

# Influencing preventive behavior with regard to HIV/AIDS among the Police Force of Harari Region, Eastern Ethiopia, 2011

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## Abstract

**Background:** HIV/AIDS has emerged as one of the serious public health challenges in Ethiopia. This disease has individual and institutional impacts, making difficult for the police services to act effectively in protecting the public from crime.

**Objective:** To assess factors that influence HIV/AIDS prevention among police personnel in Harari Region, Ethiopia, 2010.

**Methodology:** A cross-sectional study was conducted in January 2010 involving 310 out of the 790 police personnel found in the Region. A simple random sampling technique was used to select study participants by using their identification numbers as sampling frame from registration books of the Personnel Department of the Regional Police Commission. Both bivariate and multivariate analyses were used to identify determinants of sexual behavior.

**Results:** Attitudes and perceptions of study participants showed significant association with their sexual behavior. Fifty two percent of the respondents were engaged in risky sexual practices and believed that they are susceptible to HIV infection. Twenty-nine percent had multiple sexual partners of which 60% did not use condom consistently. Overall, the study participants were of young age group and have habits of consuming alcohol. Almost all have access to VCT services and opportunities for peer education.

**Conclusion:** The study participants were at risk of HIV because of their sexual behavior and misconceptions related to the risk factors and means of prevention. Hence, basic police training should include BCC on HIV/AIDS, expansion of HIV counseling and testing services, strengthening of peer education and establishing anti-AIDS clubs. [*Ethiop. J. Health Dev.* 2012;26(1):3-8]

## Introduction

Police forces globally face a serious risk of HIV/AIDS (1). A report from UNAIDS states that uniformed forces, including the police forces, are highly vulnerable to STIs including HIV/AIDS (2). In the course of their work, the police constantly interact with populations that are most at risk of HIV epidemic: such as commercial sex workers, jail and prison detainees, injection drug users, illegal immigrants, and homosexuals. These predispose the police for risky sexual behaviors (2, 3).

The impact of HIV/AIDS on the police force the latter's role in the fight against HIV/AIDS is a neglected area of research. This is partly due to the low frequency of testing and the poor systematic data collection among police services. This lack of information extends to the basic and fundamental issues like the level of prevalence of HIV/AIDS and the vulnerability of the police force to HIV/AIDS (2).

In Ethiopia, according to recent data from the Federal Police Hospital, 25% of women attending antenatal services were HIV/AIDS positive (4). The Behavioral Surveillance Survey (BSS) that was conducted in Ethiopia among the police forces indicated that 19% of their members were regular alcohol consumers and 51% of them were regular *khat* users. Twenty percent had multiple sexual partners and 40% never used condoms.

Seventy percent reported the existence of VCT in their locality while only 24% had been tested for HIV and 81% perceived themselves to be at no or low risk of acquiring HIV infection (5).

In general, most of the conclusions extrapolated from the literature on the subject have been speculative and based upon anecdotal evidence. Hence, research in this area should be a priority (2). Therefore, this study was conducted to assess factors that influence HIV/AIDS preventive behavior among the police personnel thereby giving an insight about the factors and providing useful information for possible control strategies.

## Methods

### Study area

This study was conducted in the Harari Region located 510 km away from Addis Ababa. The Region has nine districts with a total population of 203,000. Its geographic health service coverage was about 100%, and the HIV prevalence rate was 3.2% (2.6% male & 3.8% females) while the adult HIV incidence was 0.49 with annual death rate of 5.4% among PLHIV (6).

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**Source and study population**

All police force members located in the study area (790 police personnel) during the study period were the source population, and 310 of them were involved in the study.

**Study design and period**

The design of the study was cross-sectional. It used both quantitative and qualitative methods of data collection during the period of January 2010.

**Sample size determination**

A single population proportion with an assumption of 50% proportion for the existence of factors that influence preventive behavior was taken. A 5% margin of error and a 95% confidence level were also used. Since  $n/N > 10\%$ , a finite population correction was used [ $n_f = n / (1 + (n/N))$ ], the sample size was set at 310 including 20% for non-response. In addition, 10% of the source population was selected purposively for the qualitative part of the study.

**Sampling techniques**

Using identification (ID) numbers from the Police Commission Personnel Department, a sampling frame of the whole police force was prepared. A simple random sampling technique was used to select the study population. Selected ID numbers were linked with names of the police and then the current worksite of each member was identified for administering the questionnaire. The names of individuals were not used in the questionnaire to ensure anonymity.

**Study variables**

The number of sexual partners, consistent condom use, VCT service utilization and perception of risk of HIV infection were taken as outcome variables while socio-demographic and economic variables, availability and accessibility of condoms and VCT service were taken as explanatory variables.

**Data collection procedure**

Initially nine working stations were identified and data were collected at worksites. The objective of the study was thoroughly communicated to avoid refusals. Twelve data collectors (9 of them males) who had completed 12<sup>th</sup> grade with previous experience in data collection among the police were involved after two days training.

The questionnaire was prepared by adapting from the BSS questionnaire by adjusting it to fit the study target group. Quantitative data were collected by data collectors using a structured questionnaire prepared in the Amharic language. For qualitative data, individual in-depth interviews of 31 police personnel were made using a non-structured topic guide; and two FGDs with nine discussants within each group were conducted by two male nurse supervisors after a day of training.

**Data quality control**

An English language questionnaire was prepared and then translated into Amharic. The Amharic version was then translated back into English to look for any language inconsistencies. Pre-testing was made on 10% of non selected study subjects. The completed questionnaires were cleared on a daily basis by the principal investigator.

**Data analysis**

Data were checked for completeness then cleared, coded, and then entered in SPSS V.16 software for analysis. Odds ratios (OR) and 95% confidence intervals (CIs) were computed. Bivariate analyses were employed to examine the relationships between outcome and explanatory variables. These variables were observed to have significant associations in the bivariate analysis and biologically associated variables were further treated by a multivariate analysis. Qualitative data were transcribed and translated into English. The findings were summarized under thematic areas that included: sexual partner, condom, VCT services utilization and perception of risk for HIV infection.

**Ethical Considerations**

Ethical clearance was secured from the Institutional Research Ethics Review Committee of Haramaya University, College of Health Sciences in Harar. Formal letters of support were written to local police officials. All study participants voluntarily signed a written consent form. Information was collected and recoded anonymously and confidentiality was assured.

**Results****Socio-demographic characteristics**

A total of 310 police personnel participated in the study obtaining a 100% response rate. The age range was 20 to 57 years with the median age of 29 years ( $SD \pm 7.5$ ). Fifty-six percent of the subjects were in the range of 25 to 35 years. With regard to education, 110 (36%), 93 (30%), and 82 (27%) had attended tertiary, secondary and preparatory levels, respectively. Sixty-seven percent were married and 33% single. Fifty-nine percent were Muslims while 33% were Orthodox Christians (Table 1).

**Factors related to multiple sexual partnership**

Twenty-nine percent (56 of the married and 34 of the single) of the respondents had multiple sexual partners of whom only 40% (36) used condoms consistently. Fifty-six percent (89/159) of the respondents used condom during their last sexual intercourse. Fifty-one percent (158) were engaged in risky sexual practice. Evidence from the qualitative study showed that poor self-control fueled by peer pressure, the use of *khat* and alcohol, an unknown sero-status, lack of knowledge about HIV/AIDS were the main predisposing factors for unprotected sex and HIV infection.

Table 1: Socio-demographic characteristics of police personnel in Harari Region, 2010

Variables (n=310)	Frequency	Percent
<b>Age in year</b>		
18-24	74	23.9
25-35	174	56.1
36-57	62	20.0
<b>Sex</b>		
Male	283	91.3
Female	27	08.7
<b>Marital status</b>		
Single	103	33.2
Married	207	66.8
<b>Family size</b>		
< 4	210	67.7
≥4	100	32.3
<b>Monthly income</b>		
≤ 720	79	25.5
>721	231	74.5
<b>Educational level</b>		
Junior (5-8)	25	08.1
Secondary (9-10)	93	30.0
Preparatory (11-12)	82	26.5
Tertiary(12 +)	110	35.5
<b>Occupational rank</b>		
Constable	85	27.4
Assistant sajin	56	18.1
Deputy sajin	37	11.9
Chief sajin	37	11.9
Ass/inspector +	95	30.6
<b>Religion</b>		
Orthodox	103	33.2
Muslim	184	59.4
Others	23	07.4

During the in-depth interview, a 42 years old male respondent explained the situation as follows:

*“Mostly at weekends I chew Khat, then at dusk time I go for chebsi (drinking alcohol) and sometimes I did casual sex there”.*

In this study, the three most influential factors for having safe sexual behavior among the police were: mass-media (58%), past experience with the disease (17%), and health professionals' advice (14%). In the bivariate analysis, occasional alcohol consumers were more than twice more likely to have multiple sexual partners than non-consumers (COR [95%CI] =2.62[1.25, 5.47] (Table 2).

#### Factors related to VCT and condom provision

The majority (86%) of the respondents reported VCT service was easily accessible while 26% said they never used it. Eighty one percent (128/159) of them reported that condoms were easily available while only 45% (72/159) of them did use it consistently. Seventy-nine percent (245) of study participants reported there was no

condoms promotion and distribution at their work sites and 72% (223) reported no peer education services.

In the qualitative study, most discussants mentioned barriers to use VCT services as being: lack of confidence, fear of stigma and discrimination associated with being HIV positive, feeling of hopelessness following HIV infection, insufficient VCT services coupled with lack of privacy and reluctance.

During the in-depth interview, a 35 years old male respondent explained:

*“I do not want to think about VCT because I have fear of the disease and suspicion that I may be HIV positive. It is better for me to wait until it comes in its own time”.*

Respondents, who reported that VCT service was not accessible (AOR [95%CI] = 4.52 [2.03, 10.10] and there being no peer education (AOR [95%CI]=3.08[1.49, 6.38], were four and three times more likely not to use it, respectively (Table 3).

#### Factors related to attitude and perception

Forty-five percent (139) of the respondents did not perceive that HIV/AIDS was a serious enough disease to affect their operational efficiency while 143 (46%) felt that HIV/AIDS was not a problem in their unit. Ninety-two percent (284) of them felt that measures being taken currently by the police force were not sufficient to tackle the problem.

The qualitative study participants reported that, their risk perception is associated with their occupational exposure to potentially infected blood in emergency situations, lack of consistent condom use especially after alcohol consumption. Despite the existence of the above health harming behavior in the police force, most of the study participants felt that they were at no risk of HIV infection.

During the in-depth interview, a 26 years young male respondent explained the condition:

*“AIDS is real and everyone is vulnerable to HIV infection but I personally am not at risk. I have self-confidence even though I chew khat and drink alcohol sometimes”.*

Moreover, 191 (62%) of the respondents disagreed that a person having one unsafe sexual act might get or give HIV infection. Most of the predictors of attitude showed statistically significant association with the perception of risk of HIV/AIDS (Table 4).

Table 2: Selected variables measured by multiple sexual partners among police force in Harari Region, Ethiopia, 2010

Characteristics (n=159)	Sexual partners		Odds ratio (95% CI)	
	Single	Multiple	%	Crude
<b>Age in Year</b>				
18-24	37	28	40.9	0.06 (1.01,0.47)
25-35	31	49	50.3	0.12 (0.02, 0.98)
36-57	01	13	08.8	1.00
<b>Income level</b>				
≤720	28	21	30.8	1.00
≥721	41	69	69.2	2.24 (1.13, 4.45)
<b>Alcohol drinking</b>				
Regular	08	14	13.8	1.96 (0.75, 5.16)
Occasional	15	35	31.5	2.62 (1.25, 5.47)
No	46	41	54.7	
<b>Khat chewing</b>				
Regular	21	39	37.7	2.08 (0.98 4.43)
Occasional	20	2	29.0	1.46 (0.66, 3.22)
No	28	25	33.3	1.00
<b>Consistent condom use</b>				
Yes	36	36	45.3	1.00
Occasional	08	19	17.0	2.38 (0.92, 6.12)
No	26	35	37.7	1.40 (0.70, 2.79)
<b>Perception of risk of HIV</b>				
Yes	30	52	51.6	1.00
No	39	38	48.4	0.56 (0.30, 1.06)

**Note:** Married respondents who were faithful to their spouses were not included in the calculation for condom use. Hence, 103 of the single and 56 of the married who had reported multiple sexual partners were used for analysis (i.e. 159 respondents were used as denominator for condom use computation).

Table 3: Factors related to VCT utilization and other service provision among the Police Force in Harari Region, 2010

Variables (n=310)	VCT utilization			Odds Ratio (95 % CI)	
	Yes	no	%	Crude	Adjusted
<b>VCT service accessible in the vicinity</b>					
Yes	212	55	86	1.00	1.00
No	17	26	14	5.90 (2.99,11.63)	4.52 (2.03,10.10)
<b>Condom available in the vicinity</b>					
Yes	203	58	84	1.00	1.00
No	26	23	16	3.10 (1.64,5.83)	1.64 (0.74,3.62)
<b>Work place condom promotion and distribution</b>					
Enough	14	4	06	1.00	1.00
Not enough	29	18	15	2.17 (0.62,7.64)	1.58 (0.41,6.15)
No	186	59	79	1.11 (0.35,3.50)	0.58 (0.16,2.03)
<b>Peer education service</b>					
Yes	75	12	28	1.00	1.00
No	154	69	72	2.80 (1.43,5.49)	3.08 (1.49,6.38)

Table 4: Attitude and perception towards HIV/AIDS among the Police Force, Harari Region, 2010

Statement (n=310)	Risk Perception			Odds Ratio (95 % CI)	
	Yes	No	%	Crude	Adjusted
<b>AIDS can affect all people</b>					
Agree	108	78	60	2.16 (1.27,3.68)	2.15 (1.20,3.85)
Not sure	18	24	14	1.17 (0.55,2.49)	1.10 (0.48,2.53)
Disagree	32	50	26	1.00	1.00
<b>AIDS is curable disease</b>					
Agree	16	28	14	0.47 (0.24,0.92)	0.63 (0.29,1.35)
Not sure	28	30	18	0.77 (0.43,1.38)	1.10 (0.56,2.16)
Disagree	114	94	68	1.00	1.00
<b>AIDS patients can die because of opportunistic disease</b>					
Agree	82	101	59	0.49 (0.26,0.90)	0.43 (0.21,0.85)
Not sure	41	30	23	0.82 (0.40,1.68)	0.84 (0.37,1.87)
Disagree	35	21	18	1.00	1.00
<b>Consistent condom use can prevent HIV infection</b>					
Agree	70	64	43	0.83 (0.50,1.40)	1.07 (0.57,2.02)
Not sure	29	43	23	0.51 (0.28,0.95)	0.36 (0.17,0.75)
Disagree	59	45	34	1.00	1.00
<b>Refraining from CSW can prevent HIV infection</b>					
Agree	53	74	41	0.51 (0.31,0.83)	0.42 (0.23,0.79)
Not sure	25	21	15	0.48 (0.43,1.66)	0.81 (0.37,1.79)
Disagree	80	57	44	1.00	1.00
<b>Having only one sexual partner is not enjoyable</b>					
Agree	51	27	25	1.93 (1.12,3.33)	3.12 (1.64,5.93)
Not sure	11	27	12	0.42 (0.20,0.89)	0.46 (0.20,1.12)
Disagree	96	98	63	1.00	1.00

## Discussion

In this study, 29% of the respondents had multiple sexual partners of whom 60% did not use condoms consistently. Twenty-six percent of the respondents did not use VCT services. Forty-nine percent of them considered themselves to be at no risk of HIV infection.

Alcohol and *khat* use have synergetic effect in initiating individuals to unsafe sex because of their effect on behavior (7). This study revealed that considerable proportions of the respondents were regular alcohol drinkers (14%) and users of *khat* (38%). This is slightly lower than the findings of the BSS conducted in Ethiopia where 19% were regular alcohol consumers and 51% were regular *khat* users (5).

Twenty-nine percent of the study subjects had multiple sexual partners and 60% of the study participants did not use condoms. This is higher than the findings of the study conducted in Dare-Salaam where 26% had multiple sexual partners and 16% never used condoms (8) and the results of the BSS conducted in Ethiopia that showed 20% to have multiple sexual partners and 40% to have never used condoms (5). This indicates that there is a high risk sexual exposure among the study population of this study.

Eighty-six percent of the respondents reported that VCT services were easily accessible with 74% taking advantage of them. This finding is promising compared to the study conducted by Mitike and et al where 70% had reported the existence of VCT in their locality and only 24% had been tested for HIV (5).

Eighty-one percent of the participants reported availability of condom while only 45% used it consistently. This may be due to low effort to bring safe, comfortable and effective services to their working environment. This also supported by the study conducted by Solomon in Addis Ababa (9) and Elisabeth and Megh in Haiti (10).

Forty-five percent of the respondents did not perceive that HIV/AIDS was a seriously enough disease to affect their operational efficiency and 46% of them felt that HIV/AIDS is not a problem in their unit. This is in contrast to the study among the police in Malawi where all of them felt it did affect their operational efficiency. This may be due to the low provision of accurate and uncensored information to the police force and their operational efficiency ; study.



Despite the fact that they work in high risk environment, 49% of the respondents considered themselves to be at no risk of HIV infection. This was also emphasized during the in-depth interviews. This finding is slightly lower than the results of the study conducted by Hilary Pearce (2) and the BSS in Ethiopia (5, 11) but greater than the one conducted in Haiti (9). This discrepancy may be attributed to difference in study population in terms of the socio-economic characteristics and the low level of life-saving information about disease risk factors and their prevention.

For 81% of the respondents, condom accessibility was not seen as a problem. Even so, only 56% used them during their last sexual intercourse. This may be due to lack of regular promotion and awareness creation activities regarding the use of condoms and perhaps not providing them at subjects' work environment. This is also supported by other studies (5, 10, 13, 14).

By and large, this study has shown a high degree of no risk perception (49%), accompanied with multiple sexual partnership (29%) and poor condom utilization (40%) that may be putting the police personnel at high risk of HIV infection.

### Conclusions

There are considerable numbers of the Harari police personnel that practice risky sexual behaviors harboring misconception about the disease, its risk factors and its prevention. Even with their risky sexual behaviors, about half of the respondents still did not believe their susceptibility to the disease.

Therefore, this study recommends the following actions in order to protect the police from HIV/AIDS infection:

1. Expansion of VCT services and addressing barriers to the use of VCT;
2. Encouraging all new police recruits to know about their sero-status by creating conducive VCT services in such a way that they understand the benefits of being tested;
3. Ready availability of condoms at worksites and encouragement of workers to practice safe sex;
4. Establishment and encouragement of on-going Anti-AIDS clubs and peer education regarding HIV/AIDS in all police units; and
5. Intensive and consistent mini-media and BCC regarding HIV/AIDS risk and risk behaviors, accompanied by booklets and manuals in appropriate languages.

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