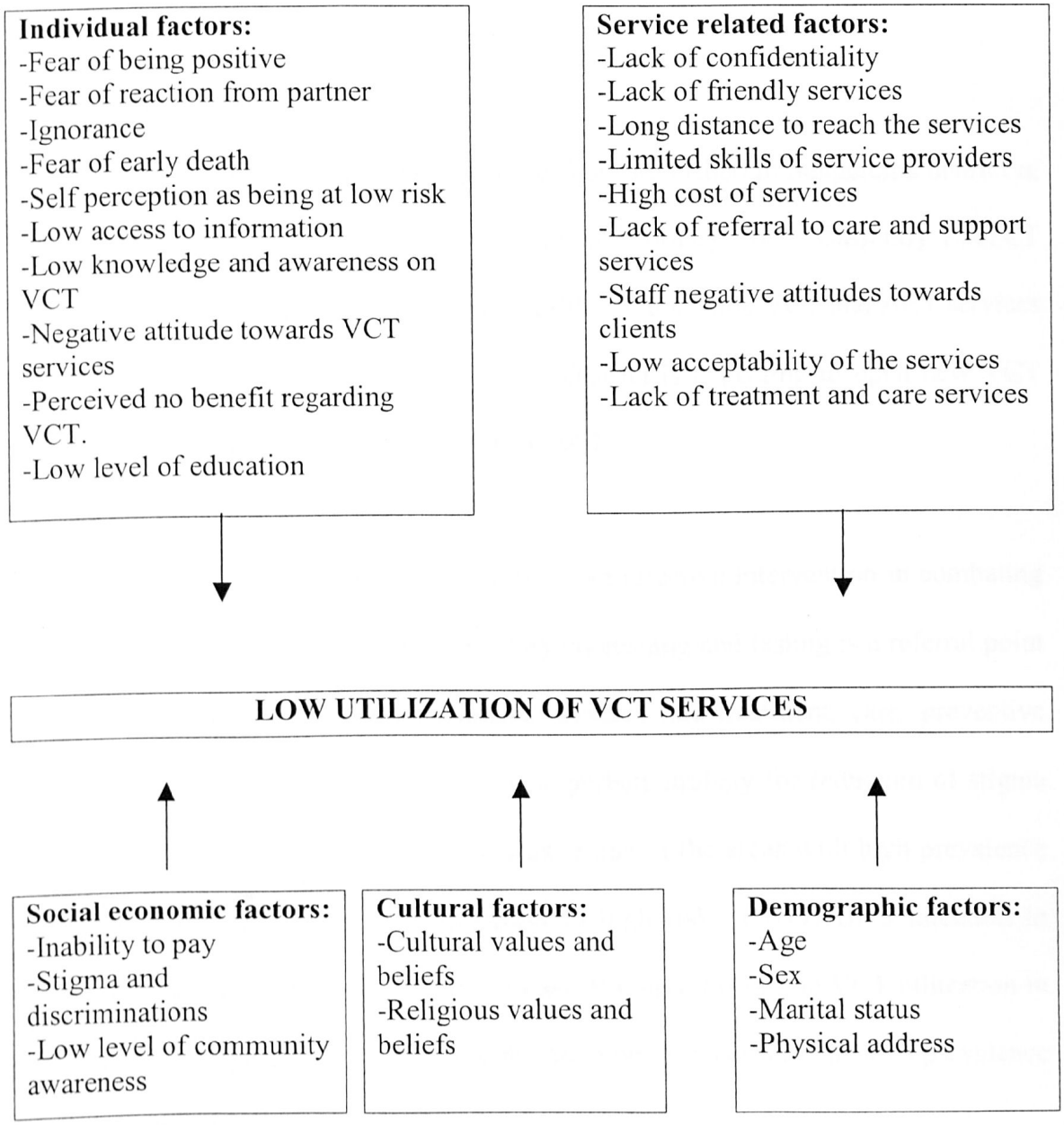
What factors are associated with utilization of VCT services in fishing Communities in Sengerema Mwanza Tanzania?

To what extent are the people in the fishing communities aware on VCT?

What reasons motivate people to utilize VCT services in fishing communities?

What reasons hinder VCT services utilization in fishing communities?

1.5 Problem Analysis Diagram



1.6 Problem statement

Implementation of HIV/AIDS program in Sengerema district started in mid 1980's mainly with community health education on prevention of HIV/AIDS and treatment of opportunistic infections. Currently the district has available VCT, PMTCT and ART services.

Voluntary counseling and testing services were first established in Sengerema district in 2005 while PMTCT and ART services started in February 2006. Currently PMTCT services are available at district hospital and health centers while VCT and ART services are only available at the district hospital. The District is expecting to open new VCT centers at five health centers before December 2007.

Voluntary counseling and testing is known to be an effective intervention in combating the spread of HIV/AIDS worldwide. Voluntary counseling and testing is a referral point which link HIV positive clients to essential services like treatment, care, preventive services and social support. VCT also is an important strategy for reduction of stigma associated with HIV/AIDS. Sengerema district is one of the areas with high prevalence of HIV/AIDS (8.6%). The district is subject to high risk of HIV/AIDS infection in particular the fishing community bordering Lake Victoria. So far the VCT utilization in Sengerema district is still low (1.6% per population per year) despite the high prevalence of HIV in the district.

The HIV/AIDS program in the district has several challenges including low utilization of VCT services, small number of people enrolled under ART, small number of mothers enrolled in PMTCT program, there is stigma related to HIV/AIDS in the community, there is minimal change of behavior in the community despite increase of awareness on HIV/AIDS, HIV/AIDS infection rate is still high, there is no decrease of morbidity and mortality due to HIV/AIDS and the quality of life for PLWHA has remained low. Most of these challenges can be minimized if the community realizes the importance of VCT and hence increase the utilization of VCT services.

Different communities differ in likelihood of accepting VCT. Public health interventions on strengthening VCT services should take into considerations the context surrounding each specific population in order come out with specific measures and strategies. The HIV/AIDS program in Tanzania is now expanding services such as VCT, PMTCT and ART to cover different population groups and categories in both urban and rural communities. Observations in some areas have shown that even when services are available, sometimes the utilization of the services remains low. This expansion of services will only be successful if factors influencing the use of VCT services in different population groups have been identified and addressed properly. Hence, while expanding VCT and other services it is also important to understand how different population groups and categories in our communities are likely to accept the services and reasons driving this.

Factors known to influence utilization of VCT and HIV preventive services include demographic factors, individual factors, services related factors, cultural factors and social economic factors.

Most of the studies done to determine factors influencing accessibility and utilization of VCT services have been conducted in urban areas. This study was conducted in fishing communities in Sengerema district, and before the study we were not sure about the level of VCT utilization and community awareness on VCT services. Also we didn't know exactly what factors facilitate or hinder utilization of VCT services in these communities.

Therefore, this study on VCT utilization in fishing communities in Sengerema district was of paramount importance for the success of any intervention related to prevention of HIV/AIDS and improvement of the quality of life for PLWHA.

1.7 Rationale of the study

It was important to conduct this study so that, findings would serve as guide to stake holders while designing strategies for improving VCT and HIV/AIDS preventive measures in Sengerema district and other areas with similar communities.

The study would provide a lesson for designing user-friendly VCT services and HIV/AIDS preventive measures so as to increase number of people utilizing VCT services.

Findings from this study would help to address several challenges in HIV/AIDS program that include increasing the number of people enrolled under ART, increasing the number of mothers enrolled in PMTCT program, reduction of stigma related to HIV/AIDS, change of behavior among community members, reduction of HIV/AIDS infection rate, reduction of morbidity and mortality due to HIV/AIDS and improving the quality of life for PLWHA.

The findings from this study also would be useful for comparison with other studies done in Tanzania, Africa and other parts of the world.

1.8 OBJECTIVES

1.8.1 General objective

The general objective of the study was to determine voluntary counseling and testing services utilization rate and associated factors in fishing communities in Sengerema district.

1.8.2 Specific objectives

Specifically the study intended,

1. To determine the proportion of people utilizing VCT services.
2. To determine utilization of VCT services by demographic characteristics, accessibility, perceived benefits, attitude and HIV/AIDS related risk practices
3. To assess community awareness on VCT.
4. To explore community reasons influencing utilization of VCT
5. To explore community observations and suggestions regarding VCT services.

CHAPTER 2

2.0 LITERATURE REVIEW

2.1 Utilization of VCT services.

Different population groups have different likelihood of accepting VCT and hence public health interventions on HIV/AIDS counseling and testing should be specifically targeted for each population group, (Kintu *et al*, 2004).

A study conducted in urban population in Zambia in 1996 on acceptability of voluntary HIV counseling and testing, 29% expressed interest (readiness) in being tested and among these only 4% used the services (acceptability). When the survey was repeated 3 years later, readiness among those aged 20 – 24 years was 47% and those 40 – 49 years was 18% (Fylkesnes *et al*, 2004).

A study done in rural community in Northern Nigeria on attitude towards Voluntary Counseling and Testing among Adults revealed that, 72.3% of respondents said they were willing to be tested and would recommend it to friends and relatives. The remainder said would only consent to test if a cure were available. About 99% of respondents have not had VCT previously (Iliyasu *et al*, 2006).

Demographic health survey conducted in Kenya in 1998 revealed that, more that 60% of males and females aged 15 to 19 years who had not undergone VCT reported that they would like to be tested (Carverton MD, 1999). Results from an explanatory study on HIV voluntary counseling and testing among youth aged between 14 to 21 years in Nairobi, Kenya, and Kampala and Masaka, Uganda indicated that, 90% of 210 Ugandans and 75% of 122 Kenyans who said they had not received VCT services reported that they wanted to be tested (Washington DC, Population council, 2001).

A study done in rural Malawi population on HIV -VCT service preference, demonstrated only 11% of men and 7% of women who had been tested for HIV. Among those untested 76% of men and 61% of women desired testing (Johnson *et al*, 2005).

A study done in Mwanza region of Tanzania on uptake of VCT services among Primary school Teachers revealed 20% of participating teachers who had voluntarily tested for HIV (Kakoko, 2006).

2.2 Factors influencing utilization of VCT services

A study conducted in Zambia on acceptability of voluntary HIV counseling and testing revealed that, among factors associated with readiness to utilize VCT services, self-perceived risk of being HIV infected was the only significant factor among the young aged 15 – 24 years while poor self- rated health was an important factor among the order 25- 49 years, (Fylkesnes *et al*, 2004)

A study on acceptability of voluntary counseling and testing in rural villages in Kagera Tanzania revealed that, false perception of being at low risk, and feeling health and strong were the main reasons sited by respondents for not volunteering to test for HIV (Killewo *et al*, 1998).

Women are less informed than men in both rural and urban areas. Data from 35 out of 48 countries in Sub Saharan Africa demonstrated that, on average young men were 20% more likely to have correct knowledge of HIV/AIDS than young women, (UNAIDS, 2005). Formal education and knowledge on HIV/AIDS are significant predictors of positive attitude towards VCT. Findings from a study done in rural community in Northern Nigeria on Knowledge of HIV/AIDS and attitude towards Voluntary Counseling and Testing among Adults revealed that, reasons for avoiding VCT were stigma and discrimination in case of positive result (48%), fear of the unknown (34%), marital disharmony (9%), because it has no cure (3%), and the treatment is costly and not readily available (6%), (Iliyasu *et al*, 2006).

Results from a study done in rural Malawi population on HIV -VCT service preference indicated that, factors significantly associated with the past and future VCT use for men and women include; knowledge of behavior of HIV prevention, knowing someone with AIDS, knowing the locations of the test site, and perceived risk of HIV infection, (Johnson *et al*, 2005)

In a qualitative research conducted in rural South Africa on VCT knowledge and practice, participants' demonstrated knowledge on the availability of voluntary HIV counseling and testing in their area. However participants did not utilize the services unless they had signs and symptoms suggestive of possible HIV infection, (Mabunda, 2006).

There are several social demographic characteristics, which may influence utilization of VCT services, and these include age, sex, marital status, accessibility to VCT services and education level.

A study done in Mwanza region Tanzania on uptake of VCT services among Primary school Teachers, social demographic variables showed that, teachers aged between 21 to 30 years with easy access to VCT services and who perceived their health status positively, were more likely to have been voluntarily tested for HIV (Kakoko, 2006). Teachers who had not tested for VCT were significantly more likely to believe that it was not necessary to be tested for HIV in absence of vaccine or cure for HIV, only people who suspected that they were infected with HIV should be tested for HIV, people infected with HIV were more likely to die faster if they were tested for HIV and informed of their positive results, (Kakoko, 2006).

A population- based HIV survey on Demographic and AIDS- related characteristics of consenters conducted in Arusha Tanzania showed that, subjects with secondary or

higher education were more likely to refuse HIV testing than subject with less forma education (Ole- King'ori *et al*, 1994)

Despite the fact that there is an increase of the number of VCT centers established in both rural and urban areas, most of the centers are still very far from homes of the majority of the VCT users. People need to travel a long distance in order to get VCT services. The situation in rural areas is made worse by the poor situation of the roads and lack of means of transport. The study done in Mongu western province in Zambia on factors affecting VCT revealed that VCT program could not succeed because of the long distance to the center and lack of continuity of funding to enable the staff to operate effectively, (Kaliki, 2000)

Introduction of user fee has been reported to reduce significantly the utilization of VCT services. Despite high cost of running VCT services, transferring this cost to the user in any way is most likely to hinder utilization of the services. It is important to find ways of subsidizing costs in particular for low-income communities in order to ensure accessibility of services.

A study done in Sagamu Nigeria from July 2003 to June 2004 on impact of user fee on the utilization of VCT services, revealed a significant reduction on the utilization of VCT services by almost 50% following the introduction of user fees. In the first 6 months services were free and 66.1% of the people presenting for VCT services were

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tested. User fee was charged for the following six months and during this period only 33.9% of the people presented for VCT services were tested, (Oduwole *et al*, 2005)

The study done in Kawepe division in Uganda on Women's access to and utilization of VCT services mentioned cost of services as among four major factors ranked highest among those that prevents a woman from seeking HIV test, (Barongo *et al*, 2004). The four major factors mentioned were; fear of HIV positive results, negative attitude towards HIV testing (Stigma and Discrimination), cost of services and fear of others finding it out. The percentages represented by each factor were 93%, 90%, 85% and 82% respectively. Other factors mentioned to prevent seeking HIV test were; fear of husband (76%), lack of women friendly services (74%), distance to the service (72%), days and hours when VCT is available (69%), talking to health workers of opposite sex (65%), knowing people who work at VCT service center (56%), also culture and religion beliefs (43%), (Barongo *et al*, 2004).

Due to the past history of being ivolved in HIV/AIDS high risk behaviour, people tend to perceive themselves as being HIV infected and hence develop interest of knowing their HIV sero status. Some people when become sick for a long time without significant improvement despite receiving medical treatment, also tend to perceive themselves as being HIV infected hence develop interest of knowing their HIV sero status.

The study done in Kawepe division in Uganda on Women's access to and utilization of VCT services again identified signs and symptoms suspicious of HIV/AIDS as the first among the four major factors ranked highest among those that can motivate a woman to seek HIV test, (Barongo *et al*, 2004). The four major factors were; signs and symptoms, availability of support services after HIV testing, radio heath messages and HIV/AIDS health talks. The percentages represented by each factor are 92%, 87%, 85% and 80% respectively. Other factors mentioned to motivate seeking of HIV test were Newspapers advert (69%), peers influence (68%), religious and cultural beliefs (52%), provider attitude (48%) and influence from spouse (35%), (Barongo *et al*, 2004).

Stigma associated with HIV/AIDS is one of the big obstacles hindering utilization of VCT services. Several times heath workers are being held responsible for stigmatizing HIV positive clients. Such a perception is an obstacle preventing some people to access VCT services. A study done in India on reducing stigma and discrimination in hospital revealed stigmatization and segregation behavior that include arrogant and judgmental remarks, unjustifiable referrals to other health facilities, segregation and tagging of patients, excessive use of barrier precautions, un consented HIV testing, inadequate pre and post test counseling, withholding of HIV test results from the patients, un consented disclosure of HIV results to the family and non family members, and denial of treatment, (Vaishali, 2006).

Social marketing of VCT by means of mass media and interpersonal communication focusing on positive advantage and importance of VCT is an efficient way of promoting VCT and decreasing stigma linked with HIV testing. Surveys done in Zimbabwe, Zambia and Kenya indicated that mass media behavior change communication (BCC) campaign focusing on perceived benefit and importance of VCT decreased stigma around VCT and fear of HIV positive results, (Joseph *et al*, 2005). Common factors motivating for seeking VCT services include relief from anxiety about risky sexual behavior and sickness or death of a partner. Client data show that social marketing campaign using mass media are key source of information and on the other hand inter person communication technique has been effective in targeting high-risk clients.

Voluntary counseling and testing of HIV may contribute to sexual gender based violence (SGBV). Most VCT clients become happy and comfortable after disclosure of their HIV status. However, HIV positive women may remain more vulnerable to consequences following disclosure of their status. Female fear of a gender-based violence by a male partner due to a positive result, hence this factor is a major barrier to VCT as well as disclosure of results to the male partners. International Planned Parenthood Federation (IPPF), 2004 stated that, in many countries women are particularly vulnerable and may risk rejection, violence, abandonment and loss of home and children if their HIV status becomes known (IPPF/UNFPA, 2004).

Inadequate supportive supervision for counselors is one of the VCT challenges. Ongoing supportive supervision of counselors will provide information updates, acknowledgement as well as education about emotional labor in counseling. Failures of supportive supervision lead counselors to become less motivated and perceive VCT as a burden, (USAIDS report March, 2003).

2.3 Factors related to risk of HIV infection

Working away from the families is one of the factors for high transmission rate of HIV/AIDS. This is supported by high prevalence of HIV/AIDS among people working away from their families such as truck and bus drivers.

Pakistan has high rates of internal and external migration. Most of the migrants are either unmarried men or married men who live in the cities apart from their wives and children who continue to live in rural areas. These migrants include truck and bus drivers who traverse the country and are typically away from their homes for long periods.

These migrant workers are at risk for HIV/AIDS as they are away from their wives for long periods of time, and hence engage in casual sexual relations with commercial sex workers or other partners. Wives are at risk of contracting HIV when the infected men return home. In a study of 40 truck drivers attending a sexually transmitted disease (STD) clinic in Karachi Pakistan, 40% of them reported sexual contact with female

commercial sex workers and 90% of these had sexual contacts with more than one female sexual worker. In addition, 53% reported multiple homosexual contacts (Zahid *et al*, 1997).

Several aspects of healthcare practices contribute to the spread of HIV. Such aspects include unsafe use of needles in both the formal and non-formal healthcare. In many hospitals and clinics there are frequent shortages of disposable or sterilized needles and syringes leading to unsafe needle-use practices. Also, HIV could be transmitted if instruments contaminated with blood are not sterilized or disinfected between clients.

For health care workers on the job, the main risk of HIV transmission is through accidental injuries from needles and other sharp instruments that may be contaminated with the virus. However this risk is small. Scientists estimate that the risk of infection from a needle stick is less than 1%; a figure based on the findings of several studies of health care workers who received punctures from HIV-contaminated needles or were otherwise exposed to HIV-contaminated blood (Centers for Disease Control (CDC), June, 2006). Therefore any trial to cap the needles by hand or removal of needles from syringes is not recommended; instead all used needles should be disposed in puncture proof containers.

Blood transfusion is another potential avenue of HIV infection in case screening of blood is not properly done in blood banks and hospitals. A survey done in Pakistan in

1995 on blood transfusion practices indicated that, only 5–10% of the total blood transfusions in government hospitals were properly screened, and in private hospitals conditions were even more discouraging (Shouket *et al*, 1995)

The proper and consistent use of condoms when engaging in any type of sexual intercourse reduce a person's risk of acquiring or transmitting sexually transmitted diseases, including HIV/AIDS infection. There are many different types and brands of condoms available, however only latex or polyurethane condoms provide a highly effective mechanical barrier to HIV. Women may wish to consider using the female condom when a male condom cannot be used.

For condoms to provide maximum protection, they must be used consistently and correctly. When condoms are used reliably, they have been shown to prevent pregnancy up to 98 percent of the time among couples using them as their only method of contraception. Properly used latex condom provides a high degree of protection against a variety of sexually transmitted diseases, including HIV infection (95%).

The HIV indicator survey carried out in Tanzania for the period of 2003/04 demonstrated

17% and 26% condoms use the first time they had sexual intercourse among young girls and young boys aged 15-24 years respectively. Within the same age group 37% of girls and 81% of boys engaged in higher risk sexual activity in the past one year while only

47% and 42% were more likely to use a condom among boys and girls respectively. The same study also suggests that 23% of women and 46% of men engage in higher risk sex and out of these only 38% of women and 50% of men reported using condom in the most high-risk sex (TACAIDS report, 2003–2005).

2.4 Benefits of Voluntary Counseling and Testing

Voluntary counseling and testing of HIV (VCT) is a mean for prevention of HIV transmission by identification of those infected with the disease, coupled with efforts to interrupt transmission. VCT can lead to self-reported changes in high-risk sexual behavior among both HIV positive and HIV negative people. VCT is a tool to help HIV positive persons to reduce their high-risk behaviors to avoid spreading the disease to uninfected persons.

Voluntary counseling and testing of HIV (VCT) is a gateway between prevention and care. Is a critical first step in identifying those who are HIV positive in order to effectively link them with HIV treatment, care, and support services. Services available for PLWHA include the prevention of HIV-related illnesses, psychosocial and family support and treatment with antiretroviral therapy. Knowing one's HIV status provides information that enable HIV positive persons to plan for their own future and that of their family. VCT connect clients with services including legal services, and support for orphans and vulnerable children. Practices have revealed that VCT clients have an

advantage of the ongoing support and counseling to cope with their diagnosis and facilitate disclosure.

Voluntary counseling and testing of HIV is an important factor for stigma reduction, (USAIDS report March 2003). Stigma and discrimination hinder the community participation in VCT and prevent PLWHA from disclosure of HIV status, and seeking care, treatment and support. Community involvement in VCT and other HIV/AIDS programs helps to increase participation in VCT and the community ownership of the programs. Community involvement can help PLWHA to be accepted within their communities, and hence reducing stigma and denial.

CHAPTER 3

3. METHODOLOGY

3.1 Study area

This study was conducted in fishing communities at the mainland just bordering Lake Victoria in Sengerema district; Katunguru and Buchosa divisions. Mainland villages with fishing communities in Sengerema district are namely Bulolo, Chifunfu, Kasarazi, Kasisa, Kahunda, Lushamba and Itabagumba.

Sengerema is one of the eight (8) districts within Mwanza region found in Tanzania Lake zone. It share borders with Muleba district of Kagera region on the North West, Geita district on the South West, Misungwi district on the South East and on the East it share borders with Ukelewe district and Nyamagana and Ilemela districts of the Mwanza city. The population of Sengerema district according to 2002 National census is 498,993. The district has a total area of 8,817 km^2. Administratively Sengerema has five (5) Divisions namely Sengerema, Kahunda, Buchosa, Nyanchenche and Katunguru.

At the mainland bordering Lake Victoria and within islands of Lake Victoria is where you can find fishing communities with fishing as the main economic activity. Other activities include agriculture, trade of fish and fish products, trade of agricultural

products and trade of other consumable and non-consumable goods. These communities are complex and heterogeneous in nature with people from different areas.

Fishing communities have been chosen for this study because of complexity and being a place with observed high HIV/AIDS risk sexual behaviors.

3.2 Study design

Analytical cross sectional design using quantitative methods was used to determine utilization rate and factors associated with utilization of voluntary counseling and testing services in fishing communities in Sengerema district.

3.3. Study population

The study targeted males and females aged from18 to 59 years living in fishing communities in Sengerema district.

3.3.1 Inclusion criteria

The study included males and females aged from 18 to 59 years.

3.3.2 Exclusion criteria

The following groups of people were excluded from the study sample:

Individuals aged less than 18 years.

Individuals aged 60 years and above.

Too sick individuals.

3.4 Sample size

Sample size estimation was calculated using the following formula:

$$\mathbf{n = \frac{z^2\, p\,(100 - p)}{\varepsilon^2}}$$

Where: n = Minimum sample size.

z = 1.96: Standard normal deviate corresponding to 95% C.I

p = 1.6%: Estimated proportion of population in the district who utilized VCT services for the year 2006. (Calculated using VCT data to provide total clients counseled and tested within one year in the district as numerator and total population aged from 18 to 69 years in the district from National 2002 census as denominator)

ε = 1%: Margin of error.

There fore

$$n = \frac{1.96^2 \times 1.6\,(100 - 1.6)}{(1)^2}$$

Hence the minimum sample size (n) = 605

When we added 9% for attrition, about 660 respondents were recruited for the study.

3.5 Sampling procedures

A multistage cluster sampling technique was used to obtain the study sample.

The first stage: Involved random sampling of three (3) villages from a list of seven (7) villages comprising fishing communities at the mainland bordering lake Victoria in Sengerema district. Balloting method was used and three (3) villages were selected namely Chifunfu, Kasisa and Lushamba. Each village contributed the same number (220) of study sample to make the total sample size of 660.

Second stage: Involved sampling of households. Systematic sampling was used to select households. A sampling frame was drawn from each village to estimate regular interval for selection of households that provided respondents. All eligible candidates found at each selected household were included in the study sample.

3.6 Recruitment and training of interviewers

Two research assistants were recruited to assist the investigator during data collection. Criteria for selection were; ability to work from morning to evening for the whole period of research, skills to fill the structured questionnaires and ability to read, write and speak

fluent Swahili. Research assistants were trained on how to fill in the questionnaire and how to conduct the interview prior data collection process.

3.7 Data collection

Data were collected using structured questionnaires with open and closed ended questions. The questionnaire were translated in Swahili, then in English, and then translated back to Swahili. The data included social demographic information, awareness on VCT, source of information, VCT utilization, HIV/AIDS risk behaviors practices, reasons associated with VCT utilization, attitudes towards VCT services, perception regarding the sites and services of VCT, and suggestions on how to improve VCT services.

3.8 Variables

3.8.1 Dependent variables

Self reported VCT utilization was the dependent variable.

3.8.2 Independent variables

Independent variables included social-demographic characteristics (age, sex, marital status, physical address, occupation and education level), accessibility to VCT services (time taken to reach the nearest site), perceived benefits on VCT services, attitudes towards VCT services (willingness to utilize VCT services, opinion on disclosure of HIV test results, opinion on recommending HIV test to a friend or relative) and past

history of HIV infection risk behavior (history of sexual intercourse, number of sexual partners, use of condom, history of blood transfusion).

3.9 Pre- testing

Prior the data collection process, pre-testing of the questionnaire was done to respondents aged from 18 to 59 years. These respondents were not included in the main study. The aim of pre-testing was to identify any gapes that need to be sorted out before commencing with data collection.

3.10 Data management

Data quality was checked on daily basis. The data were coded, sorted, entered and analyzed using Epi 6 program. The principal Investigator supervised the two research assistants to ensure that the procedures and schedules were adhered to.

Factors associated with utilization of VCT services and other responses related to the study objectives were described using frequencies and measure of central tendency. The proportion of the people utilizing VCT services was then determined.

Chi-square and Fisher Exact test were used to examine association and strength of relationship between independent variable and dependent variable.

3.11 Limitations

Due to shortage of time, other methods that would have been useful to compliment information such as focus group discussion were not applied.

Again due to financial and time constrain, selection of the study sample only involved fishing communities at the mainland bordering Lake Victoria. Fishing communities within the islands of Lake Victoria were not involved. The results may not be generalized to represents the situation in the islands of Lake Victoria due to the nature of isolation of these islands and limited means of transport compared to the fishing community found at the mainland just bordering Lake Victoria.

Some respondents didn't provide answers to some questions and some respondents might have given false answers.

3.12 Ethical consideration

The proposal was submitted for ethical clearance to the MUHAS Research and Publication Committee. Request for permission to carryout the study was sent to the Sengerema District Commissioner (DC) and copied to the District Executive Director (DED) and District Medical officer (DMO). The aim of the study was explained to the participants, the information given by the respondents ware treated as confidential and no names appeared on the questionnaire. The participation was voluntary and the respondents were free to refuse if they didn't want to participate.

In order to ensure confidentiality at household level, each eligible member at the family was interviewed separately away from other family members. The choice of the place for conducting the interview at family level depended on the household environment.

The information from each family member was confidential and hence not communicated to other members of the family.

CHAPTER 4

4.0 RESULTS

4.1 Distribution of study sample according to village and sex

A total of 660 respondents from three villages namely Chifunfu, Kasisa and Lushamba were interviewed as study sample. Among these study participants, 272 (41.2%) were females and 388 (58.8%) were males. A sample of 220 (33.3%) participants represented each village as shown in table 1.

Table 1: Distribution of study sample according to village and sex

	Sex		
Village	**Female (%)**	**Male (%)**	**Total (%)**
Chifunfu	**105 (47.7)**	**115 (52.3)**	**220 (33.3)**
Kasisa	**89 (40.5)**	**131 (59.5)**	**220 (33.3)**
Lushamba	**78 (35.5)**	**142 (64.5)**	**220 (33.3)**
Total	**272 (41.2)**	**388 (58.8)**	**660**

4.2 Distribution of study sample according to age and sex

Table 2 shows the characteristics of study sample by age and sex. Age was recorded in 655 respondents with five respondents did not state their age; but falling within the desired age group of between 18 and 60 years. The minimum age was 18 years and the maximum age was 59 years with the mean of 30 ± 9.2 years and median of 29 years. The majority of the respondents were the youth aged from 20 to 29 years comprising

51.7% of female participants, 39.9% of male participants and 44.7% of both sex participants combined.

Table 2: Distribution of study sample according to age and sex

Age (in years)	Sex		Total (%)
	Female (%)	Male (%)	
<20	33 (12.2)	24 (6.2)	57 (8.7)
20 - 29	139 (51.7)	154 (39.9)	293 (44.7)
30 – 39	65 (24.2)	127(32.9)	192 (29.3)
≥40	32 (11.9)	81 (21)	113 (17.3)
Total	269	386	655

4.3 Overall VCT services utilization

Respondents were asked if they had ever attended VCT and being tested for HIV. Out of 658 participants who responded to the question, 79 had attended VCT and tested for HIV. This gives an overall VCT services utilization of 12% with a 95% confidence interval of 9.7% to 14.8%

4.4 VCT services utilization by demographic characteristics

Table 3: VCT services utilization by demographic characteristics as cited by 658 participants who responded to the question on VCT utilization.

	VCT services utilization				
Characteristics	**Yes (%)**	**NO (%)**	**Total (%)**	χ^2	**P-value**
Age(in years):				**3.78**	**0.29**
<20	3 (5.3)	54 (94.7)	57 (8.7)		
20 - 29	41 (14)	251 (86)	292 (44.6)		
30 - 39	23 (12)	169 (88)	192 (29.4)		
≥40	12 (10.6)	101 (89.4)	113 (17.3)		
Sex:				**0.16**	**0.69**
Female	31 (11.4)	241 (88.6)	272 (41.3)		
Male	48 (12.4)	338 (87.6)	386 (58.7)		
Villages:				**0.36**	**0.84**
Chifunfu	28 (12.7)	192(87.3)	220 (33.4)		
Kasisa	27 (12.3)	192 (87.7)	219 (33.3)		
Lushamba	24 (11)	195 (89)	219 (33.3)		
Marital status:				**0.71**	**0.40**
Not Married	19 (10.3)	165 (89.7)	184 (28)		
Married	60 (12.7)	412 (87.3)	474 (72)		
Occupation:				**5.61**	**0.35**
Fishermen	35 (14.4)	209 (85.6)	244 (37.1)		
Peasant	13 (8.8)	134 (91.2)	147 (22.3)		
Housewife	13 ((13.4)	84 (86.6)	97 (14.7)		
Employed	2 (5.9)	32 (94.1)	34 (5.2)		
Petty business	9 (9.6)	86 (90.4)	95 (14.4)		
Student	7 (17.1)	34 (82.9)	41 (6.3)		
Level of Education:				**10.7**	**0.005**
No formal Education	12 (11.3)	94 (88.7)	106 (16.2)		
Primary education	53 (10.7)	442 (89.3)	495 (75.6)		
Above primary education	14 (25.9)	40 (74.1)	54 (8.2)		

NB: - 2 out of 660 participants didn't respond to the question on VCT utilization.

- 4 out of 658 participants their ages were not stated.
- 3 out of 658 respondents didn't state their level of education.
- Marital status: divorced, widowed and separated were put together with singles and grouped as "Not Married"

4.4.1 VCT utilization by age

Results in table 3 suggest that there is a tendency of utilization rate decreasing with increasing age among people aged 20 years and above. For example, utilization of VCT services was 14% among the youth aged 20 – 29 years compared to 30 – 39 years (12%) and 40 years and above (10.6%). However, the difference was not statistically significant (P= 0.29)

4.4.2 VCT utilization by Sex

Male utilization of VCT services was 12.4% while female utilization was 11.4% but the difference was not statistically significant (P= 0.69)

4.4.3 VCT utilization in relation to marital status

Utilization of VCT services in relation to marital status showed utilization of 12.7% and 10.3% among married and non-married respondents respectively. The differences was however, not statistically significant (P= 0.40)

4.4.4 VCT utilization according to occupation

Highest utilization rate was reported in students (17.1%) followed by fishermen (14.4%), housewives (13.4%), petty business makers (9.6%), peasants (8.8%) and the employed (5.2%). Again the differences are not statistically significant (P=0.35)

4.4.5 VCT utilization in relation to level of education

Education was categorized into three namely: no formal education, primary education and secondary education and above. Those with primary education constituted 75.6% of all study participants with the utilization of 10.7% while participants with no formal education had the utilization rate of 11.3%. Participants with secondary education and above had the utilization of 25.9%, and were more likely to utilize VCT services compared to other education categories. There is a statistically significant difference in VCT utilization among the education categories (P= 0.005).

4.5 VCT services utilization by accessibility and perceived benefit

Table 4: VCT services utilization by accessibility and perceived benefit

Characteristics	VCT services utilization				
	Yes (%)	NO (%)	Total (%)	χ^2	P-value
Time taken to reach the site:				**7.91**	**0.005**
1 - 2 Hours	14(43.8)	18 (56.2)	32 (11.6)		
> 2 Hours	52 (21.2)	193 (78.8)	245 (88.4)		
Perceived benefits:				*	**0.14**
Yes	79 (15.5)	430 (84.5)	509 (97.2)		
No	0 (0)	15 (100)	15 (2.8)		

* Fisher Exact Test was used to assess significance of the difference, since one of the cells has a zero value leading to corresponding expected cell value being <5.

NB: -Time taken to reach VCT site was asked to 277 respondents who knew places where VCT services are available.

- The question on perceived benefits was asked to 529 respondents who had heard about VCT, 5 participants didn't respond to the question.

4.5.1 VCT services utilization by accessibility

Accessibility to a VCT center was assessed in terms of the time (in hours) that one would take to reach the nearest center. The association between VCT utilization and accessibility was then examined only in study participants who reported to know places

where VCT centers were located: these were 277 respondents in total. Out of the 277 participants who knew the place where VCT services are available, 32 (11.6%) would take between one (1) hour and two (2) hours to reach the nearest VCT site and the rest would take more than two (2) hours. Utilization among those using one (1) hour to two (2) hours was found to be 43.8% while the utilization among those using more than two (2) hours was 21.2%.

The results show that there is a significant association between VCT utilization and the time taken to reach the nearest VCT site (P= 0.005). The shorter the time taken to reach the nearest VCT site, the more likely for one to utilize VCT services.

4.5.2 VCT services utilization by perceived benefit

Respondents who had heard about VCT (529) were asked if they thought going for VCT services was beneficial. Out of 524 respondents who responded to the question, 509 (97.2%) felt that there is some benefit, 15.5% of those who said there is benefit reported to have utilized VCT services, while among those who felt there is no benefit none had utilized the services. The difference was not statistically significant (P= 0.14, using Fisher exact test).

Participants were also asked to mention the benefits of VCT services. Figure 1 shows that, Out of 509 respondents who said VCT were beneficial, 504(99%) mentioned knowing health status as one of the benefit. Other mentioned benefits included

prevention of HIV infection (36%), counseling on how to live with HIV/AIDS (5.7%), referral for care and support (5.5%), referral for drugs to prolong life (5.1%), counseling on HIV prevention (2.2%) and planning for the future (2.2%).

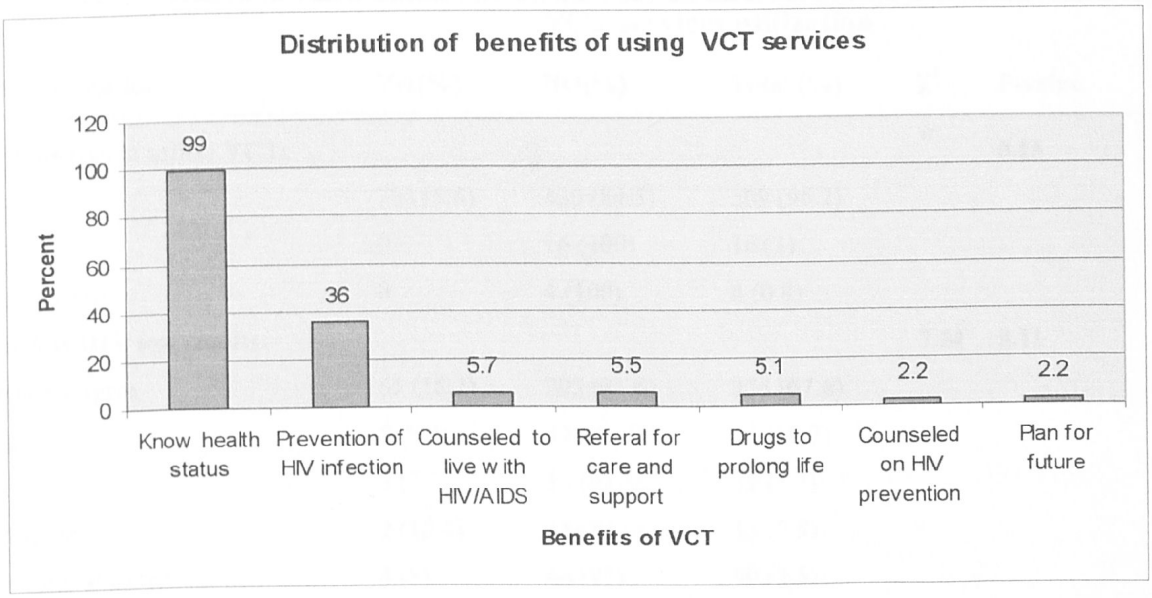

Figure 1: Benefits of using VCT services as mentioned spontaneously by 509 respondents who said VCT services are beneficial.

4.6 VCT services utilization in relation to attitude on VCT services

Table 5: VCT services utilization by some attitudinal characteristics as cited by 529 respondents who had heard about VCT

	VCT services utilization				
Characteristics	**Yes(%)**	**NO(%)**	**Total (%)**	**χ^2**	**P-value**
Willingness to utilize VCT:				*	**0.15**
Yes	79 (15.5)	430 (84.5)	509 (96.2)		
No	0	16 (100)	16 (3)		
Don't know	0	4 (100)	4 (0.8)		
Disclose HIV test results:				**7.54**	**0.11**
Strongly agree	65 (18.2)	293 (81.8)	358 (67.6)		
Agree	5 (9.3)	49 (90.7)	54 (10.2)		
No	3 (7.7)	36 (92.3)	39 (7.4)		
Disagree	2 (15.4)	11 (84.6)	13 (2.5)		
Strongly disagree	4 (8)	46 (92)	50 (9.5)		
Don't know	0 (0)	15 (100)	15 (2.8)		
Disclose HIV +Ve results:				**2.97**	**0.23** **
Yes	67 (17.7)	312 (82.3)	379 (92)		
No	2 (6.3)	30 (93.8)	32 (7.8)		
Don't know	0 (0)	1 (100)	1 (0.2)		
Recommend VCT to friend:				**1.63**	**0.65** **
Strongly agree	72 (15.6)	390 (84.4)	462 (87.3)		
Agree	5 (11.4)	39 (88.6)	44 (8.3)		
No	0 (0)	4 (100)	4 (0.8)		
Strongly disagree	0 (0)	2 (100)	2 (0.4)		
Don't know	0 (0)	17 (100)	17 (3.2)		

* Fisher Exact Test was used to assess significance of the difference, since one of the cells has a zero value leading to corresponding expected cell value being <5.

** Yate's corrected χ^2 was used to take care of the small cell values that led to expected frequencies of <5.

NB: The question on disclosure of HIV positive result was only asked to 412 respondents who strongly agreed or just agreed to disclose HIV test results.

4.6. 1 VCT services utilization in relation to willingness to utilize VCT

It was revealed that out of 529 respondents, 509 (96.2%) were willing to utilize VCT services. However among those who were willing to utilize VCT services only 15.5% had utilized VCT services, this is higher compared to zero percent utilization among those who were not willing to utilize VCT services. The difference was not statistically significant (P= 0.15, using Fisher exact test).

4.6. 2 VCT services utilization in relation to attitude towards disclosure of HIV test result

Respondents were asked to express their opinion on the view that people should be willing to disclose their HIV test results to the third party. Opinions were stated in categories of strongly agree, agree, no, disagree and strongly disagree. Table 5 shows that 67.6% said they strongly agree while nine point five percent (9.5%) said they strongly disagree. Utilization among those who strongly agree is 18.2% while for those who strongly disagree is eight percent (8%). There was no statistically significant association between VCT utilization and attitude towards disclosure of HIV test results (P= 0.11)

Out of 412 respondents who agree to disclose their HIV test results, 379 (92%) would agree to disclose HIV positive results. Table 5 shows that 17.7% of those willing to disclose HIV positive results had utilized VCT services while only six point three percent (6.3%) of those not willing to disclose there HIV positive result had utilized VCT services. Again, we note that there is no significant association between willingness to disclose HIV positive results and VCT utilization (P= 0.23).

4.6. 3 VCT services utilization in relation to attitude towards recommending VCT to others

Opinions on whether people should recommend HIV test to their friends or relatives were asked from the study participants. Responses were put into categories of strongly agree, agree, no, disagree and strongly disagree. Table 5 gives details of the responses: among those who strongly agree, 15.6% had utilized VCT services and none (0%) of those who strongly disagree had utilized VCT services. However, the difference was not statistically significant (P= 0.65).

4.7 VCT services utilization by HIV infection related risk practices

4.7.1 VCT services utilization in relation to sexual intercourse practices

Participants were asked if they had sexual intercourse in the last six months. Out of 658 respondents who responded to the question on utilization of VCT services, 576 (87.5%) reported to have sexual intercourse while 12% of respondents didn't have sexual intercourse. 12.7% had utilized VCT services among those who had sexual intercourse compared to 7.6% among those who did not had sexual intercourse, however there was no significant association between history of sexual intercourse in the last six months and utilization of VCT services (P= 0.19).

4.7.2 VCT services utilization in relation to number of sexual partners

Respondents who reported to have had sexual intercourse were asked to mention the number of sexual partners they had in the last six months. Out of 576 respondents who reported to have sex in their last six months, 172 (29.9%) had two (2) or more sexual partners while 392 (68.1%) had only one sexual partner and 12 (2%) participants didn't respond to this question. The utilization of VCT services was 12.5% and 12.8% among those who had one (1) sexual partner and two (2) or more sexual partners respectively, and the difference was not statistically significant (P= 0.92).

Table 6: VCT services utilization by HIV related risk practices as reported from 658 respondents who answered the question on utilization of VCT services.

	VCT services utilization				
Characteristics	**Yes (%)**	**NO (%)**	**Total (%)**	**χ^2**	**P-value**
Sex in last six months:				**1.69**	**0.19**
Yes	73 (12.7)	503 (87.3)	576 (87.5)		
No	6 (7.6)	73 (92.4)	79 (12)		
No response	0 (0)	3 (100)	3 (0.5)		
Number of sexual partners:					
(In the last six months)				**0.01**	**0.92**
1	49 (12.5)	343 (87.5)	392 (68.1)		
2+	22 (12.8)	150 (87.2)	172 (29.9)		
No response	2 (16.7)	10 (83.3)	12 (2)		
Used Condom:					
(During the last sexual intercourse)				**0.26**	**0.61**
Yes	13 (14.3)	78 (85.7)	91 (15.8)		
No	60 (12.3)	425 (87.7)	485 (84.2)		
Blood Transfusion:					
(In the past five years)				*	**0.014**
Yes	7 (30.4)	16 (69.6)	23 (3.5)		
No	72 (11.4)	562 (88.6)	634 (96.3)		
No response	0 (0)	1 (100)	1 (0.2)		

* Fisher Exact Test was used to assess significance of the difference, since one of the cells has a zero value leading to corresponding expected cell value being <5.

NB: The questions on number of sexual partners and use of condom were asked to only 576 respondents who reported to have sex in the last six months.

4.7.3 VCT services utilization in relation to use of condom

The question on whether study participants had used condom in their last sexual intercourse was asked. Out of 576 respondents, 91 (15.8%) had used condom during their last sexual intercourse. It was revealed that 14.3% of those who had used condom had utilized VCT services while 12.3% of those who did not use condom had utilized VCT services, however the difference in utilization was not statistically significant (P= 0.61)

4.7.4 VCT services utilization in relation to history of blood transfusion

History of blood transfusion in the past five years was asked to the study respondents. Out of 658 participants who responded to the question on utilization of VCT services, 23 (3.5%) reported to have had blood transfusion, 634 (96.3%) reported to have no history of blood transfusion and one (0.2%) participant didn't respond to the question. VCT utilization in relation to history of blood transfusion showed that, 30.4% of those who had blood transfusion and 11.4% of those who did not had blood transfusion had utilized VCT services. Utilization of VCT services was significantly higher among respondents with history of blood transfusion than those with no history of blood transfusion (P= 0.014).

4.8 Awareness on VCT

Respondents were asked if they had ever heard about voluntary counseling and testing of HIV. The findings revealed that, 529 (80.3%) of the study participants said they have

heard about VCT and 277 respondents (42%) knew the places where VCT services were available. Respondents who had heard about VCT were asked to mention the type of services provided at the VCT centers. Figure 2 shows that, 404 (76.4%) respondents mentioned testing blood for HIV and 272 (51.4%) respondents mentioned counseling. None of the respondents was able to mention specifically pretest counseling and posttest counseling. Respondents also mentioned inaccurate VCT services. The number and percent of respondents for mentioned inaccurate responses include; provision of treatment 24 respondents (4.5%), provision of care and social support nine respondents (1.7%) and distribution of condom two respondents (0.3%). Out of 529 respondents, 40 (7.6%) did not mention any service provided at VCT.

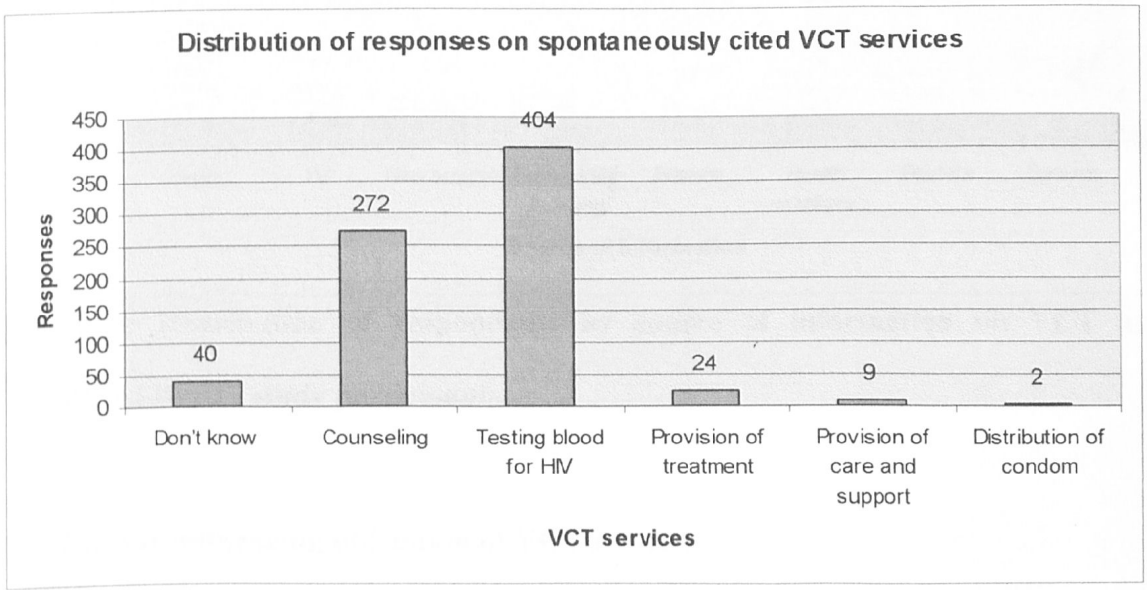

Figure 2: Distribution of responses on VCT services as cited by 529 respondents who said they had heard about VCT.

Participants who had ever heard about VCT were also asked to mention source of the information. The results (Figure 3) show that, out of 529 respondents, 480(90.7%) had heard through a radio. The number and percent of respondents for other sources of information mentioned were: TV 124 (23.4%), newspapers 112 (21.2%), community meetings 35 (6.6%), friends 87 (16.5%), health workers 123 (23.3%), posters 41 (7.8%) and spouses 10 (1.2%).

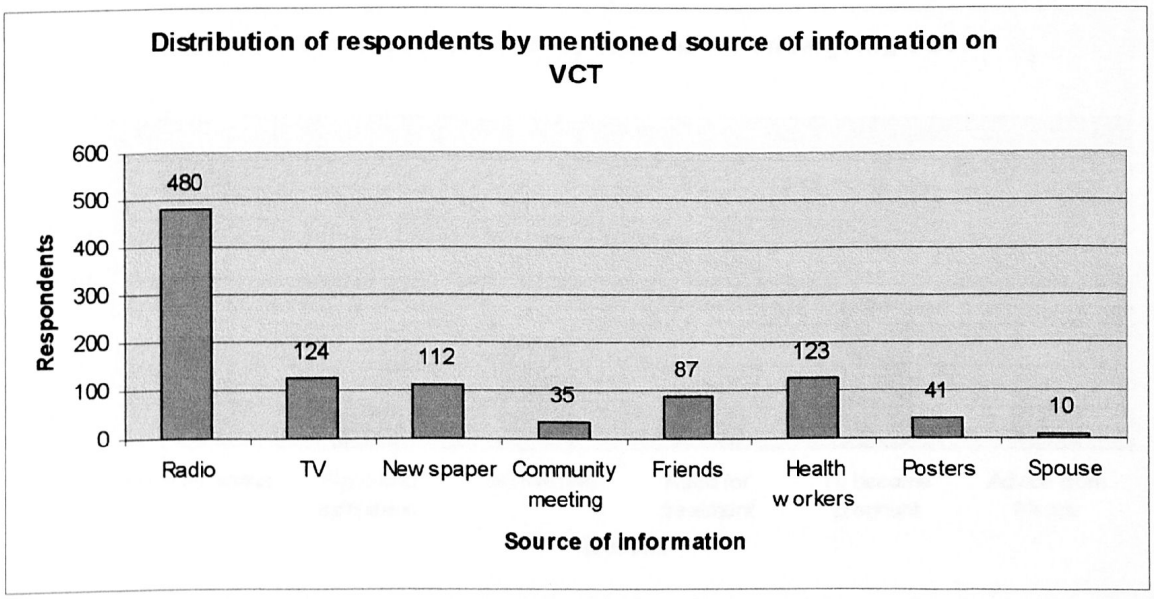

Figure 3: Distribution of respondents by source of information on VCT as mentioned by 529 study participants.

4.9 Reasons influencing utilization of VCT services

4.9.1 Reasons for making decision of undergoing VCT

Study respondents who had utilized VCT services mentioned reasons that influenced them to undertake VCT. Reasons for undergoing VCT are as shown in figure 4. Out of

79 respondents who had undergone VCT, 36 (45.6%) respondents mentioned the need to know their HIV status as a reason for undergoing VCT. The number and percent of respondents for other reasons mentioned included; becoming pregnant 18 (22.8%), for getting married 13 respondents (16.5%), observed signs and symptoms of HIV/AIDS five respondents (6.3%), need for ART five respondents (6.3%) and advice from friend five respondents (6.3%).

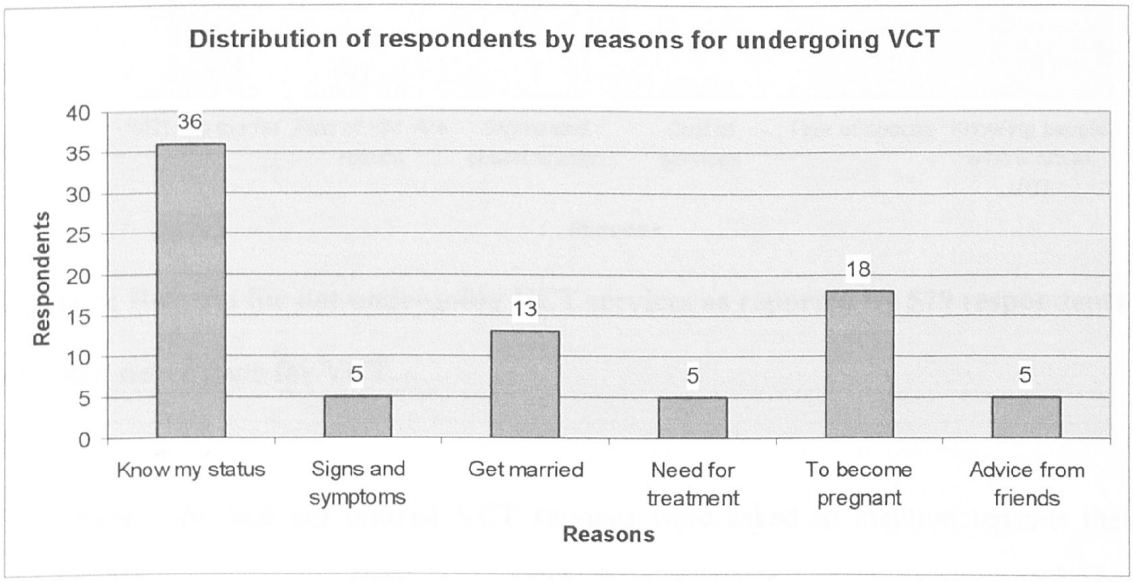

Figure 4: Reasons for undergoing VCT as reported by 79 respondents who had utilized VCT services.

4.9.2 Reasons for not undergoing VCT

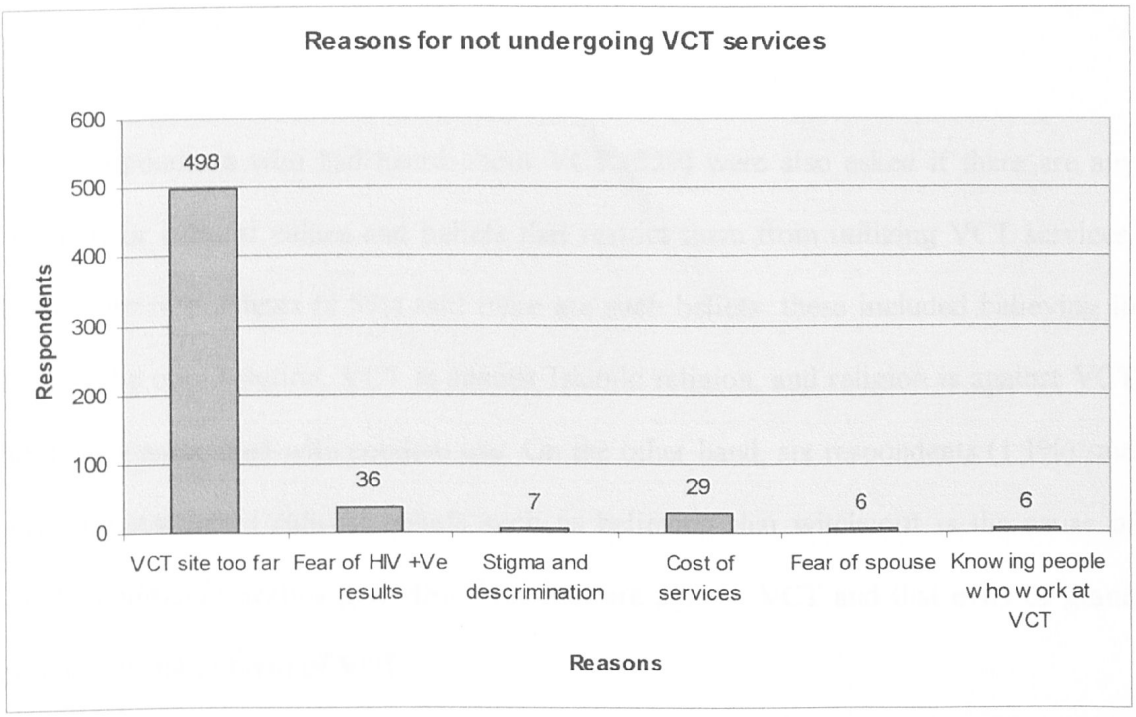

Figure 5: Reasons for not undergoing VCT services as reported by 579 respondents who had never gone for VCT.

Participants who had not utilized VCT services were asked to mention reasons that prevented them to undergo VCT. Out of 658 respondents who answered the question on utilization of VCT services, 579 (88%) had not yet undergone VCT. Reasons for not undergoing VCT as mentioned by respondents are shown in figure 5.

Out of 579 respondents, 498 (86%) mentioned VCT centers being located too far away from their homes while 36 (6.2%) respondents mentioned fearing of HIV positive results. The number and percent of respondent for other reasons mentioned include; high cost of VCT services 29 respondents (5%), stigma and discrimination seven respondents

(1.2%), knowing people who work at VCT six respondents (1%) and fear of spouse six respondents (1%).

Study respondents who had heard about VCT (529) were also asked if there are any religious or cultural values and beliefs that restrict them from utilizing VCT services. Only eight respondents (1.5%) said there are such beliefs: these included believing in God as the only solution, VCT is against Islamic religion, and religion is against VCT because is associated with condom use. On the other hand, six respondents (1.1%) said there are restrictive cultural beliefs such as believing that witchcraft is the cause of AIDS, traditional healers give directives that are against VCT and that evils of grand parents are not in favor of VCT.

4.10 Quality of VCT services as observed by study participants

A total of 87 (16.6%) out of 529 respondents reported to have ever visited a VCT site. These were then asked to describe in the opinion, their observation on VCT staff quality of services to the clients. Figure 6 below depicts opinions on VCT staff quality of services as described by the 87 participant of the study. The numbers and percentages of recorded responses were; staff are friendly 53 respondents (60.9%), staff are caring 28 respondents (32.3%), staff are helpful 4 respondents (4.6%) and staff are understanding one respondent (1.1%). Only one respondent (1.1%) mentioned staff as un-friendly.

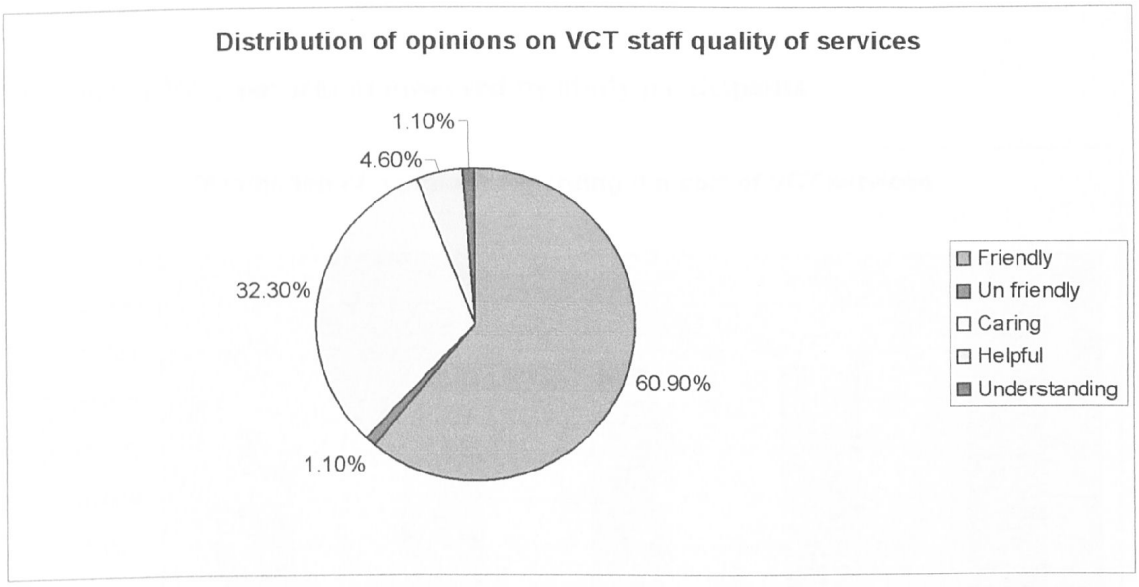

Figure 6: Distribution of opinions on VCT staff quality of services as observed by 87 respondents.

Views regarding VCT confidentiality were asked from study participants who had visited a VCT site, 87 respondents were asked if the counselors at the VCT site observe confidentiality. Out of 83 respondents (4 respondents didn't answer the question on counselors confidentiality), 81 (97.6%) said counselors do observe confidentiality.

To get opinion whether the waiting time is reasonable and if the days and hours of services are convenient, participants were asked to explain their views. Out of 86 respondents, 76 (88.4%) said the waiting time was reasonable and the rest (11.6%) were of the opinion that the waiting time was not reasonable, on the other hand 88.2% said days and hours of VCT services are convenient while 11.8% said days and hours of VCT services are not convenient.

4.11 Cost of VCT services as observed by study participants

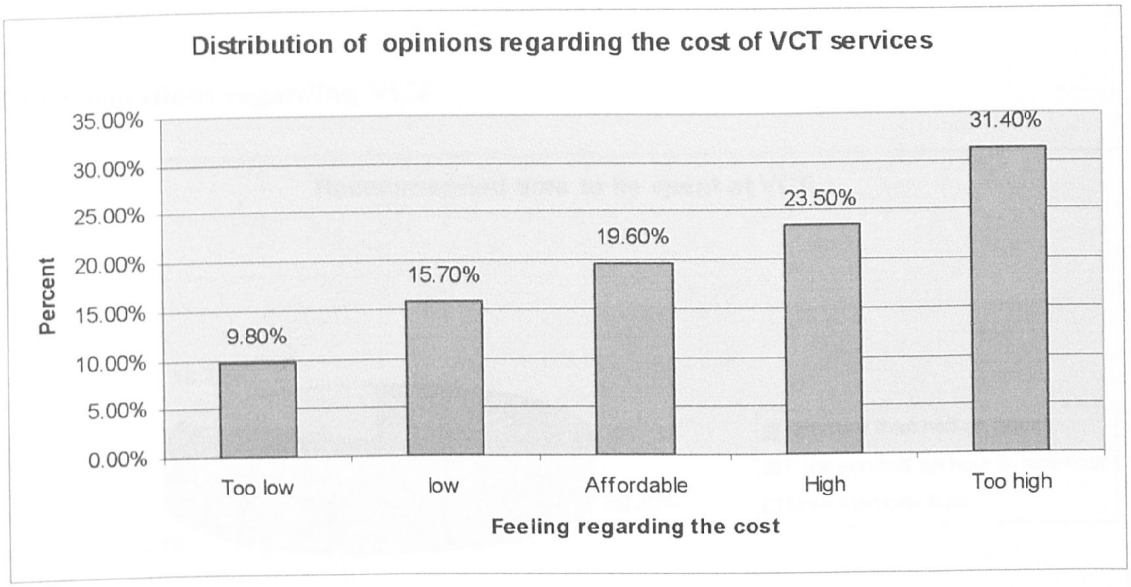

Figure 7: Opinions regarding the cost of VCT services as mentioned by 42 respondents who said there is fee for VCT services.

Participants who had heard about VCT (529) were asked if they thought they had to pay in order to get VCT services, and also were asked to give their impression regarding the amount charged for VCT services. The findings indicated that, 42 (8%) of respondents said clients had to pay fee for VCT services, 39.8% said there was no payment and 52.2% were not sure whether they had to pay for VCT services or not. Regarding the fee for VCT services results are as shown in figure 7. Out of respondents who thought there is fee for VCT; 31.4% said the fee is very high, 23.5% said the fee is high, 19.6% said

the fee is affordable, 15.7% said the fee is low while nine point eight percent (9.8%) said the fee is very low.

4.12 Suggestions regarding VCT

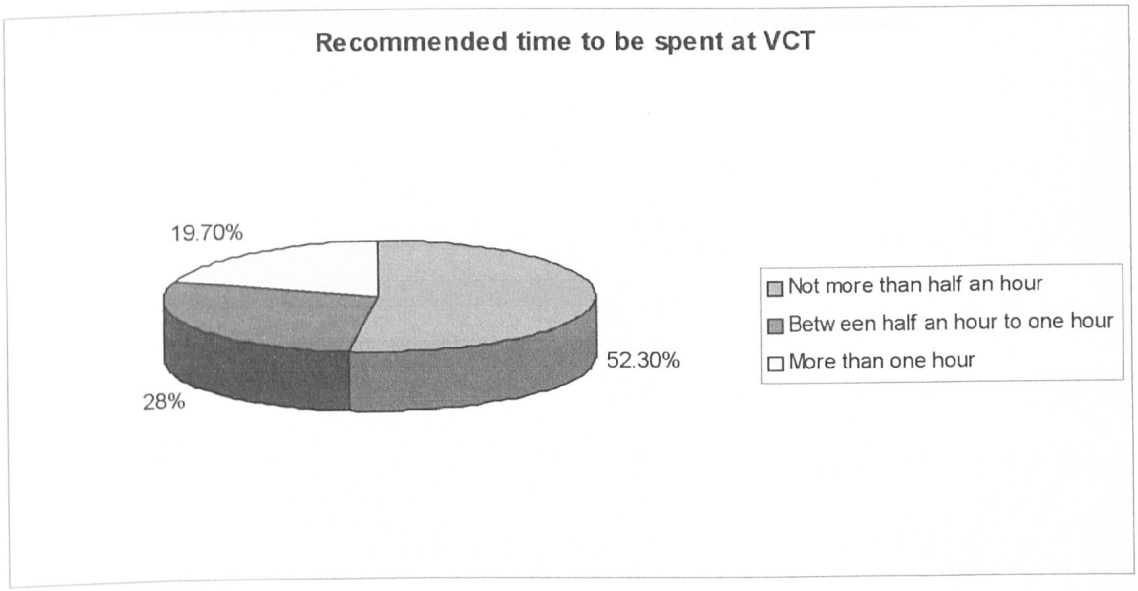

Figure 8: Distribution of respondents by recommended time to be spent at VCT as cited by 87 participants who had ever visited a VCT site.

Respondents who had ever visited a VCT site (87) were asked to suggest amount of time to be spent at VCT site from the time of arrival to the end when the person moves out with results. Figure 8 shows that, majority (52.3%) of the respondents suggest time that does not exceed half an hour, 28% of respondents suggest time of between half an hour and one hour while 19.7% suggest time of more than one hour.

Suggestions on the convenient location for VCT to enable many people to attend VCT services were mentioned by respondents who had heard about VCT. The study revealed that, 443 (84.5%) respondents suggest services to be near their homes while only 15 (2.9%) respondents preferred services to be far from their homes. The rest (12.6%) never gave preferences of location in relation to the distance from their homes.

CHAPTER 5

5. DISCUSSION

This study aimed at determining the rate of utilization of VCT services and associated factors in fishing communities in Sengerema Mwanza, Tanzania.

The study specifically assessed the proportion of people utilizing VCT services and factors influencing utilization of VCT services. Factors examined included demographic characteristics, accessibility of VCT services, perceived benefits of VCT, attitude towards VCT services and HIV infection related risk practices. Also the study looked at level of community awareness on VCT, community reasons influencing utilization of VCT and community observations and suggestions regarding VCT services.

5.1 Overall VCT services utilization

Results show that, 79 (12%) out of 658 study participants had used VCT services for HIV testing. The findings from this study indicate lower utilization rate compared to studies done in specific occupation groups comprising more educated individuals in different parts of Tanzania. For example, VCT utilization rate among primary school teachers in Mwanza, Tanzania was found to be 20% (Kakoko, 2006) and among soldiers in Tanzania Peoples Defense Force in Dar Es Salaam it was 31.3% (Mekere, 2006). On the other hand, results are much closer to 11% utilization rate observed among men in a study done in Rural Malawi (Johnson *et al*, 2005). The similarities and differences may

be explained on basis of economic and environmental conditions that may be similar for both rural and fishing communities of Malawi and Tanzania respectively while such factors are quite different if you compare rural communities with any of the specific occupation groups.

Most of the teachers and soldiers have education level higher than primary education while most of the fishing and other rural community members have primary or lower level of education. Other reasons for the difference is the ease accessibility to VCT services among soldiers in Dar Es Salaam compared to the rural community and also the low income among peasants in the rural community compared with employed groups.

5.2 VCT utilization by age and sex

5.2.1 VCT utilization by age

About 82.7% of all respondents interviewed were between 18 and 39 years of age. The highest number of study respondents interviewed was between 20 to 29 years (44.6%). The results of this study showed a tendency of utilization rate decreasing with increasing age among people aged 20 years and above. The age group 20 to 29 years presented the highest utilization rate of 14% followed by 30 – 39 years (12%) and 40 years and above (10.6%). These findings agree with the study conducted in Zambia that showed readness to utilize VCT services of 47% among the people aged 20 to 24 years compared to 18% among the people aged 40 to 49 years (Fylkesnes *et al*, 2004). These results support also findings of another study on VCT uptake among primary school

teachers in Mwanza Tanzania, which showed that teachers aged 21 to 30 years, were more likely to have voluntarily tested for HIV than older age groups (Kakoko, 2006). It was also found in the 2004/2005 Tanzania demographic health survey that the age group of 20 to 29 years were more likely to have utilized VCT services compared to other age groups.

The results above can be explained by the fact that most young individuals are highly sexually active: a factor that predisposes one to a high risk sexual behavior that in turn leads to self-perception of being at risk of HIV infection. This observation is supported also in a study done by Fylkesnes *et al* (2004) in Zambia, which found self-perceived risk of being HIV infected as the only significant factor influencing readiness to utilize VCT among the youth. On the other hand, factors like preconditions for marriage, need to become pregnant and prevention of mother to child transmission of HIV influence more the young age group to seek for VCT compared to the more aged groups.

5.2.2 VCT utilization by sex

Females and males had similar utilization rates of VCT services. This can be explained by the fact that the majority of the participants were youth, and factors influencing utilization of VCT services among youth as mentioned above apply almost equally to both males and females.

5.3 VCT utilization in relation to marital status and occupation

5.3.1 VCT utilization in relation to marital status

Utilization of VCT services was found to be independent of marital status. This indicates that, gender roles, responsibilities and decision making at family level has little influence on seeking VCT services. This differs with the observation in Uganda where by, given the male dominated decision making structure in Ugandan culture, males knowledge and value of VCT and accessibility has implication for the possibility of their wives going for HIV testing (Barongo *et al*, 2004).

5.3.2 VCT utilization in relation to occupation

This study shows the highest VCT utilization among students followed by fishermen and housewives. These findings may be due to the fact that, those who utilized VCT services are the youth who are made up in largest proportions, of students, fishermen and housewives who participated in this study. On the other hand employed staff, peasants and business makers may contain a bigger proportion of older individuals who are also less likely to utilize VCT services as described above.

5.4 VCT utilization in relation to level of education

Level of education was found to be associated with VCT utilization in that, the higher the education level from secondary education the higher the utilization of VCT services. The study revealed VCT utilization of 25.9%, 10.7% and 11.3% for education categories with post-primary education, primary education and no formal education, respectively.

These findings agree with results from other studies like, the Tanzania demographic health survey, a study on utilization of HIV VCT services among soldiers in Tanzania Peoples Defense Force in Dar Es Salaam (Mekere, 2006) and a study on voluntary HIV counseling and testing acceptance in Rakai Uganda (Matovu *et al*, 2005). All these studies indicated higher utilization of VCT services for education categories with post primary levels of education compared to primary education and no formal education.

The possible explanation related to the differences observed across levels of education is probably the way level of education has implication for the effective communication depending on the media used to communicate the message on VCT. For instance, radio is the commonest media for VCT communication, the level of education of a person may influence understanding of the message aired through the radio. Other media of communication like posters, leaflets, newspapers, billboards and books need a person with ability and interest to read. People with higher level of education are more likely to read and understand information than people with a lower level of education.

5.5 VCT services utilization by accessibility and perceived benefit

5.5.1 VCT services utilization by accessibility

Time taken to reach the nearest VCT site was also found to influence significantly utilization of VCT services. Utilization among those between one (1) hour and two (2) hours was found to be 43.8% while the utilization among those taking more than two (2) hours was 21.2%. The shorter the time taken to reach the nearest VCT site, the more

likely for one to utilize VCT services. In other words, people residing far from the VCT sites were less likely to utilize VCT services compared to people residing close to the VCT sites. The findings agree with the study findings from Mongu, western province in Zambia on factors affecting utilization of VCT that mentioned long distance to the center as one of the major reason for the failure of the VCT program (Kaliki, 2000)

The above observation may be due to poor situation of the roads, limited means of transport and high cost of transport in particular for the low-income population. Public means of transport are very limited in rural areas, and when available some people cannot afford the cost for transport. When the whole process of traveling and getting VCT services takes many hours, this may bring the issue of time constrain for the people who are busy with day to day activities struggling for their survival, and hence act as a hindering factor for the utilization of VCT services.

5.5.2 VCT services utilization by perceived benefit

When respondents were asked if they thought going for VCT services was beneficial, 97.2% felt that there is some benefit. However, only 15.5% of those who said there is benefit reported to have utilized VCT services and non-had utilized the services among those who felt there is no benefit. When respondents were asked to mention the benefits of VCT, 99% mentioned knowing one's health status, 36% mentioned prevention of HIV infection, 5.7% mentioned counseling on how to live with HIV/AIDS, five pint five percent (5.5%) mentioned referral for care and support, five point one percent (5.1%)

mentioned referral for drugs to prolong life, two point two percent (2.2%) mentioned counseling on HIV prevention and again two point two percent (2.2%) mentioned planning for the future.

These findings indicate that, despite the fact that majority of the people agree that being counseled and tested for HIV is beneficial, only a small proportion utilizes VCT services. This suggests the possibility of having some factors that hinder utilization, which may include poor accessibility of services, fear of knowing HIV positive status and stigma related to HIV infection. From the results also we find that, only two types of benefits of VCT were mentioned by more than 35% of the respondents. The other five benefits of VCT were mentioned by less than six percent (6%) of the respondents. This indicates that, despite having several benefits of VCT, only few are known to the majority of the people. Low awareness on the benefits of VCT may act as a hindering factor for the utilization of VCT.

5.6 VCT services utilization by some attitudinal characteristics

Majority (96.2%) of respondents said were willing to be tested for HIV and among them, 15.5% had utilized VCT services. Of those who were not willing to be tested for HIV, none had utilized VCT services. The big proportion of respondent willing to utilize VCT is supported by big proportion (95.6%) of people who either strongly agree or just agree to recommend VCT services to friends and family members. The observed willingness to utilize VCT services is comparable to 96.1% willingness found in a study

on acceptability of VCT among Nigerian women attending antenatal clinic in Lagos Nigeria (Ekanem *et al*, 2004).

A low utilization rate of VCT services despite a high level of willingness to utilize VCT is similar to findings in a study on attitude towards VCT among adults in rural communities in Northern Nigeria, whereby 72.3% of respondents were willing to undergo VCT and only 1.4% had utilized VCT services (Iliyasu *et al*, 2006).

The low utilization may be attributed to social implications of HIV positive test that may include considerable stigma and discriminations from friends, employers and even family members. Other hindering factors for VCT utilization include poor accessibility of the services and associated costs.

The high willingness indicates a potential demand for VCT services and thereby providing an opportunity for scaling up VCT services in rural areas and would also serve as an entry point to the HIV/AIDS prevention and care program.

Results from other attitudinal characteristics indicated that, a higher proportion (18.2%) of those who strongly agree to disclose HIV positive results had utilized VCT services compared to eight percent (8%) utilization among those who strongly disagree. There was also a higher utilization (17.7%) among those willing to disclose HIV positive results compared to those not willing to disclose HIV positive results (6.3%). This

indicates a consequence of negative attitudes towards VCT. With more health education and community sensitization on VCT it may be possible to reduce some of the negative attitudes among community members and hence improve VCT utilization.

5.7 VCT services utilization by HIV infection related risk practices

The study revealed association between history of blood transfusion in the past five years and utilization of VCT services. VCT utilization in relation to history of blood transfusion showed that, 30.4% of those who had blood transfusion and 11.4% of those who did not had blood transfusion had utilized VCT services. Individuals with history of blood transfusion were more likely to utilize VCT than people without history of blood transfusion. This finding can be explained by the fact that, most people are aware of the blood and blood containing products from a person infected with HIV as one of the main sources of HIV infection. Despite of being assured on the blood screening process, still clients would like to confirm if they were not infected through blood transfusion. There is evidence that, not all hospitals have all the necessary equipment and qualified personnel for proper screening of blood. Findings from a study done in Pakistan showed that, only 5–10% of the total blood transfusions in government hospitals were properly screened (Shouket *at al*, 1995). To ensure that there is safe blood for all health facilities in Tanzania, the government has established zonal units with modern equipments for screening of blood, these were not there before.

Most (87.5%) of the study participants had history of sexual intercourse in their last six months. Among those who had history of sexual intercourse, 29.9% had two (2) or more sexual partners (multiple sexual partners) during that period and 15.8% used condom during their last sexual intercourse. By considering having multiple sexual partners as higher risk sex, the above results may be compared with findings from 2003/2004 Tanzania HIV indicator survey, which indicated 23% of women and 46% of men that engage in higher risk sex. The study also reports 38% and 50% condom use among women and men, respectively (TACAIDS REPORT, 2003- 2005). The low condom utilization rate may be due to low knowledge and negative attitudes towards condom use.

Utilization of VCT services among respondents who had history of sexual intercourse was 12.7% while for participants without history of sexual intercourse was seven point six percent (7.6%). This may be due to perceived risk of HIV infection among the people who had history sexual intercourse compared to people without history of sexual intercourse.

5.8 Awareness on VCT services utilization and source of information on VCT

About 80.3% of respondents had heard about voluntary counseling and testing of HIV and only 42% of respondents knew the place where VCT services were available. Of those who had heard about VCT, seven point six percent (7.6%) did not know or mention any service provided at VCT, 76.4% mentioned testing blood for HIV and

51.4% mentioned counseling. None of the respondents was able to describe the steps involved in undergoing VCT (i.e. pre-test counseling, testing and post-test counseling). Some respondents mentioned incorrect VCT services such as provision of treatment (4.5%), provision of care and social support (1.7%) and distribution of condoms (0.3%).

When respondents were asked to mention their common source of information on VCT, radio came out as the most common source of information among the respondents (90.7%) followed by TV (23.4%), health workers (23.3%), newspapers (21.2%), friends (16.5%), posters (7.8%), community meetings (6.6%) and spouses (1.2%).

Though more than 90% of respondents mentioned radio as their common source of information followed by TV, only two (2) correct VCT functions were mentioned by more than 50% of the respondents (i.e. testing blood for HIV and counseling). Again a number of respondents didn't mention any VCT service and still some respondents mentioned wrong VCT functions. This may be due to the fact that, most people don't have the culture of tuning into a radio all the time when health programs are being aired. As a result of this, important messages can be missed out. Such a problem can be compounded by the fact that it is only a small proportion of community members who apparently obtain information on VCT through health workers or through discussion with friends.

5.9 Reasons influencing utilization of VCT services

5.9.1 Reasons for making decision of undergoing VCT

As elaborated in the literature review, there are many benefits of VCT that may attract a person to seek VCT services. However respondents who had utilized VCT services mentioned only few reasons. Among those who reported to have ever utilized VCT services, the most frequently mentioned reasons were the need to know one's own health status (45.6%), followed by the need to plan for becoming pregnant (22.8%) and planning to get married (16.5%). Other reasons mentioned by six point three percent (6.3%) of study respondent included observed signs and symptoms of HIV/AIDS, need for treatments (ART) and advice from friends.

The primary objective of VCT is to prevent the spread of HIV infection. However, nobody mentioned the need to know status in order to change behavior or in case found HIV positive to avoid infecting other people. This indicates low knowledge on the benefits of VCT services among adults in the fishing communities.

Findings from this study differ from those in a study done in Kawepe Uganda whereby, the two major factors ranked highest to motivate a woman to seek HIV test were signs and symptoms of HIV AIDS (92%) and availability of support services after HIV testing (87%), (Barongo *et al*, 2004). Moreover, these reasons were mentioned in higher proportions among respondents in the Uganda study compared to those in this study.

This disparity can be explained by a possible difference in level of knowledge on VCT between the two communities in reference, with the Uganda community being more aware than the fishing community in the present study. All stakeholders for HIV/AIDS program should think of strategies that will help to increase knowledge and awareness on VCT among different populations in our communities.

5.9.2 Reasons for not undergoing VCT

The following reasons were reported by the respondents who had not utilized VCT services as constraining factors towards access and use of VCT services: location of VCT centers being too far away from homes (86%), fear of knowing HIV positive status (6.2%), high cost of VCT services (5%), fear of the consequence of being stigmatized and discriminated if found to have tested positive (1.2%). Other reasons stated in smaller proportions included being known by some one who works at a VCT centre, and fear of a spouse. Currently, Sengerema district has only one VCT center, located at the district hospital. Clients from fishing communities who need VCT services have to cover not less than 20 km to reach the VCT site. Long distances imply spending long hours on the way before reaching the destination and in most cases they go also with other costs such as spending on food and accommodation, for instance. Thus, it is no wonder that long distance comes out as the most outstanding constraining factor for utilization of VCT services.

5.10 Quality of VCT services and suggestions on how to improve VCT

Quality of the VCT services, as perceived by clients, was also explored among the 87 study participants who reported to have ever utilized the services. Only one point one percent (1.1%) of the respondents had the perception that the services were unsatisfactory in terms of the VCT staff being friendly, caring for and helping clients appropriately. Likewise, more than 95% of the respondents felt that counselors do observe confidentiality and that the location of the VCT rooms provides enough privacy. Regarding waiting time, majority (about 88%) of the respondents were of the opinion that it was reasonable and that the days and hours of opening for the services were also generally convenient.

Despite having a small number of VCT sites in place, the above findings suggest that clients are satisfied with the quality of VCT services that are being provided at our VCT centers. This should be taken as a motivation to ensure that the good quality of services is maintained even when more VCT sites will be established in different areas in both rural and urban setting. There is no system that can purely operate without weaknesses; a small proportion of comments on the negative aspects of VCT services also should be taken into consideration in order to find a room for more improvement of our VCT services.

On the aspect of cost, just over a half (52.2%) of the respondents were not sure on whether there are fees to be paid for VCT services, while 39.8% said there were no fees

and only eight percent (8%) said clients has to pay some fees for the services. Among those who said clients had to pay fees, nearly 55% regarded the fees to be either just high or very high, while the rest were of the view that the fees are well affordable. The above findings regarding the cost of VCT services reflect an element of the fee charging pattern in the provision of the VCT services. VCT services at Government units have always been free of charge, but in places where non-governmental institutions provide VCT services, clients are sometimes required to pay service fees. Cost has been reported in several studies as a hindering factor for VCT services in particular for the areas with low income. For example, a study by Oduwole *et al*, (2005) in Sagamu Nigeria, showed that utilization of VCT services dropped by almost 50% following the introduction of user fees.

Respondents made some suggestions regarding VCT services. Majority of the respondents (52.3%) felt that it would be a facilitating factor if a client got served within half an hour on registering at a VCT centre. This again is another challenge for the service provider to ensure the waiting time is made as short as possible. This should be possible if, for instance, more qualified counselors and other staff are available to provide the services

CHAPTER 6

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

Utilization of VCT services in fishing communities is still low. Factors that significantly influence utilization of VCT services in fishing communities include level of education whereby participants with secondary education and above are more likely to utilize VCT services compared to other education categories, time taken to reach the nearest VCT site where by the shorter the time taken to reach the nearest VCT site the more likely the one to utilize VCT services and history of blood transfusion in the past five years whereby individuals with history of blood transfusion are more likely to utilize VCT services than those with no history of blood transfusion.

From this study finding, several factors contributed to low utilization of VCT services in fishing communities though didn't show significant association with utilization of VCT services. Such factors include; individuals with older age presented with the lower utilization rate compared to young age groups, individuals with negative attitudes towards VCT (i.e. strongly disagree to disclose HIV test result, strongly disagree to recommend VCT to friend or relative and no willingness to utilize VCT services) had low utilization compared to individuals with positive attitudes and individuals with no past history of HIV infection risk practices (i.e. no past history of sexual intercourse and

no past history of multiple sexual partners) had low utilization of VCT services compared to individuals with past history of HIV infection risk practices.

Majority of the respondents (80.3%) said they had heard about VCT while only 42% knew the place where VCT services were available. Among the respondents, 90.7% mention radio as their source of information. When respondent who had heard about VCT were asked to mention services provided at VCT, 7.6% did not know or mention any service and some mentioned incorrect VCT services. For those who mentioned correct VCT functions like counseling and testing blood, no body including those who had tested for HIV mention the complete process from pretest counseling, testing and post test counseling.

Knowing own HIV status was the most frequently mentioned reason for making decision of undergoing VCT while VCT centers being located too far away from home was the most frequently mentioned hindering factor for undergoing VCT.

More than 88% of respondents who had visited a VCT site were happy with all the aspects related to the quality of VCT services. However about 54.9% of the respondents who mentioned that clients had to pay fees for VCT services, regarded the fees as being either too high or just high.

Majority of respondents (52.3%) suggest the process of VCT including waiting time not to exceed half an hour. Equally important is the suggestion by about 84.5% of the respondents that, VCT services should be made available within reasonable distances from peoples' residences.

6.2 Recommendations

From the study findings and in recognition of the progress made so far in prevention and control HIV/AIDS, the following recommendations suggest actions that could further emphasize the need for increase in utilization of VCT services:

- VCT centers should be within accessible distances and convenient locations. In places where VCT centers cannot be established soon, a program for mobile VCT services should be considered and effected.
- Adequate number of service providers should be deployed at the VCT centers to minimize the time the client stay waiting for services.
- The government should cover all the cost involved in VCT services to enable provision of free VCT services by both government and non-government institutions.
- Establish and strengthen the existing VCT campaign programs to cover all categories of age, sex and education levels in both urban and rural communities in order to improve knowledge and awareness of community members on VCT.
- Sensitization programs on VCT should involve the community from the stage of developing the message up to implementation and evaluation. Community members may participate as peer educators after undergoing training.

► Communities and families should be sensitized to avoid stigma and discrimination towards HIV positive clients.

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