ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

CAUSES AND CONSEQUENSES OF RISKY SEXUAL BEHAVIOR AMONG THE MILITARY PERSONNEL AT ZALAMBESSA TOWN, TIGRAY REGIONAL STATE

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List of Acronyms

AIDS: - Acquired Immune Deficiency Syndrome

AIDSCAP: - AIDS Control and Prevention

BCC: - Behavioral Change Communications

BSS: - Behavioral Surveillance Survey

CSW: - Commercial Sex Workers

EDHS: - Ethiopian Demographic and Health Survey

FGD: - Focus Group Discussion

HIV: - Human Immune Deficiency Virus

IFPP: - International Family Planning Perspective

ILO - International Labor Office

KABP: - Knowledge, Attitude, Behavior and Practice

MOH: - Ministry Of Health

PLWA: - People Living With AIDS

SIYB: - Start and Improve Your Business

STD: - Sexually Transmitted Disease

STI: - Sexually Transmitted Infection

SPSS: - Statistical Package for Social Science

UNAIDS: - United Nation Program on HIV/AIDS

UNESCO: - United Nations Educational, Scientific and Cultural Organization

WHO: - World Health Organization

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Abstract

***Objective**: The general objective of the study is to investigate the extent of risky sexual behavior among Military personnel and to explore the various underlying causes and consequences of their sexual behavior in Tigray regional state, Zalambessa town.*

***Method:** A cross-sectional study design was employed to achieve the stated objectives. Simple random sampling was used to select the 420 respondents. To analyze the data univariate, bivariate, and multivariate techniques of data analysis were applied. Chi square test was employed to see the association between predictive and outcome variables. Logistic regression is also fit to identify determinants of risky sexual behavior using Statistical Package for Social Scientists (SPSS Version 15). To in-depth the results of the quantitative data, qualitative data were also generated using FGD.*

***Results:** Ninety-two percent of the study population has ever had sexual intercourse. Eighty-nine percent, forty-four percent and twenty-five percent of the respondents had sexual intercourse, had sex with commercial sex workers and had at least four or more sexual partners, respectively in the last 12 months. Ninety-six percent and ninety-five percent of the respondents reported to have ever heard about condoms and used in their life time consistently, respectively. Multivariate results showed that the likelihood of having sex with commercial sex workers who had ever married is more than never married by a factor of 1.95. The likelihood of having work related stress for those who said no is greater than those who said yes by a factor of 1.6.Those respondents who took alcohol in the last four weeks preceding the survey were more likely to have sex within commercial sex workers than those who did not consume alcohol.*

The logistic regression model also reflects that variables like education, marital status and work related stress come up as determinants of sex with commercial sex workers. As, education increases the likelihood of doing sex with commercial sex workers decreases. This indicates that education has its own positive role in denying sex with sex workers.
The model again depicts that age, education and work related stress are determinants of multiple sexual partners. Age is positively correlated with multiple sexual partners. Thus it can be said that increase in age by itself has a positive influence in developing multiple sexual partners. On the other hand, education has a negative influence on having multiple sexual partners.

***Conclusion:** Studies on sexual behavior of the sexually active population in general and the adolescent including Military force in particular are crucial in designing, implementing and monitoring effective intervention programs, targeted in behavioral changes that enable to prevent or to reduce risky sexual behavior. Finally, the study recommends that in order to bring behavioral change in the military personnel, concerned military health officers should arrange programs using Drama, Magazine (Tikuakur Nebroch or the black Tigers), in the Anti ADS club. Peer education should also be promoted if risky sexual behavior is to be eliminated among the military personnel.*

Chapter One

Introduction

1.1 Background of the Study

Risky sexual behavior refers behavior engaging in unprotected premarital sexual activity with more than one sexual partner, which gave the way for contraction of STIs including HIV/AIDS, unwanted pregnancies and illegal abortion that all pose serious health, social and psychological trauma (Steinberg L, 1989).

STIs are those diseases that can be transmitted by means of sexual relations. HIV is a sexually transmitted infection. The mode of transmission is the same for STIs and HIV/AIDS. For specific reasons, the genital area and the anal region appear to be ideal for the transmission of HIV. STIs further promote the chances of successful transmission from one person to the other because of the presence of sores in the genital area (ILO, 2003).

Risky sexual behaviors, including early sexual debut, unprotected sexual intercourse, and multiple sexual partners, occur in a border context. The intensity of involvement in sexual risk behavior ranges from no sexual relationship to unprotected sexual intercourse with multiple partners and prostitution. Although risky sexual behavior does not always indicate a high-risk lifestyle, sexual risk behaviors often cluster with other risk behaviors, including substance use ,violence involvement, and poor school performance .Adolescents who engage in sexual intercourse at young ages are at higher risk for outcomes that can compromise their health. Sexually active teens who exhibit few positive or prosaically behaviors, such as involvement in organized actions at school or in the community, are at higher risk for outcomes such as early sexual activity and pregnancy during their teenage years (Sieving, Oliphant and Blum, 2002).

The Human Immune Deficiency Virus (HIV) is a sexually transmitted virus which is known to affect only humans. This virus was discovered in 1981 but appears to have been around for a long time. It is unclear why and where it came from. Inside the human body the virus lives in living cells, particularly in the white blood cells and other tissue cells, of an infected person. This virus multiplies in the cell, eventually destroying the cell. As more of the virus is formed more cells

become infected. It is not a very strong virus compared to other disease causing viruses. It can not survive for any significant time outside of the human body, nor can it withstand trauma or change in its usual environment. HIV is the virus that attacks the immune system, causing AIDS (ILO, 2003).

An important component of AIDS prevention programs is the promotion of safe sex, including encouraging monogamous relationships, discouraging multiple sexual partners , promoting the use of condoms .Information on the sexual behavior of individuals is important in designing and monitoring intervention programs to control the spread of the diseases since heterosexual contact promotes the transmission of HIV/AIDS (EDHS, 2000).

With adequate lifestyle (housing, nutrition, health care, etc), the average time from HIV infection to the onset of AIDS is now longer than 10 years. People Living with AIDS (PLWA) can be expected to live up to three years or more after onset of AIDS, when a HIV-positive person develops AIDS, they usually progress through the following stages.

First stage: - Infected, but no symptoms, feeling healthy
Second stage: - start becoming sick
Third/final stage: - Seriously ill and dying.

For AIDS, there is no cure or vaccine as yet. Scientists are working very hard and some identified vaccines are currently being tested world wide. Success is not guaranteed and will not probably be in the near future (ILO, 2003).

1.2 Statement of the Problem

Young adulthood is a stage in which human beings brought about many developments; biological, physical, psychological, social, etc. And these developments are accompanied by positive or negative behaviors depending on the environment in which the person grow, sexual risk behaviors, including early sexual debut, unprotected sexual intercourse, and multiple partners, occur in a broader context. The intensity of involvement in sexual risk behavior ranges from no sexual relationship to unprotected sexual behaviors with multiple partners and prostitution. Although risky sexual behavior does not always indicate a high-risk lifestyle, sexual risk behaviors often cluster

with other risk behaviors, including substance use, exposure to media, and religiosity .Youths who engage in sexual intercourse at young ages are at higher risk for outcomes that can compromise their health (Girma, 2008).

HIV/AIDS has become the world's most devastating epidemic in history and its devastating effect on human being is high. In particular due to this care, Ethiopia is classified as a country with a generalized HIV/AIDS epidemic. There is also sufficient evidence to believe that HIV/AIDS has a significant impact on armed forces.

Major General Marc-Jean Deconinck, chief of medical services of the Belgium armed forces mentioned that "HIV/AIDS has probably touched the armed forces of every country, with infection rates surpassing 30 percent and reportedly even 40 percent in several armies. Soldiers have a higher probably of becoming infected with HIV than of being killed in military action" (united Nations, 1998:3). Because of the nature of military environment, members of the army are more exposed to the infection of HIV/AIDS than the civil society. Military personnel are more likely young and sexually active, mobile, less subject to social controls, exposed to a professional ethos which encourages risk-taking, subject to periods of stress and boredom, inclined to risky behavior including risky sex and substance abuse like alcohol, khat (chat) and other drugs. Besides, they have more and more power influence than the local population (UNAIDS Humanitarian Unit, 2002:1, cited in Asmamaw, 2003: 2)

Therefore, studies on sexual behavior of the sexually active population in general and the adolescent including Military force in particular are crucial in designing, implementing and monitoring effective intervention programs, targeted in behavioral changes that enable to prevent or to reduce sexual behavior . According to the AIDS Risk Reduction Model, knowledge of AIDS is necessary to recognize one's behavior as high risk and then to take action to change that behavior (Mezgeb, 2005).This knowledge may, therefore, influence the degree to which persons acknowledge their behavior as risky and the types of precautions they have to reduce their risk (Mezgeb, 2005).
In light of the above consideration, this research has tried to study causes and consequences on its resulted sexual behavior of the Military force. Their knowledge about HIV/AIDS and other STIs and other factors related to military sexuality in Zalambessa town.

1.3 Significance of the Study

Adolescent's reproductive health is compromised due to the influence of myriad factors operating at individual, parental and social levels. Therefore, the military personnel is one part of this group, hence the burdens of STDs including HIV/AIDS are concentrated among this group.

This study was undertaken to identify causes and consequences of risky sexual behavior of the military personnel. Therefore, the finding of this study will have contribution for those who want to know the causes and consequences of risky sexual behavior in the study area. Hence the finding of the study suggests intervention program by concerned bodies to address the issue among the defense personnel's, the important group. This research work will have tremendous importance. It may also serve as reference for other researchers to study such problems in-depth in the study area besides filling the literature gap.

Chapter Two

Review of Related Literature

2.1 The Young Adults and Sexuality

Young adulthood is a period of transition to experience physical, psychological and social changes and sexual experimentation. This is accompanied by little awareness of the danger .In fact; risky sexual behavior is part of a large pattern of behavior including alcohol and drug use. Lacking to the judgment that comes with experience, young adults often can't appreciate the adverse consequences of their action (Kiragu , 2001).

Adolescent sexual decision making is subject to a complex web of influence. Therefore, adolescents are the population at highest risk for acquiring sexually transmitted diseases with risk factors that include having multiple sex partners, engaging in unprotected sex and having partners who are at high risk for having an STD (Division of STD prevention, 2000).

A number of studies have pointed the growing concern regarding the vulnerability of people to HIV infections. A study on sexual behavior and level of awareness of reproductive health problems among young people in eastern Ethiopia found that among unmarried young men and women, the mean age at first sexual intercourse was 16.9 years for men and 18.0 years for women .While less than 10 percent of unmarried females age 14-17 have had sexual intercourse, over 20 percent of unmarried male youth in the same age group have had sexual intercourse (Korra and Haile ,1999). Estimates of HIV incidence in the age group 16-22 years obtained by Fontanet and his colleagues in their study in urban Addis Ababa ranged from 1.3-2.3 percent for men and 2.1-2.4 percent for women (Fortanet et al., 1998).

Knowledge about the sexual behavior of military forces as well as their knowledge of HIV/AIDS and other STDs is important in designing, implementing and monitoring intervention program against the spread of HIV/AIDS.

2.2 HIV/AIDS: The Global Picture

It was reported that an estimated 38.6 million people world-wide were living with HIV at the end of 2005.An estimated 4.1 million become newly infected with HIV and an estimated 2.8 million lost their lives to AIDS. Overall, the HIV incidence rate (the proportion of people who have become infected with HIV) is believed to have peaked in the late 1990s and to have established subsequently, not withstanding increasing incidence in several countries. (UNAIDS 10th anniversary special edition, 2006).

UNAIDS 2006 report on global AIDS epidemic indicates that in Sub-Saharan Africa, the region with the largest burden of the AIDS epidemic, data also indicate that HIV incidence rate has peaked in most countries. However, the epidemics in this region are highly diverse and especially sever in southern Africa, where some of the epidemics all still expanding. Based on its extensive antenatal clinic surveillance system, as well as national surveys with HIV testing and mortality data from its civil registration system, an estimated 5.5 million people were living with HIV in 2005. An estimated 18.8% of adults (15-49 years) were living with HIV in 2005. Almost one in three pregnant women attending public antenatal clinics were living with HIV in 2004 and trends over time show a gradual increase in HIV prevalence (UNAIDS 10th anniversary special edition, 2006).

The HIV/AIDS programs in Uganda and Senegal show that high-level political leadership in decentralized, multisectorial, paricipatory planning and implementation supported community-based organizations can be highly effective. Although the task of building a truly national HIV/AIDS program is daunting and risky in a poor country like Ethiopia, a quick, decisive start and "learning by doing" rather than extending the preparatory period offers the most promise for success (Binswanger, 2000).Like most sub-Saharan countries, except Uganda and Senegal, Ethiopia was slow in responding effectively to the HIV epidemic at early stage, greatly increasing the cost and barriers of dealing with it now (World Bank, 2000a).

The experiences of Uganda, Senegal, and more recently Zambia show that the most cost-effective and technically feasible means of reducing HIV/AIDS infections is a reduction in multiple sexual partners. Due to the relatively late commencement of the national program in Ethiopia, a high prevalence of multiple partners and evidence of behavioral change is still scanty. Nevertheless, the

encouraging changes reported for some Addis Ababa population indicate that this may be possible. A major challenge will be to broaden the HIV awareness and behavioral change base throughout Ethiopia. Ugandan intervention results indicate that reduction in multiple partners, even more than increased condom use, was the most effective intervention-as effective as a vaccine with 80 percent efficacy (USAID, 2002).

2.3 HIV/AIDS in Ethiopia

HIV was first detected in Ethiopia in stored sera collected in 1984 and the first two AIDS cases where reported in 1986. A National HIV/AIDS taskforce was established in 1985 and the National AIDS Control Program (NACP) was established at a Department level at the MOH in 1987. HIV/AIDS surveillance began in 1989.Therefore; an importance of AIDS/HIV prevention programs is the promotion of safe sex, including encouraging monogamous relationships, discouraging multiple sexual partners, and promoting of the use of condoms. Information on the sexual behavior of individuals is important in designing and monitoring intervention program to control the spread of the disease since heterosexual contact promotes the transmission of HIV/AIDS (DHS, 2000).

There are many factors that promote the spread of the disease including the presence of sexually transmitted infections, gender inequality, multiple sexual partners, and prostitutions, men with disposable income, alcohol, unsafe blood transfusion, and transmission from infected mother to her fetus/child during pregnancy and breast-feeding.

In 2005, it was estimated that 1,320,000 people were living with HIV/AIDS of the total, 634,000 were living in rural area and 686,000 in urban areas. In the age group, 15-29 years there were more women living with HIV/AIDS than men, in the age group 30+ years, there were more men living with HIV/AIDS cases, 128,900 new HIV infections including 30,300 HIV positive births and 134,500 AIDS deaths occurred (MOH 6th report, 2006).

The total HIV prevalence among 28,529 (22,261 male and 6,278 female) blood donors in 2005 was 5% (4.5% among males and 6.7% among females). The prevalence for those in the age group 15-29 years was 2.9%. The highest prevalence occurred among donors in the age group of 30-39 year (MOH 6th report, 2006).

2.4 Transmission and Risk Factors of HIV/AIDS in Military Personnel

The mixing of civilians and combatants (either regular military force of rebel forces) during war increases the spread of HIV since military personnel are a population group at special risk of exposure to sexual transmitted disease including HIV. In peacetime, STD infection rates among armed forces are generally 2 to 5 times higher than in civilian populations; in times of conflict, the difference can be 50 times higher or more. Military personnel are usually young sexually active and separated from their normal partners. They often have greater access to resources than the civilian population and made frequent commercial sex workers. The military ethos of risk-taking might undermine HIV prevention even when soldiers are aware of the risks. The "macho" attitude is that are part of military socialization may also lead to high-risk sexual behavior and even exploitative abuse of power, including sexual violence (UNESCO'S, 2002-2007: 16).

Moreover, Military personnel are at increased risk of HIV/AIDS/STDS infection, because they are more likely, young and sexually active mobile and away from home, less subject to social controls and subject to professional ethos that tends to encourage risk-taking and to periods of stress and boredom and inclined to indulge in risky behavior, including risky sex and substance abuse (UNAIDS Humanitarian Unit 2002: 1).

Some study indicates that 33% of those living with HIV/AIDS globally, as UNAIDS estimation are aged 15-24 .50% of all new infections are occurring among young people, including the military forces. Military forces are in the age group at greatest risk for recruited at young ages when they are sexually active and they are at great risk of HIV/AIDS/STDS (UNAIDS, 1998: 3, UNAIDS Humanitarian unit, 2002: 2).

In addition to this, the other more important factor leading to high risk rates of HIV in the military force is the practice of posting personnel far from their accustomed communities and families for a long period of time. This situation initiates military personnel to look for ways to relieve loneliness, stress and the building up of sexual tension and thereby encourages resort to commercial sex and growth of local sex industries in the areas where they are posted (Ngangoue, 2000:1).

Usually, soldiers find alcohol consumption and sexual intercourse as a means of entertainment. Even those who remember to take condoms with them are likely to forget them while under the influence of alcohol.

In the national survey of America conducted by Kaiser family foundation on youth's knowledge and attitudes of sexual health, 73% of young people aged 15-24 years agreed that condom often are not used when people are drunk (Kaiser Family Foundation, 2002).

2.5 Sexual Behavior and Knowledge of HIV/AIDS in Military Personnel

AIDS has been called a disease of behavior (AIDSCAP, 2000). If people avoided risky sexual behavior by using condoms or abstaining from sex except within a monogamous relationship they could avoid contracting STDs such as AIDS.

Knowledge of HIV/AIDS and other STDs can be expressed through: - knowledge on mode of transmission of the disease, its symptoms, its effects, behaviors that increase the risk of contracting them, preventive methods and the relationship between HIV/AIDS and other STDs.

When provided with enough knowledge on HIV/AIDS and the ways not to be infected, individuals will do all they can to prevent themselves and others from being infected. Informed individuals may rationally lead to maximum gains like living healthy and happy life and minimum loses like death due to AIDS. However, studies have shown that knowledge of HIV/AIDS may not lead to the low risk of AIDS infection (Schenker, 2002: 9).

The study which was done in Jimma town in 1991 by taking a total of 494 males between the ages of 15-49 revealed high level of knowledge about the routes of transmission of HIV/AIDS (Larson, 1991: 27-29). Another study in Awassa town showed that more than 90% of the respondents (i.e. out of school youth 15-24 years) had good knowledge about the means of transmission and prevention ways of AIDS. Nevertheless, the rate of condom usage by sexually active respondents was very low (Negussie Taffa, 1995: 21).

Like the civilian population, the military personnel have adequate knowledge on HIV/AIDS. However, they do not change their risky sexual activities. For instance, the results of STD/HIV/AIDS knowledge, attitude and sexual behavior and practice survey of the Zimbabwe National Army showed that 99.1 percent of the respondents identified the correct HIV/AIDS transmission and prevention ways. Despite their adequate knowledge of HIV/AIDS transmission and prevention ways, 29.5 percent had risky sexual intercourse and 55.9 percent did not use condom during sexual relation with non-regular sex partners in 1995 (Siziya et.al, 1996, cited in Reta, 2001:44).

A study of KABP(Knowledge, Attitude, Behavior and Practice) on HIV/AIDS among male members of the Ethiopian ground forces at Badime front showed that 81.6% of the respondents knew the ways of HIV transmission through contaminated needles injection, from a pregnant mother to her unborn child and a mother to her new born child through breast feeding, whereas 69.1% answered the three questions of HIV/AIDS prevention correctly, that is , consistent use of condom, abstinence from sex and being faithful to one uninfected sex partner (Reta, 2001:34,cited in Asmamaw,2003:19-20).

2.6 Sexual Behavior and Knowledge of HIV/AIDS in Ethiopia

HIV-1 is the major strain in Ethiopia, with transmission largely through heterosexual contact and to lesser extent through mother-to-child transmission, traditional surgical practices, and probably blood transfusion. Genetic diversification studies of the Ethiopian HIV-1 subtype C virus confirm its introduction in the early 1980s (Abebe et.al. 2001). HIV/AIDS prevalence remained low in the 1980s but sharply accelerated through most of the 1990s, rising from an estimated 2.7 percent in adults by 2000 (MOH, 2000). The lower rate reported for 2001 (6.6 percent) is largely due to sampling bias rather than a decrease in HIV incidence (MOH, 2002).

Although difficult to measure, the impacts of political, economic and ecological crises of HIV and other sexually transmitted diseases (STDs) in Ethiopia have been significant, as they have created conditions conducive to the transmission of HIV. Among the factors contributing to the rapid spread of HIV are:-

1. Seasonal migration of workers in search of employment and better economic conditions that tend to increase multi partner sexual contacts
2. Dislocation of many people due to the civil war.
3. High STD rates in both high risk groups and the general population.
4. Increasing sexual activity among youth,
5. High unemployment rates, including the demobilized soldiers (AID-SCAP 2001).

During the early stage of the epidemic in Ethiopia, the focus was on identifying high-risk groups and their sexual behavior, a concept that has proven less useful and even discriminatory with the expansion of the HIV epidemic into the general population. In 1988, an HIV prevalence study of 6,234 female commercial sex workers in 24 communities throughout Ethiopia revealed infection rates between 1.3 percent and 38.1 percent in different towns. The mean infection rate was 18.3 percent, which increased to 29.2 percent during a follow up survey in 1999. Rates above 20 percent were found in communities on major truck routes between Addis Ababa and Assab and from Addis Ababa to Bahir Dar and Mekele (Mehret, et al, 1990a).

Truck derivers, closely linked with commercial sex workers, were also identified as a high-risk group, with a 17.3 percent infection rate in 1989 (Mehret, Khodakerich and Zewdie, 1990 b). Several studies reported a strong correlation between HIV and STD infections in both males and females (Aklilu et.al, 1999). Rates in commercial sex workers increased further in 1990 and 1991, but no comparable epidemiological data are available for female sex workers for subsequent years. In Addis Ababa rates among sex worker were 24.7 percent in 1988, 54.3 percent at STD clinics in 1990, and 73.4 percent in 1998, indicating that rates continued to increase in other urban centers as well (Mehret, Khodakerich, and Zewdie, 1990b).

2.6.1 Sex with Commercial Sex Workers

Education, marital status, military rank and service years have positive association with knowledge of the military about HIV/AIDS. The military whose educational level is secondary, and above had better knowledge about the means of HIV/AIDS transmission and prevention than the others. Those who were never married also had better knowledge than those who were married. Although the military members who were not married were more knowledgeable, 90.5 percent of them carried

out sex with sex workers more than one time within a year before the survey compared to 71.3 percent of the married military personnel .Condom usage was also less for them than the married. Members of the military whose rank was junior officers were more knowledgeable than the private soldiers and whose service years were eleven years and above were found to be more knowledgeable than those whose service years were less than eleven years (Reta,2001: 43).

2.6.2 Multiple Sexual Partners

Soldiers in Ethiopia, another highly mobile group exposed to multi partner sex contacts, were stationed in many towns with in the war zone characterized by high HIV infection rates. Troops could also have been infected during emergency blood transfusions without HIV screening (Eshete et al. 1993; Kloos 1993) .HIV Infection rates in new recruits increased from 0.8 percent in 1986 to 2.6 percent in 1991, and in soldiers from 12 percent in 1990 to 27 percent in 1993 (Kholdakevich and Zewdie ,1993; Assefa ,et al. 1994). About half a million soldiers had been demobilized and reintegrated into the rural economy by the mid 1990s (Dercon and Ayalew ,1998).

In one of the few studies of risk behavior in rural areas, shabbier and Larson (1995) concludes that demobilized soldiers had not changed their sexual behavior to protect themselves and their partners .Studies in Uganda have shown among spatial correlations between the source areas of soldiers recruited into the armed forces and subsequently high rates of AIDS in the Substance use in the general population in those same areas (Smallman- Raynor and Cliff, 1991).

Type and numbers of sexual partner has also a significant role in HIV/AIDS transmission. Many studies done on sexual behavior revealed that a number of people have sexual experience with more than two persons in their lifetime. In free town, it was also found that 29.3% of men have had more than eight sexual partners, which is the mean number for the entire population (0.Adegboha, 1995; cited in Samson, 1997). In Ethiopia, 70% of girls and 55% of the boys have reported to have 2 to 5 persons in Addis Ababa high school (Solomon, 1990).

2.6.3 Alcohol Abuse

A growing body or research shows that excessive alcohol consumption plays a key role in gender based violence and the occurrence of risky sexual activity that exacerbates the spread of HIV (the

voice, 2003). Alcohol/drug use can impact sexual behaviors both at the time of sexual activity (i.e. deciding whether to engage in sexual activities under substance influence) and over long-term periods (i.e. drug) alcohol use increases one's overall engagement in risky sexual behaviors (Brooks, 2007). A study on young people in Kenya reveals that females who take alcohol are nearly 3 times more likely to be sexually active than those who do not. Similarly, males who take alcohol are nearly 3.5 times more likely to be sexually active than those who do not. Alcohol and other substance abuse affects people's risk assessment process (Essex, et al., 2006).

People who are drunk do not think clearly and are more likely to do things that put them at risk of getting HIV(i.e. unprotected sex, having multiple sexual partners, needle sharing or use of contaminated needles for injection, prolonged and traumatic sexual intercourse) (Granich and Mermin, 2001:57; UN, 1998:4-8).

Alcohol abuse not only impairs personal judgment but also increases sexual desire of the users. A study on Americans aged 18 to 59 showed 35 percent of men (aged 18 to 30 years) had sex after drinking five to eight bottles of alcohol and 45 percent had sex after consuming eight or more bottles of drinks compared with 17 percent of those who had one or two bottles of drinks. In the case of women, 39 percent of women aged 18 to 30 years having had sex after consuming five to eight bottles of drinks and 57 percent of them had sex after drinking eight or more bottles of drinks, compared with 14 percent of women who had one or two bottles of drinks. Other drugs like Khat (chat), hashish (marijuana). Cocaine and heroin may also induce risky behavior and influence the spreading of HIV/AIDS (Kaiser Family Foundation, 2002).

2.6.4 Inconsistent use of Condom

It is also important to note that risk sexual behavior is also to be influenced by condom use .Young men are more likely than young women to know where to obtain a condom. The most common mode of transmission of HIV in Ethiopia is through unprotected sex with an infected person. To prevent HIV transmission, it is important that young people practice safer sex through the much advocated ABC method. Studies sexual behavior of adolescents indicated that condom use among adolescents is low. A study conducted on the three Ghanaian town's adolescents for example indicated that 50 percent of the adolescents reported condom use in their recent sexual practice

(Glover, E.K, 2003). But another research conducted with a nationally representative data of Ghanaian adolescents' revealed 24 percent males and 20 percent of females reported consistent condom use in their resent sexual experience (Karim, A.M., 2003) .The Ethiopian DHS2000 also indicated low condom use.13 percent of women and 30 percent men reported condom use with a non co-habiting partner at last sexual intercourse (CSA and ORC Marco, 2001).

The 2005 EDHS has documented that knowledge of condom source does not vary consistently with age. Never married women are much more likely to know the sources of condoms than married women. Among both young women and men, those in urban areas are more likely than those in rural areas to know of condom source. Youth who are better educated and live in wealthier households are more likely than other youth to know a source of condoms (EDHS, 2005).

2.6.5 Health Hazards

The Health Belief Model is one of the models that are used to explain and predict health behaviors like sexual risk behaviors and the transmission of HIV/AIDS based on the attitude and beliefs of individuals. This model assumes that his/her attitudes and beliefs are significant to prevent the spread of the disease. According to this model, individual's perception of susceptibility to the disease (i.e. one's subjective perception of the risk of contracting a disease); perception of severity of the disease (i.e. feelings concerning the seriousness of contracting an illness), perception of benefits (i.e. individual belief in the effectiveness of strategies made, such as using a condom consistently, to reduce the threat of the disease);perceived barriers to action and self-efficacy and clues to action (i.e. events either bodily like physical symptoms of a health conditions or environment like media publicity motivate people to take action) are elements that lead to the required behavioral change (Rosenstock ,et. al 1994).

Generally, based on the above mentioned review of literatures facts, next the researcher will try to assess the causes for and consequences of risky sexual behavior of the military personnel in Zalambessa town by having thorough analysis of the collected primary data, and the qualitative information obtained, using appropriate statistical tests.

2.7 Objective of the Study

2.7.1 General objective

The General objective of the study is to investigate the extent of risky sexual behavior of Military (personnel) Commandos and to explore the various underlying causes and consequences of their sexual behavior

2.7.2 Specific objectives

- To identify the sexual risk taking behavior of the military personnel.
- To explore the causes associated with sexual behavior of military commandos in the study area.
- To examine their knowledge about contraceptive methods.
- To identify their awareness about risky sexual behavior and it's resulted health consequences.
- To relate the socio- demographic and economic characteristics on their risky sexual behavior.
- To correlate the knowledge factors on their resulted risky sexual behavior.
- To find out the effect of work related factors on their risky sexual behavior.

2.8 Research Questions

The purpose of this study is to show the demographic and socio- economic conditions as among the various causes that influence sexual risk behavior among the Military personnel in the study area. To this end, the following are the basic research questions the study will address

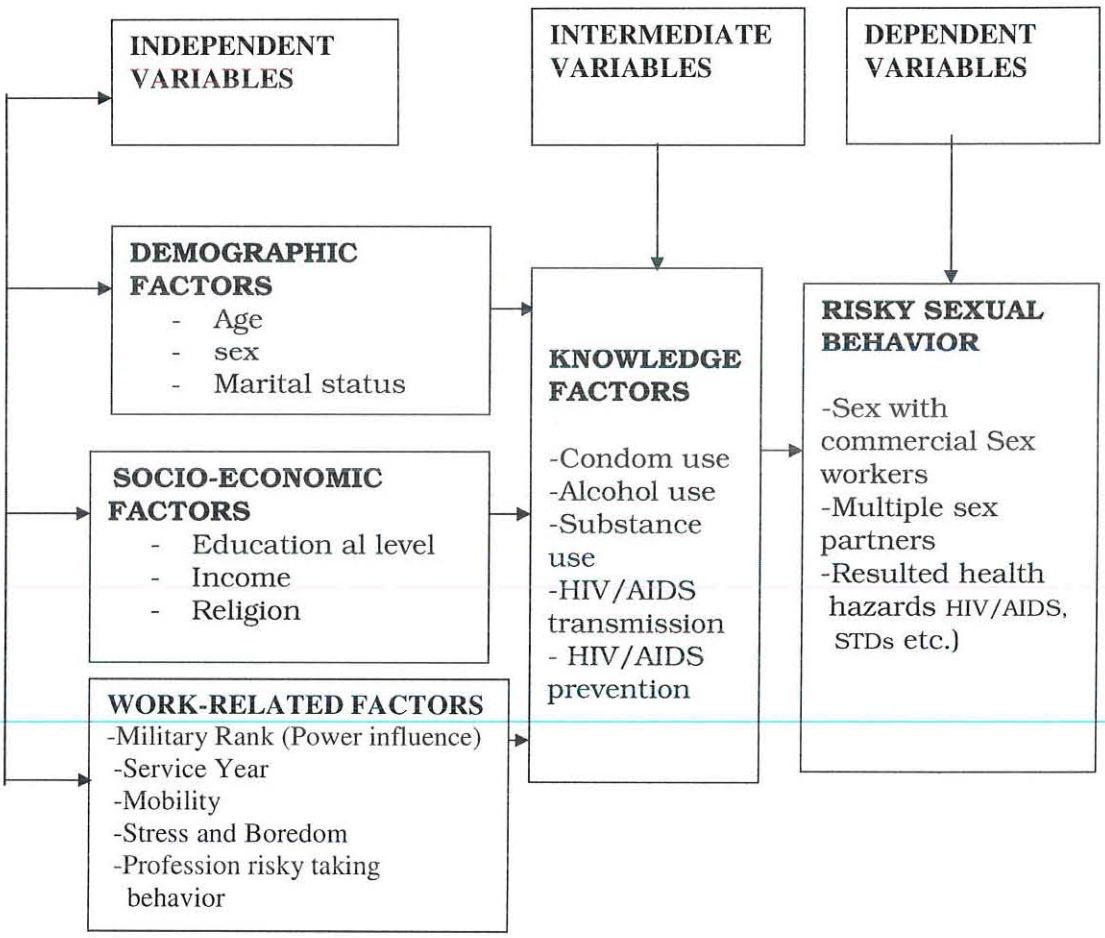
1. What motivates Military personnel to engage in sex?
2. What are the socio-demographic and economic factors that affect the Military Personnel sexual activity in Zalambessa town?
3. What are the resulted consequences on sexual behavior of Military personnel?

2.9 Conceptual Framework of the Study

Based on review of related literatures and specific objectives of the study, the following frame work developed in order to organize our knowledge systematically and to see how concepts are interrelated to one another.

For the purpose of this study, the dependent variable that is the military personnel's risky sexual behavior is the function of independent variables (individual demographic factors, socio-economic factors and work related factors) and intermediate variables (individual knowledge factors)

Figure 1:- Conceptual Framework of the Study



Source: - Developed by the Researcher.

2.10 Operational Definitions of Key Terms Used

The following definitions are given according to United Nations (1998) and some indicated sources-

- **Commercial Sex-worker**:- an individual who engages in direct sexual activity with other persons in exchange for money or goods
- **Non-regular sexual partner**:- any sexual partner other than wife/regular sexual partner with whom one has been having sexual relations for less than twelve moths.
- **Regular sexual partner**:- wife or other steady sexual partner with whom one has been having sexual relations for more than twelve months.
- **Risk factors**:- conditions or behaviors which make it more likely that a person will become infected with HIV like having multiple sex partners, presence of sexually transmitted diseases, sexual intercourse with sex-worker
- **Risk perception: -** one's own judgment about the chance of being infected by HIV based on his own sexual behavior and related factors.
- **Risky sexual behavior :-** involvement in unsafe sexual intercourse that could expose to HIV infection
- **Safe sex**: - any sexual practices that aim to reduce the risk of passing HIV from one person to another.
- **Sexual behavior:** - refers all activities that produce sexual excitation include solidarity and inter personal activities such as kissing, touching, sexual intercourse (Steinberg L., 1989). However, in this study sexual behavior is limited to issues on sexual intercourse.
- **Sexuality: -** is a general term referring to various sexually related aspects of human life, including physical and psychological developments and behavior, attitudes and social customs associated with the individual's sense of gender, relationships, sexual activity and mate selection.
- **Sex-worker**:- an individual who engages in direct sexual activity with other persons in exchange for money or goods
- **Work related mobility**:-refers to movement of soldiers for special work related purpose
- **Work related stress**:- refers to the stress based on any work related ordered by the officers
- **Young adults or Youth:** - WHO (2004) defines a women or men with the age group (15-24) years

2.11 Scope and Limitation of the Study

Although it may not be possible to reach the final conclusions about the military force knowledge, attitude and sexual behavior on HIV/AIDS, the findings of this study is expected to contribute a little to fill, the gap in understanding, the knowledge, attitude and sexual behavior of the military force in the mentioned area. Besides, researcher, organizations and other who are interested to work on military force sexual behavior and on HIV/AIDS prevention and control would benefit from the findings of this study. It may also serve as a base line data for further works on HIV/AIDS epidemic.

In spite of all efforts made to obtain relevant information, the findings of the study, the conclusion and recommendations should be considered in the light of the following limitations.

- Lack of literature and research works on risky sexual behavior among military personnel especially in Ethiopia is the major problem of the study.
- The sensitive nature of the questions may affect the level of reliability. Therefore, it is believed that respondents may under report sexual activity and thus the data are subjective to reporting errors of unknown direction and magnitude.

  Such as Respondents` response on questions, like "Do you use protective means during handling of war wounded friends? If yes, explain what type of protective means? may be taken as the weakness of th e study , since they face problem to explain it.
- Another problem was also the absence of female military member of the command in the purposively selected Regiment.

But, in the presence of these limitations, the study identified factors that contribute to risky sexual behavior among the military force that can be used to formulate appropriate intervention strategies to fight health hazards such as HIV/AIDS and other STDs.

Chapter Three

Research Methodology

3.1 Study Area and Target Population

The study was conducted in Zalambessa town, Tigray Regional State, Northern Ethiopia. Zalambessa is located in East Zone of Tigray region and North of Adigrat. Zalambessa town is found around 920 Km from Addis Ababa where part of the North command of the army was located. The target population of this research was young adult of Military force in the age group of 20 to 34. Since this group is highly affected by STDs. The study was carried out from January 23 to February 23, 2008.

3.2 Study Design

The study was based on a cross-sectional survey design which was conducted in purposively selected Regiment among members of the ground forces in the North command that has been stationed at Zalambessa town since 2000.The study applied mainly quantitative approach and to strengthen the findings, qualitative approach also has been employed.

3.3 Sample Size Determination

No adequate study had so far been done on the causes and consequences of the sexual behavior of the military force in Zalambessa town. Thus in the absence of survey, to obtain a representative sample, a proportion of 50 percent of high risk sexual behavior age group among the commandoes has been taken as respondents sample . So, based on this assumption, the study was aimed at obtaining a confidence interval of 95%.

The sample size was calculated using the following formula (Gordon and Gordon's, 1994: 369).

$$N = \frac{Z^2 P (1-P)}{E^2}$$

Where

N= sample size

P= population proportion, which is 50%

Z= the value of the standard normal distribution corresponding to a significant level of alpha (here 1.96 for a two tailed test at the 0.05 level).

E= the maximum error which will be accepted here, 5% (0.05).

Hence the sample size is calculated as follows

$$N = \frac{Z^2 P (1-P)}{E^2}$$

$$= \frac{(1.96)^2 (0.5) (1-0-5)}{(0.05)^2}$$

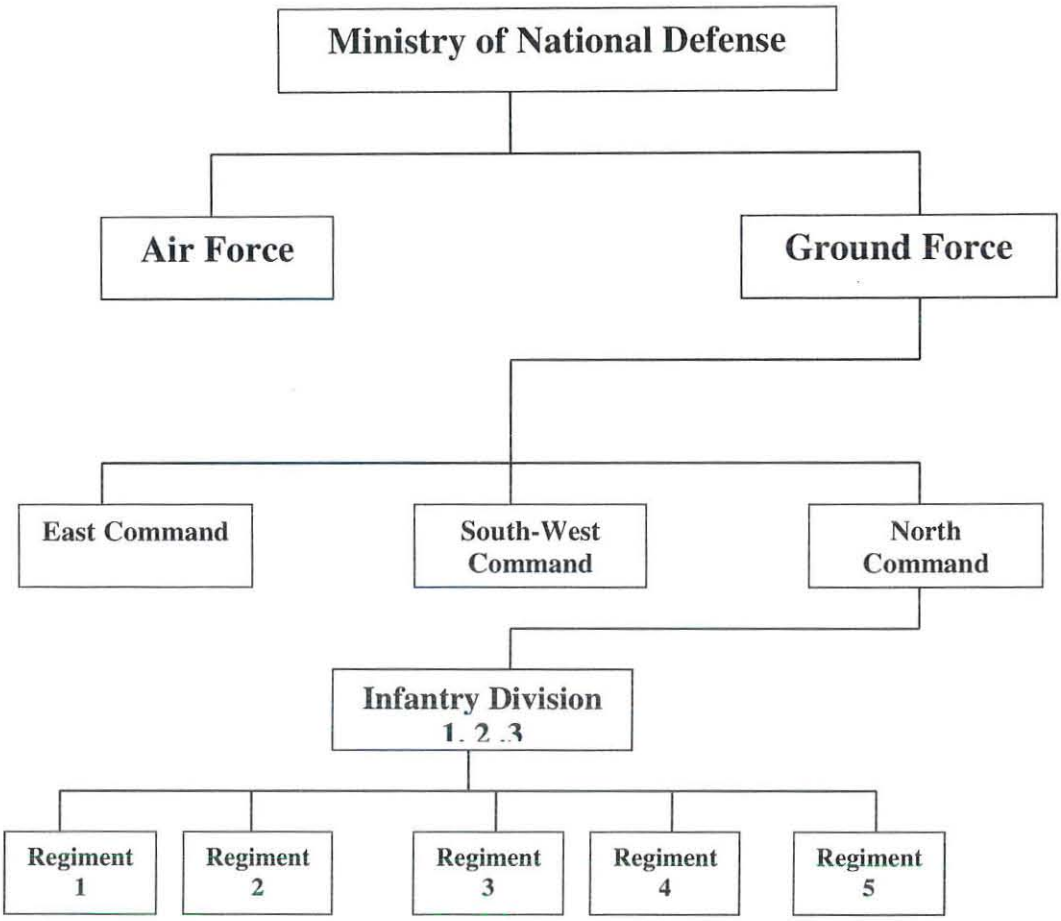
N= 384

After making 10% adjustment for non-response and vacant households, a sample size of 422 was obtained.

3.4 Sampling Procedure

The target population of Military personnel was selected purposefully. This is, because, it was the largest command where large number of Military personnel was deployed and no sufficient study so far was done concerning the sexual behavior and knowledge of HIV/AIDS of the armed force in the commandoes. It has three infantry divisions. One of the infantry divisions that were stationed at Zalambessa town was picked by purposive sampling technique again. From the selected infantry division, the first Regiment was taken by purposeful sampling, because this regiment is near to the town of Zalmbessa. At last, samples were taken by a simple random sampling method from the payrolls.

Figure 2:- Sampling Procedure for the Target Population



Source: - Developed by the Researcher.

3.5 Sample Frame

List of military Personnel obtained from the payroll of the Regiment.

3.6 Data Source

Primary data sources were used for the study. The source of primary data was a survey conducted on military forces in Zalambessa town.

3.7 Instruments used for Data Collection

3.7.1 Questionnaire

This study used a structured questionnaire as a primary tool to collect the needed primary data. The questionnaire was prepared in English and then translated into Amharic. The questionnaire contained four main parts. The first part of the questionnaire was designed to measure the demographic and socio-economic factors of respondents; the second part was work-related factors of respondents; the third part was sexual behavior and condom use of respondents' .The final part of the questionnaire was Knowledge about HIV/AIDS and other STIs of respondents.

3.7.1.1 Validity

In order to use the valid instrument for data collection, the content validity of the questionnaire was achieved by way of getting experts opinion, mainly with the advisor, before actually administrating the questionnaire for field.

3.7.1.2 Reliability

Pilot study: - prior to actual distribution of the questionnaire, pre-testing was made in one of the regiment to make sure that the questions are clear and could be understood by the respondents. In addition, pre-testing was used to check ordering and acceptance, to improve the structure and content of the questionnaire and to explore potential, shortcomings and undertake appropriate modifications.

3.7. 2 Focus Group Discussion (FGD) Guide

In order to support information collected through structured questionnaire, one focus group discussion was conducted. The Focus group Discussion Guide consists of five structured items focused and to meet the proposed research questions. Some of the items were similar to those found in the questionnaire to check whether the results are in harmony with the results obtained from the questionnaire. The focus group discussion was also containing items that were not found in the questionnaire to raise ideas that were not assessed through the questionnaire. The focus group discussion was conducted with five voluntary military forces, which are considered knowledgeable on the subject.

The type of focus group discussion for this study was structured. In the course of focus group discussion, the participants were free permitted to select most convenient time and place, and also they were allowed freely to express and discuss about the sensitive topic of sexual behavior.

3.8 Procedure of Data Collection and Analysis

3.8.1 Procedure of Data Collection

The first step to be undertaken in this research study was to contact the participants through their leaders. The next step was to activate the actual data collection. Next to this, structured questionnaires were distributed to the target sample in order to collect the pertinent needed information.

3.8.2 Recruitment of Data Collectors and Training

Eight data collectors and two supervisors were involved in data collection at the field. All these data collectors are members of military forces. The recruitment of the data collectors was done on the basis of their experience of data collection and supervision.

Training of data collectors was done for two days. The content of the training includes explaining the purpose and objective of the study, procedure of data collection, how to approach the participants and respecting the consent and ethical values of the respondents.

3.8.3 Data Analysis

The data collected through structured questionnaire was edited and entered into the computer for analysis with the help of SPSS. Uni-variate, bi-variate and multi-variate techniques of data analysis was used. In the uni-variate analysis the respondents' background information was analyzed. In the bi-varinta analysis cross tabulation of independent variables with dependent variables was analyzed and chi-square test was employed to identify those independent variables that had an association with the dependent variables. Further more binary logistic regression analysis was used to identify the predictor variables among those that had the association with the dependent variable using the chi-square test.

3.9 Variables Selected for the Study

In this research the investigator formulated the following dependent and independent variables based on the literature review in order to access sexual behaviors of the target group.

The dependent variables are

- Sex with commercial sex workers
- Multiple sexual partners
- Resulted health hazard (HIV/AIDS and STIs)

The independent variables are

1. **Demographic factors**
   - Age
   - Sex
   - Marital status
2. **Socio- economic factors**
   - Educational level
   - Income
   - Religion
3. **Wok related factors**
   - Military Rank
   - Service year
   - Mobility

- Stress and Boredom
- Profession resulted risk taking behavior

The intermediate variables are

- Condom use
- Alcohol use
- Substance use
- Knowledge

3.10 Ethical Considerations

Ethical clearance was obtained from Addis Ababa University, College of Development Studies, Institute of Population Studies and Ministry of National Defense.

In the process of the study, ethnical value of the institution and the individuals was taken into account. Relevant permission of the institutions was obtained from responsible bodies. The purpose, objective and procedure of the study were explained to the respondents and informed consent was also obtained from the study subjects. The result was confidential and the secrecy of the respondents was kept because of the anonymity of the data collection.

3.11 Data Quality Assurance

The quality of the data was ensured through proper recruitment and training of data collectors, pre-testing of the questionnaire, close supervision of data collectors and getting immediate feedback, checking each of completed questionnaires daily. Information was exchanged daily to correct problems during the course of data collection. All collected questionnaires were checked for completeness, accuracy and consistency by the principal investigator everyday. Anything which was unclear was corrected and communicated to the data collectors on the next day.

Chapter Four

Data Presentation

4.1 Socio-Demographic Characteristics of Respondents

From the total respondents of 422 purposively selected members of the military of the study Regiment (which has about 600 infantry soldiers), 420 participated were included in the study. The rest 2 members of the military could not volunteer to finish the questionnaire because they were ordered by their officer to do a special military mission. Therefore, the final sample size was 420 making the response rate 99.9 percent. The respondents considered in the study were male military personnel. There were no female military commandoes in the Regiment.

The distribution of respondents by Socio-Demographic Characteristics including age group, level of education, religion, marital status, work-related mobility, work-related stress, drinking of alcohol, total service years, income, place of residence, ethnicity and current military rank is shown in Table4.1

Table 4.1 Percent Distribution of Respondents' by Background Characteristics

Background Factors	Number	Percent (%)
Age group		
15-19	8	1.9
20-24	160	38.1
25-29	177	42.1
30+	75	17.9
Total	**420**	**100**
Place of birth		
Urban	182	43.3
Rural	238	56.7
Total	**420**	**100**
Level of Education		
Illiterate	178	42.4
Primary	119	28.3
Secondary and above	123	29.3
Total	**420**	**100**
Marital Status		
Never Married	282	67.1
Ever Married	138	32.9
Total	**420**	**100**
Religion		
Orthodox	278	66.2

Muslim	104	24.8
Protestant	30	7.1
Catholic	8	1.9
Total	**420**	**100**
Work-Related Mobility		
No	369	87.9
Yes	51	12.1
Total	**420**	**100**
Work-Related Stress		
Yes	323	76.9
No	97	23.1
Total	**420**	**100**
Drinking Alcohol in the last 4 weeks		
No	99	23.6
Yes	321	76.4
Total	**420**	**100**
Total Service Year in Military		
(1-5) years	145	34.5
(6-10) years	175	41.7
(>=11) years	100	23.8
Total	**420**	**100**
Current Military Rank		
Private Soldiers	180	42.9
Non-Commissioned	163	38.8
Junior& Senior officer	77	18.3
Total	**420**	**100**
Income of Respondents		
(<401) Birr	74	17.6
(401-800) Birr	229	54.5
(801+) Birr	117	27.9
Total	**420**	**100**
Ethnic Group		
Tigrean	106	25.2
Afar	19	4.5
Amhara	141	33.6
Oromo	97	23.1
Sidama	29	6.9
Others	28	6.7
Total	**420**	**100**

Source: Field Survey, 2009.

Out of the total respondents, 1.9 percent, 38.1 percent, 42.1 percent and 17.9 percent were found in the age groups of 15-19, 20-24, 25-29 and 30+ years respectively. These age groups are the most sexually active and vulnerable to sexually transmitted diseases including HIV/AIDS. The youngest age was 18, whereas the oldest reported age was 47. The mean and median age for the study population were found to be 28.7 and 28.0 years respectively. Regarding place of birth of respondents 56.7 percent were from rural and 43.3 percent were from urban.

With respect to the educational level of respondents, 42.4 percent had no education; 28.3 percent had attended primary education and 29.3 percent had secondary education and above.
A large part of respondents' i.e. 67.1 percent had never married whereas 32.9 percent were ever married. Ever married includes those respondents who were currently married, separated, divorced and widower at the time of the survey.

In terms of religion, 66.2 percent of the respondents were Orthodox Christians, 24.8 percent were Muslims, 7.1 percent and 1.9 percent were protestant and Catholic Christians respectively.
Regarding work-related mobility of respondents, 87.9 percent did not move from their station place but 12.1 percent moved from one place to another by the ordered of their officer to do a special military mission. The majority of the respondents, that is, 76.9 percent reported to felt work-related stress, but 23.1 percent did not agree with this idea.

A major percentage of respondents (76.4 percent) drank alcohol within the last four weeks before the survey, while the rest 23.6 percent of respondents did not take alcohol.
The majority of respondents, 41.7 percent gave military services from 6 years to10 years whereas 34.5 percent and 23.8 percent reported to be in the service years between 1-5 years and more than 10 years respectively.

Regarding the current military rank of respondents, 42.9 percent were private soldiers, 38.8 percent were Non-Commissioned Officers (includes, corporal and sergeant), 18.3 percent were both Junior Officers (i.e. Lieutenant and Captain) and Senior Officers (i.e. Major, Colonel and General).

With respect to the respondents monthly income, about 54.5 percent earned (401-800) Birr, 27.9 percent earned more than 800 Birr and 17.6 percent earned less than 401 Birr.

With respect to ethnicity about a third were Amhara and about a quarter were Tigreans, whereas 23.1 percent, 6.9 percent 4.5 percent were Oromo, Sidama and Afar respectively, 6.7 percent belong to other ethnicity(i.e., Wolayitas, Somalias Agew, Guragie, Gambela, Berta,Gumz ,Gediyo, Bench ,Kenbatas, Hadiya).

4.2 Sexual Behavior of Respondents

92 percent of the study population has ever had sexual intercourse. The age at first sexual intercourse ranged between 11 and 36years. The majority of respondents (89.4 percent) had sexual intercourse during the twelve months preceding the survey. Those respondents who had sexual intercourse in the last twelve months preceding the survey were asked additional questions to know their sexual partners and the number of their sexual partners. According to the results of their response, 43.5 percent of respondents had sex with commercial sex-workers, whereas 40.3 percent and 16.2 percent had sex with their regular partners and non regular sexual partners, respectively. In addition, out of four hundred and twenty respondents, 72 (25.2 percent) had at least four or more sexual partners (see Table 4.2).

With regard to awareness of STIs, 96 percent of respondents had heard about a disease that is transmitted from person through sexual intercourse. About 72 percent of the study population had heard of the three STIs, i.e., syphilis, gonorrhea and chancroid.

Table 4.2 Percent Distribution of Respondents by Sexual Behavior

Items	Number	Percent
Ever had Sexual intercourse?		
Yes	386	91.9
No	34	8.1
Total	420	100.0
Had sexual intercourse in the last 12 months?		
Yes	345	89.4
No	41	10.6
Total	386	100.0
With whom did you have sex in the last 12 months?		
Spouse/Regular partner	139	40.3
Commercial sex workers	150	43.5
Non-regular sexual partners	56	16.2
Total	345	100.0
With how many different partners have you had sex in the last 12 months?		
One sexual partner	125	43.7
Two sexual partners	57	19.9
Three sexual partners	32	11.2
Four and above	72	25.2
Total	286	100.0

Source: Field Survey, 2009.

4.3 Knowledge and Use of Condom

If there is no vaccine, preventive measures such as provisions and consistent use of condoms remain the most effective and affordable interventions for slowing the HIV pandemic.

Even though 96 percent of the study population has heard about condom and 92 percent of the respondents have ever had sexual intercourse, only 94.5 percent of the study population used condoms in their life time. The rest 5.5 percent were more likely exposed to the risk of HIV/AIDS (refer table 4.3). Respondents were also asked a question "which places or persons do you know to obtain condoms?" Hence, according to the result of their response, 86.3 percent and 82.6 percent of respondents mentioned that condoms could be obtained from shop and Health station /Hospital respectively. Shop is the common place to obtain condoms for the majority of the sample. Beside, 77.9 percent and 67.9 percent of the study population reported clinic and pharmacy respectively are places to obtain condoms. 62.9 percent of the study population identified Hotel/ Bar as source to obtain condoms. Therefore, the respondents' awareness of place or persons to obtain condoms is more likely the result of educational program of the Health Bureau of Ministry of National defense.

The major importance for the prevention of the spread of HIV is the use of condoms consistently while having sexual intercourse. However, the use of condoms consistently among the study population is not yet widespread. 73 percent of respondents did not use a condom consistently. Respondents gave various reasons for not using it consistently. Thirty percent of them did not use condom consistently since they did not always have condom at hand; 19 percent of them said that it reduces sexual gratification; 24 percent of them had sex with only one sexual partner; 29 percent of them did not always remember to use it although they had it at hand. This might be due to consumption of alcohol and then unable to negotiate and use it. Breakage of condom during sexual intercourse was given as a reason for not using condom consistently by 8 percent of respondents (It is not presented in Table).

Table 4.3 Percent Distribution of Respondents by Condom Use

Items	Number	Percent
Ever heard about condom?		
Yes	402	95.7
No	18	4.3
Total	420	100.0
Ever used a male condom?		
Yes	380	94.5
No	22	5.5
Total	402	100.0
Where do you get condom?		
Shop		
yes	347	86.3
no	55	13.7
Total	402	100.0
Pharmacy		
yes	273	67.9
no	129	32.1
Total	402	100.0
Clinic		
yes	313	77.9
no	89	22.1
Total	402	100.0
Health Station/Hospital		
yes	332	82.6
no	70	17.4
Total	402	100.0
Hotel/Bar		
yes	253	62.9
no	149	37.1
Total	402	100.0
Peer educator/ friend		
yes	172	42.8
no	230	57.2
Total	402	100.0

Source: Field Survey, 2009

4.4 Awareness and Knowledge of HIV / AIDS

4.4.1 Awareness of HIV/ AIDS

Most of the time, having relevant knowledge of AIDS is necessary to avoid risky sexual behavior for the transmission of HIV. About 97 percent of the study population had heard of AIDS. Table 4.4 shows the percentage of respondents who have heard of AIDS from specific sources by selected background factors. Radio was the main source of information on AIDS as stated by the study population (87.7 percent). Health workers, Television and News paper were also important sources of information on AIDS for the respondents. 84.6 percent and 82.6 percent of the study population recognized health workers and Television as source of information about AIDS epidemic, whereas 79.4 percent of the study population confirmed News paper / Magazine as source of information on AIDS. The target populations are more likely to recreate themselves by listening to different radio programs, and by attending different meeting programs which is given by the health officers of military. Thus, in the same way, they are more probably to hear and attend those programs about AIDS information. Majority of respondents put radio and health workers as source of information on AIDS.

Another source of information about AIDS was mentioned by friends / relatives which are about 64 percent of respondents. This implies that the presence of discussion among them about the disease. Educated respondents were more likely to get information from the media (i.e. Newspaper/ Magazines, pamphlets/ posters) and from schools/ teachers. Churches/mosques were the lowest source of information on AIDS as reported by the study population (52 percent). Although the role of organized institutions, such as Churches or Mosques is important to disseminate information about AIDS, their role in the military environment is limited. This may be that the military profession does not allow for individual military personnel to go to either churches or mosques. This is due to the intensive mission of the military which is given an order by their officers.

Table 4.4 Percent Distribution of Respondents by Awareness of HIV/AIDS (Multiple Reponses)

Items of Knowledge Factors	Number	Percent
Ever heard about HIV /AIDS?		
Yes	408	97.1
No	12	2.9
Total	420	100.0
From which source of information have you heard about HIV/AIDS?		
Radio		
yes	358	87.7
no	50	12.3
Total	408	100.0
TV		
yes	337	82.6
no	71	17.4
Total	408	100.0
News Paper / Magazine		
yes	324	79.4
no	84	20.6
Total	408	100.0
Pamphlets / Posters		
yes	300	73.5
no	108	26.5
Total	408	100.0
Health workers		
yes	345	84.6
no	63	15.4
Total	408	100.0
Churches /Mosques		
yes	212	52.0
no	196	48.0
Total	408	100.0
School /Teachers		
yes	246	60.3
no	162	39.7
Total	408	100.0
Friends / Relatives		
yes	261	64.0
no	147	36.0
Total	408	100.0
Work place		
yes	262	64.2
no	146	35.8
Total	408	100.0

Source: Field Survey, 2009.

4.4.2 Knowledge of HIV/AIDS Transmission

Obtaining knowledge of HIV/AIDS transmission is an important step to stop the alarming rate of the disease. Thus, Table 4.5 indicates, percentage of respondents who knew different methods by which HIV/AIDS can be transmitted by selected background factors.

Some literature shows, not using condom during sex, having sex with multiple partners, or with commercial sex workers, transfusion of infected blood and use of contaminated needles and syringes are risk factors for the transmission of HIV/AIDS. Every single act of unprotected intercourse with commercial sex workers or non-regular partners is more likely to expose some on to the risk of contracting HIV/AIDS. Table 4.5 shows that, Ninety-one percent of respondents believed that intercourse without a condom are the main way of HIV/AIDS transmission.

The other risk factors are transfusion of infected blood and sex with multiple partners and they had relatively higher response rate than the remaining other risk factors. Seventy- six percent and Seventy-two percent of respondents' think that transfusion of infected blood and sex with multiple partners (respectively) as ways of HIV/AIDS transmission. Seventy-one and thirty-six percent of respondents reported use of contaminated needles and syringes and homo-sexual contacts respectively are ways of HIV/AIDS transmission.

Misunderstanding of the methods of HIV/AIDS transmission was also observed among the study population. Thirty-one and twenty-five percent each of respondents mentioned that HIV/AIDS can be transmitted through kissing and mosquito bites respectively.

Table 4.5 Percent Distribution of Respondents by Knowledge of Means of HIV/AIDS Transmission

Items of Knowledge Factors	Number	Percent
How can a person get HIV / AIDS?		
Not using condoms during sex		
yes	384	91.4
no	36	8.6
Total	420	100.0
Sexual intercourse with multiple partners		
yes	304	72.4
no	116	27.6
Total	420	100.0
Transfusion of infected blood		
yes	317	75.5
no	103	24.5
Total	420	100.0
Use of contaminated needles and syringes		
yes	299	71.2
no	121	28.8
Total	420	100.0
Kissing		
yes	131	31.2
no	289	68.8
Total	420	100.0
Mosquito bites		
yes	105	25.0
no	315	75.0
Total	420	100.0
Homo sexual contact		
yes	153	36.4
no	267	63.6
Total	420	100.0

Source: Field Survey, 2009.

4.4.3 Knowledge of HIV/AIDS Prevention

As table 4.6 indicates, the percentage distribution of respondents who knew specific methods through which one can avoid getting infected with the HIV/AIDS virus. 95.5 percent of respondents stated that there is a method to avoid getting AIDS while 4.5 percent of respondents reported that there is no method- to avoid getting AIDS.

About eighty-two percent of respondents' stated that, one can avoid getting AIDS by abstaining from sex. Eighty-three percent of respondents believed that having sex with only one faithful partner is an effective method to avoid contracting HIV. Seventy-five percent of respondents' thought that using condoms is a method of avoiding getting AIDS.

About fifty-three percent of respondents think that avoiding sex with commercial sex workers is a way of avoiding getting HIV/AIDS. The rest forty-seven percent of respondents did not mention avoiding sex with commercial sex workers as a method of avoiding contracting HIV/AIDS. This may be due to the content of the educational program that did not give due attention to avoid sex with sex-workers as method to avoid getting HIV/AIDS. On the other hand, the study population might have learned other ways of avoiding contracting HIV/AIDS from the military health workers through the educational program in the study regiment. Sixty-six percent and Sixty -one percent of respondents stated that avoiding sharing blades and sharing other sharp instruments, and insisting to test blood for transfusion respectively can help prevent the risk of getting HIV/AIDS. The response rate of seeking protection from traditional healer as a way of avoiding getting HIV/AIDS is about 26 percent which is relatively low.

Table 4.6 Percent Distribution of Respondents by Knowledge of HIV/AIDS Prevention

Items of Knowledge Factors	Number	Percent
Is there a method to avoid getting HIV/AIDS?		
Yes	401	95.5
No	19	4.5
Total	420	100.0
Abstain from sex		
yes	327	81.5
no	74	18.5
Total	401	100.0
Limit sex to one partner		
yes	332	82.8
no	69	17.2
Total	401	100.0
Seek protection from traditional healer		
yes	103	25.7
no	298	74.3
Total	401	100.0
Use condoms		
yes	302	75.3
no	99	24.7
Total	401	100.0
Avoid sex with sex-workers		
yes	213	53.1
no	188	46.9
Total	401	100.0
Avoiding blades and sharing other sharp instruments		
yes	266	66.3
no	135	33.7
Total	401	100.0
Insist to test blood		
yes	283	70.8
no	118	29.2
Total	401	100.0

Source: Field Survey, 2009.

4.4.4 HIV/AIDS Knowledge Related Issues

To evaluate the further knowledge about HIV/AIDS, respondents were asked a number of questions on HIV/AIDS related issues. Table 4.7 shows the percentage distribution of respondents who have knowledge of HIV/AIDS related issues by selected items about knowledge of HIV/AIDS.

The table shows, 92 percent of respondents believed that AIDS cannot be cured medically. Respondents were also asked a question "Have you ever had an HIV test?" and "If no, what is the reason behind?" to assess their attitude to HIV test. Thirty percent of them have not had an HIV test. Reasons for not having HIV test were; thirty-seven percent of respondents reported that lack of HIV testing facilities, eighty-seven percent fear of it, and twenty-eight percent lack of money.

To assess about the deep knowledge about HIV/AIDS respondents also asked some questions like "Can a healthy looking person be HIV positive?", "Can a person get HIV by the first time he / she have sex?", "Do men and women have equal chance of getting HIV/AIDS in a single sexual intercourse?" and "Can HIV/AIDS be cured medically?'. Hence, according to their response, 33 percent, 48 percent, 28 percent and 8 percent respectively said "yes". This shows that their understanding about the knowledge of HIV/AIDS seems to be limited.

Table 4.7: Percent Distribution of Respondents by HIV/AIDS Knowledge Related Issues.

Items of Knowledge Factors	Number	Percent
Does the presence of STIs have an impact of HIV?		
Yes	342	81.4
No	78	19.6
Total	420	100.0
Ever had an HIV test?		
Yes	293	69.8
No	127	30.2
Total	420	100.0
If no, what is the reason?		
Lack of HIV test facilities		
yes	47	37.0
no	80	63.0
Total	127	100.0
Lack of money		
yes	35	27.6
no	92	72.4
Total	127	100.0
I am afraid		
yes	111	87.4
no	16	12.6
Total	127	100.0
Can a healthy looking person be HIV positive?		
Yes	138	32.9
No	282	67.1
Total	420	100.0
Can a person get HIV by the first time he/she have sex?		
yes	202	48.1
no	218	51.9
Total	420	100.0
Do men and women have equal chance of getting HIV/ AIDS in a single sexual intercourse?		
yes	117	27.9
no	303	72.1
Total	420	100.0
Can HIV/AIDS be cured medically?		
Yes	34	8.1
No	386	91.9
Total	420	100.0

Source: Field Survey, 2009

Chapter Five

Data Analysis and Discussion

5.1 Bivariate Results

In this case, three dependent variables were selected to examine their association with the independent variables by using the chi-square independence test. So as to use the chi-square test, its assumptions must be satisfied. The selected dependent variables were:

- Sex with commercial sex workers
- Multiple sex partners
- Resulted health hazards

The first dependent variable was concerning the sexual behavior of the respondents i.e. sex with commercial sex workers, which is one of the risk factors for the transmission of STIs including HIV/AIDS. Due to their high HIV prevalence, to their increased ability to transmit HIV when co-infected with other STIs, and to the broad population groups they reach through their clients, sex workers have often been described as a 'core group', namely, a small group in which the infection is endemic and from whom it spreads to the population at large (Mathias et al. 2001: 88). Thus, this dependent variable was selected for this study. Table 4.8 shows the bivariate results of the respondents who have had sexual intercourse with commercial sex workers in the last 12 months before the survey by selected background factors.

As Table 5.1 indicates, four of the independent variables had association with the dependent variable at $p<0.05$. The respondents' educational level, marital status, work related stress and drinking alcohol were found to have association with the dependent variable. This is to say that the number of respondents who had sex with commercial sex workers decreases and then increases as the level of their education increase. This suggests that respondents who have higher level of education are more likely to have good knowledge about the risk factors including sex with commercial sex workers for HIV/AIDS transmission.

Table 5.1 shows that, 53.8 percent of respondents who had primary educational level did have sexual intercourse with commercial sex workers. This is low compared with 62.4 percent of respondents who had no education. During the survey, respondents who had ever married during the

survey (51 percent) had sex with this risk group (i.e. Commercial sex workers) whereas 69 percent of never married respondents did sex with sex workers. 66 percent of respondents who had work related stress carried out sexual intercourse with commercial sex workers and 66 percent of respondents that took alcohol in the last 4 weeks before the survey carried out sexual intercourse with commercial sex workers.

The above discussion is also supported by the focus group discussion (FGD) that the respondents who contracted STIs are more likely to be infected with HIV/AIDS. The sexual activity of subsets of the population who had multiple partners or changed their sexual partners frequently and had sex with Commercial sex workers probably lead to the transmission of AIDS.

Table 5.1 Percentage of the respondents who have had sexual intercourse with commercial sex workers in the last 12 months before the survey by selected background factors

Independent Variables	Sex with Commercial Sex workers				X^2	P-Value
	Yes		No			
	Number	Percent	Number	Percent		
Age						
15-19	6	75	2	25		
20-24	102	63.8	58	36.2	0.628	0.89
25-29	111	62.7	66	37.3		
30+	46	61.3	29	38.7		
Level of Education						
Illiterate	111	62.4	67	37.6		
Primary	64	53.8	55	46.2	9.837	0.007
Secondary and above	90	73.2	33	26.8		
Marital Status						
Never Married	195	69.1	87	30.9	13.508	0.000
Ever Married	70	50.7	68	49.3		
Religion						
Orthodox	179	64.4	99	35.6		
Muslim	63	60.6	41	39.4	1.502	0.682
Protestant	17	56.7	13	43.3		
Catholic	6	75	2	25		
Total service year in Military						
(1-5) years	98	67.6	47	32.4		
(6-10) years	105	60	70	40	2.027	0.363
(>=!1) years	62	62	38	38		
Work Related Mobility						
No						
Yes	232	62.9	137	37.1	0.799	0.455
	33	64.7	18	35.3		
Work Related Stress						
Yes						
No	212	65.6	111	34.4	3.873	0.049
	53	54.6	44	45.4		
Drinking alcohol in the last 4 weeks						
No	53	53.5	46	46.5	5.084	0.024
Yes	212	66	109	34		

Source: - Field Survey, 2009

The second dependent variable was multiple sexual partners of respondents that is, soldiers were stationed in many towns within the war zone characterized by high HIV / AIDS infection rates. This is caused by multiple partner sex contacts. Respondents were asked a question with how many different partners have you had sex in the last 12 months other than your spouse?

As Table 5.2 shows, out of the eight selected socio-demographic variables, the four variables: age, level of education, marital status and work related stress were found to have association with the dependent variable at $p<0.05$. As age increased the percentage of respondent who had multiple sexual partners also increased, except at the older age group. This indicates that almost age has a positive association with the dependent variable. Contacts with multiple sexual partners contribute to the spread of STIs including HIV, since the person can transmit the infection to others without realizing it.

As level of education increases, the percentage of respondents with multiple sexual partners' decreased, except at the higher level of education. This shows that level of education has almost negative association with the dependent variable. Table 5.2 shows that, the never married respondents had more multiple sexual partners (70 percent) than the ever married respondents (61 percent). Respondents who had work related stress, (71percent) had more multiple sexual partners. This indicates that stressed soldiers need to enjoy by having more multiple sexual partners which contributes to the spread of STIs and HIV /AIDS.

Table 5.2 Percentage of the respondents who have had multiple sexual partners in the last 12 months before the survey by selected background factors

Independent Variables	Multiple Sexual Partners				X^2	P-Value
	Yes		No			
	Number	Percent	Number	Percent		
Age						
15-19	4	50	4	50		
20-24	113	70.6	47	29.4		
25-29	130	73.4	47	26.6	11.568	0.009
30+	40	53.3	35	46.7		
Level of Education						
Illiterate	125	70.2	53	29.8		
Primary	71	59.7	48	40.3	6.242	0.044
Secondary and above	91	74	32	26		
Marital Status						
Never Married	203	72	79	28	5.291	0.021
Ever Married	84	60.9	54	39.1		
Religion						
Orthodox	196	70.5	82	29.5		
Muslim	69	66.3	35	33.7	2.808	0.422
Protestant	17	56.7	13	43.3		
Catholic	5	62.5	3	37.5		
Total service year in Military						
(1-5) years	98	67.6	47	32.4		
(6-10) years	119	68	56	32	0.175	0.916
(>=!1) years	70	70	30	30		
Work Related Mobility						
No	252	68.3	117	31.7	0.002	0.962
Yes	35	68.6	16	31.4		
Work Related Stress						
Yes						
No	229	70.9	94	29.1	4.251	0.039
	58	59.8	39	40.2		
Drinking alcohol in the last 4 weeks						
No						
Yes	68	68.7	31	31.3	0.007	0.931
	219	68.2	102	31.8		

Source: - Field Survey, 2009

Table 5.3 Percentage of the respondents who have had related health hazard in the last 12 months before the survey by selected background factors

Independent Variables	Related Health Hazard				X^2	P- Value
	Yes		No			
	Number	Percent	Number	Percent		
Age						
15-19	1	12.5	7	87.5		
20-24	34	21.2	126	78.8	1.915	0.59
25-29	39	22	138	78		
30+	21	28	54	72.0		
Level of Education						
Illiterate	38	21.3	140	78.7		
Primary	33	27.7	86	72.3	2.619	0.27
Secondary and above	24	19.5	99	80.5		
Marital Status						
Never Married	66	23.4	216	76.6	0.302	0.582
Ever Married	29	21	109	79		
Religion						
Orthodox	56	20.1	222	79.9		
Muslim	27	26	77	74	14.295	0.003
Protestant	6	20	24	80		
Catholic	6	75	2	25		
Total service year in Military	43	29.7	102	70.3		
(1-5) years	35	20	140	80	6.591	0.037
(6-10) years	17	17	83	83		
(>=!1) years						
Work Related Mobility						
No	90	24.4	279	75.6	5.447	0.02
Yes	5	9.8	46	90.2		
Work Related Stress						
Yes						
No	71	22	252	78	0.325	0.569
	24	24.7	73	75.3		
Drinking alcohol in the last 4 weeks						
No						
Yes	14	14.1	85	85.9	5.319	0.021
	81	25.2	240	74.8		

Source: - Field Survey, 2009

5.2 Multivariate Results

The independent variables specified for this study (namely age, level of education, marital status, religion, total service years, work related mobility, work related stress and drinking of alcohol) are examined in the analysis. The forward stepwise method is used in selecting significant variables for entry into the model predicting each of the three dependent variables analyzed. In other words, the base model in each case contained only the constant, while, at each step, the likelihood ratio test is used to select a variable (predictor) for entry into the model. The stepwise method of variables selection is used so as to minimize the problem of multi-co linearity and to insure that only significant predictors are included in the model. Thus, for each dependent variable only significant predictors are presented for discussion.

The first dependent variable was sex with commercial sex workers. It was entered as dummy variable where 1 was assigned to those respondents who respond 'yes' and 0 for 'No'.
As Table 5.4 shows, predictor variables level of education, marital status, work related stress and alcoholic drink have positive association with the dependent variable. Respondents whose highest level of education was primary and secondary and above are more likely to be knowledgeable 0.6 and 0.5 times respectively than those who had no education. This clearly demonstrates the role of education as a facilitator of knowledge.

The odds ratio of sex with commercial sex workers for respondents who had ever married were more than never married by a factor of 1.95.The likelihood of having work related stress for those who said **no** is greater than those who said **yes** by a factor of 1.6.

Those respondents who took alcohol in the last four weeks preceding the survey were more likely to have sex with commercial sex workers than those who did not take alcohol. From Table 5.4 it can be seen that those who took alcohol in the last four weeks before the survey were found to have increased likelihood of sex with commercial sex workers by a factor of 1.5 times compared with those of respondents who did not take alcohol.

Table 5.4 Logistic Regression Results for Respondent's Sex with Commercial Sex Workers

Variables	β	S.E.	Sig.	Exp(β)
Educational Level				
Illiterates(RC)				1.000
Primary	-0.495	0.262	0.06*	0.61
Secondary and above	-0.773	0.282	0.006**	0.462
Marital Status				
Never Married(RC)				1.000
Ever married	0.67	0.222	0.003**	1.954
Work Related Stress				
Yes(RC)				1.000
No	0.487	0.243	0.045*	1.628
Alcoholic Drink				
No (RC)				1.000
Yes	0.374	0.245	0.127	1.453

Source: - Field Survey, 2009

Note: - β: Regression Coefficient
SE (β): Standard Error
Exp (β): Odds Ratio
RC: Reference Category

**Significant at p<0.01
*Significant at p<0.05

The second dependent variable was having multiple sexual partners' .It was entered as dummy variable where 0 represents those who respond 'no partner' and 1 for 'has partner'.

Table 5.5 reveals the effect of the predictor variables on the dependent variable. Out of all predictor variables, only the four variables (i.e. age, level of education, marital status and work related stress) showed significant influence on the dependent variable in the multivariate analysis. Having multiple sexual partners is positively related with age of respondents.

The odds ratio of multiple sexual partners for respondents whose highest level of education is primary school and, secondary and above is less than those of respondents who were did not have any education by a factor of 0.85 and 0.570 respectively. Level of education raises the awareness of HIV/AIDS, its modes of transmission and preventive measures. Hence, respondents who are more educated are more likely to feel less at risk of contracting HIV/AIDS by minimizing number of sexual partners. This may be because educated respondents might avoid each activity that exposes them to the risk of contracting HIV/AIDS.

The odds ratio of multiple sexual partners for respondents who were ever married is reduced by a factor of 1.5 compared with the odds of those of never married respondents. It is obvious that majority of respondents who were ever married are less likely to use condom consistently since they have wife/regular sexual partners. This may be because those ever married respondents probably dislike using condom on the ground that condom reduces sexual gratification. Hence, they may not adopt the use of condom consistently during sex. .The likelihood of having work related stress for those who said **yes** is greater than those who said **no** by a factor of 1.8.

Table 5.5 Logistic Regression Results for Respondent's Multiple Sexual Partners.

Variables	β	S.E.	Sig.	Exp(β)
Age Group				
15-19(RC)				1.000
20-24	-0.34	0.762	0.655	0.712
25-29	0.628	0.306	0.04*	1.874
30+	0.858	0.297	0.004**	2.358
Education				
Illiterates(RC)				1.000
Primary	-0.161	0.271	0.552	0.851
Secondary and above	-0.567	0.288	0.049*	0.567
Marital Status				
Never Married(RC)				1.000
Ever married	0.382	0.233	0.102	1.465
Work Relate Stress				
Yes(RC)				1.000
No	0.579	0.249	0.02*	1.784

Source: - Field Survey, 2009

Note: - β: Regression Coefficient
SE (β): Standard Error
Exp (β): Odds Ratio
RC: Reference Category

**Significant at p<0.01
*Significant at p<0.05

The third dependent variable was HIV/AIDS related health hazard. It was entered as dummy variable where 1was given to those who had attack and 0 for those who did not attack.

As Table 5.6 shows, religion, service year, work related mobility and alcoholic drink have significant relation with the dependent variable. The odds ratio of health hazard of respondents who are Muslims, protestant and catholic is less than those of orthodox respondents by a factor of 0.10, 0.15 and 0.12 respectively. Hence, they are more likely to avoid related health hazards.

Respondents who had more service years were found to have a much higher chance of having health hazards in the last 12 months before the survey than those of lower service years. The likelihood of having work related mobility for those who said **yes** is greater than those who said **no** by a factor of 3.Respondents who consume alcohol were more likely to have a health hazard than those who did not consume alcohol by the factor of 2.04.

Table 5.6 Logistic Regression Results for Respondent's Resulted Health Hazard

Variables	β	S.E.	Sig.	Exp(β)
Religion				
Orthodox(RC)				1.000
Muslim	-2.269	0.854	0.008**	0.103
Protestant	-1.891	0.871	0.03*	0.151
Catholic	-2.148	0.961	0.025*	0.117
Total Service years				
(1-5) years(RC)				1.000
(6-10) years	0.76	0.334	0.023*	2.138
(>=11) years	0.266	0.333	0.424	1.305
Work Related mobility				
No(RC)				1.000
Yes	1.082	0.497	0.029*	2.952
Alcoholic Drink				
No(RC)				1.000
Yes	0.712	0.329	0.03*	2.038

Source: - Field Survey, 2009

Note: - : β Regression Coefficient **Significant at p<0.01

SE (β): Standard Error *Significant at p<0.05

Exp (β): Odds Ratio

RC: Reference Category

Chapter Six

Summary, Conclusion and Recommendations

6.1 Summary

This research was a cross-sectional study. It set out to explore the causes and consequences of risky sexual behavior with commercial sex workers, multiple sex partners and resulted health hazards of 422 randomly selected male members of military personnel who lived in Zalambessa town since 2000. The research employed primary data, which were collected using standard questionnaires from January 23 to February 23, 2008. Data analysis included univariate, bivariate and multivariate techniques. The univariate analysis consisted of simple frequency and percentage distributions while the bivariate and multivariate analyses were employed to identify the effect of each of the explanatory variables on the dependent variables. In the multivariate analysis, binary logistic regression model was used.

With respect to the sexual behavior of the target population, 92 percents of the respondents have ever had sexual intercourse in their lifetime, whereas, 89.4 percent of them had sex in the last 12 months preceding the survey. About half of those who had sex in the last 12 months did sexual intercourse with sex workers that are high risk partners for the transmission of HIV/AIDS. Besides, about 25.2 percent of the respondents who had sex in the last 12 months had at least four female sexual partners. FGD also supports that it is relatively common for military population in the study area to have multiple sexual partners more than the reported number

Although 96 percent of the study population had heard about a disease that can be transmits from person to person through sexual intercourse (STIs), there were 51, 51, 48 and 44 percent respectively infected with Syphilis, Cancroids, and Gonorrhea and HIV/AIDS respondents within 12 month preceding the survey. So, treating the military for STDs is necessary to reduce the risk of HIV infection among the military.

Even though 96 percent of respondents had heard about condoms, the use of condoms consistently during sex is not widespread. It is only 18 percent of that used it consistently. The rest were more likely to be exposed to the risk of infection with HIV/AIDS. They gave various reasons for not

using condom consistently. These are: did not have condom always at hand, it reduces sexual gratification, burst of condom, and sex with wife/regular partners, etc. The majority of respondents had good knowledge about the source of condoms. Negative attitude towards condom, cultural influence, less knowledge about how to use condoms properly and fear of losing sexual partners were the main reasons by the discussant of the FGDs for the low level use of condoms

With regard to respondents' awareness of AIDS, 97 percent of respondents had heard of AIDS. Radio, health workers, television, newspaper/magazines, pamphlets/posters, work place and friends in that (descending) order were reported as important sources of information on HIV/ AIDS. Both results of the survey and FGDs also showed that respondents had good knowledge about ways of HIV/AIDS transmission. However, 31 percent and 25 percent of respondents' thought that HIV/AIDS could be transmitted through kissing and mosquito bites, respectively. Knowledge of HIV/AIDS prevention is also high among the study population. Ninety-six percent of respondents believed that there is a way to avoid getting AIDS. Twenty-six percent of respondents confirmed that seeking protection from traditional healer is a way to avoid contracting HIV/AIDS. Due to the nature of the risk factors for the spread of HIV/AIDS in military personnel, the following dependent variables were selected for the bivariate and multivariate analysis. These are: sex with commercial sex workers, multiple sexual partners and resulted health hazards. Bivariate and multivariate analysis used to examine the effect of predictor variables on these selected dependent variables.

The bivariate results of the study such as educational level, marital status, work related stress and alcoholic drink of respondents' had association with the dependent variable sex with commercial sex workers.

The number of respondents who had sexual intercourse with commercial sex workers decreases then increases with increment in respondents 'level of education" and the number of respondents who had sexual intercourse with commercial sex workers decreases with "marital status" was changed from never married to ever married . Respondents those who had more work related stress and took more alcoholic drink, had more sexual intercourse with commercial sex workers.

More over, as age of respondents increases, having multiple sexual partner increases except at the age group of 30+. Whereas, as marital status increases from never married to ever married and level

of education from illiterate to primary except at higher level education, having multiple sexual partner decreases. As respondents had work related stress, they practice more multiple sexual partners.

The independent variables religion, total service year, work related mobility and alcoholic drink had association with the dependent variable health hazard. As the total service year of respondents increases, resulted health hazards (STIs and HIV / AIDS) decreases. But, those who were consuming more alcoholic drink were exposed to health hazard (STIs and HIV/AIDS).

The logistic regression model reflects that variables like education, marital status and work related stress come up as determinants of sex with commercial sex workers. As, education increases the likelihood of doing sex with commercial sex workers decreases. This indicates that education has its own positive role in denying sex with sex workers. Moreover, the tendency of having sex with commercial sex workers is more among the ever married soldiers. This could be due the fact that their prior sexual experience forces them to do so. Another conclusion that can be arrived at is that work related stress has a negative influence on doing sex with commercial sex workers.

The model again depicts that age, education and work related stress are determinants of multiple sexual partners. Age is positively correlated with multiple sexual partners. Thus it can be said that increase in age by itself has a positive influence in developing multiple sexual partners. On the other hand, education has a negative influence on having multiple sexual partners. Educated soldiers have adequate knowledge on the impact of having multiple sexual partners and they tend to avoid having many sexual partners. Another conclusion that can be arrived at is work related stress has a negative influence on having multiple sexual partners.

Variables such as religion, total service years, work related mobility, and alcoholic drinks are determinants of health hazard. In terms of religion the Orthodox groups are more likely to develop health hazard than the other religious groups. Increase in total service year among soldiers has a positive influence in developing health hazard. With regard to work related mobility, soldiers who moved for special purpose to some other areas were more likely to develop health hazard. Thus it

can be said that work related mobility has a positive influence on health hazard. Moreover, drinking alcoholic drinks has a direct impact on developing health hazard.

6.2 Conclusion

.In conclusion, despite so many limitations, this study has shown that a set of socio- demographic, socio-economic and work-related factors account for significant proportions of the variations in the past among the target population in changing sexual behavior of military personnel.

The findings of the study suggest that, about 92 percent of the respondents admitted to being sexually experienced, 43.5 percent had sex with commercial sex workers, 56.3 percent had sexual contacts with multiple partners, on average 49 percent of the respondents were affected by STDs including HIV/AIDS and even though 75.3 percent of the respondents believed the use of condoms can prevent HIV/AIDS and other STIs, the remaining 24.7 percent did not agree with this idea, which is a significant value in case of military population because development of a country more depends on military defense that brings peace. Hence, the above results show that respondents are at high risk of sexual behavior.

The principle is that the various internal and external causes and knowledge about HIV/AIDS influence their behavior, that is, risk taking behavior. Results of the study have shown that perception of risk and high knowledge about HIV/AIDS does not necessarily translate to behavior change. Even in the face of existing perception of risk and knowledge of HIV, risk taking behavior (having multiple sexual partners, sex with commercial sex workers, resulted health hazards) is still high.

Generally, as we have seen throughout in this study, those who were less educated; those who had highest service years ,those who had work related stress; those who had work related mobility and those who had been ever married were in one way or the other more likely to be exposed to the infection of STDs including HIV/AIDS. Thus, there is a strong need of appropriate intervention programs targeting the military population in the study area.

6.3 Recommendations

In addition to the discovery of an effective vaccine or therapy, reduction of risk-taking behavior is the only way in which the AIDS pandemic can be achieved. Therefore, based on the results of the research obtained and the conclusion drawn, the following important recommendations are presented to eliminate risky sexual behavior.

- Peer educators are people in workplace similar to each other in age, background and experiences and interests .This form of education is suitable to matter how small or large your work is, as people are more likely to listen and follow advice from their peers .In order to protect Military personnel from risky sexual behavior, military health officials should recruit, train, promote peer educators and gave the way for peer discussion. So that military personnel freely discuss with their peers and might solve their negative behaviors.
- Encouraging and supporting the already formed educational approach in the military institutions is important. More aggressive educational approach is needed to re-educate those member of the military who have less educational level; lower service years and who are private soldiers, etc. on the misperception about HIV/AIDS. In improving their understanding of modes of transmission and prevention, minimizing the difficulty in identification of infected persons by looking at them etc would contribute to reduce the infection rate of HIV among the military personnel. Education must be explicit and repeated to be effective.
- Continuing a vigorous campaign on condom use, correctly and consistently each and every time should be strengthened. We can learn lessons from Senegalese government. The Senegalese government has reduced the prevalence of HIV/AIDS in the military population by giving unlimited supply of free condoms as part of military provisions or supplies along with uniforms, shoes etc and encouraging them to use it correctly and consistently. Ethiopian soldiers should be taught about the importance of condom use, and the military should supply the troops with condom regularly and timely.
- The Military health officials should strengthen and extend provision of counseling and voluntary testing services in the war front of Corps, Divisions, Regiments, etc, with regular encouragement to the military personnel to take advantage of these services.

- By now the necessary and urgent condition is to create a non-stigmatizing and non-discriminatory environment within the military personnel. For this reason necessary support could be given to establish AIDS club at each military regiment work place.
- To bring behavioral change in the military personnel, concerned military health officers should arrange programs using Drama, Magazine (Tikuakur Nebroch or the black Tigers), in the Anti ADS club by providing an electric power (Generator).
- To bring behavioral change in the commercial sex workers, concerned officers of town should arrange as a group in small business development so as to change their life style.
- The existing study indicates that substance use and risky sexual behavior co-vary .Taking substance increases the likelihood of risk-related sexual intercourse .the current study also confirmed this fact by showing that it is a powerful predictor of risky sexual behavior .Therefore, there is a need to protect military personnel from such emerged and quickly expanding problem. To do so comprehensive substance use cessation program should be implemented by stake holders , that is
  * Friends who have substance abuse problems need to teach the other friends about the grim consequences of the substance use.
  * Concerned health officers create awareness about the causes and consequences substance use.
  * Above all, the higher military officials should teach and control Private military not to use substances since the future peace and development of the country lies on the yoke of his segment of the society.
- Finally, in this study attempts have been made to give an insight about the causes and consequences of risky sexual behavior of the military personnel in Zalambessa town of Tigray Regional State. However, further studies are needed to augment our knowledge of the town military personnel's risky sexual behavior that motivate or deter them from having sexual intercourse and using preventive methods, particularly by considering military personnel who are not considered in this study.

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using condom consistently. These are: did not have condom always at hand, it reduces sexual gratification, burst of condom, and sex with wife/regular partners, etc. The majority of respondents had good knowledge about the source of condoms. Negative attitude towards condom, cultural influence, less knowledge about how to use condoms properly and fear of losing sexual partners were the main reasons by the discussant of the FGDs for the low level use of condoms

With regard to respondents' awareness of AIDS, 97 percent of respondents had heard of AIDS. Radio, health workers, television, newspaper/magazines, pamphlets/posters, work place and friends in that (descending) order were reported as important sources of information on HIV/ AIDS. Both results of the survey and FGDs also showed that respondents had good knowledge about ways of HIV/AIDS transmission. However, 31 percent and 25 percent of respondents' thought that HIV/AIDS could be transmitted through kissing and mosquito bites, respectively. Knowledge of HIV/AIDS prevention is also high among the study population. Ninety-six percent of respondents believed that there is a way to avoid getting AIDS. Twenty-six percent of respondents confirmed that seeking protection from traditional healer is a way to avoid contracting HIV/AIDS. Due to the nature of the risk factors for the spread of HIV/AIDS in military personnel, the following dependent variables were selected for the bivariate and multivariate analysis. These are: sex with commercial sex workers, multiple sexual partners and resulted health hazards. Bivariate and multivariate analysis used to examine the effect of predictor variables on these selected dependent variables.

The bivariate results of the study such as educational level, marital status, work related stress and alcoholic drink of respondents' had association with the dependent variable sex with commercial sex workers.

The number of respondents who had sexual intercourse with commercial sex workers decreases then increases with increment in respondents 'level of education" and the number of respondents who had sexual intercourse with commercial sex workers decreases with "marital status" was changed from never married to ever married . Respondents those who had more work related stress and took more alcoholic drink, had more sexual intercourse with commercial sex workers.

More over, as age of respondents increases, having multiple sexual partner increases except at the age group of 30+. Whereas, as marital status increases from never married to ever married and level

of education from illiterate to primary except at higher level education, having multiple sexual partner decreases. As respondents had work related stress, they practice more multiple sexual partners.

The independent variables religion, total service year, work related mobility and alcoholic drink had association with the dependent variable health hazard. As the total service year of respondents increases, resulted health hazards (STIs and HIV / AIDS) decreases. But, those who were consuming more alcoholic drink were exposed to health hazard (STIs and HIV/AIDS).

The logistic regression model reflects that variables like education, marital status and work related stress come up as determinants of sex with commercial sex workers. As, education increases the likelihood of doing sex with commercial sex workers decreases. This indicates that education has its own positive role in denying sex with sex workers. Moreover, the tendency of having sex with commercial sex workers is more among the ever married soldiers. This could be due the fact that their prior sexual experience forces them to do so. Another conclusion that can be arrived at is that work related stress has a negative influence on doing sex with commercial sex workers.

The model again depicts that age, education and work related stress are determinants of multiple sexual partners. Age is positively correlated with multiple sexual partners. Thus it can be said that increase in age by itself has a positive influence in developing multiple sexual partners. On the other hand, education has a negative influence on having multiple sexual partners. Educated soldiers have adequate knowledge on the impact of having multiple sexual partners and they tend to avoid having many sexual partners. Another conclusion that can be arrived at is work related stress has a negative influence on having multiple sexual partners.

Variables such as religion, total service years, work related mobility, and alcoholic drinks are determinants of health hazard. In terms of religion the Orthodox groups are more likely to develop health hazard than the other religious groups. Increase in total service year among soldiers has a positive influence in developing health hazard. With regard to work related mobility, soldiers who moved for special purpose to some other areas were more likely to develop health hazard. Thus it

can be said that work related mobility has a positive influence on health hazard. Moreover, drinking alcoholic drinks has a direct impact on developing health hazard.

6.2 Conclusion

.In conclusion, despite so many limitations, this study has shown that a set of socio- demographic, socio-economic and work-related factors account for significant proportions of the variations in the past among the target population in changing sexual behavior of military personnel.

The findings of the study suggest that, about 92 percent of the respondents admitted to being sexually experienced, 43.5 percent had sex with commercial sex workers, 56.3 percent had sexual contacts with multiple partners, on average 49 percent of the respondents were affected by STDs including HIV/AIDS and even though 75.3 percent of the respondents believed the use of condoms can prevent HIV/AIDS and other STIs, the remaining 24.7 percent did not agree with this idea, which is a significant value in case of military population because development of a country more depends on military defense that brings peace. Hence, the above results show that respondents are at high risk of sexual behavior.

The principle is that the various internal and external causes and knowledge about HIV/AIDS influence their behavior, that is, risk taking behavior. Results of the study have shown that perception of risk and high knowledge about HIV/AIDS does not necessarily translate to behavior change. Even in the face of existing perception of risk and knowledge of HIV, risk taking behavior (having multiple sexual partners, sex with commercial sex workers, resulted health hazards) is still high.

Generally, as we have seen throughout in this study, those who were less educated; those who had highest service years ,those who had work related stress; those who had work related mobility and those who had been ever married were in one way or the other more likely to be exposed to the infection of STDs including HIV/AIDS. Thus, there is a strong need of appropriate intervention programs targeting the military population in the study area.

6.3 Recommendations

In addition to the discovery of an effective vaccine or therapy, reduction of risk-taking behavior is the only way in which the AIDS pandemic can be achieved. Therefore, based on the results of the research obtained and the conclusion drawn, the following important recommendations are presented to eliminate risky sexual behavior.

- Peer educators are people in workplace similar to each other in age, background and experiences and interests .This form of education is suitable to matter how small or large your work is, as people are more likely to listen and follow advice from their peers .In order to protect Military personnel from risky sexual behavior, military health officials should recruit, train, promote peer educators and gave the way for peer discussion. So that military personnel freely discuss with their peers and might solve their negative behaviors.
- Encouraging and supporting the already formed educational approach in the military institutions is important. More aggressive educational approach is needed to re-educate those member of the military who have less educational level; lower service years and who are private soldiers, etc. on the misperception about HIV/AIDS. In improving their understanding of modes of transmission and prevention, minimizing the difficulty in identification of infected persons by looking at them etc would contribute to reduce the infection rate of HIV among the military personnel. Education must be explicit and repeated to be effective.
- Continuing a vigorous campaign on condom use, correctly and consistently each and every time should be strengthened. We can learn lessons from Senegalese government. The Senegalese government has reduced the prevalence of HIV/AIDS in the military population by giving unlimited supply of free condoms as part of military provisions or supplies along with uniforms, shoes etc and encouraging them to use it correctly and consistently. Ethiopian soldiers should be taught about the importance of condom use, and the military should supply the troops with condom regularly and timely.
- The Military health officials should strengthen and extend provision of counseling and voluntary testing services in the war front of Corps, Divisions, Regiments, etc, with regular encouragement to the military personnel to take advantage of these services.

- By now the necessary and urgent condition is to create a non-stigmatizing and non-discriminatory environment within the military personnel. For this reason necessary support could be given to establish AIDS club at each military regiment work place.
- To bring behavioral change in the military personnel, concerned military health officers should arrange programs using Drama, Magazine (Tikuakur Nebroch or the black Tigers), in the Anti ADS club by providing an electric power (Generator).
- To bring behavioral change in the commercial sex workers, concerned officers of town should arrange as a group in small business development so as to change their life style.
- The existing study indicates that substance use and risky sexual behavior co-vary .Taking substance increases the likelihood of risk-related sexual intercourse .the current study also confirmed this fact by showing that it is a powerful predictor of risky sexual behavior .Therefore, there is a need to protect military personnel from such emerged and quickly expanding problem. To do so comprehensive substance use cessation program should be implemented by stake holders , that is
  * Friends who have substance abuse problems need to teach the other friends about the grim consequences of the substance use.
  * Concerned health officers create awareness about the causes and consequences substance use.
  * Above all, the higher military officials should teach and control Private military not to use substances since the future peace and development of the country lies on the yoke of his segment of the society.
- Finally, in this study attempts have been made to give an insight about the causes and consequences of risky sexual behavior of the military personnel in Zalambessa town of Tigray Regional State. However, further studies are needed to augment our knowledge of the town military personnel's risky sexual behavior that motivate or deter them from having sexual intercourse and using preventive methods, particularly by considering military personnel who are not considered in this study.

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Appendix A

Addis Ababa University

School of Graduate Studies

College of Development Studies

Institute of Population Studies

Title:- Causes for and Consequences on Risky Sexual Behavior among Military Personnel at Zalambessa Town, Tigray Regional State

Structured questionnaire to collect information on causes and consequences of sexual behavior of military persons in Zalambessa town

01. Year conducted_____

02. Questionnaire no _____

03. Corps _____

04. Division _____

05 .Regiment_____

Dear respondents

Good morning/afternoon.

The main objective of the study is to investigate the extent of risky sexual behavior of Military personnel and to explore the various underlying causes and consequences of their sexual behavior. So that the results of the study will be used for better understanding of those determining factors of risk sexual behavior, and for appropriate planning of interventions. Your honest answer to these questions is necessary and will never be used in connection with any of the information you tell us. Hence, your genuine participation by responding patiently to the questions is highly appreciated. You have the right to skip questions which are not comfortable to you, and you can stop at any time you like.

We thank you.

06. Are you willing to participate in completing the questionnaire?

1. Yes= ok

Thank you for your willingness to participate in filling this questionnaire, continue

2. No = End

Part 1:- Demographic and Socio-economic Factors of Respondents

Item No	Questions	Coding Categories	Code number	Skip to
101	Sex	Male Female	1 2	
102	Age	Age in completed years Do not know	_____ 8	
103	Where were you born?	Urban Rural	1 2	
104	What is your educational qualification?	Illiterate Primary(1-8) High school(9-10) Preparatory(10+1 – 10+2) Diploma and above	1 2 3 4 5	
105	What is your marital status?	Never married (Single) Married(in union) Divorced Separated Widowed /widower Other, specify	1 2 3 4 5 _____	
106	What is your ethnic group?	Tigrean Afar Amhara Oromo Other ,specify	1 2 3 4 _____	
107	What is you religion?	Orthodox Muslim Protestant Catholic Other ,specify No response	1 2 3 4 _____ 9	

Part 2:- Work – Related Factors of Respondents

201	How long have you served in the Army?	1-5 years 6-10 years More than 10 years Do not know	1 2 3 8	
202	What is your present monthly income?	_____Birr		
203	What is your present military rank?	**Private soldier** **Non- Commissioned Officer**(i.e. Lancer , corporal, Surge ant) **Junior officer** (i.e. Second lieutenant, Lieutenant Captain) **Senior officer**(i.e. Major, Colonel, General)	1 2 3 4	
204	Are you experiencing any work related mobility?	Yes No	1 2	
205	If yes, how many times since from the last 12 months?(refer Q112)	Everyday Once a week Twice a week Once a month Twice a month Other, specify Do not know No response	1 2 3 4 5 _____ 8 9	
206	Are you experiencing any work related stress and boredom?	Yes No	1 2	
207	If yes, because of your stress, would you like to have sexual relationship with commercial sex workers?(refer Q206)	Yes No	1 2	
208	Do you use protective means during handling of war wounded friends?	Yes No	1 2	
209	If yes, explain what type of protective means?			

Part 3:- Sexual Behavior and Condom use of Respondents

Item No	Questions	Coding Categories	Code number	Skip to
301	Have you heard about condom?	Yes No	1 2	
302	If yes, which type of condom?	Male condom Female condom Both Male and Female condom	1 2 3	
303	Have you ever used a male condom?	Yes No	1 2	
304	Where do you get condom?		Yes No	
		Shop	1 2	
		Pharmacy	1 2	
		Clinic	1 2	
		Health station/Hospital	1 2	
		Hotel/Bar	1 2	
		Peer educator Friend	1 2	
		Other, specify	_____	
		No response	9	
305	Have you ever had sexual intercourse?	Yes No No response	1 2 9	
306	At what age you had your first sexual intercourse?	Age in completed years— Do Not know No response	_____ 8 9	
307	Have you had sexual intercourse within the last 12 months?	Yes No No response	1 2 9	
308	If yes, with whom did you have sex?	Spouse(s)/regular sexual partner Sex workers Non regular sex workers Do not know No response	1 2 3 8 9	

309	Did you use condom consistently while having sexual intercourse ?	Yes No Do not know No response	1 2 8 9	
310	If yes, who suggested use condom at that time? (refer Q 309)	My self My partner Joint decision No response	1 2 3 8	
311	If no, why you did not use condom at that time? (refer Q 309)		Yes No	
		Because of work related risk taking behavior	1 2	
		Not available	1 2	
		Too expensive	1 2	
		Fell ashamed to obtain condoms		
		Reduces sexual satisfaction	1 2	
		Religious barrier	1 2	
		Do not know where condoms are found	1 2	
		Consumed alcohol/chat/	1 2	
		Lack of knowledge of condom use	1 2	
		Trust my partner		
		Forgot to use condom	1 2	
		Do not like to use	1 2	
		Others specify	1 2	
		Do not know	1 2	
		No response	8 9	
312	Altogether, with how many different partners have you had sex in the last 12 months other than your spouse?	No sexual partner One partner Two partners Three partners 4 and above partners Do not know No response	1 2 3 4 5 8 9	
313	Have you ever had sex while either you or your partner was under the influence of alcohol?	Yes No	1 2	

314	If you have never had sexual intercourse with partners what is your reason?	Fear of parents Fear of pregnancy For religious reason HIV/AIDS Fear of SIT and Other, specify	1 2 3 4 5 _____	

Part 4:- Knowledge on HIV/AIDS and other STIs of Respondents

Item No	Questions	Coding Categories	Code number	Skip to
401	Have you ever heard about HIV/AIDS?	Yes No	1 2	
402	If yes, from which source of Information have you heard about AIDS?		Yes No	
		Radio	1 2	
		TV	1 2	
		News paper/ Magazine	1 2	
		Pamphlets/posters	1 2	
		Health workers	1 2	
		Churches/ mosques	1 2	
		School/ Teachers	1 2	
		Friends/Relatives	1 2	
		Work place	1 2	
		Other, specify	_____	
403	How can a person get HIV/AIDS?		Yes No	
		Not using condoms during sex	1 2	
		Sexual intercourse with multiple partners	1 2	
		Transfusion of infected blood	1 2	
		Use of contaminated needles and syringes	1 2	
		Kissing	1 2	
		Mosquito bites	1 2	
		Homo sexual contact	1 2	
		Other, specify	_____	

404	Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS?	Yes No	1 2	
405	If yes, what can a person do to avoid getting infected with HIV?		Yes No	
		Abstain from sex	1 2	
		Limit sex to one partner	1 2	
		Seek protection from traditional Healer	1 2	
		Use condoms	1 2	
		Avoid sex with sex-workers	1 2	
		Avoiding blades and other sharing Sharp instruments	1 2	
		Insist to test blood	1 2	
		Do not know	8	
		Other, specify	_____	
406	Have you ever heard about STI?	Yes No	1 2	
407	If yes, what are they?		Yes No	
		HIV/AIDS	1 2	
		Syphilis	1 2	
		Gonorrhea	1 2	
		Cancroids	1 2	
		Do not know	8	
		No response	9	
		Others	_____	
408	During the last 12 months did you have any sexually transmitted infection?		Yes No	
		HIV/AIDS	1 2	
		Syphilis	1 2	
		Gonorrhea	1 2	
		Cancroids	1 2	
		Do not know	8	
		No response	9	
		Others , specify	_____	
409	During the last 4 weeks, have you had drinks containing alcohol?	Yes No	1 2	

410	If yes, how frequently did you use alcohol?	Everyday Once a week More than once a week Do not know No response	1 2 3 8 9	
411	Some people have tried to use a range of different types of drugs. Which of the following, if any, have you tried?	 Chat Hashish Tobacco Cocaine Heroine Do not know No response Other, specify	Yes No 1 2 1 2 1 2 1 2 1 2 8 9 _____	
412	In the last 4 weeks, how frequently did you use these drugs?	 Everyday Once a week Less than once in a week Never Do not know No response Other, specify	Yes No 1 2 1 2 1 2 1 2 8 9 _____	
413	Do you think that taking alcohol increases your sexual desire and risky sexual practice?	Yes No Do not know No response	1 2 8 9	
414	Do you believe that the presence of SITs has an impact of HIV infection?	Yes No Not sure	1 2 3	
415	Have you ever had an HIV test?	Yes No	1 2	
416	If no, what is the reason behind it?	 Lack of HIV test facilities I am afraid Lack of money Other, specify	Yes No 1 2 1 2 1 2 _____	

417	Can a healthy looking person be HIV positive?	Yes No Not sure	1 2 3	
418	Can a person get HIV by the first time he/she have sex?	Yes No Not sure	1 2 3	
419	Do men and women have equal chance of getting HIV in a single sexual intercourse?	Yes No Not sure	1 2 3	
420	Can HIV/AIDS be treated medically?	Yes No Not sure	1 2 3	

Appendix B

Addis Ababa University

School of Graduate Studies

College of Development Studies

Institute of Population Studies

Title: - Causes for and Consequences on Risky Sexual Behavior among Military Personnel at Zalambessa Town, Tigray Regional State

Questions for focus group discussion

1. In your opinion, what are the causes and consequences of sexual behaviors on Military personnel in Zalambessa Town.
   - Do demographic factors, socio-economic factors and work related Factors have any contribution on risky sexual behavior?
2. What do you say about the sexual behavior of military personnel in Zalambessa Town?
   - Do they prevent themselves from HIV/ AIDS infection?
   - Are causal sex practices and contacts with commercial sex workers?
   - Prevalent among military personnel in Zaambessa town?
3. How do you explain the knowledge of Military Force about HIV/AIDS?
   - Its ways of transmission and
   - Prevention methods
   - Treatment and cure
4. How do you see the following situations among Military personnel in relation to HIV /STIs risk?
   - Multiple sexual partnership/number of sexual partner/
   - Age at first sex
   - Taking HIV test in relation to behavioral change
5. In your opinion, what are the local practices that could put Military personnel at risk of contracting HIV/AIDS?
   - Sexual intercourse after taking different types of drugs (Chat, Tobacco, Hashish, etc.)

Declaration

The thesis is my original work, has not been presented for a degree in any other university and that all sources of material used for the thesis have been duly acknowledged.

MOHAMMEDSALD HAGOS _____ 29/06/2009
Student signature Date

I confirm that this thesis has been submitted with my approval as the supervisor of the same.

Dr. Vijaya S. Vijayalakshmi 30/06/2009
Advisor signature Date