

**Assessment of community uptake of HIV Voluntary Counseling and  
Testing (VCT) services in an integrated health care delivery  
approach in Rungwe district**

**By**

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**A Dissertation Submitted in Partial Fulfilment of the Requirements  
for the Degree of Master of Public Health of Muhimbili University of  
Health and Allied Sciences.**

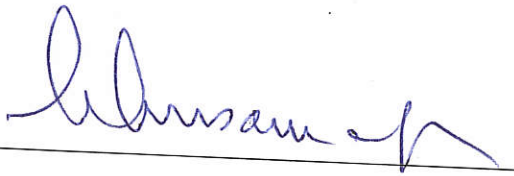
**Muhimbili University of Health and Allied Sciences**

**November, 2007**



**CERTIFICATION**

The undersigned certifies that he has read and hereby recommends for acceptance by Muhimbili University of Health and Allied Sciences a dissertation entitled **Assessment of community uptake of HIV Voluntary Counseling and Testing (VCT) services in an integrated health care delivery approach in Rungwe district**, in partial fulfilment of the requirements for the degree of Master of Public Health of Muhimbili University of Health and Allied Sciences.



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Date

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## **DEDICATION**

This work is dedicated to my late parents, Baba Kassinga Kalinga and Mama Mungalilagha Mtafya. I also dedicate this work to my late daughters, Ms Dorah Kalinga and Ms Debora Kalinga.

### ABSTRACT

This study intended to investigate community uptake of voluntary counseling and testing (VCT) services as a result of integrating them into health facilities in Rungwe district of Mbeya region. Rungwe district is one of the four districts in Tanzania that are implementing the integration of VCT services into health facilities since 2002.

A cross-sectional descriptive study was conducted using structured interviews to collect quantitative information from 420 randomly selected participants. In addition, in-depth interviews with eight counselors and one district program coordinator were conducted to gather qualitative information.

The result showed that integration of VCT services in the health care delivery approach was associated with increase in uptake of VCT services. Annual uptake of VCT services increased from 0.7% before integration to 12% in 2006. The result also revealed that in the first two years of integration, the proportion of people who utilized integrated VCT services were three and five folds respectively compared to that of non integrated ones.

Community awareness about the availability of referral services such as access to ARVs and nutrition support services had influenced increase in uptake of VCT services. Mobilization of the community through the use of health talks, drama and seminars were responsible for increasing level of awareness about the availability of integrated VCT services.

The need to know ones HIV status was the commonest reason that influenced people to accept VCT services as mentioned by 61.3% of the respondents. On the contrary, fear of result was the deterrent factor for not accessing VCT services as mentioned by 65.8% of the respondents.

The community suggested the need to strengthen community mobilization activities (45.1%) and expand VCT services (26.4 %) in order to improve VCT services,

In conclusion, integration of VCT services within health care delivery system appears to have increased uptake of VCT services in Rungwe district. There is need to continue monitoring the trend at least every two years and evaluate quality of the services rendered repeatedly.



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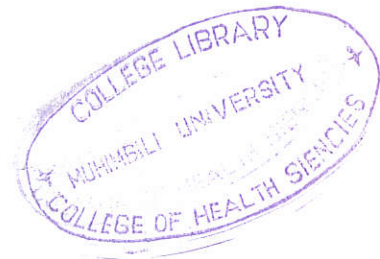


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### ABBREVIATIONS

AIDS	-Acquired Immune Deficiency Syndrome
ARTs	-Antiretroviral Treatments
CI	-Confidence Interval
CTC	-Care and Treatment Clinic
ELISA	-Enzyme Linked Immunosorbent Assays
EPI	-Expanded Program on Immunization
FBO	-Faith Based Organization
GDP	-Gross Domestic Product
HBC	-Home Based Care
HIV	-Human Immunodeficiency Virus
LCCB	-Local Community Competence Building on HIV/AIDS
MPH	-Master of Public Health
NACP	-National AIDS Control Program
NIMR	-National Institute for Medical Research
PHC	-Primary Health Care
PLWHA	-People Living With HIV/AIDS
PMTCT	-Prevention of mother –to- child transmission
SPSS	-Statistical Package for Social Sciences
TACAIDS	-Tanzania Commission for AIDS
THIS	-Tanzania Health Indicator Surveys
VCT	-Voluntary Counseling and Testing
WHO	-World Health Organization



## CHAPTER ONE

### 1.0.0 INTRODUCTION

#### 1.1.0 Background

##### 1.1.1 Global and national overview of HIV/AIDS

Approximately 38.6 million people were living with HIV and 4.1 million people became newly infected with HIV worldwide in 2005.<sup>1</sup> Of all people living with HIV worldwide, two third are in sub-Saharan Africa where 24.5 million people were already infected in 2005. HIV transmission continues to increase among both adults and children. In countries in the region, more than 10% of adults are estimated to be HIV infected.<sup>1</sup> It is reported that 87% of 2.3 million children living with HIV/AIDS globally are found in Sub Saharan Africa. HIV/AIDS epidemic appears to be slowing down globally, but new infections are continuing to increase in certain parts of Asia and sub-Saharan Africa.<sup>1</sup> It is also reported that approximately 2.8 million people died of AIDS-related illnesses in 2005.<sup>1</sup>

The first three cases of HIV/AIDS in Tanzania were reported in 1983.<sup>2</sup> The epidemic has evolved from being rare and new disease to a common household problem, which has affected most Tanzanian families. About 7% of adults aged 15-49 years are infected with HIV. The prevalence among women is higher than that of men 8% and 6%, respectively according to the Tanzania HIV/AIDS indicator survey of 2003/04.<sup>2,3</sup> In cities and towns, HIV prevalence averaged 11%, twice the levels found in rural areas. HIV infection has increased sharply in older age groups, with prevalence reaching 13% in

women aged 30–34 years.<sup>3</sup> Between 1st January and 31st December 2004, a total of 16,430 AIDS cases were reported to the NACP from the 21 regions of Tanzania Mainland. This resulted into a cumulative total of 192,532 reported cases since 1983 when the first 3 cases were identified in the country.<sup>4</sup> In 2004 Mbeya region ranked as the number one in having the largest number (33,520 patients) of AIDS cases. It was followed by Dar es Salaam and Kilimanjaro with 28,474 and 12,791 cases, respectively.<sup>4</sup> Mbeya and Dar es Salaam have consistently ranked the highest in reporting the largest number of AIDS cases for the past several years compared to other regions. Population based findings from the Tanzania Health Indicator Survey (THIS) carried out in 2003/2004 also showed that the three leading regions in HIV prevalence in descending order were Mbeya (14%), Iringa (13%) and Dar es Salaam (11%). The first four regions which reported the lowest prevalence in descending order were Mara (3.5%), Singida (3.2%), Kigoma (2%) and Manyara (2%).<sup>2,4</sup>

The development of HIV/AIDS epidemic has had a major impact on all sectors of development. The World Bank estimates that because of the AIDS epidemic, life expectancy by 2010 will revert to 47 years instead of the projected 56 years in the absence of AIDS.<sup>3</sup> Additionally, the Bank estimates that, AIDS will reduce the average real GDP growth rate in the period 1985-2010 from 3.9% without AIDS to between 2.8 and 3.3% with AIDS. These factors will certainly have a negative impact on the overall economic performance of the country and its living standards.



AIDS often leads to social and economic disruption of affected individuals, families and communities. The health sector in particular is experiencing an increased demand for its services, as AIDS patients occupy an ever-increasing number of beds in hospitals. And given illness episodes per AIDS patient, the public expenditure on AIDS treatment is high. In the education sector we find children pulled out of school either due to a lack of money or needed at home to head the family. The social welfare sector is experiencing a large increase of AIDS orphans. Industries experiencing the loss of skilled workers are facing high costs of recruitment and training of the new personnel. As the labor force in agriculture declines, agricultural productions will also decline.<sup>3</sup>

### **1.1.2 Voluntary Counseling and Testing (VCT)**

The World Health Organization (WHO) and major international public health organizations have drawn urgent attention to the need to rapidly increase access to knowing one's HIV status through VCT. VCT for HIV infection is a process of providing individuals, groups of people or couples with HIV pre- and post -test counseling. The process of pre- test counseling is concerned about whether to take an HIV test and what one's personal risks are for HIV infection. It is followed by testing if and only whether the client decides to do so based on pre test counseling. In a post test counseling session, the client is counseled among other things, on how to receive the test results. Clients work

with the counselor during the post-test counseling session to develop life plans for behavior that protect themselves and others from HIV transmission.

As initially planned, VCT services focused on prevention of new HIV infections by motivating both people who are HIV-positive and HIV-negative to change their behavior in ways that would prevent them from passing the virus to others or becoming infected respectively. Now that treatment is becoming more widely available, health planners perceive VCT as a way of identifying those who need care and support services. As the emphasis changes from prevention to care, less attention is being placed on a high-quality counseling that can motivate people to adopt safe behaviors and the usefulness of VCT as a preventive measure is being weakened. VCT programs have demonstrated their ability to increase safe sexual behavior and use of care and support services among adults.<sup>5,6</sup> By helping clients learn their HIV sero status and creating a personalized HIV risk reduction plan, VCT can provide the information and support necessary to change risky behaviors that may be associated with HIV infection or transmission.<sup>7,8</sup>

Generally, VCT has numerous advantages at both individual and community perspectives. At individual level, VCT creates a more realistic self-perception of the client's vulnerability to HIV, promotes or maintains behaviors to prevent new acquisitions or further transmission of HIV, alleviates anxiety and facilitates the understanding and coping. VCT helps to link clients with interventions to reduce MTCT of HIV; it enables early and appropriate

referral of people living with HIV/AIDS for treating and preventing tuberculosis, sexually transmitted infections and opportunistic infections. VCT also enables referral for nutritional services, legal aid, spiritual support, home-based care and antiretroviral therapy for HIV. At community level VCT is important as it creates peer educators, and mobilizes support for appropriate responses and it can reduce denial, stigma and normalizes HIV/AIDS.<sup>9,10</sup>

Therefore, it is advocated to increasingly implement innovative strategies to deliver HIV counseling and testing in more settings and on a much larger scale so that more individuals can make use of the above benefits. All such innovations need to satisfy the minimum requirements for ensuring the provision of voluntary counseling and HIV testing. This can be achieved through the available diversified models of delivery of VCT services. The VCT delivery models includes stand-alone sites, integrated sites within existing health facilities, NGO-based sites, private sector sites, mobile services or a combination of all. In recent years, the demand for voluntary counseling and testing (VCT) services has increased alongside understanding that seeking basic health care can extend the lives of people living with HIV/AIDS (PLWHA). The use of HIV Voluntary Counseling and Testing for facilitating both treatment and prevention, quadrupled to 16.5 million people tested worldwide in 2005.<sup>1</sup>

The provision of HIV/AIDS related counseling services in Tanzania was started in 1988.<sup>11</sup> In 1996, an evaluation of VCT services in the country showed that these services were in high demand and therefore expansion of such services to all districts was recommended.<sup>4</sup> The NACP in collaboration with NGOs, FBO are committed to VCT expansion and setting-up VCT sites to increase accessibility. In Tanzania, there are four models of VCT sites namely integrated (facility based), stand alone and mobile or outreach. By March, 2006 there were more than 806 VCT sites and 2,110 trained counselors providing VCT services.<sup>12</sup> The number of clients, who accessed VCT services between July 2005 and March, 2006 was 427,272. Of these, 99,851(23%) clients were found to be HIV positive.<sup>12</sup> Of all the regions in Tanzania, Mbeya was ranked as the number one in utilizing VCT services. Among the Tanzanians who accessed VCT, 41% were from Mbeya region where the prevalence of HIV was 16%.<sup>12</sup>

### **1.1.3 Integration of VCT services into the health care delivery system**

Among other approaches, the Tanzanian VCT program is expanding its services through integration of VCT services into the health services. This was implemented following a needs assessment for Orphans and vulnerable children (OVC) conducted by AXIOS International under Step Forward of Abbott Laboratories Fund in 2002. The needs which were identified included VCT services, education, access to primary health care, economic and social support.<sup>13</sup> Five districts were recommended to integrate VCT services on a trial basis before the services are scaled-up to other districts in the country.



The recommended districts are Rungwe in Mbeya region, Hai in Kilimanjaro, Ilala in Dar es Salaam, Muheza in Tanga and Mbeya Urban in Mbeya region.<sup>13,14</sup>

In Rungwe district, there was a need to implement an integrated approach of VCT delivery following a recommendation from the results of a situational analysis carried out in 2001. The analysis revealed that access to and utilization of VCT services was poor.<sup>15</sup> Therefore in 2002, the district health authorities using funds from Step Forward (Abbott Laboratories Fund) and technical assistance from AXIOS, introduced an 'integrated' VCT program in eight health facilities (three hospitals and five health centres) in the district. Currently, VCT centres have been expanded through integration from eight to 29 among 57 health facilities. Therefore the district has a total of 31 VCT centres of which two are stand alone; one is owned by FBO and the other one is privately owned.

It was understood that the expansion would utilize rapid test technology and hence allowing more facilities to offer services and decrease the burden on the counselors. The use of rapid tests was meant to encourage clients to seek services as they would know their results with immediate effects. However, it was suggested that communities would need a great deal of education and mobilization. At the health facilities, VCT services are provided by counselors who in most cases are clinicians and well trained nurses. Multi-skilled training on basic facts of HIV/AIDS and VCT was offered to all

health personnel to raise HIV and VCT awareness. The health staff were trained on counseling and rapid HIV testing, home-based care, HIV test quality control techniques, infection control, waste management as well as treatment of opportunistic infections. The approach is further responsible for provision of same-day results to clients and improvement of overall health service delivery such as targeted renovation, equipment and supply provision.<sup>15</sup> In order to improve efficiency of the operation, VCT services are strengthened by providing six-week refresher courses to counselors. Sensitization meetings and drama performances are conducted at ward and village level in order to promote VCT services and the associated services. Such promotions help in raising the level of awareness among community members.<sup>16</sup>

Although the enabling environments are documented for community uptake of the services, it is yet to be confirmed that utilization rate of the services is as high as anticipated. Sometimes, when the VCT services are brought closer to the community this may not necessarily maximize utilization of services as desired because of implementation problems that may hinder the uptake especially if mobilization activities and supportive supervision are not intensified. In addition, in communities where there is stigmatization for HIV infected people, utilization of VCT services may not be noticeable.

### 1.2.0 Statement of problem

VCT services are acknowledged within the international arena as an effective and pivotal strategy for the prevention, care and support services for HIV/AIDS. Counseling motivates people who are HIV-positive and negative to change their behavior in ways that would prevent their passing the virus to someone else or becoming infected, respectively. There is evidence that many people benefit from VCT services and therefore, a growing interest has arisen in extending these services to many communities especially those in remote areas where they have not been made available.<sup>17,18</sup> A study conducted in South Africa showed that utilization of VCT services is positively associated with close proximity of clinics. On the other hand, increased mobilization and access to VCT services can contribute to an increased number of people seeking VCT services.<sup>19</sup>

A number of VCT delivery models are being used to expand the entry points to HIV testing and to promote testing as a more routine practice.<sup>20</sup> Expanding the number of models will help more people to learn about their HIV status and benefit from prevention, care and treatment services. Among the known models of delivery, integration of sites within the existing health facilities is being implemented in Rungwe district. VCT services are located in the same physical structure housing other health services, personnel are typically recruited from within the same facility and clients access different services through a series of referrals. Some individuals may prefer to use the term "co-located" because "integrated" has typically implied that a client can

receive all the health services s/he needs with one visit to a certain provider. Whereas, the term "co- located" implies that VCT operates in the same facility but relies on separate resources.<sup>21</sup>

The integrated model was observed in Kenya to be associated health facilities serving a large volume of VCT clients and hence having a strong potential to be scaled- up. Another study in Kenya observed that the integrated services are more sustainable compared to other models and can be dispersed more widely throughout the country.<sup>22</sup> The experience of integrating VCT services into health facilities resulted in increased access, coverage also it ensured provision of equitable services. As a consequence it was recommended that health planners should encourage the establishment of integrated VCT sites as a first option.<sup>23</sup>

Although integration of VCT into health facilities might have advantages and disadvantages there is no evidence to suggest that the advantages out weigh the disadvantages or *vice versa*. The advantages of integration include allowing the "normalization" of HIV/AIDS, involvement of health care workers directly in HIV prevention activities and allowing direct referral to other relevant care and welfare services. In integrated approach, high volume of potential clients tends to visit public facilities. On the other hand, integration lowers quality of VCT service delivery and disallows the use of non-health care workers as counselors. Other concerns are those pertaining to low motivation of public sector employees, difficulty in enforcing quality

assurance measures as well as problems of limited administrative capacity and long waiting times.

Although studies in other countries have reported that integration is associated with increase in uptake of VCT services this phenomenon can not be generalized in the Tanzanian settings and specifically Rungwe district, Mbeya region. In Rungwe district where integration approach commenced in 2002, no study has been conducted to assess how it affects the pattern of utilization of services. The only available information from review of records based on clients register revealed that one year after inception of the integration delivery approach, the utilization increased by six fold.<sup>15</sup> However, the validity of facility records is questionable due to incompleteness and inaccuracy of the data, one can not rely on such findings.

Therefore, there was a need to conduct a population based survey to determine the number of people who are utilizing VCT services in both urban and rural areas of the Rungwe district. The study was also designed to determine factors influencing uptake of the services and suggestions for improving the uptake of the service if deemed so.

### **1.3.0 Rationale**

This study was intended to assess community's uptake of VCT services in an integrated VCT centres. Therefore, these findings from the population based

survey will form a baseline data to be used for future monitoring and evaluation of the program.

#### **1.4.0 Broad objective**

The broad objective of the study was to determine community uptake of HIV Voluntary Counseling and Testing (VCT) services in an integrated health delivery approach in Rungwe district.

#### **1.4.1 Specific objectives**

- (i) To assess community awareness of the availability of HIV/AIDS prevention, care and support services
- (ii) To determine the trend in utilization of VCT services within and outside facilities catchment's areas from 2002 to 2007.
- (iii) To assess factors that influence uptake of VCT services.
- (iv) To identify community's suggestions for improving VCT services



## CHAPTER TWO

### 2.0 LITERATURE REVIEW

Studies conducted in various parts of the world have shown that many people benefit from VCT.<sup>17,18</sup> As a result more interest has been shown on the need to extend such services to many communities especially those in remote areas where such services have not been made available. A multi-centre VCT efficacy trial in Kenya, Tanzania, and Trinidad showed that there was a significantly greater decline in the number of individuals who had unprotected sex with non-primary partners among a group that received VCT as compared with a group that received a health education intervention.<sup>5</sup> A study in South Africa, has reported that increased recognition of the value of knowing one's HIV status is one of the factors that influence acceptance of VCT services at PHC facilities.<sup>23</sup>

When VCT services are integrated into health facilities this tends to make the services easily accessible. A study in Kenya, observed that integration of VCT services into the Ministry of health's clinics was associated with increased accessibility and coverage.<sup>22</sup>

A study in South Africa on introduction of Voluntary Counseling and rapid testing demonstrated that improving access to high quality VCT services is an achievable public health intervention in historically disadvantaged rural areas.

When VCT services are operated at already existing health care facility which are close to majority of people in both rural and urban area makes them accessed more easily .A study in South Africa showed that although overall use of VCT services was low (in the whole province: 14% and 17%; in rural: 9% and 11% for women and men respectively), utilization of VCT services was positively associated with proximity to clinics and demographic characteristics such as age, education, socioeconomic status.<sup>19</sup> Another study observed that a large percentage (75%) of clients presenting voluntarily or 'self-referring' may be related to increased accessibility of VCT at PHC facilities.<sup>23</sup>

In the integration programme rapid testing assays are utilized to encourage clients to seek services as they would know their results immediately effects. Therefore, shortening of waiting time by providing same day result can increase the number of people accessing VCT services. Studies conducted in South Africa and Tanzania revealed that availability of rapid testing assays was positively associated with increased utilization of VCT services.<sup>19, 25</sup> A study carried out in Rungwe district, Tanzania observed that the availability of rapid tests reduced waiting times; it also revealed that more than 90% of clients receive their results compared to less than 10% at the program's inception.<sup>15</sup> A multidimensional impact assessment of the introduction of VCT in primary health care (PHC) facilities in South Africa, demonstrated that through effectively utilizing existing clinic staff with the rapid assay, all

clients received same-day results compared with 10–15% when one uses hospital-based ELISA testing assay.<sup>23</sup>

The availability of care and treatment services such as ART, PMTCT, HBC etc have a major influence on the uptake of VCT services. In Tanzania, clients' referral networks for prevention, care and support services also have influence on the uptake of VCT services.<sup>25</sup> A study in Uganda reported that the availability of such services tends to increase the number of people accessing VCT services, also the number of clients referred to care and treatment services.<sup>26</sup> A study in Ethiopia revealed that the availability of ART was found to have a positive influence on the acceptance of VCT services. Thus by increasing access to ART services this would also help in further expansion of VCT services.<sup>27</sup>

In order to create awareness to the community on VCT services, it is paramount important to seriously strengthen mobilization activities and supportive supervision. A study conducted in Uganda concluded that among other things, increased mobilization may increase the number of people seeking VCT.<sup>28</sup> In Rungwe district it has been observed that sensitization meetings and drama performances conducted at ward and village level had big impact on utilization of VCT services. Such promotions are thought to help in rising awareness among community members.<sup>16</sup> A study conducted in South Africa, has also shown that outreach services and lower levels of HIV/AIDS stigma were associated with utilization of VCT services.

Importantly, the effects of stigma appear considerably stronger for females, while for men they are more heavily influenced by the characteristics of the VCT services.<sup>19</sup> In addition, a needs assessment study in Mbeya, Tanzania concluded that in communities where there is stigmatization for HIV positive people, utilization of VCT services may not be noticeable.<sup>12</sup>

Quality of service such as confidentiality, privacy, workers attitude, and waiting time play a significant role in the acceptance of VCT services by the community. A study in Rungwe district in Tanzania found that through integration, confidentiality increased which resulted in increased number of clients accessing VCT services without other patients not necessarily knowing the reason for a visit.<sup>15</sup> A study in Uganda showed that quality of counseling services also influenced the uptake by different groups. The Ugandan study suggested that clients value confidentiality, regular availability of counseling (rather than 'one-off' sessions) and the presence of non residential counselors among other factors. Another study conducted in Kenya, showed that people desiring VCT services may not visit health facilities out of a concern over lack of privacy.<sup>24</sup> In Tanzania, it has been observed that in order to improve efficiency of operation, VCT services can be strengthened by providing refresher courses to counselors.<sup>16</sup>

The benefits of integrating VCT services into health facilities can not be taken for granted any where it is implemented. Sometimes under certain circumstances, the phenomenon can hinder the uptake of VCT services. One

evaluation study on scaling up HIV VCT in Africa concluded that “Although there is a widespread belief that scaling -up of HIV voluntary counseling and testing (VCT) programs in Africa will have large prevention benefits through reductions in risk behaviors, these claims are difficult to establish from existing evaluations of VCT services”.<sup>29</sup> From the same study, considering behavioral models and the available data suggest that as VCT coverage increases, marginal program effects are likely to decline owing to changes in the degree of client selectivity; however the potential uptake among those at highest risk is uncertain. In Uganda a preference for a particular counseling site has been studied and the authors showed that clients have a high preference of counseling if it is done outside the health centre (a ‘neutral site’) such as community centre.<sup>26</sup>

## CHAPTER THREE

### 3.0.0 METHODOLOGY

#### 3.1.0 Study area

The study was conducted in Rungwe district in Mbeya region. The district was selected to be studied because it was among the few (four) that are integrating VCT services into health facilities in Tanzania. Secondly, the district is stratified into urban and rural areas for comparison purposes of people's uptake of VCT services in the two settings.

Rungwe district is one of the seven districts of Mbeya region. Other districts include Chunya, Ileje, Mbarali, Mbozi, Mbeya municipality and Mbeya rural. The district headquarter is situated at Tukuyu town, which is about 72 km away from Mbeya municipality. It covers a total area of 2,211 km<sup>2</sup> which is divided into four divisions namely Tukuyu, Ukukwe, Pakati and Busokelo. The four divisions are further divided into 30 wards, 162 registered villages and 731 sub-villages. The district has a projected population of 307,270 people based on the district annual population growth rate of 0.9%.<sup>30</sup> The population density is estimated to be 140 inhabitants per km. Therefore with this annual population growth rate the district was expected to have 317,611 people in 2006.

Rungwe district has a total of 57 health facilities including three hospitals, five health centres and 49 dispensaries. Among the three hospitals, one is owned by government and two are religious based. Of the five health centres,

only one is owned by FBOs and the rest are owned by the government. Of the 49 dispensaries, 33 are owned by government, 11 by FBOs and five are operated by private for profit non Government organization. The district provides both preventive and curative services. The preventive services include environmental sanitation, expanded program on immunization program (EPI), antenatal and postnatal clinics, malaria control, STI/HIV/AIDS Program, Tuberculosis/Leprosy and VCT program. There are a total of 31 VCT centres of which two are stand-alone and 29 are integrated into health facilities. Of those integrated, three are hospitals, five are health centres and 21 are dispensaries.

### **3.2.0 Study design**

This study employed a cross sectional study design to collect quantitative data. Whereas the quantitative data were collected using structured interviews, qualitative data was collected using in-depth interviews of key informants. The qualitative information complemented quantitative data in order to give an insight on the provision of VCT services in an integrated delivery approach.

The study was conducted in June and July, 2007 as a requirement for the partial fulfilment of a Master of Public Health (MPH) program offered by Muhimbili University of Health and Allied Sciences (MUHAS).



### 3.3.0 Sample size

The minimum sample size was calculated using the formula below.

$$n = 1/d^2 * Z^2 pq \{q = (1-p)\}^{31,32}$$

$$\text{Therefore } n = Z^2 p (1-p) / d^2$$

Where

n= expected minimum sample size

Z= critical value which is 1.96(95% CI)

d= Margin of error (3%)

P=percentage of population who accept VCT service (utilization of VCT services). In this case, 10% was taken as an average of utilization figures of 11% and 9% for males and females in rural South Africa.<sup>19</sup> The proportion from South Africa was used to calculate sample size because no similar studies have been done in Tanzania to assess utilization of VCT under the integration approach. Given the rural settings in African countries do not differ much, it is hoped the acceptance level will be similar. For example, females have lower acceptance because stigma appears to influence them more while males are influenced by characteristics of the VCT services. Another similar setting is the use of rapid assay in the integration delivery approach.

Therefore, substituting the above values into the formula:  $n = Z^2 p (1-p) / d^2$

$$n = (1.96)^2 \times 10 (100-10) / (3)^2$$

$$n = 384$$

Therefore the minimum number, n of subjects was 384. However, taking into account of non-response by respondents and the possibility of missing some

subjects, 11% of the minimum sample was calculated and added to it to make a total of 428 participants. Of these, 420 participants were interviewed while 8 refused to participate in the study on various grounds.

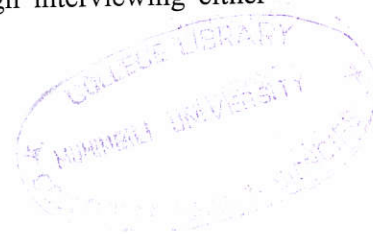
#### **3.4.0 Sample selection:**

In depth interview focused on health workers who are the in charges of health facility and counselors. In the population survey, almost equal proportions of males and females aged 15 to 79 years were sampled.

#### **3.5.0 Data collection techniques.**

##### **3.5.1 Household survey:**

A multistage random sampling approach was used. Of the four divisions in the district, one is in urban area and the other three are in rural areas. All divisions were studied to ensure coverage of the district. For each division, two wards were randomly selected using ballot method from a given list of all wards. In Rungwe district, every ward had at least one health facility based VCT centre. For each selected ward, two villages were selected to include one from the closest and one furthest to the health facility. For each selected village, two sub- villages was purposively selected so that the closest and furthest to the health facility was enrolled for study. At each selected sub-village we selected seven households to be sampling units from a given list of all households obtained from the chairman of sub village or village executive officer. In order to have at least equal number of males and females, selection of each sex was considered by data collectors through interviewing either



male or female in alternate households as data collectors moved from one household to another.

Study participants were requested to give oral consent in order to be interviewed. Information in the consent form was read loudly and the individuals were asked whether they reject or accept to participate in the study. Data were collected using tools translated in Kiswahili which later were translated back to English.

### **3.5.2 In-depth interview**

A semi structured interview guide was used to collect qualitative data from nine key informants. The key informants included one district VCT program coordinator and eight in -charges of health facilities who were also site counselors.

The major themes of the study instruments included promotion activities, acceptance level and factors influencing utilization of VCT services. Other themes were availability of referral services for those identified HIV positive and means to improve implementation of VCT services under integration approach.

### **3.5.3. Training of data collectors**

Two data collectors were identified by the District Medical officer among district health staff while another two were from NIMR. These were a health assistant and Nurse Midwife from the district office and two Laboratory

assists from NIMR. Data collection was preceded by a 2 days training of research assistants on how to interview, fill the questionnaires. Data collectors were also trained on how to observe privacy when conducting an interview and the whole process of maintaining confidentiality of the data.

### **3.6.0 Pre-testing**

Pre-testing was done in Mbeya district which is also integrating VCT services to check whether the instrument to be used in the surveys was able to collect relevant and the desired information. Pre-testing was done for 10 people and the responses were compared to see if questions were well understood by the respondents. Necessary changes were made before the actual field work.

### **3.7.0 Variables**

#### **3.7.1 Dependent variables**

- Utilization of VCT services
- Awareness on HIV/AIDS prevention, care and support services

#### **3.7.2 Independent variables**

**-Demographic characteristics:** Age, sex, marital status, religion, locality, occupation and education level.

**-Individual characteristics:** Fear to receive result, fear of being stigmatized for being positive, fearing to get a negative reaction from ones partner, perception of being at risk or not at risk, awareness on VCT and referral services

**Community characteristics:** Stigma, cultural beliefs, gender violence,

**-Quality of VCT services offered:** Confidentiality, privacy, distance to access the site, direct and indirect costs, waiting time for the service, waiting time for the result, skills of counselors, attitudes of counselors, involvement in decision making, availability of referral services.

### **3.8.0 Data Analysis**

The responses from quantitative study were collected using a coded questionnaire. Data were collected, checked by the field team, discussed the uniformity and any variations as they got identified by data collectors. All questionnaires were handed to a single individual who filled in the code numbers of all ticked responses from various data collectors. Then data were entered in a computer using SPSS software (version 11.5). In data analysis, two by two contingency tables were used to determine the association between independent and dependent variables as described here under.

Awareness of respondents about VCT was assessed using a scoring system. The level of awareness (Low, moderate and high) was done based on the number of questions that were responded correctly as per established scale.

For qualitative data, written notes from the every interview session were organized soon after fieldwork by taking the key statements to be expanded for analysis. Data were ordered in relation to research question or objectives, transcribed and interpreted accordingly.

### Measures of association

- Association between demographic characteristics and utilization of VCT service
- Association of utilization of VCT services by the community and their awareness on VCT services
- Association between availability of treatment, care and social support service (ART, PMTCT, economic, HBC etc) and utilization of services
- Linkages between mobilization activities and uptake of VCT services
- Association between proximity to health facility and utilization of the services
- Linkages between quality of services provided by the facility (privacy, confidentiality, waiting time, stigma, workers' attitude etc.)

**Note:** Statistical test used was the Manthel Haenzel Chi square.

### 3.9.0 Ethical Considerations

Ethical clearance was sought from the Research and publications committee of Muhimbili University of Health and Allied Sciences (MUHAS). Permission to conduct the research was sought from the District Executive Director District Medical Officer, in-charges of health facilities, Ward Executive Officers, Village executive officers, Chairman of the sub - village/street and finally individual interviewee. Confidentiality was observed and unauthorized persons had no access to the data collected. Respondents were informed that their responses will be treated confidentially and that the results would be used not only for academic purpose but also to better

understand on the uptake of VCT services following integration into health facilities. Respondents were free to participate in the study on voluntary basis. They were assured that non-participation would have no repercussion.



## CHAPTER FOUR

### 4.0.0 Results

#### 4.1.0 Socio-demographic characteristics

Table 1 presents the socio-demographic characteristics of the study population. A total of 420 participants were interviewed on the uptake of VCT services in an integrated health care delivery approach. Of all the respondents, 200 (47.6%) were females and 220 (52.4%) were males. The age of the respondents ranged between 15 to 79 years and the mean age was 33.5 years. Sixty one percent of the respondents were married, 65% were peasants and 76% had completed primary school education. (Table 1)

Table 1. Socio-demographic characteristics of study population (N=420)

<b>Characteristics</b>	<b>Frequency</b>	<b>%</b>
<b>Sex</b>		
Male	220	52.4
Female	200	47.6
<b>Locality</b>		
Urban	101	24.0
Rural	319	76.0
<b>Marital Status</b>		
Single	106	25.2
Married	258	61.4
Others	56	13.3
<b>Occupation</b>		
Business	48	11.4
Peasantry	217	64.5
Employment	22	5.2
Student	76	18.2
Others	3	0.7
<b>Education</b>		
College	17	4.0
Secondary	64	15.2
Primary/adult	327	77.9
None	12	2.9

#### 4.2.0 Awareness of the existence of VCT services in the study area

The result revealed that 96.4% were aware of the existence of VCT centres in the study area. There was no significant difference ( $p=0.49$ ) of awareness on the existence of VCT centres in the study area among respondents between rural (97.0%) and urban (96.4%) area

Awareness about availability of VCT services was significantly ( $\chi^2 = 21.0$ ;  $p=0.02$ ;  $df = 1$ ) associated with increase in level of education but it was not associated with age, sex and rural/urban location. The higher the level of education, the more aware the respondents were about the availability of VCT services. Those who had college education were more aware (76.5%) than secondary school leavers (43.8%), primary school leavers (34.5%) and those who had no formal education (8.3%).

#### 4.3.0 Awareness about availability of referral services

Of the study participants, 66% reported that they were aware of the availability of referral services in the district for patients identified to be HIV positive.

Additionally, the results revealed that 59.1% of the respondents were aware that they could have access to ARVs while 47.6% were also aware of nutrition support as referral services available in the district.

There was no association between age, sex, locality and education with awareness of referral services.

#### **4.4.0 Awareness about integration of VCT services into health facilities**

Of the 408 respondents, 332 (81.4%) reported that they were aware that VCT services are integrated into health care system. Those who were aware were of integration, 295 (72.3%) were able to explain the meaning of integration. More than half (57.3%) were able to explain integration as when VCT centres are located within the health facilities. Some (30.8%) respondents explained in other scenarios by saying integration is when a room for VCT services is provided in the hospital settings.

Of 391 respondents who were asked to mention the source of information on knowing integration of VCT services into health care delivery approach, 76% mentioned health talks at health facilities and alerts from health workers in normal conversations. Leaflets (36%) and drama performance (27%) were also reported to be contributing source of information for knowing integration **(Table2)**.

There was significant association ( $\chi^2 = 8.8$ ;  $p=0.03$ ;  $df =1$ ) between sex with announcement on boards in knowing integration but not with other sources of information.

Table 2. Source of information on knowing integration of VCT services by sex

(n=391)

Source of information	Male		Female		Total	
	No.	%	No.	%	No.	%
Seminar	35	55.5	27	43.6	62	15.9
Announcement on boards	68	63.6	39	36.4	107	27.3
Leaflets	74	52.5	67	47.5	141	36.1
Health talks at H/facility	67	42.9	89	57.1	156	39.9
Health workers	81	57.4	60	42.6	141	36.0
Political leaders	38	60.3	25	39.7	63	16.2
Drama performance	50	48.1	54	51.9	104	26.5
VCT/HIV/AIDS meetings	12	44.4	15	55.6	27	6.9

#### 4.4.1 Convenience of integration of VCT services into health facilities

Of 400 respondents, three quarters said integration of VCT services into health facilities was convenient for individuals who want to go for the services. The response on convenience of integration of VCT services was significantly ( $\chi^2 = 7.8$ ;  $p=0.005$ ;  $df=1$ ) associated with sex but not associated with age, education and urban/rural location. Eighty one percent of respondents of females against 69% of males reported that integration was convenient. (Table 3)

Majority (63.5%) had the opinion that when VCT services are integrated, people tend to be more assured about quality of the service because health

workers at health facility get more concerned with the health issues including HIV testing. Some of the people were concerned with health facilities as places that were designed for people to check their health status. Some of the respondents associated convenience with easy of accessibility of VCT services if they are located at a health facility because they become more accessible to the majority of the people.

In an in-depth interview, all participants reported that integration was convenient. Majority of the interviewee in the in-depth session reported that convenience is high as supported by high level of acceptance of the service. For example one counselor had to say “Hii huduma kuwepo kwenye vituo vyetu ni nzuri sana kwasabababu imewafanya watu waweze kuja kirahisi na kuipata kwa muda mfupi ukilinganisha na huko nyuma”. This literally means that the integrated service is good because has enable people to easily access it in short time compared to the past.

**Table 3. Convenience of integration of VCT services by socio-demographic characteristics**

Characteristics	Responses on convenience (N=400)				
	Yes		No		Total
	No.	%	No.	%	No.
<b>Sex</b>					
male	143	69.4	65	30.6	206
Female	158	81.4	36	18.6	194
<b>Locality</b>					
Urban	69	68.3	32	31.7	101
Rural	232	77.6	67	22.4	299
<b>Age group (years)</b>					
15-24	88	77.9	25	22.1	113
25-34	87	75.7	28	24.3	115
35-44	75	77.3	22	22.7	97
≥ 45	51	68.0	24	32.0	75
<b>Education</b>					
College	11	64.7	6	35.3	17
Secondary	45	73.8	16	26.2	61
Primary/Adult	238	76.5	73	23.5	311
None	7	63.5	4	36.5	11



#### 4.5.0 General utilization of VCT services

Results showed that of the 414 respondents, 162 (38.8%) had utilized VCT services for various reasons. Of 162 who had visited VCT centres, 149 respondents had remembered the time interval that had passed since when they visited VCT centres for VCT services. Results showed that 146(98%) respondents had utilized VCT services within a period of 5 years (2002-2007) while 3(0.2%) had utilized the VCT services before 2002.

There was a gradual increase of utilization in the first three years (2003-2004) of integration. The utilization peaked in 2005 and 2006. The utilization in 2007 appeared to decline because data presented covered only six months of year 2007. (Fig. 1)

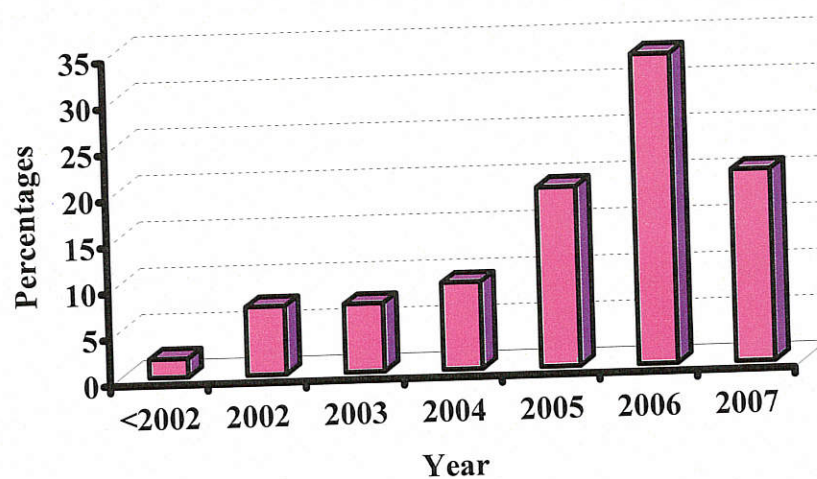


Fig1. Annual trends of utilization of VCT services

### .5.1 Motives for seeking VCT services

Among study participants, 60% knew that people can access VCT services because of personal decision to know their HIV sero status. Of these, 56.8% were males while 43.2% were females and most of them (36.0%) were in the age of 25-34 years old. Only females reported that pregnant women (22.4%) can access VCT services through antenatal clinic visits. Generally, Males knew motives for seeking VCT services more than females by 10.2%. Out of 147 people who knew motives for seeking VCT services, 50(34.0%) were in the age of 25-34 years old (Table 4 & Table 5)

Table 4. Motives for seeking VCT services by sex

Motives for accessing VCT	Male		Female		Total	
	No.	%	No.	%	No.	%
Antenatal care visit	0	0.0	33	100	33	22.4
Marriage condition	10	83.3	2	16.7	12	8.2
Scholarship condition	1	33.3	2	66.2	3	2.0
Individual decision	50	56.8	38	43.2	88	59.9
Partner influence/couple	2	28.6	5	71.6	7	4.8
Friends influence	0	0.0	1	100	1	0.7
Parents influence	2	66.2	1	53.3	3	2.0
Total	66	44.9	81	55.1	147	100

Table 5. Motives for seeking VCT services by age group

Motives	Responses by Age group				Total	
	15-24	25-34	35-44	≥ 45	No.	%
Antenatal care visit	9	12	10	2	33	22.4
Marriage condition	3	3	4	2	12	8.2
Scholarship condition	2	0	0	1	3	2.0
Individual decision	21	32	17	18	88	59.9
Partner influence/couple	2	1	1	3	7	4.8
Friend influence	0	1	0	0	1	0.7
Parents influence	2	1	0	0	3	2.0
Total	39	50	32	26	147	100

#### 4.5.2 Utilization of VCT services by villages with and without integrated health facilities.

Of 162 respondents who had ever utilized VCT services, 50.6% were from villages around non-integrated health facilities while 49.4% were from villages near integrated health facilities. For example, in Ikuti ward, twelve percent of participants had utilized VCT services in Kyobo Village which is an area of non-integrated health facility compared to 6% of Ikuti village which is an area of integrated health facility. (Fig. 2)

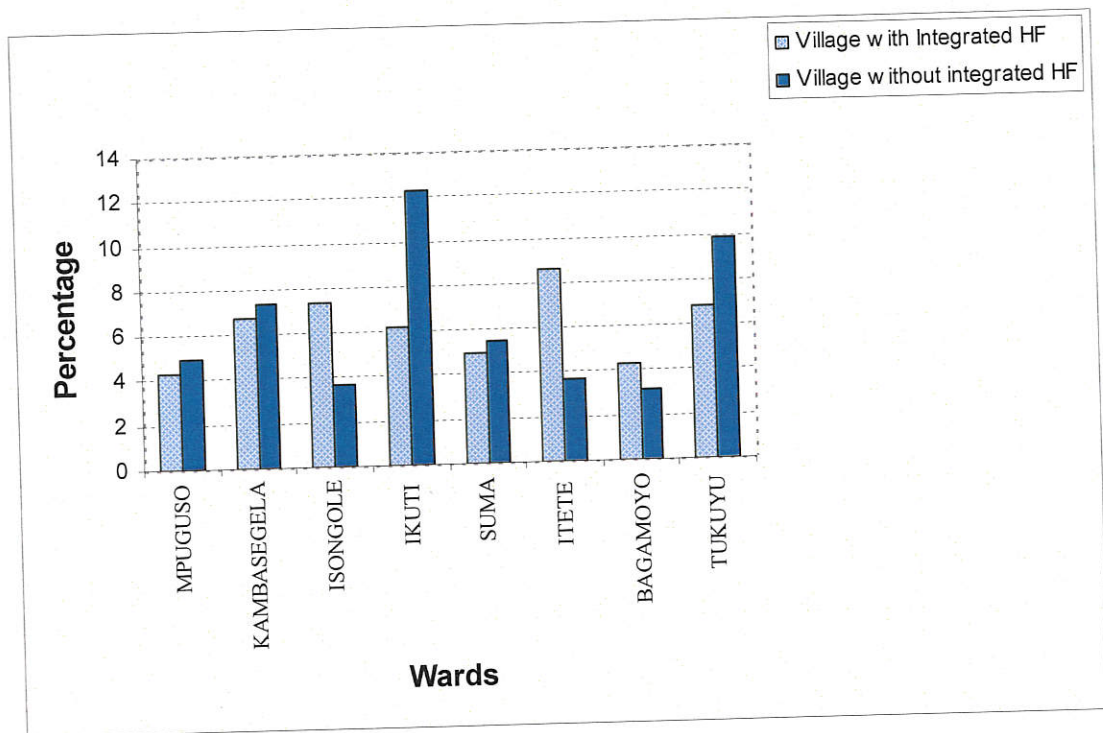


Fig.2. Utilization of VCT services by catchment's areas of Health facilities

#### 4.5.3 Utilization of VCT services in integrated and non integrated VCT centres

Utilization of VCT services between 2002 and 2007 was higher among health facility based VCT centres than stand alone VCT centres. For each year, the percentages of individuals who visited VCT centres were higher in integrated compared to non integrated VCT centres. Annual utilization of VCT services by type of VCT centre revealed that in 2002 and 2003, the first two years of implementation of integration, people accessed by three and five times respectively, the integrated than none integrated VCT centers. In the year 2004, 2005 and 2006 the utilization declined a bit and became steady although still there was higher utilization of integrated services than non integrated by 1.3, 1.3 and 1.2 times respectively. (Fig. 3)



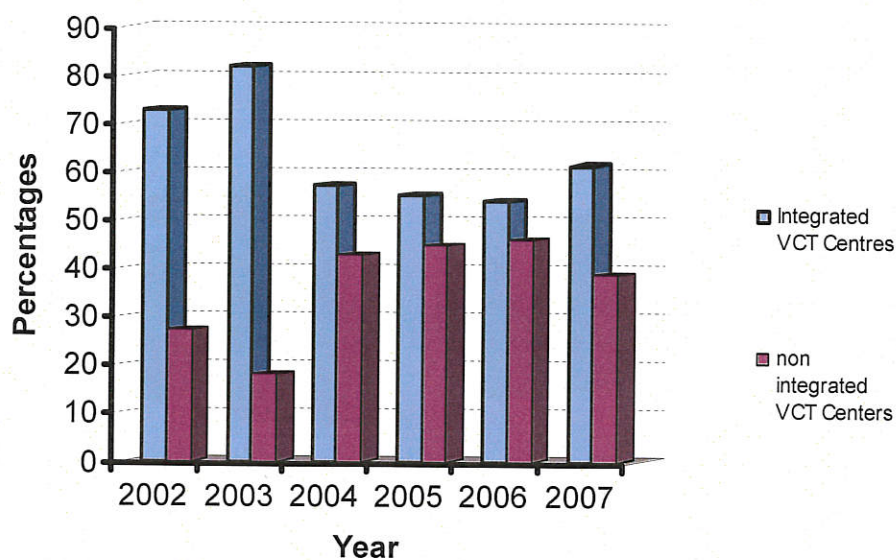


Fig3. Comparison of utilization of VCT services between integrated and none integrated VCT centres

#### 4.5.4 Utilization of VCT services by type of VCT centres

Overall, the majority (79%) of people accessed health facility based VCT centres while 20.4% accessed non integrated VCT centres. Of those who had visited health facility based VCT centres, 46.3% visited nearby health facilities within the district, 11.1% visited other health facility within the district and 22.2% visited health facilities that are located outside the district.

(Fig. 4)

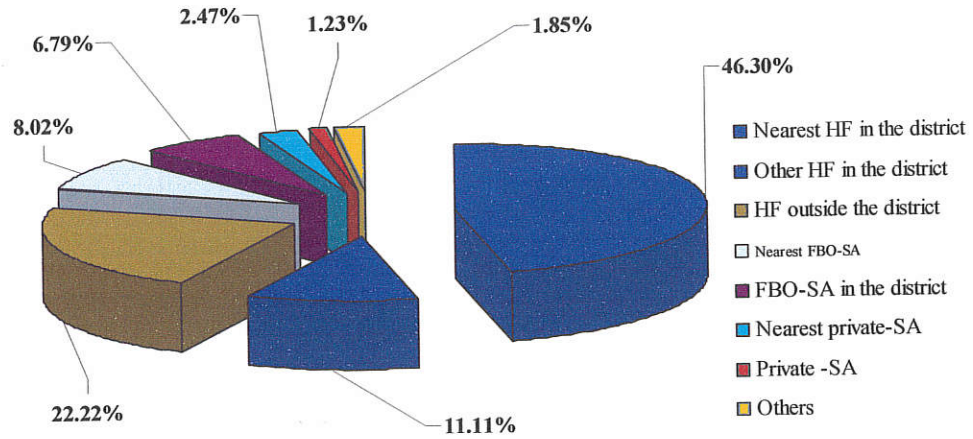


Fig 4. Utilization of VCT services by type of VCT centre

#### 4.5.5 Utilization of VCT services by location of villages from nearby integrated VCT centres.

Of 75 (46.3%) people who accessed nearby health facility based VCT centres, 34 (45.3%) were from villages within Health facility catchments areas while (54.7%) were from villages away health facility catchment's areas. There was no association between nearness to health facility and utilization of VCT services. (Table 6)

Table 6. Utilization of VCT services by location of villages

Health facility	Utilization in villages around H. facility			Utilization in villages away H. facility			Total
	Str/vill	Freq	%	str/vill	Freq	%	
MASEBE	Mpuguso	5	50.0	Isajilo	5	50.0	10
NTABA	Ntaba	3	60.0	Mbambo	2	40.0	5
NDAGA	Ndaga	3	37.5	Ntokela	5	62.5	8
IKUTI	Ikuti	7	31.8	Kyobo	15	68.2	22
ITETE	Kabembe	9	90.0	Kibole	1	10.0	10
SUMA	Suma	1	25.5	Masebe	3	75.5	4
ELCT	Bagamoyo	2	66.7	Bujinga	1	33.3	3
MAKANDANA	Makandana	4	30.8	Bulyaga	9	69.2	13
	Total	34	45.3		41	54.7	75

#### 4.6 Association between socio-demographic characteristics and utilization of

##### VCT services

There was no association of being in rural or urban areas and utilization of VCT services. There was significant ( $\chi^2=5.7$ ,  $p=0.02$ ,  $df=1$ ) difference in accessing the service between males and females. A larger proportion (44.7%) of females had utilized VCT services compared to males (33.3%). The difference might be attributed by female being obliged to access VCT services as they visit antenatal care clinics where by opt out services are offered through PMTCT programme. (Table 7)



Table 7. Utilization of VCT service by demographic characteristics (n=420)

Characteristics	Utilization of VCT services				
	YES		NO		Total
	No.	%	No.	%	No.
<b>Sex</b>					
Male	73	(33.3%)	146	(66.7%)	219
Female	89	(44.7%)	110	(55.3%)	199
<b>Locality</b>					
Urban	39	(38.6%)	62	(61.4%)	101
Rural	123	(38.8%)	194	(61.2%)	317
<b>Education</b>					
College	10	(58.8%)	7	(41.2%)	17
Secondary	27	(42.2%)	37	(57.8%)	64
Primary /Adult	122	(37.5%)	203	(62.5%)	325
<b>Marital status</b>					
Single	37	(34.9%)	69	(65.1%)	106
Married	103	(40.2%)	153	(59.8%)	256
Others	22	(39.3%)	34	(60.7%)	56
<b>Age interval</b>					
15-24	45	(38.5%)	72	(61.5%)	117
25-34	50	(40.3%)	74	(59.7%)	124
35-44	38	(37.6%)	63	(62.4%)	101
≥45	29	(38.2%)	47	(61.8%)	76

#### 4.7.0 Association between awareness on VCT services with utilization of VCT

Fifty three percent of respondents who had high level of awareness on VCT services utilized VCT services. There was strong association between awareness of VCT services with utilization of the service ( $\chi^2 = 27.9$ ,  $P = 0.000$ ,  $df = 2$ ).

#### 4.8.0 Association between awareness of type of referral services with utilization

Majority (67.6%) who knew the availability of ARVs had ever utilized VCT service followed by those who were aware of nutrition support (59.3%). There was positive association between those who were aware of availability of referral services and nutrition support with utilization of VCT services. In an in-depth interview, counselors also reported of the nutrition support as introduced by AXIOS and distributed through Home based care program. For example, one counselor said "*Huko nyuma walikuwa wanapata vitu kama nafaka, Mbuzi na kuku wa kufuga lakini baadaye AXIOS wakaacha kutoa. Hivi vitu vilikuwa vinawavutia watu wengi wakijua watapewa misaada*". Literally this means that patients were given nutrition support in form of materials such as grains, goat and chicken for rearing but it was not sustainable support. These material supports were attracting people to access the services. (Table 8)

Table 8. Association of awareness on type of referral services with utilization of VCT services

Awareness on Type of referral services	Utilization of VCT services				Total No.
	Yes		No		
	No.	%	No.	%	
Home Based Care	49	(45.4%)	59	(54.6%)	108
Family planning	36	(51.4%)	34	(48.6%)	70
PMTCT	55	(46.6%)	63	(53.4%)	118
Treatment of STIs	37	(46.8%)	42	(53.2%)	79
Treatment of OIs	48	(52.7%)	43	(47.3%)	91
Access to ARTs	137	(67.6%)	110	(3.4%)	247
Nutrition support	118	(59.3%)	81	(40.7%)	199
Others	15	(53.6%)	13	(46.4%)	27

#### 4.9.0 Association between mobilization activities with utilization of VCT

Of those who had utilized VCT services, 46.8% were mobilized through health talks at health facilities, 43.4% through leaflets and 40.9% through health workers. (Table 9)

On the other hand, all 9 participants of the in-depth interview also mentioned health talks at health facilities as means of mobilizing community members. They also mentioned selected VCT mobilizing teams in every village.

All interviewees mentioned that patients were mobilized through health talks organized in some days per week. They all agreed that health talks were influencing some people to make decision of knowing their HIV sero status. A counselor from Mpuguso said that “*wengine wakihamasishwa wakati wa elimu ya asubuhi hapa kituoni wanaamua kupima afya zao hapohapo*”. It means that some people make instant decision to access VCT services following morning health talks.

Table 9. Association between mobilization activities with utilization of VCT services

Mobilization activities	Utilization of VCT services				
	YES		NO		Total
	No.	%	No.	%	No.
Seminars	31	(19.5%)	128	(80.5%)	159
Announcement	46	(28.9%)	113	(71.1%)	159
Leaflets	69	(43.4%)	90	(56.6%)	159
Health Talks	74	(46.8%)	84	(53.2%)	158
Health workers	65	(40.9%)	94	(59.1%)	159
Leaders	24	(15.2%)	134	(82.8%)	158
Drama performance	38	(23.9%)	121	(76.1%)	159
Meeting	11	(7.0%)	147	(93.0%)	158

#### 4.10 Association between distance and utilization of VCT

Of the 162 people who accessed VCT services, 38.9% lived at a walking distance of less than 20 minutes while another 38.9% lived at places which were more than 60 minutes walk distance. There was no association between walking distance and easy accessing of VCT services for walk distances.

(Table 10)

Table 10. Utilization of VCT services by distance from the health facility

Time(minutes)	Utilization of VCT services				
	YES		NO		Total
	No.	%	No.	%	No.
<20	63	(38.9%)	326	(80.5%)	89
20-39	25	(15.4%)	113	(71.1%)	389
40-59	11	(6.8%)	90	(56.6%)	389
≥60	63	(38.9%)	84	(53.2%)	389

#### 4.11 Factors that influence uptake of VCT services

Knowing ones HIV status was the commonest reason that influenced people to accept VCT services. This was mentioned by 61.3% of the respondents from population survey. Whilst, Six out of eight counselors had supported community perception of the disease and the need to have HIV test. One counselor gave an example of a woman who said "*nimeuguza watoto wangu na nimesikia walikuwa na ukimwi kwa hiyo nataka nipime ili nijue ninao au hapana na kama hapana basi niweze kujiangalia*". That means a woman has made a decision to have HIV test in order to take precaution following deaths

of her children as caused AIDS. Concerning this matter, the district programme coordinator also had to say "*watu wengi wamepukutika na wameshituka wanaona kheri wakapime wajue afya zao*" literally meaning so many people have passed away and people have been cautioned and would like to be tested for HIV.

The decision to test for HIV was also geared by the one's health status at the particular time as mentioned by 10.5% of the respondents

On the other hand, fear of positive results and worries about its consequences such as blood pressure, suicide, depression and so forth were mentioned by 65.8% of the respondents as the main reasons for not accessing VCT services. Thirteen percent of the respondents reported that some people assume that they are already infected because of their risk behaviours and that testing is not important. Stigma (10.5%) from the community members and lack of confidentiality and privacy (7.8%) were also reported by as hindrances for HIV testing among people in the area

#### **4.12 Community's Suggestions for improving VCT services**

Forty five percent of the participants suggested a need for increasing mobilization activities on the utilization of VCT services in the area. Suggested mobilization activities included conducting seminars, meetings, drama shows as well as making announcements in churches and mosques.

Members suggested that we should conduct special mobilization programs in schools, clubs, also from one house to another etc.

Twenty six percent of the respondents suggested the expansion VCT services in form of increasing VCT centres in rural areas and through mobile VCT services so as to make them accessible to majority.

Ten percent of the respondents suggested the provision of social support such as Nutrition, cash, clothes etc for those who are HIV infected and who can not manage at their own these basic needs.

Although based on other studies and findings from this study that utilization of VCT services is associated with availability of referral services such as access to antiretroviral treatment, some community members mentioned that antiretroviral drugs should not be made readily accessible. According to them, such drugs do accelerate the transmission of virus because as soon as patients improve their health they become sexually active and hence they start to practice unsafe sex with uninfected people. For example, one woman said *"mtu akishatumia hizo dawa anaanza kupendeza na wanaume wanaanza kumtafuta na ndipo maambukizi yanaongezeka kama hawatatumia kondom; kwa hiyo ni bora dawa zisiwepo na mwenye kuathirika atambulike ili wamwogope mpaka afe"*. This literally means that after using ARVS infected people improve their health and become attractive and this increases



transmission of virus if practice unsafe safe sex. That means is better the drug get discouraged so that the infected ones are easily identified until they die.

## CHAPTER FIVE

### 5.0 DISCUSSION

In this study the increasing trend of utilization can be explained to be attributed by increased number of VCT centers in areas where such services did formally not exist. Compared to before integration, when people had to access VCT services at only three hospitals and one stand alone VCT centre in the district, during integration people had more centres located nearer to their residences. Therefore, increased utilization is presumably associated with the easy accessibility and feasibility to people especially in rural areas.

Integration makes the service closer to majority and hence easy accessibility. The result of this study showed that out of 128 respondents who utilized integrated health facilities, 75 (59%) accessed nearby health facilities<sup>24</sup>. This observation is similar to record review in the same study area which found that client attendance increased by six-folds during the first year of the integration program.<sup>15</sup> Another study in Kenya observed that integration of VCT services into Ministry of health clinics was associated with increased accessibility and coverage of services.<sup>22</sup> In rural South Africa they also studied and came up with similar observation that large proportion (75%) of clients presenting voluntarily or 'self-referring' may be related to increased accessibility of VCT at PHC facilities.<sup>23</sup> This finding is similar to facility records in the study area showing increasing trend from 2002 to 2006. For example, there was an increase by 35.5% and 56.6% from 2002 to 2003 and 2002 to 2006 respectively. However, this finding is contrary to what was

observed in Uganda where they found that there was high preference of counseling outside the health centre, a 'neutral site' such as community centre.<sup>26</sup>

The increased uptake of VCT services was also attributed by the short waiting time of result with rapid testing assays being employed. Before integration people had to wait the result for long time because specimen were sent to referral hospital in Mbeya where non-rapid ELISA testing assay was employed. That means people are now encouraged to seek services as they would know their results immediately. Therefore, shortening of waiting time by providing same day result had increased the number of people accessing VCT services. Studies conducted in South Africa and Tanzania revealed that availability of rapid testing assays was positively associated with increased utilization of VCT services.<sup>19, 25</sup> Another study in South Africa, demonstrated that through effectively utilizing existing clinic staff with the rapid assay, all clients received same-day results compared with 10–15% when one uses hospital-based ELISA testing assay.<sup>23</sup>

Utilization of VCT services between 2002 and 2007 was higher (78.6%) among health facility based VCT centers compared to 20.4% of non integrated ones. That means the proportion of people who utilized VCT services was higher in integrated compared to stand alone VCT centers. The preference in utilizing health facility based VCT services was due to convenience and built trust by community members over health workers and

health facilities. People are concerned and believe in quality of services (Confidentiality, privacy etc) at health facilities than stand alone VCT centres. They also believe that health workers are responsible for people's health than if attended by counselors who are not health workers. In my view, people are also concerned that health facilities were designed for people to visit for health checking including VCT services for HIV test. Moreover, at health facility it is not easy for one to be identified as going for VCT services because different people visit health facility for various reasons. This finding is similar to various studies done in Uganda,<sup>15</sup> Kenya<sup>24</sup> and Tanzania.<sup>16</sup>

VCT uptake in both Urban and rural areas were associated with community being highly aware (96.4 %) of VCT services available in the study area. In my opinion, mobilizations of people through health talks, seminars and drama performance might have played a significant role in making them aware of the services which formerly did not exist. The use of community mobilizing teams had played a significant role in letting people know about the service. Community mobilizing teams each constituted by two people selected in each sub village, trained and become responsible for going from one house to another, in clubs and burial ceremonies to let people know about integrated VCT services available in their areas. This finding is similar to that of a study conducted in Uganda which concluded that among other things, increased mobilization may increase the number of people seeking VCT.<sup>28</sup> In Tanzania it was also observed that promotion activities were regarded as means of raising awareness among people about the availability of VCT services

through integration.<sup>16</sup> Therefore, there is a need to further mobilize people so that majority can accept the service

Awareness about referral services for those who are identified HIV infected had also contributed to increased uptake of VCT services. Sixty six percent of respondents were aware of existence of referral services in the area. There was association between awareness on availability of referral services such as ARVs and nutrition support and utilization of VCT services. Availability of ARVs and the perceived effectiveness of the drug to those who were in the dose seemed attracting people because they believe that if they are tested positive they can access treatment. In agreement with this finding, a study in Ethiopia revealed that the availability of ART was found to have positive association with acceptance of VCT.<sup>27</sup> On the other hand, nutrition and other social supports such as clothes and small credits for villagers was and is still implemented by LCCB which is FBO. Cash provision for transport to and from district for CD4 count and follow-up of drugs by patients was also introduced at the beginning of the program by AXIOS, the founder of the program, although could not be sustained for long. If patients are not given nutrition support will deteriorate their health because insufficient food or unbalanced diet will slow down patients' immunity. Considering that most villagers are not self-sufficient in terms of food and finance, external support might be a motivating factor to test for HIV so that they can access such supports. In Tanzania also clients' referral networks of prevention, care and

support services were found to have influence in the uptake of VCT services.<sup>25</sup> In a study conducted in Uganda they also found similar findings.<sup>26</sup>

In this study it was found that people's willingness to know their HIV sero status has positively influenced utilization of VCT services as mentioned by 61% of the respondents and six out of eight counselors. The decision to test for HIV seemed to be geared by the one's health status at that particular time. Some people may wish to be tested because of the burden of the disease as manifested through deaths of relatives and friends. Similarly, those who frequently fall ill are likely to visit VCT centers for the test in order to get assurance of their health status. This can be attributed by worry of the unhealthy condition. Therefore, with the current HIV/AIDS problem, people are likely to decide at their own or convinced by friends and relatives to test for HIV. This finding is similar to what was observed in Kenya<sup>18</sup> and in South Africa.<sup>23</sup>

Fear of positive results and worries on its consequences such as committing suicide, depression and acquiring blood pressure was among few major barriers for utilization of VCT service as mentioned by 65.8% of the respondents. It appears that people are fearful of dying from consequences of worries such as those mentioned above. Interestingly, it seems villagers lack education on HIV because they have perception that as soon as they are infected will die soon.

Stigma from the community was also reported as hindrance for people to accept the service. There is perception among people that a HIV person is likely to be discriminated if his/her status is known to people. As such, people fear to go for the test to avoid isolation at community level. In this study, stigma seemed to have accelerated fear among people not to access the service despite being aware about the service. This was also noted in a study conducted in Mbeya<sup>12</sup>

In order to improve uptake of VCT services, the study participants suggested to increase mobilization activities in order to increase utilization of VCT services in the area. Mobilization activities can be achieved by conducting seminars, meetings, drama shows as well as making announcements in churches and mosques. Furthermore, special mobilization programs in schools, recreation clubs and making visits by community mobilizing teams from one house to another can very much help to achieve community awareness about VCT services in their areas and hence accelerate utilization

The expansion of VCT services in rural areas will increase accessibility and hence utilization will increase. The expansion of the service can be achieved through establishment of more VCT centres in health facilities which currently do not have such services. Currently only 31 out of 57 health facilities are integrated in the district. The expansion of the services can also be achieved through using mobile VCT services especially in areas where permanent VCT centres are yet to be established.

There is need to strengthen provision of social support such as nutrition, clothes and small credits for those who are HIV infected so as to motivate them to access the service.

The strength of this study is stemmed on the cross-sectional design where participants were randomly selected from the population in the representative wards of the districts to assess the uptake of VCT services. This is contrary to clients' record review studies which were conducted in the past in the same study area of which its findings can not be relied because of incompleteness and inaccuracy of data available in health facilities. That means, findings from this study will form a base for future reference of utilization of VCT services in an integrated health facilities. Further more, these data will be used as base line to compare with an uptake of the service in future time.

... that it employed triangulation of methods for



significant. There was big diffusion of people from area of no integration to integrated ones, because that was the only available services in their reach. In my view, this could have been possible for a big study comparing areas in districts with and without integration located in a significant distances.

Another weakness of this study is recalling bias among the respondents especially on years when they accessed VCT services. For example, it was difficult for some people to recall when they were tested in the past five years compared to one or two years ago.

## CHAPTER SIX

### 6.0 CONCLUSION AND RECOMMENDATIONS

#### 6.1.0 Conclusion

In conclusion, integration of VCT services within health care delivery system appears to have increased uptake of VCT services in Rungwe district. The increase in uptake was associated with community awareness on availability of VCT services in their respective areas and easy in accessing referral services such as ARVs and nutrition support. The uptake of the services was also influenced by people's willingness to know their HIV sero status.

#### 6.1.0 Recommendations

There is need to continue monitoring the trend at least every two years and evaluate quality of the services rendered repeatedly.

The community should further be mobilized on the importance of being tested for HIV in order to increase utilization of VCT services. Mobilization activities can be through meetings, seminars, drama show, preaching and health education.

Provision of VCT services should be expanded so that many people can easily access them. Expansion of VCT services can be through increasing VCT centers; making VCT closer to people especially in remote areas. The provision of mobile VCT services was also recommended so as to reach some

people in remote areas where VCT centres are yet to be established in either health facility or as stand alone

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