

**FACTORS AFFECTING UPTAKE OF VOLUNTARY
COUNSELING AND TESTING SERVICES AMONG YOUTH IN
RUKUNGIRI DISTRICT, UGANDA**

By

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**Dissertation submitted to Makerere University School of Public
Health in partial fulfillment for the Award of the Degree of Master of
Public Health**

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DECLARATION

I, Mwenyango Irene, declare that all the work presented in this dissertation is my original work unless otherwise acknowledged. It has never been submitted either in part or in full for publication or award of a degree in any other University. I henceforth present it for the award of the degree of Master of Public Health of Makerere University Kampala, Uganda.

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DEDICATION

This book is specially dedicated to my mother Margaret Kironde and my sisters who encouraged and ensured I attained the education.

I also dedicate this work to husband John Baptist, our children William, Martin and Gabriella for all the support and sacrifice that I will always cherish

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ART	Anti –Retroviral Therapy
DHO	District Health Office
FGD	Focus Group Discussion
FHI	Family Health International
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HSD	Health Sub-District
STD	Sexually Transmitted Diseases
UBOS	Uganda Bureau of Statistics
UDHS	Uganda Demographic and Health Survey
UNDP	United Nations Development Program
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations Children’s fund
UPHOLD	Uganda Program for Human and Holistic Development
VCT	Voluntary Counseling and Testing
WHO	World Health Organization
YFS	Youth Friendly Services
LC	Local council
HC	Health centre

OPERATIONAL DEFINITIONS

Confidentiality - obligation not to reveal youth HIV test results of a youth without his/her consent

Discrimination – is an action that results from stigma. It occurs when a distinction is made against persons that result in their being treated unfairly on the basis of HIV/AIDS status. This does not only occur to the infected persons but also to their families, relatives and friends.

Informed consent - an agreement the youth makes with the service provider or researcher after having received and understood the purpose of the procedure or the exchange of information.

Post-test counseling- a discussion held between a provider and a youth with the aim of informing the youth of their HIV test results and assisting them to cope with the results. The discussion consists of giving the test results, assessing the youth's emotional and mental understanding of the results and making plans for care.

Pre-test counseling- a discussion held between a provider and youth aimed at preparing the youth for the HIV test. It consists of clarifying the youth's knowledge about HIV/AIDS, informing the youth about the test procedures and how HIV test results are managed, preparing the youth for the outcome of the test, assisting them to make a decision about testing , obtaining the informed consent of the youth and counseling about safer sex.

Stigma – Stigma refers to the negative thoughts about a person or group based on prejudiced.

Voluntary Counseling and Testing - Process whereby a person undergoes counseling to enable him/her make an informed choice about being tested for HIV. This decision must be entirely the choice of the individual and must be assured that the process is confidential.

Youth - Any persons aged between 15-24 years, (MoH, 2004)

ABSTRACT

Introduction: Globally 10 million youth are living with HIV with an estimated 2.5 million new HIV infections occurring each year, 63% live in sub Saharan Africa. Uganda has about 1 million people living with HIV/AIDS; the prevalence of HIV among youth is 6.7%-9.0% in females and 2.6%-5.0% in male youths. In Rukungiri district HIV prevalence is 11.7%, HIV Voluntary Counseling and Testing uptake among the youth is still poor at 2% and the factors responsible for this low uptake are not entirely clear.

Objective: To explore uptake of Voluntary HIV Counseling and Testing among youth in Rukungiri.

Methods: This was a cross sectional study conducted in Rukungiri district employing both quantitative and qualitative methods of data collection. Multistage sampling at sub-county, parish and village levels was used to select study subjects. A total of 288 youths were interviewed. Semi structured questionnaires were used for quantitative data and FGD guide for qualitative data. Data was coded, entered and analyzed using Epi-info 3.2.2 version and SPSS soft ware. Univariate analysis was carried out and descriptions of respondents made. Bivariable analysis was done for associations between independent and dependent variables. Odds ratios were used to determine the associations at 95% confidence interval. Multi-variable analysis was applied to variables that were significant after bivariable analysis. Since some of the independent variables were nominal and others numeric with a binary outcome variable logistic regression model was used in order to identify independent variables that are significant while controlling for confounding and checking for effect modification. Master sheet analysis was used for the qualitative data.

Results: The study showed that 25% of the youth, comprising 12.8% of female and 12.2% of male respondents had taken an HIV test. Factors associated with uptake of voluntary counseling and testing were having knowledge of place where VCT service are offered (OR=13.7, 95% CI 1.20-158.1, $p=0.035$), the distance to the nearest health facility (OR =2.2, 95% CI 1.1 - 4.3, $p=0.024$), youth with informal employment (OR= 4.0, 95% CI 1.2 - 13.2, $p=0.02$) and peers encouragement (OR= 6.7, 95% CI 3.2-14.1, $p=0.000$)

Conclusions: A quarter of the youth in the district have had voluntary counseling and testing services and factors that promote uptake include awareness of place and proximity, encouragement by peers and employment status.

Recommendations: The DHT should develop information education communication materials and use local media to increase awareness of the service and offer VCT outreach services to target in schools and out of school youths. Youths should encourage peers to go for voluntary counseling and testing.

The DHT should train peers and facilitate peer groups and have refresher courses to the counselors on VCT, to enable them offer youth friendly services.

CHAPTER ONE

1.0 Introduction and Background

1.1 Introduction

Worldwide, 10 million (5.8%) youths are living with HIV with an estimated 2.5 million (1.5%) new HIV infections annually and 6,000 new infections daily (FHI, 2005).

HIV/AIDS is a threat to society and especially the youth because it is among the commonest health problems in the area of sexual and reproductive health in the world today, and is a major cause of morbidity and mortality among the young (WHO, 2000).

HIV/ AIDS is the leading cause of death in African-American youth and at least 25% of all new HIV infections are people under 21 years (UNAIDS, 2005). Africa alone has an estimated 1.7 million young people infected annually. 63% of the youth living with HIV are in sub Saharan Africa (UNICEF/ UNAIDS, 2003). Preventing HIV infection among youth is particularly urgent in sub-Saharan Africa where in many countries young people comprise more than 30% of the population and the general HIV prevalence rates exceeds 10%.

Uganda has about 1 million people living with HIV/AIDS, a total of 132,500 Ugandans get infected with HIV annually and the prevalence is now at about 6.7% (UNAIDS, 2006). The prevalence of HIV among youth ranges between 6.7%-9.0% in females and between 2.6%-5.0% in males (UNAIDS, 2000) and youth begin to have sexual encounter at a relatively early age with 32% of females and 29% of males having had sex before age 15 (UDHS, 2006).

Youth are of particular importance with respect to HIV/AIDS not only because they are at risk for infection, but also because it is during this period of life when many behavior patterns are established that will affect their risk of HIV infection throughout their adult years.

To date there is no cure for HIV/AIDS and prevention still remains the main strategy for combating HIV/AIDS. Many approaches to HIV prevention and care require people to know their HIV status. In many low and middle income countries, the primary model for HIV testing has been of client-initiated VCT (WHO, 2004). The provision of voluntary confidential counseling and testing is first and foremost based on the intent that everyone who wishes to has a right to know the test result, and that services are provided on confidential basis (Temmerman et al., 1997).

Voluntary Counseling and Testing (VCT) presents an entry point for important intervention opportunities in terms of prevention, support and medical care (Lippincott & Wilkins, 1999)

Voluntary Counseling and Testing is HIV testing provided to individuals who seek the service out of their own will without any coercion. A health provider, sexual partner or friend may refer these persons, or they may have learned of the service through hearsay or public media. The emphasis is that the person makes their conscious decision to seek the service without coercion; this can be an effective behavior-change intervention since it offers a holistic approach that can address HIV in the broader context of peoples' lives, including the context of poverty and its relationship to risk practice (Boswell & Baggaley, 2002). Youth particularly those still in their teens are underrepresented among those accessing VCT services (McCauley, 2004), in spite of most HIV infections being estimated to occur among young people 15–24years (UNAIDS, 2004). Young people require special attention to their needs through the provision of confidential youth friendly health services.

1.2 Background

In 1991, Uganda established a National AIDS Control Program and National Surveillance system within the same year the first AIDS Information Center (AIC) for anonymous VCT was opened in Kampala. The AIDS Information Centre has since then reported an increase in the number of youth seeking VCT, especially for pre-marital testing (Gumisiriza et al., 1996). AIC pioneered providing same day results using rapid HIV tests as well as the concept of post test clubs to provide long term support for behavior change to anyone who had been tested, regardless of serostatus (WHO/GPA, 1989&1995).

The AIDS Information Center grew from one site in 1991 to 51 sites by 2001. In 2001 the site was stationed in Mbarara but extending it's VCT services to Rukungiri, with a cumulative total of more than 500,000 clients.

In 2002, VCT services in Rukungiri had reached to the 2 hospitals of Nyakibale and Kisiizi and the services were paid for however the AIDS Information Centre would provide outreach services at Rukungiri Health Centre once a month.

In September 2003 the component of youth friendly services started at Rukungiri HCIII in Town Council and it would support HIV patients in various aspects.

Latter 7 facilities (including hospitals and Health Centre IVs) VCT sites were established by HIV/AIDS Integrated Model for district project, AIDS Information Centre and Ministry of Health as part of the strategic plan for Rukungiri district to reduce on the HIV prevalence.

In August 2007, Uganda Program for Human and Holistic Development started supporting 6 health units of Buhunga, Kebisoni, Bugangari, Buyanja, Bwambara and Rukungiri HCIII with Voluntary Counseling and Testing services in the district.

CHAPTER TWO

2.0 Literature review

Voluntary counseling and testing facilitates early referral for care and support of HIV-infected individuals and is an effective method of preventing infection. Provision of voluntary confidential counseling and testing is an entry point to other HIV services and an opportunity for individuals to learn their HIV status, and knowledge about accurate risk perceptions thereby encouraging safer behaviors therefore testing and counseling must be scaled up for universal access (UNDP, 2007).

Counseling, both before and after the test distinguishes VCT from other HIV testing services. HIV testing must be voluntary, the decision to test or not to test being based on an understanding of accurate, objective and relevant information; post-test counseling & services are crucial; confidentiality must be protected; non-discrimination in service delivery is critical. The provision of voluntary confidential counseling and testing is first and foremost based on the intent that everyone who wishes to has a right to know the test result, knowledge of HIV serostatus has been advocated as a prerequisite for access to support and care (Zoysa et al., 1995) and increasingly as a prevention measure in its own right (Summers et al., 2000; Cock et al., 2002, 2003). It can motivate an individual to practice safer sexual behavior thereafter avoiding transmitting the virus to others (UDHS, 2006).

A study done in Zimbabwe on lifetime uptake of VCT showed that knowledge of HIV , increasing education and age were associated with VCT uptake with an increase from under 6% to 11% at follow-up. Women who took a test were more likely to be HIV positive and to have greater HIV knowledge and fewer total lifetime partners; sexual behavior was not independently associated with VCT uptake. Motivation for VCT uptake was driven by knowledge and education rather than sexual risk (Sherr et al., 2007).

Voluntary counseling and testing services can result in positive behavior change including a decrease in unprotected sexual intercourse (Youth net, 2007). It is part of health seeking behavior which refers to those entire things humans do to prevent diseases and to detect diseases in asymptomatic stages or even when they become symptomatic to seek care.

In many countries, young people actively seek VCT. However patterns of health service use differ, for instance young people in industrialized nations often do not attend formal health services for reproductive health and STI/HIV health services (Mirza et al., 1998) for their preventive health needs where as in some developing countries like in Zambia Kara clinic there are increasing number of youth seeking VCT, especially in the context of premarital testing (Chama & Kayawe 2000; UNAIDS, 2002). Marital status has also been found to affect uptake of HIV/AIDS health care services. In a study carried out in Bushenyi District, South western Uganda by Nuwaha et al., 2002, it was found that sexual partner influence were among the factors that affected acceptability of VCT for HIV the same was found in other studies however the decision to undertake VCT was mainly a personal decision though it was also influenced by other people such as spouses, sexual partners and prospective marriage partners.

Several studies have been carried out to establish the relationship between uptake of VCT with age; a randomized trial conducted in Zambia on acceptability of voluntary counseling and testing revealed that acceptability varied greatly with age with about 47% of the respondents in the young age group of 20-24years accepting to take VCT services compared to only 18% of those in age group of 40-49 years (Fylkensnes et al., 2004).

Voluntary counseling and testing services should be accessible, unrestricted by geography, economic, social and cultural or language barriers. Geographic access may be measured by modes of transport, distance, travel time and any other physical barriers that could keep the client from receiving the services. Social or cultural access relates to service acceptability within the context of the clients' cultural values, beliefs and attitudes (Lori et al., 1999). Studies conducted revealed that Stigma, fear of receiving an HIV-positive status, lack of confidentiality, long distances to VCT sites, and long delays in returning HIV test results limit people's access to VCT services (Matovu et al., 2007).

2.1 Benefits of Voluntary counseling and testing

High quality voluntary counseling and testing not only enables and encourages people with HIV to access appropriate care but has been demonstrated to be effective in HIV prevention. Research over the last decade has demonstrated the public health benefit of VCT in terms of reductions in risk behavior that are both significant and cost effective (Marks & Crepaz, 2001; Sweat et al., 2000; Forsythe et al., 2002). Studies of VCT impact among youth in the United States do provide evidence that some youth adopt safe behaviors after testing. Although the U.S. studies often focus on high-risk individuals such as drug-users, runaways, and those in high-prevalence areas, they do look at the behavior of young people.

In Lusaka, Zambia it was also reported that most people found VCT a useful experience, particularly in making decisions on sexual behavior; sero-positive people valued the role of VCT in helping them cope with their status and its link to support services while sero negative people valued the assistance that VCT provided in remaining sero-negative.

The importance of VCT for both prevention and care is increasingly recognized which includes prevention of HIV transmission from positive tested people to un-tested, mother to child; prevention of HIV acquisition by negative tested people from positive or untested partners leading to early and appropriate uptake of service for both positive-tested and negative-tested people.

Voluntary counseling and testing is the platform for facilitating early management of HIV-related infections and STIs, identifying the need for prophylaxis and effective use of HIV antiretroviral therapy, medical care, family planning, emotional care, counseling for positive living, social support, improved coping and planning for the future.

Societal benefits like challenging stigma, promoting awareness, supporting human rights enabling psychosocial support through referral to social and peer support groups increases the visibility of HIV in the communities. This fosters the enhancement of destigmatisation of those with HIV/AIDS (WHO, 2004).

2.2 Youth friendly VCT services

According to young people “Youth friendly services’ means that the counselor will not scold them for being sexually active or be judgmental (Juma et al., 2004c; Likwelile, 2004). A study conducted among adolescents in Mpigi District of Uganda revealed that many of the males and females were interested in HIV testing but concerned about confidentiality, the testing process, the accuracy of test results, and the cost of VCT services (Bohmer & Kirumira, 1997). This was similar to a study carried out in Zambia which found that privacy and service quality were also important to youth and they stressed the need for privacy in testing and the availability of complete and accurate information (UNAIDS 2002).

Among surveyed youth (14 to 21), in Kenya and Uganda, 41 percent of untested youth and 38 percent of tested youth reported that they would prefer to test at a youth friendly facility rather than at adult facility, where they might encounter adults they know (Horizons, 2001). Youth also want staff who are kind and who understand youth issues. Untested Kenyan and Ugandan youth wanted to be sure that they saw qualified staff that used reliable testing equipment. Youth want counselors who can give them accurate information in a friendly way.

In Ugandan clinics, tested youth participating in exit interviews rated the skills and friendliness of the providers as what they liked most about the VCT service. They mentioned long waits as what they liked least, and reported that the wait as each person received their results privately was a particularly stressful time (Juma et al., 2002; Kirumira et al., 2003).

2.3 Barriers to seeking Voluntary Counseling and Testing

According to Boswell 2002, barriers to VCT for young people include availability and acceptability of services, including waiting time, costs and pressure by health staff to notify partners, worries about confidentiality and fears that results would be shared with parent(s) or partner(s). Inaccurate risk perception, fear of being labeled and stigmatized by their families, friends and communities perceptions of the consequences of living with HIV ,inadequate responses from health care providers, including counselors, to effectively meet the HIV prevention, care and support needs of youth.

AIDS related stigma is another factor that probably influences seeking VCT as indicated by a study done in South Africa. Stigmatizing beliefs about AIDS and their associated fears of discrimination can influence decisions to seek HIV testing and HIV treatment services (Kalichman & Simbay, 2003).

In a report by International information support centre on implementing HIV testing for individuals revealed that costs affected whether or not people sought HIV counseling and testing. Deborah & Rachel, 2002 found that barriers to VCT for the young people included costs attached to the services which was similar to a study conducted by Nuwaha et al., 2002 in Bushenyi district which found cost and physical accessibility of VCT services was among the factors that influenced acceptability of HIV testing.

A study carried out by Matoro et al., 2002 found that health-seeking behavior of youth with regard to VCT was low mainly because of different kinds of fear, this is similar to a survey done among urban youth in Kampala Uganda, which revealed that only 9% were involved in VCT activities although 81% of youth 16-28 had ever heard of VCT (Muganzi et al, 2002). This was due to being scared of results, fear of psychological effects and stigma which is in agreement with a study carried out in South Africa that indicated only one in five people who know about VCT have been tested for HIV however the reasons that South Africans gave for not seeking HIV testing were negative perceptions of testing services (Kalichman, 2003).This study explored why there is still low VCT uptake in the district despite the availability of youth friendly services.

Research conducted by Horizons and partners, 2001 revealed that social relationships, including family interactions may influence young people's decisions regarding HIV testing (Denison et al., 2006) but doesn't consider how factors at the individual, relational, and environmental levels interact and influence adolescent test-taking behaviors. This study attempted to explore this area.

A study in Zimbabwe revealed that young people are less likely to ask questions about these issues without prompting, appear more embarrassed and shy to talk about sexual matters and they have concerns about privacy and confidentiality in counseling situation (Kim et al., 1997). There seems to be mixed feelings in communities regarding the value of VCT (Kayawe et al., 1998). There is lack of qualitative information about young people's attitude to VCT for HIV in East Africa (Amuyunzu-Myamongo et al., 2005). Thus whether or not a youth seeks treatment with the appropriate providers and at the appropriate time depends on various factors, including the client's socio-economic status, perceived severity of illness and symptom recognition, distance and physical access, and perceived quality and cost of health service provision (Tipping 1995).

CHAPTER THREE

3.0 Problem statement, Justification, Conceptual framework

3.1 Problem statement

In Rukungiri district there are 13 facilities offering HIV voluntary counseling and testing however, uptake of the service among both female and male youths is still poor at 2% (District work plan, 2002/07) compared to the national average of 14% among female youth and 11% among the young men (UBHS, 2004/5).

The factors responsible for this low uptake of the service among the youth are not entirely clear. Whereas several studies have been carried out, few have targeted youth and some have shown that even when health care is available, there are other factors apart from access that influence uptake: therefore this study seeks to determine factors that affect uptake among youth in the district despite the efforts to mitigate HIV/AIDS. HIV/AIDS is among the top 10 causes of morbidity and mortality in the district second only to malaria and contributes 17.5% of mortality (DHO, 2005). Youth contribute 20% of the total population with an HIV prevalence of 11.7% compared to the national average of 6.7% (UDHS, 2006) and the region average of 5.9% (UBHS, 2004/5).

In an attempt to mitigate the effects of HIV/AIDS, the district came up with HIV/AIDS strategic plan, which includes offering VCT in 6 health units of Bugangari HCIV, Kebisoni HCIV, Rukungiri HC III, Buyanja HC IV, Buhunga HC IV and Bwambara HCIII. HIV counseling and testing Outreaches were conducted in 7 sub counties of Rukungiri Town Council, Kagunga, Kebisoni, Bugangari, Bwambara, Buyanja and Buhunga and to provide counseling and testing in static sites and facilitating post-test clubs to promote HCT/VCT and fight stigma among the communities through music, dance and drama. Several impacts of the epidemic have been documented.

The number of orphans, widows and widowers has increased because of HIV/AIDS. There is reduced productivity as a result of time spent while in hospital and looking after the orphans and caring for those who are suffering from the disease.

Some studies have shown that even when healthcare is available it is not utilized optimally which indicates that there are other factors apart from availability that influence uptake. Whereas several studies have been done few or none has targeted youth hence this study seeks to explore factors that affect uptake among youth in the district.

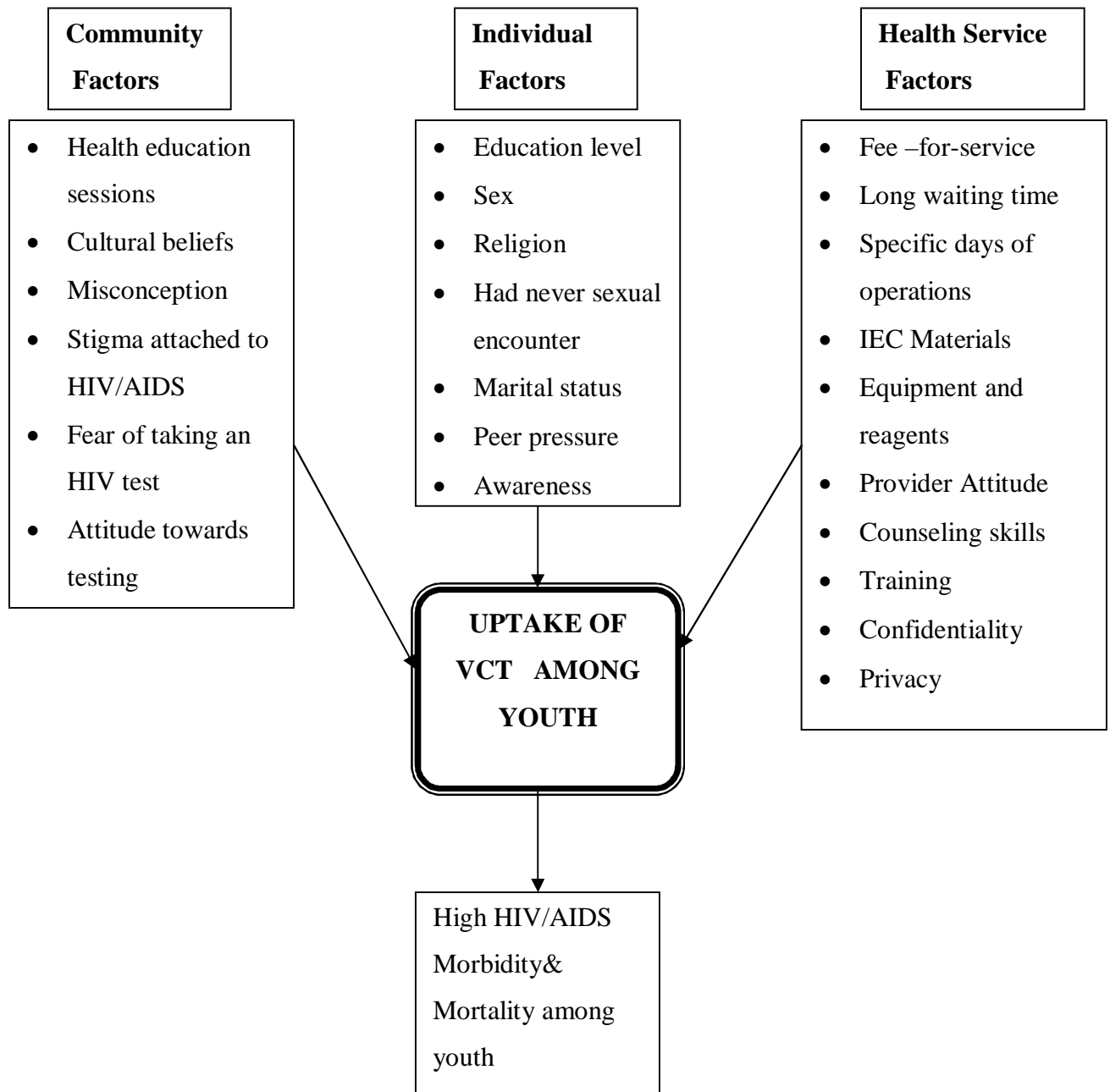
3.2 Justification

Nearly half of all new HIV infections worldwide occur in youth (Ross et al., 2006). Nationally youth are targeted to reduce the disease burden through strategies such as voluntary counseling testing, improve negotiating skills for safer sex and reduce transactional cross –generation sex .This group, particularly those still in their teens, have been underrepresented among those accessing VCT services.

The study will generate information about factors that influence voluntary counseling and testing by youth. The recommendations will help identify areas where interventions may be most successful in increasing the uptake and impact of VCT among youth, so as to reduce on the burden of HIV/AIDS among youth in Rukungiri district.

Service delivery organizations in Uganda will be availed with the findings of the study to design VCT programs that are youth-friendly and provide high-quality voluntary counseling and testing.

3.3 Conceptual frame work of uptake of VCT services among youth



Conceptual frame work

The framework highlights the Individual factors, Community factors and Health service factors that affect uptake of VCT services among the youth.

The community factors such as stigmatization, cultural beliefs and misconceptions may negatively influence youth uptake of VCT services. This may be influenced by service delivery factors like counselors attitudes, waiting time, equipment, costs and specific days of operation and the individual characteristics like education level, sex, awareness and peer influence that could affect Uptake of VCT among youth. This low VCT uptake will result in increased HIV/AIDS morbidity and mortality among the youth.

3.4. Research Questions

1. What individual factors influence VCT uptake among youth?
2. What is the community's attitude towards youth VCT uptake in Rukungiri district?
3. What are the health service related barriers to VCT uptake by the youth in Rukungiri District?

CHAPTER FOUR

4.0. Objectives

4.1 General objective

To determine factors affecting uptake of voluntary counseling and testing among youth in Rukungiri District.

4.2 Specific objective

1. To determine individual factors affecting uptake of HIV voluntary counseling and testing among youth.
2. To determine community factors as perceived by youth that affect uptake of voluntary counseling and testing among youth.
3. To identify health services barriers as perceived by youth that affect uptake of HIV voluntary counseling and testing among youth.

CHAPTER FIVE

5.0. Methodology

5.1 Study area

The study was conducted in Rukungiri District, located in south western Uganda. It borders the district of Ntungamo in the east, Kabale in the south, Bushenyi in the north and Kanungu to the west about 400kms from Kampala the capital city of Uganda.

The District has a total area of 1,524.28sqkms, has 2 counties of Rujumbura and Rubabo, 11 sub-counties, 77 parishes and 825 villages. The total population according to the 2002 Uganda population and census report is 275,162 people disaggregated as 131,052 males and 144,110 females. The population density is 192 persons/ Sq. km with a growth rate of 1.5. The proportion of young people is 44. 1 percent of the total population, youth 15-24 constituted 20.1 percent.

Health care in the district for both rural and urban population is provided by two private hospitals, namely Nyakibale and Kisiizi and 60 public Health centers, 17 clinics and 27 drug shops. VCT is carried out in 6 health units of Bugangari HCIV, Kebisoni HCIV, Rukungiri HC III, Buyanja HC IV, Buhunga HC IV and Bwambara HCIII and the outreaches were conducted in 7 sub counties of Rukungiri Town Council, Kagunga, Kebisoni, Bugangari, Bwambara, Buyanja and Buhunga: all services are public.

The Public Health Service has 12doctors, 117nurses and 137 health staff of other categories (Rukungiri DHO, 2002).

5.2. Study design

The design of the study was a cross-sectional study employing both qualitative and quantitative techniques of data collection.

5.3. Study population

The study population was youth between 15-24 years residing in Rukungiri District.

5.3.1 Inclusion criteria

Youth in and out of school and are residents of Rukungiri District for over a year.

5.3.2 Exclusion criteria

Youth whose parents/ guardians were not around for consent and are below 18 years.

Youth who are residents of Rukungiri for over a year and were found too sick to be interviewed.

5.4. Sample size determination

Using S. Bennet et al (1991)

$$C = \frac{P(1-P)D}{\delta^2 b}$$

$$C = \frac{PQD}{\delta^2 b} \quad \text{Where } Q = 1-P$$

C = number of clusters needed (local council village was taken as a cluster).

P = Estimated prevalence of VCT uptake among the youth [17.4% is prevalence of VCT obtained from a study carried out in Bushenyi by Nuwaha et al., 2005]

D = Design effect, representing the effect of the cluster sampling to variation due to simple random sampling for the same sample size.

$$= 1 + p(b-1)$$

b = number of respondents selected in the cluster.

$$Q = 1 - P$$

$$Q = 1 - 0.174$$

$$Q = 0.826$$

δ = Maximum error the investigator is willing to allow, between the estimated prevalence of VCT uptake and the true prevalence of VCT uptake in the population. (2.5%)

Calculation of design effect

$$= 1 + p(b-1)$$

$$= 1 + 0.01(10-1)$$

$$= 1.09$$

~ 1.1 (The study done reports that the design effect tends to equal to 1 by Ferrinho et al., 1992)

$$C = \frac{0.174 \times 0.826 \times 1.1}{0.025 \times 0.025 \times 10}$$

$$= 25.29$$

$$C \sim 26$$

$$n = C \times b$$

$$n = 260 \text{ youth.}$$

With a 10% non-response, a total of 288 youth were interviewed.

5.5. Sampling procedure

5.5.1 Quantitative

Three sub-counties were purposively selected which included: Bugangari, Kebisoni, and Buhunga because they have been offering VCT services at all their Health centre IVs. Three parishes were randomly selected from each sub-county. A total of 9 parishes were selected. A list of parishes in each of the above sub-counties was written; the parishes were written on same sized pieces of paper and put in different boxes. Using simple random sampling with replacement 3 parishes per sub-county were selected from the boxes.

Three villages were randomly selected from each parish. A list of villages in each of the selected parishes was obtained and each was written on an equal sized piece of paper. The three villages per parish were selected using simple random sampling with replacement.

Household were selected with the help of Local Council 1 chairman, the total of all households in the villages was obtained. Using probability proportionate to size the expected number of households with youth in a given village was obtained.

Then using simple random sampling the households were selected and a household that didn't have an eligible youth was skipped.

Where 2 youth who fit the eligibility criteria from a household existed both were interviewed except for a couple living together only one was interviewed after tossing a coin.

5.5.2 Qualitative

Four focus group discussions were conducted from Rukungiri Town Council villages. The local council leaders invited all youth to a community centre and those who were the eligible were asked to remain for the FDG and the FDGs were conducted in community centre hall. They were stratified by age and comprised of 2 groups of females and 2 of males. Each group consisted of 8 people of 15-19 age groups, and the other two groups (male and female) 20-24 years. Two of DHT members who were trained were the moderator and note taker, tape recording was done to ensure all is captured at the end of the sessions. The principal investigator was involved and ensured that sessions were focused and some notes were taken to harmonize with the note taker.

5.7. Study variable

5.7.1 Dependent variable

Voluntary Counseling and Testing uptake.

5.7.2 Independent variable

- Individual factors like age, religion, sex, education level, occupation, level of awareness, peer pressure.
- Community factors as perceived by the youth like cultural beliefs, Stigma and fear of taking an HIV test.
- Health service barriers as perceived by the youth like Health education sessions, Provider attitude and Poor counseling skills and confidentiality observed, availability of IEC materials , privacy at the health facility, specific working days.

5.8. Data Collection

5.8.1 Data collection procedures

The local council chairmen were seen before beginning a village and their houses considered the 1st household and a pen was spin to determine the direction to take for the next household. Questionnaires were administered by interviewers. The guardian for the minors interviewed were asked for consent and the tools were not capturing any names of the youth, interviews were in a private place like under a tree to avoid interference by other house members. Research assistants were supervised by the principal investigator.

Focus Group Discussions comprising of male and female youths from selected house holds in Town council sub-county were conducted. Discussions were tape-recorded, transcribed and translated from local language into English.

Each FGD had a moderator (to guide and lead the discussion) and a scribe to take notes verbatim.

5.8.2 Data collection Tools

Semi structured questionnaires were used for collecting quantitative data while, FGD guides were used for collecting qualitative data. Data collection tools were translated into the local language and translation back into English by people without prior knowledge of the instrument. This helped in checking whether the original meaning of the questions in the instrument was maintained when the questionnaire was administered in the local language.

5.9 Quality control

5.9.1 Pre-testing of the Tool

Pre-testing of the questionnaire was done for a day in Nyakagyeme sub-county under the guidance of the local council leader (Secretary for works) and the assistance the youth representative of the sub-county as well as the principle investigator

Nyakagyeme sub-county was selected because it was not among the sub- counties where the study was to be conducted and it has not been having Voluntary Counseling and Testing facility until about 6 months ago.

Thirty households were visited about 10% of the total questionnaires were pre-tested the tool was adjusted according to the response by the youth at the various households in the different parishes of Nyakagyeme sub-county.

5.9.2 Training of research assistants

Training of research assistants was carried for a period of 2 days. 4 research assistants, 2 moderators and a scribe were trained and these were fluent in both English and the local language. The training was undertaken by the principle investigator.

5.10. Data Management and Analysis

5.10.1 Field editing

The principal investigator and the research assistants edited questionnaires at the end of each day for accuracy and completeness. Questionnaires which were incomplete where taken back the following day for completion.

5.10.2 Data management

All variables in the quantitative data were coded and entered in the computer using Epi-Info 3.2.2 version software. Data was cleaned and stored on a daily basis by the PI. Accuracy for the data entered was checked by cross checking the print of a data set with a random number of questionnaires picked from the 288 questionnaires. Entry of the data was done by two people.

For qualitative data, raw data was transcribed and read through repeatedly to see whether the content is okay i.e. responses complete, quality of transcripts and pattern of responses.

5.10.3 Data analysis

5.10.3.1 Quantitative data: analysis was done using Epi-Info 3.2.2 version software and SPSS

Uni-variate analysis was carried and descriptions of respondents made. Bivariable analysis was done for associations between independent and dependent variables. Odds ratios and chi-square tests were used to determine the associations at 95% confidence interval.

Multi-variable analysis was applied to variables that were significant after bivariate analysis. Since some of the independent variables were nominal and others numeric with a binary outcome variable logistic regression model was used in order to identify independent variables that are significant while controlling for confounding and checking for effect modification.

Results were presented in form of text, tables and graphs.

5.10.3.2 Qualitative data:

Data was summarized according to the themes related to the objectives of the study and analyzed manually using the master sheet technique. Typical quotes from the focus group discussions were presented verbatim in the results.

5.11. Ethical consideration

Permission to conduct the study was obtained from the Makerere University School of Public Health Higher degree Research and Ethics Committee and Uganda National Council of Science and Technology, the District Health Officer Rukungiri District, The chairmen of the various LCs. Informed consent from respondents above 18 years and assent and informed consent from parents /guardians respectively of respondents below 18 years was obtained

The research assistants explained the purpose of the study to the respondents and informed consent was sought.

Confidentiality was maintained throughout the study and there after.

5.12. Study limitations

Participants were uncomfortable with giving the true information about certain questions since it was a sensitive topic however the research assistants assured the respondents that the information obtained was confidential and the respondent's names were not indicated. And selection of youth research assistant enabled youth to provide information at their ease.

Research Assistants found it difficult getting both guardians and the youths who were below 18 years at home in order to conduct an interview but this was overcome by conducting the interviews mainly in the afternoon when both the respondent and guardian are around and where they were not, re-visits were made.

The sample size formula used was for a prevalence study there was a possibility of affecting the power of the study.

5.13. Dissemination of results

The study findings were shared with the DHT of Rukungiri and the stake holders of the district and the community where the study was conducted. Copies were submitted to Makerere University as partial fulfillment for the award of the degree of Master of Public Health and with plans of publishing in journals and presenting them in conferences.

CHAPTER SIX

6.0 Results

The total number of respondents involved in the study was 288. The respondents were in the age range of 15-24 years with 104 of the respondents (36.1%) being <18 yrs). Majority of the respondents were aged 20-24 154/288(54%), males 165/288(57%), protestant faith 151/288(52%), and had attained at least primary level education 271/288(92%). Most of the respondents were singles 215/288(75%), students 128/288(45%) and were Banyankole 179/288(63%).

6.1. Socio-demographic characteristics

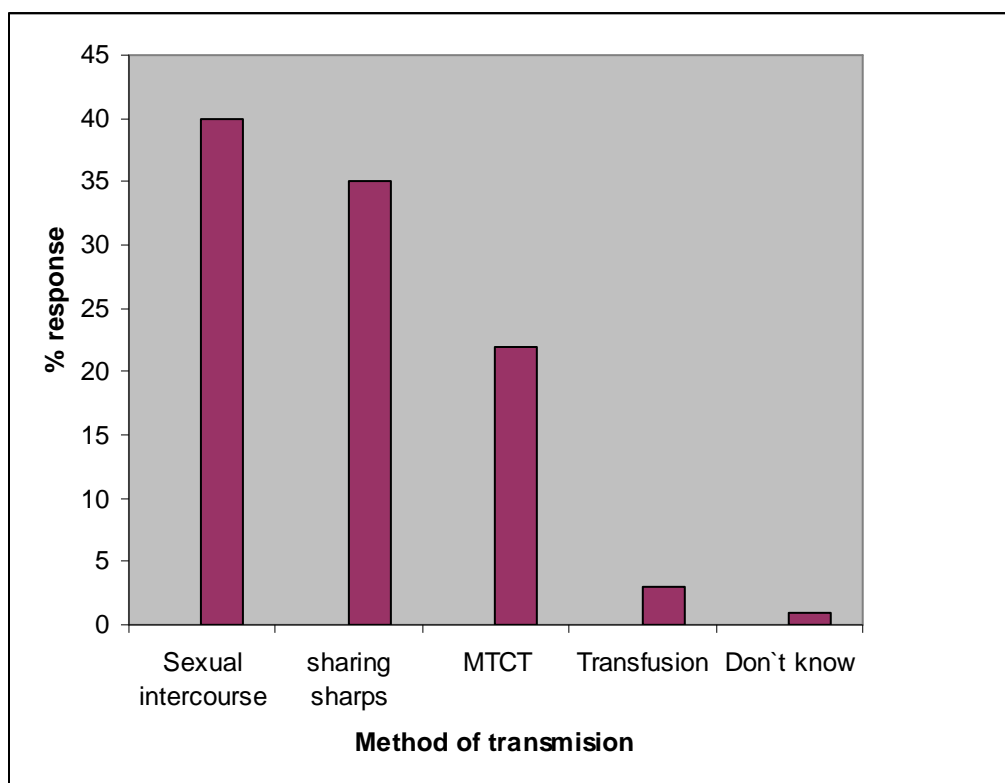
Table 1: Socio-demographic characteristics of the youth

Variable	Frequency (N=288)	Percentage (%)
Sex		
Female	123	42.8
Male	165	57.2
Age		
15-19	134	45.8
20-24	154	54.2
Tribe		
Muhororo	45	15.6
Munyankole	179	62.5
Mukiga	63	21.9
Education level		
None	17	5.9
Primary	97	33.8
Secondary	149	51.6
Tertiary	25	8.6
Religion		
Catholic	99	34.4
Protestant	156	52.4
Muslim	26	9.0
Pentecostal	08	2.8
Others	02	0.7
Marital status		
Single	215	74.9
Married	68	23.6
Separated	3	1.0
Divorced	2	1.0
Occupation		
Unemployed	61	21.2
Student	128	44.4
Formal	9	3.2
Self employed	87	30.2
Informal	3	1.0

6.2. Specific objective 1: Individual factors affecting uptake of Voluntary Counseling and Testing among youth

6.2.1: Knowledge of youth about mode of transmission

Fig 1: Knowledge of youth about modes of HIV transmission



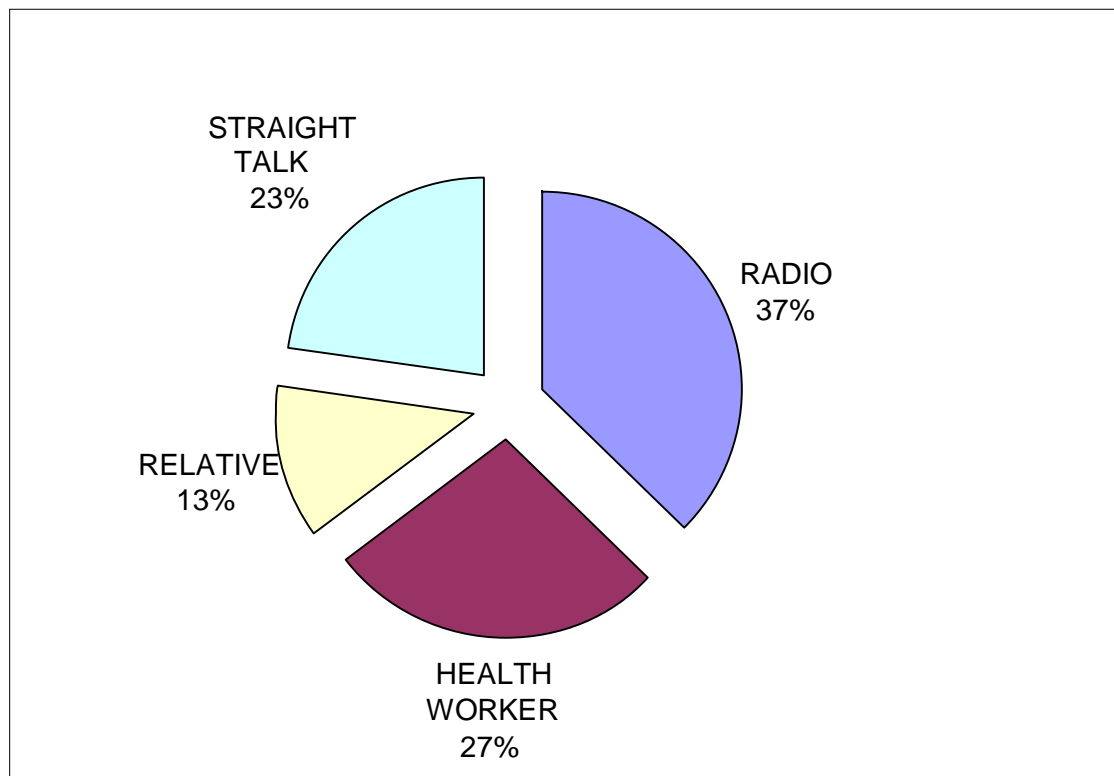
Knowledge of youth about mode of transmission was generally high with 115 of the 288 respondents (40%) indicated having unprotected sex with an infected person as the main mode of acquiring HIV/AIDS, 101 of 288 respondents (35%) indicated sharing sharp objects while 63 of 288 (22 %) indicated mother passing it to the unborn baby, 6 of 288 (2%) mentioned blood transfusion while only 3 of 288 (1.0%) could not mention any mode of transmission.

Table 2: Knowledge of methods of detection of HIV

Diagnostic method	frequency	Percent
Taking an HIV test	167	58.1
Signs and symptoms	66	22.8
Doctors exam	33	11.4
Don't know	22	7.7
Total	288	100

More than half of youth, 167 /288 (58%) mentioned taking an HIV test as diagnostic method while 66 / 288 counts (23%) mentioned signs and symptoms as a method of detection of HIV , 33/288 (11%) mentioned doctors examination and 22/288 (8%) were not knowledgeable of any method.

Fig 2 Sources of information about Voluntary Counseling and Testing

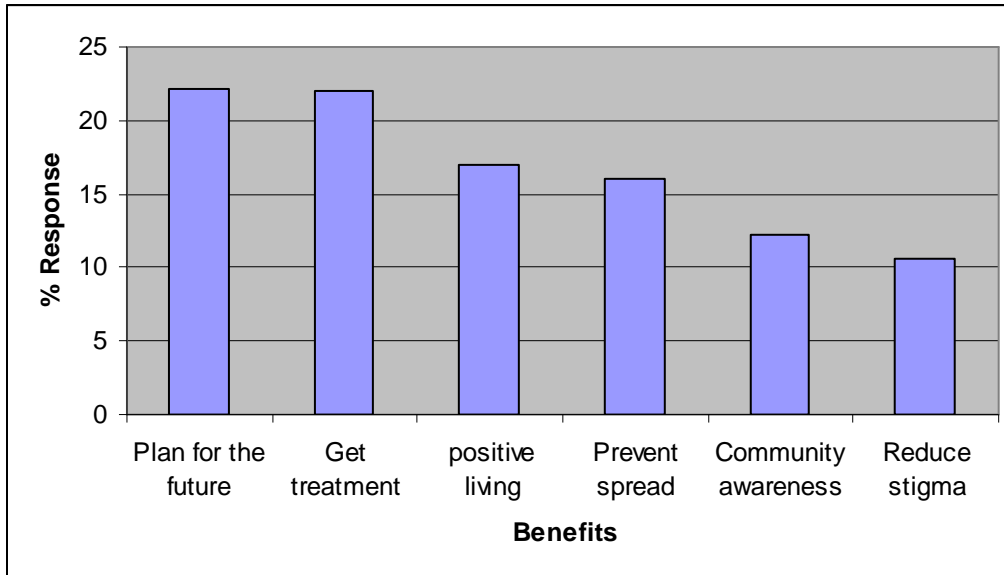


The main sources of information about VCT were radio 107/288 (37%), followed by health workers 78/288 (27%). Straight talk magazines 66/288 (23%) were another source that youth get the information while some respondents said that they learnt of VCT from their relatives 37/288(13%).

In addition, all FGDs conducted participants mentioned that the radio was the main source of information i.e. informed them of the places to go for VCT.

‘We youths enjoy listening to music over the radio and any adverts that are between music intervals can be clearly heard so that’s how we get to know where VCT services are offered’.

Fig 3: Knowledge about advantages of Voluntary Counseling and Testing.



Some youth mentioned that when one gets to know their status they are able to plan for the future 64/288 (22%) while others mentioned get treatment 63 /288 (22%) if found positive, live positively 49 /288 (17%), prevent spread 46 /288 (16%),increases community awareness 35/288 (12 %) and reducing stigma 31/288 (11 %) as a benefit of VCT.

Table 3: Individual factors associated with uptake of VCT at bivariable analysis

Variable	Tested		OR	95%CI	P- Value
	Yes	No			
Age					
15-19	22	110	2.4	1.3 - 4.2	0.003
20-24	50	106			
Sex					
Male	35	127	1.5	0.8-2.6	0.13
Female	37	89			
Education level					
Others ¹	59	205	4.1	1.8 -9.6	0.001*
Tertiary	13	11			
Marital status					
Others ²	28	44	0.4	0.2- 0.7	0.002*
Single	44	173			
Others					
Married	44	176	2.8	1.6-5.0	0.000*
	28	40			
Occupation					
Others ³	25	103	0.5	0.3- 0.8	0.01
Student	47	113			
Others					
Formal employment	66	213	6.5	1.6-26.5	0.003*
	6	3			
Know of a place where you can have an HIV test					
Yes	71	187	11.0	1.5-82.4	0.004 ψ
No	1	29			
Distance					
Other	29	133	2.3	1.3 -3.9	0.003 *
<5km	43	83			
Know the benefits of having an HIV test					
Yes					
No	71	177	15.6	2.1-116.1	0.000 ψ
	1	39			

Others¹ include none, primary, secondary.

Others² include divorced, separated, married

Others³ include self employed, unemployed, formal employment, informal employment

* Statistically significant results, p <0.05

A quarter (72 /288) youth interviewed had taken an HIV test, with similar response between females and males (13%, 12%) respectively, OR of 1.5 (0.8-2.6, p=0.13) [Table 3].

Youth aged 20-24 were 2.36 times more likely to have been tested for HIV compared to those between 15-19 with a p-value of 0.003. A youth with tertiary level of education was 4.11 times more likely to have been tested for HIV compared to youth with at most secondary education level.

A single youth was 0.4 times less likely to have been tested for HIV with a p-value=0.002 while a youth in formal employment was 6.4 more likely to have been tested for HIV.

Of the youth who had tested 43/72 (60%) were staying within less than 5kms from the health facility offering VCT and 133/216 (62%) who reside more than 5km and did not utilize VCT services. Youth who resides within 5km are 2 times likely to have VCT with OR=2.2, 95%CI 1.3-3.9 and p-value 0.003.

Among those who had taken the HIV test nearly 35/72 (49%) reported that they spent less than an hour when they had gone for testing, 18/ 72 (25%) spent between an hour and two hours while 19/ 72 (26 %) reported having spent more than two hours.

Nearly 55 /72 (76%) youth reported that the service was free while 16 /72 (22%) mentioned that they paid a fee for the service.

For the qualitative component, the participants reported that the main reason they carry out an HIV test was to know their sero-status. Other reasons were, when getting married or starting a relationship or when pregnant as a routine test and a few mentioned that they tested because they had lost a partner.

6.3 Specific objective 2 : Perceived guardians attitude on voluntary counseling and testing among youth

Table 4: Response from youth regarding their guardian's attitude towards Voluntary Counseling and Testing

Variable	Frequency N =288	Percentage (%)
Attitude on VCT		
Willingness to test		
Yes	201	70.3
No	85	29.5
Parents/ Guardians willingness test		
Yes	209	72.6
No	18	6.3
I don't know	61	21.1
Parents/ Guardians provide financial support		
Yes	113	39.2
No	72	25.0
I don't know	103	35.8
Encouraged by Peers		
Yes	133	42.2
No	149	51.7
Encouraged by Local leaders		
Yes	182	63.6
No	104	36.4

Most youth (70%) mentioned that they were willing to test and that 209/288 (73%) their parents would be willing to have them tested though only 113/288(40%) would be facilitated by their parents. Youth are generally encouraged by parents, local leaders as well as their peers to go and test.

Table 5: Community factors associated with uptake of VCT at bi-variable analysis.

Variable	VCT uptake		OR	95%CI	P-Value
Encouraged by local leaders	Yes	No			
Yes	51	131	1.6	0.9 -2.8	0.1
No	21	85			
Have your peers encouraged you to test					
Yes	55	78	5.7	3.1 -10.5	0.000*
No	17	138			
Willing to test					
Yes					
No	61	140	3.0	1.5-6.1	0.001*
	11	76			

* Statistically significant results

Youth who had encouragement from their fellow youth registered almost 6 times likelihood of getting tested for HIV as compared to those youth who lacked peer encouragement (OR= 5.7, 95% CI 3.11-10.5).

6.4 Specific Objective 3: Health service barrier associated with VCT

Barriers to Uptake of Voluntary Counseling and Testing

Table 6: Reasons for not being tested

Variable	Frequency n=216	Percentage
Never had sexual encounter	77	36
Have one faithful partner	59	27
Fear	45	21
Need more time to make a decision	14	6
Testing site is far	11	5
Don't know where testing site is	6	3.0
Don't have time	4	2.0

The reasons youth mentioned for not getting tested were that they had never had sexual encounter 77 /216 (36%), while 59 /216(27%) had one faithful partner and 40/216(19%) mentioned fear as the reason.

Respondents who had been tested said services were not youth friendly because testing is carried out on specific days of the week with no privacy and counselors' attitudes being poor however a few mentioned costs .

During the FGDs, youth mentioned the reason they don't go for VCT was due to fear of knowing their status and being stigmatized while others gave reasons like lack of information, time and money. One of the FDG participants mentioned that "we are *confident of our life*" so no need to go for VCT.

One participant said "*I am blood group O then no need to test or go for VCT I cannot contract HIV and I can only go for VCT if asked by the parents to do so.* (FDG of young girls< 20 years)"

Table 7: Suggestions by youths on how to improve VCT uptake

Suggestions to improve uptake	Frequency	Percentage (%)
Sensitization	16	5.6
No response	29	10
Bring services close to youth	50	17
Motivate the youth	68	24
Don't know	125	43.4

About a quarter of youth suggested that uptake of VCT would be improved by motivating youth through creating drama clubs, youth training others, setting -up youth testing sites, using youth counselors and using parents to convince them. However 125/288 (43.4%) of youth did not give any suggestions.

Other suggestions posed were 63/288 (22%) bringing services close to the youth which 63/288(22%) included taking services to schools and offering outreach services.

The government should pay all the youths who test some money as a form of incentive that would encourage more youth to go for VCT. (FGD of males <20 yrs)

Other suggestions that arose from the FGD participants that could improve uptake of VCT were: sensitization through health education talks, putting bye-laws and radio advertisements.

All groups of the youth mentioned that they prefer listening to radio stations so adverts between music breaks on HIV would draw their attention and encourage them to go for VCT. However some groups said creating clubs, health education extended to schools and offering free of- charge and friendly services could improve uptake. If possible conducting workshops involving the young leaders, Outreach services, adolescent centres and counseling teams should be created in order to capture more youths with video shows and role plays.

Table 8: Health Service factors associated with uptake of VCT services

Variable	Tested		OR	95%CI	P- Value
	Yes	No			
Services youth friendly					
Yes					
No	63	132	4.5	2.1-9.4	0.000*
	9	84			
Distance					
Other	29	131			
<5km	43	85	2.3	1.3-3.9	0.003 *
Know the benefits of having an HIV test					
Yes	71	177	15.6	2.1-116.1	0.000 ψ
No	1	39			
Counselors attitudes(rude)					
Yes	69	188	0.292	0.9 - 1.0	0.037*
No	3	28			
Privacy					
Yes	31	82	2.16	1.3-3.7	0.005 ψ
No	41	134			
Keep test result as a secret					
Yes	56	102	3.9	2.1-7.3	0.000 ψ
No	16	114			
Services are Free					
Yes	53	92	3.8	2.1-6.8	0.000 ψ
No	19	124			

* Factors that were found to be statistically significant at hindering uptake for Voluntary Counseling and Testing

ψ Factors that were statistically significant at enhancing uptake for VCT

Other include distance 5-10 km and >10km.

Fischer exact test analysis was used for those cells which had less than 5.

Services that were youth friendly were statistically and significantly associated with uptake for Voluntary Counseling and Testing with (OR= 4.5, 95% CI 2.10-9.43).

Services that were youth friendly were statistically and significantly associated with uptake for Voluntary Counseling and Testing with (OR= 4.5, 95% CI 2.10-9.43).

6.5 Multivariate analysis

Backward stepwise logistic regression was used to control for confounding. Variables that were found to be significantly associated with uptake for VCT at bivariable analysis ($p\text{-value} < 0.05$), and all plausible factors that were not significant at bi-variable analysis were put into logistic regression analysis

The logistic model was used $\text{Logit } p(y) = \alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_n x_n$

$$\begin{aligned} \text{Logit } p(y) = & \alpha + \beta_1 (\text{respondent's knowledge of place where VCT services are offered}) \\ & + \beta_2 (\text{respondent's distance from home to health facility}) \\ & + \beta_3 (\text{respondent's peer encouragement}) \\ & + \beta_4 (\text{respondent's being informal employment}) \\ & + \beta_5 (\text{respondent's know the benefits of having an HIV test}) \\ & + \beta_6 (\text{respondent's counselor's attitude}) \\ & + \beta_7 (\text{respondent's privacy}) \\ & + \beta_8 (\text{respondent's marital status}) \\ & + \beta_9 (\text{respondent's willingness}) \\ & + \beta_{10} (\text{respondent's age}) \end{aligned}$$

$\text{Logit } p=y$ (dependent variable), that is the probability of uptake for VCT among youth.
 α constant- the y intercept.

β =coefficient for the independent variable i.e. the coefficient estimates of the exposures or likely confounders.

x = independent variable.

The best fitted logistic model that predicts uptake for VCT among the youth from the various predictors is given below;

$\text{Logit } p(y) = \alpha + \beta_1 \text{Knowledge of place where VCT services are offered} + \beta_2 \text{Distance from home to health facility} + \beta_3 \text{peers encourage youth to go for testing} + \beta_4 \text{being informal employment} .$

The variables that were found significantly associated after logistic regression were knowledge of place where VCT service are offered, distance from home to the nearest health facility, informal employment and having peers encourage youth to go and test. Age group, Tertiary education, Formal employment, marital status married, being a student and services being friendly were found to be confounders.

The table below shows the independent variables that are associated with uptake after controlling for confounding.

Table 11: Predictors, Coefficient estimates and adjusted odds ratios of uptake of VCT among youths

Variable	Coefficient estimate	Adjusted odds ratio	95% CI	P-value
Know place where VCT services are				
Yes	2.62	13.8	1.2-158.1	0.035
No				
Distance from home to HU				
≤5km				
>5km	0.78	2.2	1.1 - 4.3	0.024
Employment				
Informal				
Others* ₁	1.39	4.0	1.2- 13.2	0.022
Have peers encouraged you to go for testing				
Yes	1.89	6.7	3.2 - 14.1	0.000
No				

Others*₁=unemployment, student, other

Youth who knew place where VCT services are were 2.6 times more likely to have carried out an HIV test. Youth staying more than 5km from the health unit were 0.8 times less likely to have an HIV test done. Youth in informal employment were 1.4 times more likely to have taken an HIV test and those encouraged by peers were almost 2 times more likely to have taken an HIV test.

CHAPTER SEVEN

7.0 Discussion

7.1 Individual factors that affect uptake of VCT

This study found out that youth in the age group (20-24) were more likely to go for an HIV test than those 15-19 years. This is explained by the fact that these youth had some form of employment and have the finances and probably the knowledge and are aware of the benefits of knowing their HIV status as compared to the lower age group. This means that age is an important factor enabling the youth to test. Older youth are more likely to have more knowledge. The finding closely relate to the results in Zimbabwe where age was associated with uptake for VCT (Ikechebelu et al, 2006). The Older youth with tertiary education level were more likely to have carried out an HIV test than those with less than tertiary education though after adjustment the association was not significant.

These results are consistent with results from a study carried out in a rural Zimbabwean cohort (Sherr et al, 2007) in a high HIV incidence area which found that increasing education was associated with uptake of VCT. The findings were similar to another longitudinal study carried out in a rural area in Uganda (Matovu et al ,2005) with a high HIV prevalence which found that those with higher than primary education accepted to test while UNAIDS ,2001, report revealed that young people in secondary schools showed high willingness to test for HIV. This can be explained by the fact that increasing in level of education increases the knowledge and awareness of the advantages of knowing your sero-status.

Youth who were married were more likely to have gone for VCT as compared to divorced and separated while being single was less likely to have tested and this was statistically significant at bivariate. The findings in this study are consistent with reports by UNAIDS, (2001) and AIC, (2003), since majority are tested before getting married.

Knowledge on VCT

Knowledge of youth on the routes of transmission and prevention of HIV was high this is similar to a study done by Matoro, 2002. However according to the AIDS epidemic update 2005, knowledge about HIV transmission route in sub Saharan countries was found to be low and generally women were less-well informed about HIV than men.

A cross sectional population study carried out in Hong Kong by Lam et al, 2003 found that youth had good knowledge about correct modes of HIV transmission and prevention. These findings were similar to this study probably because of increasing awareness programmes and campaigns on HIV/AIDS that are conducted in the country.

According to Shelley Clark, 2005 a survey conducted in Malawi revealed that knowledge about HIV/AIDS was very high in Malawi and commonly discussed within social networks, everyone having heard of HIV/AIDS and nearly everyone could correctly name at least one means of transmission, including via heterosexual intercourse. These finding are consistent with this study which shows that nearly every youth mentioned at least one mode of HIV/AIDS transmission.

Knowledge of the youth about an HIV VCT was high, awareness of the place for VCT and the benefits of VCT were found to be associated with uptake of the services. Sixty three percent of the undergraduate students in Nigeria were aware and had heard of VCT with 59.1% having heard of it at least one year prior to the study (Ikechebelu et al, 2006). These results are different from those of this study which showed youth who were aware the benefits of Voluntary Counseling and Testing highly opted for VCT services . This could probably be due to more sensitization campaign carried out because a study carried out among urban youths in Mulago on knowledge and acceptability by Muganzi et al, 2002 indicated a high proportion had ever heard of VCT.

The main sources of information about VCT was radio and followed by health workers and most youth knew where VCT services could be obtained where a study carried out by Ikechebelu, 2006 found that Mass media and Churches were the highest sources of information on VCT Most of the students did not know where VCT services could be obtained.

The proportion of males and females who sought services was found to be similar. This finding closely relate to the results in Uganda where the proportion of males and females who had tested was equal between males and females respectively (Juma, et al, 2002).

This is also similar to a study carried out by Lam; 2003. This could probably be due to increased equitable access of services among both sexes.

7.2 Guardian's attitudes towards VCT uptake

Majority of youth were willing to have an HIV test done and willingness to go for HIV test was statistically associated to uptake for VCT. This is consistent with findings in a study on knowledge , attitudes and practices on VCT where majority of the respondent were willing to go for VCT and among those who were not willing to go for VCT the commonest reason given was that they were certain they were not infected (Ikechebelu et al.,2006).

Peers played a role in encouraging the youth to go for testing and majority who have tested were encouraged by their peers and this was significant. Local leaders as well encourage youth to go for testing but this was not statistically significant. When youth were asked whether their parents would be willing to have them tested, majority said that their parents were willing however not many said that their parents would facilitate them to have the test for example giving them money for transport.

Youth, who knew the benefits of VCT like reducing stigma, getting treatment and planning for the future were more likely to take on VCT and there was a statistically significant association with VCT uptake. A study conducted in Kumi District by Siduda, 2004, who found no significant association between stigma/ discrimination and uptake of VCT. This could be due to the fact that MoH, the district and other stake holders have made discrimination a theme for HIV/AIDS activities at various levels.

However among the reasons they don't test was due to fear of being stigmatized. Stigma and discrimination affect uptake of VCT in different communities. Normalizing testing and increasing the number of people who know their sero-status is an important strategy for reducing stigma and discrimination. Similarly, the declaration of role models or valued members of the community that they have been tested is important in reducing stigma and increasing the uptake of HIV testing.

7.3 Barriers and enhancing factors affecting uptake of VCT.

The longer the distance the less likely to go for VCT, youth who were staying within 5km from the health facility were more likely to take on VCT. This finding was similar to those finding by Nuwaha et al, 2002, in Bushenyi District. People staying near a health facility can ably walk to access service since long distance requires extra transport costs. There is a possibility that youth who reside near the health facility are able to access information and know the benefits of testing.

The counselors attitude including inadequate responses, being rude and apportioning blame, being judgmental was associated with uptake for VCT a major factors found hindering the youth. Counselors' attitudes play a crucial role in addressing sexual issues with young people. Service providers who are inhibited may inhibit young clients who present to them, which create additional access barriers. Unmarried but sexually active adolescents in Bangladesh reported that they did not feel comfortable seeking family planning or STI services from nearby clinics and pharmacies and perceived providers to be judgmental and unfriendly.

There was no significant association between costs and uptake for VCT. Most of the youth said the services were free and those who had tested didn't pay. This is because the majority of facilities offering VCT are Government units. This is consistent with a report from youth friendly services Uganda, 2005 which noted that majority of the youth had reported that services were free and only a few said that the services were affordable. This differs from a study by Deborah and Rachel, 2002, carried out among youth which found that costs was a barrier to VCT. According to Damesyn et al study carried in Kenya, Zambia, Zimbabwe and United States, cost factors significantly affected uptake and acceptability of VCT services by young people. In order to reach most young people, VCT must be free.

Boswell and Baggaley, 2002 found that the barriers to youth taking up VCT services were issues concerning availability and acceptability of VCT services, waiting time, costs and pressure by health staff to notify partners, worries about confidentiality and fear that results would be shared with parent(s) or partner(s) without their consent, inaccurate risk perception, fear of being labeled and stigmatized by their families, friends and communities, perceptions of the consequences of living with HIV, inadequate responses from health care providers, including counselors, to effectively meet the HIV prevention, care and support needs of youth

Privacy, youth friendly services and keeping test result a secret were associated with uptake. These factors encouraged the youth to go for testing with majority reporting that the main reason for testing being to know their sero-status.

CHAPTER EIGHT

8.0 Conclusions and Recommendations

8.1 Conclusions

The study showed that a quarter of youth in the district have had voluntary counseling and testing services, being aware of place where services are offered enhances uptake of voluntary counseling and testing among youth. Youth who were in informal employment were more likely to have tested and proximity favored uptake of the service as well as encouragement by peers. However Health service e.g. counselor's attitude i.e. being rude, unwelcoming and judgmental hinders uptake of voluntary counseling and testing

8.2 Recommendations

The following should be considered by the health directorate in order to improve uptake of VCT among youth

Health service providers

- The DHT should intensify health education through information, education and communication materials geared towards sensitizing the communities and youths in particular, the importance of testing and the role it plays in preventing spread. The materials should also target youth in school
- The DHO/DHT should ensure that facilities are equipped to carryout VCT in the district.
- The DHO and DHT should work with and facilitate youth clubs to promote VCT in order to reduce on the spread of HIV/AIDS.
- The DHT should have refresher courses to the counsellors on issues concerning VCT and offer friendly services.
- The DHT should offer outreach services to schools and other public places to improve on uptake.

- The DHT should train youth leaders as peers to encourage uptake of VCT among youth.
- The DHT should continue to emphasize the use of local media to solicit involvement of youth as well as their parents in providing sex education.

Community level

- The parents should be provided with more information and conduct community awareness session to enable them overcome the communication barriers related to HIV/AIDS issues. This can be done through involving parents in ‘straight talk’ programmes, seminars, drama, job aides, provision of IEC materials. These materials should be translated into the local languages and distributed to the community through the already existing structures like the Village health teams.
- Peers should be supported to encourage colleagues to carry out VCT and involve in HIV/AIDS preventive activities.

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APPENDICES

Appendix 1: Consent form

INFORMED CONSENT FOR YOUTH 18YEARS AND ABOVE ON HIV Voluntary Counseling and Testing.

Introduction

Good morning/Afternoon

I am..... and am part of a research team from the office of the District Health Officer Rukungiri District.

We are studying uptake for HIV voluntary counseling and testing among youth. You and other youths have been randomly selected as a resource person to participate in this study because we regard the information that you may give to be very important.

Procedures for the study: This questionnaire will take between 20- 30 minutes. No names will be required for the purposes of the study; however I will use a code for the questionnaires.

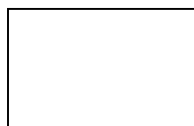
Benefits: The information you give will enable us to strengthen the uptake of youth for voluntary Counseling and Testing services to reduce the HIV burden among youth in the district.

Confidentiality: Your answers will be taken generally as a contribution from a resourceful member of the District. The answers will be treated in confidence and used for purposes of this study only.

Voluntary consent: You are free to choose whether to take part in this study or not, and you are free to withdraw at any time at your own discretion. Feel free to ask any questions before or after the interview.

Potential risks- There are no potential risks in the study. For any further inquiries concerning this study, you can contact me through the office of the DDHS Rukungiri on telephone number- 0772487327.

----- Or Thumb print (Right)



Signature

Researcher's name

signature

Appendix 2: Questionnaire

Questionnaire for a study on uptake for Voluntary HIV Counseling and Testing among youth in Rukungiri District, Uganda.

General information

Name of the interviewer..... Date.....

Questionnaire No..... Sub-county..... Parish.....

Village.....

A. Identification

1. Sex

1= Male [].

2=Female [].

2. Age of the respondent in years

3. What is the highest Level of education attained? Please Tick appropriate

1=None [].

2= primary [].

3= secondary [].

4= Tertiary [].

4. Religion:

1= Catholic [].

2= Protestant [].

3= Moslem [].

4=other (specify)

5. Are you? Tick appropriate

1=single [].

2=married [].

3= separated/divorced [].

4= widow/widower [].

6. What is your current employment status?

1= unemployed

2= student

3= formal employment

4=self employed

5=other (specify).....

7. What is your tribe?

1= Ganda []

2= Muhororo []

3=Munyankole []

4=Mukiga []

5=Other (specify).....

B. Knowledge on HIV VCT

8. What is the best known mode of HIV/AIDS transmission? *Tick only one mentioned*

1= By having sexual intercourse with a person who is infected with HIV.[]

2=Mother passing it to the unborn baby.[]

3= Sharing sharp objects. []

4= I don't know[]

5= other (specify).....

9. Could you please tell me how you can find out if one has the germs (virus) that causes AIDS .*Tick only one*

1= Taking an HIV test [].

2= Doctor's Examination [].

3= don't know [].

4= other (specify).....

10. Have you ever heard of Voluntary Counseling Testing for HIV?

1=Yes [].

2= No [].....If 'No' skip and go to 13.

11. Where did you get the information about HIV Counseling and Testing? Choose only one source

1= Radio [].

2= Health worker [].

3= Relative [].

4= Straight talks [].

5= other (specify).....

12. What do you know about HIV Voluntary Counseling and Testing?

1= Testing for HIV when someone forces you to do so but not your own decision. []

2= Going for an HIV test after making a decision on your own without being forced by anyone []

13. Do you know of any place here in Rukungiri where you can go and have an HIV test?

1=Yes [].

2= No [].....If 'No' go to No. 16.

14. How did you know about the place?

1=Health worker [].

2=Friends [].

3= Radio

4= other (specify).....

15. What is the distance from your home to the nearest HIV testing site?
 1= <5km [].
 2= 5-10km [].
 3= > 10 km [].
16. Do you know the benefits of having an HIV test?
 1=Yes []
 2=No [].....skip 17 go to 18
17. What benefits does a person get in going for VCT? *Tick only one option*
 1= People who test positive can get treatment [].
 2 = Effective at preventing spread from those who are positive to the
 negative [].
 3= It also enables positive living through referral to social groups like (TASO)
 and peer support groups [].
 4=Increases community awareness about HIV. []
 5= Reducing stigma among HIV/AIDS people.[]
 6= Helps plan for future []
18. Have you been previously tested?
 1=Yes []
 2=No [].....If 'No' go to 21
19. How long did you take while at the testing health facility?
 1= < 1 hour []
 2= 1- 2 hours []
 3= >2hours []
20. Did you pay any money for the service offered?
 1=Yes []
 2=No []
21. What was the reason/s for the response in (18) above?

C. Attitudes on uptake and barriers to HIV VCT services

22. Would you be willing to have an HIV test carried out?
 1=Yes []
 2=No []
23. Do you think your parents / guardians would be willing to have you tested for HIV?
 1= Yes []
 2= No []
 3= I don't know []
24. Would your parents give you money to go for an HIV test?
 1=Yes []
 2=No []
 3= I don't know []

25. Have your peers (friends) ever encouraged you to go for HIV test?
 1=Yes []
 2= No []
26. Have the local leaders in your village ever encouraged youth to have an HIV test done?
 1=Yes []
 2=No []
27. Do you think the services offered at the VCT sites encourage youth to get involved?
 1= Yes []
 2= No []...If 'No'go to 29
28. What makes you think the services are youth friendly? *Tick all mentioned*
 1= Privacy []
 2= Counselors keep the result as a secret []
 3= low cost []
 4=free []
 5=counselors are approachable []
 6= others (specify).....
29. If no, what is it that the VCT site does that doesn't encourage the youth to be tested? *Tick all mentioned*
 1= costs []
 2= carried out on specific days of the week []
 3= counselors attitudes []
 4=No privacy []
 5= others (specify).....
30. In your view why do you think youth go for VCT services? (Tick all mentioned).
 1= know their status []
 2= get married []
 3= asked by their parents []
 4= start a relationship []
 5= other (specify).....
31. What suggestions would you give to improve VCT uptake among Youth?

THANK YOU FOR PARTICIPATING!

Appendix 3. Focus group discussion guide

Introduction

We are part of a research team from the office of the District Health Officer Rukungiri District. We are studying uptake for HIV voluntary counseling and testing among youths. You have been selected for the study because we think that you have a good understanding of this subject. Your participation will be voluntary and the information you give will be used to improve on the high burden of HIV/AIDS among youths in the district. Thank you.

S/county..... Moderator.....

Parish..... Recorder.....

Venue..... Language.....

Date..... Starting time..... ending time.....

Number of participants.....

1. Can you tell us what you know about HIV/AIDS and its transmission?
2. Have you had about HIV Voluntary Counseling and Testing?
3. Where in this area can people go if they want VCT, Can you please mention any sites you know?
4. How did you come to know about this place?
5. Do you think VCT is important? Would you accept to go for VCT?
6. What do you think is the importance/ benefits of testing for HIV?
7. Do you think your parents/ guardian can accept you to go for an HIV test?
8. What problems do Youth face that stop them from having to test for HIV?
9. How does the community regard youth who undergo HIV testing?
10. Are the VCT services offered at facilities encouraging/motivating youth to test?
Yes / No, Give reasons for this.
11. Records from DHO show that very few youths go for HIV VCT, what could be the possible reasons for this?
12. What do you think health workers should do to increase the number of youths going for VCT?

Appendix 4. Map of Rukungiri showing the populations per sub county

