KNOWLEDGE, ATTITUDE, AND PRACTICE OF VOLUNTARY COUNSELLING AND TESTING FOR HIV AMONG UNIVERSITY STUDENTS, TIGRAY, NORTHERN ETHIOPIA

Sanat Kumar Sharma[1], S.C. Mohapatra[2], Meghkanta Mohapatra[3]

1. Associate Professor, Department of Sociology, Mekele University, Mekele, Ethiopia
2. Professor, Department of Community, Institute of Medical Sciences, Banaras Hindu University, Varanasi, India
3. Management Professional, Arora, Illinois, USA

Corresponding author: Dr. Sanat Kumar Sharma**,** Associate Professor, Department of Sociology, Mekele University, Mekele, Ethopia, **email:** sanatkumar**.**sharma@gmail.com

ABSTRACT

The aim of this study was to assess the knowledge, attitude, and practice of voluntary counselling and testing (VCT) for HIV in Mekelle, Tigray, Ethiopia with a view of suggesting measures for increased up takes in University students. Institution based cross-sectional study design was used. Respondents were selected by simple random sampling method. A total of 425 students were included. The data was collected by trained health workers using a self administered structured questionnaire which was adopted from Behavioural survey surveillance (BSS). A total of 413 students participated (with the response rate of 97%). In which 145 (35.1%) accounted for females. Their age ranged from 18-30, with the median age of 20. Majority 145 (35.1%) of the respondents preferred the VCT service to be given in youth clubs followed by Government Institutions 105(25.4%).The female respondents were found to have a significant association to accept VCT for HIV with the OR=1.95(1.27,2.99). In this study females were more knowledgeable and willing to VCT for HIV than that of the males. Still cost of VCT matters, in which the respondents prefer to be tested at youth clubs and Government hospitals. Therefore, both sexes should have to be empowered to accept VCT for HIV through peer initiated VCT services at all levels of care including in Universities.

Key words: VCT, Knowledge, Behaviour, Practice.

INTRODUCTION

Almost three quarters (72%) of all adult and child deaths in sub-Saharan Africa in 2005 have occurred due to AIDS.[1] The devastating effect of HIV/AIDS in Ethiopia has become more and more visible with time, and the life expectancy is estimated to have fallen from 50 years to 42 years. Today 42% of the hospital beds in the country are estimated to be occupied by AIDS patients, draining the scarce resources allocated to the health sector. According to EDHS 2005, 14% of adults (15-49 years) were reported infected with HIV in 2005 though its prevalence among adult men had been only 0.9%. Further, infection levels are found to be higher in urban areas (5.5% among adults) compared to rural areas (0.7%).[2]

In the recent years, number of people living with HIV has increased in every region in the world. It was particularly higher in east Asia and in eastern Europe and central Asia, where the number in 2006 was over one fifth (21%) higher than in 2004.

In many parts of the globe significant number of adult women (15 years or older) are (than ever before) also reported to be living with

HIV. In sub-Saharan Africa, for every ten adult men there are about 14 adult women infected with HIV. Across all age groups, 59% of people living with HIV in sub-Saharan Africa in 2006 were women.[3]

HIV prevention programs must be differentiated and locally adapted to the relevant epidemiological, economic, social, and cultural contexts in which they are implemented. HIV prevention is for life, therefore, both delivery of existing interventions as well as research and development of new technologies require a long term policies of prevention should be in place and have to address norms and beliefs, recognizing both the key role they may play in supporting prevention efforts and the potential they have to fuel HIV transmission.

A 2003 report from the global HIV prevention working group revealed that less than one in five persons is at risk of HIV and had access to basic HIV prevention services globally. It also revealed that only one in ten people living with HIV

has even been tested for the virus. Increased coverage with anti-retroviral treatment is expected to reduce the mortality and morbidity due to AIDS worldwide and will simultaneously provides countless new HIV prevention opportunities through client initiated and provider initiated routine (often of voluntary and confidential) good quality HIV counselling, testing and referral.[3,4]

Voluntary counselling and testing (VCT) for HIV is acknowledged in the international arena as an effective and pivotal strategy for HIV/AIDS in terms of prevention and care. Research conducted in Kenya, Tanzania, and Trinidad by family health international in collaboration with UNAIDS, WHO & the centre for AIDS prevention studies (CAPS) at the University of California have shown that VCT is an effective strategy for facilitating change in behaviour. VCT is also an important entry point for care and support. These findings have boosted interest and support for VCT as a valuable component of comprehensive HIV/AIDS programs among international organization, including the national AIDS programs of many countries and donors.[4] VCT is more than drawing and testing blood and offering a few counselling sessions. It is a vital point of entry to other HIV/AIDS services, including preventing mother- to- child transmission; preventing and clinically managing HIV-related illnesses, tuberculosis control, psychosocial and legal support.[4,5]

VCT provides benefits for those who test positive as well as those tests negative. VCT alleviates anxiety, increases client's perception of their vulnerability to HIV, promotes behavioural change, facilitates early referral for care and support, including access to antiretroviral therapy and helps reduce stigma in the community. It offers holistic approach that addresses HIV in the broader context of people's lives, including poverty and its relationship to risky practices.[3]

Yet, several researches have been conducted to identify those factors that affect acceptance of VCT in Ethiopia. A study in north and south Gondar administrative zones revealed that 82% of the respondents were willing to accept VCT. The results of the behavioural variables showed that significance of relevant to their friends, families, religions leaders and couples were found to have statistically significant for VCT acceptance. [6]

Another study conducted in Harar Town about utilization of VCT services, perceived barriers and preference of adolescents 15 – 24 yrs of age, majority of them (83.3%) felt that they were at either no or low risk of acquiring HIV and 92.2% responded that they have heard about VCT, the most frequent and preferred source of information for VCT being radio/television (59.2%). Only 21.9% of adolescents reported that they had ever been tested for HIV. The commonly given perceived barriers of HIV tests were low risk perception and fear of stigma and discrimination if the follows test positive, more than half (55%) of adolescents preferred to be counselled by professionally of any sex but older than their age.[7]

Determinants of VCT utilization among youth in Jijiga town, Ethiopia also identified that most commonly cited reason for VCT utilization among the cases was to know their HIV status (61.6%) and for not being tested them among controls was fear to get the result.[8] Therefore, this study aimed to assess knowledge, attitude and practice of VCT among university students.

METHODOLOGY

Description of the study area:

The study area Mekelle is the capital city of Tigray administrative region located about 776 kms north of Addis Ababa on Addis Ababa-Adigrat national highway. It is one of the Ethiopian towns growing rapidly in infrastructure and population. It is a special administrative city which consists of 10 kebelies, and a municipality. Several Governmental and non- Governmental services are given to the community. There are three governmental health centres and one referral and training hospital. Further, voluntary counselling and testing (VCT) service is given in five centres (TRBH, 2005/6). Mekelle University is one of the twenty one Universities in Ethiopia which currently enrolled more than ten thousand students.

Study Design:

A cross-sectional survey was conducted to assess knowledge, attitude, and practice of VCT for HIV among University students in Mekelle, Tigray, Ethiopia. Students of Mekelle University (faculty of business, economics and law) were taken as study population. All the students who were volunteered to participate in the survey were included. The sample size was determined using the single population proportion formula with the following assumptions: Positive attitude towards VCT=50% (to obtain the maximum sample size), Degree of precision= 5%, Level of confidence = 95% (Z=1.96), Non-response rate 10%, the calculated sample size was 425. And these subjects were selected by a simple random

sampling method after listing the name of the students alphabetically as a sample frame. The number of subjects to be selected from each class room was proportional to the population size of the class room. The response rate was 99%. The subjects who were absent during the study period were replaced by others. Socio-demographic variables: sex, age, educational status, religion, ethnicity, Acceptance of VCT for HIV (Knowledge, behaviour/practice).

Sample collection and processing:

To gather relevant information pertinent to the assessment of knowledge, attitude, and practice of VCT for HIV among the University students a structured questionnaire was used. This self-administered questionnaire was adopted from the Ethiopian Behavioral Survey Surveillance (BSS) questionnaire. It includes three parts; the first section enquires about personnel data including age, sex, ethnicity, religion, marital status, and education level. The second part elicits awareness of existence of VCT and VCT services and its utilization, while the third part explores the normative beliefs of the respondents including their significant others.[9]

The study instrument was validated using a pre-test of randomly selected students of the University. The result of the pre-test study was used to modify content and wording of the questionnaire. Four qualified nurses administered the questionnaire to the sample population. The questionnaire was prepared in English, which was translated to Tigrinya language by experts. The data collectors were trained for two days about the purpose of the study and validity of filling the format properly and sincerely.

The quality of data collection was supervised by the principal investigator during the data collection process. Review and cross examination of the filled questionnaires was done daily by the assistant supervisors and the principal investigator; and necessary corrections and adjustments were made. The data collection took 10 days. The raw data was entered into a computer and analyzed using SPSS version 13.0 statistical soft-ware package. Descriptive statistics was depicted using absolute numbers, simple percentages, range, and measures of central tendency (mean, median) as appropriate.

The logistic regression used to test the significance of associations between categorical groups and other important associations (OR, C.I, and P-value) was also calculated and the results were presented & interpreted, those who scored above the mean i.e. 17.8 were considered knowledgeable. Those who scored above the mean i.e. 16.77 were considered to have good behaviour or practice.

RESULTS

Total of 413 people responded to the questionnaire out of 425 proposed study participants (with the response rate of 97%) in which females were 145 accounting 35.1%. 266 (64.4%) are from orthodox religion, 219 (52%) are from 1st year and 147(35.6%) are ethnically Tigrians. Their age is ranged from 18-30 years with the median age of 20 (Table-1).

Table-1: Socio-demographic characteristics of respondents, Mekelle University, Tigray, Ethiopia (n=413)

Variables		No.	%
Sex	Male	268	64.9
	Female	145	35.1
Age (yrs)	≤18	66	15.9
	19-24	343	83.1
	25-30	04	0.9
Educational Status	Ist year	219	53
	2nd year	104	25.2
	3rd year	84	20.3
	4th year	06	1.4
	Orthodox	266	64.4
	Protestant	88	21.3

Religion	Catholic	29	4.8
	Muslim	20	7.0
	Others	10	2.4
Ethnicity	Tigrian	147	35.6
	Amhara	133	32.2
	Oromo	76	18.4
	SNNPR	44	10.4
	Others	13	3.1

Among the respondents about 35.1% preferred the VCT service to be given in youth clubs followed by 25.4% who preferred Government Institutions (Table-2).

Table-2: Preferences of the respondents for VCT services offered, Mekelle University, Ethiopia, (N=413)

Preferred VCT services	**No.**	**%**
Govt. health institutions	105	25.4
Private health institutions	49	11.9
NGOs'	69	16.7
Youth club	145	35.1
Others	45	10.9
Total	**413**	**100.0**

Many of them prioritized the primary importance of VCT for HIV, and 251 (59.6%) agreed for everybody to have the test followed by all adults 49 (11.6%), (Table-3).

Table 3: Primary importance of VCT services reported, Mekelle University, Ethiopia, (N=413).

Primary importance	**No.**	**%**
Every body	251	59.6
Commercial sex workers	07	1.7
Drivers	04	1.0
Students	12	2.9
Pregnant women	32	7.6
All adults	49	11.6
Children	31	7.4
Couples for marriage	11	2.6
Young people	09	2.1
People with multiple partners	09	2.1
Total	**413**	**100**

Eighty four (20%) of the respondents believed that if someone has tested HIV positive he/she should have to teach others about the condition followed by 78(18.5%) whom they preferred to seek medical help (Table-4).

Table-4: Respondents' perception on how to behave if someone knows he/she is HIV positive Mekelle University, Ethiopia, (n=413).

Perceived behaviour	No.	%
Stop sexual intercourse	57	13.5
Prevent pregnancy	17	4.0
Plan for marriage	09	2.1
Divorce	11	2.6
Use a condom	25	5.9
Seek medical help	78	18.5
Commit suicide	40	9.5
Tell others about his/her status	54	12.8
Teach others	84	20.0
Take care of him/herself	21	5.0
Be religious	09	2.1
Others	16	3.8
Total	**413**	**100**

Further statistical analysis was done to check whether the socio-demographic characteristics of the respondents were associated with the knowledge about VCT for HIV, and, female respondents were found to have a significant association with the OR=1.95 (1.27,2.99), p-value=0.001 (Table-5).

Table-5: Socio-demographic variables *Vs.* Knowledge of the respondents, Mekelle University, Ethiopia, (N=413).

Variables		Knowledge of VCT for HIV					
		Yes		No		Crude OR, 95%, CI	Adjusted OR, 95%, CI
		No.	%	No.	%		
Sex	Male	113	42.2	155	57.8	1	1
	Female	81	55.9	64	44.1	174 (1.16,2.60)*	1.95 (1.27, 2.99)*
Educational Status	Ist year	96	43.8	123	56.2	1	1
	2nd year	60	57.7	44	42.3	1.72 (1.07, 2.4)*	1.72 (1.05, 2.82)*
	3rd year	34	40.5	50	59.5	0.86 (0.51, 1.0)	0.84 (0.49, 1.45)
	4th year	04	60.0	02	40.0	1.88 (0.31, 12.0)	2.76 (0.43,17.49)
Religion	Orthodox	107	40.2	159	59.8	1	1
	Protestant	51	58.0	37	42.0	2.05(1.26,3.00)*	2.56 (1.49, 4.37)*
	Catholic	14	70.0	06	30.0	3.47 (1.29, 9.00)*	3.88 (1.39, 10.75)*
	Muslim	17	58.6	12	41.4	2.11 (0.97, 4.00)	2.49 (1.09, 5.72)*
	Others	05	50.0	05	50.0	1.49 (0.42, 5.00)	2.53 (0.67, 9.58)
Ethnicity	Tigrian	71	53.4	62	46.6	1	1
	Amhara	68	46.3	79	53.7	0.75 (0.47, 1.0)	0.88 (0.54, 1.45)
	Oromo	31	40.2	45	59.2	0.60 (0.34, 1.0)	0.49 (0.26, 1.00)
	SNNPR	19	43.2	25	56.8	0.66 (0.33, 1.0)	0.64 (0.31, 1.32)
	Others	05	38.5	08	61.5	0.55 (0.17, 1.01)	0.49 (0.15, 1.70)

(* refers to association)

Table- 6: Socio-demographic variables Vs behaviour/practice of the respondents, Mekelle University, Tigray, Ethiopia, (n=413).

Variables		Behaviour/practice of VCT for HIV					
		Yes		No		Crude OR, 95%, CI	Adjusted OR, 95%, CI
		No.	%	No.	%		
Sex	Male	124	46.3	144	53.7	1	1
	Female	81	55.9	64	44.1	0.68 (0.45, 1.0)	0.62 (0.40, 1.00)
Educational Status	Ist year	100	45.7	119	54.3	1	1
	2nd year	65	62.5	39	37.5	0.50 (0.31,1.00)	0.51 (0.31, 1.01)
	3rd year	38	45.2	46	54.8	1.01 (0.61,3.00)	0.99 (0.58, 1.67)
	4th year	02	20.0	04	80.0	3.36 (0.37, 3.23)	2.59 (0.27, 24.33)
Religion	Orthodox	117	44.0	149	56.0	1	1
	Protestant	51	58.0	37	42.0	0.57 (0.35,0.79)	0.55 (0.33, 1.02)
	Catholic	16	80.0	04	20.0	0.20 (0.06, 1.00)	0.19 (0.06, 1.04)
	Muslim	15	51.7	14	48.3	0.73 (0.34, 1.01)	0.85 (0.38, 1.89)
	Others	06	60.0	04	40.0	0.52 (0.14, 1.00)	0.49 (0.12, 1.90)
Ethnicity	Tigrian	75	56.4	58	43.6	1	1
	Amhara	64	43.5	83	56.5	1.68 (1.05, 2.0)*	1.51 (0.92, 2.47)
	Oromo	37	48.7	39	51.3	1.36 (0.77, 2.00)	1.58 (0.87, 2.86)
	SNNPR	20	45.5	24	54.5	1.55 (0.78, 3.00)	1.58 (0.77, 3.24)
	Others	09	69.2	04	30.8	0.58 (0.17, 1.00)	0.54 (0.15, 1.94)
(* refers to association)							

Statistical analysis was also done on whether the socio-demographic characteristics of the respondents were associated with the behaviour/practice of VCT for HIV, and no significant associations were found with the OR=0.62(0.40, 1.00) for females and OR=0.51(0.31, 1.01) for year II students (Table-6).

DISCUSSION

The study had tried to look into the socio-demographic characteristics that might influence the knowledge, behaviour/practice and preferences of VCT for HIV among Mekelle University students. Voluntary counselling and testing for HIV is acknowledged within the international arena as an effective and pivotal strategy for both prevention and care in HIV/AIDS.

Majority 145 (35.1%) of the respondents preferred the VCT service to be given in youth clubs followed by Government Institutions 105 (25.4%), and these could be because of the free service given at the youth club and the cheap payment in Government hospitals and fear of stigma and discrimination. Similarly, in Harar majority of the adolescents preferred to be counselled by professionals of any sex but older than their age (Lemessa, 2005).[7]

Many of the respondents prioritized the primary importance of VCT for HIV and agreed for everybody 251(59.6%) to have the test followed by all adults 49(11.6%); Eighty four (20%) of the respondents believed that if someone has tested HIV positive he/she should have to teach others about the condition followed by 78 (18.5%) whom they preferred to seek medical help.

Nearly eighty five percent of the respondents were willing to accept VCT for HIV, and this was online with the study conducted in Gondar (Mengesha, 2006),[6] in which 82% of the respondents were willing to accept VCT.

Two hundred and forty one (58.4%) of the respondents believed that a person would not necessarily accept VCT, unless he/she is planning marriage or to go abroad, in addition 102 (24.2%) of the respondents said that HIV/AIDS has treatment, this is mainly related to lack of knowledge that may be thinking the HAART (highly active anti-retroviral therapy) completely treats HIV/AIDS cases.

After further statistical analysis female respondents were found to have more knowledge as

compared with the male respondents with the OR=1.95 (1.27, 2.99), p-value=0.001, similarly year II students were having significant association with the OR=1.72 (1.05, 2.82), and p-value of 0.002, this has an agreement with the study done on "Utilization of VCT services in Harar Town Ethiopia" by Lemessa (2005)[7] in which female were found to have knowledge about VCT. In another study by Mengesha (2006)[6] conducted in North and South Gondar, it contradicts the above view and concludes that there is no significant difference between male and female in their knowledge about VCT for HIV.

The statistical analysis done on whether the socio-demographic characteristics of the respondents were associated with the behaviour/practice of VCT for HIV, and no significant associations were found with the OR=0.62 (0.40, 1.00) for females and OR=0.51(0.31, 1.01) for year II students, etc. And this could be as a result of small sample size included in this study. One of the main factors influencing VCT for HIV was consequences of the test result that might lead in to stigma and discrimination leading to depression and hopelessness.

CONCLUSION

In this study females were more knowledgeable and willing to VCT for HIV than that of the males. Still cost of VCT matters, in which the respondents prefer to be tested at youth clubs and Government hospitals. The other socio-demographic characteristics of the respondents in this study did not influence the acceptance of VCT for HIV.

Both sexes should have to be empowered to accept VCT for HIV through peer initiated VCT services at all levels of care including in Universities. Governmental and Non-governmental institutions should have to work on providing the VCT service for the youth in a very cheap and extensive manner so as to increase the uptake of the VCT for HIV. Even though the study does not reflect the contribution of the socio-demographic characteristics of the respondents, much emphasis should have to be given in reducing stigma and discrimination of the group undergoing VCT for HIV.

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