

Assessment of Knowledge, Attitude and Practice towards Voluntary Counseling And testing Services of Areka High school, South Ethiopia

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Abstract

Background: VCT is the process by which an individual undergoes counseling enabling him or her to make an informed choice about being tested for HIV. This decision must be entirely the choice of the individual and he or she must be assured that the process will be confidential. This study aimed to assess the level of knowledge, attitude and practice of Voluntary Counseling and Testing (VCT) for HIV among Areka High school preparatory students in South Ethiopia.

Methods: A cross sectional study was conducted from January to to March, 2016 using a stratified sampling method to enroll students from their respective grades and department into the study. A total of 390 preparatory students were filed in a self-administered questionnaire. Main outcome measures were level of knowledge, attitude and practice of VCT for HIV. A chi-square test was used to determine an association between a number of independent factors and dependent variables. Results were presented using tables and figures and interpretation, discussion and recommendation was made finally based on the findings of this research.

Result: Out of all study participants 80.4% were knowledgeable on VCT, 67.4% had positive attitude towards VCT for HIV and 65.1% had had VCT for HIV in the past. Partners and self-trust, fear of stigma and discrimination, afraid to get the result, were reported as main barriers for VCT uptake.

Conclusion: Despite of high knowledge and favorable attitude towards VCT, there is poor practice towards it. There is a need to work on awareness creation on uptake of VCT.

Keywords: Voluntary counseling, Knowledge; Attitude; Practice, Areka

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I. Background

Since the first case of HIV/AIDS was reported in 1981 infection has grown to pandemic proportion, resulted in us estimated about 65 million deaths. And an estimated 34 million people were living with HIV at the end of 2010. Teens and adult, particularly adults and young women continue to be at the center of the epidemics. An estimated 2.7 million people worldwide were newly infected with HIV in 2010 and 390.000 children were newly infected with HIV in 2010; 30% fewer than the peak of 560.000 annual new infection children, in 2002 and 2003[12].

VCT is the process by which an individual undergoes counseling enabling him or her to make an informed choice about being tested for HIV. This decision must be entirely the choice of the individual and he or she must be assured that the process will be confidential [9].

VCT is an effective strategy for facilitating behavioral change around both preventing HIV as well as getting early access to care and support. It is also instrumental in bringing about behavioral change, reducing unprotected sex and helping reduce the incidence of HIV and other STIs [10]. However, the availability of VCT services in Ethiopia has been uneven, and even when available, uptake has been relatively low [11].

Many countries have been trying to take many different approaches in an attempt to slow the spread of HIV infection and minimize its impact on the individual, family and society. Among these strategies include; voluntary counseling and testing (VCT), provider initiated counseling and testing (PICT), diagnosis of HIV in infants and young children, family care and partner testing and counseling based on index care, condom promotion and provision, detection and management of sexually transmitted infections, safer sex and risk reduction counseling, male circumcision, targeted interventions for sex workers and homosexuals [7]. Among these VCT is internationally recognized as an effective and important strategy for both prevention and care of HIV [8].

Ethiopia, as a country in the Sub-Saharan region, is a country with high HIV prevalence. According to

the single point estimate, the Ethiopian adult HIV prevalence was 2.2% in 2008 with an estimated 1,037,267 people living with HIV in the country [5]. According to the Ethiopian demographic and health survey report of 2011, the percentage of HIV positive in the age group 15–24 years was less than one percent [6].

Ethiopia responded to the HIV epidemic as early as 1985 by developing policies different guidelines (PMTCT, ART, IP, VCT etc.) and strategic documents to create an environment conducive for the implementation of HIV prevention, care, and treatment and support programs. As part of this effort, the first counselling and testing guidelines were published by the Federal Ministry of Health (FMOH) in 1996 and subsequently edited in 2002 and 2007 [11].

Studies in different areas indicated that knowledge, attitude and practice of Preparatory School students towards VCT is low and its uptake is minimal. The low uptake was found to be associated with ignorance, fear of being positive, cost of VCT, inadequate number of VCT centers and stigmatization constituted major hindrances to acceptances of VCT for HIV [7, 8, 12-14].

There are reports on the awareness and uptake of VCT service among different study groups in the study area [10, 15]. However, there are no studies conducted on the knowledge, attitude and practice of Preparatory School students towards VCT service. Interventions developed for general population may not be appropriate for Preparatory School students. In order to develop the body of knowledge needed to develop interventions targeted to different category of people, it is necessary to study the overall KAP of Preparatory School students towards VCT in a variety of institutional settings.

The school environment offers great opportunity for HIV high-risk behaviors, including unsafe sex [16]. Preparatory School students are at risk because they tend to be sexually adventurous, often with multiple partners and do not consistently use condoms [17, 18]. Moreover youths, students of tertiary level, constitute a significant proportion of persons affected by HIV and a good number of them are also sexually active. Knowing the benefits of VCT, it is important to determine their awareness and utilization of VCT services, willingness to undergo and pay for VCT so that barriers can be identified and interventions can be planned.

assessing the knowledge, attitude and practice of Preparatory School students towards VCT service in Areka High school South Ethiopia

II. Methods And Materials

Study area and period

The study was conducted in Areka High school from February 1 to May 30, 2017 which is found in Areka High school Town. Areka High school Town is found in Wolaita Zone, SNNP regional state, and it is a capital of the Zone. It fares 396 km & 156 km from Addis Ababa capital city of Ethiopia and from Hawasa regional tawon, respectively. According to the 2007 census report, the zone has total population of 1,527,908. Areka High school is the only governmental Preparatory school within the city which was established in 2002 with students from grade 11 and 12 in the city. The total number of students at the Preparatory level in 2017 is 4757.

Study design

A cross sectional study was conducted to assess knowledge, attitude and practice towards HIV voluntary counseling and testing.

Source Population: All students attending their education in Areka High school.

Study population: Study population were all selected students of Areka High school Preparatory School.

Sample size determination

The sample size was calculated by using the statistical sample size determination formula, based on 50% of population prevalence.

$$n = \frac{(Z_{\alpha/2})^2 p(1-p)}{d^2}$$
$$n = \frac{(1.96)^2 0.5(1-0.5)}{(0.05)^2}$$
$$n = 384$$

- $z_{\alpha/2}$ = level of significant which is 1.96
- prevalence which is population proportion 0.5
- d = margins of error which is 0.05
- n = sample size

Since our source population was less than 10,000, which were **4757** we used the correction formula as follows.

$$nf = \frac{n}{1 + \frac{n}{N}}$$
$$nf = \frac{384}{1 + \frac{384}{4757}}$$
$$nf = 355$$

Where,

- nf = final sample size
- n = total study population which is **384**
- N = source of population which is **4757**

To compute for non-response, **10%** of the required was added **i.e. 355 + 35.5**, and then the total sample sizes were **391**.

Since our technique was proportion allocation to the grade of students and their departments used as follow;

Sampling techniques

Proportion allocation to the grades and departments were done by taking the grades as strata. Then the grade was stratified into the departments and simple random sampling technique was used to select among department strata, and respondents in respective section. The final sample size was distributed proportionally to each selected departments based on the number of students population they have. Finally the students were selected by simple random sampling from those selected departments sections.

Data Collection instruments and procedures

For data collection, self-administered structured questionnaire that can address the objective of the study was adapted in English, through reviewing different literatures and previous similar studies.

Data processing and analysis

Data was compiled, summarized and analyzed manually on prepared tally sheet and using scientific calculator. Simple frequencies were used to see the overall distribution of the study subject with the variables under study. A chi-square test was used to determine an association between a numbers of independent factors and dependent variables. Finally obtained results were presented using graphs and tables.

Data quality assurance

Before actual data collection the questionnaire was pretested on 5% of sample size students randomly selected among students of non-selected preparatory school by considering similar backgrounds. Based on the response rate some or total modifications were done on some

questions those trouble respondents. Also discussion was made among data collectors to have common understanding on the objectives of the study and each of the questions in the questionnaire. Therefore, the personal variations on interpretation of the questions was minimized. Data collection process was supervised by one nominated supervisor from the investigators. In addition to these on site supervision and technical assistance during the period of data collection was given by nominated supervisor. Before starting the actual data collection process brief explanations was given for respondents to avoid any ambiguity and misunderstanding.

Ethical consideration

Formal letter was obtained from WSUTRH department of Nursing and was brought to college administrative bodies to proceed with the study. The objective of the study was described to the college management body, verbal consent was obtained from the students and confidentiality and accountability was maintained.

Operational definitions and Definitions of terms

- Counseling:-** is dialogue between attained person, health services provider, social works, psychologies, etc and client
- Knowledge:** - There are 16 questions which covered the basic knowledge about the VCT and HIV/AIDS; each question assigned score of one for each correct response and 0 for each incorrect answer.
- Good Knowledge:** - when the respondents answered more than 60% of knowledge questions correctly.
- Poor knowledge:-** when the respondents scored less than 60%
- Attitude:** - There are 10 questions regarding the attitude towards the VCT; it assigned score of one for each favorable response and 0 for each unfavorable response.
- Positive Attitude:** - when respondents, favorably answered more than 60% of questions for attitudes.
- Negative Attitude:** - when respondents, unfavorably answered more than 60% of questions for attitudes.
- Practiced/ utilized/:-** when respondents reported that they have ever undergone HIV tests at least once.
- Discrimination:** - treating a person (s) differently, usually wanted that other.
- Knowledge:** - facts information understanding skills person acquired through experience or education.
- Pre-test counseling:** - counseling before test is done.
- Post-test counseling:** - counseling after testing has been done.
- Stigma:** - bad reputation that something has because more people disapprove of it usually unfairly

VCT: -the process by which an individual undergoes counseling to enable him/her to make an informed choice to be tested for HIV

III. Results

Sociodemographic characteristics of respondents

A total number of 390 responses (99.7% response rate) from the students were found valid and included in the analysis. Among the respondents 202 (51.8%) were males and 188(48.2%) were females. The mean age (+SD) of respondents was 19.3 (+ 2.9) years (median 19). The majority, 209 (53.7%), 112 (28.8%), 58 (14.8%) of the respondents were found to be Protestant, Orthodox Christian and Muslim, respectively.

Among the total respondents 352 (90.2%) of them were single, while 37 (9.5%) and 1 (0.25%) were married and widowed, respectively. The Socio demographic characteristics of the students are given in **Table 2**.

Socio demographic characteristics, among Areka High school Students, Areka High school Town, 2016/17.

Variable	Male (%)	Female (%)	Total
Age (years)			
15- 19	184 (91%)	169(89.9%)	353(90.6%)
20 – 24	12 (6%)	16 (8.5%)	28 (7.1%)
25+	6 (3%)	3 (1.6%)	9 (2.3%)
Level of education			
Grade 11	130 (33.3%)	120 (30.7%)	250 (64.1%)
Grade 12	72 (14.5%)	68 (17.4%)	140 (35.9%)
Religion			
Protestant	110 (54.5%)	99 (52.8%)	209(54.1%)
Orthodox Christian	62 (30.2%)	50 (27.3%)	112 (29%)
Muslim	24 (11.6%)	34 (18.2%)	58(14.9%)
Others	6 (2.6%)	5 (1.7%)	11 (2%)

Knowledge about VCT

A total of five questions, with “Yes” and “No” response, were included in the questionnaire regarding the knowledge of the study subjects about VCT. The mean of correct answers was computed and those who

score a value greater than or equal to the mean were considered knowledgeable. The mean scored value was **4.82**. From the respondents 314 (80.4%) scored greater than or equal to the mean and considered knowledgeable.

Regarding to the students' information on VCT services, 364 (93.4%) of them have heard of VCT services from different sources among this 50.4% are females and 49.6% are male. 25 (6.6%) of the respondents did not heard of VCT services which constitute male 83.3% and 16.7% female.

Among those students who have heard of VCT, 66.6%, 58.9%, 57.2%, 45.7%, 44.6%, 36.7%, 34.9%, 33.7% and 14.1% of them were heard from mass-media, health institution, teachers, peer, family, youth center , other relatives, partner and others, respectively.

More than half of the students (54%) and 51.6%) said that VCT is important for prevention of HIV infection and to know one's HIV status, respectively. Similarly, large proportion of the students also respond that VCT is important to protect others from being infected (44.9%), to get information about HIV (42.2%), to get psychological support (39.3%) and to get treatment if there is infection (38.4%). Small proportions of the respondents respond to know that VCT is important to prevent mother to child transmission of HIV (8.2%) and to choose partner (3.2%). Of those respondents who have heard of VCT services, 95.9% them agreed that VCT is important for various reasons stated above 53.7% were male and 46.3% were female.

Large proportion (71.8%) of the students respond that VCT service is provided by government health institutions having VCT center, while 47.5% and 40.8% of them respond that the service is provided by NGOs health institution having VCT, and private health institutions having VCT center, respectively.

Attitude towards VCT

A five-item attitude indicator responded as either "Yes" or "No", towards VCT test was used to assess the student's level of attitude towards VCT. A score serving as a proxy variable was calculated by adding each of the attitudinal scores after giving a value of "1" and "0" for positive and negative responses respectively. Accordingly 274 (67.4%) of the respondents had positive attitude towards VCT service. Based on the findings 349 (95.9 %) of the respondents felt that VCT is necessary.

The majority, 66.6% of the students agreed that everybody needs to be tested, while 32%, 21. 4% and 20.5% respond that VCT/ test for HIV is important for those to be married, those who are at high risk and those individuals suspected by medical personnel, respectively. The knowledge of respondents about VCT has showed an association with attitude towards VCT

$$(\chi^2 = 30.026, P\text{-value} < 0.001)$$

Practice of VCT for HIV

Among the students who have heard and agreed that VCT is important 327 (95.9%) a total of 222(65.1%) do have had a VCT male and 58.8% Female) and only 60.1 % have heard their results. The reason that (41.2%the students were tested include ,to Know the status (37.5%), had unprotected sex (15.8%), thinking that the partner could have risk factor(10.8%), Having multiple sexual partner(4.7%) having other risk factors for infection(4.9%) .

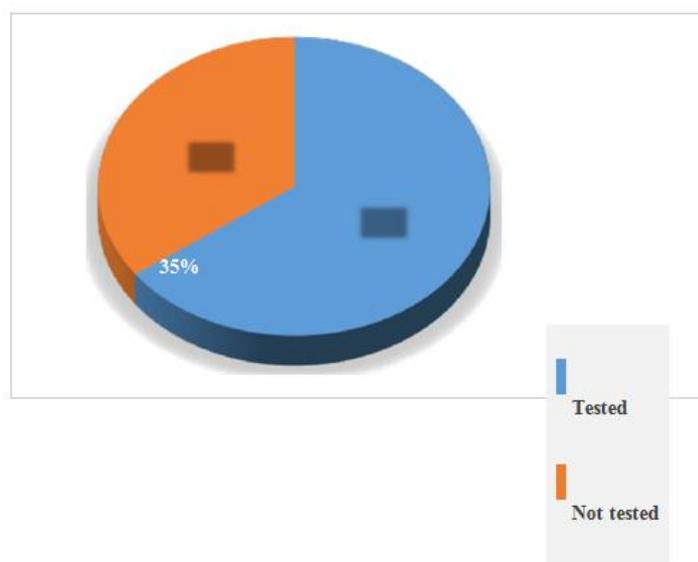


Fig 1. Students who have tested among those who agreed on the importance of VCT in Areka High school, 2016/17.

Among those students who agreed on the importance of VCT and don't have had the test 131 (34.9%) that 66.7% & 33.3% male and female respectively, their reasons were partners and self-trust(18.5%), fear of stigma (21.2%), Afraid to get the result (18.3%), No service in

the nearby (9.9%), Partner refusal (9.9%) and other (22.8%). Among those who have heard about VCT 364(93.4%), 78% of them do have a desire to get tested in the Future, 17% don't want to get a test and 5% haven't decided. This indicated the need of more work in awareness creation associated with stigma and discrimination and the possibility to live longer with the virus as far as HIV positive individuals lead their lives as per physicians and counselors recommendations.

Tale .2 Knowledge of students towards VCT services among Areka High school Students, Areka High school Town, 2016/17.

Variables	Number	Percent
Have you heard about VCT?		
Yes	364	93.4
No	24	6.6
Is VCT important?		
Yes	349	95.9
No	15	3.2
Use of VCT services		
To know one's HIV status	188	51.6
To prevent HIV infection	196	54
To protect others from being infected	163	44.9
To have psychological support	143	39.3
To get information about HIV	154	42.2
To get treatment if there is infection	140	38.4
Prevent mother to child transmission of HIV	30	8.2
To choose partner	11	3.2
Who do you think to tested?		
Every body	242	66.6
Those to be married	116	32
High-risk groups	78	21.4
Only those suspected y medical Personnel	75	20.5
Where is VCT service provided		
Government health institution having VCT center	261	71.8
NGOs health institution having VCT Center	173	47.5
Private health institution having VCT	149	40.8

Attitude and Practice of students towards VCT services among Areka High school Students, Areka High school Town, 2016/17.

Variables	Number	Percent
Do you agree that VCT is important		
Yes	364	95.9
No	15	3.2
Have you ever had VCT?		
Yes	243	65.1
No	106	30.8
Have you heard your result after being tested?		

Yes	146	60.1
No	97	39.9
Do you have desire to have VCT whether you have it before or not?		
Yes	284	73.6
No	63	16.1

IV. Discussion

This study showed that, majority (93.4%) of the students have heard of VCT services from different sources. This is in line with the finding of Knowledge and attitude towards VCT services among adolescent high school students in Addis Ababa, Ethiopia (18) who found that majority (92.1%) of the students included in the study have heard about VCT. On the contrary to the location advantage of Addis Ababa than Areka High school, which might be related to increasing awareness of students towards VCT in the study area?

Among those students who have heard of VCT, they got information from different sources including 66.6% from mass-media, 58.9% from health institution, 57.2% teachers, 45.7% peer %, 44.6% family, 36.7% youth center and the rest from other resources. The study from the same source (18) on source of information about the VCT services reported that 32.5% and 22.1% obtained from media (radio/TV) from friends respectively and the majority others, gave multiple sources of information about VCT. Relatively higher contribution of media and friends as source of information was obtained in the current study compared to the same study (18). This might be due to mass medias are able to reach wide audience and can convey simple information and can be a powerful force for mass communication.

The participants' attitude towards VCT was very high and appreciable which is very important and needed in the prevention and control of HIV. Majority believed that VCT is important for several reasons, 66.6% of the students agreed that everybody needs to be tested, while 32%, 21.4% and 20.5% respond that VCT/ test for HIV is important for those to be married, those who are at high risk and those individuals suspected by medical personnel, respectively. According to study conducted in Jijiga, 99.2% of youth agreed that VCT is important (19). In the study performed on Adolescents in Addis Ababa, 77.7% of students said that VCT is important for people who are getting married. The result of similar study showed that VCT is important for those who are sexually active (64.5%) and for high-risk groups (34.3%). In the current study, 54% and 51.6% of the study subjects considered believe that VCT is important for prevention of HIV infection and to know one's HIV status, respectively. Small proportions of the respondents respond to know that VCT is important to prevent mother to child transmission of HIV (8.2%) and to choose partner (3.2%). The study conducted on young people's, HIV/AIDS and reproductive health in different parts of

Ethiopia found that 73.2% and 18.8% of the respondents mentioned the importance of VCT for voluntary HIV counseling and testing and to find out one's HIV status, respectively.

Another study in Addis Ababa showed that 77% of the students respond the importance of VCT to change behavior and prevent HIV infection, while 67.9% and 67% of the respondents said to protect others from being infected and to know one's HIV status, respectively (18). The association of level of education may rise from the increase in knowledge of students and hence increased attitude, which goes in line with a study from Addis Ababa University [29].

The results from this study also indicated a relatively good attendance of VCT (65.1%) which is much higher than a study conducted in Addis Ababa in which 15.3% of the respondents found tested for HIV (18). Moreover, 78% of the students included in the current study do have a desire to get tested in the future. The difference may be attributable to one's health beliefs and health seeking behavior, cultural, beliefs, social networks, perceived health status and severity of disease. According to this study the main reasons for those who had never had VCT in the past were partners and self-trust (18.5%), fear of stigma (21.2%), afraid to get the result (18.3%). Though there is a difference in VCT attendance main reasons for not visiting VCT centers is similar across different study areas including community based surveys [22- 26].

According to the current study sex and religion showed statistically significant association with level of VCT uptake. Moreover, knowledge about HIV, knowledge about VCT and attitude towards VCT showed association with practice on VCT for HIV which indicates the relation of one with the other. Hence, working on the knowledge and attitude change will facilitate the uptake of VCT service.

Limitation of the Study

A questionnaire-based cross-sectional study in which we relied completely on information provided by the respondents, which may lead to bias and misunderstanding of questions.

V. Conclusions

Despite high knowledge and favorable attitude towards VCT, there is poor practice towards it. There is a need to work on awareness creation on uptake of VCT.

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