ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

Assessment of Condom use for prevention of HIV/AIDS among members of Ethiopian Army at Zalambesa front Tigray Regional State.

By

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A Thesis Submitted to the School of Graduate Studies Of Addis Ababa University Department of Community Health in Partial Fulfillment of the Requirements for the Degree of Masters in Public Health.

J une 2005

Addis Ababa, Ethiopia

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DEPARTMENT OF COMMUNITY HEALTH
FACULTY OF MEDICINE
ADDIS ABABA UNIVERSITY

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DEDICATION

This thesis work is dedicated to my lovely parents Ato Berehe Abreha and W/ro Enanu Abera who have been the very source of inspiration and strength throughout my academic life.

Especially, to my mother whose sudden death at the middle of my academic stays was unbearable and unforgettable.

ACKNOWLEDGEMENTS

First and fore most I am very thank full to my advisor Dr. Alemayehu worku and professor Yemane Birhane, for their assistance, constructive comments and suggestion throughout the thesis work.

I would like to acknowledge my sponsor Action Aid Ethiopia for their generous financial support that covered all expenses of the project. Also I would like to thank Dr.Hagos Beyene, Dr. Reta Ayele, Dr. Yodit Abreha, Col.Tesfay Gidey and w/ro Ejigayehu Ayalew for their material and moral support. The ministry of defense Health Science College and national HIV/AIDS Prevention and Control Office (HAPCO) is highly acknowledged for their support on material and free Internet access during literature collection.

Finally, I am grateful to the authorities of the 23rd division command in Zalambesa front that facilitate during the data collection, and I also thanks to all respondents who actively participated in the study.

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ACRONYMS

- AAU Addis Ababa University
- AIDS Acquired immunodeficiency Syndrome
- FCSW Female Commercial Sex Workers
- DCH Department of Community Health
- DCSW Direct Commercial Sex Workers
- FGD Focus- Group Discussions
- HIV Human Immunodeficiency Virus
- HAPCO HIV/AIDS Prevention and Control Office
- IDCSW Indirect Commercial Sex Workers
- MOD Ministry of defense
- MOH Ministry of Health
- MF Medical Faculty
- NGOs Non-governmental Organizations
- STDs Sexually Transmitted Diseases
- STIs Sexually Transmitted Infections
- WHO World Health Organizations
- UNAIDS Joint United Nations Program on HIV/AIDS
- VCT Voluntary and Confidential HIV Counseling and Testing
- PVT Private soldiers

ABSTRACT

Since the beginning of the pandemic, AIDS has been spreading at alarming rate worldwide. Ethiopia is one of the most seriously affected countries in the region, with the national prevalence rate of 4.4%. Institutional based cross- Sectional survey through a self-administered structured and semi- structured questionnaires were conducted from December 2004 to January 2005 in randomly selected brigade in zalambesa front northern Ethiopia to assess the utilization of condom and high-risk sexual behavior of the militaries. A total of 845 soldiers participate in the quantitative study. 4 FGD were conducted in the qualitative study. From those 840 who completed the questionnaires, 486 (58.8) were PVT, 267 (32.3%) other rank and 73(8.8%) officers. Among respondents, 837 (99. 9%) heard about male condom, and 799 (95.9%) reported that they could get condom whenever they want. Among the total respondents 828(98.8%) ever had sexual intercourse (sexual active), from those 781 (94.1%) ever used condom and 71.2% used condom consistently. The mean age of first sexual intercourse was 19.6± 3.2 years, most of the respondents 762 (90.8%) had been sexually active during the previous 12 months, of those 582(76.4 %) had sex with regular partners, 534(70.1 %) had commercial partner and 412(54.1%) had non – regular non commercial partner in the last 12 month.

Similarly most of the military personal had multiple partners, 52.4% and 32.7% had sex with commercial and non- regular partner respectively. Of the 429(80.3%) who were sexually active with commercials sex worker, 398 (92.8%) have used condom in the previous 12 months and 279 (71.0%) used condom consistently. The reason given for not using condom was drinking alcohol. About 99% of the respondent knew about STIs, and urethral discharge was the most common known symptom and sign followed by Genital ulcer 683 (82%) and 511(61.4%) respectively.

Almost all, 822 (99.0%) of the respondents ever heard about HIV/AIDS, about 626 (77.4%) of the respondent knew a person who was infected with HIV or who has died of AIDS. About 89 (11.2%) and 136 (17.8%) of the respondents reported that mosquito bite and eating raw meat prepared by a person infected by HIV transmitted the disease of HIV/AIDS respectively. At least half of the respondents 49.1% were said they are put at risk of getting HIV/AIDS. From the respondents 91.5%, 79.6% and 85.6% mentioned that using condom, being faithfully and abstaining as a preventive method respectively. Similarly 89.3% of the military personnels heard about VCT for HIV and 209 (25.6%) previously under gone voluntary counseling and testing for HIV.

In conclusion, knowledge of condom and HIV/AIDS was high but the utilization of condom among the study population was low, so there is gap between knowledge and practices.

It is recommended that the above weakness be removed by continuous health education on the behavior of military and focused to wards military personnel (peer leader discussion). Moreover provision of vast VCT program is needed.

1. INTRODUCTION

AIDS is an extraordinary king of crisis; it is both an emergency and a long-term development issue. Since the beginning of the pandemic, AIDS has been spreading at an alarming rate worldwide. In 2003, an estimated 4.8 million people (range 4.2-6.3 million) become newly infected with HIV. This is more than in any one year before. Today, some 37.8 million people (range 34.6-42.3 million) are living with HIV, which killed 2.9 million (range 2.6-.3.3 million) in 2003, and over 20 million since the first case of AIDS were identified in 1981 (1,2)

AIDS is the leading cause of death in sub – Saharan Africa, the fourth leading killer worldwide, and HIV is the cause of Aids, continues to spread in every corner of the globe. No country is immune. (5)

The sub- Saharan region average prevalence rate is 8.58%. In 2003 alone, an estimated 3 million peoples (range 2.6-3.7) in the region become newly infected, while 2.2 million (range 2.0-2.5 million) died of AIDS. Among young people 15-24 years of age, 6.9% of women (range: 6.3-8.3%) and 2.1 % of men (rang; 1.9-2.5%) were living with HIV by the end of 2003. (1,2).

Ethiopia is situated in the Horn of Africa where it is bordered by Djibouti, Eritrea, Sudan, Kenya and Somalia. The population of Ethiopia is estimated to be over 65 million less than 14% of the population lives in urban area. The majority of the

population lives in the high lands of Ethiopia where subsistence forming predominates. (4)

Ethiopia is one of the most seriously affected countries in the region, with the national adult prevalence rate of 4.4% with urban HIV prevalence estimate reaching as high as 12.6% and that of rural as low as 2.6% by the year 2003. (5)

Currently about 2.6 million people are living with the virus. This puts Ethiopia among the group with the highest levels of infection in African next to South Africa and Nigeria (6)

In Ethiopia Among demobilized soldiers who consented to VCT, The HIV prevalence was 6.6 % (Yigeremu Abebe, personal communication 2001). Similarly, amongst 62.000 rural and 10,000 Urban Army recruits (studies between 1999 and 2000), the prevalence of HIV was 3.8 and 7.2 % respectively (Yigeremu Abebe, personal communication 2001 (4)

Rate of condom Usage

- Prevention, despite numerous programs around the world is in its infancy stages. The use of condoms, the cheapest and most effective form of protection against AIDS during sexual contact, is rare in most regions in the developing world. In nearly all Africa countries condom use rat is less than 5% Only four countries in Asia and four in Latin America and the Caribbean have Condom use rates of 10% or more; The highest rate of condom use is in Japan with 46%, and Singapore 24%. In Europe, Denmark, Finland, Sweden, Spain, and Slovakia all

show a rate over 20% The U.S condom usage rate is 13% and Britain in 18%. (7)

The armed forces in many high prevalence countries are especially vulnerable to STIs including HIV. Various factor that contribute to such high prevalence include the young

Age of many soldiers, their related high level of sexual activity, a military culture to promotes risk – taking, the high availability of commercial sex workers near army camps, and the length periods of during which soldiers are away from Home. These combinations of factors leads to situations in which soldiers engaged in sexual affairs with commercial sex workers in the vicinity of their camps, often these sexual encounters are not protected by condom use. one of the behaviors changes or new practices suggested to stop further spread of HIV infection is condom use, even if it does not completely eliminated the risk of transmission (8,9)

Justification for the Study

AIDS is one of the emerging public health problems that could have devastating impacts on socio-economic development of a country. Ethiopia is experiencing a generalized HIV/ AIDS epidemic among the overall population, in which the HIV. Prevalence rate among the sexually active adults in general population has surpassed 1% (10).

Male and Female condom are an essential component of such efforts and Expanding and improving condom promotion and distribution are absolutely vital to success in the fight against the spread of Aids. The fact that condoms can save lives in indisputable. It is also a fact that a great many people in every country have no alternative to condom use for protecting themselves or their sexual partners, wives or husbands from infection. Prevention efforts that do no include condoms are there fore incomplete and will ultimately be ineffective (3).

Members of Ethiopia defense force, not only being part of the community where the epidemic is generalized, but also because of their young age, the nature of their profession and other related factors; are at increased risk of HIV / AIDS. The available data also confirm the fact that staying in the military will increase the risk of being infected by HIV and other STIs. A number of studies have shown that the military personnel in Sub-Sahara Africa are very much affected by HIV / AIDS. Therefore, the pandemic is very well established to pose security threat, endangering peace and stability of countries of this region. Without peace and stability; development, democracy and human rights can never be envisaged (11).

Few studies were carried out to show level of knowledge attitude practice of HIV / AIDS prevention strategies among military personnel of Ethiopia. According to the military behavior, those few previous studies are not adequate to show the full picture of the phenomenon, and still there is a gap in the trend of condom utilization among military Personnel of the country. There fore, this particulate study will try to assess utilization of condom, high – risk sexual behavior, and

measure the level of knowledge and attitude t wards condom among this study population. The outcome of this study will hopefully

used to design effective campaign messages and appropriate strategies to promote condom use among members of Ethiopian army.

2. LITERATURE REVLEIW

2.1 BACK GROUND

Despite high levels of HIV prevalence in sub- Saharan Africa, levels of condom use remain below what is necessary to arrest the HIV epidemic. The armed forces in many high – prevalence countries are especially vulnerable to STIS, including HIV (8,12).

The need for condoms is becoming increasingly urgent due to the rapid speared of AIDS, which is caused by the human immune deficiency virus (HIV). HIV/ AIDS is now among the top 10 causes of death worldwide and may soon move in to the top 5. World wide, people use an estimated 6 billion 9 billion condoms each year. To protect fully against sexually transmitted infections (STIs), however an estimated 24 billion condoms – at least 15 billion more should be used. Closing

the gap between condom use and need presents an enormous challenge to public health care (13).

The military are highly mobile; their mobility has influenced them to change their sex partners frequently. In most cases sex workers follow them but only rarely do they continue their relation ship with particular partners. Particularly the unique characteristics of soldiers, which emerges from life risking obligations and responsibilities such as thinking, “I will die tomorrow, should do every things including sex with deferent partners HIV intervention strategies, which target the military, but also for preventing the spread of HIV to the general population. This is because members of the military can act as a bridge for HIV transmission (14,15).

So condom offers effective protection against the sexual transmission of HIV if they are consistently and correctly used. Since most of the world's people have already been exposed to this message in some way the most urgent task facing emergency relief agencies during this acute phase is to make condoms freely available to those who seek them. In both Europe and Africa, studies have demonstrated up to a 90% reduction in HIV transmission among new army recruits in northern Thailand (16,17).

2.2 Knowledge about HIV / AIDS and Condom.

Military personnel are more aware of HIV / AIDS than the general population. A large proportion of respondents were aware that condoms could be used as protection against HIV / AIDS and other STDs, and mot of the respondents (98%) knew where to acquire

one. Study showed in Ethiopia amongst uniformed services respondents over 99.5 % of both ground forces and Air force had heard of HIV / AIDS. Amongst these, 60.1 % of the ground forces and 84.0 % of the air force respondents knew some one who was infected with HIV or had died of Aids. Similarly amongst uniformed services respondents, more than 95% had heard of condoms. Of those aware that make condoms Existed, 86.9% of ground forces and 69.5% of air forces respondents know where they could obtain condoms. The most commonly mentioned sources were sh0ps and uniformed services health institution (4). Study in Nigeria showed that of the total 317 responding CSWs, 305 (96.2%) reported that they had knowledge about condoms, however the prevalence of condom use among these CSW was very low.. similar Study conducted in Nigeria soldiers indicates profound knowledge and awareness of HIV/ AIDS by the soldiers . Behavioral attitudes and condom utilization was found inconsistent with the knowledge at their sero negative before they left for Liberia (4, 18, 19).

Study showed in southern Ethiopia among youth two- thirds of the study subject thought that any youth of their age would have enough knowledge about the use and importance

of condom .The remaining third were either unaware or could not be sure if youth would have knowledge about condom or note. Stud4y conducted in Addis Ababa among adolescents showed that from sexually active students only 43.2% were knew about condoms on their first coital encounter Study in kalu and Combolcha

Woredas among School and out – of- school boys and girls showed that, the majority of respondents in all categories reported that they had heard of condom before, the majority of respondents in all categories reported that they had heard of condom before, the lowest awareness was among out-of-school girls at 19% (20,21,22).

2.3 Socio –demographic factors on condom use. (Condom utilization)

Study in Nigeria Navy personnel, 98.7% of the respondent had sex. 75% had experienced their first sexual contact by the age of 20 years. The majority 88.1% of the respondents had multiple sexual partners, with lifetime number of partners ranging from 1-40 with a mean of 5.1. In Ethiopia different study in different party of the country revealed the mean age at first sexual debut to be between the ages of 13.6 to 19 years (23,24).

Other study showed in china among patents diagnosed STD who visited the center. Most of the patients had multiple sex partners in the 12 months before the interview. Mean numbers of sex partners were 6.2 for men and 7.2 for women. Condom use was UN common. Very few men and non at the women reported always using condoms; 68.5% of the men and 26.0% of the women reported never using condom even when having sex with a person other than a spouse or boyfriend / girl friend (25).

According to a 1996 survey, 61 % of married military men reported having sex with an entertainment service work in the previous month, thus the likelihood of HIV spreading to

their families in high. Other studies among unmarried military members showed that 42.1% said they did use a condom. Male were more likely than females to report they or their partner used a condom. (44.6%)Vs 33.2%, respectively Study conducted among military of Nigeria showed that more officers (25.6%) than rating (17.8%) used a condom during their last sexual encounter, the difference was not significant the group of discussants including FSW was common among naval personnel as a whole but especially so with rating (15,23,26).

2.4 Military group and high Risk behaviors for HIV / AIDS

Study in Arusha assessed the determinates of high-risk sexual behaviors and condom use among adult in 1997, it was observed that significantly more men than women reported having multiple sexual partners. More over, alcohol use, and sex under the influence of alcohol were significantly associated with multiple sexual partners in men only. In men and women, early sexual debut and being young, unmarried, traveling out of the Arusha region and having multiples sexual partners were associated with increase condom use.

A comparative study of 20 sub- Saharan Africa countries showed high level of sexual activity among young men and high levels of sexual multi partner ship but relatively low level of condom use (25,27).

Regular alcohol drinking couple with drug use was risk factors for unprotected sex amongst the uniformed services respondents. Data should that amongst the ground forces and air forces respondents 47.4% had consumed drinks containing alcohol in the pervious four weeks. Amongst all groups of uniformed

service respondents' alcohol was consumed regularly (at least once a week) by 22.5% (4).

The prevalence of HIV and STIS among military personnel is higher that among the average population in many countries. Data from a rural blood bank in Mozambique showed that 39% of military blood donors were HIV- positive compared to 15% of non-military donors. Almost 75% of the HIV – infected soldiers also tested positive for syphilis. Nigerian military personnel find themselves in professional and personal situations that lead to engaging in high-risk behaviors that could put them at risk of contracting STIs, including HIV. 15.3% of the respondents reporting having had at least two sexual partners over the last 12 months (8,19).

In Ethiopia the military personnel are a population group at special risk of exposure to STDs, including HIV. In peacetime, STD infection rates among armed force are generally two to five times higher than civilian population. According to a 2001 study in Ethiopia, while 81.2% of soldiers in the army had Sexual contact with commercial sex workers, 8.2% and similar contact with non-commercial non-regular sex partners in the previous 12 months. Often soldiers do not use condom consistently during sexual contact with commercial sex workers, and /or non-commercial non-regular sex partners (28,29).

2.5 Factors influencing sexual behavior

Study conducted in Cambodia among female commercial sex workers showed that mot of the DCSW possessed condoms and nearly half of them answered that

they had used them in every sexual contact. Almost all the condoms which the DCSW had at that time had

been provided by their brothels. On the other had, only 24.5% of the IDCSW had condoms and 10.6% said they used them every time (30).

Unprotected sexual contacts with multiple partners were common among naval personnel in Nigeria. Discussant and informants provided two explanations for this behavior. The first was the nature of military posting, which take many officers away from their families for extended period of time and second was influence of alcohol. Other similar study showed that, the reasons for not using Condoms with a FSW were:

- They were not susceptible to HIV / infection (36.1%)
- Sex was not planned (17.5%)
- Lack of knowledge about AIDS (10.3%)
- Condom was not available (7.7%)
- Need for full satisfaction (5.1%)and
- The fact that FSW was a regular partner (5.2%) (23).

Other study showed that, out of those who had not used a condom, the main reason given for not doing so was because they were in one-to-one sexual relation ship. And it is interesting to not that 25% of boys from rural out -of- school respondents said they do not use condom because they wanted to have children.

Study conducted in North West Ethiopia among high school students in rural town, showed that the most preferred methods of prevention of acquisition of

AIDS mentioned were; having single sexual partner only by 62.9%, using condoms by 18.4% and abstention from sex by 14.4% students. Out of the sexually active respondents, 45.9% had used condoms with in the past six-months.39.3% reported using condoms always (22,31).

2.6 Condom Use

The need for condoms is growing as HIV/AIDS and other sexually transmitted inflections (STIs) spread and this is true for countries like Ethiopia where hetero sexual relation is the primary mode of spread for HIV (32). Condoms are simple and affordable & yet

life – saving technology. They can be easy to use, do not require medical supervision, and can be distributed through schools, places of employment, bars, and other public venues, as well as health care facilities (3).

Studies conducted in Cambodia shown that condom use in the military has increased steadily over the past decade. In 1996 BSS survey showed that only 42% of military personnel always used condoms with commercial sex workers. By 2002, this had increased to 86%. Similar Survey conducted in Cambodia among military showed that, consistent condom use by military men increased from 54.2% in 1997 to 69.7% in 1999, and the percentage of police reporting always using a condom rose from 54.2% in 1997 to 81.3% in 1999 (15,33).

A few studies conducted in the urban area of Srilanka suggest low condom use among men. In 1997, only 47% of men between the age of 15-49 in the rural area of Matale and 9.6% of men in the capital of Colombo reported over using

condoms. In Lose Angles condom use among high school students showed that the percentage of male students who reported that they were engaged in vaginal intercourse during the past year & using condom every time increased significantly from 37% to 50%, and the percentage of male

who reported condom use at recently initiated first vaginal intercourse increased from 65% to 80%. On the other hand, female respondents showed no significant change in their condom use. As in many parts of the world, condom use in Africa tends to be low in many populations. Among high- risk adults in Nairobi, Kenya, only 3% reported used a condom with their last sexual partner (17, 34, 35).

Among the ground forces respondents with regular sex partners, 15 % use condoms during their most recent sexual encounter; the same proportion used condom consistently. Amongst those with commercial sex partners, 91 % use condoms during their most recent sexual encounter and 80% use condoms consistently. Amongst ground forces respondents with non-regular partners, 78% use condoms during their most recent sexual encounter and 66% use condoms consistently (4).

A study of Ethiopia sailors reported a 14% rate of condom use, though even this low rate was reported as inconsistent. Munguti et al. reported that in Tanzania only 20% of the men and 3% of the women in their study had used condom; though the use was not reported as regular. Quinn et al, found that the highest reported rates of condom use among discordant couples in rural Uganda more 7.4% among women and 16.9% among men. Other study conducted in south Gonder among

adolescents showed that, only 27(37.5%) of the sexually active adolescents had ever use condom. Ten (41.7%) reported continuous condom use in the last 12 months. Out of 14, only 4 (26.6%) use condom the first time they had sexual intercourse and, 9(64.3%) use condom the last time they had sexual intercourse. A study conducted among Gonder College of medical sciences students in 2002 showed that among the sexually active students, 37.1% ever used condom. Among these who reported condom use, only 6.4% have used condom regularly and 5.1% used more than half of the time. The condom use rate among students who had contact with CSW was 61.9%. (22) Study conducted in southern Ethiopia among sexual activity of out of school youth, reported condom use rate during the first sexual intercourse was 13.5%, while it was 27.6% during their most recent one. There was a significant change in the rate of condom use (17, 20, 24, 36).

3. Objective of the study

3.1 General Objective

- To examine condom use and high- risk sexual behavior among members of Ethiopian Army.

3.2 Specific Objectives

- To determine the utilization of condom
- To describe high – risk sexual behaviors
- To describe what influence sexual behavior and condom use.

4. Methodology

4.1 Study area

The study was conducted in one of the 107th core division, in northern Ethiopia: In Tigray regional states particularly Zalambesa front. This is around 930 km away from Addis Ababa. The core was dispersed in the area between Makele and Zalambesa. The core has four divisions, three of which were infantry and one of which was mechanized, each infantry division has three brigades and each brigade has four battalions.

4.2 Study design

Study design was institutional based cross – sectional quantitative survey supported by qualitative method in order to maximize the data quality and identify possible source of information, particularly FGD focused on important topics identified by the quantitative methods as back up.

Source and Study Population

The source population constituted all members of the 107th core of Ethiopian Army. The study population constituted one randomly selected brigade from one division of 107th Core of Ethiopian army.

Inclusion and exclusion criteria

All male soldiers, age 18-52 years, who can read & write and was found in the study population, were included.

All female soldiers and male soldiers who cannot read and write were excluded from this study population.

4.3 Sample Size determination

The proportion of condom use among military personnel was unknown. There fore to get the largest sample size 50% proportion was taken for sample size determination. Moreover it was assumed that the degree of precision for generalization as 0.05 and degree of confidence with which to conclude equals 95%. With the above assumptions the sample size was calculated using simple population proportion.

Assumption

n = Sample size

$z\ \alpha /2 = 1.96$

p = prevalence of condom use, which is approximately 50%

d = degree of precision 0.05 (5%)

Design effect = 2

The sample size is calculated using the following formula.

$$n = \frac{(z\ \alpha /2)^2 . p (1- p)}{d^2} = \frac{(1.96)^2 (0.5 \times 0.5)}{0.05^2} = 384$$

Since multi- stage sampling technique was applied, to correct the design effect; we multiplied the value of n by 2;

The total sample size will be 2 x 384 = 768 finally, we add 10% for non- response rate; will make the total sample size 845.

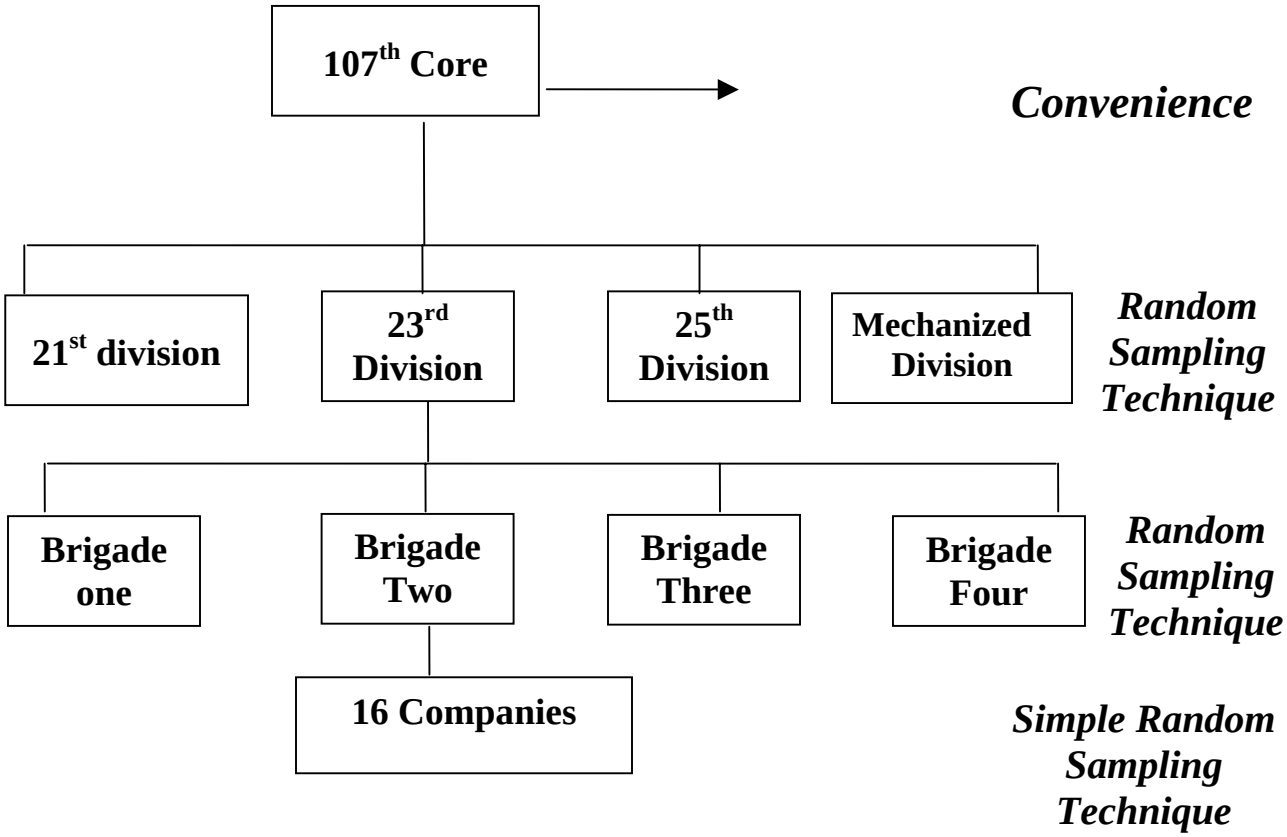
4.4 Sampling procedure (technique)

Multistage sampling technique was used to select the study subject. 107th core was selected by convenience. The reason why this core was selected is that, it was logistically feasible to carry out the study with in the limited period of time. This core has 3 infantry divisions and one mechanized division from these division one division was selected by random sampling method from the selected division, one brigade was selected by the same method. A brigade has 16 companies. There fore, a study subject was members of the selected company. Study subjects were selected from each company by simple random sampling based on proportionate to size.

The focus group discussants were organized as 8 members based on predetermined military rank and marital status to keep homogeneity. Focus group discussants were those who are not included in the quantitative study.

Sampling Producer of Study Subject

Zalambesa front . Nov . 2004



4.5 Method of data Collection

The questionnaire was developed based on predetermine variable, data was collected by using self administered questionnaires, which was close-ended, simple and short question was prepared, the questionnaire was prepared after reviewing relevant literatures. Four nurses were recruited as supervisors. The supervisors distributed questionnaire, confirm completeness and collect completed questionnaire from each site .The questionnaire was prepared in English and then translated to Amharic for field work and then retranslated in to English to cheek its consistency. Both supervisors and moderator were given the required and appropriate training. Pre-test was carried out in one neutral division. Before the beginning of the pre- test its objective and purpose was Explained to the commanding staffs of the division.

The pre test aims at improving the structure and content of the questionnaire, evaluating the respondents reaction, improving the approaches of supervisors to the respondents and determining the average time required to administer one questionnaire. Semi- Structured questionnaire, which is Open-ended, was used to guide the FGD.

One moderator was selected to facilitate the discussion. Each focus group discussion was conducted in the presence of the investigator that was helping appreciate guesser and body languages. A short note during discussion and audio tape records taken.

FGD- consent of four respondents, the group have homogenous composition in terms of marital status and military rank. Discussion question guide were arranged to guide the discussion. All discussion was tape recorded in Amharic, transcribed and translated to English. A total of four focus group discussion guided by question guide were conducted.

4.6 Study Variable

- **Independent variables (Explanatory Variable)**

- Socio- demographic characteristic such as

Age	Educational level
Marital Status	Ethnicity
Military rank	Religion
Monthly wage	Military Service Year

-Knowledge about condom

-Attitude to wards use condom

-Sexual behavior

-Willingness to VCT

- **Dependent variable (Out came variable)**

-Condom use

-Sexual risk behavior

4.7 Data management and analysis

Dummy tables that consider the main research questions were drafted after designing the questionnaires, and then first code was given to the completed questionnaire. Data was entered in to and processed using EPI-info version6 soft ware and SPSS statistical package. Date cleaning was performed to cheek for frequencies, accuracy, outliers, and consistencies and missed values and variables. Any error was identified and corrected. Frequencies, proportion and summary statistics were used to describe the study population in relation to relevant variables.

Odds ratio and x^2 were computed to assess the strength of the association and statistical significance. Binary and multivariate analysis was carried out to see the effect of each independent variable on the dependent variable. In the qualitative part of the study the raw data was in the form of field not and tape recorder documents. The discussions were transcribed into written text for analysis. The translated text document were coded using text marker manually to generate issues and ideas expressed by the participants, bring in to a single category labeled by a word taken from the data. Reading and coding was started while the data is begun collected.

Quality Control

To assure the quality of the data, properly designed data collection instrument was developed. Training was given for moderator and supervisors. Everyday, 10% of the collected data was reviewed and cheeked for completeness and relevance by the supervisors and principal investigator.

In the qualitative part of the study, Training for moderator, recorder, note taker were given by principal investigator, Probing questions were prepared in English and

translated to local language (Amharic) since majority of participants communicate with Amharic language and finally translated back to English to maintain consistently.

4.8 Ethical Consideration

A letter of ethical clearance was obtained from AAU medical faculty, ethical clearance committee. Discussion was held with head quarter of the health command of MODs. Officials down in the organizational hierarchy of MOD were communicated through official letters written from the MOD head quarter of the health command.

Respondent was informed on the nature and purpose of the survey and asked if they consent verbally. Confidentiality was reassured and participant was made aware that there would not be any adverse consequence to their refusal to participate.

Communication on the Result

The findings of the survey will be disseminated to relevant organizations and bodies who can make use of the study, including Action Aid Ethiopia, DCH, MOD, EPHA, MOH, and relevant NGOS.

Operational Definitions

Condom Use:

Consistent and appropriate use of male condom during sexual intercourse

Consistent Condom use:

Use a Condom every time Sexual relations took place

Multiple sexual partners:

More than one sexual partner

Non- regular partner:

Sexual partners who had been together for less than 12 months, were no

Married, had never lived together and did not make any payment for sex.

Other ranks:

Military personnel having a military rank of lance corporal, corporal, and sergeant.

Risk Factor:

Condition and behaviors, which make it more likely that a person will become

Infected with HIV

5. RESULT

5.1 Socio – demographic characteristics

A total of 845 militaries completed the questionnaires, of which 5 response were excluded for gross incompleteness and in consistency of responses. Analyses were made based on the 840 completed questionnaires, thus the response rate was 99.4%. Out of the respondents, 486 (58.8%) were PVT, 267(32.3%) were other rank and 73 (8.8%) were officers. Most of the participants 629 (75.3%) were orthodox Christian while 14.7%, 8.9% and 1.1% respondents were Muslim, other Christian and others respectively. The mean age was 28.5 with SD 5.1 and the majorities (86.6%) of the participants were less than 35 year old, about 22.3% were between 18 and 24 years. Small portion of the population is between 35and 47 years.

Three hundred twenty seven (38.9%) of the study population was Amhara, 246 (29.3%) Oromo, 105 (12.5%) Tigray, 97 (11.5%) SNNP, 65 (7.7%) were others by ethnicity. Regarding educational status 143 (17.4%) of respondents were able to read and write, 362 (44.1%) were grade 1-6, 293 (35.7) were grade 7-12 and the remaining 23 (2.8%) were diploma and above.

Among the study population 421 (51.7%) had 0-5 years, and 394 (48.3%) had more than 5 years of military service, 367 (44.3%) of the respondents were married and 462 (55.7%) were not married.

The data showed that the military group was highly mobile, more than 90.9% of the respondents reported that they had been stationed at their current base for less than one year.

The mean wage of the military was 553.53 Ethiopian birr, Alcohol consumption in the military was high, with 27(3.4%) of respondents reporting alcohol consumption every day, 201(25.1%) at least once a week, 223 (27.9%) were less than once a week and 349(43.6%) were never. By contrast, only about 14 (1.7%) and 24 (3.2%) of respondents reported that they consume chat and shisha (gaya) respectively, and 21 (2.6%) were taken injected drugs in the past 12-month.

Table 1 - Socio- Demographic characteristics of the study population, among military personnel in zalambesa front ,in 1997.

Variable	Frequency	*Percent*
Age in years (n=804)		
18-24	179	22.3
25- 34	517	64.3
>35	108	13.4
Religion (n=835)		
Orthodox Christian	629	75.3
Other Christian	74	8.9
Muslim	123	14.7
Others	9	1.1
Ethnicity (n=840)		
Amhara	327	38.9
Oromo	246	29.3
Tigray	105	12.5
SNNP	97	11.5
Others	65	7.8
Educational Status (n=821)		
Read and Write	143	17.4
Grade 1- 6	362	44.1
Grade 7-12	293	35.7
Diploma and above	23	2.8
Military Services (n=815)		
0-5	421	51.7
> 5	394	48.3

Table 1, Continued---

Variable	*Frequency*	*Percent*
Military Rank (n=826)		
PVT	486	58.8
Others	267	32.3
Offices	73	8.8
Marital Status (n=829)		
Married	367	44.3
Not married	462	55.7
Staying in the deployment Sits (n=812)		
0-1	738	90.9
2-5	35	4.3
>5	39	4.8
Monthly Salary (n=677)		
200-450	15	2.2
451- 750	603	89.1
> 750	59	7.2
Frequency of alcohol intake (n=800)		
Every day	27	3.4
At least Once a Week	201	25.1
Less than One Week	223	27.9
Never	349	43.6
Injecting Drug User (n=810)		
Yes	21	2.6
No	789	97.4

5.2 Knowledge and utilization of condom

Among the respondents 837(99.9%) heard about male condom, from these who had heard condoms the source of information was 739 (88.6%) health professionals, 304 (36.5%) mass media, 16.8 % their friends 12.7% their leaders, and 10 % their parents. Eighty-three point eight percent of the respondents knew from where to obtain male condoms. A large proportion of respondents 97.2%reported that they could obtain condoms from work site, and 789 (97.2%) reported that they like to get condoms from their work institutions.

The most commonly mentioned sources were shops and health professionals in the camp 97.7% and 61.9% respectively, followed by clinics (56.6%) and pharmacies (51.9%). 739(88%)of respondents reported that they travel less than an hour from their deployment areas or work places to get male condoms and most of the respondents 799 (95.9%) get condoms whenever they need. And among those who have been sexually active 78l (94.1%) respondents were ever used condom, from those who responder 71.2 % were consistently used, 18% frequently, 8.4% were sometimes, and 2.4 % were only once. Among the respondents 234(27.9%) had sex without condom with commercial sex workers and any other sexual partner who have never married for the last 12 months, and 801 (95.4%) respondents said condom could prevent HIV/AIDS.

Table 2 Knowledge and Utilization of Condom among military personals in zalambesa front in 1997

Variable	*Frequency*	*Percent*
Heard about condom (n=838)		
Yes	837	99.9
No	1	.1
Source of information		
Health profession	739	88.6
Friends	140	16.8
Parents	83	10.0
Mass media	304	36.5
Leaders	106	12.7
Time for taking get condom (n=840)		
< 1 hours	739	88.0
> 1 hours	101	125
Get condom when ever you want (approval of condom distribution) (n=833)		
Yes	799	95.9
No	34	4.1
Ever used condom (n=830)		
Yes	781	94.1
No	49	5.9
Frequency of using condom (n=837)		
Consistently	525	71.2
Frequently	133	18.0
Sometimes	62	8.4
Only Once	17	2.4

5.3 Sexual history of military personnel

Among the respondent, 828(98.8%) ever had sexual intercourse, from these who ever had sexual intercourse, the mean age of first sexual intercourse was 19.6± 3.2 years.

Most of the respondents 762 (90. 8%) had been sexually active during the previous 12 months. Amongst the respondent, 582(76.4%) had regular partners, 534(70.1%) commercial partner and 412(54.1%) respond non- regular non-commercial partner in the last 12 months. Similarly most of the respondent had multiple partners, with regular, commercial and non –regular non-commercial partners (19.6%, 52.4% and 32.7%) respectively.

Of the five hundred seven (87.1%) who were sexually active with regular partner with whom they had sexual relation during the past 12 month; 294 (58%) were use condom, from those who suggested condom use, 45% were said my self, 47.2% were both decision and 7.8%were said my friend. In contrast, 213 (42%) didn't use Condom in the last 12 months, from these who didn't using condom, the common reasons were 29.2% were desire to conceive, 25.8% were faithful, 10.0% used other contraceptive and 6.7% they were drunk. From the respondent 144 (53.3%) used condom consistently, 50(18.5%) almost every time, 47(17.4%) sometime, and 29(10.8%) no responded.

Of the 429(80.3%) who were sexually active with commercial sex worker, most of the respondents 355 (82.8%) had sex in the town, and 58 (13.5%) had in the village. Form these 398(92.8%) had used condom, and 31 (7.2%) didn't use condom.

From the respondent 279 (71.0%) were consistently use, 74 (18.8%) were frequently, 34 (8.7%) were sometimes, 6 (1.5%) no respond. From the respondents who suggest to use condom, 169 (42.9%) reported myself, 18(4.6%) my friend and 207 (52.5%) were both decision.

From these who didn't use condom with commercial sex workers, the reason for not use condom were, most of the respondent 29.0% were drunk alcohol, 12.9% were desire to conceive, 9.7 % were used other contraceptive and 9.7% were reported didn't think it was necessary, 6.5% were not available and 3.2%, 3.2%, 3.2% and 3.2% were reduce sexual pleasure, not important, don't like it, and partner objective respectively.

From these 260 (63.1%) who were sexually active with non- regular non-paying sexual partner, 215(82.7%) were sexual inter course takes place in the town, and 45 (17.3%) were in the village. Among the respondents 233 (92.8%) used condom, and 18(7.2%) did not use. From these who suggested condoms 78 (34.2%) were myself, 15 (6.6%) were my friend and 135(92.2%) were both decision. From these who didn't use condom, the reason for not using condom were 5(27.8%) desire to conceive, 4(22.2%) I was drunk,3(16.7%) in a hurry, partner objective and didn't think it was necessary (11.1%,11.1%) respectively. And the other reported that not available, I trust my partner, don't like it, and don't know how to use (5.6%, 5.6%,

5.6%, 5.6%) respectively. From the respondents 155(70.5%) were consistently, 40 (18.2%) were frequently and 21 (9.5%) some time and 4(1.8%) no response.

Table 3 Type and Numbers of Sexual Partner among Military Personal in Zalanbesa front in 1997.

Variable	*Frequency*	*Percent*
Ever had sexual inter course (n=838)		
Yes	828	98.8%
No	10	1.2%
Sexual intercourse in the last 12 months (n=(762)		
Yes	762	90.8%
No	77	9.2%
Had Regular Partners in the last 12 month (n=582)		
None	180	23.6%
One	433	56.8%
>1	149	19.6%
Had Commercial Partners in the last 12 month (n=534)		
None	228	29.9%
One	135	17.7%
>1	399	52,4%
Had None Regular none commercial Partners in the last 12 month (n=412)		
None	350	45.9%
One	163	21.4%
>1	249	32.7%

5.4 Knowledge and attitude towards HIV\AIDS and STIs.

Among the respondents, about (99.0%) were aware of STIS, among these who knew STIS existed, the most commonly mentioned symptoms of STI in men was 683(82%) genital discharge, 511(61.4%) Genital ulcer, 621(74.1%) burning pain and followed by abdominal pain, swelling in the groin area (28%, 40.1%) respectively.

Among the respondent 49(6.2%) and 38 (4.9%) had a symptoms of genital discharge and genital ulcer in the last 12-month respectively.

Form these who had history of STIs 27 (61.4%), 14(31.8%), 2(4.5%) were treated in Hospital\ clinic, pharmacy and traditional medicine, respectively, and 1(2.3%) were no medication. Among those who taken the medication, 30(88.2%) have taken all the prescribed Medication and 4(11.8%) didn't take the medication completely.

Table 4 Knowledge of STIs, among Military personal in Zalambesa Front in 1997

Variable	*Number*	*Percent*
Ever heard of disease that transmitted through sexual intercourse (n=840)		
Yes	832	99.0
No	8	1.0
Knew symptoms of STDs in men (n=832)		
Yes	683	82.1
No	149	17.9
Had a genital discharge during the past 12 months (n=792)		
Yes	49	6.2
No	743	93.8
Had a genital ulcer/sore during the past 12 months (n=779)		
Yes	38	4.9
No	741	95.1
Did you take all the medicine prescribed (n=34)		
Yes	30	88.2
No	4	11.8

Among the respondents 822 (99.0%) of them, ever heard about HIV/AIDS. And from the respondents 626(77.4%) knew a person who is infected with HIV or who has died of AIDS and similarly 187(22.3%) of the respondent mention had close relative or close friends who was infected with HIV or has died of AIDS.

Seven hundred thirty three (91.5%), 644(79.6%) and 701 (85.6%) of the respondents mentioned, people can protect them selves from HIV, by using condom, having one uninfected faithful sexual partner, and by abstaining from sexual intercourse, respectively.

Eighty nine (11.2%) and 136 (17.8%), of the respondents reported that mosquito bite and eating raw meat prepared by a person infected by HIV may transmitted the disease of HIV\AIDS respectively, similarly 30(3.7%) of respondents, were said that sharing of contaminated needle that was already used by some body, does not transmit HIV/HIDS. Seven hundred ninety (95.4%) and 791 (97.3%) of respondents reported that having multiple sexual partners and alcohol intake can predispose to HIV acquisition.

From sexual active militaries, 366(49.1%) of respondents said that they are put at risk of getting HIV/AIDS. In contrast 379 (50.9%) were not put at risk of getting HIV/AIDS. From those who put at risk of getting HIV/AIDS, the reasons for getting risk for HIV/AIDS were; 112(30.6%) cited more than one partners as reason, 58 (15.8%) pointed to mistrust, 95 (26%) have has sex with out condom, 27 (7.4%) have had sexual intercourse with commercial sex worker, 38 (10.4%) past history injury with contaminated sharps, and 26 (7.1%) blood transmission.

In contrast the respondents who feel they are said not at risk. The majority of the respondent 267 (43.4%) and 213 (34.6%) were said that I always use condom and faith

full, respectively. Of the 821 respondent, 733 (89.3%) of the military heard about voluntary counseling and testing for HIV, 209 (25.6%) reported history of previously under go HIV and test and 725 (88.2%) were agreed to under go voluntary counseling and testing for HIV.

Table 5 Knowledge and Attitude of HIV/AIDS among military Personal in Zalanbesa front in 1997

Variable	*Number*	*Percent*
Ever heard about HIV or the disease called AIDS (n=830)		
Yes	822	99.0%
No	8	1.0%
Know anyone who is infected with HIV or who has died of AIDS (n=809)		
Yes	626	77.4%
No	183	22.6%
Have a close relative or close friend who is infected with HIV or has died of AIDS (n=840)		
Yes	187	22.3%
No	653	77.7%
Protect themselves from HIV by using condom correctly every time they have sex (n=801)		
Yes	733	91.5%
No	68	8.55
Can a person get the HIV from mosquito bites (n=797)		

Yes	89	11.2%
No	708	88.8%
Person get the HIV from eating raw meat prepared by a person infected by HIV (n=778)		
Yes	136	17.8%
No	642	82.2%

Table5, Continued---

Person get the HIV by getting injections with a needle that was already used by some one else (n=820)	***Number***	***Percent***
Yes	790	96.3%
No	30	3.7%
Can protect themselves from HIV by having one uninfected Faithful sex partners (n=809)		
Yes	644	79.6%
No	165	20.4%
Can protect themselves from HIV by abstaining from sexual intercourse (n=819)		
Yes	701	85.6%
No	118	14.4%
Having multiple sexual contact leads to HIV acquisition (n=828)		
Yes	790	95.4%
No	38	4.6%
Alcohol consumption and drug uses can predispose to HIV acquisition (n=813)		
Yes	791	97.3%

No	22	2.7%
Do you believe you have done anything that put you at risk of getting HIV virus (n=745)		
Yes	366	49.1%
No	379	50.9%

Table 5, Continued---

Variable	***Number***	***Percent***
Ever heard about voluntary counseling and testing for HIV (n=821)		
Yes	733	89.3%
No	88	10.7%
Did you ever under go HIV test (n=814)		
Yes	209	25.6%
No	605	74.4%
Volunteer to undergo voluntary counseling and testing for HIV (n=822)		
Yes	725	88.25%
No	97	11.85%

Multiple logistic regression analysis was done to control potential confounders. Condom use was compared with background characteristics such as religion; ethnicity; education, military service, monthly salary, and military rank, marital status and drug intake were analyzed. Marital status, which was significant before adjusting confounders, shows significant association yet in multiple logistic regression analysis [OR=5.56 (2.44, 12.66)]. Similarly

Regarding the military rank compared with condom use, which did not revealed significant association before adjusting, depicted statistically significant association between officers and other low rank military personnel's and PVT [OR=10.84 (1.22, 96.4)]. The remaining socio demographic variables still did not showed statistically significant association (Table 6)

Condom use was also Compared with other selected variables like military rank, approval (availability) of Condom, information about HIV/AIDS, can condom prevent HIV/AIDS, prevention of HIV/AIDS by abstaining, prevention of HIV/AIDS by having single partner, transmission of HIV\AIDS by mosquito bite, risk of alcohol and drug

consumption, information about VCT and previous under to test. Among the variables listed above, those who reported condom as reliable HIV/AIDS prevention were more likely to use condom and it showed statistically significant association [OR=0.33 (95% C.I= 0.16,0.96)], and these previously ever under go VCT for HIV test were significant association before adjusted confounders [OR=0.39(96)CI=0.16,0.96]. In the contrast military rank, which was significant association in the first model, did not revealed significant association in this model.

Additionally the other listed variables above were not significant both before and after adjusting potential confounders (Table 7)

Some selected variables such as military rank, length of stay in one site, information about HIV/AIDS, opinion about condom as reliable HIV/AIDS prevention method, Having single partner as prevention choice, prevention of HIV/AIDS by abstaining, Having multiple partner is a risk for HIV, Alcohol and drug consumption predispose to HIV infection, opinion of respondents about his risk to acquire HIV/AIDS, information about VCT and preparedness to VCT were compared with the other dependent variable called high risk sexual behavior.

From the entire variable described above opinion of respondent about alcohol and drug user can predisposed to HIV showed statistical significant association with high risk sexual behavior before adjusted confounders [OR= 2.64(95%CI=1.05,6.65]. The other remained variables did not showed significant association (Table 8)

TABLE 6 - Relation ship between socio-demographic variable and condom use among military group in zalambesa front, in 1997.

	Condom use		OR (95% CI)	
VARIABLE	**YES**	**NO**	**CRUDE**	**ADJUSTED**
Age in year				
18-24	175	4	0.28(0.07,1.06)	0.37(0.09,1.48)
25-34	477	34	0.87(0.37,2.11)	0.63(0.24,1.67)
>35	98	8	1.00	
Ethnicity				
Amhara	301	24	2.43(0.54,15.30)	2.14(0.46,10.04)
Oromo	235	8	1.04(0.20,7.27)	0.95(0.18,4.98)
Tigere	95	8	2.57(0.48,18.16)	2.59(0.40,12.81)
SNNPS	89	7	2.40(0.43,17.34)	1.78(0.31,10.20)
Others	61	2	1.00	
Educational status				
Read and Write	132	9	0.45(0.10,2.33)	0.27(0.55,1.33)
Grade 1-6	343	17	0.33(0.08,1.55)	0.23(0.05,1.01)
Grade 7-12	269	19	0.47(0.12,2.19)	0.42(0.97,1.81)
Diploma & Above	20	3	1.00	
Military Rank				
PVT	451	30	4.72(0.67,94.56)	10.84(1.22,96.4)*
Other	247	18	5.17(0.71,105.79)	9.16(1.04,80.43)*
Officer	71	1	1.00	
Marital Status				
Married	327	36	4.09(2.02,8.45)	5.56(2.44,12.66)*
Non Married	446	12	1.00	
Stayed in the deployment Site				
0-1	688	42	1.13 (0.25,7.02)	0.99(0.21,4.57)
2-5	33	2	1.12(0.10,12.00)	1.24(0.13,11.26)
>5	37	2	1.00	
Alcohol in take				
Every day	34	2	1.34(0.0,6.61)	1.12(0.12,9.88)
At least once a Week	191	8	0.96(0.36,2.49)	0.70(0.27,1.75)
Less than one week	211	12	1.30(0.55,3.05)	1.00(0.44,2.24)
Never	320	14	1.00	

TABLE 7- Relation ship between selected variable and condom use among military group by selected variable in zalambesa front, in 1997.

Variable	Condom use		OR (95% CI)	
	Yes	**No**	**CRUDE**	**ADJUSTED**
Military Rank				
PVT	451	30	4.72(0.67,94.56)	3.60(0.47,27.40)
Other Rank	247	18	5.17(0.71,105.79)	3.90(0.50,30.44)
Officer	71	1	1.00	
Approval of condom Distribution				
Yes	751	44	0.42(0.13,1.49)	1.39(0.17,10.89)
No	29	4	1.00	
Ever heard of HIV/AIDS				
Yes	768	46	0.42(0.05.9.26)	102.07(0.00,5.10)
No	7	1	1.00	
Prevention of HIV\IDS By Condom				
Yes	688	39	0.48(0.19,1.23)	0.39(0.16,0.96)*
No	59	7	1.00	
Prevention of HIV/AIDS By Faith Full sex				
Yes	600	39	1.25(0.55,2.96)	1.06(0.43,2.60)
No	154	8	1.00	
Prevention of HIV /AIDS By Abstaining				
Yes	659	43	1.83(0.61,6.11)	2.72(0.79,9.38)
No	112	4	1.00	
Can person get HIV By Mosquito bite				
Yes	80	7	1.49(0.59,3.61)	1.37(0.55,3.44)
No	663	39	1.00	
Alcohol and drug user Can predispose to HIV				
Yes	739	45	1.2 2(0.17,24,90)	1.18(0.14,9.50)
No	20	2	1.00	
Ever heard about VCT				
Yes	684	43	1.02(0.37,301)	1.06(0.36,3.15)
No	81	5	1.00	
Ever under go VCT for HIV test				
Yes	75	44	2.00(0.58,0 .82)*	0.69(0.32,1.49)
No	92	3	1.00	

TABLE 8 - Relation ship between selected variable and high –risk sexual behavior among military group in zalambesa front, in 1997.

Variable	High risk		OR (95% CI)	
	Yes	**No**	**CRUDE**	**ADJUSTED**
Military Rank				
PVT	134	329	0.62(0.32,120)	0.64(0.31,1.31)
Other	76	180	0.60(0.30,1.20)	0.56(0.26,1.20)
Officer	14	55	1.00	
Staying in the deployment Sit				
0-1	204	505	0.77(0.33,1.73)	0.65(0.27,1.55)
2-5	8	26	1.01(0.30,3.42)	0.87(0.23,3.23)
>5	9	29	1.00	
Every heard HIV/AIDS				
Yes	212	565	2.00(0.35,10.63)	1.28(0..21,7..55)
No	3	4	1.00	
Prevention of HIV AIDS by Condom				
Yes	191	511	1.34(0.74,2.39)	1.13(0.57,2.21)
No	21	42	1.00	
Prevention of HIV/AIDS by faithful sex				
Yes	169	449	1.18(0.79,1.76)	1.15(0.70,1.88)
No	47	106	1.00	
Prevention of HIV/AIDS By Abstain				
Yes	183	488	1.18(0.75,1.81)	1.36(0.80,2.29)
No	35	79	1. 00	
Having Multiple sexual Contact leads to HIV/AIDS				
Yes	209	548	1.50(0.68,3.26)	1.17(0.45,3.01)
No	12	21	1.00	
Alcohol and drug user can predisposed to HIV				
Yes	207	546	2.64(1.05,6.65)*	2.51(0.88,7.10)
No	11	11	1.00	
Every heard about VCT				
Yes	201	498	0.83(0.47,1.49)	0.71(0.38,1.32)
No	21	68	1.00	
Are you Volunteer to under go VCT for HIV				
Yes	196	494	0.91(0.54,1.52)	0.94(0.62,1.43)
No	23	69	1.00	1.00

1. Result of the Qualitative finding

Characteristics of the study area and population

A total of four focus groups were conducted from November to December in the area of zalambesa front. Depending on the concentration of military the bridged two was purposively selected. Majority of the discussant were grade 1-6 and grade 7-12. The compositions of the participant were homogenous in terms of marital status and military rank .The area selected for the studies were purposive and so does the respondents depending on the concentration of the military in the front.

There were a total of 32 military participants on the age range of 23 to 41. One unique feature of the area is, it is an area where the last Ethio-Eriterean war was conducted. The respondents stayed in the front less than one year most of the participant had sexual intercourse with more than one partner.

Knowledge & perception of HIV/AIDS

Almost all of the participants know about HIV/AIDS, the route of transmission and its prevention. The discussant generally mentioned the cause of HIV/AIDS, its seriousness and that it is incurable disease, and farther mentioned that the disease is transmitted through sexual intercourse, taking blood from infected person, sharing of contaminated materials.

As to the knowledge of the military, a 29-year-old second lieutenant from the bridged two expressed by saying;

“HIV /AIDS is a disease which is transmitted through blood contact or sexual intercourse. It is transmitted from one person to another when we use sharp objects commonly or through un safe sex.

Another discussant, age 31, second lieutenant, said;

> *‘’ HIV/AIDS is indiscriminating transmittable disease which has no demarcation and border and which affects all human races with regardless of sex, race, color and age.’’*

Condom use and sexuality

Most of the participants have understanding about condom use, concerning the utilization and its benefit. But they used to driven to un safe sex while having alcohol beyond their limitation, majority of the discussants believe that when ever alcoholic beverages are taken beyond the limit, they start to think that condom decrease their satisfaction during sexual intercourse and commit sex with out condom, one of the respondent said some drunk used to say there is no HIV/AIDS after 12. 0.clock in the night, consequently being drunk have sex with out condom.

A 23 years old PVT, from the same brigade explained about the use of condom by saying;

‘’ If condom is used properly it prevent unwanted pregnancy, and I am practically used condom, it is very effective, Some people exposed to sexually transmitted disease, since these people are not using condom properly’’.

Another, a 26 years second lieutenant, expressed on the problem of condom use by saying;

‘’ Some married members believe that it is bad to use condom and they consider that the use of condom is not acceptable practice by the society, there is lack of under standing about the use of condom, when the member go to country side think that a female in the locality could not have HIV/AIDS.’’

Risk and vulnerability

The majority of participant mentioned the following groups were at high risk for HIV, Soldiers, driver and prostitutes, because they do not live with their family. Few of the discussant said students are at high risk, thinking that they won’t contract the disease, while the commercial sex workers used to use condoms while having sex, exceptionally two of the respondents said that they do not believe in the idea that the army are more affected by HIV/AIDS as a high risk ,but the reverse is true since we are getting vast awareness, education through mass media, and by health professional during health education session .

As to the risk and vulnerability a 30 years PVT, expressed his view by saying;

''Commercial sex workers and drivers are at high risk, but as the army is getting enough knowledge through health education, it is not at high risk, as to me people living in the rural areas like Djibouti and shiraro at high risk.''

Another 32 years old PVT expressed regarding the risk and vulnerability by saying,

'' In my opinion, it is really that the first victim is the army class, for the reason that they had the long stay a part from their wives in their front. Thus, when they return to urban centers; they used to have sexual intercourse under the influence of alcohol with out condom.''

Risk aversion measures

Majority of the participate mentioned in their area, used condom as the first choice and secondly to live faithfully with one partner after screening and abstinence, the other prevention method is dissemination of health education as the best option of prevention in the army, few of course expressed it is impossible to apply abstinence because of the nature of career, as most military are young.

In relation to the preventive measures, a 28 years second lieutenant expressed his view by saying;

'' The main method of preventive HIV/AIDS here is the use of condom, but now we are using another method that is abstinence and having one sexual partner only, as our service is not enough for marriage, what we commonly used to prevent HIV/AIDS is condom.''

Another a 24, years old PVT expressed his view by saying;

‘’Although some times the army commit un safe sex with out using condom. Condoms are playing major role in all preventing HIV/AIDS, and some members use marriage as another option of preventive measure.’’

DISUCSSION

This study has tried to assess condom use and high - risk sexual behavior among military personnel in zalmbesa front, Northern Ethiopia. IN addition, the study tried to see the association between condom use and the basic demographic variables, level of Knowledge of condom, HIV/AIDS and misconception on HIV/AIDS transmission.

I n this study nearly all of (99.9%) of respondents were ever heard about condom and this finding is slightly higher than the result reported by behavioral survey among uniformed service in Ethiopia, which identified 95% (4). This apparent increase could be attributed with a sustainable and organized peer education among the military personnel.

A study conducted in Ethiopia among ground force found that 83.9% of sexual active respondents were ever use condom (28). Another study undertaken in Northwest Ethiopia among secondary school students revealed that 45.9% of respondents ever use condom (31). In this study relatively high proportion 94.1% of respondents were ever use condoms. From those respondents who ever used condom, only 71.2% were practiced condom consistently.

Most of the respondents 90.8% had sexual relation in the last 12 months of which 87.1% had sex with regular partners, 80.3% with commercial sex workers and 63.1% with non-regular non-commercial partners. From those who had sex with commercial sex workers, 92.8% were use condom of which 70.1% were consistently practiced.

Our finding complement the finding identified by a study conducted among ground force of Ethiopia army, which found 81.2% had sex with commercial sex workers and often soldiers do not use condom consistently with CSW (29).

I n this study (99%) of respondents were ever heard about HIV/AIDS and this finding go in line with the result of other similar study .A behavioral surveillance survey conducted in Ethiopia among uniformed services found that 99.5% of respondents have had information about HIV/AIDS (4). The high proportion of information about HIV/AIDS could be attributed with the huge awareness creation campaign through different channels locally and at national level.

Regarding the preferred HIV/AIDS prevention strategies, survey conducted in North West Ethiopia among high school students found that 18.4% to use condom, 62.9% to have faithful single sexual partner and 14.4% preferred abstinence (31). The finding of this study showed that 91.5% prefer condom, 78.6% faithful sexual partner and 85.6% abstinence .The possible reason why high proportion of respondents preferred condom is that the high mobility of military personnel from place to place not enabling them to have single partner. Moreover, it is not allowed to make a marriage before serving at least for five years.

In this study factors predispose to acquire HIV infection found that 95.4% having multiple sexual partners and 97.3% alcohol intake. This result was comparable with the

finding reported by study conducted in Arusha, which identified alcohol intake and sex under the influence of alcohol were significantly associated (25). 49.1% of the respondents mentioned that they were put themselves at risk of getting HIV/AIDS. From these respondents, the reason for getting risk for HIV/AIDS were 30.6% having more than one partners, 24% mistrust, 26% sex with out condom and 7.4% sexual intercourse with CSW. These findings were strengthening the above discussion.

A study conducted in South Gondar among out of school adolescents about VCT, only5.9% of the respondents were know their sero status. In our study 98.3% of the respondents have heard about voluntary counseling and testing for HIV, of which 25.6% had know their sero status. Perhaps, the possible explanation for such high discrepancy between military personnel and out of school students is that militaries are gathered in camps and easy to create awareness about VCT (24).

Data from focus group discussion supported the quantitative findings in related to knowledge, access to condom, and high risk sexual behavior was there in military personnel (i.e. un protected sex, multiple partner) the reason for exposure to high risk behavior is on the influence of alcohol, these results are similar to the study conducted among Nigerian naval personnel (23)

STRENGTH AND LIMITATION OF THE STUDY

♦STREGTH

1. Since we use self-administered questionnaire, it is possible to minimize the denial of response, which is usually common in such sensitive issues.
2. The use of qualitative method to back up the main study enables to substantiate the finding from quantitative method.
3. Conducting such study in army force could be an important input minimizes the existing shortage of literature in the area.

♦LIMITATION

The shortage of literatures in the area of condom use nationally among military personnel is critical. Therefore, it was an important problem to make good discussion.

CONCLUSION

1. Knowledge about condom and HIV/AIDS is higher among the military personnel but the utilization is low so there is a gap between knowledge and practice.
2. There is high-risk sexual behavior, which is reflected by having multiple sexual partners and sex with commercial sex workers among the army force. So there is a risk to predisposal to HIV/AIDS.
3. Regarding condom practice officers are more likely to practice than their counterparts.
4. Alcohol consumption is a common culture among military personnel and it predisposes them to unsafe sexual practice. This is similar to the respondents mention in the FGO.
5. There is good knowledge about voluntary counseling and testing but the practice is low , comparable with the knowledge.
6. Despite good knowledge about HIV/AIDS prevention strategies there is still misconception on HIV/AIDS transmission.
7. Despite high rate of risky sexual behavior and practice personal risk perception is small.

RECOMMENDATIONS

1. Promote the use of condom by ensuring its available and accessibility for all those who want to use it and strengthening sustainable education.
2. Strengthening information, education and communication (IEC) activities in continuous and organized manner to minimize the gap between knowledge and practice.
3. The ministry of national defense should strengthen the existing programmers and activities to prevent HIV/AIDS in all military personnel.
4. It is advisable to revise the regulation that prohibits marriage before five years service and Opening of vast VCT centers at division level.
5. Finally I recommend a similar study to be conducted in other division of the army force that could enable to fill the gap.

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Annex I

ADDIS ABEBA UNIVERSTY, MEDICAL FACULITY DEPARTMENT OF COMMUNITY HEALTH

Survey questioner on assessment of condom use in zalanbesa front among members of Ethiopian army

001. Questionnaire identification number----------
002. Front ----------
003. Core ----------
004. Site ----------

INT RODUCTION

This questioner is prepared for a thesis research project done in collaboration with the Addis Ababa university (AAU) department of community health (DCH) and MOD. The questioner asks response of soldiers in zalambesa front in order to find out the utilization of condom among members of Ethiopian army.

The main aim of this study is to examine rate of condom utilization and assessing high risk sexual behavior for prevention of HIV/AIDS among member of Ethiopian army

In the questioner you will be asked some very personal questions that some people find it difficult to answer. Your name will not be written on this questioner, and will never be used in connection with any of the information you tell me. You are selected for this survey merely by chance, not done intentionally.

You don't have to answer any questions that you don't want to answer, and you may end to participate in the study at any time you want to.

However, your honest answers to these questions will help us better understand what impact and behaviors are related to HIV/AIDS in the Ethiopian army. We would greatly appreciate your help in responding to this survey the questioner will take about _____Minutes to answer.

Would you willing to participate?

005. Willingness to participate

1. Yes _____continue and fill the questioner
2. No _____ please return the questioner as you told.

006. Supervisor name ---------- signature ---------- date --------

Note how to fill the questioners

1. the questioner has 8 section
2. Each question has serial number, question and the coding category /answer/. This item is put in a table.
3. After reading the questions, respond by circling the number of your option from the answer. There are reminders below the questions about the possibility of the giving multiple replies for some questions.
4. For some question answers, there will be a phrase in-front saying "go to serial number (Q) ____". This indicates that you are going to leave

some questions, that follow and to go directly to the mentioned number question.

5. You are not expected to write any thing in the column (Code).
6. After filling the questionnaire return the questionnaire as you are told by the one you are given.

THANK YOU,

Self-administered Questionnaire
Section 1 Background characteristic

No	Questions and filters	Coding categories /answer	CODE
Q101	How old were you at your last birthday?	[__ __] age in completed years 1 Don't know 88 No response 99	
Q102	What is your religion?	Orthodox 1 Catholic 2 Protestant 3 Muslim 4 No religion 5 Others (specify)------ 6 Don't know 88	

		No response 99	
Q 103	To which Ethnic group do you belong?	Amhara 1 Oromo 2 Tigrean 3 Gurage 4 Gambela 5 Other specific.....6	
Q 104	What is you educational status?	Read and write 1 Grade 1-6 2 Grade7-12 3 Diploma and above 4 No response 99	
Q105	How long have you served in the army?	[_ _] No .of years served Less than one year 0 0 Don't know 88 No response 99	
Q106	What is your present military rank?	Private soldier 1 Other ranks (L/C Cpl., Sgt) 2 Officer (2nd Lt, Lt, Capt and Form major to general) 3	
Q107	What is your marital status?	Never married 1 Married 2 Divorced 3 Widowed 4 Other, specify 5	
Q108	How long you stayed at this deployment site?	[_ _] No. of years If less than 1 year 0 0 Don't know 88 No response 99	
Q109	How much did you earn monthly in Ethiopian Birr?	birr [_ _] Don't know 88 No response 99	
Q110	During the last 4 weeks how often have you had drinks containing alcohol? Would you say…	Every day 1 At least once a week 2 Less than once a week 3 Never 4 Don't know 88 No response 99	

Q111	Some people have tried a range of different types of drugs. Which of the following if any, have you tried? (Please respond for all)	Yes No No response Chat……1…..2……..…99 Shisha/Gaya 1.…2…….99 Hashish ……1… 2……99 Benzene….. 1.…2……..…99 Cocaine ……..…1…. 2……..99	
Q112	Some people have tried injecting drugs using a syringe. Have you injected drugs in the last 12 months?	Yes 1 No 2 No response 99	

Section 2 knowledge, attitude and use of condom

No	Questions	Coding categories/Answer	CODE	
Q.201	Have you ever heard of condom	Yes ----------1 No ----------2 No response ----------99		
Q.202	If yes from where did you get the information?	From health professionals 1 From their friends 2 From their parents 3 From their mass media 4 From their leader 5		
Q203	Do you know any place or person from which you can obtain male condom?	Yes 1 No 2 No response 99		
Q204	Is that possible to get male condom from your work site, if you need?	Yes 1 No 2 Don't know 88 No response 99		
Q205	Do you like if your working institution provides condoms at the work site?	Yes 1 No 2 I am indifferent 88 No response 99		
Q.206	Which place or person do you know where you can obtain condom	Yes No Shop 1 2 Pharmacy 1 2 Market 1 2 Clinic 1 2 Hospital 1 2 Health profession 1 2 Hotel 1 2 From their friend 1 2 Others 1 2 No response 99 Other (specify) -------		
Q.207	How much time does it take from the place where you get condom	Less than one hour ------1 More than one hour --2 Don't kwon ----------88 No response ----------99		

Q.208	Do you get condom when ever you want?	Yes ----------1 No ----------2	
Q209	Have you ever used a male condom	Yes 1 No 2 No response 99	
Q210	If yes how frequently did you used condom	Consistently 1 Frequently 2 Some times 3 Only ones 4 Didn't remember 99	
Q211	During the past 12 months, did you ever have sexual inter course with out using a condom with any commercial sexual partner or any other sexual partner who you have never lived with and are not married to?	Yes 1 No 2 Don't know 88 No response 99	
Q.212	Does condom prevent HIV/AIDS?	Yes 1 No 2 Don't know 88 No response 99	

Section 3 sexual history: Number & type of partners

No.	**Questions**	**Coding categories/Answer**	**CODE**
Q301	Have you ever had sexual intercourse?	Yes …….1 No. …….2 No response ….99	
Q302	At what age did you first have sexual intercourse?	Age in year (----) Don't know -----88 No response -----99	
Q303	Have you had sexual intercourse in the last 12 months?	Yes 1 No 2 No response 99	
Q304	**FOR MEN**; Think about the female sexual partners you had in the last 12 month; …… a. regular partners	If you have no regular, commercial, non regular or other sexual partner, write oo ……. Regular ---------- Don't know 88	

	…….. b. commercial partner ……. c. non regular partner	No response 99 …… Commercial ---------- Don't know 88 No response 99 …….. Non regular and commercial ---- Don't know 88 No response 99	

Section 4 sexual history; regular partner

No.	Questions	Coding categories/Answer	Code
Q401	Filter: go to question. ….404 Did you have sex with regular partner during past 12 months?	Yes 1 No 2	
Q402	The last time you had sex with a regular partner; did you and your partner use a condom?	YES 1 NO 2 DON'T know 88 NO RESOPNSE 99	
Q 403	Who suggested condom use that time? (CIRCLE ONE)	Myself 1 My partner 2 Joint decision 3 DON'T KNOW 88 NO RESPONSE 99	

Q404	Why didn't you and your partner use a condom that time?	Not available 1 Too expensive 2 Not comfortable 3 Partner objected 4 In a hurry 5 Embarrassed to buy or ask for 6 Used other contraceptive 7 Didn't think it was necessary 8 Allergy/Itching 9 I don't like it 10 I trust my partner 11 I was drunk 12 Don't trust condom to prevent HIV13 Don't know how to apply condom 14 Due to frequent condom breakage 15 It reduce sexual pleasure 16 Desire to conceive 17 Other specify 18 Do not know 88 No response. 99	
Q405	With what frequency did you and all of your regular partner (s) use a condom during the past 12 months?	EVERY TIME 1 ALMOST EVERY TIME 2 SOMETIMES 3 NEVER 4 DON'T KNOW 88 NO RESPONSE 99	

Section 5 Sexual histories: Commercial partners

No.	Questions	Coding categories/Answer	Code
Q.501	Have you ever have a contact with Female commercial sex worker in the last 12 month?	Yes 1 ----------→502 No 2 ---------- - →601	
Q.502	If yes where?	In the village. 1 In town 2 Don't know 88 No response 99	
Q.503	The last time you had sex with a Commercial partner did you and your partner use a condom.	YES 1 NO 2 Don't know 88 No Response 99	