

FACTORS INFLUENCING UTILIZATION OF VOLUNTARY  
COUNSELLING AND TESTING SERVICES AMONG OUT OF SCHOOL  
YOUTH IN NAKURU NORTH DISTRICT, KENYA

IRENE J. CHERUIYOT B.Ed. (Home Econ)

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**Declaration**

This thesis is my original work and has not been presented for a degree or any other award in other university.

Signature



Date

17/04/2012

Irene J. Cheruiyot, B. Ed (Home Econ)

Department of Public Health

**Supervisors' Approval:** We confirm that the work reported in this thesis was carried out by the candidate under our supervision.

1.

Signature



Date

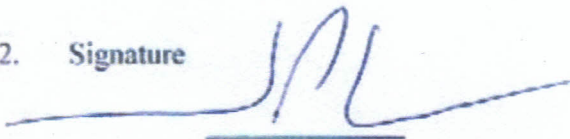
16/04/12

Dr. Margaret Keraka, PhD.

Senior Lecturer, Department of public health, Kenyatta University

2.

Signature



Date

16/04/2012

Dr. James O. Ayugi,

Department of Medicine, Therapeutics, Dermatology and Psychiatry.

## Dedication

To my dear parents from whom I learn virtues of hard work and tolerance. To my loving husband Jeff and our children Abby and Caleb.

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**Acronyms**

<b>AIDS</b>	-	<b>Acquired Immune Deficiency Syndrome</b>
<b>ARVS</b>	-	<b>Antiretroviral Drugs</b>
<b>FGDs</b>	-	<b>Focus Group Discussions</b>
<b>HIV</b>	-	<b>Human Immune Deficiency Virus</b>
<b>KAIS</b>	-	<b>Kenya AIDS Indicator Survey</b>
<b>MIS</b>	-	<b>Management Information Systems</b>
<b>MOH</b>	-	<b>Ministry of Health</b>
<b>MOPH&amp;S</b>	-	<b>Ministry of Public Health and Sanitation</b>
<b>MOYAS</b>	-	<b>Ministry of Youth Affairs and Sports</b>
<b>NGO</b>	-	<b>Non Governmental Organization</b>
<b>PRB</b>	-	<b>Population Reference Bureau</b>
<b>STI</b>	-	<b>Sexually Transmitted Infections</b>
<b>VCT</b>	-	<b>Voluntary Counseling and Testing</b>
<b>WHO</b>	-	<b>World Health Organization</b>
<b>YLWH</b>	-	<b>Youth Living With HIV/AIDS</b>

## Abstract

HIV/AIDS is increasingly affecting youth worldwide. Half of all new cases of HIV infection occur among young people between the ages of 15 and 24. Recent health and demographic studies reveals that in Kenya young people aged 15-24 years face a greater risk of HIV infection than any other age group. According to (KDHS, 2008), Rift Valley province had 45.8% of women and (60.2%) men who had never tested. But out-of-school youth may be facing the greatest danger from the pandemic in Africa and especially in Kenya due to the rising poverty levels, unemployment and the fact that they lack access to prevention education programs. High quality voluntary counseling and testing (VCT) is a cornerstone in reducing spread of the disease. However the number of people who test in VCTs is low. This study therefore sought to determine the factors that influence the utilization of VCT services as a strategy in prevention and control of HIV/AIDS among out-of-school youth in Nakuru North District. The specific objectives of the study was to determine possible socio-demographic, individual related and health service related factors influencing utilization of VCT services among out-of-school youth in Nakuru North District. To achieve the objectives, a cross-sectional survey of 369 out-of-school youth was carried out in the three Divisions of Nakuru North District over a period of eight weeks. Proportionate sampling was used to determine the number of youth to be sampled from the three Divisions in Nakuru North District. In each Division, youth were purposively selected. Data was collected using semi-structured questionnaires and through focus group discussions (FGDS) and questionnaires were analyzed using the statistical package for social scientists (SPSS VERSION 11.5). Utilization of VCTs and the association between various independent variables was determined. The study sample consisted of more males (56.1%) than female (43.9%). The mean age was 24 years. Majority of the out-of-school youth had not utilized VCT (62.6%). Poor utilization of VCT services among out-of-school youth in Nakuru North District was associated with distance to the VCT centre ( $p=0.0003$ ), knowledge of HIV/AIDS ( $P=0.0001$ ), knowledge and perception of VCT ( $p=0.0001$ ), stigma ( $p=0.0001$ ), cost ( $p=0.025$ ) and perception of quality of VCT services ( $p=0.0201$ ). Socio-demographic factors like level of education ( $p=0.0004$ ), income ( $p=0.0001$ ) and marital status ( $p=0.0039$ ) were associated with VCT services. Multiple logistic regression was performed to determine the factors independently associated with VCT utilization. The findings highlighted the need for more VCT centers to be established to address the need of accessibility which was found to be more associated with VCT utilization. Stakeholders also need to launch campaigns with out-of-school youth specific message to make the group change their perception and VCT services need to be promoted as being offered by professionally trained and competent staff. The counselors also need refresher courses on how to relate with their clients.

## CHAPTER 1

### INTRODUCTION

#### 1.1 Background

Forty two million people are living with HIV worldwide. New infections have been estimated at 166,000 annually (NACC, 2010). Sub-Saharan Africa remains the most affected region in the world with an estimate of 22.5 million (67%) of the people living with HIV (Hibret *et al.*, 2007). Approximately 1.7 million new infections occurred in Sub-Saharan Africa in the year 2007. Ten million young people aged 15-24 and almost 3 million children under 15 years are living with HIV (UNAIDS, 2010). 7.1 percent of Kenyan adults age 15-64 are infected with HIV (KAIS, 2007).

A survey conducted in Nakuru, showed that those who were likely to report readiness for testing lived in urban areas rather than rural areas (Irungu *et al.*, 2008).

The overall prevalence of HIV among youth aged 15-24 years was 3.8% (KAIS, 2007). Nakuru District has an estimated adult prevalence of 12.2% (Hallet *et al.*, 2006).

High quality VCT enables and encourages people with HIV to access appropriate care and is an effective behavior change intervention. VCT offers a holistic approach that addresses HIV in the broader context of people's lives including the context of poverty and its relationship to risk practice. VCT offers benefit both to those who test positive or negative. It also alleviates anxiety, increases clients perception of their vulnerability to HIV, promotes behavior change, facilitates early referral for care and assists in reducing stigma in the community (UNAIDS, 2010).

Utilization of VCT services among young people in Africa has been found to be linked to varied factors including socio-demographics (Yonder, 2006), aspects of access (UNICEF, 2003), privacy, confidentiality and accuracy of test results (Chandrasekaran *et al.*, 2007), poor services and lack of care and support services (FHI, 2011), socio-cultural factors including stigma and negative reactions due to disclosure (Matovu, 2007) and availability of treatment and support and denial of testing positive (Moyer *et al.*, 2007).

Most Kenyans know where to get an HIV test. However, only 57% of women and 40% of men have ever been tested in the twelve months before the survey (KDHS, 2008). HIV testing during ante-natal care is much more common in urban areas (73%) than rural areas (52%) and is highest among women with secondary and higher education (KDHS, 2008). Even with the rapid scale up of VCT programmes, the people most at risk of HIV including out-of-school youth may be the least likely to use VCT services (WHO, 2007).

Although the Ministry of Health (MOH), Non-governmental organizations (NGOs) and other stakeholders have made tremendous progress in reducing prevalence of HIV by adopting preventive measures, VCT among them, the uptake of these services is still low in Kenya. Only 20% of Kenyans who are HIV positive know their status (KDHS, 2008). The proportion of youth aged 15-24 years who know their HIV status is 13.4% in females and 12.7% in males (KDHS, 2008). This figure is low compared to the eligible population. In Kenya, youth friendly services are more visible in urban areas and scarce in rural areas (UNGASS, 2008) a factor which may negatively impact on utilization of VCT in these areas.

## **1.2 Problem Statement**

Most of the new infections in the developing countries occur among young people aged 15-24 years through unprotected sexual intercourse. Out-of- school youth are vulnerable to HIV infections due to the rising poverty levels and unemployment and in many parts of the world this group lack access to prevention education programs. Since VCT still remains an integral part of HIV/AIDS control programs in Kenya, encouraging people to know their sero-status is important.

Indeed, utilization of VCT by out-of- school youth is still low. In Nakuru North District, only 2.6% of youth aged 15-24 years were tested for HIV/AIDS between January and September 2010. This study therefore sought to identify those factors among out-of-school youth in Nakuru North District.

## **1.3 Justification of the Study**

Efforts are being made to increase the uptake of HIV testing in the community. However, few studies have systematically explored reasons for not testing among out-of-school youth who have the highest HIV prevalence and are at risk of being infected. More than one out of four adults is estimated to be infected with HIV in Nakuru, in Rift valley Province. The province indicated a high percentage of adults 15-49 years who are not tested, presence of high risk situations and settings and high population densities. Nakuru District is surrounded by small towns dominated by agricultural industries, military bases and truck stop, where the practice of high risk behaviors has fuelled the epidemic (FHI, 2011) Nakuru North District was split from Nakuru District in the year 2007. Lanet military base is situated in one of its divisions. The District has few VCT centers and the District records shows that a large proportion of youth have not tested for HIV.

#### **1.4 General Objective**

To determine the factors influencing the utilization of VCT services among out-of-school youth in Nakuru North District.

#### **1.5 Specific Objectives**

1. To determine the proportion of out-of-school youth who have utilized VCT services in Nakuru North District.
2. To identify the socio-demographic factors influencing the utilization of VCT services among out-of-school youth in Nakuru North District.
3. To identify the individual related factors influencing the utilization of VCT services among out-of-school youth in Nakuru North District.
4. To determine the health service related factors influencing the utilization of VCT services among out-of-school youth in Nakuru North District.

#### **1.6 Research Questions**

1. What proportion of out-of school youth utilizes VCT services in Nakuru North District?
2. What are the socio-demographic factors influencing the utilization of VCT services by out-of-school youth in Nakuru North District?
3. What are the individual related factors influencing the utilization of VCT services by out-of-school youth in Nakuru North District?
4. What are the health service related factors influencing the utilization of VCT services by out-of-school youth in Nakuru North District?

### **1.7 Hypothesis**

1. There are no socio demographic, individual and health service related factors influencing utilization of VCT services among out-of-school youth in Nakuru North District

### **1.8 Significant of Study**

The findings of this study will be useful to the Ministry of Public Health and Sanitation (MOPH/S), NASCOP, NACC, NGOs and other stakeholders involved in HIV/AIDS prevention initiatives targeting the youth through identifying the barriers to VCT utilization. The findings will be an important source of information for behavior change communication (BCC) programs aiming at promoting knowledge of sero- status as a means of reducing new HIV infections among the out-of-school youth. The findings will also enrich existing literature on utilization of VCT services.

### **1.9 Limitation of the study**

The study was confined to Nakuru North District only, generalizing the findings of this study to all out-of-school youth in Rift Valley should be done with caution.

Since youth were captured during barazas, agricultural field days, meetings and out reaches organized by Ministry of Youth and Ministry of Health, out-of- school youth who had not attended this meetings were not captured in the study.

### **1.10 Delimitation of the study**

A sample size of 369 out-of-school was identified from Bahati, Dundori and Subukia Divisions in reference of the total out-of-school youth population in the Divisions.

### **1.11 Assumptions**

Data was collected over a period of 8 weeks in the month of July and August 2009. It was assumed that out-of-school youth included in the survey would not be significantly different from out-of-school youth seeking VCT services during any other month of the year.

### **1.12 Conceptual framework**

The act of taking an HIV test in a VCT facility is referred to as utilization. However, there are barriers that make out-of-school youth not to utilize these services. These factors may be divided into; Lack of utilization due to individual related factors (individual factors), Lack of utilization due to health system related factors (health system factors), Lack of utilization due to socio demographic factors

This study conceptualized that poor VCT utilization among the out-of-school youth could be due to factors such as; stigma attached to HIV/AIDS, the youth socio-demographic characteristics, the youth knowledge of cause, mode of transmission and symptoms of HIV/AIDS and perception of VCT services offered at the VCT centers.

## Conceptual Framework of Factors influencing Utilization of VCT Services

### Independent Variables

### Dependent Variable

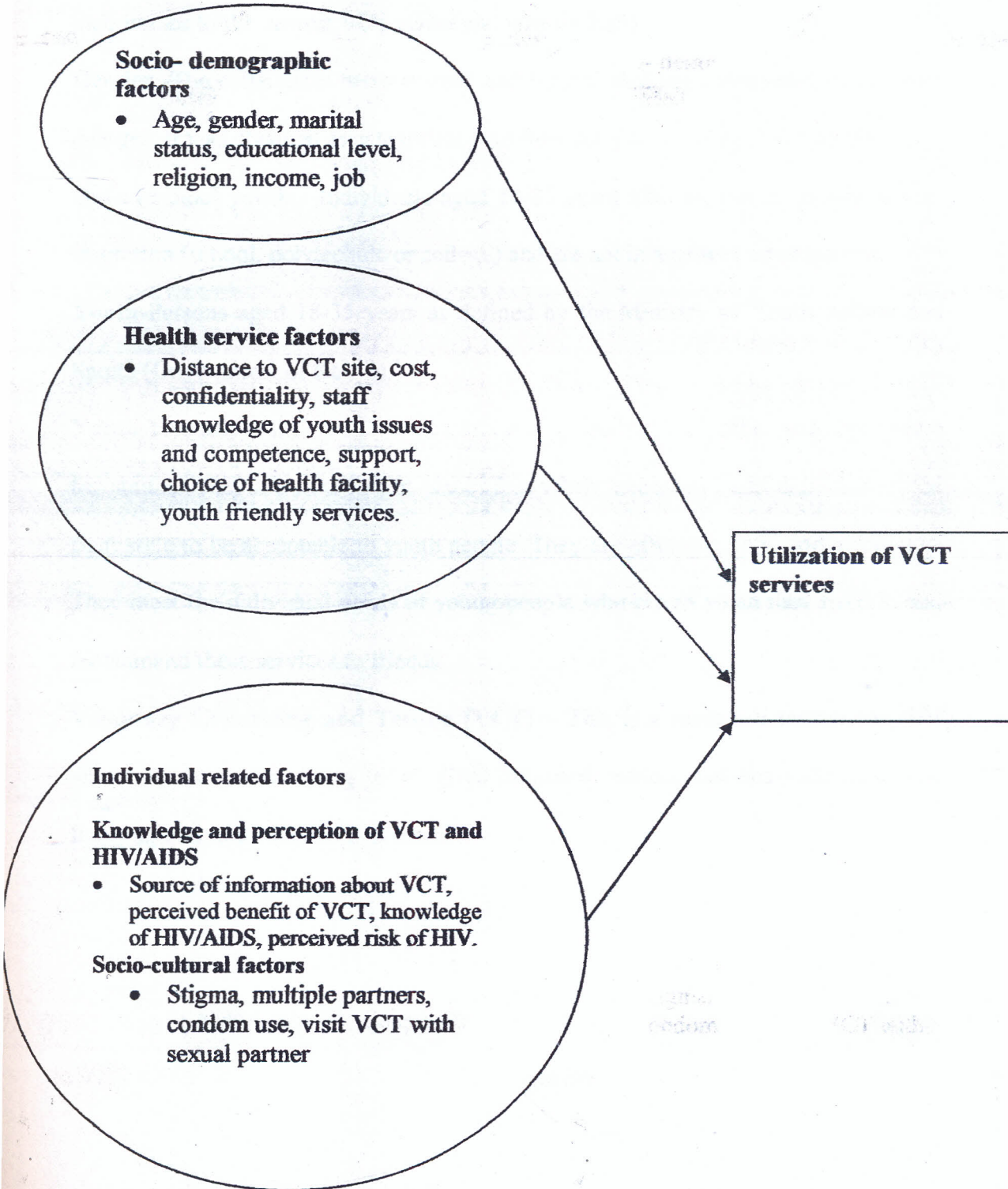


Figure 1 Conceptual framework

### **1.12 Operational Definitions**

**Accessibility** – This is the ease with which out-of-school youth obtain VCT services from a VCT centre. It was measured in terms of the duration (in hours) it takes from their homes to the nearest VCT centre and cost (in Ksh).

**Gender** -The differences between men and women that are constructed in different cultures. It was obtained as categorical data from the youth during the interview.

**Out-of-school youth** - Individuals aged 18-35 years who are not in an educational institution (school, polytechnic or college) and are not in a gainful employment.

**Youth**-Persons aged 18-35 years as defined by the Ministry of Youth Affairs and Sports (Government of Kenya).

**Youth-Friendly VCT**- VCT service that are accessible, acceptable and appropriate for youths. They are in the right place (free where necessary) and delivered in the right style to be acceptable to youth people. They are effective, safe, and affordable. They meet the individual needs of young people who return when they need to and recommend these services to friends.

**Voluntary Counseling and Testing (VCT)** – This is a means of testing for HIV where by the person being tested gives informed consent and has voluntarily and freely agreed to be counsel and tested.

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **2.1 HIV burden and prevention mechanism**

HIV/AIDS is increasingly affecting youth worldwide. Half of all new cases of HIV infection occur among young people between the ages of 15 and 24 and over 6,000 young people acquire HIV everyday (UNAIDS, 2008). In Eastern Europe and central Asia, more than 80% of those living with HIV are under the age of 30 years and of the 15-24 year olds living with HIV, 63% live in sub Saharan Africa (UNAIDS, 2010).

It is estimated that 2.6 million new HIV infections occurred globally, more than 70% of them in Sub-Saharan Africa. Out of the estimated 33.4 million people living with HIV/AIDS in the world, an estimated 67% live in Sub-Saharan Africa. In Africa alone, an estimated 1.7 million young people are infected annually with youths 15-24 years accounting for 50% of this new infections (UNAIDS, 2010).

Sub-Saharan Africa is the region with the highest overall HIV sero-prevalence, especially among adults (15-49 years) population. However, this varies between countries ranging from less than 2% to above 15%. For example, in Somalia and Gambia, the prevalence is below 2%. In other countries HIV prevalence varies: Zambia (20%), Botswana (38.8%), Lesotho (31.5%), Swaziland (33.4%), Central African Republic (12.4%), Nigeria (5.8%), Kenya (15%) and Uganda (5%). The region has almost two-thirds of all youth living with HIV/AIDS (6.2 million people); 75% of those cases are among young women or girls (UNAIDS 2010).

In Tanzania, it is estimated that about 2.2 million adults living with HIV/AIDS, among which 15-24 year age groups and 60% of all new infections occur in this age group (Mgosha *et al.*, 2009).

Despite the array of delivery approaches and the advantages of VCT uptake in sub-Saharan Africa disappointingly low with reports of 12% to 56% among the couples or the general population (Bwambale *et al.*, 2008). The global attention to AIDS treatment has caused some neglect of HIV prevention recently, a problem which can be addressed best if HIV treatment and prevention are recognized as equally important and supportive of each other (UNAIDS, 2010).

New infections are occurring among the youths especially young women aged 15-24 and men under 30. From a study done in Tanzania, it revealed that youth and women are the most affected population (WHO, 2007). In Kenya the prevalence has not changed significantly, 8.0% of women and 4.3% of men are HIV positive (KDHS, 2008). Also studies in Kenya have identified youth particularly girls to be at high risk of HIV.

National statistics indicate that the highest HIV prevalence rates are found among women ages 20 to 24 and men age 30 to 39. Studies from Nyanza province show that 22percent of young women in the 15 to 19 year of age group are already infected with HIV compared with 4 percent of their male counterparts (FHI, 2011).

Despite the high levels of knowledge on sources of HIV testing, only 58% of women and 42% of men have ever been tested (KDHS, 2008). There are cumulatively more

HIV infected people in rural areas compared to urban areas (MOH, 2008). A survey conducted in Nakuru showed that those who were likely to report readiness for testing lived in urban areas rather than rural areas (Irungu *et al.*, 2008). Nakuru district estimated adult HIV prevalence of 12.2% based on surveillance data with pregnant women (UNAIDS, WHO, 2006). One out of four adults is estimated to be infected with HIV in Nakuru (FHI, 2011).

With HIV continuing to be a public health concern in Kenya, the issues surrounding acceptance and use of VCT need to be addressed (Irungu *et al.*, 2008). 7.1 percent of Kenyan adults age 15-64 are infected with HIV (KAIS, 2007). Only 2.6% of youth aged 15-24 years were tested for HIV/AIDS in the year 2010 in Nakuru North District (MOH, 2010).

## **2.2 Utilization of VCT**

VCT is the process whereby individuals undergo pre-test counseling, risk assessment and a same day rapid HIV test, post test HIV prevention counseling and referral for medical and support services by trained service providers (Mabunda, 2006). VCT are a vital part of HIV prevention, treatment and care programs. Regardless of the result young people tested often change to less risky behavior. Studies show that many young people need and want access to VCT so that they can learn whether they are infected provided that the services are confidential and affordable and that they are given the results honestly (UNAIDS, 2010).

According to KDHS 2008, almost all Kenyan adult have heard of HIV/AIDS but knowledge of HIV prevention measures is lower. Only 71% of women aged 15-49

and 78% of men aged 15-49 know that the risk of getting HIV can be reduced by using condoms and limiting sex to one faithful uninfected partner.

Although knowledge of VCT is widespread, many youths especially out-of-school youth have inadequate knowledge of the services provided at the VCT sites (UNAIDS, 2010). A new reference guide on VCT and young people developed by FHI on behalf of United Nations Children's Fund points out that there is no ideal VCT model; youth centers, youth friendly centers, outreach efforts, social marketing other approaches might be helpful. Innovative efforts are needed to reach such groups as young pregnant women, young people using drugs and out-of-school youth (FHI, 2007).

Most of the VCT sites are situated in Nairobi city while rural districts of Wajir, Ijara and Baringo have less than 10 sites between them (NAS COP, 2009). In Suba District where the prevalence of HIV is over 43%, there are only five VCT centers (KPSA, 2006). A review of VCT among the students showed that 46% wanted to use VCT services but could not because there was no testing centre close by (UNICEF, 2003). Many rural areas in Kenya lack adequate access to VCT and other health service facilities. The public health campaigns demonstrate the pervasive lack of access and sustainability of numerous attempts to promote HIV testing and awareness in rural areas (UNGASS, 2008).

The average HIV testing rate in Kenya is approximately 15-16% which is very low. Studies have shown that uptake of VCT increases with age (KDHS, 2008). When VCT has been proposed in real life situation outside clinical trials, the uptake rate of

VCT resulted in figures generally less than 50% indicating a limited public health impact of such interventions (UNICEF, 2003).

### **2.3 Factors influencing utilization of VCT services**

Utilization of VCT services have been found to be influenced by various factors. This include individual related factors; socio-demographic factors (age, gender, occupation, religion, marital status. distance, cost of VCT services, income levels and the level of education), knowledge of HIV/AIDS and its relationship to VCT services, stigma attached to HIV/AIDS and perception of quality of VCT services among others.

#### **2.3.1 Socio-Demographic Factors**

A study on national programme to prevent mother to child transmissions of HIV conducted in Burkina Faso showed the uptake rate of VCT increase linearly with age, being particularly low among youth 15-19 years (MEDI/BF, 2004) .Education has a positive impact on utilization of VCT. Studies have previously demonstrated an increase in VCT use with increasing level of education (Wringe, 2008; Sherr, 2007).

HIV testing services provided in free of cost in a convenient and easily accessible testing site motivated over two thirds to undergo HIV testing in rural communities in northern Thailand (Kawaichai *et al.*, 2007). Free VCT services enhanced both the number of clients tested per day and its cost effectiveness of resource-limited settings of northern Tanzania (Thielman *et al.*, 2007).

It is abundantly clear that although VCT costs are greatly subsidized most youths cannot afford the minimal fee that is often charged at some facilities. Even where

services are free, if a young person needs to travel to the centre they may be unable to afford the cost of transport or time away from their work (UNAIDS 2010).

Poverty is making young people particularly those out of school vulnerable by denying them education, and literacy and forcing young women to sell sex, lack of knowledge about HIV/AIDS together with age appropriate education is making young people particularly vulnerable (Shisana *et al.*, 2006).

Most of the VCT sites have certain shortcomings. Transport difficulties and fear of being sighted at a health facility may limit the number of people particularly out-of-school youth from being tested (Yonder, 2006). The attempt by out-of-school youth to avoid gossiping neighbors and relatives are making access to VCT more difficult and costlier for themselves. Again, this undermines the work of key role players to make access to VCT by youth easier, cheaper, and friendly (Mac phail *et al.*, 2008). Stigma and gossip are key factors that work against those goals and drive youth to seek VCT far from home, making it less likely that they will actually go.

In a study done among teachers in Ethiopia, the females were more likely to be tested for HIV than their counterparts. The increased uptake of VCT observed among female teachers was probably due to the fact that women in the reproductive age group are offered the VCT service while they visit the health facilities for different health reasons in general and during their antenatal checkup in particular (Wondwoson, 2007). HIV knowledge was lowest among people who reported lower educational levels, residents of rural areas, and those who had not been tested for HIV (KAIS, 2007).

### 2.3.2 Health Service Factors

Throughout the years of operation, it has been observed that many people especially from rural and peri-urban areas find it difficult to access VCT services because of long distances they have to travel. The sites are located in urban areas serving a smaller segment of the population (WHO, 2007). There are factors such as inadequate resources which might hinder the utilization of VCT services (Matovu, 2007).

In a study done among Kenyan and Ugandan youth, those who had been tested indicated that they would like to be tested in future but most provider felt ill prepared to counsel young people. Untested Kenyan and Ugandan youth wanted to be sure that they saw a qualified staff that used reliable testing equipment (UNAIDS, 2010).

HIV/VCT in Kenya has shown that few services are available, and most sites offering counseling and testing provides poor services. Confidentiality may not be guaranteed, the quality of counseling is variable and linkages between HIV/VCT and HIV/AIDS care and support services are often non existence (FHI, 2011).

In a South African study, respondents who had not had a HIV test were asked if they would consider going for a test, about 59.4% reported that they would consider taking the test if confidentiality is maintained (Shisana *et al.*, 2006). In Zambia as well youth stressed the need for privacy in testing and the availability of complete information (UNAIDS 2008).

A study conducted among youth aged 10-19 years living in urban slums of Kisumu showed that youth prefer to receive VCT, treatment care and other services under one roof and in a fun environment (Kawango *et al.*, 2007). Only about 10 out of 700

VCT sites in Kenya specifically target young people (KSPA, 2006). Recent research done in Kenya and Zambia emphasized the need for VCT services to be more youth friendly (shisana *et al.*, 2006).

By youth friendly young people mean that the counselor will not scorn them for being sexually active and be judgmental about the young person's behavior. Shisana *et al.*, (2006) identified the qualities of a youth friendly VCT programme as; service providers are trained to counsel youth about HIV/AIDS, use of a separate room or alternative so that youth will not encounter family members or adults they know when seeking VCT, free or reduced price for tests, referral systems for young clients, outreach to schools and youth groups and multimedia campaigns to inform youths about VCT.

### **2.3.3 Individual Related Factors**

A study on national programme to prevent mother to child transmission of HIV conducted in Burkina Faso noted that social stigma of HIV /AIDS infection and fear of not having access to effective treatment as factors influencing uptake (MOH, 2008). A study conducted in Pittsburg showed that consent rates for HIV testing were low. Common reason for refusal was denial of results and fear of testing positive (Moyer *et al.*, 2007).

Studies in Africa found utilization of VCT among young people to be influenced by factors such as inadequate service providers and resources (Matovu, 2007), stigma associated with HIV/AIDS, fear of negative reactions due to disclosure of being positive as well as perception of being at low risk of HIV infection (Yonder, 2006) denial of results, distance and fear of being seen at the VCT site (WHO, 2007).

In a recent study of women attending a VCT centre in Bangalore India, 42% reported exposure to violence, and among them, 67% reported being HIV positive (Chandrasekaran *et al.*, 2007). Studies in the west and in India have demonstrated a positive relationship between substance abuse, sexual risk behavior, partner violence and subsequent risk for HIV (Schensul *et al.*, 2006, Sivaram *et al.*, 2008).

In Kenya, 54% of the women say they are willing to take care of a family member with HIV. Forty six percent said that they would want to keep secrets that a family member is positive (KDHS, 2008).

In a study done in South Africa, a significant number of out-of-school youth feared being seen at a VCT site, this can be viewed as a sign of the still prevalent stigma and prejudice surrounding HIV testing where testing is associated with sickness and AIDS (Macphail *et al.*, 2008)

Stigma associated with HIV/AIDS, fear of negative result, as well as the perception of being at low risk of HIV infection might further restrict the use of VCT (Matovu, 2007). According to KDHS, 2008, those who had sex twelve months before the survey, 2% of women and 13% of men had sex with one partner. Among these men 37% used a condom during their last sexual intercourse. Women in Kenya have an average of two sexual partners lifetime compared with men who have an average of six partners (KDHS, 2008). Eighty seven percent of women and men know that HIV can be transmitted by breast feeding .However only about two-thirds of women and men know that the risk of mother to child transmission can be reduced by taking drugs during pregnancy (KDHS.2008).

The lack of VCT use is particularly noticeable amongst young people, even though new HIV infections are greatest amongst out-of-school youth, they tend to be aware of VCT yet few have accessed these services and know their HIV status (Mac phail *et al.*, 2008, Bell *et al.*, 2007). Perceptions of both HIV/AIDS and VCT are still shrouded in stigma and mistrust creating barriers to accessing VCT services at individual, interpersonal and community or cultural levels (Bell *et al.*, 2007).

Reversing the trend of HIV widespread calls for strategies that incorporate lessons from past interventions and intensify proven approaches. Targeting particularly out-of-school youth whose activities and settings expose them to a higher risk of HIV/AIDS can contribute significantly to halting the spread of the epidemic (FHI, 2011). Other studies have shown the barriers to the uptake of VCT among the out-of-school youth as fear of stigma and discrimination (UNAIDS, 2008: UNAIDS, 2010: WHO, 2008).

Since there are limited support systems in place and stigma and discriminations are still widespread in Kenya, HIV positive youth tend to keep their status to themselves, and a result, are not able to access needed information and services (FHI, 2007). In a similar study done among youth in Harari Ethiopia showed that the vast majority of the respondents (98.4%) knew the existence of confidential VCT services in their locality (Enkosa, 2006). Nevertheless, despite improved knowledge as a result of the advocacy work, knowledge was not significantly associated with utilization of VCT suggesting that knowledge about HIV/aids alone does not necessarily guarantee to bring a behavior change (HAPCO/CAMET, 2008).

## 2.4 Importance of VCT

The high rates of HIV infection among youth make it crucial to find programs to prevent infection and mitigate the effects of HIV in this age group. Because there is evidence that many adults benefit from VCT (UNAIDS, 2010)

There is increasing interest in extending these services to young people. VCT counseling aims to help adolescents evaluate their own behavior and its consequences. Even where treatment is not available, VCT can lead young people to change their behavior. Community based VCT services can play an important role in HIV prevention especially among out of school youth particularly those who don't seek other health care services (WHO, 2008).

A study of VCT impact among youth in the United States provided evidence that some youth adopt safe behavior after testing. Although the study often focused on high risk individuals such as drug-users, run-aways and those in high prevalence areas, it also looked at the behavior of young people. Among these groups there was behavior change (UNAIDS, 2010).

A negative test result offers the opportunity to recognize vulnerability and develop risk reduction plans to adopt safe behaviors. Young people who test HIV positive can receive referrals for care and have opportunities to discuss and understand their HIV status means and what responsibilities they have to themselves like nutritional therapy early and correct treatment of all illness including and opportunistic infections avoiding re-infection or transmitting HIV Infection as a result (WHO, 2006). Young women who are pregnant and test HIV positive should be offered

special care to safeguard their own health and minimize the risk of passing the virus to the baby.

Knowledge of HIV status helps HIV negative individuals make specific decisions to reduce risks and increase safer sex practices so that they can remain disease-free. For those who have HIV, knowledge of their status allows them to take action to protect their sexual partners to access treatment, and to plan for the future (KDHS, 2008).

In a study conducted in South Africa, out-of-school youth expressed strong intentions of going for VCT and understands its role in maintaining healthy lifestyles, there is a large gap between this knowledge and actual outcomes in form of visits to VCT sites (Mac phail *et al.*, 2008).

Debates continues as to whether taking the HIV test leads to safer behavior. In study conducted in Uganda, youths who participated felt that HIV testing might be a significant step in reducing stigma, if it is linked to an integrated with other elements of effective health care such as STI care, HIV care, antenatal care, or pregnancy prevention services. Testing for young people also needs to be linked to other effective non clinical interventions, such as post rape counseling, post test clubs, and community anti-AIDS clubs (WHO, 2008).

## 2.5 Summary of the Gaps

The study found out that distance to the VCT centre is a barrier in accessing the services in most cases the high transport costs is due to the long distances to the VCT centers. Even where services are free, if a young people needs to travel to the centre they may be unable to afford the cost of transport or time away from their work. Majority of the out of school youth have no income to meet the transport costs.

The study also found out that few HIV/VCT services are available, and most sites offering counseling and testing provides poor services. Confidentiality may not be guaranteed, the quality of counseling is variable and linkages between HIV/VCT and HIV/AIDS care and support services are often non existence.

From the study, common reason for refusal to test by out-of-school youth was denial of results and fear of testing positive. utilization of VCT among young people was found to be influenced by factors such as inadequate service providers and resources, stigma associated with HIV/AIDS, fear of negative reactions due to disclosure of being positive as well as perception of being at low risk of HIV infection, denial of results, distance and fear of being seen at the VCT site. Fear of rejection by family or community members and privacy was also identified as barriers deterring out-of-school youth from utilizing VCT services.

Recently, in order to scale up HIV testing rates, CDC and WHO have introduced routine testing, opt out HIV testing policies and elimination of written informed consent (CDC, 2006; WHO, 2008). While this are likely to enhance the uptake of HIV testing (WHO, 2007), other factors that deter or motivate an individual to test for HIV; need to be elucidated as well.

## **CHAPTER III**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter highlights methodological details appropriate to the study. These include research design, study variables, location of the study, target population, sampling techniques and sample size, instrumentation, pilot study, data collection techniques, data analysis and logistical and ethical consideration.

#### **3.2 Study Design**

A cross sectional survey was conducted in this study because it involved observation of the representative subset of the population. It also aims to provide data on the entire population under study. It also represents the most common form of field research in many areas. Questionnaires were administered to 369 out-of-school youth in Bahati, Subukia and Dundori Divisions of Nakuru North District during the 8 week period of the survey.

#### **3.3 Study Variables**

The study variables were;

##### **(a) Dependent variable**

The dependent variable was the utilization of VCT. It was measured in terms of the number of out-of-school youth who have voluntarily tested for HIV.

##### **(b) Independent variable**

The independent variables were categorized into individual related and health related factors.

### **Individual Related factors**

- i. **Socio-demographic characteristics**; these included age, gender, occupation, religion, marital status, distance, cost of VCT services, income levels and the level of education
- ii. **Choice of health facility to test**; the study subjects were asked where they preferred seeking for VCT services.
- iii. **Knowledge of HIV/VCT**- knowledge was measured using a scoring method adopted from (Karki, 2004). Six questions were asked both for HIV and VCT knowledge. A score of 1 was awarded for each correct response while an incorrect response was awarded a score of 0. A summary indicator for knowledge was calculated as follows; <3 correct response (<50%) poor knowledge, 3-4 correct response (50%-79%) average knowledge, 5-6 correct response (80%-100%) Good knowledge
- iv. **Knowledge and Perception of HIV/AIDS and relationship with VCT services**-This was established by asking the study subjects questions related to the seriousness of HIV/AIDS and whether VCT was important in fighting AIDS.
- v. **Stigma**-Statements which sought to establish the existence (or non existence) of fear of rejection by family and community after realizing that they have HIV/AIDS were used. The youth responses were yes or no an answer that implied stigma was awarded 1 and 0 was awarded for responses which did not imply stigma (Karki, 2004). The same applied to having multiple partners, condom use and fear for being seen at the VCT centre.

### Health Service Related factors

- i. **Perception of quality of VCT services-** This was measured by asking the study subjects how they felt about the VCT staff, sensitivity of staff to the youth, friendliness of the services, separate rooms for testing and support services for those who test positive. A response which implied a negative perception was awarded -1, neutral response was awarded 0 and a statement which implied a positive response was awarded +1(Karki, 2004). A summary indicator for the perception of the quality of service was obtained as follows: 0 – 3 Positive (<50%) =Poor Perception, 4 – 5 Positive (50%-70%) =Average perception; 6 – 7 Positive (>80%-100%) =Good Perception

### 3.4 Study Area

The study was carried out in a rural setting in Nakuru North District which has over 453,000 inhabitants and covers an area of 593.3 km<sup>2</sup>. The district has three divisions; Bahati, Subukia and Dundori Divisions (ROK, 2009). Nakuru North District is in the Rift Valley Province of Kenya. It is served by one highway Nakuru – Nyeri. Nakuru North was initially part of Nakuru before it was split. Majority of the people live below the poverty line especially in Mbogoini areas of Subukia.

HIV prevalence in Nakuru North District was 5.9% in 2010 (MOH, 2010). There are 6 voluntary counseling and testing centers of which one is a youth friendly centre. The rest are in the public and private hospitals. This study area was identified for its typical rural setting; high population density and a large number of unemployed youth, few VCT centers which are scattered and majority of out-of-school youth have to travel for more than 21kms to get the services and for its close proximity to Nakuru town which might have an influence on the behavior of the youths. Lanet

military base is situated in Nakuru North District where the practice of high risky behaviors has fuelled the epidemic (FHI, 2011).

### **3.5 Target Population**

This study targeted out-of-school youth aged 18-35 years in Nakuru North District. This group was chosen because of their vulnerability HIV/AIDS due to poverty and unemployment (Shisana *et al.* 2006). Nakuru North District is in Rift valley province which is among the provinces with the highest number of people who have not tested for HIV (KDHS, 2008). The group lacks access to prevention education programs (UNAIDS, 2010). This age group has a population of about 88,880. Most of the youths in this group are unemployed and majority are engaged in activities in the informal sector. Also the ability of young people especially those out-of-school to deal with the negative consequences of adolescent sexuality is severely constrained by the inadequate information, skills and poor access to education and health services (KDHS 2006).

### **3.6 Study population**

The study population consisted of out-of-school youth who participated in the study and aged 18-35 years in Nakuru North District during the 8 week period of survey.

### **3.7 Inclusion and Exclusion Criteria**

#### **Inclusion criteria**

- Those who gave informed consent.
- Those in the age bracket of 18 – 35 years.
- Youth who were out of school

## Exclusion Criteria

- Those Who did not give informed consent
- Those below 18 years and above 35 years.

## 3.8 Sampling Techniques and sample size

### 3.8.1 Sample Size Determination

The sample size was calculated using the formula developed by Fisher et al., (1988). The confidence level will be set at 95% and 0.05 level of significance. According to UNICEF (2003), the uptake of voluntary counseling and Testing (VCT) in real life situations (outside clinical trials) resulted in figures generally less than 50%. The proportion of target population estimated to visit VCT Centers in Kenya is 40%. Therefore  $p = 0.4$  and  $q = 0.6$ . The sample size is worked out as shown below.

$$n = \frac{Z^2 pq}{d^2}$$

When = desired sample size (when the target population is more than 10,000)

$z$  = the standard normal deviate at the required confidence level (95% level confidence).

$p$  = the proportion in the target population estimated to have characteristics being

Measured {Proportion of youth who visit VCTs in Kenya ( $p = 0.4$ )} (UNICEF, 2003).

$q = 1 - p$

$d$  = the level of statistical significance set (0.005).

$$= \frac{(1.96)^2 (0.4) (0.6)}{(0.05)^2}$$

$$= \frac{3.8416 (0.24)}{(0.05)^2}$$

$$\begin{aligned}
 & 0.0025 \\
 = & \frac{0.921984}{0.0025} = 368.9 \\
 = & 369
 \end{aligned}$$

### 3.8.2 Sampling Techniques

Proportionate sampling was used to determine the number of out-of-school youth to be interviewed from each Division as shown in table1. This was to ensure a well representation of out-of school youth in the entire District. Youth were sampled purposively from each Division. They were captured during meetings, trainings and outreaches organized by Ministry of Youth and Ministry of Health, youth group meetings, Agricultural field days and local barazas.

**Table 1: Proportionate number of youth sampled from each Division**

<b>Division</b>	<b>Approximate Number of youth</b>	<b>Number to be interviewed</b>
Bahati	46514	193
Subukia	29600	123
Dundori	12686	53
<b>Total</b>	<b>88,800</b>	<b>369</b>

### **3.9 Construction of Research instruments**

An in-depth literature review on related research was undertaken before and during the development of the questionnaires. Several items were developed for each of the complex variables (Knowledge of HIV/VCT, stigma and perception of quality of services in health facilities offering VCT). Data was collected using a semi-structured questionnaire administered by the researcher and a trained research assistant. One FGDs was conducted in each Division. The FGDs consisted of ten out-of-school youth both male and female.

### **3.10 Pilot Study**

The questionnaires was translated into Kiswahili and pre-tested on 50 out-of-school youth in the adjacent Nakuru District. FGDS guides were piloted on three youth groups of between nine out-of-school youth in Nakuru district. The questionnaires were administered in Kiswahili because all the participants understood Kiswahili. Ambiguities in translations clarified in and appropriate modifications done on affected items.

#### **3.10.1 Reliability**

Adequate number of questionnaires was pretested and ambiguities clarified. The research assistant underwent thorough training in enumeration before and after pre-testing.

#### **3.10.2 Validity**

For complex variables like socio-demographic, socio-cultural and health service factors, knowledge and perception VCT and HIV, a series of questions addressing each variable were incorporated in the questionnaire and a summary indicator

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determined from the responses (Godfrey – Fausset *et al.*, 2002). Also in depth review of relevant literature was done and opinions sought from experts in VCT and research supervisors.

Adequate number of questionnaires was pretested and ambiguities clarified. The research assistant underwent thorough training in enumeration before and after pre-testing.

### **3.11 Data Collection Techniques**

The researcher and research assistants visited youth group meetings, use of outreaches, meetings and trainings organized by the MOH, trainings organized by the Ministry of Youth Affairs and Sports and capturing youths during agricultural field days and public barazas who over the eight weeks period of study. Before the administration of the questionnaires, the researcher and the research assistant held some discussions with youth on VCT services and what they encountered for those who had tested or heard of VCT services to minimize recall bias. Youth were interviewed as long as they were willing to participate and met the inclusion criteria. Those who participated in the three FGDS were the youth leaders who were purposively selected from groups because leaders are more informed on general issues.

### **3.12 Data Analysis**

Data were entered and analyzed using SPSS version 11.5. Descriptive statistics performed included determining the means, median and mode. Utilization of VCT was dichotomized into; low utilization (<50%) and high utilization (>50%). The significance of association was tested using chi-square and an association was statistically significant when the p-value was less than 0.05 ( $p < 0.05$ ). The variables

with a p-value < 0.05 in the univariate analysis were included in the multiple logistic regression analysis to determine the variables independently associated with VCT utilization.

### **3.13 Ethical Issues**

The study was approved by Board of Graduate School of Kenyatta University and the Ministry of Education Science and technology. Clearance to collect data was obtained from the District Commissioner Nakuru North District, who is the representative of office of the president in the District. Clearance was also sought from the Ministry of Youth Affairs and Sports (MOYAS) in charge of all the out-of-school youth and youth groups in the District. Participants were requested to give an informed verbal consent to be interviewed. All the information was treated with a high degree of confidentiality. Participants gave an informed verbal consent to be interviewed and were not required to disclose their names. The respondents were assured that the information they will give will not be used maliciously to ruin them. All the information was treated with a high degree of confidentiality.

## CHAPTER IV

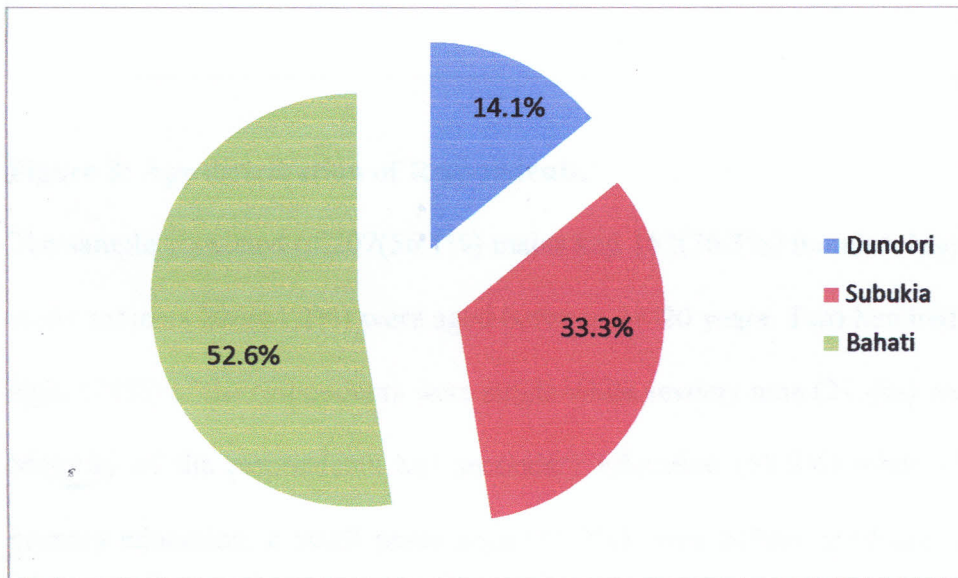
### RESULTS AND DISCUSSIONS

#### 4.1 Introduction

The chapter contains analysis of various variables in relation to VCT utilization, results presentation and discussion.

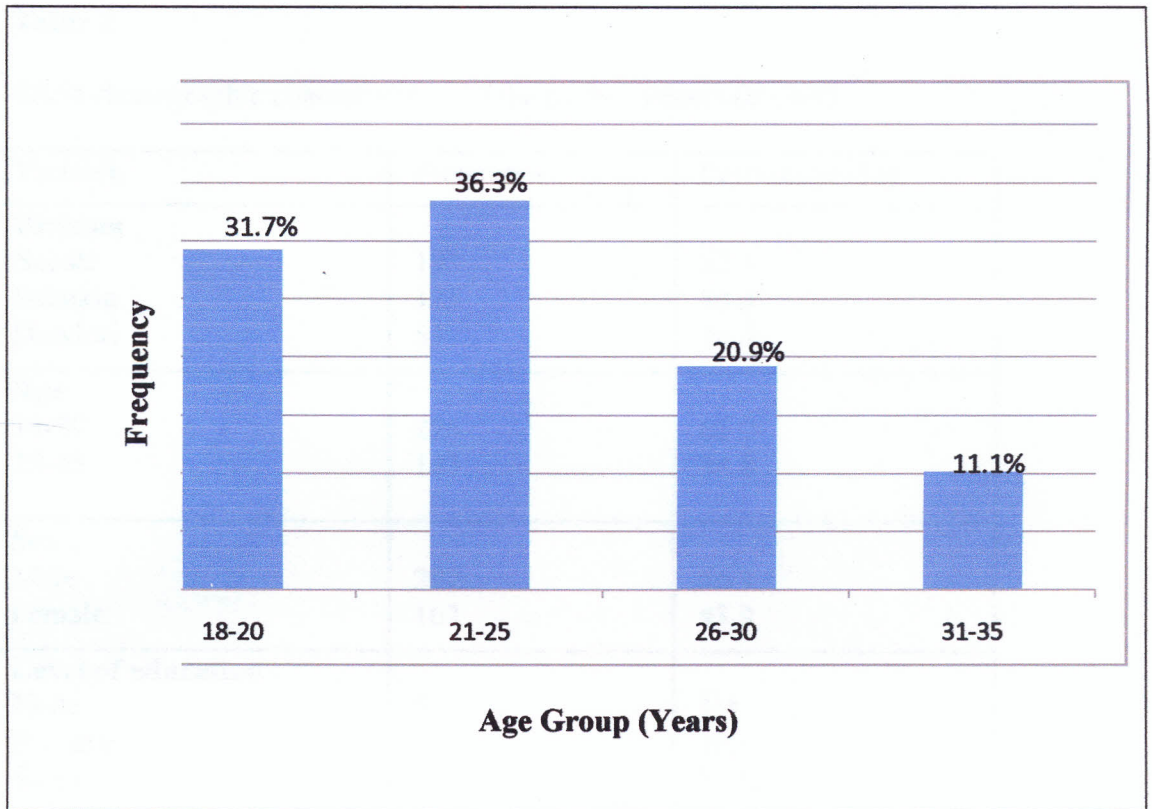
#### 4.2 Socio-demographic Profiles of Study Population

Three hundred and sixty nine (369) study population were interviewed in the three Divisions of Nakuru North District (figure 2).



**Figure 2, Proportion of study Respondents interviewed in the three Division (n=369)**

The sample consisted of approximately 56.1% males and 43.9 females. Mean age was 24 and 23 years respectively. One hundred and thirty four (36.3%) of the study subjects were aged between 21-25 years.



**Figure 3: Age distribution of Respondents.**

The sample consisted of 207(56.1%) males and 162(36.3%) females. Majority of the study subjects 226(61.2%) were aged between 18-20 years. Two hundred and eighty eight (78%) of the respondents were single while seventy nine (21.4%) were married. Majority of the respondents had secondary education (52.8%) while (30.6%) had primary education, a small percentage (15.2%) were college graduate. Majority of the respondents (86.7%) were Christians.

One hundred and fifty nine (43.1%) of the study subjects earn an income of less than Kshs 3000 while 121(32.85%) had no income. Those who earn between Kshs 3000- Kshs 6000 were 60(16.3%). One hundred and nineteen (32.2%) of the study respondents engage in casual jobs, 110(29.8%) had no job, 66(17.0%) were farmers while 37(10%) sell second hand goods.

**Table 2**

Socio-demographic characteristics of the study subjects (n=369)

Variable	Frequency	Percentage (%)
<b>Division</b>		
Bahati	193	52.3
Subukia	123	33.3
Dundori	53	14.4
<b>Age</b>		
18-20	226	61.2
25-35	143	38.8
<b>Sex</b>		
Male	207	56.1
Female	162	43.9
<b>Level of education</b>		
None	5	1.4
Primary	113	30.6
Secondary	195	52.8
College graduate	56	15.2
<b>Marital status</b>		
Single	288	78.0
Married	79	21.4
Widow/widower	2	5
<b>Religion</b>		
Christian	320	86.7
Muslim	9	2.4
Traditional	22	6.0
Others	18	4.9
<b>Income</b>		
No income	121	32.8
Less than Kshs 3000	160	43.4
Kshs 3000-Kshs 6000	60	16.3
Kshs 6000-Kshs 9000	10	2.7
More than Kshs 9000	18	4.9
<b>Business type</b>		
Farming	66	17.9
Selling second hand goods	37	10.0
Casual work	119	32.2
Others	37	10.0
None	110	29.8

### Distance and cost

Forty one percent of the youths indicated that the nearest VCT was less than 10km while 43.1% showed that it was more than 20km. This was also expressed by a female youth when asked how far was the VCT centre from home, she replied that “the VCT centers are very far from homes and this makes it difficult for the youth to go.” 30.4% of the youths spent less than Kshs 100(US Dollars 1.3) as cost of VCT services while 61.5% showed that the services were free (table 3).

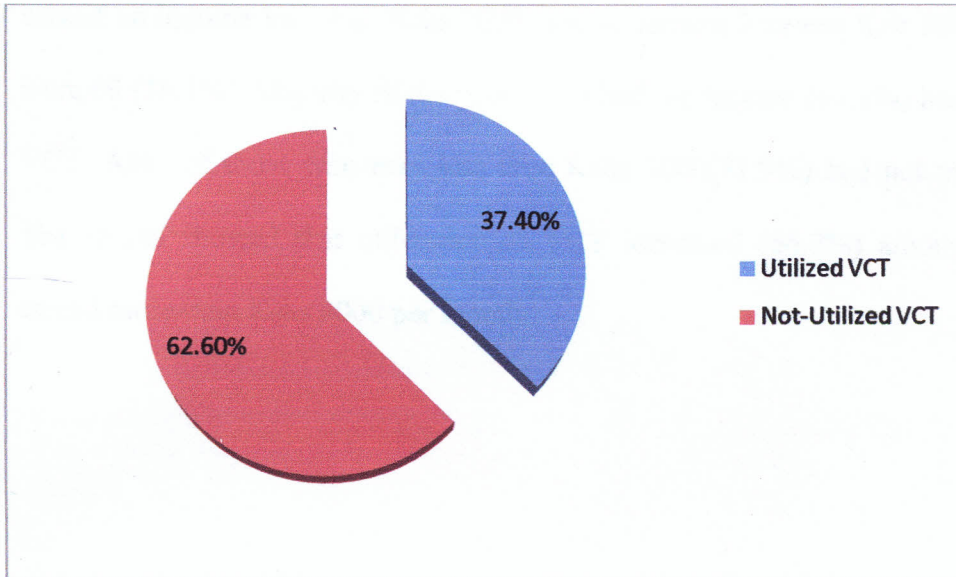
**Table 3: Distribution of study Respondents by distance to reach VCT centre and amount to pay (n=369)**

Variable		Number	Percentage (%)
Distance	Less than 10km	151	41
	11-20km	59	16.0
	More than 20km	159	43.1
Cost of VCT services	Less than Kshs 100	112	30.4
	Kshs101 and above	30	8.1
	None	227	61.5

### 4.3 Proportion of youth utilizing VCT Services

One thirty eight (37.4%) of the study subjects had tested for HIV compared to 231(62.6%) who have not tested. Majority of the study subjects had not tested for HIV and this shows that the utilization of VCT services is low among this population. Bahati Division had the highest percentage of youths participating in the study(52.6%) followed by Subukia Division (33.3%) and Dundori (14.1%).The reason being that the questionnaires were distributed to the divisions based on the population density. Majority of the males participated in this study. Female

utilization was slightly high (38.9%) compared male (36.2%).



**Figure 4: Proportion of out-of-school youth utilizing VCT services**

#### 4.4 Socio-demographic factors influencing utilization of VCT

##### Age and gender

The mean age of males was 24 years and 23 years for the female. Majority of the respondents (61.5%) of those aged 18-24 years had not utilized VCT compared to (38.5%) of the similar age group who utilized. Similarly, (64.3%) of those aged 25-35 years had not utilized. There was a slight difference on the utilization among males (36.2%) and that of the female (38.9%). (Table 4)

##### Marital status

Proportion of singles who did not utilize VCT was one hundred and eighty eight (65.3%) compared to those who utilized 100(34.7%). Utilization among married youth was still lower (45.6%) compared to (54.4%) of those who did not utilize.

The role of marital status in VCT utilization was found to be significant ( $p=0.039$ ).

**Income**

One hundred and twenty one (32.7%) had no source of income while 161(43.5%) earned an income less than Kshs 3000. Those earning between Ksh 3000-Ksh 6000 were 60 (16.3%). Majority of the youth who had no income (61.1%) had not utilized VCT. Also, of those who earn less than Kshs 3000(71.9%) had not utilized VCT. The results showed that utilization of VCT increased (66.7%) among those who earned more than Kshs 9000 per month.

**Table 4: Proportion of youth utilizing VCT by socio-demographic factors**

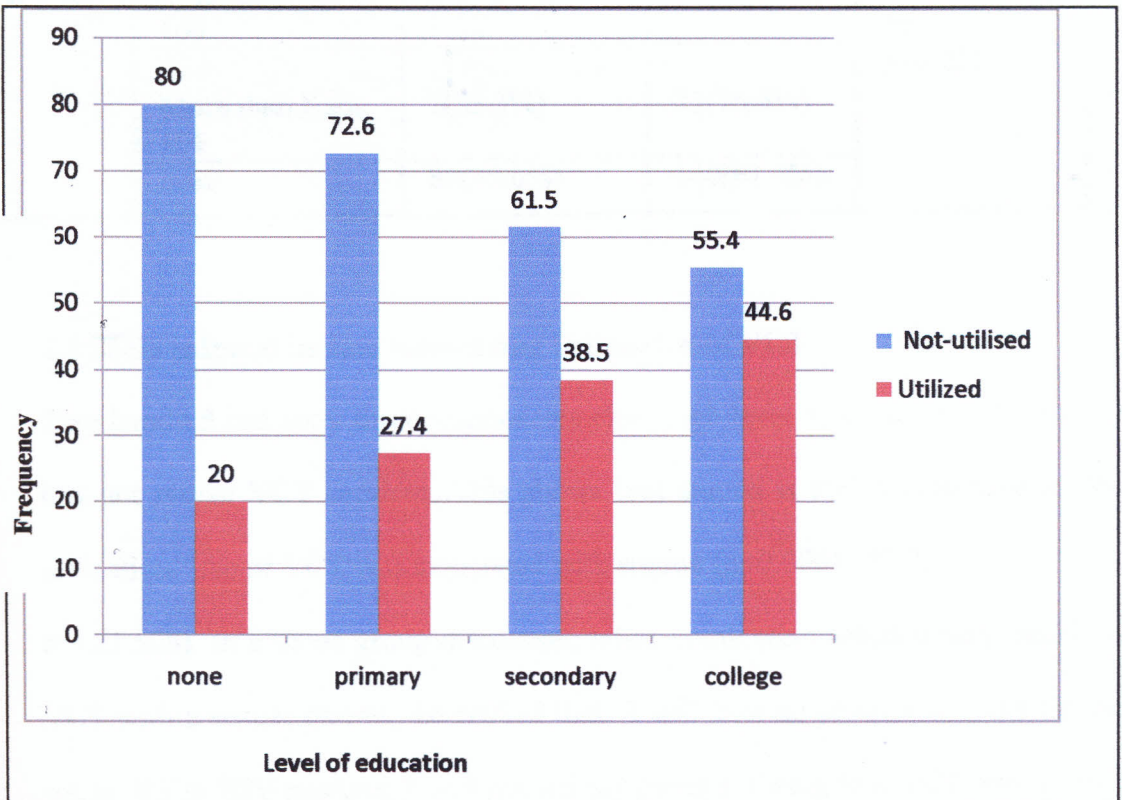
Variable		Utilize VCT n (%)	Not utilize VCT n (%)	$\chi^2$ statistical test
Age	18-24	87(38.5%)	139(61.5%)	$\chi^2=1.280$ df=3 p=0.584
	25-35	51(35.7%)	92(64.3%)	
Gender	Male	75(36.2%)	132(63.8%)	$\chi^2=0.274$ p=0.601 df=1
	Female	63(38.9%)	99(61.1%)	
Marital status	Single	100(34.7%)	188(65.3%)	$\chi^2 =6.482$ df=2 p=0.039
	Married	38(45.6%)	43(54.4%)	
Income	No income	41(33.9%)	80(66.1%)	$\chi^2 =24.798$ df=4 p=0.0001
	Less than Kshs 3000	45(28.1%)	115(71.9%)	
	Kshs 3000- Kshs 6000	34(56.7%)	26(43.3%)	
	Kshs 6000- Kshs 9000	6(60.0%)	4(40.0%)	
	Above Kshs 9000	12(66.7%)	6(33.3%)	
Type of job	Farmin g	28(43.1%)	37(56.9%)	$\chi^2 =18.637$ df=9 p=0.027
	Selling second hand goods	12(32.4%)	25(67.6%)	
	Casual work	41(34.2%)	79(65.8%)	
	None	35(31.8%)	75(68.2%)	
	Others	22(59.5%)	15(40.5%)	

A significant association was found between income earned and visiting VCT.

No significant association was established between age and utilization of VCT services ( $p=0.818$ ). Similarly the role of sex in visiting VCT was not significant ( $p=0.665$ ) (table 3). Also, a significant association was found between income earned and VCT utilization ( $\chi^2 =24.798$ ,  $df=4$ ,  $p=0.0001$ ).

### Level of education

A significant association was found between level of education and VCT utilization ( $\chi^2 =13.248$ ,  $p=0.004$ ,  $df=3$ ). Higher percentage (80%) of those with no formal education had not utilized. This showed that those with lower education had a lower uptake of VCT.



**Figure 5: youth who have utilized VCT and those not according to education level (n=369)**

One hundred and fifty nine youth were travelling for more than twenty kilometers to reach the nearest VCT centre. One hundred and forty of them (88.1%) had not utilized VCT. Distance was found to be associated with utilizing VCT services ( $p=0.0001$ )

**Table 5: Proportion of out-of-school youth and VCT utilization by distance to VCT and amount to pay. (n=369)**

Variable		Utilized VCT n (%)	Not utilized VCT n (%)	$\chi^2$ statistical test
Distance	Less than 10km	95(62.9%)	56(37.1%)	$\chi^2=86.245$ df=2 p=0.0001
	11km-20km	24(40.7%)	35(59.3%)	
	More than 20km	19(11.9%)	140(88.1%)	
Cost	Less than Kshs 100	43(38.7%)	68(61.3%)	$\chi^2=2.760$ df=2 p=0.252
	More than Kshs 101	7(23.3%)	23(76.6%)	
	Free	88(38.6%)	140(61.4%)	

#### 4.5 Socio cultural factors influencing Utilization of VCT

Two hundred and sixty three respondents cited high level of stigma and 180(68.4%) had not utilize VCT services .This shows that stigma is still a hindrance to VCT utilization. Use of VCT was associated with stigma ( $p=0.0001$ ,  $df=2$ ,  $\chi^2=21.508$ ). In a focus group discussion, when youth were asked if they could visit VCT with a sexual partner, he replied that "I will first go alone and know my own status, if I'm HIV positive, I will not tell my partner. Going to a VCT with a sexual partner is like admitting that that I have the virus."

Another youth responded that "for a superficial relationship, I will not go to VCT

but for a marriage or a serious relationship we will go both of us. Sometimes you can tell your partner that you are positive and they refuse to agree. So to be on the safe side, you go alone first.” A male youth respondent from Dundori Division.

When youth were asked if knowing their HIV status can help them change their behavior, a female youth respondent from Subukia Division replied “yes, for positive results, one changes because they are going to die. They avoid others and get psychologically stressed because of the way people will see them.” This shows how stigma associated with people who are HIV positive is still rooted in the society.

**Table 6: proportion of youths utilizing VCT according to socio cultural factors**

Variable		Utilized VCT n (%)	Not utilized VCT n (%)	$\chi^2$ statistical test
Stigma	High	83(31.6%)	180(68.4%)	$\chi^2=21.508$ df=2 p=0.0001
	Average	41(55.5%)	33(44.5%)	
	Low	14(43.7%)	18(56.3%)	
Multiple partner	Have multiple partner	53(25.7%)	153(74.3%)	$\chi^2=27.128$ df=1 p=0.0001
	Do not have multiple partner	85(52.1%)	78(47.9%)	
Condom use	Use condom	62(60.2%)	41(39.8%)	$\chi^2=31.714$ df=1 p=0.0001
	Do not use condom	76(28.6%)	190(71.4%)	
Visit VCT with sexual partner	Visited with partner	42(61.8%)	26(38.2%)	$\chi^2=21.140$ df=1 p=0.0001
	Not visited with partner	96(31.9%)	205(68.1%)	

#### **4.6 Health service related factors influencing utilization of VCT**

Ninety five (25.7%) of the youths prefer testing in a public health hospital, 122(33.0%) preferred private clinic, 76(20.5%) tested in a youth friendly centre and 76(20.5%) prefer stand alone VCT (figure 6). Two hundred and five of the youths believed that VCT counselors were qualified to offer VCT services. One hundred and sixty four (44.4%) said that counselors were not qualified therefore had not tested.

Quality of VCT counselors was found to be significant  $p=0.0001$ . One seventy three (73.9%) said that the services were not youth friendly and had not tested. whether the VCT centers offered youth friendly services or not was found to be significant  $p=0.0001$ . Majority of the youth (65.0%) of those who had not tested said that there was no support for those who tested positive. A significant association was therefore established between availability of support and testing for HIV ( $p=0.048$ ,  $x^2=6.088$ ,  $df=2$ ).

In the FGD, when youth asked whether VCT staff were competent, a female youth from Bahati Division responded. "VCT staff are locals and there is fear that the staff may spread information about their HIV status and especially if the results are positive." Another one said "Staff in the VCT are not sensitive to the clients. They ask "do you want to be tested or not?" there is no counseling, they have a negative attitude towards the youth and this makes the youth to go to VCT as a by the way." A female youth from Dundori Division. This indicates how negative out-of-school youth are towards the VCT counselors.

**Table 7: Proportion of youth utilizing VCT according to perception of the quality of health services (n=369)**

Variable		Utilize VCT n (%)	Not utilize VCT n (%)	$\chi^2$ statistical test
Perception of services	Good	74(33.5%)	147(66.5%)	$\chi^2=25.132$ df=2 p=0.0001
	Average	43(43.9%)	55(56.1%)	
	Poor	21(42.0%)	29(58.0%)	
Competenc e of VCT counselors	competent	108(52.7%)	97(47.3%)	$\chi^2=46.170$ df=2 p=0.0001
	Not competent	30(18.4%)	134(81.6%)	
Separate rooms	Have separate rooms	104(39.1%)	162(60.9%)	$\chi^2=1.175$ df=1 p=0.278
	No separate room	34(33.3%)	69(67.0%)	
Youth friendliness	Youth friendly	76(57.6%)	58(42.4%)	$\chi^2=38.653$ df=4 p=0.0001
	Not youth friendly	62(26.1%)	173(73.9%)	
Support	Adequate support	28(51.8%)	26(48.2%)	$\chi^2=6.088$ df=2 p=0.048
	No adequate support	110(35.0%)	205(65.0%)	
Health facility	Public health hospital	32(33.7%)	63(66.3%)	$\chi^2=10.962$ df=3 p=0.012
	Youth friendly centre	32(42.1%)	44(57.9%)	
	Private clinic	50(40.9%)	72(59.1%)	
	Stand alone VCT	24(31.5%)	52(68.5%)	

#### 4.7 Influence of HIV/VCT Knowledge and Perception on Utilization of VCT

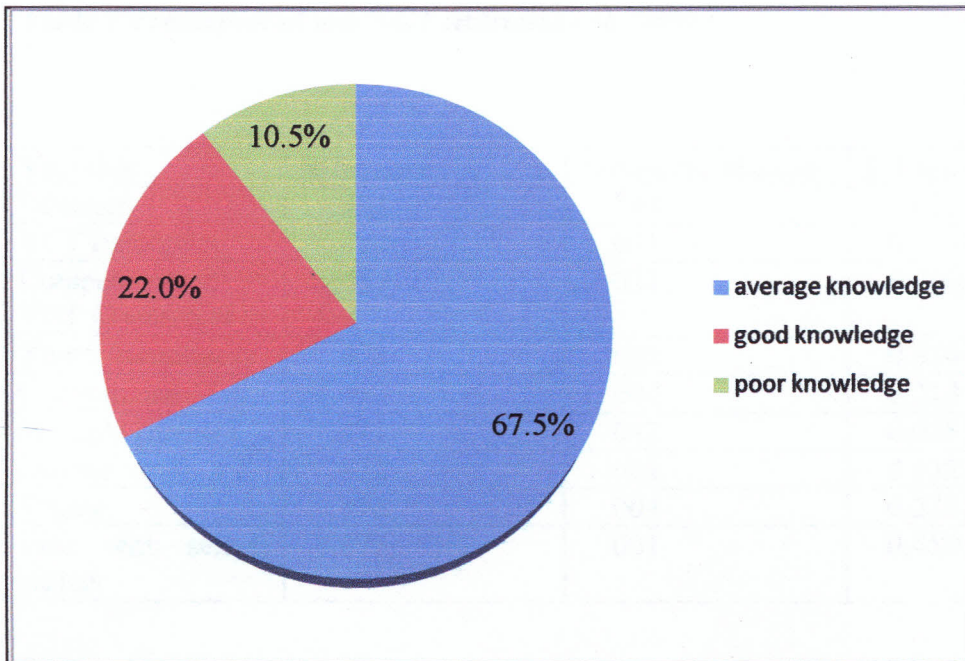
Two hundred and sixty seven (72.3%) had good knowledge of HIV while 69(18.7%) had average knowledge.

One forty six (79.3%) of the youths who had poor perception did not utilize VCT. In

the FGD, when youth were asked if knowledge of one's HIV status would change behavior, the response was "Yes, a negative result for a youth who is promiscuous can make him or her decide to change; "no, I will not continue with that behaviour. Others may change for the worst and start infecting others" a male youth responded. A female youth also responded "No, if one gets negative results, they get excited and forget about the anxiety and go back to bad risky behaviour. Positive results may make one get psychologically stressed because of the stigma." Knowledge and perception and utilization of VCT was found to be significantly associated with VCT utilization

**Table 8: Proportion of youth who have utilized VCT in relation to HIV and VCT knowledge and perception (n=369)**

Variable		Utilized n(%)	Not utilized n(%)	
Knowledge of HIV	Good	88(32.9%)	179(67.1%)	$\chi^2=9.992$ df=2 p=0.017
	Average	35(50.7%)	34(49.3%)	
	Poor	15(45.5%)	18(54.5%)	
Knowledge of VCT	Good	87(39.4%)	134(60.6%)	$\chi^2=19.477$ df=2 p=0.0001
	Average	38(35.5%)	69(64.5%)	
	Poor	13(31.7%)	28(68.3%)	
Perception of VCT	Good	36(62.1%)	22(37.9%)	$\chi^2=46.279$ df=2 p=0.0001
	Average	64(50.4%)	63(49.6%)	
	Poor	38(20.7%)	146(79.3%)	



**Figure 6: VCT knowledge score (n=369)**

Two hundred and forty nine (67.5%) of the youth had good score on VCT knowledge and 81 (22.0%) had average knowledge and 39(10.5%) had poor knowledge. Majority of the youth 236(63.6%) got the knowledge of VCT through the media.

#### **4.8 Multiple Logistic Regression**

The factors found to be significant with VCT utilization in the univariate analysis were: Distance ( $p=0.0001$ ), VCT perception ( $p=0.0001$ ), competence of VCT counselors ( $p=0.0001$ ), youth friendliness of the services ( $p=0.0001$ ), condom use ( $p=0.0001$ ), having multiple partners ( $p=0.0001$ ), income ( $p=0.0001$ ), stigma ( $p=0.0001$ ) and visiting VCT with a sexual partner ( $p=0.0001$ ).

The results in the hierarchical regression analysis showed that distance contributed 39.3% of the variability and the F-change remained significant (0.0001). VCT perception and competence of VCT counselors contributed 3.1% respectively and both of them remained significant. The three variables remained independent predictors of VCT utilization.

**Table 9 Predictors of low VCT utilization (n=369)**

<b>Variable</b>	<b>R-Square</b>	<b>R-Square change</b>	<b>F-Change</b>
Distance	.393	.393	0.0001
VCT Perception	.424	.031	0.0001
Competence of VCT Counselors	.455	.031	0.0001
Youth friendliness	.458	.002	0.334
Condom use	.460	.002	0.313
Multiple partners	.471	.012	0.025
Income	.472	.001	0.532
Stigma	.476	.003	0.228
Visit with sexual partner	.477	.001	0.459

#### 4.9 Discussion

Majority of the study respondents were males. Other related studies have also shown that more male participate in studies more than females (UNAIDS 2010). This could be because females are caregivers in homes and this may be a contributor to the slight difference in participating in this study. HIV/AIDS affects the economically productive age of 18-35 years (UNAIDS 2010). In this study (36.3%) of the out-of-school youth were aged 21-25 years. Two hundred and thirty (62.6%) had not utilized VCT and only 138(37.4%) had utilized. This finding is in line with UNAIDS report that the same age group are afraid to seek VCT services for they have doubt about privacy and confidentiality also they consider themselves not at risk of getting HIV/AIDS (UNAIDS 2010). Low perception of risk of HIV among the youth was also cited in a study done in Tanzania (Mgoshia *et al.*, 2009). It is also in line with (KAIS Report 2007) which showed that two thirds of adults aged 15-64 years have not been tested for HIV.

#### **4.9.1 Age, Gender and Marital status and proportion of youth utilizing VCT**

The proportion of males who participated in the study was 56.1% while that of female was 43.9%. The slight difference could be because the women may have had to depend on their husbands and other family members for decision making and also to raise money for transport. Women are the primary care givers in homes and lack of time could be a contributor to the slight difference in participating in this study level of utilization of VCT is high in females compared to male because when they go for antenatal they are tested this is not the case with the men who rarely visit health centers. Men rarely seek the VCT services because they do not attend the health centers for other reasons as women do sometimes they may be busy with survival Ventures and other times they lack patience necessary to follow through the testing (Moyer *et al.*, 2007).

Although the role of gender and age in VCT was statistically significant mean age for VCT utilization was (24 years) for men and (23 years) for the women, the slight difference may be attributed to early sexual encounter among the youths particularly out- of -school (KDHS, 2008) the study consisted of more singles than the married youths this is because the majority of the youths in this mean age, are not married especially the male youth. Similar study in Zambia (UNAIDS, 2008) found that the vast majority of the youths who participated were single (93%).

A community survey done in Nakuru, on HIV counseling and testing among the general population showed the majority of participants as women (173; 58.25%, than male 124; 41.75% (Irungu *et al.*, 2008). Another survey done in Nakuru also showed that more singles (168; 56.19%) than married (112; 37.46%) participated.

#### **4.9.2 Level of education**

Educated people may have a better awareness of HIV/AIDS and therefore take an HIV test. In this study, out-of – school youth with low levels of education (lack of formal education or have primary level of education) had the highest percentage of not utilizing VCT. An association was therefore established between the level of education and VCT utilization. Education has a positive impact on utilization of VCT. Studies have previously demonstrated an increase in VCT use with increasing level of education (Wringe, 2008; Sherr, 2007; KDHS, 2008).

#### **4.9.3 Income level**

Majority of the out-of-school youth (43.5%) earn an income of less than Kshs 3000 while (32.7%) had no income. This is due to the rampant unemployment facing out-of-school youth. The significant association observed between income and utilization of VCT is that youths may not get money for transport to the VCT center and also to pay for VCT charges in some hospitals.

#### **4.9.4 Distance to VCT and amount to pay**

Distance to the VCT cost of VCT services and transport to the centre was used to get an indication of how accessible these facilities were. Response from FGDS cited “VCTS in the District are far from homes of young people. Distance and cost is a barrier” female youth respondent.

#### **4.9.5 Stigma**

Youths thought that it is embarrassing to test for HIV for they suspect they may be infected given the lives they have led, having sexual partners and do not use condoms (Hibret *et al.*, 2007). Fear of the outcome deter many youths from utilizing

VCT because of stress related to knowing about an imminent death (Kawango, 2007). Other studies have also shown that perceived stigma can act as a barrier to accessing VCT among youths especially out-of-school youth (Denison *et al.*, 2008).

Stigma and discrimination are problems faced by the youths (UNAIDS 2010). In this study, most of the youths who reported experiencing high stigma have not utilized VCT.

In Nigeria, three prong approaches to HIV prevention revolves around abstinence, be faithful and correct as well as consistent use of condoms. Condoms are widely available and sold cheaply, some organizations give it away free yet studies have consistently demonstrated low consistent usage suggesting the existence of barriers to adopting safer sexual practices (Hibret *et al.*, 2007).

This study established a significant association between utilization of VCT and stigma. It was also expressed in a FGD as 'community brands youths who visit VCT as those who doubt their status; that is VCT is for the sick. Some think that going to a VCT is like going to hospital and hospital is for the sick' Female youth respondent.

According to (KDHS, 2008), four measures were used to indicate levels of stigma as follows; willingness to care for relative with HIV at home, ones willingness to buy fresh vegetable from with AIDS, believe that a female teacher should be allowed to continue teaching and would not want an HIV positive situation of a family member to remain a secret. Those who accepted the attitudes on all the four measures were 33%. Percentage expressing acceptance in all the four measures is still low.

Despite concerns regarding confidentiality and youth's fear of being gossiped about,

studies have found that most youths were comfortable with the idea of disclosing their HIV status to family members who they felt would be supportive (Denison et al., 2008).

#### **4.9.6 Multiple partners**

The Kenya UNGASS 2008 report showed that 24% of females and 46% males aged 15-24 years had sex with more than one partner. In this study, youths with more than one sexual partners did not utilize VCT services (73.3%) while those with one sexual partner was ( 47.9%). Having multiple partners was not found to be associated with seeking VCT. In the FGD, a male youth expressed that “ for superficial relationship, I will not go to test with a sexual partner because going to VCT centre is like admitting that I have HIV/AIDS.”

#### **4.9.7 Condom use**

The study found that a large proportion of the youths (71.4%) who did not use condom had not utilized VCT. The study also established that lack of condom use was not associated with VCT utilization. Sex with casual partner or sex workers without a condom is also a common practice among the youth; out-of-school youth in particular tend to have sex earlier and have the lowest rating for condom use (UNGASS 2008).

In a study done among out-of-school youth in Nigeria, about one third out-of-school youth had heard about HIV counseling and testing while only 18% had actually accessed the service. This is in contrast with the findings in Uganda as well as those of a study conducted among in school youth in tertiary institutions in Lagos where half of the respondents already knew their HIV status (Iyaniwura C. & Oloyende O.

2006). In the FGD, a male youth when asked why not use condom responded that “young girls are convinced by older men not to use condoms.

#### **4.9.8 Visit VCT with sexual partner**

The study found that a large proportion of the youths who preferred to visit VCT without a sexual partner had not actually tested (68.1%). Lack of adequate information about the services and certain traditional and cultural practices prevent many people including the youths from accessing the services (UNAIDS 2010).

Several studies have shown that high risk sexual practices such as sexual activity at an early age, unprotected sex and multiple sex partners are common among young people and this has led to an increase in the rate of sexually transmitted infections including HIV/AIDS (Wyss *et al.*, 2007).

In one of the FGDS a male youth said” I will go to test alone first, if negative I will come and take my partner just to be on the save side, if I am positive I will not tell my partner sometimes you can tell your partner that you are positive she leaves you”.

#### **4.9.9 Health service related factors**

The study found that a large proportion (67.6%) of the youth who had poor perception of the quality of VCT services had not utilized the services. Lack of qualified VCT staff has remained a stumbling block to accessing VCT services (UNAIDS, 2010). The same finding was found from an FGD’ some VCT staff are familiar to you, they are locals and there is fear that they may spread the information especially if the results are positive’. Also a male youth in the FGD said “some

counselors assume that the client know a lot about HIV/AIDS and they don't counsel youth some ask "have you been tested again" if you have been tested then they don't counsel you.

On the contrary, a study done in Tanzania on uptake and attitude to voluntary counseling and testing among health care professional students showed that only (19.1%) of the respondents have negative attitude for health care professionals and more than half (63.8%) had positive attitude about attending VCT, (17.1%) were undecided (Mgosha *et al.*, 2009).

#### **4.9.10 Choice of VCT facility**

A slight majority 152 of 266; (57.14%) of participants preferred a dedicated clinics for VCT followed by a private clinics 56 of 266, 21.05% (Irungu *et al.*, 2008).

#### **4.9.11 HIV Knowledge, VCT Knowledge and perception**

knowledge is an important component of self-care and many studies and literature advocate for increasing awareness of HIV and VCT as a means of increasing VCT uptake (UNAIDS, 2009). Similar study in Zambia, (Dennis *et al.*, 2006) showed that 79.8% of the youth have heard of HIV and VCT. (KAIS report 2007) showed that nearly all respondents aged 15-64 years reported having heard about HIV (98.3%). Majority of the out-of-school youth in this study (95.7%) had good knowledge of HIV similarly VCT knowledge was also good (85.1%) of the youth had good knowledge.

In this study 79.3% of the youths who had poor perception did not utilize VCT. 62.6% believed that VCTS were not youth friendly. Majority of the out of school youth in the three Divisions cited the media as the main source of information on

VCT. In this study, having a good score of HIV and VCT knowledge did not translate to testing for HIV. Almost all Kenyan adult have heard of HIV/AIDS, but knowledge of HIV prevention measures is lower (KDHS, 2008). A significant relationship between HIV and VCT knowledge was established in this study.

As much as majority of the youths have heard of VCT, many still lack information on the availability and importance of VCT especially those in very far end of the district according to FGDS “youth in rural areas like Ndungiri do not have information on the availability and importance of VCTS, to them VCT is a big term” a male youth responded.

## CHAPTER V

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

The chapter contains the summary, implication of the study findings, conclusions, recommendation and further research.

#### 5.2 Summary of the Findings

The study indicated that high proportion of out-of-school youth in Nakuru North District have not tested for HIV. The outstanding barriers for not testing being distance to VCT centers, perception of VCT services and competence of the VCT counselors. Promoting HIV/AIDS testing through increasing awareness of VCT services in the population and particularly out-of-school youth is still an effective way to ensure that one's status is known early so that proper mechanisms can be followed based on the test results. But such efforts are unlikely to be successful if the out-of-school youth have a poor perception of the quality of VCT services and have doubts on the competence of VCT Counselors in Nakuru North District. Distance was also a factor deterring out-of-school youth from accessing the VCT centres. This implies that Out- of -school youth most of whom lack secure source of income may continue to stay away from this centres due to transport related costs associated with longer distances.

#### 5.3 Conclusion

VCT use among out-of- school youth in Nakuru North District was low. Utilization of VCT by this group was not affected by stigma, condom use, number of partners, friendliness of the VCT centres but rather it was found to be affected by the

perception out-of-school youth had on the quality of VCT services, competence of VCT counselors and distance to the VCT centre. The study therefore rejected the hypothesis that there were no factors influencing utilization of VCT services in the District.

#### **5.4 Recommendation**

With HIV/AIDS continuing to be a major public health concern in Kenya and especially on out-of-school youth who are at elevated risk due to unemployment and rising poverty levels. The issues surrounding acceptance and use of VCT need to be addressed. On the basis of the results of this study,

- More VCT Centers need to be established and well distributed in the District to ensure accessibility to youth in towns /centres and those in villages.
- With regards to perception of quality of VCT services and competence of counselors, VCT centres need to develop messages emphasizing that the VCT counselors are not only competent but also offer the services professionally. VCT counselors should critically examine themselves and be candid about their short comings in the manner in which they deal with the out-of-school clients and take the corrective measures.

#### **5.6 Further Research**

Studies can be done to identify the barriers to utilization among high risky groups like commercial sex workers and intravenous drug users. Further research is also necessary to track utilization of VCT after the integrating HIV testing and counseling with other health services. Out-of-school youth may not see the need to go to VCT since they receive the testing as they go to seek medical services from health facilities.

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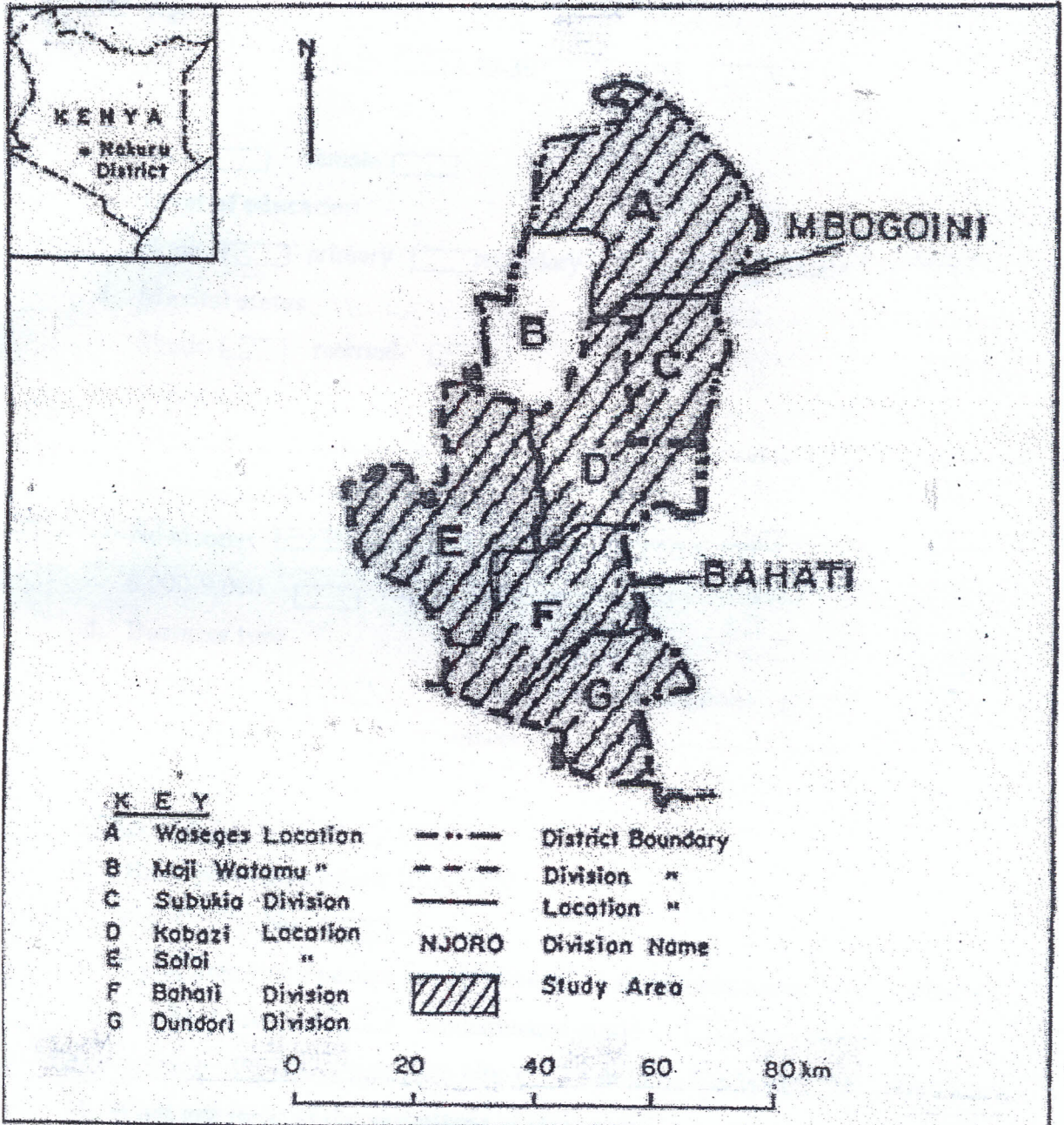
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## Appendix 1 Map of study area



**Appendix 2 –QUESTIONNAIRE**

DIVISION-----

**PART I - SOCIO – DEMOGRAPHIC INFORMATION****1. Age in years**18-20  21-25  26-30  30-35 **2. Sex**Male  female **3. Level of education**None  primary  secondary  college graduate **4. Marital status**Single  married **5. Religion**Christian  Muslim  Traditional  other **1. Income per month**No income  less than 3,000  3,000-6,000 6,000-9,000  Above 9,000 **2. Business type**Farming  Selling second hand goods Casual worker  others -----**PART II KNOWLEDGE OF HIV****3. Have you heard about HIV/AIDS?**Yes  No. **9. If yes, how can a person get HIV/Aids? Sexual intercourse  infected**mother to child  Contaminated blood  many sexual partner kissing  mosquito bite  holding hands  don't know **10. What are some of the symptoms of HIV/Aids?**

More than one answer is allowed

Diarrhea  persistent cough weight loss  skin diseases Headache  cold  don't know **11. Where did you learn about HIV/Aids?**Health work  Teachers  Partner

Parents  Peers  Church   
 Media  Relative

**12. What are the things that can be done to prevent HIV/Aids transmission?**

more than one answer is allowed

use of condoms  peer education  abstinence   
 Use of condoms  faithfulness  behavior change  STI   
 treatment  VCT

Others specify \_\_\_\_\_

**PART III KNOWLEDGE AND PERCEPTION OF VOLUNTARY  
 COUNSELING AND TESTING SERVICES (VCT)**

**13. Have you heard about VCT and HIV prevention/treatment and testing?**

Yes  No

**14. If yes, what happens at a VCT Centre?**

Treatment for HIV/Aids   
 Testing for HIV status   
 Counseling to cope with stress   
 Donating blood   
 Others

**15. Have you visited any VCT for HIV testing or any other service in the last one year?**

Yes  No

**16. If yes, what reason made you to visit a VCT Centre?**

Just wanted to know my status  
 I suspected that I might have HIV/AIDS

**17. (a) If your answer in Q15 is yes, where did you go for a VCT?**

Hospital/public health facility  youth friendly centre  private clinic

Others. Give reasons for your choice \_\_\_\_\_

(b) Did you go with your sexual partner? Yes  No

**18. If the answer in 16 is No, why haven't you sought VCT?**

Fear of a positive result  fear of discrimination  very expensive

The VCT Centre is far away  fear of people who know me at the centre   
 Not at risk of getting HIV

**19. How did you learn about VCT?**

Through friends

Sex partner  media  church  other

**20. What is your perception about the services offered VCT?**

Satisfaction

Inaccurate results

VCT centers manned by adults

**21. In your opinion are the VCT counselors good at the services they offer at the VCT?**

Yes  No

**22. In your opinion are the VCTs youth friendly? Give reasons for your answer.**

Yes  No

**23. In your opinion, how can the VCT, centers be improved to suit the youths.**

Youthful counselors man the centers

Centers to be made to met the needs of the youths

Many centers to be established

Others give reasons

**PATR IV SOCIO- CULTURAL FACTORS**

**24. Is having multiple partners considered cool among your peers?**

Yes  No

**25. Do you consider use of protection even with a steady partner a good idea?**

Yes  No

**26. Do you think asking your partner to visit a VCT centre together with you would be interpreted a sign that you do not trust them?**

Yes  No

Stigma

**27. Do you fear taking an HIV test? Yes  No**

28. Would you feel comfortable being seen at the VCT site?

Yes

No

29. Is visiting VCT considered a sign that one is promiscuous or might be infected with HIV?

Yes

No

30. Is visiting a VCT considered a sign that one is promiscuous or might be infected HIV?

Yes

No

31. Did you think that family members and other people including your friends would feel free to share plates, spoons and cups if they find out that you are HIV positive?

Yes

No

32. Did you know of family members, friends or any other people who were sacked from their jobs because their employers discovered that they have HIV?

Yes

No

33. If you found that your friend has been diagnosed with HIV would you still remain friends?

Yes

No

34. Do you think that your peers, community members and colleagues would still shake hands freely with you if they find out that you have HIV?

Yes

No

#### **PART V - HEALTH SERVICE FACTORS**

35. Was there a separate room for counseling?

Yes  No

36. Did you pay for the service?

Yes  No

37. If yes, how much?

Less than Ksh 100  Ksh101 and above

38. How far is the nearest VCT centre?

Less than 10 Km  11-20 Km  21Km and above

39. In your opinion adequate treatment support for those who test positive?

Yes

No

### **Appendix 3 Guide for FGD for youths**

1. What barriers hinder you from going to a VCT centre?
2. Where did you learn about VCT & HIV/Aids?
3. Do you think knowing your HIV status would change your behavior? if yes how?
4. What do you think should be done to make VCT more acceptable to the youth?
5. In your own opinion what are some of the importance of VCT as a method of HIV prevention mechanism, care and support.
6. Do you discuss the issue of HIV/Aids with your sexual partner?
7. Would you go for HIV testing alone or with your partner?
8. As a youth, do you think that youths are a risk of HIV/Aids infecting and why.
9. Do you think service providers are well trained to counsel youth about HIV/AIDS?
10. What do you think should be done to make VCTs more youth friendly?

**Appendix 4: STATEMENT OF ETHICAL CONSENT**

- This research is being undertaken by Irene J. Cheruiyot, a student of Master of Public Health at the Department of Public Health, School of Health Sciences of Kenyatta University.
- The research is purely for academic purpose and will not be used for monetary any monetary gain.
- All the information you give will be strictly confidential. Your name or address is not being required and will not be included in the questionnaire.
- No reward will be given to you for participating in this study.