ORIGINAL ARTICLE

HIV/AIDS- RELATED KNOWLEDGE AND DETERMINANTS OF VOLUNTARY COUNSELING AND TESTING AMONG GOVERNMENT EMPLOYEES RESIDING IN SEKA TOWN, JIMMA ZONE, SOUTH WEST ETHIOPIA

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ABSTRACT

BACKGROUND: *Voluntary counseling and HIV testing (VCT) has been shown to be effective in reducing HIV prevalence in different countries. This study is to assess AIDS related knowledge and determinants of VCT in government workers in Seka town, Jimma zone, southwest Ethiopia.*

METHODS: *This cross-sectional study was conducted on HIV/AIDS related knowledge and determinants of VCT covering all government workers residing in Seka town, Jimma zone on January 25 and January 26, 2003. Data was collected by the use of a self-administered structured questionnaire translated in to Amharic language and analyzed by using SPSS for windows version 11.0.*

RESULTS: *Two hundred fifty two government workers were covered by the study with a response rate of 81%; 172(68.3%) were males and 80 (31.7%) were females. One hundred twenty nine (51.2%) had tertiary level education and 61.1% earn a monthly income of more than 500 Birr. Nearly 91% were knowledgeable about HIV/AIDS; but only 19.2% of the respondents considered them selves to be at risk of acquiring HIV infection. Knowledge about HIV/AIDS was found to be significantly associated with educational status, occupation and monthly income (P<0.05). Majority of the respondents (75%) had favorable response to VCT related attitude statements. Three-fourth of the subjects claimed to have an intention of undergoing VCT. The main barriers for refusal of the test in this study were fear of positive test result (41.3%), perception of one's serostatus as being confidently negative (38.1%), and stigma associated with HIV/AIDS (25.4%).This study has also shown that considerable proportion of the participants did not have the appropriate feeling towards HIV test results. (Ethiop J Health Sci. 2005; 15(1):63-74)*

KEY WORDS: *HIV, AIDS, Voluntary, Counseling*

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CONCLUSION: ***It is concluded that program implementers, governmental and non-governmental organizations should address an increasing awareness campaigns on HIV/AIDS itself and VCT to fill the knowledge-attitude gap, and reinforce the accessibility to voluntary counseling and HIV testing services. Moreover health information on the benefits of VCT should be clearly addressed so that the barriers to under go VCT can be reduced.***

KEY WORDS: ***HIV/AIDS, Voluntary counseling and testing, Knowledge***

INTRODUCTION

The global HIV/AIDS pandemic, through its devastating scale and impact, constitutes a global emergency and one of the most formidable challenges to human life and dignity. It undermines social and economic development throughout the world and affects all levels of society; national, community, family and individuals without distinction as to age, gender, race and wealth. By the end of 2000, 36.1 million people worldwide were living with HIV/AIDS, 90% in developing countries and 75% in sub-Saharan Africa (1). According to the Ministry of health report, at the end of 2001, 2.2 million people were living with HIV in Ethiopia, 2 million of them are adults making the adult prevalence rate of HIV 6.6%; most people with HIV do not know that they are infected (2).

Prevention, care, support and treatment for those infected or affected are mutually re-enforcing elements of an effective response and must be integrated in a comprehensive approach to combat the epidemic. Those contribute to effective prevention through an increased acceptance of voluntary and confidential counseling and testing, and by keeping people living with HIV/AIDS and vulnerable groups in close contact with health care systems and facilitating their access to information, counseling and preventive supplies (1, 3).

Several years of experience with giving HIV antibody test result has led to the recommendation that if and when HIV test result is given, it should be voluntary, accompanied by a thorough explanation, emotional support and practical recommendations. This process is referred as "voluntary counseling and HIV testing" (4).

Voluntary counseling and testing is an important intervention in HIV/AIDS prevention (5, 6). But it has been given low priority as a possible strategy for combating HIV in developing countries because of the high demand on logistics and skill (7).

Major advances have been made recently in the medical management of HIV infection that would render VCT much more attractive. Prophylaxis of opportunistic infections by simple inexpensive generic drugs, such as co-trimoxazole has reduced severe morbidity and mortality. Prevention of mother to child transmission, by short regimens of oral anti retroviral drugs, safe alternative to breast feeding and increased availability of highly effective anti-retroviral drugs for treatment of HIV-1 infection are all large advances that may sustainably change the readiness for and acceptability of VCT in the not-too-distant future (7).

VCT has been shown to reduce HIV prevalence in several countries. It decreases risk behaviors and brings about positive behavioral changes (4). Multi-center studies conducted in Kenya, Tanzania, and Trinidad showed that personalized VCT can reduce risk behaviors by 35 -39% (14). Different studies indicated that some of the major drives to seek VCT were partner's risky sexual behavior, death of spouses and siblings, and premarital screening (9, 12). On the other hand barriers towards the test

included fear of positive test result and stigmatization, lack of risk perception and fear of partner's reaction (9, 13).

As to the investigators knowledge no similar study had been conducted in the area, and thus this study was designed to asses the knowledge about HIV/AIDS and determinants of VCT on government employees in Seka town, southwest Ethiopia.

METHODS AND MATERIALS

The study was conducted in Seka town, the capital of Seka Chekorsa woreda, located 17 kilometers west of Jimma town, southwest Ethiopia. The projected population of the town for the year 2002 is 4,867 (8). There were 311 government workers in the town when the study was conducted. Most of the data was collected on Jan. 25 & 26, 2003. However, repeat visits were made until Feb.10, 2003 to minimize non-response rate due to meetings, annual leave and fieldwork.

These subjects were chosen for the study because prevalence of the infection is similar with the general population despite their better educational status, the fact that they were not assessed on VCT and the importance of working places for advocating of preventive means, and the convenience of using self-administered questionnaire.

The study design was cross-sectional and the study included all the government workers.

A structured self-administered questionnaire which was translated to Amharic language was used to collect the data. The questionnaire contained open and closed ended questions on socio-demographic, knowledge towards HIV/AIDS and VCT related variables. Necessary adjustments were made after the questionnaire was pre-tested. The principal investigators and trained medical interns from Jimma University supervised data collection. In order to improve the response rate and minimize the number of absentees due to field work, annual leaves, illnesses and many other reasons, repeated visits were made to the government sector offices.

A written letter of cooperation was obtained from JU to the local administration. Moreover verbal and written consent was obtained from concerned bodies and participants. Anonymity and confidentiality was assured to the respondents.

Data was cleaned, edited then analyzed by use of SPSS for windows version 11.0. Those who responded positively to more than 6 out of the 9 HIV/AIDS related questions were considered to have good knowledge score, 5-6 fair and <5 as poor. Those who had a favorable response to more than two of the four attitude statements were considered to have a favorable attitude towards VCT. In addition to descriptive statistics, Chi-square test was utilized for the data analysis where appropriate at a level of significance of 5%.

RESULTS

A total of 252 subjects were included in the study out of 311 government workers with the response rate of 81%. Among those respondents 172 (68.3%) were males. One hundred and sixty five (41.7%) were in the age group 30-39years followed by the age group 20-29 years, which accounted 69(27.4%). Orthodox was the predominant religion (40%) followed by Muslims (32.1%) and majority of the respondents (71%) were married. One hundred and twenty nine (51.2%) had tertiary level education and 105(41.7%) were from grade 7-12. Information on monthly income indicated that 61.1% of the respondents

earn a monthly income of more than 500 Birr.

All of the participants have heard about HIV/AIDS (table 1). The predominant sources of information were mass media, health institutions & religious leaders for 235(93.3%), 126(50.0%) & 116(46.0%) respectively. Three or more risk factors/behaviors that would predispose to HIV infection were mentioned by 81.3% of the participants (table 1); but only 49(19.4%) said that they are at risk of acquiring HIV infection. In general, 177 (70.2%) of the respondents were found to have good knowledge score, 52 (20.6%) fair and the rest 23 (9.1%) had poor knowledge score about HIV/AIDS. Knowledge about HIV/AIDS was found to have significant statistical association with educational status, occupation and monthly income ($P < 0.05$) (table 2).

Two hundred thirty nine (94.8%) had a positive attitude towards premarital screening, but only 164(65.1%) believe that knowing one's serostatus through VCT would be better than not knowing. Attitude towards VCT was not significantly associated with any of the socio-demographic factors (table 2).

Table 1. Knowledge related to HIV/ AIDS and Attitude towards VCT among Government Employees of Seka Town, Jimma Zone: Feb. 2003 (n=252)

Knowledge about HIV/AIDS	Yes	No
	No (%)	No (%)
Ever heard about HIV /AIDS	252 (100.0)	0 (0.0)
Knowledge of means of transmission (at least 3)	192 (76.2)	60 (23.8)
Know that STDs increase infectiousness of HIV infected individuals	137 (54.4)	115 (45.6)
Know that STDS increase the susceptibility of an individual to HIV infection	200 (79.4)	52 (20.6)
Know risk factors / behavior predisposing to HIV / AIDS (at least three)	205 (81.3)	47 (18.7)
Know that an HIV infected person can stay many years with no signs and symptoms.	214 (84.9)	38 (15.1)
Know that an HIV infected person who is apparently healthy can transmit the virus.	240 (95.2)	12 (4.8)
Know signs and symptoms of AIDS disease (at least 3)	204 (81.0)	48 (19.0)
Know means of prevention of HIV/AIDS (at least 3)	176 (69.8)	76 (30.2)
Attitude Towards VCT	Favorable	Unfavorable
Knowing one's HIV status by VCT is more preferable than not knowing	164 (65.1)	88 (34.9)
Couples preparing for marriage should be screened before marriage	239 (94.8)	13 (5.2)
I would like to know my HIV states by VCT.	197 (78.2)	55 (21.8)
I would like to have the test just now.	177 (70.2)	75 (29.8)

Table 2. Knowledge and attitude towards HIV /AIDS and attitude towards VCT by Socio-demographic characteristics of government employees of Seka town, Jimma zone Feb. 2003 (n=252)

Characteristics	AIDS Related Knowledge					Attitude towards VCT			
	Good	Fair	Poor	X^2	P-value	Favorable	Unfavorable	X^2	P- value
	No (%)	No (%)	No (%)			No (%)	No (%)		
Sex									
Male	127 (73.8)	29 (16.9)	16 (9.3)	4.76	>0.05	135 (78.5)	37 (21.5)	2.79	>0.05
Female	50 (62.5)	23 (28.8)	7 (8.8)			55 (68.8)	25 (31.3)		
Age group									
20-29	54 (78.3)	11 (15.9)	4 (5.8)	7.01	>0.05	50 (72.5)	19 (27.5)	7.29	>0.05
30-39	76 (72.4)	20 (19.0)	9 (8.6)			80 (76.2)	25 (23.8)		
40-49	41 (61.2)	17 (25.4)	9 (13.4)			55 (82.1)	12 (17.9)		
≥50	6 (54.5)	4 (36.4)	1 (9.1)			5 (45.5)	6 (54.5)		
Literacy Status									
Below grade 6	7 (38.9)	6 (33.3)	5 (27.8)	25.3	<0.05	14 (77.8)	4 (22.2)	4.38	>0.05
Grade 7-12	67 (63.8)	31 (29.5)	7 (6.7)			84 (80.0)	21 (20.0)		
12+1	60 (75.9)	10 (12.7)	9 (11.4)			53 (67.1)	26 (32.9)		
≥12+2	43 (86.0)	5 (10.7)	2 (4.0)			39 (78.0)	11 (22.0)		
Marital Status									
Single	37 (72.5)	12 (23.5)	2 (3.9)	2.33	>0.05	41 (80.4)	10 (19.6)	0.99	>0.05
Married	124 (69.3)	36 (20.1)	19 (10.6)			132 (73.7)	47 (26.3)		
Divorced/Widowed	16 (72.7)	4 (18.2)	2 (9.1)			9 (81.7)	2 (18.2)		

Continued .....

Income									
100-300	13 (43.3)	11 (36.7)	6 (20.0)			27 (90.0)	3 (10.0)		
301-500	45 (66.2)	19 (27.9)	4 (5.9)			52 (76.5)	16 (23.5)		
501-700	48 (78.7)	10 (16..4)	3 (4.9)	19.6	<0.05	42 (68.9)	19 (31.1)	6.77	>0.05
701-900	43 (75.4)	7 (12.3)	7 (12.3)			45 (78.9)	12 (21.1)		
≥ 901	28 (77.8)	5 (13.9)	3 (8.3)			24 (66.7)	12 (33.3)		
Occupation									
Teacher	74 (87.1)	9 (10.6)	2 (2.4)			59 (69.4)	26 (30.6)		
Health worker	4 (100.0)	0 (0.0)	0 (0.0)			3 (75.0)	1 (25.0)		
Agri. Worker	28 (65.1)	12 (27.6)	3 (7.0)	20.8	<0.05	32 (74.4)	11 (25.6)	NA	NA
Admin. Worker	25 (55.6)	11 (24.4)	9 (20.0)			37 (82.2)	8 (17.8)		
Finan. & Justice	27 (69.2)	8 (20.5)	4 (10.3)			27 (69.2)	12 (30.8)		
Police	13 (72.2)	5 (27.7)	0 (0.0)			17 (94.4)	1 (5.6)		
Others	6 (33.3)	7 (38.9)	5 (27.8)			15 (83.3)	3 (16.7)		
AIDS related knowledge									
Good						136 (76.8)	41 (23.2)	0.73	>0.05
Fair						37 (71.2)	15 (28.8)		
Poor						17 (73.9)	6 (26.1)		

NA = Not applicable

One hundred and eighty nine (75%) of the respondents claimed that they would have VCT whenever the test is available (table 3 & 4) and 168(66.7%) will ask their partners to have the test. The main drive for two third of the participants for seeking VCT was just to know their sero-status; while the reasons for higher proportion of the respondents to refuse VCT were fear of positive test result and lack of risk perception (table 5). Those who had a higher educational status and those who had a favorable attitude towards VCT were more likely to agree with the test, $P<0.05$ (table 3 & 4).

One hundred and thirty six (72%) respondents wanted to hear their test result after proper post-test counseling, while 46(24.3%) and 5(2.6%) preferred to know anonymously and through close friends and relatives respectively.

Out of the 252 respondents, 234(92.9%) replied that they would be very happy and avoid risk behaviors if their test result becomes negative. Nearly 43% said they would adjust them selves to accept the test result and take measures not to transmit the virus to others for the rest of their life if positive for HIV, 34% would teach others and participate in control programmes and the rest 8.3%, 3.2%, 1.6% said they would do nothing except praying, feel depressed and may commit suicide, and do not know what to do right now respectively.

Table 3. Intention of undergoing VCT by Sociodemographic characteristics of government workers of Seka Town, Jimma Zone: Feb. 2003 (n=252)

Characteristics	Intention of undergoing VCT		χ^2	P- value
	Yes	No		
Sex				
Male	135 (78.5)	37 (21.5)	3.52	>0.05
Female	54 (67.5)	26 (32.5)		
Age group				
20-29	50 (72.5)	19 (27.5)		
30-39	80 (76.2)	25 (23.8)	1.32	>0.05
40-49	52 (77.6)	15 (22.4)		
≥50	7 (63.6)	4 (36.4)		
Literacy Status				
Elementary	11 (61.1)	7 (30.9)		
Grade 7-12	85 (81.0)	20 (19.0)	8.69	<0.05
12+1	52 (65.8)	27 (34.2)		
12+≥2	41 (82.0)	9 (18.0)		
Marital Status				
Single	42 (82.4)	9 (17.6)		
Married	130 (72.6)	49 (27.4)	2.07	>0.05
Divorced/ Widowed	8 (72.7)	3 (27.3)		
	9 (81.8)	2 (18.2)		
Monthly income (Birr)				
100-300	26 (86.7)	4 (13.3)		
301-500	50 (73.5)	18 (26.5)		
501-700	44 (72.1)	17 (27.9)	3.13	>0.05
701-900	44 (77.2)	13 (22.8)		
≥ 901	25 (69.4)	11 (30.6)		

Table 4. Intention of undergoing Voluntary counseling and HIV testing by their knowledge related to HIV/AIDS and Attitude towards VCT among government workers of Seka Town, Jimma Zone: Feb. 2003 (n=252)

Characteristics	Intention of undergoing VCT		χ^2	P-value
	Yes (%)	No (%)		
AIDS Related knowledge				
Good	136 (76.8)	41 (23.2)	1.26	
Fair	36 (69.3)	16 (30.8)		>0.05
Poor	17 (73.0)	6 (26.1)		
Attitude towards VCT				
Favorable	175 (92.1)	15 (7.9)	120.5	<0.05
Unfavorable	14 (2.6)	48 (77.4)		

Table 5. Reasons mentioned by respondents in order to undergo voluntary counseling and HIV testing or not among government works of Seka Town, Jimma Zone: Feb. 2003

Characteristics	Reason statements	No*	%
Reasons for intention of having VCT	Just to know my status	123	65.1
	If asked for visa/job	18	9.5
	Before marriage	59	31.2
	Have signs/symptoms	11	5.8
	I doubt my spouse's sexual behavior	10	5.3
	I lost my spouse/ partner	2	1.1
	Others	5	2.9
Reasons for refusing to have VCT	Fear of positive test result	26	41.3
	Fear of social stigma	16	25.4
	Fear of partner reaction	9	14.3
	Feeling of being safe and no need.	24	38.1
	Others	7	11.1

* *Respondents were allowed to give more than one response.*

DISCUSSION

It is to be assumed that the present study suffers from the limitations that are expected of all self administered questioners.

Majority (91%) were knowledgeable about HIV /AIDS which is lower than a similar research done in Jimma (9). Those with a higher educational status, those with a better monthly income and being health worker and teacher were found to have a higher knowledge score. Despite good knowledge score about HIV/AIDS and favorable attitude towards VCT, only 19.2% of the respondents claimed that they are at risk of acquiring HIV infection. This fact as many studies indicated will predispose those individuals to practice high-risk behaviors. There was no statistically significant association between knowledge and attitude, and between knowledge and risk perception too.

The study showed that most people agree with premarital screening but nearly one third of the respondents did not agree with the idea of being tested on the spot. These results are comparable with a study done in Jimma town (9). Three quarter of the respondents had an intention of undergoing VCT. Those figures are relatively lower than the findings of the studies done in Harar (85.4%), Jimma (85%) and another study done by Helina A. *et al* (95.1%) (9,10,11). This may be because of the unavailability of VCT information and service in our study area. Major drives to practice VCT in this study were just to know their status (65.1%) and before marriage (31.2%). Other reasons like have/had peculiar illnesses, doubting spouse's sexual behavior, lost partners and so on were mentioned by minority of respondents. When compared to a study done in Uganda the reasons to seek VCT were; partner's risky sexual behavior (27%), death of spouses (30%), just wanted to know (26%), and death of siblings (14%) (12).

On the other hand the reasons mentioned by the respondents for not intending to have the test in this study were fear of positive test result and stigmatization in above two third of the participants and denial in 38.1%. Those findings were comparable with the study done in Jimma (9). Another study done by Maman S. *et al* (13) in Tanzania showed that the main barriers to HIV testing and serostatus disclosure described by women include fear of partner's reaction, decision making and communication patterns between partners and partners attitudes towards HIV testing.

Significant proportion of the respondents did not have appropriate feeling towards HIV test results to the extent of committing suicide. Comparable findings were reported from the study done in Jimma town (9).

In general the findings of this study clearly indicated that control programmes should continue to inform the population about HIV/AIDS in general and VCT in particular; and more importantly those programmes should be revised in such a way that they should bring about change of attitude to curb the spread of the disease. Government workers should be given due attention by control programmes with respect to HIV/AIDS so that these population groups would avoid high risk behaviors and adopt preventive measures to bring about practical changes in order to fill the knowledge-attitude gap. Moreover, VCT is shown to be effective in reducing HIV prevalence in many countries (4). Effective communications are essential for raising acceptance of VCT and for avoiding stigma and discrimination. It is important for programme implementers to address counseling and HIV testing services for the majority of the population in general and government workers in particular.

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REFERENCES

1. UN general assembly special session on HIV/AIDS; Summary of the declaration of commitment on HIV/AIDS, 25-27 June 2001:24-26.
2. Disease prevention and control department, MOH: AIDS in Ethiopia 4th Ed. Oct. 2002: 8, 18.
3. Elias CJ, Castro W, Lande R, Burns M. Preventing HIV/AIDS in low resource settings; outlook 2001 May; 19 (1) :1 – 10.
4. Susan A. et al. The evaluation of VCT as HIV preventive strategy. Gibney et al; preventing HIV in developing countries. New York: Plenum Press 1999: 87 – 108.
5. Sahlu T, Kassa E et al. Sexual behaviors, perception of risk of HIV infection and factors associated with attending HIV post – test counseling in Ethiopia, *Ethiop. Med J.* 1999; 37: 53 64.
6. Judith D. et al: HIV prevention research; Accomplishment and challenges for the 3rd decade of AIDS, *American Journal of Public Health* July 2000 Vol. 90(7): 1029 – 1033.
7. Vande Perre P. HIV Voluntary counseling and testing in community health services: *Lancet* Jul. 8, 2000 (9224): 86–88.
8. The 1994 population and housing census of Ethiopia, results for Oromiya region: Vol. I (I):14: 125.
9. Nezir Z., Belachew T. Assessment of STD/HIV/AIDS related KAP; and determinants of VCT among government workers of Jimma town; The XIIIth annual scientific conference of the EPHA: abstracts and programmes, Nov. 2002
10. Helina A: Yeneabat A, et. al KAP of selected population groups in Ethiopia towards the disease AIDS. Int. Conf. On. AIDS: July 4-9 1989; 5:850
11. Mohammed F, Demeke B, Ismael S. Determinants of VCT among age group of 15– 49 in Harar Town; EPHA Xth annual public health conference abstract and programmes; Nov. 2000:5.
12. Tumusilme MA, Kabatesi DS, PHDA International Conference on AIDS. 1998: 12: 1180
13. Maman S, Mbwambo J, Hogan NM, Kilonzo GP, Sweat M. Women's barriers to HIV–1 testing and disclosure: challenges for HIV – 1 VCT. *AIDS Care*. 2001;13: 595-603.
14. Hollander D. International family planning perspectives. 2001 Mar; 27(1): 49-50.