

The Prevalence of Consistent Condom use among Western Command Force in Bahir Dar City, North West Ethiopia

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Abstract

Background: Despite recent declines in global HIV/AIDS mortality, HIV/AIDS was still the fifth leading cause of global DALYs in 2010. The distribution of HIV/AIDS burden is not equal across regions and different population segments. Sub Saharan countries are disproportionately affected from the disease despite. In 2012; roughly 25 million people were living with HIV in the region, accounting for nearly 70 percent of the global total. People in the military are part of a social group with particular risk factors of isolation, often being far from home, working in extremely stressful environments, so that are at higher risk of sexual transmitted diseases including the non curable disease, AIDS. Objectives: To assess consistent condom use and associated factors among military personnel in Western Command in Bahir Dar City, in 2013. Methods and Materials: A cross-sectional study was conducted in November 2013 among 898 military personnel in Western command in Bahir Dar City, North west Ethiopia. Self-administered questionnaire was used to collect the data. The data were analyzed using univariate, bivariate, and multivariate analyses with SPSS version 16 software package.

Index terms—

1 Introduction

Despite recent declines in global HIV/AIDS mortality, HIV/AIDS was still the fifth leading cause of global DALYs in 2010. The distribution of HIV/AIDS burden is not equal across regions and different population segments. Sub Saharan countries are disproportionately affected from the disease despite accounting for just 13 percent of the world's population; in 2012; roughly 25 million people were living with HIV in the region, accounting for nearly 70 percent of the global total. In the same year, there were an estimated 1.6 million new HIV infections and 1.2 million AIDS related deaths as a result; the epidemic has had widespread social and economic consequences, not only in the health sector but also in education, industry and the wider economy (1,2).

People in the military are part of a social group with particular risk factors-isolation, often being far from home, working in extremely stressful environments, and lacking independent decision making power. So that they are at higher risk of sexual transmitted diseases including the non curable disease, AIDS (3).

Even though limitation on information regarding military forces of any country, evidences indicated that military personnel are a population group at special risk of exposure to sexually transmitted diseases including HIV/AIDS. In peacetime, STD infection rates among service members are generally 2 to 5 times higher than among civilian population. In time of conflict, the differences can be 50 or more times greater (4).

The armed forces in many high risks for conflict countries are vulnerable to STIs including HIV and factor including age of soldiers, their related high level of sexual activity, a military culture that promotes risk taking behaviors, and the usual availability of commercial sex workers near army camps, and the length periods of soldiers are away from home (5,6).

Despite armed forces is among high risk group of sexual transmitted disease including HIV, evidences indicated that about 20% of military personnel use condom sometimes and 8.8% never used condom in their sexual intercourse. The study further indicated that 8% of soldiers reported sexual contacts with partners with high risk of sexual behavior, whilst 0.37% of them reported homosexual and bisexual contacts (7).

According to the suggestions of WHO, a combination of approaches are very important to prevent the sexual transmission of HIV, including correct and consistent condom use, reduction in the number of sexual partners, HIV testing and counseling, delaying sexual debut, treatment for STIs and male circumcision (8).

Condom is a barrier method put on erect penis and physically blocks ejaculated semen from entering the body of a sexual partner during sexual interaction. Condoms, when used correctly and consistently, are highly effective in preventing HIV and other sexually transmitted infections (STIs). A large body of scientific evidence shows that male latex condoms have an 80% or greater protective effect against the sexual transmission of HIV and other STIs (9).

2 II.

3 Objectives a) General objective

To assess magnitude consistent condom use and its associated factors among military personnel of Western Command in Ethiopia. b) Specific objectives 1. To determine the prevalence of consistent condom use. 2. To identify factors associated with consistent condom use.

4 III.

5 Methods and materials

The study was conducted in one of the Federal Democratic Republic of Ethiopia (FDRE), Ministry of Defense, Western Command, in Northern Ethiopia, in Amhara National Regional States. Bahir Dar, the capital city of Region, is about 565 kms away from Addis Ababa.

The Western Command has one large hospital equipped with different health professionals; the hospital gives both preventive and curative activities for the soldiers. In the western command, there are one primary school and institute in which solders are taking training Cross sectional quantitative study was used among military personnel of Western command or Kifle Tore 43 in November 2013.

6 a) Source population

The eligibility criteria for the study were all members of the FDRE Western Command Ethiopian Army and working in the compound as soldiers, officers and non officers b) Sample size determination

The sample size was determined using single population proportion formula. The proportion of consistent condom use among study subjects was estimated to be 50%.

The following assumptions were used: level of confidence 95%, a 5% marginal error. So based on these assumptions, the sample size was calculated as: $n = (Z_{\alpha/2})^2 p (1-p) / d^2$. Where; n = the minimum sample size needed, P = proportion of consistent condom use (50%), d = absolute precision = 0.05 and $Z_{\alpha/2} = 1.96$ at confidence level 95%. Then, $n = (1.96)^2 (0.5 \times 0.5) / (0.05)^2 = n = 385$. The final sample size with multistage design effect of 2.2 and 10% allowance for data incompleteness, the number of study subjects included in the study were $[385 \times 2.2] + 10\% [385 \times 2.2] = 932$ c) Sampling procedure Multi-stage sampling technique was used, the Western Command contain four Kifle Tore and one the four Kifle Tore was selected randomly. Regiments also selected from the selected Kifle Tore and the respondents were selected using a simple random sampling technique. d) Data collection procedure Data was collected using a self administered structured questionnaire which was adopted and modified from reviewed literatures (10-12). Four data collection facilitators and one supervisor, who were working at the Western Command compound, were recruited.

Data collector facilitators and the supervisor were trained for one and half days on procedures, techniques and ways of collecting the data. The questionnaires were initially prepared in English and then translated in to Amharic and also back translation to English was done by other translator to check for the accuracy of the questionnaire.

The questionnaires were pre-tested prior to the actual data collection in the study area among units not included in the main survey. The result of the pre-test was discussed and some corrections and changes were made on the questionnaires before the actual data collection. During the actual data collection, the data collection facilitators distributed the questionnaires to the respondents, under the supervision the respondents were filled the questionnaires returned to the data collection facilitators. The gathered questionnaires in the same day of completion returned to their supervisor thereby the supervisor and the principal investigator check the numbers and completeness of the questionnaires e) Data processing and Analysis Data were double-entered onto the EPI-data Version 3.1 software by defining legal values for each variable and setting skip patterns. The double-entered data were validated and exported to SPSS version 16 software package. Univariate and bivariate analysis were computed to see the frequency distribution and to test whether there is association/ difference/ between consistent condom use and and selected independent variables. Factors associated with consistent condom use at

bivariate were identified and the variables with pvalue of 0.20 and less were taken to multivariable Volume XIV
Issue III Version I Year () analysis and the model was built with backward elimination. Finally, the p-values
less than 0.05 were considered statistically significant.

f) Ethical Consideration

Ethical clearance was obtained from the Ethical Committee of University of Gondar and Addis Continental
Institute of Public Health. Official permission was obtained from Amhara National Regional Health Bureau
different experts and Department Head of the Western Command. The respondents were informed about
the objective and purpose of the study and oral consent was obtained from each respondent. Confidentiality
was assured by not writing the name of the respondents' on the questionnaire and information was recorded
anonymously.

IV.

8 Results

a) Socio-Demographic Characteristics of Western command force Bahir Dar, Ethiopia, November 2013.

According to the current study, out of the total 932 respondents filed the questionnaire, 35 responses were
excluded because of gross incompleteness and resulted a response rate of 96.2%. About half of the study subjects
463 (51.6%) had soldiers rank followed by other non-officer rank and 65 (7.2%) were officers in rank. Majority
of the military personnel 842 (93.9%) were male, with a mean age of 27 and standard deviation of 6.9 years.
Regarding the age of the respondents 41.6%, 26.6%, and 31.7% were in the age group of 18 -24 years, 25-30 years
and above 31 years of age respectively.

Concerning the educational status of the respondents, 243 (27.1%) have attained primary 1 The study revealed
that all respondents have had alcohol in their life time. Of these respondents 632 (70.8%) of them took from
time to time. Regarding frequency of alcohol intake in the last four weeks, 3.5%, 32.9%, 34.7%, and 28.8% were
taking every day, once a week, less than once a week, and occasionally respectively.

Out of respondents, who took alcohol 426 (50.1%) were never drank until intoxication and 323 (36.0%) were
drinking until being intoxicated.

Respondents further reported that 325 (36.2%) chew Khat, 50 (5.6%) had taken Shisha/Gaya, 4 (0.4%) had
taken Hashish, 3 (0.3%) had taken Benzene, 6 (0.7%) and taken Cocaine for the last 12months (table 2). About
892 (99.4%) soldiers had ever sexual intercourse in their life time, of these 785 (87.5%) started their first sex
below the age of 20 years, and 112 (12.5%).

The mean and standard deviation of at which respondents sexually debuted was 18.67 ± 2.236 . About 67.7%
of the respondents have had more than one sexual partner in their life time. Moreover, this study revealed that
37.7% of the respondents had more than one sexual partner in the last twelve months (table 3). The prevalence
of consistent condom use among the western command force of Ethiopia was found to be 59.4% in the last twelve
month.

Consistent condom use was depicted by 495 (55.2%) of the respondents who had intercourse with prostitutes,
by 438 (48.8%) of these who had intercourse with non-regular partners, by 101 (11.3%) of these who have
intercourse with unmarried regular partners and by 50 (5.6%) of these having intercourse with their married
regular partners.

Among the military personnel who had used condom, majority 543 (60.5%) mentioned that it was by their
own suggestion, 169 (18.8%) reported that their partners suggested, and 321 (35.8%) said that it was a joint
decision of the partners.

The reasons for not using condoms were asked and it was due to lack of satisfaction, due to its embracing nature
to ask and buy condom, some also mentioned due to their love towards their partner. Some also mentioned their
religion restricts them, some do not think about condom, condom is not necessary to use, and condom bursts
(table 4). In a multivariate logistic regression analysis, variables which were having significant association in the
crude analysis were fitted to the multivariate model to determine independent predictors of consistent condom
use. Hence the odds of consistent condom use were about two fold more likely in males than females. (AOR =
2.05, 95%, CI = (1.16, 3.63) and being secondary school and tertiary school level were less likely use condom
consistently than primary school education with (AOR = 0.63, 95%, CI = (0.45, 0.89)) and (AOR = 0.55, 95%,
CI = (0.34, 0.91) respectively.

Marital status was the other significantly associated with consistent condom use among the respondents,
accordingly the odds of being unmarried and divorced, separated and widowed were more likely to use condom
consistently compared to those who were married.

Moreover, individuals who were single in marital status were more likely to use condom consistently compared
to those were married (AOR= 1.51, 95%CI= (1.07, 2.15) (table ??)

9 Discussion

The overall prevalence rate of consistent condom use among soldiers 59.4% in this study. This magnitude was
lower than study conducted in Northern Command front, where it was 71.0% (13). The major explanation for

such discrepancy may be difference in the variation of sampling techniques of the two studies and may be due to time difference of research.

The current study was also not in accordance with a finding of BSS 2005 from the Ground Forces, where the prevalence of consistent condom use with non-regular partners was 71.8% (14). The discrepancy might be due to different reasons including variation in sampling technique. However, the prevalence of consistent condom use in this study was higher than a study done in Lao People's Democratic Republic military personnel where the prevalence of 51% reported (15). Besides, the current prevalence is different from a study done among Cameroonian soldiers and consistent condom use was reported by 21.6% (16).

Consistent condom use was uncommon in Nigerian Soldiers and found only 16-20%, with no difference between genders (17) and it was less than the prevalence of the study area, this might due to the availability of condoms by the government and other stockholders and might be the creation of awareness through IEC with enough and appropriate information on Accordingly the odds of consistent condom use was twofold more likely in males than females (AOR = 2.05, 95% CI = (1. ??6, 3.63). This study was in line with other studies where the prevalence of consistent condom use was higher among males compared to females among Cameroonian armed forces and same for civil population too where women females were less likely to report condoms with their sex partners than men (18,19). Besides, our finding was in line with a study done in Nigeria where male gender was significantly associated with consistent condom use among armed force Personnel (20).

Moreover, the findings of this study indicated that only 41.8% of female soldiers were consistently using condom, which was much less than their counter parts in Nigeria (21). Different socio cultural reasons might contributed for the difference in using condom consistently.

According this study educational status of the armed forces was also significantly affecting consistent condom use among western command; accordingly the odds of consistent condom use among soldiers with secondary school was 0.63 times less likely and (AOR= 0.63, 95%, CI = (0.45, 0.89), with tertiary school level was 0.55 times less likely (AOR = 0.55, 95%, CI = (0.34, 0.91) than soldiers with primary school education. However, a study in Swaziland Defense Force had revealed that, militaries with secondary school education were more likely to use a condom with a regular partner (22). The probable reason that soldiers with secondary and tertiary education were less likely to use condom consistently compared to those with primary education might be due to armed forces with secondary and above were mostly older and may be resistant to change and failed to use condom than individuals with primary education where most of them were younger, who are may be friendly to accept ideas and advices to prevent sexual transmitted diseases and HIV/AIDS. This study further indicated that marital status was significantly associated with consistent condom use among armed forces, the odds of consistent condom use was higher among single, divorced and windowed personnel compared to those married. Accordingly, consistent condom use by unmarried military personnel in this study was found to be 65%, whereas it was 87.66% among unmarried military personnel of Cameroon (18).

Evidences indicated that most of the time military personnel were not using condoms during sexual interaction with their partners and vulnerable to HIV, because of unfaithfulness, dishonest creating mistrust between the partners (23), however; respondents from this study revealed that reasons for not using condoms were due to decrement in satisfaction while using condom, its embracing nature to ask and buy condom, others also mentioned that their love towards their partners. Besides others mentioned that they failed to use condom in their sexual intercourse because of religious reasons, evidences from other studies also supports that religion is one of factors that affect the sexual behaviors of individuals (24).

VI.

10 Conclusions

The study demonstrated the presence of considerable gaps in the consistent condom use by respondents. The overall prevalence of consistent condom use by the respondents was 59.4%. The important factors that were significantly associated with consistent condom use among western command force were sex, educational and marital status the odds of non-regular partners were less likely use consistent condom than married regular one.

However; consistent condom use was not associated with age, monthly income, military ranks, military services, and alcohol and drug use.

11 a) Recommendation

Based on the findings of the study and understanding the nature of the militaries personnel: ¹

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Figure 1: FTable 5 :

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Figure 2: Table 1 :

2

Variable	Frequency	Percent (%)
Ever drunk alcoholic beverage (like Tela, Teje, Beer, Arkie?)		
Never drink		
Once or twice		
From time to time	48	5.4
Drink daily	178	19.8
Total	632	70.8
	39	4.3
	897	100
Frequency of taking alcohol in the last four weeks		
Every day		
Once a week	30	3.5
Less than once a week	280	32.9
Occasionally	295	34.7
Total	245	28.8
	850	100
Ever had drank heavily until intoxication		
Never drank	426	50.1
Once to twice	323	38.0
Many times	101	11.9
Total	850	100
c) Sexual History and Number of Partners among Western command armed force, Bahir Dar Ethiopia, November 2013		

Figure 3: Table 2 :

3

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November, 2013		
Variables	Frequency	Percent (%)
Age at first sexual intercourse		
Below 20	785	87.5
20 -29	11.2	12.5
Mean + SD	18.67+2.236	
Number of sexual partners in your life time		
One	287	32.3
Two and above	602	67.7
Number of sexual partners in the last 12 months		
One	554	62.3
Two and above	335	37.7

Figure 4: Table 3 :

Ethiopia, November, 2013

Variables	Frequency	Percent (%)
Condom use in the first sex		
Yes	548	61.1
No	349	38.9
Ever use condom		
Yes	874	97.4
No	23	2.6
Condom use in the last 12 months		
Yes	758	84.5
No	139	15.5
Condom in the last month?		
Yes	622	69.3
No	275	30.7
Condom use in the last sexual intercourse		
Yes	565	63
No	332	37
Frequency of condom use in the last twelve months		
Not consistent	364	40.6
Consistent condom use	533	59.4

e) The association between predictor variables and consistent condom use among Western Command, Bahir Dar, Ethiopia, November 2013

Figure 5: Table 4 :

2. Western Command health department should introduce condoms in the compound and

Strengthening

communication activities through Medias, news papers and peer group discussions collaborating with DKT-Ethiopia.

3. Concerned bodies better focus on interventions that deal with sex, educational level, and marital status need to be focused

b) Competing interest

We don't have any competing interest.

c) Contributors

ZA was revised the research proposal, report,

and prepared the manuscript and NA was

conceptualized the research problem, report writing and manuscript preparation.

information

Figure 6:

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