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Assessment of Voluntary HIV Counselling and Test Utilization and Associated Factors among Youth People in Birbir Town, Gamo Gofa Zone, SNNPR, Ethiopia

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Abstract: Youth (15-24 years) are particularly vulnerable to HIV, because of the strong influence of peer pressure and the development of their sexual and social identities. The aim of the study was to assess voluntary counseling and testing utilization and associated factors among young people in Birbir town, Southern Ethiopia. A community based cross sectional study design was conducted from August 13-16, 2016. Simple random sampling technique was used to select 400 young's. Semi structured questionnaire was used. The data was collected by trained Nurses. Data was entered and analyzed using SPSS version 20. Binary and Multivariable Logistic regression was performed with 95%CI, COR and AOR respectively. The finding was presented by tables, and figures. In this study a total of 378 youth were participated with response rate of 94.4%. The mean age of the participants was 20.6 years with SD (±2.7). The majority (96%) of respondents were heard about the confidential voluntary counseling and testing service. The prevalence of voluntary counseling and testing utilization was 64.3%. The factors such as: peer encouragement [AOR=3.81, 95%CI, (2.302, 6.285)], knowing definition of voluntary counseling and testing [AOR = 13.38, 95% CI, (1.501, 119.338)], willingness to test [AOR = 10.65, 95% CI (1.268, 89.459)], health institution encouragement [AOR=1.989, 95%CI (1.076, 3.676)] and Method of testing [AOR = 0.51, 95% CI (0.289, 0.889)] were the factors associated with voluntary counseling and testing utilization. The study shows that voluntary counseling and testing utilization was 64.3%. Knowing definition of voluntary counseling and testing, methods of testing, willingness to test, health institution encouragement and peer encouragement were the factors associated with voluntary counseling and testing utilization. Health office has to work with and facilitate youth clubs to promote voluntary counseling and testing utilization and strengthen facility based testing.

Keywords: Voluntary Counseling, Utilization, Birbir Town, Youth

1. Introduction

Voluntary counseling and testing (VCT) is a process that is under taken when a person wants to find out if they are infected with HIV. Most of the time HIV harms young's those are age group between 15 and 24 [1].

In the 2015, there were 36.7 million (34.0-39.8 million) people globally living with HIV/AIDS (PLWHA) and also there were an estimated 2.1 million (1.8-2.4 million) people who became newly infected and 1.1 million annual AIDS-related deaths worldwide [2]. Sub-Saharan Africa has the most serious HIV and AIDS epidemic in the world wide. In 2013, an estimated 24.7 million people were living with HIV, accounting for 71% of global total [2]. Ethiopia is one of the Sub Saharan countries highly affected by HIV/AIDS pandemic. According to Federal HIV/AIDS Prevention and control Office in Ethiopia, PLWHA was estimated at 738,048 and the prevalence rate was estimated around 1.3% [3].

According to Ethiopia's Central Statistical Agency (CSA) report there are an estimated 1,037,267 people living with

HIV in the country, from which 289,734 are in need of antiretroviral treatment (ART) [4]. HIV/AIDS is affecting most productive part of the population which is vital to the creation of human power this will affect both the demand and supply of man power [4, 5]. Children and youth have unique vulnerability to HIV infection. Youth (15-24 years) are particularly vulnerable to HIV because of the strong influence of peer pressure and the development of their sexual and social identities which often leads to experimentation [6].

Voluntary counseling and testing is also an effective strategy for facilitating behavior change for both clients that test negative and positive. Different studies have shown the effects of VCT including a decrease in unprotected sexual intercourse, a reduction in multiple partners, an increase in condom use and more clients choosing abstinence. In addition, VCT is an Important entry point to other HIV/AIDS services, including prevention of mother to child transmission (PMTCT), prevention and management of HIV related illnesses, and social Support [7].

It has been estimated that most of the 42 million people worldwide living with HIV do not know that they are carrying the virus and the proportion is highest in countries affected by the epidemic. In Africa alone, an estimated 1.7 million young people are infected annually. Sub-Saharan Africa has the most serious HIV and AIDS epidemic in the world wide. Preventing HIV among young people is particularly critical in SSA, where in many countries young people comprise more than 30% of the population and general HIV prevalence rates often exceed 10% [8, 9].

The first pillar of HIV prevention is voluntary counseling and testing (VCT) but despite the very high number of people already living with HIV/AIDS, it is estimated that less than 10% are aware they are infected, mainly because of the limited availability, access, and use of VCT. This fact greatly hinders efforts to respond to the AIDS epidemic, as people have to know if they are infected in order to access services [10, 11].

According to the 2011 Ethiopian demographic and health survey (EDHS), Heterosexual contact accounts for the great majority of HIV transmission in the country. AIDS is now affecting all sectors of Ethiopian society. The future course of the AIDS epidemic in Ethiopia depends on a number of factors including HIV/AIDS-related knowledge, social stigmatization, risk behavior modification, access to high-quality services for sexually transmitted infections (STIs), provision and uptake of HIV counseling and testing, and access to antiretroviral therapy (ART) [12].

Among youth, age 15-24 the period between the initiation of sexual activity and marriage is often a time of sexual experimentation and may involve risky behaviors. Knowledge of how HIV is transmitted is crucial to enable people to avoid HIV infection, especially for young people, who are often at greater risk because they may have shorter relationships and thus more partners or may engage in other risky behaviors [12].

Nationally, one in every four young women, age 15-24, (25%) and about three in every ten young men, age 15-24, (28%) who had sexual intercourse in the past 12 months had been tested for HIV in the past 12 months and received the results of the test. These percentages reflect a dramatic increase since the 2005 EDHS, when 2 percent of young women and 6% of young men who had had sexual intercourse in the past 12 months had been tested for HIV and received results. Less than 1% of Ethiopian youth age 15-24 tested positive for HIV. There is little variation in HIV prevalence by background characteristics, given the low overall prevalence [12].

Despite the high levels benefits of voluntary counseling and testing service at global and national responses towards HIV/AIDS, VCT utilization was low particularly among young's [11]. So that, the purpose of the study was to assess voluntary counseling and testing utilization and associated factors among young people in Birbir town, Southern Ethiopia.

2. Methods and Materials

2.1. Study Area, Study Design and Period

The study was conducted in Birbir Town, Gamo Gofa zone, SNNPR, Ethiopia. Birbir town is located about 465 kilometers south from Addis Ababa and 204km south west from Hawassa and 46km south from Arba Minch. A community based cross-sectional study was conducted from August 13-17, 2016.

2.2. Source Population

All young's (15-24) years of age residing in Birbir town, Mirab District.

2.2.1. Study Population

Selected youth who are between 15-24 years residing during data collection period in Birbir town.

2.2.2. Inclusion and Exclusion Criteria

All young's whose age is between 15-24 residing > 6 month in the Birbir town. Young that will not able to provide informed consent and mental problem and auditory impaired were excluded.

2.3. Sample Size Determination and Sampling Technique

The sample size was estimated using single population Proportion formula by taking prevalence for VCT utilization 38.6% from a study conducted in Bahirdar University [13]. Z= 1.96, 95% confidence level, 5% margin of error. After considering 10% non-response rate, the final sample size was 400.

Out of the total 8 villages, 2 of them were selected by lottery method. Then households with young's (496) were identified and coding was conducted. After coding of those households the code numbers was entered into computer and the required sample size was generated by simple random sampling.

2.4. Data Collection Instrument, Methods and Procedure

The data was collected by trained Nurses and face to face interview method was used to collect the data. A questionnaire with both closed and open ended questions was used to collect information on young demographic characteristics (age, education and marital status), young's socio-economic characteristics (occupation income, and ownership of items), knowledge on VCT, sources of VCT information and barriers for VCT utilization. Data was collected using a semi structured questionnaire. The questionnaire is adapted and modified from research done in Uganda and UNAIDS [14, 15].

2.5. Data Quality Control and Management

The questionnaire was adapted from literature. Each and every questionnaire was checked before data collection for an error and questionnaire was translated to Amharic then it was translated back to English for its consistency and discussion was held among the group members on the questions included in the questionnaire, on interviewing techniques, importance of privacy and approach to the interviewees, and confidentiality of the respondents.

2.6. Data Process and Analysis

After the data collected it was cleaned and entered to Statistical Package for Social Science (SPSS) version 20 software for analysis. Descriptive statistics including proportion, frequency distribution was used describe the data on the sample population in relation to relevant variables; Bivariate and multivariate logistic regression analyses was used to identify variables associated with VCT utilization. From this, a variable P value <0.25 will be transferred to multivariable logistic regression model to adjust confounder's effects, and a p value <0.05 with 95% CI and AOR was considered as statically significant associated in final model. Finally, the result of the study was presented using tables, figures and charts.

2.7. Ethical Considerations

Ethical clearance was obtained from the ethical committee of College of Medicine and Health Science, Arba Minch University. And the informed verbal consent was obtained from the respondents, after the necessary explanation about the purpose, benefits and risks of the study and also their right on decision of participating in the study. The assurance of confidentiality was kept.

3. Results

3.1. Socio-demographic Characteristics of Respondents

From the total of 400 respondents, 378 completed the questionnaires adequately making the response rate of 94.5%. The mean age of the respondents was 20.6 with SD (±2.7). More than half (61.4%) of respondents were males and again most of the respondents were among age group 20-24. More than half (58.7%) of respondents were protestants.86% of respondents were single and the remaining (14%) were married. Most (63.8%) of the study participants were students, and 14% of merchant and 13% government employed (Table-1).

3.2. Prevalence of VCT Utilization Among Youths

More than half of the respondents 243(64.3%) utilized VCT. From those 153(65.9%) were males and the rest 90(61.6%) were females (Figure-1).

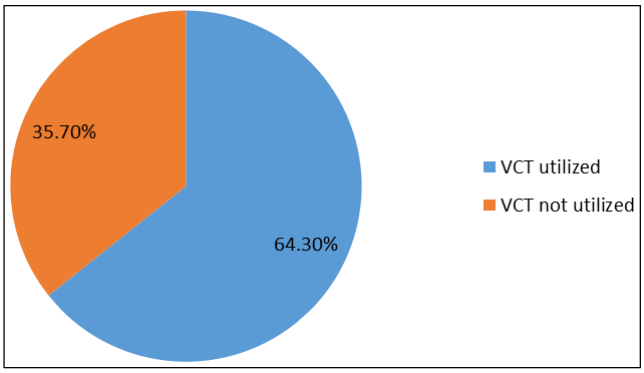

Figure 1. *The prevalence of VCT utilization Among Young people in Birbir town, Gmo Gofa zone, SNNPR Ethiopia, August 2016.*

Table 1. *Socio-demographic characteristics of respondents among youth people in Birbir town, Gamo Gofa zone, SNNPR, Ethiopia August 2016.*

Variables (n=378)		Frequency	Percent
Age	15-19	116	30.7
	20-24	262	69.3
Educational Status	1-8	45	11.9
	9-12	189	50.0
	12+	144	38.1
Sex	Male	232	61.4
	Female	146	38.6
Marital Status	Single	325	86.0
	Married	53	14.0
Occupation status	Merchant	53	14.0
	Employed	49	13.0
	Student	241	63.8
	Others	35	9.3
Religions status	Orthodox	146	38.6
	Protestant	222	58.7

3.3. Awareness and Source of Information on VCT

Almost all (96%) of respondents had claimed that they heard about VCT. Health facility/ health professional is the main source of information which covers 74.9%.98.3% of respondents had correctly explained what VCT means but the rest didn't explain correctly (Table 2).

Table 2. *Knowledge of respondents' about VCT among youth in Birbir town, Gamo-Gofa zone, SNNPR, Ethiopia, August 2016.*

Variables (n=378)	Frequency(n) (N=378)	Percentage (%)
Have you ever heard about VCT?		
Yes	363	96.0
No	15	4.0
Source of information		
Mass media	237	65.28
Health facility/health professional	272	74.9
Family	42	11.5
What did meant by VCT?		
Testing for HIV when someone forces you to do so	6	1.7
Going for an HIV test after making a decision on your own	357	98.3
Do you know of any place here where you can go and have an HIV test?		
Yes	327	86.5
No	51	13.5
What is the distance from your home to the nearest HIV testing site?		
<5Km	258	68.3
5-10km	38	10.1
>10	31	8.2
Do you now the benefits of having an HIV test?		
Yes	372	98.4
No	6	1.6
Explanation about the benefit of HIV testing		
People who test positive can get treatment.	338	90.86
Effective at preventing spread	299	80.37
Enables positive living through referral to social groups and peer support groups.	228	61.29
Increases community awareness about HIV.	204	54.83
Reducing stigma among HIV/AIDS people	211	56.7
Helps plan for future	219	58.87
Total	372	100.0

3.4. Willingness to Test and Barriers of VCT Utilization

Almost all 365 (96.6%) of respondents were willing to test for HIV. More than half (84.3%) of respondents have said the time taken for having the service is less than 1 hour, in contrast 6 respondents have said it takes more than 2 hours. 223 (91.7%) respondents have said they get VCT service for free. Health institution takes the highest for encouraging individuals to have VCT service (Table 3).

Table 3. *Willingness to test and barriers with VCT utilization Among Young people in Birbir town, Gamo-Gofa zone, SNNPR Ethiopia, August 2016.*

Variables (n=378)	Frequency(n)	Percentage (%)
Time taken to get VCT service		
<1 hour	205	84.3
1-2 hours	33	13.5
>2 hours	5	2.05
Is there payment for VCT?		
Yes	20	8.2
No	223	91.7
Are you willing to test		
Yes	365	96.6
No	13	3.4
Methods of HIV testing		
Confidential	261	69.0
Anonymous testing	117	31.0
Does peers encourage to test		
Yes	254	67.2
No	124	32.8
Does local leaders encourage for test		
Yes	176	46.6
No	202	53.4
Does health institution encourage you to test?		

Variables (n=378)	Frequency(n)	Percentage (%)
Yes	302	79.9
No	76	20.1
Way of HIV transmission		
By unsafe sex	378	100
Transmission of HIV by sharing sharp	349	92.3
Transmission of HIV from mother to child	275	72.8
Other ways	3	0.8
Methods of HIV detection		
By blood test	378	100
By looking the person	3	0.8

The youth's reason for not using VCT service is mainly due to considering themselves free from the virus which is 66% followed by 27%fear of result (Figure 2).

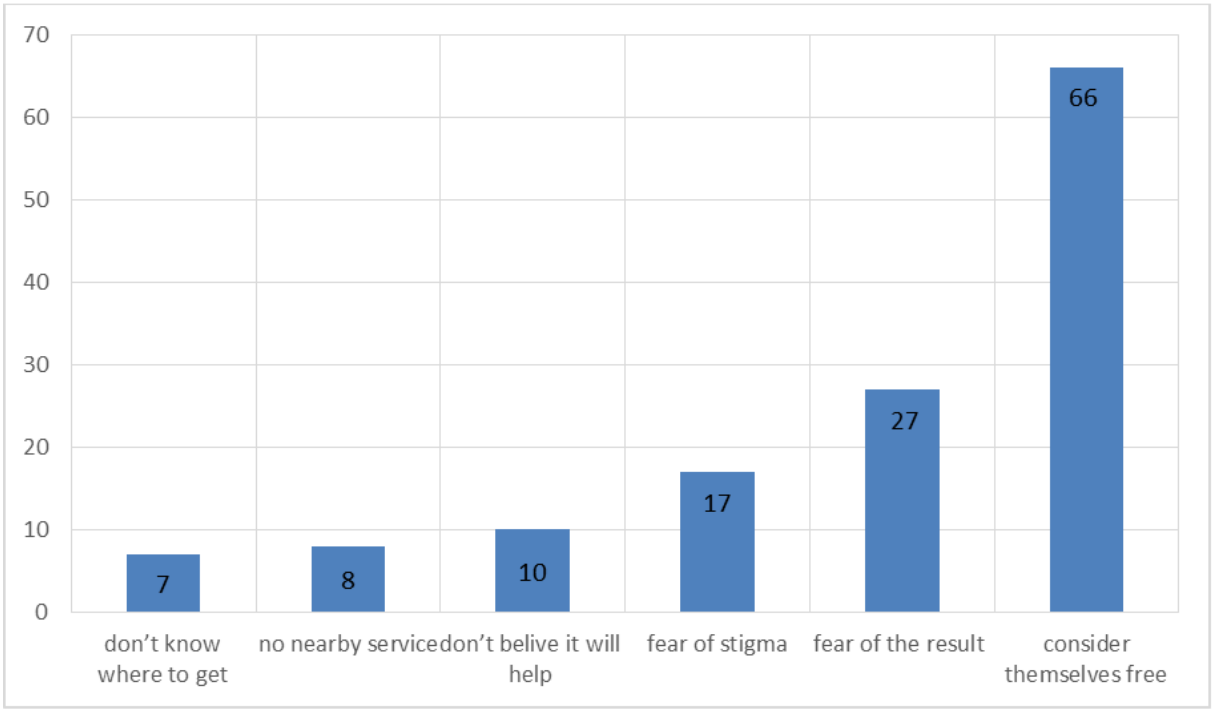

Figure 2. *Youth not utilize VCT services in Birbir town, Gamo-Gofa zone, SNNPR Ethiopia August 2016.*

3.5. The Associated Factors with VCT Utilization Among Youth

After adjustment for possible confounding factors for socio-demographic variables and other variables on VCT uptake and barriers, multivariate logistic regression analysis showed significant association with VCT utilization by P-value ≤ 0.05, 95%CI, AOR. Young's that define VCT correctly were 13 times more likely [AOR=13.384, 95%CI (1.501, 119.338)] to utilize VCT as compared to those who didn't define correctly. Young's who was willing to have VCT were almost 11 times [AOR=10.652, 95%CI (1.268, 89.459)] to utilize VCT than their counter parts. Young's that selected confidential model of testing were 50% less likely [AOR=0.507, 95%CI (0.289, 0.889)] to utilize VCT as compared to those who selected anonymous method. Young's who was encouraged to utilize VCT by their peers were 4 times more likely to have VCT as compared with those who don't encouraged by their peers. Young's who are encouraged to utilize VCT by health institutions were two times more likely [AOR=1.989, 95%CI (1.076, 3.676)] to have VCT as compared with those who don't encouraged by health institutions (Table 4).

Table 4. *Multivariable logistic analysis on factors associated with VCT utilization among young in Birbir town, Gamo Gofa zone, SNNPR Ethiopia, August 2016.*

Variables		VCT utilization		COR	AOR, 95% (CI)	P-value
		Yes	No			
Definition of	Yes	235(64.7%)	128(35.3%)	1.6	13.384(1.501, 119.338)	0.02*
VCT	No	8(53.3%)	7(46.7%)	1		
Willingness to	Yes	242(66.3%)	123(33.7%)	23.61	10.652(1.268, 89.459)	0.029*
Test	No	1(7.7%)	12(92.3%)	1		

Variables		VCT utilization		COR	AOR, 95% (CI)	P-value
		Yes	No			
Method of Testing	Confidential	156(59.8%)	105(40.2%)	0.51	0.507(0.289, 0.889)	0.018*
	Anonymous	87(74.4%)	30(25.6%)	1		
Health institution encouragement	Yes	204(67.5%)	98(32.5%)	1.975	1.989(1.076, 3.676)	0.028*
	No	39(51.3%)	37(48.7%)	1		
Peer encouragement	Yes	91(75.2%)	63(24.8%)			
	No	52(41.9%)	72(58.1%)	4.198	3.804(2.302, 6.285)	0.000*
Source of information	mass media	154(65%)	83(35%)	0.658		
	Health workers	180(66.2%)	92(33.8%)	0.694		
	Family	31(73.8%)	11(26.2%)	1		

Key note: *statistically significant

4. Discussion

Voluntary counseling and testing (VCT) is proven to be one of the most powerful weapons in halting the spread of HIV/AIDS. It is known to be a very important component of HIV/AIDS prevention strategies, despite that different study have showed that low utilization of VCT service particularly in developing countries [3]. The overall prevalence of VCT utilization in this study was 64.3%. This result is higher when compared with Research conducted in Harari Administrative region teachers shows VCT utilization was 46.3% whose age ranging from 18-60 [16]. It is also higher than a community based research conducted in rural china which is 2.3% [17]. The possible reason for this could be time gap between the studies, the difference in composition of study participant, socio-demographic variation. In addition, recent accelerated expansionoftheVCTservicecarriedoutthroughanincreasedadvocacyandsocial mobilization in the region as well as country-wide [11].

The major source of information were mass media and health facility/ health worker which is comparable with the finding from the study conducted among teachers in the Harari administration region revealed that 98.4% of teachers knew the existence of confidential VCT Service [16]. But it is higher when compared with a community based research conducted in North West Ethiopia which is 73.8% [18]. This is maybe due to youth having more exposure to mass medias and other sources of VCT information.

Overall, 96.6% study subjects showed their willing ness to undertake HIV counseling and testing in the future. This is a bit higher when compared with a research conducted in North West Ethiopia which shows the willing people were 93.8% [18]. However, this high percentage of willingness to take the VCT service by the study participants different from the actual practice. This might be due to fear of testing and its consequences, other reasons to this may be lack of youths perceiving their health risk in general and lack of perceived benefits of VCT [19, 20].

Most young's in this study revealed that they go to VCT to know their status which is 85.4%. This is higher when compared to the research conducted in North West which is 34.8%. This is may be due to the difference in the study participant socio demographic characteristics and their level of knowledge on HIV voluntary counseling testing.

Based on the findings from this study, definition of VCT, willingness to test, method of testing, peer encouragement, health institution encouragement exposure to mass media found to be statistically significant factors associated with VCT utilization. Young's who was willing to have VCT were elven times to utilize VCT than their counter parts. This is higher as compared to a research conducted in rural china which is 3 times. This is maybe due to different socio demographic characteristics, the time gap of the study's and the high focus given by the Gov't to improve VCT uptake [11]. Young's that define VCT correctly were 13 times more likely to utilize VCT as compared to those who didn't define correctly. This is consistent as compared with a study conducted in eastern Ethiopia [20]. This is due to youth tends to utilize VCT more when they know what VCT is meant.

Young's that selected confidential model were less likely to utilize VCT as compared to those who selected anonymous method. This is in line with a study conducted in Bahirdar [13]. This is may be due to most youth want stay unnoticed about their sero-status as there is perceived stigma related to the positive results. Young's who was encouraged by health institutions to utilize VCT were two times more likely to utilize VCT than their counter parts. This was consistent with a study conducted in Uganda [15]. This is due to youth encouraged by health institutions tending to have more knowledge on VCT and positive attitude towards the service [21]. Young's who was encouraged to utilize VCT by their peers were 4 times more likely to have VCT as compared with those who don't encouraged by their peers. This is in line with other research's [17, 15]. As this decreases the fear of stigma and discrimination that is perceived by the youth and this subsequently increases utilization of VCT [12].

5. Conclusions and Recommendations

This study showed that voluntary counseling and testing utilization was high. Knowing definition of voluntary counseling and testing, methods of testing, willingness to test, health institution encouragement and peer encouragement were the factors associated with voluntary counseling and testing utilization in Birbir Town. Health office has to work with and facilitate youth clubs to promote voluntary counseling and testing utilization and Health extension worker strengthen facility and community based testing.

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Authors' Contribution

Feleke Gebremeskel and Mulugeta Shigaze conceived and designed the protocol, supervised the data collection, contributed for data analysis, and wrote the paper. Bereket Gede, Edom Zerihun, Fiseha Abadi, Gezahegn Beyene, Mariamawit Tesfay as data collectors and data entry. All authors read and approved the final paper. Feleke Gebremeskel and Mulugeta Shigaze contributed equally to this work. The funder has no role in the manuscript.

Competing and Conflicting Interests

The authors declare that they have no any competing interests.

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