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SCHOOL OF GRADUATE STUDIES

Perception of High School Students towards Voluntary HIV Counseling and Testing,
using Health Belief Model in Butajira, SNNPR

BY

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Declaration

I, the under signed, declare that this thesis is my original work, has not been

Presented for a degree in this or any other university and all source materials used for the thesis have been duly acknowledged.

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This thesis has been submitted for examination with my approval as university Advisor.

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Acronyms

AIDS	Acquired immuno deficiency syndrome
ARV	Anti retroviral therapy
BSS	Behavioral Surveillance survey
CSA	Central Statistical Authority
HBM	Health Belief Model
HIV	Human immunodeficiency virus
MOH	Ministry of Health
MSP	Multiple sexual partner
SNNPR	Southern Nations, Nationalities, People Region
SSA	Sub Saharan Africa
STD	Sexually transmitted disease
SPSS	Statistical package for social sciences
PLWHA	People living with HIV/AIDS
UNAIDS	United Nation program on HIV/AIDS
VCT	Voluntary counseling and testing
WHO	World Health Organization

Abstract

A cross sectional descriptive study was conducted in January 2006, among Butajira senior secondary school students. The objective of the study was to assess the perception and attitude of the students towards voluntary counseling and testing (VCT) services based on Health Belief Model.

A multi stage sampling method was used to fill 658 self-administered questionnaires of which 638 were returned complete making the respondent rate of 96.9%. Among the respondents, 415(65%) were males and 223(35%) were females. The mean age of the students was 16.25 ± 2.09 . Of both sex mix, 129(20.22%) of the respondents had sexual experience i.e. 16.92% of the males and 3.3% of the females. The majority, 96.7% of them had heard about VCT services from different sources but only 118(18.5%) of the students had undergone VCT. Eighty two percent of the students were willing to undergo VCT. A theoretical construct with the intention to willingness to under go VCT was analyzed. Thus bi-variate regression analysis showed that willingness to VCT was significantly associated with perceived susceptibility AOR=0.37(0.28, 0.89), perceived barrier AOR= 0.45 (0.23, 0.89), perceived benefit AOR=1.79 (1.44, 2.49)

Even if majority of the students had high level of knowledge, still they were engaged in risky sexual behavior. About half of the students had low perception

towards acquiring HIV. Therefore, Information, education and communication programs should be established and emphasis should be put on reproductive health in order to encourage the students to avoid unsafe sex. HIV preventive messages like VCT should emphasis on personal susceptibility to HIV/ AIDS. Self-efficacy of the students to use VCT should be strengthened and quantitative study on perceived barriers and benefit of VCT should be conducted.

INTRODUCTION

About 40 million people are living with HIV around the world. Out of which about 35.7 million are adults, 17 million are women and 2.1 million is constituted by children less than 15 years of age. Young people (15-24 years) account for half of new infections worldwide [1]. The UNAID report of 2003 revealed that the adult prevalence of HIV is between 7.5 -8.5% [2].

Sub-Saharan Africa has just over 10% of the world population, but is home to close to two-third of all people living with HIV that is about 25 million. In 2003 alone, an estimated 3 million people in the region became newly infected, while 2.2 million died of AIDS. Among young people 15-24years, 6.9%of women and 2.1%of men were living with HIV by the end 2003[1].

According to MOH Ethiopia report by June 2004, about 1.5 million people are living with HIV/AIDS with the estimated adult National HIV prevalence rate of 4.4%. The urban HIV sero prevalence rate is 12.6% while rural one is 2.6%. The highest HIV prevalence occurs in the age group 15-24.

To reduce the growth and size of HIV /AIDS epidemics at population level, preventive efforts must be effective. WHO interventions in prevention focus on key areas such as testing and counseling as the entry point to both treatment and prevention; comprehensive programs to prevent HIV/AIDS infection among infants, women and young people. Recent studies indicate that overall coverage of testing and counseling is extremely poor in countries with highest HIV/AIDS burden. World wide, only 5% of people with HIV/AIDS are estimated to be aware of their status [3]. Therefore, access to testing and counseling is the key for successfully implementing ART and avoiding reinfection and transmission by behavioral changes. However, VCT is not available in most regions in Africa [4, 5]. There are few

studies describing barriers to HIV testing in SSA [6]. According to the first round BSS report, only 20% of the youth perceived that they are moderately or highly at risk for HIV. The study conducted in Addis Ababa and other parts of the country also showed that though the majority of out of school youth know about the transmission and prevention of HIV AIDS, less than half felt they are at risk.

RATIONALE OF THE STUDY

Young people aged 15-24 accounts for more than 50 percent of all HIV infection worldwide. In Ethiopia; VCT for HIV is included as one of the strategy for HIV/AIDS prevention in HIV/AIDS policy. Yet very little is known about what influences VCT services. The HIV/AIDS BSS report by 2002 showed that only 4% of in school youth said they had been tested for HIV, in this context, assessing the predictors that influence the youth not to undergo VCT is important. About 33% of the younger out of school youth and more than 25% of in school youth had sex by the time they were 15 years old. In addition, the lack of services, youths are often less informed, less experienced and less comfortable accessing reproductive health services including VCT. This study assessed Youth's perception towards their susceptibility of HIV/AIDS and its severity as well as their self-efficacy on utilizing VCT, perceived benefits and barriers of VCT using Health Belief Model.

LITERATURE REVIEW

Voluntary counseling and testing (VCT) is recognized as one of the few potentially effective and affordable methods for reducing the transmission of HIV in developing countries [7].

VCT programs have been identified as an entry point for HIV prevention and Care and support services [8]. Uptake of VCT services varies greatly between settings and countries, several societal and delivery associated factors like, stigma, community mobilization, confidentiality, availability of treatment, simple rapid testing (same day testing) and poor quality of services [9].

Similarly, HIV test-seeking behavior and test-receiving outcomes are also said to be influenced by the organization of a testing system described as the process one goes through to acquire testing services, the type of diagnostic test used, the process required to receive test results as well as the place where the test is offered [10].

Testing is more likely to be accepted when clients perceive their own risk and acknowledge behaviors placing them at increased risk, it is voluntarily and routinely offered, confidential and anonymous testing is available, alternative testing technologies are available and when providers & clients perceive VCT as HIV prevention means [11].

Some of the barriers to VCT in developing world are wide spread fear of taking an HIV test, potential for increased violence, loss of security, discrimination and isolation, following sharing information about HIV sero positivity and lack of access to drug therapies, psychosocial and clinical care [12].

In most regions of Africa there is a wide spread perception that HIV testing offers little to the individual who tests positive [13]

During the late 1980's, counseling and testing for HIV had become a corner stone for comprehensive prevention programs and also helped treatment efforts in most industrialized countries [10].

Later on, different interventions showed that HIV counseling and testing based on knowledge of their antibody status: enables individuals to make informed choices help them to change behaviors that may put themselves or others at risk for HIV infection, take action to prevent perinatal transmission once a person learn they are infected, and also to seek early medical care if they are positive. VCT may also enable people to cope with anxiety, because early detection of HIV infection may lead to effective psychological support [14].

A study that was done in Angola on Sexual knowledge, attitudes and behavior among urban youth in 2003 about 43% of Angolan young people have had sex by the age of 15 And nearly 70% of sexual activity amongst young people is unprotected. Over one-third of boys and young men had slept with two or more partners in the previous three months. About 90% are unable to name all three principal ways of avoiding HIV. Around 42% of youth are completely unconcerned or only a little worried about catching HIV. 35% of those who knew that condoms are protective used one last time they had sex, compared with 19% of those who did not know. Over one-third of respondents do not know where to buy condoms. Only 9% of young people think they are at high risk of contracting HIV. About 86% do not think they are at significant risk, either because they explicitly think they are safe or because they don't know. And 74% know that people who look healthy can still transmit HIV. However 51% of those who think they are at no risk have unprotected sex with casual partners 70% of youth would like an HIV test only 6% have had one. [15]

Susan Allen, in her study among 1456 childbearing women in Kigali, Rwanda, reported that a confidential HIV VCT program was associated with increased use of condoms and reduced

rates of gonorrhea and HIV in urban Rwandan women, from another study done in Kigali, Rwanda. VCT of couples has been reported to be more acceptable and resulted in beneficial long-term effects on condom use and HIV related communication [16]. Different studies showed that the acceptance rate of HIV counseling and testing service varies in a wide range. In the developed world, acceptance rate of 79% was reported from a study on STD clinic patients in South Carolina in 1989 [17]. From a study done in New York among pregnant women, out of 17, 731 pre-tested women, 6,768 (38%) agreed to test of which 6104 (90%) actually tested [18].

A variety of factors place young people at the center of HIV vulnerability. These include lack of HIV information, education and service; the gambles many must take in order to survive; and the risk that accompany adolescent experimentation and curiosity [19].

A study conducted in Jimma on high school adolescents, based on the classic health behavior model, concluded that high school students are at risk of HIV infection because of the high-risk behaviors they have [20].

Young people are a critical focus for behavior-change programs, since people 15-24 years old make up an estimated one half of all new infections. However, young people in different parts of the world face different kinds of risks and prevention programming must be designed accordingly [19].

In Ethiopia, from a study done in Harar town Out of the total 720 study subjects 615 (85.4%) had intention of having VCT which was about 86% of male and 84.4% of female study subjects [21]. Also from a study done among youth in Addis Ababa high school 86% were willing to have VCT [22]. According to a community-based study done in northwest Ethiopia, the level of knowledge about HIV/AIDS seems to be high among the study community. However, there are still wrong interpretation & misunderstanding about modes of

transmission & preventive methods. Out of 992 study subjects residing in urban & rural kebeles 89.95% were aware that one could check his/her HIV status. However, less number of them i.e. 732(73.8%) knew about availability of VCT services [23].

In this study the modified health belief model was used. The HBM was originally developed as a systematic method to explain and predict preventive health behavior. It focused on the relationship of health behaviors, practices and utilization of health services. In later years, the HBM has been revised to include general health motivation for the purpose of distinguishing illness and sick role behavior for health behavior. In general, it is now believed that people will take action to prevent, to screen for, or to control ill-health conditions if they regard themselves as susceptible to the condition, if they believe it would have potentially serious consequences, if they believe that a course of action available to them would be beneficial in reducing either susceptibility of condition, and if they believe that the anticipated barrier to (or cost of) taking action are outweighed by its benefits [24].

There are key descriptors

Perceived susceptibility – each individual has his or her own perception of the likelihood of experiencing a condition that would adversely affect one's health. Individuals vary widely in their perception of susceptibility to a disease or condition. Those at low end of the extreme deny the possibility of contracting an adverse condition. Those individuals at the high extreme of susceptibility feel there is a real danger that will experience an adverse condition or contract a given disease.

Perceived severity / seriousness – refers to the belief, a person holds concerning the effects a given disease or condition would have on one's state of affairs.

Perceived benefits of taking action – taking actions towards the prevention of disease or towards dealing with an illness is the next step to expect after an individual has accepted the susceptibility of a disease and recognize it is serious.

Perceived barriers to take action – However, actions may not take place, even though an individual may believe that the benefits to take action are effective. This may be due to barriers. Barriers relate to the characteristics of a treatment or preventive measure may be inconvenient, expensive, unpleasant, painful or upsetting. These characteristics may lead a person away from taking the desired action.

Cues to action – an individual's perception of the levels of susceptibility and seriousness provide the force to act. Benefits (minus barrier) provide the force for action. However, it may require a 'cue to action' for the desired behavior to occur. These cues may be internal and external

Self-efficacy - Beliefs about one's ability to perform the recommended response.

There are other models.

Strength of HBM

- Provide a useful Theoretical frame work for researchers of cognitive determinants of a wide range of behaviors for over 30 years.
- Its common sense constructs are easy to non psychologists to assimilate and apply.
- It has focused on easily modifiable behaviors.

Limitations

- Others social cognitive variables which are highly predictive of behaviors in other models are not incorporated.

- Lack of more powerful analysis of data.

THEORY OF REASONED ACTION /THEORY OF PLANNED BEHAVIOR

This model is based on individuals attitude towards any behavior and subjective norms the purpose of this theory.

- To predict and understand motivational influences on behavior that is not under individuals volitional control
- To identify how and where to target strategies for changing behavior
- To explain virtually any human behavior such as why a person buys a car, is absent from a work or engages in premarital sexual intercourse.

Weakness

- In suggesting that behavior is under the control of intention this theory restricts it self to volitional behaviors.
- Behaviors which require skills, resources or opportunities are not considered.

TRANS THEORETICAL MODEL/STAGES OF CHANGE

This model tries to explain why people don't easily change their behavior, even when they are knowledgeable or even directly affected by the condition. There are 6 stages of change individuals used to change their troubled behavior i.e. precontemplation, Contemplation, Preparation, Action, Maintenance, and Termination.

SOCIAL COGNITIVE THEORY

This model stipulates that human behavior is an interaction between cognitive, behavior and environmental determinants.

Why HBM is selected?

As it is known that since VCT is available, the acceptance has increased and the service was gradually wide spread but different studies showed that for various reasons the acceptance of VCT varied among selected population group in a wide range.

According to a decade review of HIV testing and Counseling practices in USA, factors that influences acceptance or refusal of VCT could be characterized as socio demographic, cognitive and behavioral and organization of VCT service delivery.

There are a lot of models used in HIV/AIDS prevention derived from social psychology and concepts of communication. For this particular study, which mainly assesses the intention towards a specific behavior and what are the possible factors that influence the development of the desired behavior, modified HBM was found to be appropriate. As behavior in this perspective is a function of the subjective value of an outcome and of the subjective probability or expectation that a particular action will achieve that outcome. Thus explanations for behavioral changes all focus on things that go on inside people's head their knowledge, beliefs, attitudes and perception of others.

In general it is now believed that people will take action if they regard themselves as susceptible and potentially damaging and also the anticipated barrier of taking action are outweighed by its benefit so to assess this the HBM is more appropriate than others.

OBJECTIVES

General objective

- To assess the perception of Butajira High School students towards VCT.

Specific objectives

To describe sexual experience of the students.

To assess students perceived threat towards HIV/AIDS infection.

To assess the perceived barrier, perceived benefits as well as self-efficacy towards VCT.

To estimate the proportion of study population who has willingness to VCT.

METHODOLOGY

Study design

A descriptive cross sectional study was conducted to assess the knowledge and level of perception towards Voluntary HIV counseling and testing among high school students in Butajira town.

Study area

The study was conducted in Butajira town, which is found in the southern part of Ethiopia, Gurage zone, Southern Nations Nationalities and Peoples Region (SNNPR). It is located 130 k.m away from Addis Ababa. The estimated population in 1999 was 257,000. The town has both postal and telephone service as well as 24 hour supply of electricity. The main language spoken in the town is Guragigna (Ethio-Semetic language). The majority of the populations in the district follow Islamic religion. Most people in the town are engaged in commercial activities. There are all weather roads connecting Butajira to Addis Ababa and Zeway. There is one functional governmental Hospital in the town, which provides both curative and preventive service. There are one technical school, one high school, 14 junior secondary

schools and 14 primary schools in the district. The female to male school enrolment ratio is 1:3.5. About 77% of the district populations are illiterates and less than 2% of populations have education beyond junior secondary school.

Study population

High School students of both sexes specifically grade 9th, 10th, 10+1th and 10+2th.

Sample size

The required sample size was determined using single population proportion formula. It was estimated considering 85.4% demand rate for VCT (based on study done in Harar), which was about 86% of male and 84.4% of female study subjects. The marginal error between sample and population was 4% with 95% confidence interval.

$$n = \frac{(Z \frac{\alpha}{2})^2 P(1 - P)}{d^2}$$

P=Prevalence of the intention to get HIV testing (0.85)

d=Marginal error between the sample and population (0.04)

$Z \frac{\alpha}{2}$ = Critical value at 95% confidence interval (1.96)

Therefore the required sample size was 306 but to eliminate the design effect it was doubled and 15% non-response rate was added as the study contains some sensitive issues on sexual behavior, which may not be responded by students. Therefore the total sample size required was =**658**

Sampling Procedure

The High school consists of grade 9, 10, 10+1, 10+2 and there were sections in each grade labeled as A, B, C, D, E. Eg. 9th A, 10th B, 10+2th E. So the study population was categorized from the source population based on the level of the grade. The number of study subjects

included in each grade was proportional to their size. Then sections to be included in each grade were selected based on simple random sampling (Lottery method). Students from the selected section were chosen randomly, assembled in a room and made to fill out the questionnaire in the presence of the data collectors.

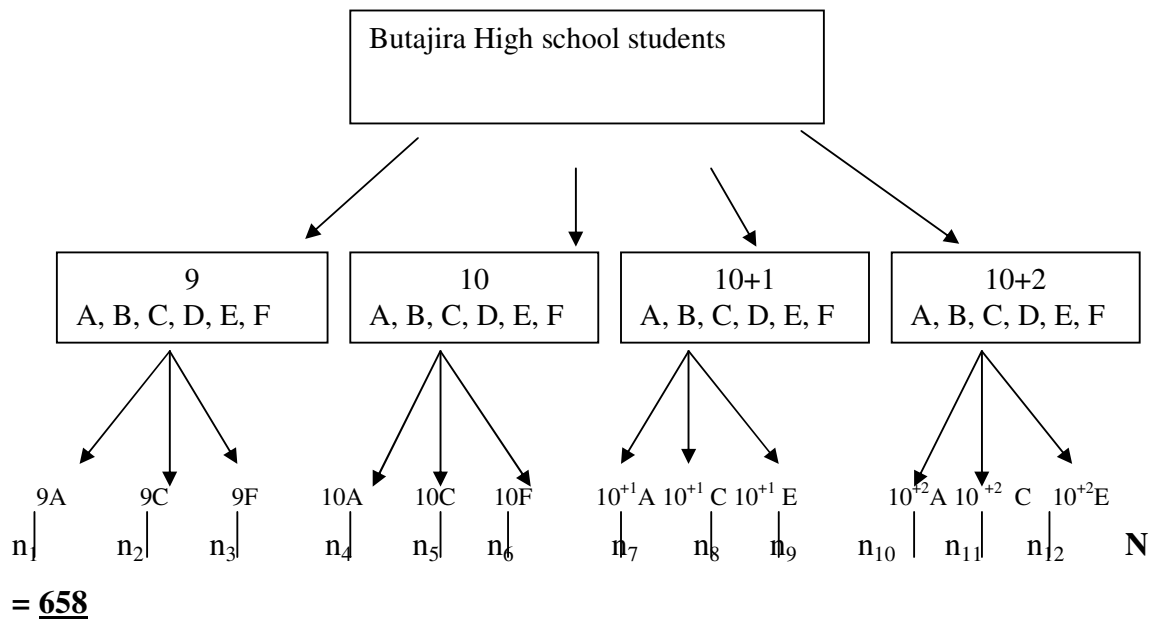


Figure1. Schematic presentation of sampling of students.

Data Collection instruments and management

Quantitative data was collected using self-administrated structured questionnaire. The questionnaire was prepared first in English and then was translated to Amharic. The Amharic version questionnaire was pretested for clarity, acceptability, and flow among the non-study

subjects. Based on the findings from pre testing the questions that were difficult to answer were modified and the corrected questionnaires were distributed to collect the data.

There are sets of variables included in the questionnaire

- Socio demographic characters tics.
- Knowledge about HIV/AIDS.
- Sexual behavior.
- Perceptions towards VCT.

The following variables were used to fulfill the objective of the study.

Study variables

- Dependent variables –
 - Willingness to undergo VCT.
- Independent variables
 - Perceived susceptibility/ severity
 - Perceived benefits, perceived barriers.
 - Socio demographic variables such as, age, sex, educational status, area of residence.
 - Self- efficacy.
 - Sexual experience and condom use.

Data Collection

Teachers who had Bachelor degree/Diploma were recruited from the high school specially those who had previous experience of the data collection. They were trained about the importance of the study and how the questionnaires were filled.

Data entry and analysis

The questionnaires were checked for completeness by the principal investigator. Unfilled and partially filled questionnaire were excluded. The remaining were coded and then the data entered into EPI info version 2002 statistical package. Then the data was transformed & analyzed by SPSS version 10.0 package.

Perceived benefits;

This variable consists of five items that suggest VCT is an effective way of preventing the transmission of the virus. The responses options will be on a five point likert scale ranging from strongly agree to strongly disagree. Responses were summed into mean score. Those who scored below the mean value indicating lower perception of benefits.

Perceived barriers;

This variable also consisted of three items, which, among others, suggested that undergoing VCT is embarrassing, expensive.

Perceived susceptibility;

Four items were included related to susceptibility of the respondents to HIV/ AIDS. Response options were arranged on a five point likert scale of strongly agree to strongly disagree. The mean score was summed and those who scored below the mean value were categorized as having low risk of getting HIV/ AIDS.

Perceived severity;

Three items were included in this variable which respondents state the seriousness of getting HIV/ AIDS. The response options were arranged on a five point score. The score ranges from strongly agree to strongly disagree. The mean score was calculated. Those respondents who scored below the mean value were categorized as having low perception towards the severity of HIV/ AIDS.

Self-efficacy;

Three items were included in this variable to assess the self-efficacy such as confidence to using VCT. The score ranges from strongly agree to strongly disagree. The mean score was calculated. Those who scored below the mean were taken as having low efficacy.

The variables were analyzed as follow: -

In order to examine the bivariate relationships of the Health Belief Model concepts to willingness to VCT, bivariate logistics regression between theoretical variables and the dependent variables, intention to use VCT was calculated. Moreover common descriptive statistics were also be applied as per variables of interest

Ethical considerations

Before the data collection, ethical clearance was obtained from Faculty of Medicine, Addis Ababa University. Then formal letter of cooperation was written to SNNPR Education Bureau, Butajira City Administration Education Desk and Butajira High School. The study participants were informed either to participate or refuse in the study by putting the mark on the cover page of the questionnaire.

RESULTS

Socio demographic characteristics

Six hundred fifty eight students filled the self-administered questionnaires of which six hundred thirty eight were returned complete making a response rate of 96.9%. Twenty students returned incomplete questionnaires and were excluded from analysis.

Among 638 successfully completed respondents, 415(65%) were males and 223 (35%) were females. Out of which 194(30.4%) were grades 9, 174(27.3%) were grade 10, students, 140(21.9%) were grade 10+1 and 130(20.4%) were grade 10+2.

The mean age of the students was 16.25 with sd of ± 2.09 . Majority of the students 614(96.2%) were single.

Three hundred fourteen students (49.2%) were Muslim, 245(38.4%) were orthodox christians, 72(11.3%) were protestant by religion. The rest belong to catholic and having no religion.

The students were dominantly Guragie that consisted of 511(80.1%), followed by Seltie, Amhara, Oromo and Tigre, which comprised 67 (10.5%), 38(6%), 10(1.6%) and 10(1.6%) respectively. **(See table 1)**

Table1; Distribution of Butajira high school students by their Socio demographic characteristics, January 2006.

Socio-demographic Variables	Number (638)	Percent
Sex		
Male	415	65%
Female	223	35%
Age		
<15	85	13.3%
15-19	321	50.3%
>20	75	12.6%
Marital Status		

Single	614	96.2%
Married	23	3.6%
Religion		
Muslim	314	49.2%
Orthodox Christian	245	38.4%
Protestant	72	11.3%
Others	7	1.1%
Area of residence		
Urban	411	65%
Rural	227	35%
Ethnicity		
Guragie	511	80.1%
Seltie	67	10.5%
Amhara	38	6%
Others	20	3.2%
Educational Status		
9 th	194	30.4%
10 th	174	27.3%
10+1 th	140	21.9%
10+2 th	130	20.4%

Knowledge about HIV/AIDS

A total of eleven questions were included to assess the knowledge status of the students about HIV/ AIDS on way of transmission and prevention.

Six hundred twenty eight (98.4%) students responded that it could be transmitted by unsafe sex. Eighty (12.6%) said it could be transmitted by mosquito bite. For the questions assessing knowledge of MTCT, correct response on the transmission of the HIV, Three hundred forty six (54.2%) replied it can be transmitted to the infant before birth, two hundred twenty two (34.8%) said it couldn't be transmitted before birth. About three fourth answered that it can be

transmitted from the mother to the new born during delivery, 508(79.6%) said it could be transmitted during breast-feeding to the infant. Majority of the students 621(97.4%) responded that shaking of hands couldn't transmit the virus. Six hundred three students (94.5%) said feeding together with HIV infected person could not transmit the virus. More than two third answered that healthy looking individuals can be carrier of the virus while 87 (13.6%) agreed that healthy looking individuals can not be carrier of the virus, the rest 115(18.1%) don't know whether they can be or not.

Five hundred eleven students (80.1%) reported regular and proper use of condom could prevent HIV infection while 11.2% of the respondents didn't agree that regular and proper use of condom protects HIV infection. Five hundred ninety two (92.8%) said abstinence could prevent the transmission. Majority of the students 620(97.2%) believed being faithful to one partner could prevent the transmission of the virus.

(See table 2)

Table 2. Knowledge of the students on the modes of HIV transmission and prevention in Butajira, January 2006.

Knowledge on HIV	Male	Female	Total
Unsafe sex transmit HIV			
Yes	409 (64.1%)	219 (34.3%)	628 (98.4%)
No	6 (0.9%)	4 (0.4%)	10(1.6%)
Mosquito bite transmit HIV			
Yes	47 (7.4%)	33 (5.2%)	80 (12.6%)
No	348 (54.5%)	163 (25.6%)	511 (80.1%)
I don't know	20 (3.1%)	27 (4.2%)	47 (7.3%)
Pregnant mother transmit HIV to the fetus before birth			

Yes	247 (38.7%)	99 (15.5%)	346 (54.2%)
No	132 (20.7%)	90 (14.1%)	222 (34.8%)
I don't know	36 (5.7%)	34 (5.3%)	70 (11%)
Pregnant mother transmit HIV to the fetus during delivery			
Yes	332 (52.1%)	148 (23.2%)	480 (75.3%)
No	43 (6.7%)	44 (6.9%)	87 (13.6%)
I don't know	40 (6.3%)	31 (4.8%)	71 (11.1%)
Pregnant mother transmit HIV to the fetus by breast-feeding			
Yes	327 (51.2%)	181 (28.4%)	508 (79.6%)
No	57 (8.9%)	24 (3.8%)	81 (12.7%)
I don't know	31 (4.9%)	18 (2.8%)	49 (7.7%)

Shaking of hands transmit HIV				
Yes	9 (1.4%)	2 (0.3%)	11 (1.7%)	
No	402 (63%)	219 (34.4%)	621 (97.4%)	
Taking meal together with HIV positive individual transmit HIV				
Yes	19 (3%)	6 (0.9%)	25 (3.9%)	
No	391 (61.3%)	212 (33.2%)	603 (94.5%)	
Healthy looking individual be carrier of HIV				
Yes	293 (45.9%)	143 (22.37%)	436 (68.3%)	
No	58 (9.05%)	29 (4.45%)	87 (13.6%)	
I don't know	85 (13.32%)	30 (4.78%)	115 (18.1%)	
Regular & proper use of condom protects HIV				
Yes	343 (53.8%)	168 (26.3%)	511 (80.1%)	
No	47 (7.4%)	24 (3.8%)	71 (11.2%)	
I don't know	25 (3.9%)	31 (4.8%)	56 (8.7%)	
Abstinence from sex protects HIV				
Yes	387 (60.7%)	205 (32.1%)	592 (92.8%)	
No	21 (3.3%)	8 (1.2%)	29 (4.5%)	
Being faithful to partner protects HIV				
Yes	407 (63.8%)	213 (33.4%)	620 (97.2%)	
No	6 (0.9%)	4 (0.6%)	10 (1.5%)	

Knowledge on condom and its use

Significant numbers of the students (97.6%) were aware of the presence of male condom. Majority of the students 585(91.8%) knew where condom is available. Nearly half of the respondents (49.4%) didn't know the correct use of male condom. Out of which, 163(25.6%) were males and 152 (23.8%) were females. Among those who made sexual intercourse in the last 12 months, 39 (6.1%) of them did not use condom, 22 (3.5%) used occasionally, 45 (7 %) used condom always.

With regard to female condom, about three quarter (75%) of the students were aware of it, out of which 337 (52.8%) were males and 142 (22.2%) were females.

(See table 3)

Table 3. Knowledge of students about condom in Butajira High School, January 2006

Condom use related knowledge		Male	Female	Total
Heard of male condom				
	Yes	406 (63.6%)	217 (34 %)	623 (97.6%)
	No	9 (1.5%)	6 (0.9%)	15 (2.4%)
Know the correct use of male condom				
	Yes	252 (39.5%)	71 (11.1%)	323 (50.6%)
	No	163 (25.6%)	152 (23.8%)	315 (49.4%)
Ever used a male condom while doing sex in				
	Yes/always	37 (28.6%)	8 (6.2%)	45 (34.8%)
	Yes/occasionally	19 (14.7%)	3 (2.3%)	22 (17%)
	Never	34 (26.3%)	5 (3.8%)	39 (30.2%)
	No response	18 (14%)	5 (3.8%)	23 (17.8%)
Know where condom is available				
	Yes	390 (61.1%)	195 (30.7%)	585 (91.8%)

	No	25 (3.9%)	28 (4.3%)	53 (8.2%)
Heard of female condom				
	Yes	337 (52.8%)	142 (22.2%)	479 (75%)
	No	78 (12.3%)	81 (12.7%)	159 (25%)

Sexual characteristics of the study populations

Out of 638 respondents, 129 (20.2%) reported to have previous history of sexual contact. Among these respondents 108 (17%), 21(3.2%) were males and females respectively. From which 27(20.9%) were grade 9, 33(25.8%) were grade 10, 38(29.4%) were grade 10+1 and 31(24%) were grade 10+2 students. For male students the median age for first sexual intercourse was 17 (mean=16.54±1.9) year. For female students the median age for commencement of sexual intercourse was 18 (17.5±1.4) years.

The minimum age at first sexual intercourse for males and females were 12 and 15 years of age respectively. The maximum age at first sexual intercourse for males and females were 21 and 20 respectively.

Out of those who had previous history of sexual contact, 50(38.7%) of male and 9(6.9%) of females responded that they had sexual intercourse in the last 12 months. Among those who had sex in the last 12 months only 45 (38%) replied that they used condom consistently.

Out of those who experienced sexual intercourse for the first time, 43(33.3%) reported that they used condom, the majority (66.7%) did not use condom.

According to students' response, the main reasons for not using condom were, 20(23.3%) due to refusal of the partner, 19(22.1%) because of its expensiveness, 15(17.4%) reasoned because of condom allergic reaction.

The main reason for committing first sexual intercourse were, in 52(40.3%) of respondents due to their personal desire, 10(7.8%) were being forced by alcohol.

(See table 4)

Table 4. Sexual behavior of student's Butajira High school, January 2006

Variable		Male	Female	Total
Ever had sexual intercourse				
	Yes	108 (17%)	21(3.2%)	129(20.2%)
	No	307(48.1%)	202(31.7%)	509(79.8%)
Age when started sexual intercourse				
	<15 yrs	24 (18.6%)	2 (1.5%)	26(20.1%)
	15-19	45 (34.8%)	9 (6.9%)	54(41.8%)
	>20 yrs	3 (2.3%)	2 (1.5%)	5(3.8%)
	I don't know	36 (27.9%)	8 (6.2%)	44(34.1%)
Had sexual intercourse during the last 12-month				
	Yes	50 (38.7%)	9 (7%)	59 (45.8%)
	No	58 (45%)	12 (9.2%)	70 (54.2%)

Knowledge on Voluntary Counseling and Testing

Six hundred sixteen (96.7%) of students either knew or had heard of VCT from different sources. Radio was the main source of information access in 97% of the respondents, 65% from Television, and 25% from friends, 20% from school.

Students were asked whether VCT was important or not, 318 (49.8%) of respondents thought that to undergo VCT was very important. Even if majority of the respondents believed that VCT is important, some of the students (35.4%) reported that it is not easy to undergo VCT. Regarding preference of professionals as counselors, majority 332(52%) of the students preferred trained VCT counselor, followed by 161(25.2%) physicians, 67(10.5%) HIV patients and 37(5.8%) religious leaders. (See Figure 2)

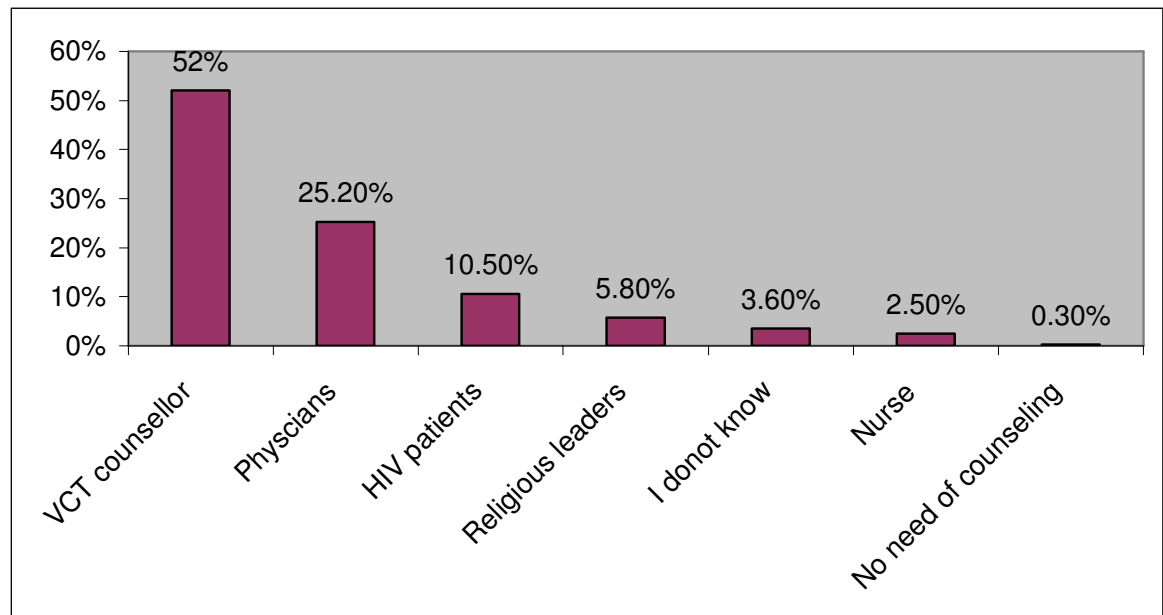
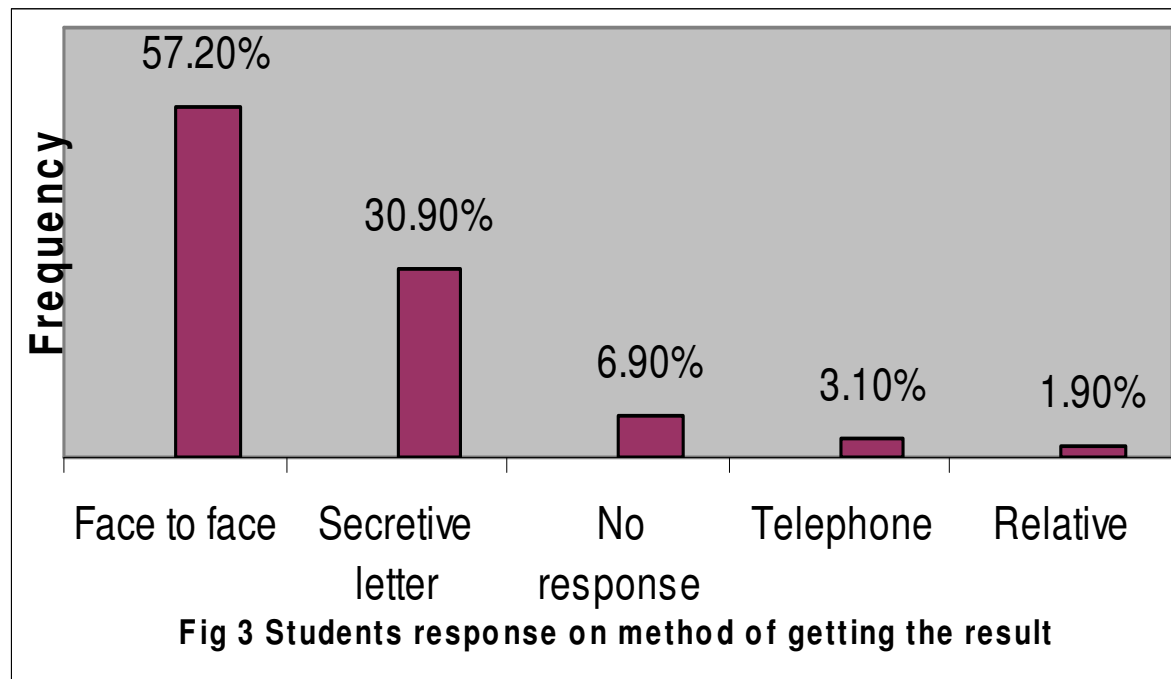


Fig 2. Students' response on choice of counselor

As to the type of counseling method, majority 382(60%) of the respondents showed preference for confidential testing, followed by 156(24.4%) anonymous way of testing.

Concerning preference of way of receiving HIV test result majority preferred face-to-face 365(57.2%) followed by secretive letter 197(30.9%). (See Figure 3)



Regarding their attitude and practice towards VCT, 118 (18.5%) used VCT service, of those who underwent VCT males and females counted 10.8% and 7.7% respectively. Majority of the students 99 (83.9%) reasoned out why they underwent VCT was just to know their current health status while 9 (7.6%) did for marriage purpose.

Students Willingness to undergo VCT was assessed, 526(82.3%) of the respondents responded that they were willing, while the rest 112 (17.5%) were not. The reason for not undergoing VCT was fear of anxiety following the result was reported in 50(45.5%) and in 22(19.6%) was due to fear of stigma and discrimination by the society.

When willingness to pay for VCT was assessed, 372 (58.4%) were found to be willing, majority of them 289 (74.7%) were willing to pay between 1-10 birr. **(See Table 5)**

With regard to timing for testing, Majority of the students 449(70.4%) said one should undergo VCT at any time, 135(21.2%) agreed just before marriage, 29(4.5%) thought when an individual is getting sick and 5(0.8%) thought when an individual did have multiple sexual partner (MSP). **(See figure 4)**

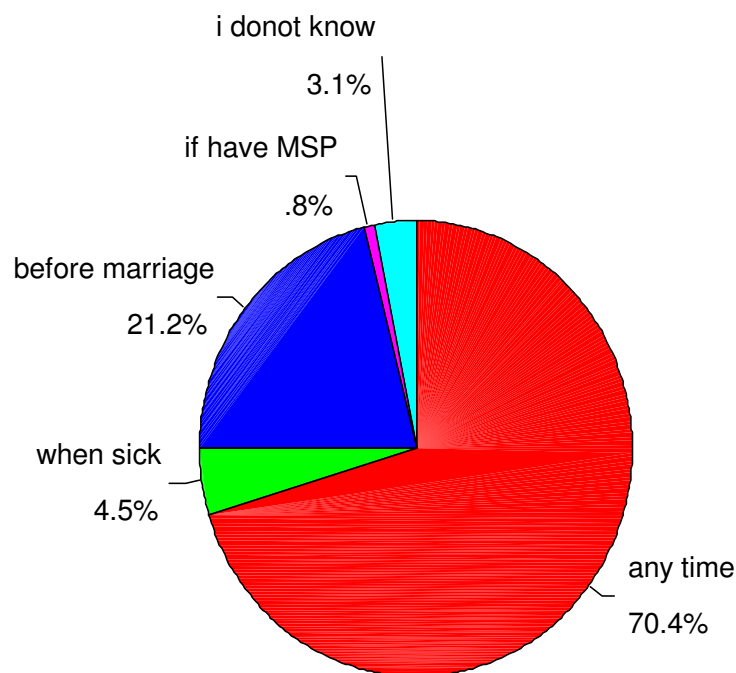


Fig 4. Students' response for timing of VCT

Four hundred one (62.9%) of students knew the availability of VCT service providing institution in their surrounding, while more than two third (37.1%) did not know.

Table5. Knowledge and attitude of Butajira high school students towards VCT, January 2006.

Characteristics		Male	Female	Total
Heard of Voluntary HIV counseling and testing				
	Yes	405 (63.5%)	221 (33.2%)	616 (96.7%)
	No	10 (1.5%)	12 (1.8%)	22 (3.3%)
Feel that VCT is necessary				
	Yes	211 (33.1%)	107 (16.7%)	318 (49.8%)
	No	195 (30.6%)	106 (16.6%)	301 (47.2%)
Undergone VCT				
	Yes	69 (10.8%)	49 (7.7%)	118 (18.5%)
	No	346 (54.2%)	174 (27.3%)	520 (81.5%)
Willing to under go VCT				
	Yes	338 (53%)	188 (29.5%)	526 (82.5%)
	No	77 (12.1%)	35 (5.4%)	112 (17.5%)
Willing to pay for VCT service				
	Yes	232 (36.4%)	141 (22%)	372 (58.4%)
	No	183 (28.7%)	82 (12.9%)	265 (41.6%)
Willing to under go VCT if given free of charge				
	Yes	350 (54.8%)	188 (29.5%)	538 (84.3%)
	No	28 (4.4%)	16 (2.5%)	44 (6.9%)

	I don't know	37 (5.8%)	19 (2.9%)	56 (8.8%)
VCT service providing institution in your surrounding				
	Yes	266 (41.7%)	135 (21.1%)	401 (62.8%)
	No	149 (23.4%)	88 (13.8%)	237 (37.2%)

Perception about HIV/AIDS and VCT

The mean score for perceived susceptibility, perceived severity, perceived barrier, perceived benefit and self-efficacy for male and female is shown in table 6.

Perceived susceptibility

Students' attitude towards perceiving themselves as susceptible to HIV infection was assessed and the result indicated that 312 (48.9%) of them replied as having low perception of acquiring the infection. The remaining 51.1% of them responded that they could have high possibility of getting HIV/AIDS. The most frequently cited reason by those with low perception was because 41.6% had no any sexual contact, 37.3% were faithful to their partner, 18.7% used condom consistently. In this regard the mean score was calculated and showed 3.1398(± 0.70799) for males and 3.1368(± 0.77859) for females.

Perceived Severity

Three hundred thirty six (52.6%) of the respondents had high perception towards severity of HIV/AIDS. While 302(47.4%) had low perception .The mean score for perceived severity was 3.1627(± 0.89587) for male and 3.1300(± 0.98005) for female.

Perceived Benefit

One fourth of the respondents agreed that VCT is an effective way for preventing HIV/AIDS.

The mean score for the perceived benefit of VCT was 1.6232(± 0.42503) for male and 1.6287(± 0.36203) for female.

Perceived Barrier

Three hundred thirty five (52.5%) of the students had high level of perception on barrier of VCT. The mean score was 2.6229(± 0.71767) for male and 2.6300(± 0.76738) for females.

Self-Efficacy

Three hundred seventy nine (59.4%) of the respondents had high confidence in using VCT.

The mean score for self-efficacy was 1.5462(± 0.66339) for male and 1.5262(± 0.66831) for female.

Table 6. Mean score and standard deviation of theoretical variables

Theoretical variables	Male	Female
Perceived Severity	3.1627(± 0.89587)	3.1300(± 0.98005)
Perceived susceptibility	3.1398(± 0.70799)	3.1368(± 0.77859)
Perceived barrier	2.6229(± 0.71767)	2.6300(± 0.76738)
Perceived benefit	1.6232(± 0.42503)	1.6287(± 0.36203)
Self efficacy	1.5462(± 0.66339)	1.5262(± 0.66831)

Association of socio-demographic variables and theoretical variables with willingness to VCT

Socio-demographic variables, theoretical variables were analyzed if there were association with willingness to VCT. By applying logistic regression the following variables showed statistical association with willingness to VCT.

- Age groups 15-19 and 20 years and above were more likely to undergo VCT.
- Students with educational status 10+1 and 10+2 were more likely to show willingness to VCT than those of grade 9 and 10, AOR=3.05(1.36, 6.78).
- Students who had ever had sexual intercourse were less likely to show willingness to VCT than to those who did not have, AOR= 0.54 (0.29, 0.98).
- Those students who had high perceived susceptibility were less likely to have intention to willingness to VCT than to those having low perception, AOR= 0.37(0.28, 0.89).
- Students who had high perception on barriers were less likely to have intention to willingness to VCT than to those having low perception, AOR=0.45 (0.23, 0.87).
- Students who had high perception on benefit were more likely to have intention to willingness to VCT than to those having low perception, AOR=1.79 (1.44, 2.43).

(See Table 7)

Table 7. Association of Socio demographic, theoretical variables and practices with willingness for having VCT among students, Butajira, 2006

Variable	Willingness to VCT		Un adjusted OR 95% CI	Adjusted OR 95% CI
	Yes	No		
Age				
<15	38	4	1.00	1.00
15-19	173	39	0.13 (0.02, 1.05)	1.52 (1.28, 1.90)*
>20	47	14	0.21 (0.03, 1.53)	1.78 (1.49, 1.92)*
Sex				
Male	232	183	1.00	1.00
Female	141	82	0.96(0.50, 1.84)	0.67(0.36, 1.16)
Educational Status				
9-10	195	33	1.00	1.00
11-12	143	44	0.418 (0.21,0.83)*	3.05 (1.36, 6.78)*
Area of residence				
Urban	200	50	1.00	1.00
Rural	138	27	0.78 (0.47,1.31)	0.85 (0.48, 1.52)
Had Sexual intercourse				
No	259	48	1.00	1.00

Yes	79	29	0.98 (1.17,3.35)	0.54 (0.29, 0.98)*
Use Condom				
No	49	23	1.00	1.00
Yes	30	6	2.34 (0.86,6.42)	2.73 (0.84, 8.59)
Perceived Susceptibility				
Low	170	35	1.00	1.00
High	168	37	1.21 (0.74,1.99)	0.37 (0.28, 0.89)*
Perceived Severity				
Low	170	40	1.00	1.00
High	168	37	0.42 (0.65,0.95)*	0.67 (0.35, 1.28)
Perceived Benefit				
Low	72	27	1.00	1.00
High	266	50	0.51(0.29,0.86)	1.79 (1.44, 2.43)*
Perceived Barrier				
Low	190	31	1.00	1.00
High	148	46	0.91 (0.15,3.15)	0.45 (0.23, 0.87)*
Self Efficacy				
Low	108	63	1.00	1.00
High	230	14	0.11(0.06,0.19)*	0.11 (0.66, 1.23)

* P< 0.05

DISCUSSION

The HIV /AIDS pandemic that started over twenty years ago is still extremely dynamic and growing worldwide. Young people (15-24years old) account for half of all new infections, according to UNAIDS, 2004 report.

Taking that into considerations, a cross sectional study among Butajira high school students was conducted based on Health Belief Model, which tried to assess information on knowledge of HIV transmission, prevention, sexual behavior and different issues on VCT.

This study revealed that majority of the respondents had a high knowledge on HIV/AIDS way of transmission and prevention. This might be due to the fact that they were getting sufficient information from different sources. This finding is similar with study done in four big towns in Ethiopia by Mehret et al in 1993 [34]. Even if majority of the students had sufficient knowledge, significant proportions of students were engaged in risky sexual practice. About two third of those who had experienced sexual intercourse did not use condom during first sexual intercourse. Moreover, among those sexually active in the last 12 months, 66% did not use condom consistently.

In this study twenty percent of the study subjects of which 16.9% of male students and 3.29% of female students had sexual experience; this figure is low as compared to other studies in

USA and Canada, which were 46-72% for boys and 24-72% for girls. [27] In Europe it was between 18.9-78% for boys and 17-45% for girls [28].

In Ethiopia, in Harar nearly half of males and one-fifth of females [29]. In North West Ethiopia Kolla Diba 31.9% for both sexes [30], in Jimma 40% for both sexes [31], in Addis Ababa 5.6% for girls, 39.8% for boys [32], in Addis Ababa 21.9% for both sexes had sexual experience [33]. This figure is lower than the report from BSS, which were 19.3% and 12.8% for males and females respectively. This might indicate that students might be able to abstain from sexual intercourse to prevent being infected from HIV. This might be as a result of the different interventions programs designed and being implemented on avoidance of pre marital sex is becoming effective. Moreover, the fact that Butajira is a health research base for AAU for about two decades might have contributed to the current finding.

Regarding to the first age for commencement of sexual intercourse, the mean age of initiation of sex was 16.54 ± 1.9 SD for male and 17 ± 1.78 SD for females. In Nigeria it was 17 years for males [25]. Males started sexual intercourse earlier than female, which is demonstrated in other studies. But a study done among school adolescents in Oromia showed female students had sexual intercourse earlier than males (15.21 ± 1.4 vs. 16.11 ± 1.94) [26].

As to their knowledge on preventive measures 80.1% said safe and proper use of condom, 92.8% abstinence and 97.2% remaining faithful to one partner were mentioned.

Even if majority of the study subjects know the presence of male condom and where it is available, nearly half of the study subjects didn't know the proper use of male condom. This finding showed that still there is knowledge gap in this preventive method.

Significant proportion of the study subjects (96.7%) knew the presence of VCT from different sources. The main source being radio and as well majority of whom (82.5%) are willing to undergo VCT for HIV.

In this study 18.5% of the study subjects of which 10.8% of males and 7.7% of females had undergone VCT, these figures are higher than that of BSS 2002 report, which was 4.5% for males and 3.4% for females. This showed that the acceptance rate of VCT as preventive measure is increasing and might be due to the expansion of VCT in the last two years. Yet even if majority of the students thought that undergoing VCT is very important, around 35% of them replied that it is not an easy task to undergo. This showed that still a lot should be done to let them know the importance of VCT to appreciate and use the service.

Although majority of the respondents prefer to be counseled by any trained counselor and physicians and some of them had preference of religious leaders and HIV patients. This finding highlights that religious leaders and HIV patients had better been involved in VCT to increase the acceptance rate. Study done in Uganda and Tanzania showed that involving traditional healers and religious leaders in HIV counseling showed significant result to expand VCT services [35].

With regard to VCT delivery system, majority of the respondents preferred confidential method. This might indicate that confidentiality could be considered as a crucial element for implementation of effective VCT services.

Students who were grade 10+1 and above had showed more willing to undergo VCT than those below Youth in this educational level might have had better information and awareness about VCT and are more likely to show willingness VCT. This might be the level; of awareness will increase about the importance of VCT. This is also similar to other studies done in Ethiopia and Uganda. [36]. Similarly students of higher age were more likely to have willing to VCT this might be again as age advance the status of their knowledge might increase.

Those students who had ever had sexual experience, students who replied that they did have high perceived susceptibility were less likely to have intention for willingness to VCT. This might be the fact that they were afraid that they could get the HIV infection and might be engaged in unprotected sexual intercourse.

Even if majority of the respondents showed their willingness to pay for VCT services, significant proportion of them claimed to afford very minimum. Therefore special program should be planned to address youth who demand for VCT in spite of the fact that they couldn't afford to pay for the service. The Uganda VCT service at AIDS information center revealed those "free day" VCT service programs were used to attract young people [12].

Fear of positive result, stigma and discrimination attached with HIV in the public were the major reasons mentioned by the respondents for their willingness to VCT. Similar finding in many developing countries were reported by UNAIDS: emphasizing that a properly carried out program could help to break the vicious circle of fear and stigma.

Strength and Limitation of the Study

Strength

- There is high response rate, which is about 96.9%.
- This study employed health belief model, which is applicable and widely used.

Limitations

- Since some questions include sensitive issues, responses are sorted and may create desirability bias.

Conclusion

- Students have high level of Knowledge on HIV /AIDS but engaged in unprotected sexual intercourse that was demonstrated by low utilization of condom and lack knowledge on proper use of male condom.
- The perception of majority of the students towards acquisition of the infection was low.
- Majority of the students knew or had heard of VCT.
- Some of the students replied that it wasn't easy to undergo VCT
- There is high willingness to under go VCT.
- About half of the students had high perception on barriers of VCT.
- Students Perceptions on the benefit of VCT was low.
- Self-efficacy to use VCT was high.
- Statistically significant association difference was seen between respondent of having high and low perception on perceived susceptibility barrier and benefit with willingness to VCT.
- Fear of stigma and discrimination by the society were the main reason for not undergoing VCT.

Recommendations

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- IEC program to advocate the benefits of VCT and reduce fear of stigma and discrimination should be strengthened.
- Information, education and communication programs should be established and emphasis should be put on reproductive health in order to encourage the students to avoid unsafe sex.
- HIV preventive messages like VCT should emphasis on personal susceptibility to HIV/ AIDS.
- Self-efficacy towards the use of VCT needs to be encouraged.
- Other non health professional trained VCT counselor should be involved in counseling to increase the acceptance rate.
- Quantitative study on barriers and benefit of VCT should be conducted.

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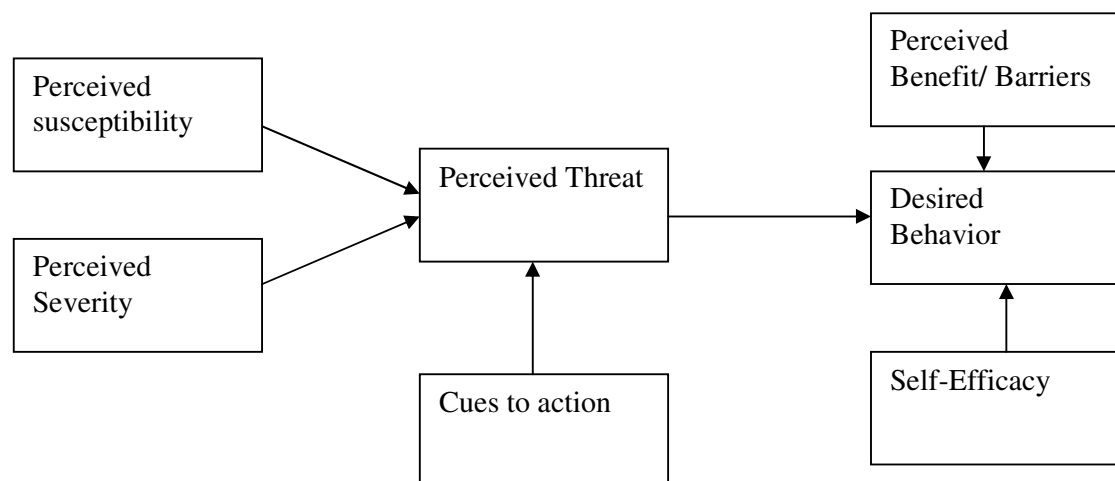
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The Model used



Questionnaire

**Addis Ababa University
Faculty of Medicine
Department of Community Health**

Students' self-administered questionnaire to be filled by Butajira High school Students.

Dear students,

This is a study to assess the level of perception and knowledge towards voluntary counseling and testing for HIV. The forth coming questions include various issues about HIV/AIDS and VCT.

In order to attain effective goal, I ask your honest and genuine answer. There is no need to put your name. No individual response will be reported. This is to keep absolute confidentiality. It is your full right to participate or refuse in the study. Any body that doesn't want to participate in the study can inform the facilitator and give the questionnaire. If there is anything not clear, don't hesitate to ask the facilitator for clarification.

Do you want to participate in the study?

Yes, I want to participate ☐

No, I don't want to participate ☐

If you don't want to participate, you can raise your hand and inform the facilitator to leave the room.

Thank you for your cooperation.

Guide line 1.Circle the answer you choose.

2. Read the entire question carefully and give answer.

I. Section Socio-demographic characteristics

101	Sex	1. Male 2. Female	
102	Age	_____ Yrs. 88.I don't know	
103	Marital status	1. Single 2. Married 3. Divorced 4.Others.specify_____	
104	If married, Age during marriage	_____ Yrs 88. I don't know	
105	Area of residence	1.Urban	

		2.Rural	
106	Religion	1. Orthodox 3. Protestant 2. Muslim 4. Catholic 5.No religion 6.Other specify_____	
107	Ethnicity	1. Gurage 2. Seltie 3. Amhara. 4. Oromo. 5. Tigre 6.Other specify _____	
108	Educational Status	1. 9 3. 10+1 2. 10 4. 10+2	

II- Section Sexual behavior

	Ways of HIV transmission		
201	Can doing unsafe sexual intercourse transmit HIV?	1.Yes 2.No 88.I don't know	
202	Can HIV be transmitted by mosquito bite?	1.Yes 2.No 88.I don't know	
203	Can HIV be transmitted from pregnant mother to the fetus before birth?	1.Yes 2.No 88.I don't know	
204	Can HIV be transmitted from pregnant mother to the fetus during delivery?	1.Yes 2.No 88.I don't know	
205	Can HIV be transmitted from pregnant	1.Yes 2.No	

	mother to the infant by breast-feeding?	88.I don't know	
206	Can shaking of hands transmit HIV?	1.Yes 2.No 88.I don't know	
207	Can taking meal together with HIV positive individual transmit HIV?	1.Yes 2.No 88.I don't know	
208	Does healthy individual be carrier of HIV?	1.Yes 2.No 88.I don't know	
	Ways on HIV prevention.		
209	By using condom regularly and properly	1.Yes 2.No 88.I don't know	

210	By abstains from sexual intercourse	1.Yes 2.No 88.I don't know	
211	By being faithful to partner	1.Yes 2.No 88.I don't know	
212	Have you learned about HIV/AIDS in the last 12 months?	1.Yes 2.No	
213	Have you ever watched about HIV/AIDS on television?	1.Yes 2.No	
214	Have you ever watched about HIV/AIDS in the school?	1.Yes 2.No	
215	Have you heard of male condom?	1.Yes 2.No	
216	Do you know the correct use (when, how to inset and discard) of condom?	1.Yes 2.No	
217	Do you know where condom is available?	1.Yes 2.No	
218	Can you mention where you can get condom?	1.Yes 2.No	
219	Have you heard of female condom?	1.Yes 2.No	
220	Have you ever had sexual intercourse	1. Yes 2.No 99. No response	If the answer is no skip to Q 301
221	How old were you when you started sexual intercourse?	Age _____yrs 88.Idon'tknow/Idon't remember. 99. No response	

222	What was your reason for initiation of sex?	1. Personal desire 2. Peer pressure 3. Influence of alcohol 4. Coercion 5. Others specify _____ _____ 88. I don't know/I don't remember. 99. No response	
223	Did you use condom when you made sexual intercourse for the first time?	1. Yes 2. No 88. I don't know/I don't remember. 99. No response	
224	If you don't use condom what was the reason?	1. It was not available. 2. It was expensive 3. I am ashamed of using 4. Because my friend disagree 5. Because of urgency 6. Fear to buy condom 7. I don't relay of using 8. I did not thought 9. Be cause of allergy 10. I believe my friend 11. Be cause I drank 12. I believe condom	

		can transmit HIV. 13. Because I don't know how to use condom. 14. Because condom can reduce pleasure. 15.I want to give birth 16.Otherspecify_____ _____ 88. I don't know/I don't remember. 99. No response	
225	Have you had sexual intercourse during the last 12-month?	1. Yes 2. No 99. No response	
226	Have you ever used a male condom while doing sex in the last 12 months?	1.Yes, usually 2.Yes,occasionally 3.No 88. I don't know/I don't remember 99. No response .	
227	If you don't use condom what was the reasons?	1.It was not available. 2.It was expensive 3.I am ashamed of using 4.Because my friend disagree 5.Because of urgency 6.Fear to buy condom 7.I don't relay of using 8.I did not thought	

		9.Be cause of allergy 10.I believe my friend 11.Be cause I drank 12.I believe condom can transmit HIV. 13. Because I don't know how to use condom. 14. Because condom can reduce pleasure. 15.I want to give birth 16.Otherspecify_____ _____ 88. I don't know/I don't remember. 99. No response	
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Section III- Perception about HIV/AIDS infection

301	Are you at risk of getting HIV/AIDS?	1.strongly disagree 2.Disagree 3.Neutral 4.Agree 5.strongly agree	
302	Is it possible that you will get HIV/AIDS?	1.strongly disagree 2.Disagree 3.Neutral 4.Agree 5.strongly agree	
303	If you get HIV/AIDS will it destroy your feature?	1.strongly disagree 2.Disagree 3.Neutral 4.Agree 5.strongly agree	
304	Is it likely that you will get HIV/AIDS?	1.strongly disagree 2.Disagree 3.Neutral 4.Agree 5.strongly agree	
305	Do you think you can get	1.Yes 2.No	

	the virus?	88.I don't know	
306	What are your chances of getting infected with the HIV?	1.Nil 2.low 3.moderate 4.High 88.I don't know 99. No response	
307	If your answer is <u>nil or low</u> what are the reasons?	1. I never had sexual contact 2. Abstained from sexual intercourse 3. I trust my sexual partner 4.I never used a needle used by other 5. I always use condom 6.I am healthy, no contact with HIV person 7.Otherspecify_____ 88. I don't know/I don't remember. 99. No response	
308	If your answer is <u>moderate or high</u> what are the reasons?	1.I had sexual contact with HIV positive person 2.I had sexual intercourse with out condom. 3. I had sex with commercial sex worker 4. The condom I used was disrupted 5.Because I was injected with sharp materials. 88. I don't know/I don't remember. 99. No response	
309	Do you think that if you get HIV/AIDS it will destroy your future?	1.strongly disagree 2.Disagree 3.Neutral 4.Agree 5.strongly agree	

310	Is getting HIV a sure death sentence?	1.strongly disagree 2.Disagree 3.Neutral 4.Agree 5.strongly agree	
311	What do you think of getting HIV mean to you?	1.desperate of living hope/ death sentence 2.Miserable life 3.It does mean nothing but can live with productive life 4.other specify 88.I don't know 99.No response	

Section IV- Knowledge and attitude related to VCT

401	Have you ever heard of voluntary HIV counseling and testing?	1.Yes 2.No	
402	What is the source of information if the answer is yes?	1.Radio 2.Television 3. Magazine 4.Health institution and profession 5.Friend 6.Neighbour 7.Other specify_____	
403	Do you fell that VCT is necessary?	1. Yes 2. No 88.I don't know	
404	Had you undergone VCT?	1. Yes 2. No	
405	When was the last time you underwent VCT?	1. 1year back 2. 1-2 year back 3. 2-4year back 4.4year back 5. I did not undergo 88.I did not know	

406	If you underwent VCT, what was your reason?	1. For marriage 2. To prevent the transmission of virus to the Fetus. 3.To prevent the transmission to my friend. 4. To know my self. 88.I don't know 99.I don't know	
407	How much is important of getting VCT?	1. Very important 2. Moderately important 3 Neutral 4.Not important	
408	How much is easy to reach to get VCT?	1. Very Easy 2. Moderately Easy 3.Neutral 4.Not Easy	
409	Do you agree that getting an HIV VCT would let you know for sure whether Or not you are infected with HIV?	1. Strongly agree 2. Agree 3. Neither agrees nor disagrees 4.disagree 5.Strongly disagree	
410	How much is true that getting an HIV blood test in the near future would be reassuring if the test result is negative?	1. Very true 2. Somewhat true 3.Neither true nor untrue 4. Somewhat true 5. Very untrue	
411	How much is important that to know that you are infected with HIV?	1. Very important 2. Somewhat important 3. Not important 4. Somewhat true 5. Very untrue	
412	How much is helpful that to know that you are not infected with HIV?	1.Very helpful 2. Somewhat helpful 3. Neutral 4. Not helpful	
413	Do you agree that most people whom	1. Strongly disagree 2. Disagree	

	you respect think, “You should get an HIV blood testing in the near future?	3.Agree 4. Strongly Agree	
414	Do you agree that that getting HIV blood test would provide safety for you Partner?	1. Strongly disagree 2. Disagree 3.Agree 4. Strongly Agree	
415	How much good that you providing safety for your partner would be?	1. Very good 2. Somewhat good 3. Not good 99.No response	
416	Does VCT help you to alleviate your anxiety?	1. Strongly disagree 2. Disagree 3.Agree 4. Strongly Agree	
417	How likely is that getting an HIV blood test in the near future might mean you Would find out being test positive?	1. Very likely 2. Somewhat likely 3. Neither likely nor unlikely 4.Somewhat unlikely 5Very unlikely	
418	By Whom do you prefer VCT be given?	1. By physician 2. By Nurse 3. By any trained counselor 4. By HIV patient 5.By religious leader 6. No need of counseling 88.I don’t know 99.No response	

419	Which method of HIV testing you prefer?	1. Confidential, linked testing 2. Anonymous testing 88.I don't know 99.No response	
420	Which way do you prefer to obtain the HIV test result?	1.face to face 2.Secretive letter 3.Relative or partner 4.Telephone 88.I don't know 99.No response	
421	When do think that one should undergo VCT?	1. At any time 2.While felling sick 3. Pre marital 4. If have many sexual partner 88.I don't know 99.No response	
422	Are you willing to undergo voluntary HIV counseling or testing?	1. Yes 2. No	
423	Are you sure to use VCT in the future?	1. Strongly disagree 2. Disagree 3.Agree 4. Strongly Agree	
424	Are you willing to pay for VCT services?	1. Yes 2. No	
425	If yes, how much?	1.1-10 birr 2.11-20 birr 3. 21-30 birr 4. >31 birr	
426	If not willing to undergo VCT, what will be your reason?	1. Fear of stress due to the virus 2. Fear of stigma by the society 3.Lack of confidence on confidentiality. 4.Lack of knowledge. 5. Because it is expensive. 6. I had never had sexual intercourse	

		7. I don't feel at risk 8.Unavailability of service provider. 88.I don't know 99.No response	
427	Are you willing to undergo VCT if made available free of charge?	1. Yes 2. No 88.I don't know	
428	Is there VCT service providing institution in your surrounding?	1. Yes 2. No 88.I don't know	
429	How likely is that you intend to get an HIV blood test in the near future if VCT service is available in your surrounding?	1.very likely 2. Some what likely 3. Neither likely nor unlikely 4. Somewhat unlikely 5. Very unlikely	

_____ **The End of the Question** _____

I thank you very much on behalf of Addis Ababa University for your participation.