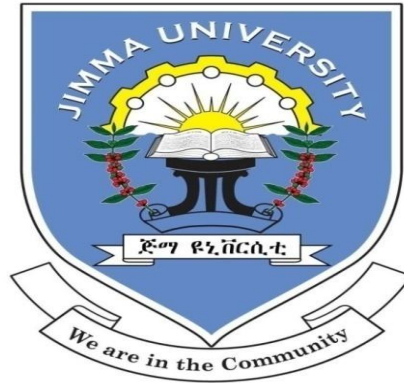


**ASSOCIATION BETWEEN SUBSTANCE ABUSE AND HIV INFECTION
AMONG CLIENTS RECEIVING PROVIDER INITIATED HIV TESTING
AND COUNCELLING SERVICE IN THE HEALTH INSTITUTIONS OF
JIG-JIGA TOWN; SOMALI REGION; ETHIOPIA.**



By
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**A thesis submitted to Jimma University, College of Public Health & Medical Sciences
Department of Population & Family Health, In Partial Fulfillment for the Requirement
For Master of Public Health In Reproductive Health (MPH/RH).**

**November 2013;
JIMMA; ETHIOPIA**

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**November 2013;
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Summary

Introduction: currently acquired Immune deficiency syndrome is a major threat to the world's population- to its overall social, economic, and political wellbeing, as well as to the individual health of hundreds of millions of people. It has become the most devastating disease humankind has ever seen. Globally; 34.0 million [31.4 million–35.9 million] people were living with HIV at the end of 2011. Determinant factors that drive the epidemic and sexual behaviors among different groups of population are not adequately explored but limited studies. One of the factors fueling the epidemic is the problem of substance abuse (including drug use) which is currently reported to be on the increase in major urban areas of Ethiopia.

Objectives: To assess association between substance Abuse and HIV infection among the clients given PITC service in health institutions of jig-jiga town from September 01 to 30, 2013.

Methods: Case control design was employed. Data was collected from clients visiting PITC providing units of age 15 years and above; came to get medical service and received counseling service & tested for serum HIV status and volunteer to participate in the study by using pre-tested interview guided semi-structured questionnaire. 72 cases and 212 controls were interviewed. data was entered into computer, coded by using epi info & analysed by using SPSS version 20.

Result: In the study, 284 -study participants who were eligible & met the set criteria for the study participants completed the interview in all study sites, a response rate of 100%. Among these, 72 (25.3%) were cases and 212 (74.6%) were controls. The mean age of the cases and controls was 34 ± 9 and 33 ± 14 respectively. All variables with $P < 0.2$ in bivariate analysis were entered in to multivariate analysis. In Bivariate analysis, variables with $p < 0.2$ were being female, primary education, age 25-34 years, occupation, income, marital status, all risk level of substance use (tobacco, alcohol drinking, Amphetamines, Sexual intercourse in the last 12 month, genital discharge, knowledge of condom use.

In multivariate logistic regression analysis, Alcohol and Amphetamine type stimulants /chat abusers & dependents were founded to be positively associated with HIV infection, where as tobacco found to be insignificant.

Conclusion and recommendation: Alcohol and Amphetamine type stimulants /chat abusers & dependents were founded to be positively associated with HIV infection, where as tobacco use and others substances with serum HIV positivity were found to be insignificant. Based on the results, we advocated heightened concerns be target populations, particularly those populations with sexual active and substance use behaviors. Further research is needed to develop effective interventions to reduce sexual and substance use behaviors, which may have a long beneficial effect to the control of HIV/STI in the study area.

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LIST OF ABBREVIATIONS

AIDS	Acquired immunodeficiency syndrome
ANC	Ante natal Care
BCC	Behavioral Change Communication
CI	Confidence interval
CSA	Central Statics Agency
CSW	Commercial sex worker
DHS	Demographic health survey
FGA	Family Guidance Association
HIV	Human immunodeficiency virus
HIVCT	HIV counseling and testing
IEC	Information, Education & Communication
IVDU	Intravenous drug use
JU	Jima University
MMM	Medical Missionaries for Marry
NGO	Non-Governmental Organization
NRNC	Non-regular non-commercial
OCHA	Office for Coordination of humanierian affairs
OPD	Out Patient department
OR	Odds ratio
OSSA	Organization For Social Services Affairs
OSY	Out school youths. Provider initiated Testining &
PITC	Councelling Prevention of Mather to Child
PMTCT	transmission
SD	Standard deviation Southern Natation ,nationalities &
SNNP	Peoples
SPSS	Statistical package for social science
STD	Sexually transmitted disease
STI	Sexually transmitted Infections
UNAIDS	Joint United Nation's Program on AIDS
US	United States
USA	United States of America
PEPFAR	Pres-ident's Emergency Plan for AIDS Relief
VCT	Voluntary counseling and testing
WHO	World Health Organization

CHAPTER- ONE:- INTRODUCTION

1.1. Introduction

Acquired Immunodeficiency Syndrome (AIDS) is a major threat to the world's population- to its overall social, economic, and political wellbeing, as well as to the individual health of hundreds of millions of people. It has become the most devastating disease humankind has ever seen (1).

Globally 34.0 million [31.4 million–35.9 million] people are living with HIV, 1.7 million [1.5 million–1.9 million] people died from AIDS-related causes and 2.5 million [2.2 million–2.8 million] peoples were newly infected with HIV infection (2).

Sub-Saharan Africa remains most severely affected, with nearly 1 in every 20 adults (4.9%) living with HIV and accounting for 69% of the people living with HIV world wide. According to 2012 UNAIDS report in 2011, 23.5 million [22.1 million–24.8 million] people (adults and children) were living with HIV, 1.2 million [1.1 million–1.3 million] people died from AIDS-related causes and 1.8 million [1.6 million–2.0 million] peoples were newly infected with HIV infection (2).

Ethiopia is one of the Sub-Saharan African countries hard-hit by HIV/AIDS in all its manifestations. In 2011, adult HIV/AIDS prevalence in Ethiopia was estimated at 1.5% Approximately 1.2 million Ethiopians were living with HIV/AIDS in 2010(3). According to 2011 spectrum data, there were 952,700 orphans due to AIDS, with the total number of orphans estimated at 4.6 million (2, 3).

According to 2011 DHS findings, in Somali region HIV prevalence was estimated to be 1.6% and report from 2009 ANC-based HIV Sentinel Surveillance survey also showed that regional HIV prevalence in pregnant women of 4.5% (4, 5,6).

Jig-jiga town (Jig-jiga/karamara hospital) which was one of the HIV Sentinel Surveillances in the survey had 3.9% HIV prevalence (6).

In Sub Saharan Africa, more than 85% of HIV transmission is heterosexual. Other routes include prenatal transmission and through exposure to contaminated blood, which account for the remaining 15% of the transmission (7). It has been reported in many different studies that HIV/AIDS infection is common among substance Abusers in the western world. Drug Abuse is one of the primary ways of HIV spread. More than 5% of all HIV infections are related to injecting drug use with infected needles. In many parts of the world, excluding Africa, injecting drug use is fast becoming one of the main modes of HIV transmission (8).

The two primary modes of HIV transmission in Ethiopia are heterosexual intercourse (87%) and vertical transmission from mother to child (10%) during pregnancy, delivery and breast-feeding. Illegal medical and harmful traditional practices are also potential route of transmission. There are behavioral related risk factors that drive for the epidemic in the country and these include: widely Practice of multiple concurrent sexual partnerships, early initiation of sexual practices, Low and inconsistent condom use, Intergenerational and transactional sex, MTCT and vertical transmission. In addition to these, there are also other emerging factors that make individuals and communities more at risk of acquiring and transmitting HIV infection in the country. Among these are injection drug use, substance use/dependency, anal sex and men having sex with men (7,9).

Drug Abuse has an intimate connection with HIV. The connection occurs when drugs are injected using contaminated equipment. However, the risk of HIV transmission is not limited to drugs that are injected. Drugs, that can be swallowed or inhaled, normally alter people's judgment, and can lead to risky sexual behaviors, such as unprotected sex (intercourse without a condom), having multiple sexual partners, prolonged and traumatic sex, which can also result in HIV transmission (8).

In addition to the HIV/AIDS pandemicity, many sub-Saharan Africa countries also demonstrate very high levels of alcohol consumption (10). According to the researchers, when a substantial percentage of any generation engages in "drug" use, that generation will become a crippling social burden including the most prevalent behavioral risk factors implicated in the transmission of HIV and other STDs (10,11). So in developing countries the major existing current health problems are malnutrition, infectious diseases child born and pregnancy related complications. However, if drug /substance use problems is incorporated, those countries will shortly find that the cost of treating the major problem will outweigh by the cost of dealing with diseases caused by substance /drug Abuse. Because of shortage of resource availability for health care the additional burden of substance Abuse related problems could have direct consequence for countries economy (11).

Ethiopia is classified among the foremost drug using countries (12).currently; substance Abuse is a one of the growing problem as in many developing countries where alcohols and chat are the most frequently used substance, followed by hashish and solvents. But hard drugs such as heroin and cocaine are rarely used In Ethiopia; in relation to substance Abuse the magnitude of

HIV/AIDS is ever increasing in major towns in the country including Jig-Jiga town which include among the highest HIV prevalence towns.

In Somali region where data and researches on HIV/AIDS are limited and available ones only address specific issues like knowledge, attitude and socio-economic impact of HIV/AIDS. Moreover, there is also lack of analytical study on the factors contributing HIV spread in the region including substance use/Abuse which could be the most potential factors in the region as well as jig-jiga town. Therefore, this study becomes visible to undertake and explore the association between HIV status and substance use among the clients visiting health institutions in jig-jiga town, who have received provider initiated HIV counseling and testing service.

CHAPTER- TWO: LITRATURE REVIEW.

2.1. Magnitude of HIV/AIDS

The emergence of the HIV epidemic is one of the biggest public health challenges the world has ever seen in recent history. In the last three decades HIV has spread rapidly and affected all sectors of society- young people and adults, men and women, and the rich and the poor. Sub-Saharan Africa is at the epicentre of the epidemic and continues to carry the full brunt of its health and socioeconomic impact (3).

Worldwide, the number of people newly infected continues to fall: the number of people (adults and children) acquiring HIV infection in 2011 (2.5 million [2.2 million–2.8 million]) was 20% lower than in 2001. Here, too variation is apparent. The sharpest declines in the numbers of people acquiring HIV infection since 2001 have occurred in the Caribbean (42%) and sub-Saharan Africa (25%). The number of people dying from AIDS-related causes began to decline in the mid-2000s because of scaled-up antiretroviral therapy and the steady decline in HIV incidence since the peak in 1997. In 2011, this decline continued, with evidence that the drop in the number of people dying from AIDS-related causes is accelerating in several countries. Ethiopia is among the countries most affected by the HIV epidemic. With an estimated adult prevalence of 1.5%, it has a large number of people living with HIV (approximately 800,000); and about 1 million AIDS orphans (2, 3).

2.2. HIV/AIDS and substance Abuse

Substance abuse is on the increase and of global concern. It is a major public health problem, especially in develop-ing countries and it has continued to be one of the major public health burdens in addition to HIV/AIDS, although there are attempts aimed at reducing the associated health hazards in many countries. According to World Drug Report of 2010, Substance use also has adverse health implications. There is a strong association between substance Abuse and human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS).Evidence has shown that HIV/AIDS may be due to the mode and paranphrenalia employed in the use of illicit substances. In the US, in-travenous drug users (IDU) were found to be responsible for new cases of HIV/AIDS in the year 2000 (8).

In recent years, researchers have begun to explore the intersection of substances abuse and sexual ‘risk behaviors,’ (activities that put people at increased risk for sexually transmitted diseases), unintended pregnancies and sexual violence (10). Substance abuse and HIV/AIDS infection seem to be interrelated. Many people report that substances such as alcohol and drug often go hand-in-hand with sexual activity - a predisposing factor for HIV/AIDS. There is currently great interest in looking at whether substance could be a specific risk factor for HIV/AIDS. Drugs of abuse and alcohol have been suggested as possible risk factors, possibly acting as both catalysts for high-risk sexual and injecting behaviors, as well as directly impairing immune competence (11). Substance abuse is closely associated with prostitution and HIV/AIDS cases have been concentrated in people that practice this high-risk activity (7).

In the Americas, substances such as cocaine, cannabis, heroin, and multiple drugs (alcohol and psychotropic drugs) are commonly utilized (12). The abuse of alcohol, cocaine, cannabis, and psychoactive drugs by women is reported to be growing in Bolivia in parallel with HIV/AIDS. Studies have also indicated that HIV-infection and use of alcohol and drugs are increasing among Brazilians, and a rise in the incidence of AIDS among injecting drug users as well (7). The extent of drug-related problems in Africa is not clear, although it should be noted that many African countries are on drug transit routes. To date, drug use, especially injecting drug use, did not appear to be a major public health problem for much of Africans. However, the number of hospital admissions for drug-associated problems is increasing in some cities where it primarily affects more affluent segment of the community (13). Illicit drug use in Africa is related with cannabis and other natural psychoactive plants. Cannabis is a widely abused drug in the world. It is the most commonly used drug by adult smokers in rural areas in African region. Women in Cameroon often use cannabis pessaries in the vagina to increase the sexual desire of their partners (7). This practice can contribute to alteration of the vaginal mucosa and increase in exposure to HIV. International drug traffickers now import a broad range of drugs, including heroin and cocaine, to many African countries. In South Africa, these trends have been accelerated by immigration, especially of other Africans and particularly Nigerians (14). Demand for these drugs has been established in South Africa, including among the urban lower classes. Most people smoke crack cocaine, a stimulant drug with pro-sexual effects. These sexual effects, together with very strong addictive potential, have led to very high HIV sero-

prevalence in user populations. Addiction often leads female users into prostitution, and prostitutes are the main conduits for the spread of both the drugs and HIV infection (7, 14, 15).

Alcohol abuse is increasing in Sub-Saharan African countries in recent years. The fact that alcohol abuse is associated with a loss of sexual inhibition with a consequence of involvement in risky sexual behaviors that predispose to HIV infection is a major issue that needs due attention. Although few data are available on this issue, there is growing concern about alcohol abuse and HIV infection in Africa (13).

In Ethiopia, drugs like alcohol and khat are commonly consumed in both urban and rural areas. Unlike the developed world, the use of “hard” drugs such as heroin, cocaine and other narcotics were not considered important (12). Studies on substance abuse in selected urban areas of Ethiopia showed 82% of street children, commercial sex workers, and street vendors as having used addictive drugs or substances. The study also revealed that khat, alcohol, hashish, tobacco, and solvents were the most abused substances (16,17)

Injecting drugs use

Injecting drugs are among the substances commonly abused by people. According to UNAIDS report in UN General Assembly Special Session conducted Geneva, 1999: many parts of the world, injecting drug use are the major mode of HIV transmission. This is the case in a number of Asian countries including Malaysia, Viet Nam, Yunnan Province in China, and the northeastern states of India; a number of Latin American countries; and some western European countries such as Spain and Italy. In the Russian Federation, more than half of all reported HIV cases to date have been injecting drug users (18, 19,20). Intravenous drug users (IVDUs) have been identified as a significant risk for HIV infection because of their practice of injecting using blood-contaminated syringes and needles. 33% of the AIDS cases in the United States acquired HIV by injecting illegal drugs (18, 21, 22). Furthermore, it is recognized that some drug use can lead to increased sexual risk behavior either through behavioral or physiological mechanisms, which can also result in HIV transmission (8, 23). Of all the different ways that the virus can be passed on, directly injecting a substance contaminated with HIV in the blood-stream is by far the most efficient- much more so, than through sexual intercourse. Together, therefore, drug injecting and HIV can form an explosive combination. In fact, in some parts of the world, injecting drug use has helped kick-start the HIV epidemic. This was the case in Thailand, where during the first nine months of 1988, HIV prevalence rates among injecting drug users in

Bangkok shot up from around zero to almost 40%, and in ten years since, approximately a million people in Thailand have become infected with HIV/AIDS (8,24). Similarly, the prevalence of HIV infection among injecting drug users, in different cities of Indonesia, was reported to range from 15% to 53% (1, 8).

Drug injection and prostitution are associated with a number of serious health risks. Drug users may also engage in prostitution to obtain money to buy drugs or even directly in return for drugs. Several studies have suggested that the use of drugs may be associated with an increased likelihood of various health risk behaviors and some have attributed this to some sort of 'disinhibitory' effect (8, 21, 24, 25).

HIV transmission with non-sterilized injecting equipment of intravenous drug users has not been documented as a major mode of HIV transmission in Africa. Unlike the developed countries, where up to 27% to 33% of HIV-1 infected individuals are intravenous drug users or have had sexual contact with intravenous drug users, injectable drug users are not commonly found in Africa (18). This low incidence of drug use has been attributed to the expense of the drugs and injecting equipment and social barriers to drug-using behavior (22, 13).

ALCOHOL ABUSE

Alcohol is possibly the most available and accessible drug throughout the world. It is the most commonly used drug for all groups and alcohol abuse has long been a problem in most countries of the world. New evidence points to a causal link between alcohol and infectious diseases. Namely, alcohol consumption weakens the immune system, thus enabling infections by pathogens, which cause pneumonia and tuberculosis. This effect is markedly more pronounced with heavy drinking and there may be a threshold effect. A strong association exists between alcohol consumption and HIV infection and sexually transmitted diseases. It may be that a common third cause, such as having particular personality traits, impacts on both alcohol consumption and risky sexual behaviour leading to infectious diseases (10,13).

Rapid social changes have contributed to an increase in alcohol dependence and alcohol related problems. Alcohol is the most abused substance in Honduras with substance abuse listed as one of the country's top ten health priorities. HIV infection has become the focus of much concern in the Bahamas due to the rapid increase in the number of infected people and AIDS cases among alcohol abusers. Unsafe heterosexual practices and intravenous drugs are the most important modes of HIV transmission among alcohol abusers (19).

Different studies have revealed that low socio economic situations, life stresses, lack of success, peer pressure, unemployment, lack of social support and related factors could lead to substance abuse (13, 19, 25). Some people may drink or use drugs to gain courage, reduce sexual inhibition, increase sociability, relief pressure, enhance sexual arousal or justify behaviors that might otherwise feel is uncomfortable or unwise – without considering the potential consequences (16). Substances make certain individuals feel more capable of coping with a variety of life stresses. In the study conducted 1995 prostitutes in South London indicated that many prostitutes use drugs and alcohol in order to help them cope with the most unpleasant demands of their work (25).

According to 1993 WHO country assessment report, in Kenya change in social attitudes is leading to acceptability of alcohol use by women and women's alcohol abuse is especially linked to the distilling of liquor. This is because of the low socio economic situation (19).

Alcohol abuse reduces personal thinking capacity and judgment. Many sexually active young people report that alcohol or drugs have influenced their decisions about sex (26).

Use of alcohol during sexual contact is one condition under which people sometimes do not comply with risk reduction guidelines (27). Alcohol abuse may affect the transmission of, susceptibility to and effect of HIV in multiple ways. The most important, with respect to transmission, is that acute alcohol use leads to reduction in sexual inhibition accompanied by greater risk-taking, such as engaging in sexual behaviors associated with high risk of receiving or transmitting the virus. These behaviors include unprotected sex, having multiple sexual partners, needle sharing, or use of contaminated needles for injection, prolonged and traumatic sexual intercourse (8, 17, 28).

A survey Conducted in Sydney-Australia 1989 revealed that current alcohol use was significantly associated with increased needle sharing, and subjects with current alcohol problem were significantly more likely to engage in high-risk needle sharing (needle sharing with a prostitute or stranger) than no risk behavior (29).

A study in California has shown that regular alcohol users have more sexual partners than non-users. Among 523 women who were sexually active, 7.5% reported that they have used alcohol half the time or more (30).

A probabilistic national sample survey done in 2002 on in-school and out-of-school youths of Ethiopia showed that there was a significant and linear association between alcohol intake and

unprotected sex, with those using alcohol daily having a threefold increased odds compared to those not using it: [adj. OR 95% CI = 3.05 (2.38, 3.91)] (31). An other study conducted Addis Ababa in 2011 revealed that females are more likely to be infected with HIV than males and this could be that girls are at a much greater risk at early ages because of both biological and cultural factors such as early age at sexual debut (31).

A Case control study conducted 2012 on Association of khat and alcohol use with HIV infection among youths visiting HIV counseling and testing centers of Gamo-Gofa, Southern Ethiopia; revealed that alcohol use was positively associated with HIV infection that is Alcohol users were 5.9 times [OR & (95%CI) = 5.883 (3.034, 11.408)] as likely to be infected with HIV as non Alcohol users (10).

COCAINE ABUSE

Cocaine is recognized as a sexual drug. Women describe the highly sexual sensations they are able to achieve after cocaine (19). After intravenous use of central nervous stimulants such as cocaine, both men and women tell of engaging in sexual acts, which they view in retrospect as humiliating and guilt producing. Addicted women in particular are made to perform a wide range of sexual acts in order to obtain cocaine (19, 25). This kind of sexual activity with different partners has an obvious impact on the increase of sexually transmitted diseases (STDs) including HIV/AIDS. According to 1993 WHO country assessment report on women's & substance, in Bahamas have shown that a high percentage of women infected with HIV were cocaine dependent, and keeping their habit by trading sex for drugs (19).

Desperate to earn money to buy cocaine, drug-addicted female prostitutes in South Africa serve many clients and engage in practices shunned by their non-addicted peers: such as unprotected and anal sex (21).

A survey conducted 1993 in United States of America revealed that an increased risk for HIV through sexual transmission was associated with crack cocaine use, particularly among those who also injected (33). This study also revealed that among 246 cocaine abusers, 45% had never married, 66% were unemployed, 15% were HIV sero-positives, and 26% attended college. The higher rate of STDs among cocaine users underscores the involvement of these users in risky sexual behaviors that predispose them to STDs and a potential threat these sex behaviors represent for the transmission of HIV infection (33).

CANNABIS ABUSE

Cannabis is very widely abused drug throughout the world. Although people of all ages are at risk, two groups in particular are affected: adult smokers in rural areas of Africa, Asia, and Middle East, and the young in urban and semi-urban areas of the Americas, Europe, and Western Pacific (34). It is the most commonly used drug in Africa. A School-based cross-sectional survey study on drug use among high school students in Addis Ababa and Butajira January 1998, revealed that cannabis and cigarette use were more prominent among students in private schools as compared to students in public schools in Ethiopia (17). Another study conducted, 1998 on health workers, farmers and police officers in Addis Ababa and Butajira, indicated that cannabis was the most commonly used drug by traffickers and users within the country and nearly 50% of the users were jobless (13). The use of cannabis is on the increase owing to its low price and its growth locally. This was evidenced by a police report that 98% of the prisoners were arrested because of cannabis use or trafficking (13).

KHAT ABUSE

Khat, commonly known as “chat” in Ethiopia, has been used for prayer and during fasting period of Ramadan among Moslems. However, its use became widespread among many parts and populations (34). Khat, which Ethiopians do consider as an illicit drug, is a cash crop and an important source of foreign exchange next to coffee and skin and hides (17). Even though literatures written on the relation between HIV/AIDS and khat (*Catha edulis*) use are not available, surveys on the socio economic impact of khat chewing have revealed its negative effect. A study has identified that alcohol and khat were the two drugs commonly ever tried by high school students in both government and private schools in Ethiopia (17).

In Ethiopia, a study of 561 young people aged 15-24 years found the use of khat (a local amphetamine-type stimulant) pre-dicted the likelihood of having ever engaged in sexual activity (35).

A case control study conducted 2012 on Association of khat and alcohol use with HIV infection among youths visiting HIV counseling and testing centers of Gamo-Gofa, Southern Ethiopia; revealed that Khat chewing was also found to be positively associated with HIV infection: that is Khat chewers were 7.24 times [OR & (95%CI) = 7.24 (1.871, 28.016)] as likely to be infected with HIV as non chewers (36).

Insomnia is a common problem after use of khat and sleep disturbance is highly prevalent among current users and is the cause for referral to hospitals and abuse of psychotropic substances to abolish its effect. Insomnia, caused by cerebral-stimulant action of khat chewing, is being overcome by different activities, depending on the local situation, such as indulgence in alcohol and abuse of sedatives and hypnotic drugs. Khat chewing in some areas occurs with the use of other substances such as cigarette and cannabis (13, 34). Alcohol intake following khat chewing, commonly known in Ethiopia as “chebsi”, is perceived to overcome the effect of khat chewing. Therefore, most khat chewers are believed to drink after chewing. Some people, however, use drugs with sedative or hypnotic effects (34). In a study of 561 young people aged 15-24 years found the use of khat (a local amphetamine-type stimulant) pre-dicted the likelihood. Khat chewing was also found to be positively associated with HIV infection in this study

2.3. The impact of substance abuse

The impact or effect of substance abuse on its Abusers and their families has been well documented in various studies. Alcohol dependence, for example, has been observed to create havoc with the health of users and their families (19). Alcohol makes it difficult for the dependent user to judge what is right or wrong, what is good or bad, and what is moral or immoral. At its worst, alcohol abuse can lead to accidents and death. Prolonged alcohol abuse may lead to family disintegration and financial hardship. The emotional development of children and their education may be compromised if parents abuse alcohol. Cases of theft, fraud, assault, murder, and sexual offences due to alcohol have been found to be common. The incidence of domestic violence, child abuse, divorce, neglect, and cruelty to a partner has been associated with alcohol abuse (19, 17).

Substance abuse undermines judgment, reduces choice of sex partners, damages monogamous relationships, and facilitates impulsiveness resulting in unsafe and risky sexual practices that facilitate the transmission and spread of HIV/AIDS (34).

There is strong cross sectional relationship between high-risk sexual activities and use of drugs during sexual intercourse and there are multiple connections between AIDS risk and substance abuse (37). These include: Sexual transmission of HIV to partners of substance users.; Neonatal transmission by infected mothers who are substance users or partners of substance users; Increased risk due to inhibition under the influence of drugs or alcohol; Increased risk due to immune suppression caused by drugs or alcohol use and Inability to utilize resources (social,

financial, health) because of substance abuse. Many young people reported that drug use has influenced their sexual decision and were involved in risky sexual behaviors because of drugs (26).

A survey conducted 1993 in San Francisco, United States of America revealed that men at high risk are about 2 to 4 times more likely to have used drugs during sexual activities than men at no risk are. The same study indicated the proportionate increase in risk for risky sexual practices to be greater if the drug used during such activity is illegal (e.g. Marijuana and other drugs) rather than legal and easily available (e.g. Alcohol). There was a strong connection between the frequency and number of substance used and participation in risky sexual activities (27, 32). A study particularly examined the relationship between substance use and HIV/STI-related sexual risky behaviors among a national sample of sexually active adolescents in American rural settings, where it was similarly found that smoking could increase the likelihood of unprotected sex (32)

Crack has been associated with high-risk sex behaviors and with HIV-infection. High-risk sex behaviors were reported far more frequently among smoking injectors and smokers only than among injectors who did not smoke. Smoking injectors were more likely than the other groups to report frequent drug use in association with high-risk sex behaviors and crack smoking injectors were more likely to report sex with an injector, exchanging sex for drugs and/or money, drug use before or during sex, and unprotected sexual intercourse (32).

2.3.1. Substance abuse and increased sexual desire

Different studies have reported that substance abuse increases sexual desire of the users. It is reported that increased alcohol consumption was found to be associated with an increased likelihood of being involved in sexual activity (16). In a survey conducted 1997 on Americans aged 18 to 59 years showed that 35% of men, aged 18 to 30 years, had sex after consuming 5 to 8 drinks and 45% had sex after consuming eight or more drinks compared with 17% of those who had one or two drinks. The same survey has revealed that, among women aged 18 to 30 years, 39% had sex while consuming 5 to 8 drinks and 57% had sex when consuming eight or more drinks, compared with 14% of women who had one or two drinks. In another study conducted to assess the prevalence of HIV sexual risk behaviors and substance use among 775 runaway and homeless adolescents in San Francisco, Denver, and New York City, 75% have reported having had sex while under the influence of alcohol or drugs (38).

In Ethiopia, According Health institution based cross-sectional study conducted 2012 to determine the time of first sexual initiation and associated factors among youths visiting HIV counseling and testing centers of Gamo-Gofa, Southern Ethiopia; Youths who are khat chewers were found to be seven times more likely to initiate sexual intercourse earlier than non chewers: adj. OR (95% CI) =7.241 (1.871, 28.016). The same study has revealed that alcohol users were almost four times more at risk to initiate sexual intercourse earlier than those who didn't use alcohol: adj. OR (95% CI) = 3.8 (1.3,11.1) (36,39,40).

2.3.2. Substance abuse and condom non-use

It appears that substance use during sexual contact affects the sexual practices of different people, their sexual decision and is one condition under which individuals sometimes decline to comply with risk reduction guidelines. Many people reported that they were engaged in risky sexual behaviors because of substance abuse (26, 27). In a national survey conducted by Kaiser Family Foundation on Youths' Knowledge and Attitudes on Sexual Health, 73% of young people aged 15 to 24 years agreed that condom often don't get used when people are drinking or using drugs (26). In another study, alcohol use was found to be related to willingness to have unprotected sex for money and less condom use. The same study indicated that while two-third of the study participants agreed that they would be more likely to engage in a wider variety of sexual practice after taking alcohol/drugs, 22% of the respondents agreed that they were less likely to use condom after taking alcohol/drugs (25, 32). This study has shown a statistically significant correlation between frequency of drinking and quantity of alcohol consumed and the likelihood of having sex without using a condom after taking drugs (32).

A cross-sectional study conducted 2012 among students in Hosanna Health Science College, Southern Ethiopia revealed that Alcohol use was significantly associated with inconsistent condom use that participants use alcohol were more than two times risky to use condom inconsistently [AOR=2.86, CI, (1.63, 5.02) P<0.0001] and subjects having videos initiating sexual desire in mobile phone were more likely to report inconsistent condom use in the most recent sexual intercourse [OR=2.15, P=0.015] (40).

2.3.3. Substance abuse and multiple sexual practices

Since substance abuse impairs individuals' thinking and judgment the chance of selecting sexual partners will at the same time be compromised. By weakening ego controls, substances like alcohol could elicit behavior likely to increase probability of exposure to HIV (39, 40). In a

national survey of Americans aged 18 to 59 years, there was some evidence that heavy alcohol use was associated with multiple sexual partners, which is a primary risk factor for transmission of STDs, including HIV (16). In a study conducted in USA, about 38% of “regular” alcohol users reported having more than one sexual partner in the past year compared to 12% of “light” users and 6% of nonusers (31). Among 71% of cocaine abusers who had sex in the past 30 days, 44% reported having sex with multiple sex partners (32). Majority of sero-positive IVDUs in USA were likely to have multiple sexual partners compared to sero-negative individuals (41). According to the cross-sectional study conducted 2012 among students in Hosanna Health Science College, Southern Ethiopia, The odds of reporting multiple sexual partners was more than twice among alcohol users [AOR=3.51, CI, (2.09, 6.07),P=0.001] and nearly twice higher among participants having videos or figures initiating sexual desire in mobile phones compared to those not use [AOR=2.5,CI, (1.45, 4.44), P=0.001] (40).

2.3.4. Substance abuse and risky injections

Substance users are usually involved in risky injections that predispose them to HIV infection. Needle or syringe sharing and use of contaminated needles are the major risky practices among injecting drug users. In a study done in USA to assess HIV infection and risk behaviors among intravenous drug users, a greater percentage of sero-positive subjects injected drugs on daily basis reported a higher daily cocaine injection rate (41). These people were more likely to have multiple sex partners, to have history of sexually transmitted diseases, to have ever shared needles and syringes, and to use new needles less frequently as compared to sero negative individuals (41). A study conducted Australia in 1999, showed that among 74 Heroin users that were interviewed whether or not practicing needle or syringe sharing, 12 (16%) reported sharing needle or syringe with strangers, 12 (16%), have shared with one or more friends, three (4%) have shared with prostitutes and nine (12%) have shared with sexual partners (29).

2.3.5. Drug dependency and susceptibility to risk of HIV infection

Drug dependence is associated with particularly high-risk patterns of drug use and related risks of HIV transmission for the following reasons: drug users experience difficulties in controlling drug-taking behaviors and frequent episodes of intoxication and withdrawal (often accompanied by a strong desire to take drugs); furthermore, they persist with drug use despite clear evidence of harmful consequences or high risk of such consequences. Some drug users practise unsafe sex with multiple partners in exchange for drugs or money, providing a bridge for HIV to spread from populations with high HIV prevalence to the general population (41).

The close inter-relationship between sex work and drug use in many countries creates a transmission bridge between drug-using and non-using populations. Significant proportions of injecting drug users trade sex for drugs to support their drug dependence. As a result, HIV epidemics are being driven by injection drug use in a number of countries, notably in Eastern Europe, Asia, the Middle East and South America (42).

The findings of this study regarding gender and sexual behavior support those of Williams et al. (2007). A greater proportion of women than men in Dar es Salaam were then found to be sexually active. Women were more likely to have traded sex for money or drugs, engaged in vaginal sex more frequently and had more partners (43).

2.3.6. Substance abuse and susceptibility to infections

Clinically, chronic alcoholics have long been known to be susceptible to increased infections. In laboratory animals, alcohol has been shown to affect the immune system adversely. It is associated with both decrease in the numbers of lymphocytes and a defective response to mitogen challenge. Alcohol may suppress cellular immunity and augment HIV-1 replication in tissue cultures. Alcohol had no effect on the relative proportion of CD4+ and CD8+lymphocytes, but decreased the ability of lymphocytes to produce interleukin-2 and the soluble immune response activity of suppressor cells (28, 42). The known susceptibility of heroin addicts to develop infections suggests that the responsible virus (HIV) will rapidly proliferate within the system of the heroin users (28).

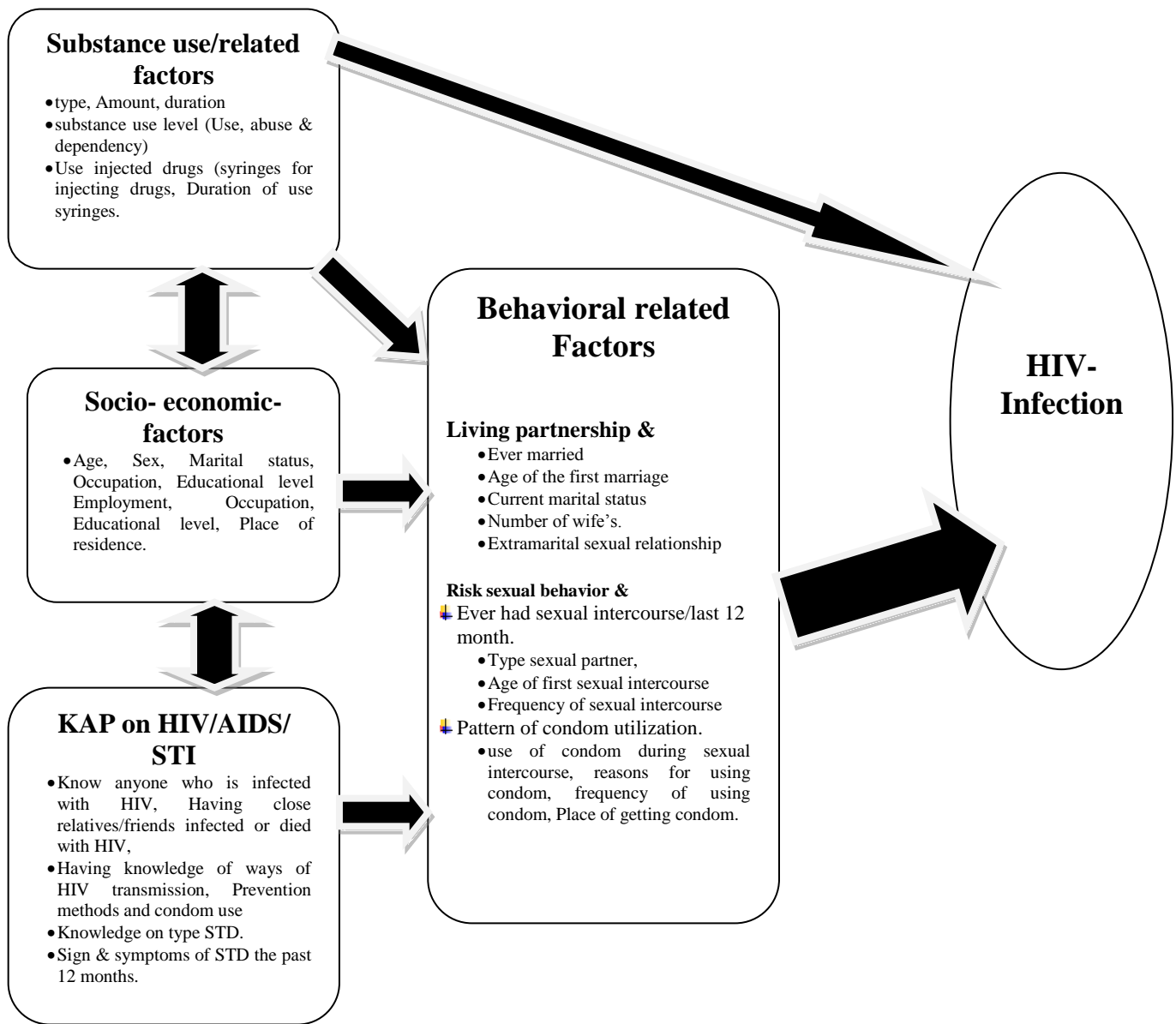
The use of khat leaves or alcohol are believed to alter one's moods or emotional state either through the sustained release or inhibition of neurotransmitters, thereby enhancing or dampening the response of the individual. Effects of Khat on the chewer include increased levels

of energy, increased self-esteem, euphoria, increased libido, excitement, and increased proclivity for social interaction (43, 44).

Most people whose thinking is warped by continued drug use may not be able to see the harm resulting from their actions. Thus, there has been a strong linkage between drug use and casual or unsafe sexual practice despite the serious concern about HIV infection (44). A study conducted among pregnant women in Zimbabwe revealed that STI were associated with taking alcohol (Adjusted OR=1.16; 95%CI: 1.01-1.33). In this study, having more than one lifetime sexual partner in the past year, age sexual debut less than 20 years were significant predictors of STIs (45).

Students who had sexual intercourse after alcoholic intake were 1.7 (95%CI: 1.2, 2.5) times more likely to have sexually transmitted infections than those didn't have intercourse after alcoholic intake (46).

2.4. Conceptual frame work



This frame work was developed by using different litratures

Figure 1:-Conceptual Frame work of the study.

2.5. Significance of the study

Globally, the use of substance and related problems has been posing more challenges to public health problems. In Ethiopia, substance use and abuse is growing problem as in many developing countries where alcohols and chat are the most frequent substance of use, followed by hashish and solvents. Hard drugs such as heroin and cocaine are rarely used In Ethiopia; in relation to substance abuse the magnitude of HIV/AIDS is ever increasing in major towns in the country including Jig-Jiga town which include among the highest HIV prevalence towns. However, data regarding the relation of substance abuse and HIV infection is lacking. Therefore, this study is to explore the relation between substance abuse and HIV infection among those people visiting health institutions in jig-jiga town, and come up with recommendations to enable the responsible bodies and policy makers to design appropriate strategies and measures to control the responsible substances for the transmission and spread of HIV/AIDS in the town as well as in whole region. In addition to this, the sudy also could serve as reference for those who are interested in doing further studies related to this topic.

CHAPTER- THREE: OBJECTIVE OF THE STUDY.

3.1. General objective

To assess the association between substance Abuse and HIV infection among clients receiving PITC service in health institutions of jig-jiga town

3.2. Specific objectives

- To determine the association between Chat Abuse and HIV infection among clients receiving PITC service.
- To determine the association between Tobacco Abuse and HIV infection among clients receiving PITC service.
- To determine the association between Alcohol Abuse and HIV infection among clients receiving PITC service.

CHAPTER- FOUR: METHODOLOGY.

4.1. Study area and period

The study was conducted on patients visiting public, NGOs and private health facilities providing PIHCT services in Jig-jiga town from September 1 to 30, 2013.

Jig-jiga is central town of the regional state located 630 km East of Addis Ababa, and administratively divided into 10 Kebele & 67 sub kebeles. According to CSA population census 2007, the population of the town is estimated to be around 141,820 in which 78,852 are males and 62,968 are females, living with 21,488 household the income of inhabitants is small and large scale trading. The potential health coverage is 100%. There is one referral hospital, one general hospital, two health centres and ten health posts. There are one private general hospital, 27 higher and 10 medium clinics. There are also three owned by NGOs clinics (OSSA , FGAE and Meristope international clinics). Among these health facilities there are eight health facilities (karamara referral hospital, two health centres, one private general hospital, 2 private higher clinics, Meri-stop international medium clinic, and Family Guidance Association Clinic) provide PITC service

4.2. Study design

Case control study design was used to compare HIV sero-positives and HIV sero-negatives individuals on their exposure status. Cases were clients, aged 15 years and above, who have visited the government or nongovernmental organization (Private & NGO) health institutions for medical reasons who were tested for HIV and become positive. And controls were HIV sero-negative clients, aged 15 years and above. In the study for each case, there were three controls. Both the cases and controls were selected from health institutions that provide PITC service in jig-jiga town, during the same period.

4.3. Study population

Source population: All people who have visited, health institutions providing PITC service in jig-jiga town from September 1-30, 2013.

Study population: All peoples aged 15 years and above, who have visited these health institutions, during the same period.

Inclusion and Exclusion Criteria

Inclusion criteria

Cases: HIV sero-positive clients aged 15 years and above; come to get medical service & received counseling and tested for serum HIV status and willing to participate in the study.

Controls: HIV sero-negative clients, aged 15 years and above; came to get medical service and received counseling service & tested for serum HIV status and willing to participate in the study

Exclusion criteria

- Age above 15 years, serum HIV test result of gray zone.
- Age above 15 years who are not willing to participate in the study or having mental problem.

4.4. Sample size determination and sampling technique

Sample size determination

The Sample size for this study was calculated by using EPI info software statcalc version 7.1.0.6. In the study, exposure to substance use was the variable used to calculate the sample size. Sample size calculation for this study was made based on similar study conducted in Addis Ababa that 31.7% cases and 14.33 % of the controls have exposure to substance with 80% power, 95% confidence interval, 5% alpha error, 2.7782 odds ratio and the ratio of case to control to be 1:3 (47). Thus, applying EPI info software the calculated sample size of the cases were 65 cases & 193 controls. By considering 10% nonresponse rate, as the issue is very personal and sensitive. So the final sample size required for the study were 284 subjects (cases = $65+10\% = 72$ & controls = $193+10\% = 212$).

Sampling technique

First, all health facilities public, NGOs and private which providing PITC service was identified. Then identified health facilities were taken as a target to be included for this particular study. The sample size was distributed proportionally to each selected health facilities based on their case load by using the last three months report. Similarly, with in health facility level the required sample size among PITC providing units (OPD Unit, MCH Unit and TB clinic) was allocated proportionally based on their case load. Finally, the determined sample for each health facility was achieved through exit interview until the allocated sample size is obtained.

During data collection period, every client (attendee) visited PITC providing units were approached to participate and those showed willingness were interviewed.

4.5. Data collection and measurement

4.5.1. Study Variables

Dependant variables

- ✓ HIV sero-status (HIV sero- positive, HIV sero- negative)

Independent variables

- ✓ Socio demographic variables (age, sex, residence, marital status, educational level, religion, occupation, ethnicity & income).
- ✓ Substance use (type, Amount, use of addictive substances, Type of addictive substance & duration of use of addictive substance, Use of syringes for injecting drugs, Duration of use syringes, Age started the first injected illegal//non-medical drugs, sexual desire after use of drugs, Sterilization/cleaning of syringes before use, substance used for cleaning type of chat , frequency of chewing chat, sleeplessness after chewing, Measures use to overcome sleeplessness
- ✓ Behavioural related factors (Living in partnership & Sexual History) :- Age of the first marriage, current marital status, number of wife's, extramarital sexual relationship, Age of the first sexual intercourse, Type sexual partner, Frequency of sexual intercourse , use of condom during sexual intercourse, reasons for using condom, frequency of using condom, knowledge of the benefits of using condom. Place of getting condom.
- ✓ KAP on HIV/AIDS & other STI :- know any one who is infected with HIV, Having close relatives/friends infected with HIV, Having close relatives/friends died with HIV, Having knowledge of ways of HIV transmission, Having knowledge of ways of HIV prevention.

4.5.2. Data collection instrument and pre-testing

The data was collected using pre-tested semi-structured questionnaire adapted from previous conducted researches related to this topic and WHO Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) Scale (36,47,49) .Before the actual data collection, the questionnaire was tested on 5% of the total samples that means 42 clients got PITC service from health institutions providing service in jig-jiga town.

The brief description of the instrument was as described below:-

Socio demographic characteristics

General characteristics consisting of items eliciting information of the respondents that were important in determining risk of HIV infection, these include: age, gender, marital status (married, divorced, widowed, single), Educational level, employment status (current type of work) and Income.

Knowledge of HIV/AIDS, STD and Condom use

The knowledge consisted of questions that focused mainly on the transmission and prevention of HIV /AIDS. Study participants were assessed on their knowledge about the use of condoms, types of sexually transmitted diseases (STDs), and HIV transmission and prevention methods. The knowledge of the respondents was categorized by using yes/no questions.

Respondents were designated as knowledgeable in that specific situation if he/she mentioned three uses of condoms correctly, four types of STDs included in the questionnaire correctly, five methods of HIV transmission and three methods of HIV prevention correctly.

HIV risk behaviors (Sexual History and drug use)

Substance use, Abuse and Dependency:-

Study participants were assessed on their risk level of substance used (Low risk), abused (moderate risk) and dependence (high risk) by using ASSIST SCALE.

Respondents were designated as substance user (Low risk) in that specific drug if he/she has ASSIST scale cut-off score “0-10” for alcohol and “0-3” for other substances, abuse/Moderate risk “11-26” for alcohol and “4-26” for other substances and Dependency/high risk level score of “11-26” for alcohol and “4-26” for other substances.

In addition to ASSIST scale, questionnaires adapted from other previous researches was used to assess the relationship between substance and HIV by asking question related drug use and risk of sexual desire (i.e whether use of some drugs could increase their sexual desire or not. if yes the measures they use to overcome etc) (48).

Live-in partnerships and Sexual History: - were measured by asking participants questions related to marriage and live-in partnerships, Sexual history (Having sex with commercial sex workers, Regular and irregular partners), how many sexual partners they had in their life time, in the past 12 months, whether they had sex with someone they had just met or with commercial sex workers and how consistently they have used condoms etc.

4.5.3. Data collectors and supervisors:

Data collectors were 15 councilors selected from respective health institutions. The main purpose of selecting councilors as a data collector was to keep individuals' secrecy and to get maximum response from client. There was one data collector for every one unit in the target health facility. There was one supervisor for every three health facilities to supervise the day to day data collection activity together with the principal investigator. Prior to actual data

collection period two days training were given to data collectors and supervisor on the objectives of the study and how to interview, how to fill the questionnaire and handle questions asked by clients during interviewing was given by the principal investigator.

4.5.4. Data collection procedures

After identifying target health facilities for data collection; each of them were deployed to at least one trained data collector. The number of data collector required for each health facility was depending on the number of PITC providing units exists. The client was interviewed during pre test counseling and before the sero-status of the individuals was known.

4.6. Operational Definitions and definition of terms

- ❖ **Hard drugs:** Substances such as cocaine, heroin, etc, which are under the international control and produced, trafficked and consumed illicitly.
- ❖ **Heavy chewers:** Study participants who were chewing Khat daily or every two days.
- ❖ **Heavy drinkers:** Study participants who were taking alcoholic drinks daily
- ❖ **Khat:** A central nervous system stimulating substance with alkaloid active ingredient, cathinone, and with biologic effect similar to that of amphetamine.
- ❖ **Knowledge:** Respondents were designated as knowledgeable in that specific situation if he/she mentioned three uses of condoms correctly, four types of STDs included in the questionnaire correctly, five methods of HIV transmission and three methods of HIV prevention correctly
- ❖ **Light chewers:** Study participants who were chewing Khat twice a week or less.
- ❖ **Light drinkers:** Study participants who were taking alcoholic drinks twice a week or less
- ❖ **PITC centers:** is the OPD Unit, TB treatment unit and MCH units of the officially licensed health institution (owned by government, private and NGO) by RHB to carry out provider initiated HIV counseling and testing services in Jig-jiga Town.
- ❖ **PITC service:** includes a provider-initiated HIV counseling and testing offered by health care workers as part of regular medical care.
- ❖ **Substance use/Low risk:** is an ASSIST scale cut-off score “0-10” for alcohol and “0-3” for other substances.
- ❖ **Substance Abuse/Moderate risk:** is an ASSIST scale cut-off score “11-26” for alcohol and “4-26” for other substances.

- ❖ **Substance Dependency/high risk:** is an ASSIST scale cut-off score “11-26” for alcohol and “27 & above” for other substances.
- ❖ **Substance:** Any non-medical drugs used by study subjects such as alcohol, Khat, cannabis, heroin, cocaine & marijuana.

4.7. Data Analysis

The completed questionnaire from each study participant was checked for completeness and consistency by the principal investigator. Codes were given to the completed questionnaires. The principal investigator entered the data entered using Epi-data software which has range and consistency checking logics to avoid clerical errors during data entry. After data entry random counter checking of already entered data with the hard copy was performed and Data editing and cleaning was performed to check for accuracy, consistency, & missing values and the analysis were made by using SPSS for windows version 20.

Data was summarized and descriptive statistics was computed for all variables according to type. Frequency, mean and standard deviation were calculated for continuous variables and categorical variables were assessed by computing frequencies. Then to assess the presence and degree of association between outcome variable (HIV sero-status) and socio-demographic variables and types of substance used, bivariate analysis was used Crude odds ratio (COR) and 95% confidence interval (CI) for each variable of interest was calculated. Finally, all variables that were with $P < 0.2$ under bivariate analysis was entered into multiple logistic regression models and adjusted odds ratio was also calculated for each exposure variables to see the effect of the independent variables on the dependent variable by controlling for confounders. $P < 0.05$ was considered as statistically significant.

4.8. Data quality control

To keep the quality of the data the English version questionnaire was translated in to Somali and then back to English to maintain its consistence for actual data collection purpose with great emphasis given to local vocabularies. The questionnaire was pre-tested in a similar setting before its administration; amendment was made to ensure their accuracy and consistency prior to actual collection of data. Detail training for data collectors and supervisor was given by the principal investigator and a guiding document was given to them. Furthermore, the principal investigator and supervisor was given feedback and correction on daily basis for the data collectors before they start data collection and completeness, accuracy, and clarity of the collected data was

checked carefully. Any error, ambiguity, incompleteness encountered was addressed & corrected before the individual is told the test result in his/her visit for the post test counseling.

4.9. Ethical clearance/ consideration

Ethical Clearance was obtained from Committee of the Department of population & family health, College of public health and medical science, Jimma University. Then official letter from the Graduate Coordinator of the Department was written to Ethiopian Somali Regional state health bureau at Jig-jiga. Then official letter from RHB were written to Jig-jiga city administration health office and other stakeholders and thereby to the selected health institutions. During the interview, each individual was informed about the aim of the study and on the possible benefit of the study and Informed consent was obtained from each respondent (clients) and they were also told to have the right to give-up the interview any time she/he wishes. Confidentiality and the secret of the respondents was maintained. Health education was given for each respondent about the negative effects of substance use then they were given counseling on HIV/AIDS transmission and prevention methods during post test counseling.

4.10. Dissemination plan of the study findings

The result of the study was presented to JU community as part of MPH thesis and the final study report will be communicated to Ethiopian Somali Regional state health bureau, Jig-Jiga city administration health office, targeted health facilities and to all relevant bodies to incorporate the result of the finding of this study in their future planning. Great effort will be exerted to publish the result on relevant scientific journals.

5. CHAPTER – FIVE: - RESULTS

5.1. Description of Socio- Demographic characteristics of the respondents

A total of 72 (25.4%) cases and 212 (74.6%) controls were included in the study making a response rate of 100%. Among the cases males and female was 36 (50.0%) and 139 (65.6%) of controls were males and 73(34.4%) were females.

As it was shown table one; 10 (13.9%) of the cases and 83 (39.2%) controls were age group between 15-24. 27 (37.5) of cases and 51 (24.1) of the controls were age group 25 up to 34 years. Almost half of the cases 35 (48.6) and 78 (36.8) controls were above 35years. The mean age of the cases and controls was 34 ± 9 and 33 ± 14 respectively.

Regarding to the education level almost equal proportion of cases and controls has education level of secondary and above (45.8% vs. 46.2% for cases and controls respectively).

The ethnic composition of the study indicated that 24(33.3%) of cases were Oromo ethnic group followed Somali (25%) and Amhara (23%).

Almost majority of both cases (79.2%) and controls (74.1%) of were residents of jig-jiga town while the rest 15 (20.8 %) of cases and 55 (25.9%) of controls were from outside of jig-jiga town. One third of cases and almost half of the controls were were single (unmarried).

According to the findings of this study majority of cases were jobless 54(75%) while majority of the controls had job 18 (28%) (Table1).

Table 1:- Socioeconomic characteristics of of study subjects, Jigjiga town, sepember, 2013.

Characteristics		Cases(n=72) No (%)	Controls(n=212) No (%)	Total (n=284) No (%)
Sex	Male	36(50)	139 (65.6)	175(61.6)
	Female	36(50)	73(34.4)	109(38.4)
Age	15-24	10 (13.9)	83 (39.2)	93 (32.7)
	25-34	27 (37.5)	51 (24.1)	78 (27.5)
	35 and above	35 (48.6)	78 (36.8)	113 (39.8)
Education level	Illiterate	17(23.6)	88 (41.5)	105(37.0)
	Primary education	22(30.6)	26(12.3)	48(16.9)
	Secondary school & above	33(45.8)	98 (46.2)	131(46.1)
Religion	Muslim	46(81)	172 (19)	218 (77)
	Christian (Orthodox)	16(22.2)	22 (10.1)	38(13.4)
	Others	10(14)	18(8.5)	28(10)
Ethnicity	Somali	18(25)	169 (80.1)	187(66.1)
	Amhara	17(23.6)	8 (3.8)	25(8.8)
	Oromo	24(33.3)	28 (13.2)	52(18.3)
	Others	10(14)	18(8.5)	28(10)
Residence	Jig-jiga town	57 (79.2)	157 (74.1)	214 (75.4)
	Outside Jig-jiga	15 (20.8)	55 (25.9)	70 (24.6)
Marital status	Single	55 (76.4)	104 (49.1)	159(56)
	Married	17 (23.6)	108 (50.9)	125 (44)
Occupation	Employed	18 (25.0)	135 (63.7)	153(53.9)
	Unemployed	54 (75.0)	77 (36.3)	131 (46.1)
Personal income	≤ 500 BIRR	61 (84.7)	143(67.5)	204(71.8)
	> 500 BR	11 (15.0)	69 (32.5)	80 (28.2)

Majority of the cases (19.3%) as well as controls (60%) were from government health institutions, followed by private (4.6% of cases versus 12.3 % of controls) (figure 2).

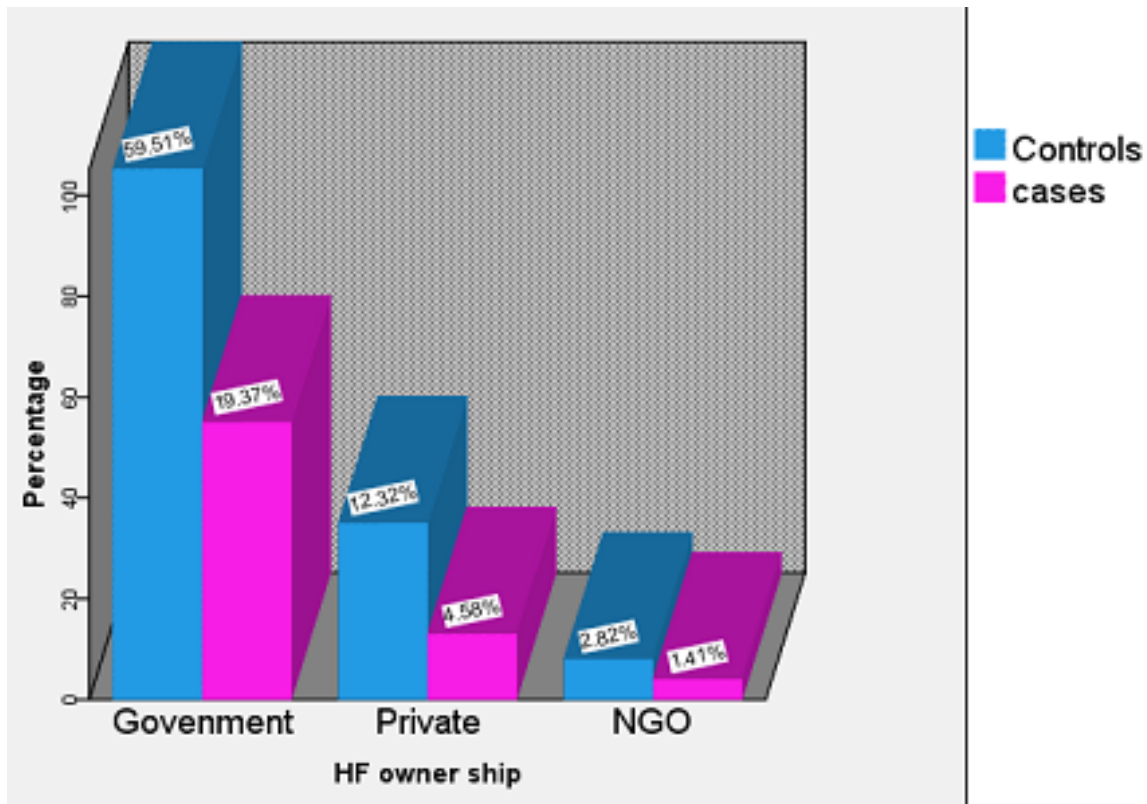


Figure 2:-Distribution of respondents by study sites ownership, jig-jiga, September 2013.

As shown in table 2; majority of cases and controls were from Karamara hospital ((68.4% vs. 75% for cases and controls respectively), followed by dire general hospital (16.7% of cases and 11.8 % of controls).

Table 2:-Distribution of study subjects by study sites, Jigjiga town, september, 2013.

	Cases No (%)	Controls No (%)	Total No (%)
Ayar dega HC	2(2.8)	5(2.4)	7(2.5)
Dire hos	12(16.7)	25(11.8)	37(13.0)
FGA	2(2.8)	3(1.4)	5 (1.8)
Jig-jiga HC	3(4.2)	5(2.4)	8 (2.8)
Karamara hos	50(68.4)	159(75)	209 (73.6)
Mash Clinic	1(1.4)	11(5.2)	12 (4.2)
OSSA	2(2.8)	4(1.9)	6 (2.1)
Total	72(100)	212 (100)	212(100)

5.2. Soci-demographic variables associated in with HIV seropositivity in bivariate analysis

Table 3 shows socio-demographic factors associated with risk of serum HIV positivity. Males were about 47% [OR & (95% CI) = 0.5 (1. 1, 3.4)] less likely to be infected with HIV than females. Risk of HIV sero-positivity was slightly higher in the older age group 30-39 years compared to younger ages. Compared to age group of 15-24 years, those other age groups of 25-34 years [OR & (95% CI) = 4.4 (1.9, 9.8)] and 35 & above [OR & (95% CI) = 3.7 (1.7, 8)] were more likely to be infected with HIV. Compared study subjects education level of secondary school and above, those with primary education level [OR & (95% CI) = 2.5 (1.3-5.4)] were 2.5 more likely to be infected with HIV. Risk of HIV sero-positivity was slightly higher in single marital status compared to married. The odds of HIV sero-positivity was also higher in the lower income group (OR= 2.7, 95% CI= **(1.3-5.4)**). Other variables like place of residence were not found associated with the Risk of HIV sero-positivity (Table 3).

Table 3:- Comparison of study subjects Socio-Demographic characteristics with risk to HIV, Jigjiga town, september, 2013.

Characteristics		Cases No (%)	Controls No (%)	COR (95% CI)	P value
Sex	Male	36(20.6)	139 (79.5)	0.53(0.31-0.9)	0.02*
	Female	36(33)	73(67)	1	
Age	15-24	10 (10.7)	83 (89.3)	0.23(0.13-0.58)	0.001*
	25-34	27 (34.6)	51 (65.4)	1.2(0.6-2.2)	0.597
	≥35	35 (31)	78 (69)	1	
Education level	Illiterate	17(16)	88 (84)	0.57(0.3-1.1)	0.095
	Primary School	22(46)	26(54)	2.5(1.3-5.4)	0.009*
Ethnicity	Secon-scho & above	33(25)	98 (75)	1	
	Somali	18(9.6)	169 (90.4)	0.57(0.02-0.16)	<0.001*
	Amhara	17(68)	8 (32)	1.14(0.33-3.97)	0.832
	Oromo	24(46)	28 (54)	0.46(0.15 -1.34)	0.156
Religion	Others	13(65)	7(35)	1	
	Muslim	46 (21)	172 (79)	0.12(0.04-0.34)	0.001*
	Christian (Orthodox)	16 (42)	22 (58)	1.5(0.45-4.6)	0.59
Residence	Others	10 (35.7)	18 (64.3)	1	
	Outside J/-jiga	15 (18)	55 (82)	0.75(0.39-1.43)	0.3856
Marital status	Jig-jiga town	57 (44)	157 (56)	1	
	Single	55 (34.6)	104 (65.4)	3.36(1.8-6.1)	<0.001*
Occupation	Married	17 (13.6)	108 (86.4)	1	
	Unemployed	54 (41.2)	77 (58.8)	5.2(2.8-9.6)	<0.001*
Personal income	Employed	18 (11.8)	135 (88.2)	1	
	≤ 500 BIRR	61(30)	143(70)	2.7(1.3-5.4)	0.006*
	> 500 BR	11(14.)	69(86)	1	

5.3. Behavioral factors associated HIV seropositivity in bivariate analysis

As shown on table 4 Risk behavior indicators of the respondents were also analyzed to look for association of behavioral factors and risk of HIV infection. Individuals, who had practiced sexual intercourse in the last 12 month were 3.5 times more likely to have HIV infection compared to those who did not practiced (OR = 3.5, 95% CI = **1.8-6.5**) .

The risk of HIV sero-positivity in an individuals had genital discharge during the past 12 months were 12 times (OR= 11.9, 95% CI= **5.8 -24.4**) as high as the odds of their counterpart. Other variables like place of Ever had sexual; sex with regular pariners were not found associated with the Risk of HIV sero-positivity (table 4).

Table 4:- Comparison of Sexual behavior study subjects with risk to HIV, Jigjiga town, september, 2013.

Variables		cases No (%)	Controls No (%)	COR (95% CI)	Pvalue
Ever had sexual intercourse	Yes	56(28)	143 (72)	1.68 (0.9-3.2)	0.101
	No	16(19)	69(81)	1	
Age at first Sexual intercourse.	≤ 18	22(29)	55(71)	1	0.987
	>18	37(31)	84(69)	1.1(0.5 -1.8)	
Sexual intercourse in the last 12 month.	Yes	36 (65.5)	67 (35.1)	3.5 (1.8-6.5)	<0.001*
	No	19 (34.5)	124 (64.9)	1	
Have sex with regular partner during past 12 months.	Yes	9(64)	5 (36)	3(0.9 -9.6)	0.0654
	No	36(38)	60 (63)	1	
Condom use during sex with regular partner during in past 12 months.	Yes	3(43)	4 (57)	0.12(0.004 -1.8)	0.134
	No	6(86)	1 (14)	1	
Have sex with CSW during past 12 months.	Yes	20(67)	10 (33)	1.3(0.17 -2.9)	0.638
	No	6(60)	4 (40)	1	
Condom use during sex with CSW in past 12 months.	No	3(33)	6 (67)	1	0.22
	Yes	17(81)	4 (19)	8.5 (0.4 -49.5)	
Genital discharge during the past 12 months	Yes	33 (70)	14 (30)	11.9(5.8 -24.4)	<0.001*
	No	39 (22)	198(78)	1	
Genital ulcer /sore during the past 12 months.	Yes	70(27)	190(73)	3.8(0.884 -16.9)	0.072
	No	2(9)	21(91)	1	

* Significant

5.4. Knowledge related variables associated in with HIV seropositivity in bivariate analysis

As shown on table below the proportion of cases and controls who have correctly answered the three uses of condom were 35(37%) and 59 (63%). 32 (44.4%) of the cases and 40 (55.6%) of the controls have correctly answered four types of sexually transmitted diseases that were included in the questionnaire. Only 1 (5%) of the cases and 19 (95%) of the controls knew all five methods of HIV transmission included in the questionnaire. However, 35 (37.2%) of the cases and 59 (62.3%) of the controls knew the three methods of HIV prevention included in the questionnaire.

In this study having knowledge on condom use, STD and HIV prevention methods were significant and positively associated with HIV infection. However knowledge on Transmission methods was significant and positively associated with HIV infection.

Table 5:- Comparison of study subjects knowledge on use of condom, types of STDs, HIV transmission and prevention methods and its association with HIV seropositivity Jigjiga town, september, 2013.

Variables		PITC result		Crude OR(95% CI)	P- value
		Cases No (%)	Controls No (%)		
Knowledge of Condom use	Yes	35(37)	59 (63)	2.45(1.41-4.26)	0.001*
	No	37(19.4)	153(80.6)	1	
Knowledge of STD	Yes	32(44.4)	40(55.6)	3.44(1.93-6.13)	<0.001*
	No	40(18.6)	172(81.1)	1	
Knowledge of HIV Transmission methods.	Yes	1(5)	19(95.0)	0.143(0.01-1.08)	0.060
	No	71(26.8)	193(73.2)	1	
Knowledge of HIV prevention methods	Yes	35(37.2)	59(62.8)	2.45(1.4-4.25)	0.001*
	No	37(37.2)	153(62.8)	1	

* Significant

5.5.Substance abuse related variables associated with HIV seropositivity in bivariate analysis.

In tobacco use 19(33.9%) of the cases and 37(61.1%) of controls were tobacco dependent/high risk and 15 (40.5%) of the cases and 22(59.5%) of controls were tobacco abusers “Moderate risk”. As shown in table 6, the odds of serum HIV positivity among tobacco abusers and dependents 2.1 and 2.7times as high as the odds of low risk/tobacco users.

Regarding amphetamine type of drugs (chat), among dependents 51.6% were cases and 48.4% of controls were dependent. Similarly 46(27.9) of the cases and 119(72.1) of controls were abusers. The odds of serum HIV positivity among “high risk” and “Moderate” amphetamine type of drugs (chat) user’s were 8.3 and 3 times as high as the odds of low risk users.

11(73.3%) of the cases and 4(26.7%) of controls were alcohol beverages dependent/high risk and 9 (52.9%) of the cases and 8(47.1%) of controls were alcohol abusers “Moderate risk”. The odds of serum HIV positivity among “high risk” and “Moderate” Alcohol user’s were 10 and 4 times as high as the odds of low risk /Alcohol users.

Table 6:-Types of substances use with associated risk level by cliens visiting Health institutions PITC service, jig-jiga town, sepember, 2013.

Characteristics		Cases No (%)	Controls No (%)	COR (95% CI)	Pvalue
Tobacco products score risk level	High	19 (33.9)	37(61.1)	2.1(1.07 -3.9)	0.009*
	Moderate	15 (40.5)	22(59.5)	2.75(1.3 -5.7)	0.008*
	Low	38(19.9)	153(80.1)	1	
Alcohol beverage score risk level	High	11(73.3)	4(26.7)	10.6(7.8 -14.3)	<0.001*
	Moderate	9 (52.9)	8(47.1)	4.33(3.2 -5.8)	0.004*
	Low	52(20.6)	200(79.4)	1	
Amphetamine type stimulants score risk level	High	16 (51.6)	15 (48.4)	8.3(6.2-11.3)	<0.001*
	Moderate	46 (27.9)	119(72.1)	3.02(2.2 -4.1)	0.004*
	Low	10(11)	78(89)	1	

* Significant

The final model was constructed using backward stepwise logistic regression method. Omnibus test for model fitness was checked and found that model chi square of 184.52 with $P < 0.000$, in addition to that Cox and Snell R square And Nagelkerke R Square were also checked and they showed that 60.2% and 80.3% respectively are contributable to the independent variables in the model. Each independent variable was tested against dependent variable by bivariate analysis and COR ratio was calculated. All variables during the bivariate analysis at P-value below 0.2 were entered to multivariable analysis and adjusted odds ratio was calculated for each exposure variables to see the effect of the independent variables on the dependent variable by controlling for confounders. Among variable that were found significantly associated with outcome variable were being female, occupation, income, high & moderate risk level of alcohol and Amphetamines, Sexual intercourse in the last 12 month, genial discharge in the last 12 month (Table 7).

Table 7:- Variables evaluated, for possible association, with HIV serostatus among clients visiting PITC providing health institutions, jig-jiga town, september 2013.

Characteristics		Cases No (%)	Controls No (%)	COR (95% CI)	AOR (95% CI)
Sex	Male	36(20.6)	139 (79.5)	0.5(0.3-0.9)	0.06(0.02-0.2)
	Female	36(33)	73(67)	1	1
Age	15-24	10 (10.7)	83 (89.3)	0.23(0.13-0.6)	0.34(0.09-1.2)
	25-34	27 (34.6)	51 (65.4)	1.2(0.6-2.2)	0.82(0.26-2.5)
	≥35	35 (31)	78 (69)	1	1
Education level	Illiterate	17(16)	88 (84)	0.57(0.3-1.1)	0.78(0.16-3.8)
	Primary School	22(46)	26(54)	2.5(1.3-5.4)	0.8(0.17-3.6)
	Secon-scho & above	33(25)	98 (75)	1	1
Religion	Muslim	46 (21)	172 (79)	0.12(0.04-0.34)	0.59(0.07-5.2)
	Christian (Ortho)	16 (42)	22 (58)	1.5(0.45-4.6)	0.76(0.08-6.7)
	Others	10 (35.7)	18 (64.3)	1	1
Ethnicity	Somali	18(9.6)	169 (90.4)	0.57(0.02-0.16)	0.05(0.01 -1.2)
	Amhara	17(68)	8 (32)	1.14(0.33-3.97)	1.18(0.22 -6.4)
	Oromo	24(46)	28 (54)	0.46(0.15 -1.34)	0.72(0.16 -3.2)
	Others	13(65)	7(35)	1	1
Marital status	Single	55 (34.6)	104 (65.4)	3.36(1.8-6.1)	0.53(0.16-1.7)

Characteristics		Cases No (%)	Controls No (%)	COR (95% CI)	AOR (95% CI)
Occupation	Married	17 (13.6)	108 (86.4)	1	1
	Unemployed	54 (41.2)	77 (58.8)	5.2(2.8-9.6)	0.2(0.05-0.7)
	Employed	18 (11.8)	135 (88.2)	1	1
Income	≤ 500 BIRR	61(30)	143(70)	2.7(1.3-5.4)	3.6(1.2-12.1)
	> 500 BR	11(14)	69(86)	1	1
Tobacco product	High risk	19 (33.9)	37(61.1)	2.1(1.07 -3.9)	1.2(0.87 -1.5)
	Moderate risk	15 (40.5)	22(59.5)	2.75(1.3 -5.7)	0.89(0.66 -1.2)
	Low risk	38(19.9)	153(80.1)	1	1
Alcohol beverage	High risk	11(73.3)	4(26.7)	10.6(7.8 -14.3)	7.7(5.7 -10.4)
	Moderate risk	9 (52.9)	8(47.1)	4.33(3.2 -5.8)	3.1(2.3-4.19)
	Low risk	52(20.6)	200(79.4)	1	1
Amphetamine	High risk	16 (51.6)	15 (48.4)	8.3(6.2-11.3)	5.7(4.2 -7.74)
	Moderate risk	46 (27.9)	119(72.1)	3.02(2.2 -4.1)	2.6(1.9 -3.5)
	Low risk	10(11)	78(89)	1	1
Sex in the last 12 month.	Yes	36 (65.5)	67 (35.1)	3.50 (1.86-6.5)	7.8(4.1-14.6)
	No	19 (34.5)	124 (64.9)	1	1
Genital discharge last 12 months	Yes	33 (70)	14 (30)	11.9(5.8 -24.4)	8.7(4.6-16.3)
	No	39 (22)	198(78)	1	1
Knowledge of Condom use	Yes	35(37)	59 (63)	2.45(1.4-4.26)	2.2(0.65-7.8)
	No	37(19.4)	153(80.6)	1	1
Knowledge of STD	Yes	32(44.4)	40(55.6)	3.44(1.93-6.1)	0.5(0.14-1.48)
	No	40(18.6)	172(81.1)	1	1
Knowledge HIV prevention methods	Yes	35(37.2)	59(62.8)	2.45(1.4-4.25)	0.85(0.27-2.6)
	No	37(37.2)	153(62.8)	1	1

6. CHAPTER – SIX: - DISCUSSION

6.1. Discussions

The emergence of the HIV epidemic is one of the biggest public health challenges the world has ever seen in recent history. In the last three decades HIV has spread rapidly and affected all sectors of society- young people and adults, men and women, and the rich and the poor. Sub-Saharan Africa is at the epicentre of the epidemic and continues to carry the full brunt of its health and socioeconomic impact (3). In addition to the two primary modes of HIV transmission in Ethiopia there are behavioral related risk factors that drive for the epidemic in the country and these include: widely Practice of multiple concurrent sexual partnerships, early initiation of sexual practices, Low and inconsistent condom use, Intergenerational and transactional sex, MTCT and vertical transmission. In addition to these, there are also other emerging factors that make individuals and communities more at risk of acquiring and transmitting HIV infection in the country. Among these are injection drug use, substance abuse, dependency, anal sex and men having sex with men (9).

Drug Abuse has an intimate connection with HIV. The connection occurs when drugs are injected using contaminated equipment. However, the risk of HIV transmission is not limited to drugs that are injected. Drugs, that can be swallowed or inhaled, normally alter people's judgment, and can lead to risky sexual behaviors, such as unprotected sex (intercourse without a condom), having multiple sexual partners, prolonged and traumatic sex, which can also result in HIV transmission (8).

Drug abuse has been incriminated as a potential exposure factor to HIV/AIDS by causing loss of inhibition and involvement in risky sexual behaviors, such as unprotected sex, multiple sexual partners, prolonged and traumatic sex, and risky injections (4, 5, 7, and 19).

The present study specially examined the associations between substance abuse and ongoing unprotected sexual intercourse, the use of substances such tobaccos products were found to be significantly associated with serum HIV positivity in bivariate analysis. However, after controlling for confounding variables, the association of tobaccos abuse with serum HIV positivity was found to be insignificant (AOR = 0.89, 95% CI: 0.66 -1.2). In contrary to these, study particularly examined the relationship between substance use and HIV/STI-related sexual risky behaviors among a national sample of sexually active adolescents in American rural

settings, where it was similarly found that smoking could increase the likelihood of unprotected sex (33).this could be explained tobacco alone may not predispose to risky sexual behaviors and hence to HIV infection unless alcohol is indulge with other substances.

Our study revealed that the odds of serum HIV positivity among Amphetamine type stimulants /chat dependents “high risk” were 5.7 times as high as the odds of low risk level (AOR=5.7, 95 CI: 4.2 -7.74). Similarly “Moderate risk level or abusers” were also 2.6 times as high as the odds of low risk level Amphetamine type users (AOR=2.6, 95 CI: 1.9 -3.5). This is similar to an earlier findings of a case control study conducted 2012 on Association of khat and alcohol abuse with HIV infection among youths visiting HIV counseling and testing centers of Gamo-Gofa, Southern Ethiopia; where khat abuse was positively associated with HIV infection: that is Khat abusers were 7.24 times [OR & (95CI) = 7.24 (1.871, 28.016)] as likely to be infected with HIV as non abusers (10). This might be explained by the fact that concomitant use of khat and alcohol could probably be one of the risk factors for exposure to HIV infection.

Alcohol abuse may affect the transmission of, susceptibility to and effect of HIV in multiple ways. The most important, with respect to transmission, is that acute alcohol use leads to reduction in sexual inhibition accompanied by greater risk-taking, such as engaging in sexual behaviors associated with high risk of receiving or transmitting the virus. These behaviors include unprotected sex, having multiple sexual partners, needle sharing, or use of contaminated needles for injection, prolonged and traumatic sexual intercourse (8, 17, 28). Alcohol and drug abuse by young people may lead to earlier sexual initiation, unprotected sexual intercourse and multiple partners as well as putting young people at risk for sexually transmitted diseases (STDs) including HIV/AIDS, unintended pregnancy, and sexual violence (9, 22).

This study indicated that alcohol dependents or “high risk” were seven times more likely to be HIV sero-positives compared to those who are low risk/users (AOR=7.7, 95 CI: 5.7 - 10.4) . Similarly “Moderate risk level or Alcohol abusers” were also 3 times as high as the odds of low risk level or Alcohol user’s (AOR=3.1, 95 CI: 2.3-4.19). This findings is consistent with Case control study conducted 2012 on Association of khat and alcohol use with HIV infection among youths visiting HIV counseling and testing centers of Gamo-Gofa, Southern Ethiopia; revealed that alcohol abuse was positively associated with HIV infection that is Alcohol users were 5.9 times [AOR & (95CI) = 5.883 (3.034, 11.408)] as likely to be infected with HIV as non Alcohol users (10) and this might be due to the fact that alcohol drinking increases sexual

desire which might be responsible for their exposure to HIV infection by having unprotected sex and multiple sexual partners.

The use of khat leaves or alcohol are believed to alter one's moods or emotional state either through the sustained release or inhibition of neurotransmitters , thereby enhancing or dampening the response of the individual. Effects of Khat on the chewer include increased levels of energy, increased self-esteem, euphoria, increased libido, excitement, and increased proclivity for social interaction (43, 44). Most people whose thinking is warped by continued drug use may not be able to see the harm resulting from their actions. Thus, there has been a strong linkage between drug use and casual or unsafe sexual practice despite the serious concern about HIV infection (44). A study conducted among pregnant women in Zimbabwe revealed that STI were associated with taking alcohol (AOR=1.16; 95%CI: 1.01-1.33) (45). The present study revealed that the risk of HIV sero-positivity in an individual's had genital discharge during the past 12 months were 8.7 times (AOR= 8.7, 95% CI= **4.6 -16.3**) as high as the odds of their counterpart. This might be resulted from unprotected sex and unselected sexual partners, under the influence of such substances like khat and alcohol, which might have been the risk factors for HIV infection.

With regard to gender in this study, females were found to be four times [AOR & (95CI) = 3.8(1.9 -7.7)] more likely to be infected with HIV than males and this could be that girls are at a much greater risk at early ages because of both biological and cultural factors such as early age at sexual debut, early marriage, sexual abuse and violence and this possible explanation is supported by another study in Addis Ababa(31).

6.2. Strength of the study

- Interviewer bias was minimized as the data were collected by using double blind control type, as both the interviewers and the respondents did not know the cases and the controls prior to the interview.
- Use of scale for classification patients status/level of substance use.
- Probably this is the first study in its type in the area trying to explore association's between substance use & HIV infection and it will provide evidence based decision for HIV prevention strategies program implementation.
- The design of the study(case-control) is also strong design

6.3. Limitation of the study

- The study may not represent the general public since it involves only few populations who came to health institutions.
- Use of professional data collectors could also be one of the limitations of this study, as professionals tried to redirect respondents in their own way.
- Since both cases and controls are interviewed after getting services so information may get contaminated.

7. CHAPTER- SEVEN: CONCLUSION AND RECOMMENDATIONS

7.1. Conclusion

In conclusion, our findings provided information regarding substance use and risk of HIV infection among client's visiting health institutions of jig-jiga town. Alcohol and Amphetamine type stimulants /chat abusers & dependents were found to be positively associated with HIV infection, whereas tobacco and other substances with serum HIV positivity were found to be insignificant.

7.2. Recommendations

- Regional government and other responsible bodies should design a strategy to control the use of substances like alcohol, chat which were found to be responsible for the spread of HIV infection.
- Emphasis should be on behavioral change to prevent HIV infection, as knowledge alone does not help to combat the epidemic.
- Further community based study needs to be carried out to identify true prevalence of substance abuse in the population to get further detail information.
- Wide range prospective study needs to be conducted to explore into the association of substance abuse and HIV infection in the community.

8. ANNEXES

8.1. Annex 1:- References

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8.2. Annex 2:- Questionnaires

A. English version questionnaire

Jimma University
Department of population and family health

Questionnaire designed to assess association between substance and HIV/AIDS among the patient visiting adult OPD health institutions in Jigjiga town.

Instruction for the interviewers

The questionnaire has Ten parts, some of the questions have their own set of instructions, please follow these instructions strictly and circle the response given from the alternatives. Before starting collecting data you need to consider the following points critically.

The exclusion criteria

- + Are critically ill patients and unable to respond
- + Are not volunteer to respond
- + Children age less than 14 years.

Information Sheet

Hello, my name is _____ and I am working as data collector in a study conducted by MPH student of Jimma University on association between substance and HIV/AIDS among the patient visiting adult OPD health institutions in Jigjiga town. You are kindly requested to be included in the study, which will have importance in improving HIV prevention and control activities. . The responses you provide will be kept strictly confidential and will not be shown to other persons. There are no risks associated with participating in this study. Participation in this study or refusal to participate will not affect any of your ability to access any other services. I would like to inform you that your name will not be written anywhere in this paper. The interview takes about _____ to _____ minutes to complete. Participation in this study is voluntary and you can choose not to answer any personal questions or all the questions.

I agree to participate

I don't agree to participate

Consent form:

I have been briefly informed about the study and I clearly understood its objectives. Since it doesn't affect my personal life, I don't need any remedy.

Consequently, I am here to approve my consent to take part in the study as an interviewee with my signature.

Signature: _____ Date : _____

Section 1: Background characteristics

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
Q1.1	<i>Record sex of the respondent</i>	<i>Male</i>	<i>1</i>	
		<i>Female</i>	<i>2</i>	
Q1.2	<i>How old were you at your last birthday?</i>	<i>Age in completed years [-----/-----]</i>		
Q1.3	<i>Educational level?</i>	<i>Can not Read and write</i>	<i>0</i>	
		<i>Read and write</i>	<i>1</i>	
		<i>Grade 1 to 6</i>	<i>2</i>	
		<i>Grade 7 to 8</i>	<i>3</i>	
		<i>Grade 9 to 12</i>	<i>4</i>	
		<i>Above grade 12</i>	<i>5</i>	
Q1.4	<i>Where is your place of residence?</i>	<i>Jig-jiga town</i>	<i>1</i>	
		<i>Jig-jiga Rural</i>	<i>2</i>	
		<i>Others</i>	<i>3</i>	
Q1.5	<i>What is your religion?</i>	<i>No religion</i>	<i>0</i>	
		<i>Muslim</i>	<i>1</i>	
		<i>Christian (Orthodox)</i>	<i>2</i>	
		<i>Protestant</i>	<i>3</i>	
		<i>Catholic</i>	<i>4</i>	
		<i>Others _____</i>		
Q1.6	<i>To which ethnic group do you belong?</i>	<i>Somali</i>	<i>1</i>	
		<i>Amhara</i>	<i>2</i>	
		<i>Oromo</i>	<i>3</i>	
		<i>Gurage</i>	<i>4</i>	
		<i>Tigray</i>	<i>5</i>	
		<i>Harari</i>	<i>6</i>	
		<i>Others _____</i>		
Q1.7	<i>What is your current occupation?</i>	<i>Have no job</i>	<i>0</i>	

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
		<i>Students</i>	1	
		<i>Civil servant</i>	2	
		<i>Solders</i>	3	
		<i>Merchant</i>	4	
		<i>Driver</i>	5	
		<i>Daily laborer</i>	6	
		<i>Others specify _____</i>		
Q1.8	What is your Average personal income per month (Ethiopian Birr) ?	<i>_____ Birr</i>		
		<i>No income</i>	0	
		<i>Don't know</i>	88	
Q1.9	What is your total monthly household income in Birr?	<i>_____ Birr</i>		
		<i>No income</i>	0	
		<i>Don't know</i>	88	

Section 2: Substance use

2.1. Alcohol Drinking

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
Q2.1.1.	Ifyou drink Alcohol, What is the usual amount that you take (use local measurement unit)?	<i>1---5</i>	1	
		<i>6---10</i>	2	
		<i>More than 10</i>	3	
Q2.1.2	Why do you drink ?	<i>because my friends drink.</i>	1	
		<i>because my family members drink</i>	2	
		<i>To escape my problems</i>	3	
		<i>To relax my self</i>	4	

Q2.1.3	Who introduce you to drink?	Friends	1	
		by family members	2	
		Others specify _____	99	
Q2.1.4	Have you used one or more other drug while you are drinking ?	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>Don't know</i>	88	
		No response	99	
Q2.1.5	If your response is "yes" to question no 2.1.5: What was the type of drugs have you used with it?	_____		
Q2.1.6	Do these drinks and drugs increase your sexual desire and risky behaviors after you using it?	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>Don't know</i>	88	
		No response	99	
Q2.1.7	Have you ever had sex after having alcohol?	<i>Yes</i>	1	
		<i>No</i>	2	
Q2.1.8	If yes, was condom used?	<i>Yes</i>	1	
		<i>No</i>	2	
Q2.1.9	Where do you think one can get condom if she/he wants to use? (Multiple responses can apply).		Yes DK	No
		<i>Shop</i>	1 3	2
		<i>Pharmacy</i>	1 3	2
		<i>Market</i>	1 3	2

		<i>Clinic/Hospital</i>	1 3	2	
		<i>Family planning center</i>	1 3	2	
		<i>Bar/hotel</i>	1 3	2	
		<i>Other-----</i>			
		No response		99	

2.2. Injecting & Illiga drugs Drugs

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
Q2.2.1	How long have you been using these illegal/non-medical/addictive drugs?	Number of months [---/---]		
Q2.2.2	From where did you get these illegal drugs?	From shops	1	
		Hotels/bars	2	
		Street peddlers	3	
		Others specify _____		
Q2.2.3	Who introduce you these illegal drugs?	Friends	1	
		by family members	2	
		Others specify _____		
Q2.2.4	Do you know those illegal drugs have harmful effects?	<i>Yes</i>	1	
		<i>No</i>	2	
Q2.2.5	How long have you been injecting drugs?	Number of months [---/---]		
Q2.2.6	How old were you when you first injected illegal/non-medical drugs?	Age in completed years [---/---]		
Q2.2.7	Do these injecting drugs increase your	<i>Yes</i>	1	

	sexual desire and risky behaviors after you using it?	<i>No</i>	2	
		<i>Don't know</i>	88	
		No response	99	
Q2.2.8	During the past 12 months how often would you say you injected drugs?	Only once	1	
		2-3 times	2	
		About once a week	3	
		2-3 times a week	4	
		4-6 times a week	5	
		About once a day	6	
		2-3 times a day	7	
		4 or more times a day	8	
		Don't know	88	
		No response	99	
Q2.2.9	Think about the last time you injected drugs. Did you use a needle or syringe that had previously been used by someone else?	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>Don't know</i>	88	
		No response	99	
Q2.2.10	In the past 12 months, when you injected with needles or syringes that had previously been used, how often did you clean them first?	<i>Every time</i>	1	
		<i>Almost Every time</i>	2	
		<i>Some times</i>	3	
		<i>Never</i>	4	
		<i>Don't know</i>	88	
		No response	99	
Q2.2.11	If cleaned: How did you usually clean them?	Cold water	1	
		Hot water	2	
		Boiling	3	
		Bleach	4	
		Alcohol	5	

		<i>Others specify</i> _____	
		No response	99
2.3. khat chewing			
S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING
Q2.3.1	<i>Some people have tried khat chewing. Have you ever tried to chew ?</i>	<i>Yes</i>	1
		<i>No</i>	2
		<i>Don't know</i>	88
		No response	99
Q2.3.2	If your answer to question no Q2.6.1 is yes What are the types of khat you chew? Circle all answers!	Aweday	1
		Mismar	2
		Orde	3
		Tajaro	4
		<i>Others specify</i> _____	
Q2.3.3	If your answer to question no Q2.6.3 is yes for how long you have chewed?	less than one year	1
		1-3 years	2
		More than three years	3
		<i>Others specify</i> _____	
Q2.3.4	Who introduces you to chew khat?	Friends	1
		by family members	2
		<i>Others specify</i> _____	
Q2.3.5	How often did you chew khat in the last 12 months?	Every day	1
		Every two days	2
		Twice a week	3
		Once a week	4
		Once a month	5
		Occasionally	6
Q2.3.6	How much do you usually use per day (Tel by using in your local measurement amount of chat)? _____		

Q2.3.7	Why do you chew khat?	<i>because my friends drink.</i>	1	
		<i>because my family members drink</i>	2	
		<i>To escape my problems</i>	3	
		<i>To relax my self</i>	4	
		<i>Others specify _____</i>		
Q2.3.8	Have you ever use khat and other substances (cigarettes, alcohol, etc) at the same time?	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>Don't know</i>	88	
		<i>No response</i>	99	
Q2.3.9	Do you feel sleeplessness after you chewed khat?	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>Don't know</i>	88	
		<i>No response</i>	99	
Q2.3.10	If your answer to question no Q2.6.9 is yes , what do you do to overcome this effect?	<i>Drink alcohol</i>	1	
		<i>Take hypnotics orally</i>	2	
		<i>Inject hypnotics</i>	3	
		<i>Do nothing</i>	4	
		<i>No Response</i>	99	
		<i>Others specify _____</i>		

Section 3: Marriage and live-in partnerships

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
Q3.1	<i>Have you ever been married?</i>	<i>Yes</i>	1	
		<i>No</i>	2	➔ Q3.3
		<i>No Response</i>	99	➔ Q3.3
Q3.2	How old were you when you first married?	Age in years [---/---]		

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
Q3.3	What is your current marital status?	<i>Married and living with spouse</i>	1	
		<i>Divorced and living with other sexual partner</i>	2	
		<i>Divorced and not living with spouse or any other sexual partner</i>	3	
		<i>Not married, living with sexual partner</i>	4	➔ Q4.1
		<i>Not married, not living with sexual partner</i>	5	➔ Q4.1
		<i>Spouse died and living alone</i>	6	
		<i>No Response</i>	99	
Q3.4	If married: Men: do you have more than onewife? Woman: does your husband have other wives?	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>Don't know</i>	88	
		<i>No response</i>	99	
Q3.5	Woman: Do you have any extra marital sexual relationship?	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>No response</i>	99	

Section 4: sexual history: numbers and types of partners

S.N	QUESTIONS	CODING CATAGORIES		SKIP TO	CODE
Q401	<i>For unmarried: Have you ever had sexual intercourse?</i>	<i>Yes</i>	1		
		<i>No</i>	2	Q803	
		<i>No Response</i>	99		
Q402	At what age did you first have sexual intercourse?	<i>Age in years [---/---]</i>			

S.N	QUESTIONS	CODING CATAGORIES		SKIP TO	CODE
Q403	Have you had sexual intercourse in the last 12 months?	Yes	1		
		No	2		
		No Response	99		

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
Q4.1	<i>For unmarried: Have you ever had sexual intercourse?</i>	Yes	1	
		No	2	➔ Q8.3
		No Response	99	➔ Q8.3
Q4.2	If your answer to question no Q4.1 is yes ,at what age did you first have sexual intercourse?	Age in years [---/---]		
Q4.3	Have you had sexual intercourse in the last 12 months?	Yes	1	
		No	2	
		No Response	99	

Section 5: sexual

history: regular partners

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
Q5.1	<i>Did you have sex with regular partner during past 12 months?</i>	Yes	1	
		No	2	➔ Q6.1
		Don't remember	99	➔ Q6.1
Q5.2	The last time you had sex with this regular partner, did you and your partner use a condom?	Yes	1	➔
		No	2	Q5.4
		No Response	99	
Q5.3	Who suggested condom use that	Myself	1	➔ Q5.5

➔
➔
➔
➔

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
	time?	<i>My partner</i>	2	Q5.5
		<i>Joint decision</i>	3	Q5.5
		<i>Don't know</i>	88	Q5.5
		<i>No response</i>	99	➔ Q5.5
Q5.4	Why didn't you and your partner use a condom that time?		Yes No	
		<i>Not available</i>	1 2	
		<i>Too expensive</i>	1 2	
		<i>Partner objected</i>	1 2	
		<i>Don't like them</i>	1 2	
		<i>Used other contraceptive</i>	1 2	
		<i>Didn't think it is necessary</i>	1 2	
		<i>Didn't think of it</i>	1 2	
		<i>Don't know</i>	88	
	<i>No response</i>	99		
Q5.5	With what frequency did you and all of your regular partner(s) use a condom during the past 12 months?	<i>Every time</i>	1	
		<i>Almost every time</i>	2	
		<i>Sometimes</i>	3	
		<i>Never</i>	4	
		<i>Don't know</i>	88	
		<i>No response</i>	99	

Section 6: Sexual history: commercial partners /only for males/

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
Q6.1	<i>Did you have sexual intercourse with a</i>	<i>Yes</i>	1	



S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
	<i>commercial partner in the last 12 months?</i>	<i>No</i>	2	<i>Q7.1</i>
		No Response	99	<i>Q7.1</i>
Q6.2	The last time you had sex with this commercial partner, did you and your partner use a condom?	<i>Yes</i>	1	
		<i>No</i>	2	<i>Q6.4</i>
		<i>Don't know</i>	88	<i>Q6.4</i>
		<i>No response</i>	99	<i>Q6.4</i>
Q6.3	Who suggested condom use that time?	<i>Myself</i>	1	<i>Q6.5</i>
		<i>My partner</i>	2	<i>Q6.5</i>
		<i>Joint decision</i>	3	<i>Q6.5</i>
		<i>Don't know</i>	88	<i>Q6.5</i>
		<i>No response</i>	99	→ <i>Q6.5</i>
Q6.4	Why didn't you and your partner use a condom that time?		Yes No	
		<i>Not available</i>	1 2	
		<i>Too expensive</i>	1 2	
		<i>Partner objected</i>	1	2
		<i>Don't like them</i>	1 2	
		<i>Used other contraceptive</i>	1 2	
		<i>Didn't think it is necessary</i>	1 2	
		<i>Didn't think of it</i>	1 2	
		<i>Other -----</i>		
		-		
		<i>Don't know</i>		88

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
		No response	99	
Q6.5	With what frequency did you and all of your commercial partner(s) use a condom during the past 12 months?	Every time	1	
		Almost every time	2	
		Sometimes	3	
		Never	4	
		Don't know	88	
		No response	99	

Section 7: Sexual history: commercial partners /only for males/

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
Q7.1	Did you have sex with non-regular, non-commercial sex partner during the last 12 months?	Yes	1	
		No	2	→ Q8.1
		No Response	99	Q8.1
Q7.2	The last time you had sex with non-regular, non-commercial partner; did you and your partner use a condom?	Yes	1	→
		No	2	→ Q7.4
		Don't know	88	Q7.5
		No response	99	
Q7.3	Who suggested condom use that time?	Myself	1	→ Q7.5
		My partner	2	→ Q7.5
		Joint decision	3	→ Q7.5
		Don't know	88	→ Q7.5
		No response	99	→ Q7.5
Q7.4	Why didn't you and your partner use a condom that time?		Yes No	
		Not available	1	

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
			2	
		Too expensive	1 2	
		Partner objected	1 2	
		Don't like them	1 2	
		Used other contraceptive	1 2	
		Didn't think it is necessary	1 2	
		Didn't think of it	1 2	
		Other ----- -----		
		Don't know	88	
		No response	99	
Q7.5	With what frequency did you and all of your commercial partner(s) use a condom during the past 12 months?	Every time	1	
		Almost every time	2	
		Sometimes	3	
		Never	4	
		Don't know	88	
		No response	99	

Section 8: Condom use

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
Q8.1	What is the use of condom? (multiple response is possible please Circle all answers!)		Yes No	
		To prevent pregnancy	1 2	

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
		<i>To prevent STDs</i>	1 2	
		<i>To prevent HIV/AIDS</i>	1 2	
		<i>Don't know</i>	88	
		<i>No response</i>	99	
Q8.2	Have you and a sexual partner ever used a condom?	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>Don't know</i>	88	
		<i>No response</i>	99	
Q8.3	Do you know of any place or person from which you can obtain condoms?	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>No response</i>	99	
Q8.4	Which place or persons do you know where you can obtain condoms?		Yes No DK	
		<i>Shop</i>	1 2 3	
		<i>Pharmacy</i>	1 2 3	
		<i>Market</i>	1 2 3	
		<i>Clinic/Hospital</i>	1 2 3	
		<i>Family planning center</i>	1 2 3	
		<i>Bar/hotel</i>	1 2 3	
		<i>Other-----</i>		
		<i>No response</i>	99	

Section 9: Sexually transmitted diseases

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
Q9.1	<i>Have you ever heard of diseases that can be transmitted through sexual intercourse?</i>	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>No response</i>	99	
Q9.2	Can you tell me those diseases that can be transmitted through sexual intercourse?		Yes DK	No
		<i>Syphilis</i>	1 3	2
		<i>Gonorrhoea</i>	1 3	2
		<i>Cancroids</i>	1 3	2
		<i>HIV/AIDS</i>	1 3	2
Q9.3	<i>Have you had a genital discharge during the past 12 months?</i>	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>Don't know</i>	88	
		<i>No response</i>	99	
Q9.4	<i>Have you had a genital ulcer /sore during the past 12 months?</i>	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>Don't know</i>	88	
		<i>No response</i>	99	

Section 10: knowledge, options, and attitudes

S.N	QUESTIONS & FILTERS	RESPONSE CATAGORIES	RESPONSE CODING	SKIP TO QUESTION No
Q10.1	<i>Have you ever heard of the disease called AIDS?</i>	<i>Yes</i>	1	
		<i>No</i>	2	

		<i>No response</i>	99	
Q10.2	<i>Do you know any one who is infected with HIV or who has died of AIDS?</i>	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>No response</i>	99	
Q10.3	<i>Do you have a close relative or close friend who is infected with HIV or has died of AIDS?</i>	<i>Yes, a close relative</i>	1	
		<i>Yes, a close friend</i>	2	
		<i>No</i>	3	
		<i>No response</i>	99	
Q10.4	<i>Can a person get HIV by sharing a meal with someone who is infected?</i>	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>Don't know</i>	88	
		<i>No response</i>	99	
Q10.5	<i>Can a person get HIV from mosquito bites?</i>	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>Don't know</i>	88	
		<i>No response</i>	99	
Q10.6	<i>Can a person get HIV by getting injections with a needle that was already used by someone else?</i>	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>Don't know</i>	88	
		<i>No response</i>	99	
Q10.7	<i>Can a pregnant woman infected with HIV or AIDS transmit the virus to her unborn child?</i>	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>Don't know</i>	88	
		<i>No response</i>	99	
Q10.8	<i>Can a woman with HIV or AIDS transmit the virus to her newborn child through breastfeeding?</i>	<i>Yes</i>	1	
		<i>No</i>	2	
		<i>Don't know</i>	88	
		<i>No response</i>	99	

Q10.9	<i>Do you think drinks with alcoholic content leads to promiscuity?</i>	<i>Yes</i>	<i>1</i>	
		<i>No</i>	<i>2</i>	
		<i>Don't know</i>	<i>88</i>	
		<i>No response</i>	<i>99</i>	
Q10.10	<i>Do you think that a healthy-looking person can be infected with HIV, the virus that causes AIDS?</i>	<i>Yes</i>	<i>1</i>	
		<i>No</i>	<i>2</i>	
		<i>Don't know</i>	<i>88</i>	
		<i>No response</i>	<i>99</i>	
Q10.11	<i>Can people protect themselves from HIV virus that causes AIDS by using a condom correctly every time they have sex?</i>	<i>Yes</i>	<i>1</i>	
		<i>No</i>	<i>2</i>	
		<i>Don't know</i>	<i>88</i>	
		<i>No response</i>	<i>99</i>	
Q10.12	<i>Can people protect themselves from HIV by having one uninfected faithful sex partner?</i>	<i>Yes</i>	<i>1</i>	
		<i>No</i>	<i>2</i>	
		<i>Don't know</i>	<i>88</i>	
		<i>No response</i>	<i>99</i>	
Q10.13	<i>Can people protect themselves from HIV by abstaining from sexual intercourse?</i>	<i>Yes</i>	<i>1</i>	
		<i>No</i>	<i>2</i>	
		<i>Don't know</i>	<i>88</i>	
		<i>No response</i>	<i>99</i>	

The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST).

Question 1

1	In your lifetime, which of the following substances have you ever used? (NON-MEDICAL USE ONLY)	Yes	No
A.	Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	1	0
B.	Alcoholic beverages (beer, wine, spirits, etc.)	1	0
C.	Cannabis (Ganja, marijuana, pot, grass, hash, etc.)	1	0
D.	Cocaine (coke, crack, etc.)	1	0
E.	Amphetamine type stimulants (Chat, speed, diet pills, ecstasy, etc.)	1	0
F.	Inhalants (nitrous, glue, petrol, paint thinner, etc.)	1	0
G.	Sedatives or sleeping pills (Valium, Serapax, Rohypnol, Ambien, etc.)	1	0
H.	Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	1	0
I.	Opioids (heroin, morphine, methadone, codeine, etc.)	1	0
J.	Other – specify:	1	0

Probe	if all answers are negative:	If "No" to all items, stop interview.
:-	“Not even when you were in school?”	If "Yes" to any of these items, ask Question 2 for each substance ever used.

Question 2

2	In the past three months, how often have you used the substances you mentioned? (NON-MEDICAL USE ONLY)	Never = 0	Once or twice = 2	Monthly = 3	Weekly = 4	Daily or almost daily = 6
A	Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	2	3	4	6
B	Alcoholic beverages (beer, wine, spirits, etc.)	0	2	3	4	6
C	Cannabis (Ganja, marijuana, pot, grass, hash, etc.)	0	2	3	4	6
D	Cocaine (coke, crack, etc.)	0	2	3	4	6
E	Amphetamine type stimulants (Chat, speed, diet pills, ecstasy, etc.)					
F.	Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	2	3	4	6
G	Sedatives or sleeping pills (Valium, Serapax, Rohypnol, Ambien, etc.)					
H	Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	2	3	4	6
I.	Opioids (heroin, morphine, methadone, codeine, etc.)	0	2	3	4	6
J.	Other – specify:	0	2	3	4	6

**If "Never" to all items in Question 2, skip to Question 6.
If any substances in Question 2 were used in the previous three months, continue with Questions 3, 4 & 5 for each substance substance used.**

Question 3

3	During the past three months, how often have you had a strong desire or urge to use (FIRST DRUG, SECOND DRUG ETC)?	Never = 0	Once or twice = 3	Monthly = 4	Weekly = 5	Daily or almost daily = 6
A	Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	3	4	5	6
B	Alcoholic beverages (beer, wine, spirits, etc.)	0	3	4	5	6
C	Cannabis (Ganja, marijuana, pot, grass, hash, etc.)	0	3	4	5	6
D	Cocaine (coke, crack, etc.)	0	3	4	5	6
E	Amphetamine type stimulants (Chat, speed, diet pills, ecstasy, etc.)	0	3	4	5	6
F	Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	3	4	5	6
G	Sedatives or sleeping pills (Valium, Serapax, Rohypnol, Ambien, etc.)	0	3	4	5	6
H	Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	3	4	5	6
I	Opioids (heroin, morphine, methadone, codeine, etc.)	0	3	4	5	6
J	Other – specify:	0	3	4	5	6

Question 4

4	During the past three months, how often has your use of (FIRST DRUG, SECOND DRUG ETC) led to health, social, legal, or financial problems?	Never = 0	Once or twice = 4	Monthl y = 5	Weekl y = 6	Daily or almost daily = 7
A	Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	4	5	6	7
B	Alcoholic beverages (beer, wine, spirits, etc.)	0	4	5	6	7
C	Cannabis (Ganja, marijuana, pot, grass, hash, etc.)	0	4	5	6	7

D	Cocaine (coke, crack, etc.)	0	4	5	6	7
E	Amphetamine type stimulants (Chat, speed, diet pills, ecstasy, etc.)	0	4	5	6	7
F	Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	4	5	6	7
G	Sedatives or sleeping pills (Valium, Serapax, Rohypnol, Ambien, etc.)	0	4	5	6	7
H	Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	4	5	6	7
I	Opioids (heroin, morphine, methadone, codeine, etc.)	0	4	5	6	7
J	Other – specify:	0	4	5	6	7

Question 5

5	During the past three months, how often have you failed to do what was normally expected of you because of your use of (FIRST DRUG, SECOND DRUG ETC)?	Never = 0	Once or twice = 5	Monthly = 6	Weekly = 7	Daily or almost daily = 8
A	Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	5	6	7	8
B	Alcoholic beverages (beer, wine, spirits, etc.)	0	5	6	7	8
C	Cannabis (Ganja, marijuana, pot, grass, hash, etc.)	0	5	6	7	8
D	Cocaine (coke, crack, etc.)	0	5	6	7	8
E	Amphetamine type stimulants (Chat, speed, diet pills, ecstasy, etc.)	0	5	6	7	8
F	Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	5	6	7	8
G	Sedatives or sleeping pills (Valium, Serapax, Rohypnol, Ambien, etc.)	0	5	6	7	8
H	Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	5	6	7	8
I	Opioids (heroin, morphine, methadone, codeine, etc.)	0	5	6	7	8

J.	Other – specify:	0	5	6	7	8
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Ask Questions 6 & 7 for all substances ever used (i.e. those endorsed in Question 1)

Question 6

6	Has a friend or relative or anyone else ever expressed concern about your use (FIRST DRUG, SECOND DRUG ETC)?	No, Never = 0	Yes, in the past 3 months = 6	Yes, but not in the past 3 months = 3
A.	Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	6	3
B.	Alcoholic beverages (beer, wine, spirits, etc.)	0	6	3
C.	Cannabis (Ganja, marijuana, pot, grass, hash, etc.)	0	6	3
D.	Cocaine (coke, crack, etc.)	0	6	3
E.	Amphetamine type stimulants (Chat, speed, diet pills, ecstasy, etc.)	0	6	3
F.	Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	6	3
G.	Sedatives or sleeping pills (Valium, Serapax, Rohypnol, Ambien, etc.)	0	6	3
H.	Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	6	3
I.	Opioids (heroin, morphine, methadone, codeine, etc.)	0	6	3
J.	Other – specify:	0	6	3

Question 7

7	Have you ever tried and failed to control, cut down or stop using (FIRST DRUG, SECOND DRUG ETC)?	No, Never = 0	Yes, in the past 3 months = 6	Yes, but not in the past 3 months = 3
A.	Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	6	3
B.	Alcoholic beverages (beer, wine, spirits, etc.)	0	6	3
C.	Cannabis (Ganja, marijuana, pot, grass, hash, etc.)	0	6	3
D.	Cocaine (coke, crack, etc.)	0	6	3
E.	Amphetamine type stimulants (Chat, speed, diet pills, ecstasy, etc.)	0	6	3
F.	Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	6	3
G.	Sedatives or sleeping pills (Valium, Serapax, Rohypnol, Ambien, etc.)	0	6	3
H.	Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	6	3
I.	Opioids (heroin, morphine, methadone, codeine, etc.)	0	6	3
J.	Other – specify:	0	6	3

Question 8

8	Have you ever used any drug by injection? (NON-MEDICAL USE ONLY)	No, Never = 0	Yes, in the past 3 months = 2	Yes, but not in the past 3 months = 1
		0	2	1

Thank you very much for your cooperation.

B. Somali version questionnaire

Jimma University

Department of Population and family health

Su'aalahaan waxaa loo diyaariyey in lagu baadho xidhiidhka ka dhexeeya isticmaalka mukhaadaraadka & cudurka HIV/AIDSka bukaanada soo u imanaya daawaynta goobaha daawaynta bukaan socodka ee xarumaha/cusbitaalada ku yaal magaalada jigjiga.

Sharaxaad loogu talagalay xog ururiyaha.

Kuweysshaneerkan wuxuu leeyaha _____ qaybood, sulaaha qaarkood waxay leeyihiin sharaxaad u gooni ah, fadlan sidooda u raac sharaxaadahaas.

Fadlan goobo gali jawaabta saxda ah

Intaanad bilaabain xog ururinta waxaad u baahan tahay inaad eegto qodobadan soo socda si taxadir leh.

Dadka reeban

Bukaanka aad u xanuusanaya ee aan awoodin inay jawaab

Warqada macluumaadka

Hello, magacaygu waa _____ waxanan u shaqaynaya xog ururiye ahaan daraasaad uu sameynayo arday MPH ee jaamacada Jimma taasoo ku waajahan bukaanada soo booqanaya goobaha daaweeyo bukaan socodka ee xarumaha ama cusbitaalada dawliga ah iyo kuwa aan dawliga ahayn eek u yaala magaalada jig-jiga. Waxaa si naxariis leh lagaaga codsnayaa inaad ka qayb qaadato daraasaadkan taasoo muhiimad wayn u leh hawlaha ka hortaga iyo xakamaynta cudurka HIV/AIDSka. Jawaabaha aad bixisaa waa la ilaalin doona, cidkalena haba yaratee la tusimayo. Majiraan wax dhib ah oo kaa soo gaadhaya ka qaybqaadashada daraasaadkan. Ka qayb qaadashada daraasaadkan ama diidma inaad ka qayb qaadato ma saameyn doonto helitaanka adeega caafimaad ee xaruntan ama tukale lagu bixinayo. Waxan jeclaan lahaa inaan kula socodsiiyo in magacaaga inaan lagu qorin doonin meelnaba. Waraysigan wuxu qaadan doonaa _____ ilaa _____ daqiiqo in la dhameeyo.ka qaybqaadashada daraasaadkan waa ikhtiyaar waanand kartaa inaanad ka jawaabin su'aalaha qaarkood ama dhamaantoodba.

Waan ogolahay inaad ka qaybqaato

ma ogoli inaan ka qayb qaato

a:

Macluumaad fiican ayaa la iga siiyey daraasaadkan, si cadna waan u fahmay ujeedadeeda.

Maadaama ayna saameynayn noloshayda shaqsiyeed , waxaan halkan ka cadaynayaa ogolaanshahayga inaad ka qayb qaato la waraayste ahaan waxaan ku muujinaya saxeexayga.

Saxeex _____

Tar : _____

Qaybta 1: su'aalo ku saabsan xaalada dhaqan dhaqaale ee la waraystaha

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
S-101	<i>Qor Mayaoca jinsiga jawaab bixiyaha</i>	<i>Lab</i>	<i>1</i>		
		<i>Dhidig</i>	<i>2</i>		
S-102	<i>Da,adaadu waa imisa? Ku sheeg sanad ahaan.</i>	<i>Da'ada oo sanad ahaan ah [-----/--- -----]</i>			
S-103	<i>Waa maxay heerka aqoontaadu ? Dugsi hoose, Dugsi dhexe ama Dugsi sare?</i>	<i>Malaha wax aqoon ah</i>	<i>0</i>		
		<i>Qorikara ama akhrinkara</i>	<i>1</i>		
		<i>Fasalka- 1 ilama 6</i>	<i>2</i>		
		<i>Fasalka-7 ilama 8</i>	<i>3</i>		
		<i>Fasalka-9 ilama 12</i>	<i>4</i>		
		<i>Fasalka-12 aad & wax ka sareeya</i>	<i>5</i>		
S-104	<i>Waxaa xagee goobta aad dagantahay?</i>	<i>Jig-jiga</i>	<i>1</i>		
		<i>Goob kabaxsan</i>	<i>2</i>		
S-105	<i>Waa maxay diinta aad haysto ama aaminsantahay?</i>	<i>Wax diin ah mahaysto</i>	<i>0</i>		
		<i>Orthodox</i>	<i>1</i>		
		<i>Protestant</i>	<i>2</i>		
		<i>Catholic</i>	<i>3</i>		
		<i>Islaam</i>	<i>4</i>		
		<i>Wax intaa ka baxsan _____</i>			
S-106	<i>Waa maxay qoomiyada aad ka soo jeedo?</i>	<i>Somali</i>	<i>1</i>		
		<i>Amhara</i>	<i>2</i>		
		<i>Oromo</i>	<i>3</i>		
		<i>Gurage</i>	<i>4</i>		
		<i>Tigray</i>	<i>5</i>		
		<i>Harari</i>	<i>6</i>		
		<i>Wax intaa ka baxsan _____</i>			
S-107	<i>Waa maxay shaqada hada/wakhti xaadirkan aad ka shaqaysid?</i>	<i>Wax shaqo ah ma hayo</i>	<i>0</i>		
		<i>Shaqaaale dawladeed</i>	<i>1</i>		
		<i>Baayac mushtar</i>	<i>2</i>		
		<i>Dirawal</i>	<i>3</i>		
		<i>Makaanig</i>	<i>4</i>		
		<i>Xoogsato</i>	<i>5</i>		
		<i>Wax intaa ka baxsan _____</i>			
S-108	<i>Waa imisa dhaqaalaha bil ahaan ku soo gala?ETB</i>	<i>Majiro wax dhaqaale ah oo isoogala</i>	<i>0</i>		
		<i>In kayar 100 Birr</i>	<i>1</i>		
		<i>100 ilaa 299 Birr</i>	<i>2</i>		
		<i>300 ilaa 499 Birr</i>	<i>3</i>		
		<i>500 iyo wax ka badan</i>	<i>4</i>		
		<i>Ma garanayo</i>	<i>88</i>		

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
S-109	Waa imisa dhaqaalaha bishii soo gala qoyskaaga?ETB?	<i>Majiro wax dhaqaale ah oo isoogala</i>	0		
		<i>In kayar 100 Birr</i>	1		
		<i>100 ilaa 299 Birr</i>	2		
		<i>300 ilaa 499 Birr</i>	3		
		<i>500 iyo wax ka badan</i>	4		
		<i>Ma garanayo</i>	88		
S-110	Waa maxay sababta ugu muhiimsan ee kugu kaliftay inaad raadsato baadhitaanka cudurka HIVga?		H aa	Ma ya	
		<i>In aan laf ahaantayda is ogaado</i>	1	2	
		<i>Waan iska shakiyay</i>	1	2	
		<i>Kal sooni la'aan dhinaca xaaska ah</i>	1	2	
		<i>Buktaan</i>	1	2	
		<i>Guur isku diyaarinaya</i>	1	2	
		<i>Fiisa</i>	1	2	
		<i>La soo gudbiyay</i>	1	2	
		<i>Inaan xaqiijo nadiijo positive ah.</i>	1	2	
		<i>In la baadhay uurka kahor</i>	1	2	
		<i>Uraydu waa inay garato</i>	1	2	
		<i>Death/illness of partners</i>	1	2	
		<i>Occupational exposure</i>	1	2	
		<i>Kufsi darted</i>	1	2	
		<i>Shaqo darteed</i>	1	2	
<i>Sababa kale-----</i>	1	2			

Qaybta 2: Su'aalo ku sabsan Isticmaalka mukhaadaraadka

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
S-201	Imisa jeer ayaad cabtay cabitaan leh alkool mudadii 12 kii bilood ee la soo dhaafay?	<i>Maalin walba</i>	1		
		<i>Todobaadkii labo jeer</i>	2		
		<i>Todobaadkiiba ugu yaraan hal mar</i>	3		
		<i>Todobaadkiiba in ka yar hal mar</i>	4		
		<i>Waligay macabin</i>	5		
S-202	Badana waa nuucma Mayaoca mukhaadaraadka aad cabtid?	<i>Whisk</i>	1		
		<i>Beer</i>	2		
		<i>Draft</i>	3		
		<i>Areke/Gin</i>	4		
		<i>Tella</i>	5		

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
		<i>Teji</i>	6		
		Nooc kale-----			
S-203	Badanka mukhaadaraad intee le eg ayaad qaadataa (ku cabir waxyaabaha deegaan ahaan lagu cabiro mukhaadaraadka)?	<i>1---5</i>	1		
		<i>6---10</i>	2		
		<i>In ka badan 10</i>	3		
S-204	Dadka qaarkood waxay isku dayaan isticmaalka mukhaadaraadyo kala du duwan Non-medical/addictive drugs. ee wali ma isku dayday mukhadaraadyadaas?	<i>Haa</i>	1		
		<i>Maya</i>	2		
		<i>Ma garanayo</i>	88		
		Jawaab male	99		
S-205	Hadii ay suasha kore jawaabteedu tahay haa waa nuucma nuuca mukhadaraadka aad isticmashay		Haa	DK	NR
		<i>Cocaine</i>	1	88	99
		<i>Heroin</i>	1	88	99
		<i>Cannabis</i>	1	88	99
		<i>Marijuana</i>	1	88	99
S-206	Mudo inteedhan ayaad istoicmaalaysay mukhaadaraadyadan /Mayan-medical/addictive drugs?	_____ Bilood			
S-207	Dadka qaarkood waxay isku dayaan isticmaalka mukhaadaraadyada irbad ahaanta lagu qaato (La isku duro) ee wali ma isku dayday mukhadaraadyadaasi 12 kii bilood ee u danbaysay?	<i>Haa</i>	1		
		<i>Maya</i>	2		
		<i>Magaranayo</i>	88		
		Jawaab male	99		
S-208	Mudo inteedhan ayaad istoicmaalaysay mukhaadaraadyada irbad ahaanta lagu qaato (La isku duro)?	_____ Bilood			
S-209	Imisa ayaad ahay markii kugu horaysay ee aad bilawday isticmaalka mukhaadaraadyada irbad ahaanta lagu qaato (La isku duro)?	_____ Sanadood			
S-210	Isticmaalka mukhaadaraadkani makugu abuuraa dareen rabitaan galmo ama inaad isku daydo dabecado halis ah?	<i>Haa</i>	1		
		<i>Maya</i>	2		
		<i>Magaranayo</i>	8		
		Jawaab male	9		
S-211	Imisa jeer ayaad isku dayday isticmaalka mukhaadaraadyada irbad ahaanta lagu qaato (La isku duro) mudadii 12 kii bilood ee la	<i>Hal mar</i>	1		
		<i>2-3 Jeer</i>	2		
		<i>Todobaadkiiba hal mar</i>	3		

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY	UGUDUB SU'AASHA	KOODHKA
	soo dhaafay?	Todobaadkiiba 2-3 jeer	4	
		Todobaadkiiba 4-6 jeer	5	
		Hal mar maalintiiba	6	
		Maalintiiba 2-3 jeer	7	
		Maalintiiba 4 jeer & in kabadan.	8	
		<i>Magaranayo</i>	8	
		Jawaab male	9	
S-212	Ma xasuusantahay wakhtigii kugu danbeeyay ee isku dayday isticmaalka mukhaadaraadyada irbad ahaanta lagu qaato (La isku duro) . hadii aad xasuusantahay miyaad isticmaashay irbad ruux kale isticmaalay hada ka hor?	<i>Haa</i>	1	
		<i>Maya</i>	2	S-215
		<i>Magaranayo</i>	8	
		Jawaab male	8	S-215
S-213	Mudadii 12 kii bilood ee u danbaysay markii aad isticmaalasay mukhaadaraadyada irbad ahaanta lagu qaato (La isku duro) imisa jeer ayaad nadiifisay irabada intaanad isticmaalin ka hor irbada?	<i>Mar kasta</i>	1	
		<i>In ku dhaw Mar kasta</i>	2	
		<i>Mararka qaarkood</i>	3	
		<i>Waligay maan isticmaalin</i>	4	S-215
		<i>Magaranayo</i>	8	
		Jawaab male	8	S-215
S-214	Hadii aad nadiifin jirtay irbada: Sideed u nadiifin jirtay?	Waxaan ku nadiifin jiray biyo qabaw	1	
		Waxaan ku nadiifin jiray biyo diiran	2	
		Waa fixin jiray	3	
		Saabuun budo ah	4	
		Waxaan ku nadiifin jiray alkool.	5	
		Waxaan ku nadiifin jiray waxyaabo kale _____.		
		Jawaab male	9	

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
S-215	Mudadii 12 kii bilood ee u danbaysay ma isku dayday qayilaada jaadka?	Haa	1	S-301	
		Maya	2		
			9		
		Jawaab male	9		
S-216	Muxuu ahaa nooca jaadka eed qayilaysay? Gobaab dhamaantooda Hadii aad qayishay	Aweday	1		
		Cumar kuule	2		
		Ordo /Bureed	3		
		Taajaro	4		
		Kuwokale ----- -			
S-217	Imisa jeer ayaad qayishay mudadii 12 kii bilood ee u danbaysay?	Maalin walba	1		
		Labadii maalmoodba hal mar	2		
		Todobaadkiiba labo jeer	3		
		Todobaadkiiba hal mar	4		
		Bishiiba hal mar	5		
		Mararka qaarkood	6		
S-218	Markaad jaadka qayisho madareenta hurdo la'aan?	Haa	1	S-301	
		Maya	2		
		Ma garanayo	8		
			8		
		Jawaab male	9		
S-219	Hadaba hadii hurdo la'aan dareentid maxaad samaysaa si aad hurdootid?	Cabitaanka alkoolka	1		
		Qaadashada kiniinka hordada	2		
		Inject hypMayatics	3		
		Waxba ma sameeyo	4		
		Kuwokale ----- -			
		Jawaab male	9		

Qaybta 3: Su'aalaha ku saabsan xaalada guurka iyo lamaane ku wada noolaanshaha.

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
S-301	Waligaa/Hada ka hor ma guursatay?	Haa	1	S-303	
		Maya	2		
		Jawaab male	99		
S-302	Guurkii ku gu horeeyay imisa jir ayaad ku guursatay?	_____ Sano			

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
S-303	Wakhti xaadirkan xaalada guurkaagu waa _____?	<i>Guursaday oo la Mayaol xaaskiisa Married and living with spouse</i>	1		
		<i>Xaaskiisi furay oo hada la nool mid kale</i>	2		
		<i>Xaaskiisi furay balse hada kaligii ah oon cidkale la noolayn</i>	3		
		<i>Aan wali guursan balse hada la nool mid kale oo saaxiib ah.</i>	4	S-401	
		<i>Aan wali guursan balse hada kaligii ah oon cidkale la noolayn</i>	5	S-401	
		<i>Xaaskiisi geeriyooday hada kaligii ah oon cidkale la noolayn.</i>	6		
		Jawaab male	99		
S-304	Hadii aad guursatay : Raga/labka: Maleedahay in kabadan 2 xaas? Haweenka/dhidiga: Ninkaagu ma leeyahay xaas kale?	<i>Haa</i>	1		
		<i>Maya</i>	2		
		<i>Ma garanayo</i>	88		
		Jawaab male	99		
S-305	Haweenka/dhidiga: Hada ka hor wax gogol dhaaf ma samaysay?	<i>Haa</i>	1		
		<i>Maya</i>	2		
		Jawaab male	99		

Qaybta 4: Su'aalaha ku saabsan xaalada galmoodka ee lamaanaha (tirade & nooca lamaanaha).

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
S-401	<i>Ruuxa aan guursanin: Waligaa galmood ma samaysay?</i>	<i>Haa</i>	1		
		<i>Maya</i>	2	S-803	
		Jawaab male	99		
S-402	<i>Imisa ayaad ahayd markii aad samaysay galmoodkii gugu horeeyay?</i>	_____ sano.			
S-403	<i>Galmood ma samaysay mudadii 12 bilood ee u danbaysay?</i>	<i>Haa</i>	1		
		<i>Maya</i>	2		
		Jawaab male	99		

Qaybta 5: Su'aalaha ku saabsan xaalada galmoodka ee lamaanaha (lamaanaha joogtada ah).

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
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S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
S-501	Mudadii 12 bilood ee u danbaysay <i>Galmood mala samaysay xaaskaaga ama saaxiib joogtada ah ?</i>	<i>Haa</i>	1		
		<i>Maya</i>	2	<i>S-601</i>	
		Ma xasuusan karo	99		
S-502	kondhom ma isticmaashay Galmoodkii u danbeeyay eed la samaysay <i>xaaskaaga ama saaxiib joogtada ah ?</i>	<i>Haa</i>	1		
		<i>Maya</i>	2	<i>S-504</i>	
		Jawaab male	99	<i>S-505</i>	
S-503	Wakhtigaas ayaa lahaa talada isticmaalka kondhomka?	<i>Aniga laf ahaantayda</i>	1	<i>S-505</i>	
		<i>Xaaskayga</i>	2	<i>S-505</i>	
		<i>Go'aan wada jir aan ku gaadhnay</i>	3	<i>S-505</i>	
		<i>Ma garanayo</i>	88	<i>S-505</i>	
		Jawaab male	99	<i>S-505</i>	
S-504	Waa maxay sababta aad u isticmaali waydeen kondhomka wakhtigaasi?		Haa	Ma ya	
		<i>Kondhomka oon jirin</i>	1	2	
		<i>Kondhomka oo aad u qaali ah</i>	1	2	
		<i>Xaaska oo diiday</i>	1	2	
		<i>Ma jecli isticmaalkiisa</i>	1	2	
		<i>Waxaan isticmaalnay daawooyin kale oo lagu kala dheereenayo</i>	1	2	
		<i>Umaan malaynayn inuu yahay wax sidaasi loogu baahanyahay</i>	1	2	
		<i>Maan xasuusnayn</i>	1	2	
		<i>Man garanayn</i>	88		
		Jawaab male	99		
S-505	Imisa jeer ayaaad isticmaasheen kondhomka adiga iyo saaxiibkaa mudadii 12 kii bilood ee ugu danbaysay?	<i>Mar kasta</i>	1		
		<i>In ku dhaw mar kasta</i>	2		
		<i>Mararka qaarkood</i>	3		
		<i>Waligay</i>	4		
		<i>Ma garanayo</i>	88		
		Jawaab male	99		

Qaybta 6: Su'aalaha ku saabsan xaalada galmoodka lala samayna haweenka jidhkooda ka ganacsada (Su'aalahan waxaa loogu talagalay kaliya raga).

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
S-601	<i>Galmood ma la samaysay haweenka jidhkooda ka ganacsada mudadii 12 kii bilood ee ugu danbaysay?</i>	<i>Haa</i>	1		
		<i>Maya</i>	2	<i>S-701</i>	
		Jawaab male	99	<i>S-701</i>	
S-602	kondhom ma isticmaasheen	<i>Haa</i>	1		

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
	adiga iyo lamaanahaagu galmoodkii ugu danbeeyay eed la samaysay haweenka jidhkooda ka ganacsada?	Maya	2		
		Ma garanayo	88	S-604	
		Jawaab male	99	S-605	
S-603	Wakhtigaas ayaa lahaa talada isticmaalka kondhomka?	Aniga laf ahaantayda	1	S-605	
		Xaaskayga	2	S-605	
		Go'aan wada jir aan ku gaadhay	3	S-605	
		Ma garanayo	88	S-605	
		Jawaab male	99	S-605	
S-604	Waa maxay sababta aad u isticmaali waydeen kondhomka wakhtigaasi?		Haa	Maya	
		Kondhomka oon jirin	1	2	
		Kondhomka oo aad u qaali ah	1	2	
		Xaaska oo diiday	1	2	
		Ma jecli isticmaalkiisa	1	2	
		Waxaan isticmaalnay daawooyin kale oo lagu kala dheereenayo	1	2	
		Umaan malaynayn inuu yahay wax sidaasi loogu baahanyahay	1	2	
		Maan xasuusnayn	1	2	
		Sababa kale -----			
		Man garanayn	88		
Jawaab male	99				
S-605	Imisa jeer ayaad isticmaasheen adiga iyo lamaanahaagu galmoodkii ugu danbeeyay eed la samaysay haweenka jidhkooda ka ganacsada?	Mar kasta	1		
		In ku dhaw mar kasta	2		
		Mararka qaarkood	3		
		Waligay	4		
		Ma garanayo	88		
		Jawaab male	99		

Qaybta 7: Su'aalaha ku saabsan xaalada galmoodka lala samaynayo lamaanaha aan joogtada ahayn iyo haweenka kale ee aan ahayn kuwa jidhkooda ka ganacsada.

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
S-701	Galmood ma la samaysay lamaane aan joogta ku ahayn , haweenka jidhkooda ka ganacsada mudadii 12 kii bilood ee ugu danbaysay?	Haa	1		
		Maya	2	S-801	
		Jawaab male	99	S-801	
S-702	kondhom ma isticmaasheen adiga iyo lamaanahaagu galmoodkii ugu danbeeyay eed la samaysay lamaane	Haa	1		
		Maya	2	S-704	
		Ma garanayo	88	S-705	

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
	<i>aan joogta ku ahayn , haweenka jidhkooda ka ganacsada?</i>	Jawaab male	99		
S-703	Wakhtigaas ayaa lahaa talada isticmaalka kondhomka?	<i>Aniga lafaahantayda</i>	1	S-705	
		<i>Xaaskayga</i>	2	S-705	
		<i>Go'aan wada jir aan ku gaadhnay</i>	3	S-705	
		<i>Ma garanayo</i>	88	S-705	
		Jawaab male	99	S-705	
S-704	Waa maxay sababta aad u isticmaali waydeen kondhomka wakhtigaasi?		Haa	Ma ya	
		<i>Kondhomka oon jirin</i>	1	2	
		<i>Kondhomka oo aad u qaali ah</i>	1	2	
		<i>Xaaska oo diiday</i>	1	2	
		<i>Ma jecli isticmaalkiisa</i>	1	2	
		<i>Waxaan isticmaalnay daawooyin kale oo lagu kala dheereenayo</i>	1	2	
		<i>Umaan malaynayn inuu yahay wax sidaasi loogu baahanyahay</i>	1	2	
		<i>Maan xasuusnayn</i>	1	2	
		<i>Sababa kale -----</i>			
		<i>Man garanayn</i>	88		
		Jawaab male	99		
S-705	<i>Imisa jeer ayaad isticmaasheen kondhom adiga iyo dhamaan haweenka jidhkooda ka ganacsada eed galmoodka la samaynaysay mudadii 12 kii bilood ee ugu danbaysay?</i>	<i>Mar kasta</i>	1		
		<i>In ku dhaw mar kasta</i>	2		
		<i>Mararka qaarkood</i>	3		
		<i>Waligay</i>	4		
		<i>Ma garanayo</i>	88		
		Jawaab male	99		

Qaybta 8: Su'aalaha ku saabsan xaalada isticmaalka cinjirka kondhomka.

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
S-801	<i>Waa maxay isticmaalka Kondhomku ? Gobaab dhamaan jawaabaha aad is leedahay waa suurta gal!</i>		Haa	Maya	
		<i>In lagaga hortago uur qaadista</i>	1	2	
		<i>In lagaga hortago cudurada galmoodka lagu kala qaado</i>	1	2	
		<i>In lagaga hortago cudurada HIV/AIDS</i>	1	2	
		<i>Ma garanayo</i>	88		
		Jawaab male	99		
S-802	Waligaa ma isticmaashay	<i>Haa</i>	1		

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA	
	kondhom adiga iyo lamaanahaagu ?	Maya	2			
		Ma garanayo	88			
		Jawaab male	99			
S-803	Ma taqaana qof ama goob aad ka heli karto kondhomka?	Haa	1			
		Maya	2			
		Jawaab male	99			
S-804	Qofkee ama goobtee ayaad u garawsantahay inaad ka heli karto kondhomka?		Haa	Maya	DK	
		Tukaanada	1	2	3	
		Farmasiyada	1	2	3	
		Suuqa	1	2	3	
		Kilinigyada/cusbitalada	1	2	3	
		Goobaha adeega qorshaynta qoyska laga bixiyo	1	2	3	
		Mukhmaaradaha/huteelada	1	2	3	
		Kuwa kale -----				
Jawaab male		99				

Qaybta 9: Su'aalaha ku saabsan cudurada galmada lagu kala qaado.

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA	
S-901	Waligaa ma maqashay cudur galmada lagu kala qaado?	Haa	1			
		Maya	2			
		Jawaab male	99			
S-902	Ma sheegi kartaa cudurada galmada lagu kala qaado?		Haa	Maya	DK	
		Warabawga	1	2	3	
		Jabtida	1	2	3	
		Kar karka	1	2	3	
S-903	Ma isku aragtay dheecaan kayimid xubinta galmoodka mudadii 12 kii bilood ee ugu danbaysay?	Haa	1			
		Maya	2			
		Ma garanayo	88			
		Jawaab male	99			
S-904	Ma isku aragtay boog/nabaro xubinta galmoodka mudadii 12 kii bilood ee ugu danbaysay?	Haa	1			
		Maya	2			
		Ma garanayo	88			
		Jawaab male	99			

Qaybta 10: Su'aalaha ku saabsan aqoonta, fursadaha kale iyo aragtida.

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SHIYAY		UGUDUB SU'AASHA	KOODHKA
S-	Waligaa ma maqashay cudurka loo yaqaano	Haa		1	

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SIIYAY	UGUDUB SU'AASHA	KOODHKA
1001	<i>HIV/AIDS?</i>	<i>Maya</i>	2	
		Jawaab male	99	
S-1002	<i>Ma la kulantay /garanaysaa qof uu ku dhacay ama uu dilay cudurka loo yaqaano HIV/AIDS?</i>	<i>Haa</i>	1	
		<i>Maya</i>	2	
		Jawaab male	99	
S-1003	<i>Ma jira qof qaraabadaada ah ama saaxiibadaa ka mid ah oo uu ku dhacay ama uu dilay cudurka HIV/AIDSku?</i>	<i>Haa, wuu jiraa ruux qaraabada kamid ah</i>	1	
		<i>Haa, wuu jiraa ruux saaxiibaday kamid ah</i>	2	
		<i>Maya</i>	3	
		Jawaab male	99	
S-1004	<i>cudurka HIV/AIDSka malagu kala qaadi karaa irbada dadka lagu duro oo lala wadaago ruuxa qaba cudurka?</i>	<i>Haa</i>	1	
		<i>Maya</i>	2	
		<i>Ma garanayo</i>	88	
		Jawaab male	99	
S-1005	<i>Cudurka HIV/AIDSka ma ku gudbi karaa qaniinyada kaneecada?</i>	<i>Haa</i>	1	
		<i>Maya</i>	2	
		<i>Ma garanayo</i>	88	
		Jawaab male	99	
S-1006	<i>Cudurka HIV/AIDSka malagu kala qaadi karaa irbada duritaanka oo lala wadaago ruuxa kale?</i>	<i>Haa</i>	1	
		<i>Maya</i>	2	
		<i>Ma garanayo</i>	88	
		Jawaab male	99	
S-1007	<i>Hooyada uurayda ah ee qabta cudurka HIV/AIDSka ma u gudbin kartaa cudurka ilmaha caloosha /uurka ku jira?</i>	<i>Haa</i>	1	
		<i>Maya</i>	2	
		<i>Ma garanayo</i>	88	
		Jawaab male	99	
S-1008	<i>Hooyada qabta cudurka HIV/AIDSka ee nuujinaysa naaska ma u gudbin kartaa cudurka ilmaheega?</i>	<i>Haa</i>	1	
		<i>Maya</i>	2	
		<i>Ma garanayo</i>	88	
		Jawaab male	99	
S-1009	<i>Ma u malaynaysaa in cabitaanka khamrigu ay ku horseedayso ku dhaqaaqid falal sharmuuto nimo/ dhilo nimo?</i>	<i>Haa</i>	1	
		<i>Maya</i>	2	
		<i>Ma garanayo</i>	88	
		Jawaab male	99	
S-1010	<i>Ma u malaynaysaa in qofka muuq ahaan jidhkiisu caafimaad qabyahay uu dhiigiisa ku dhex noolaan karo ilma'aragtayga (fayraska)</i>	<i>Haa</i>	1	
		<i>Maya</i>	2	
		<i>Ma garanayo</i>	88	

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SIIYAY	UGUDUB SU'AASHA	KOODHKA
	<i>HIV ga ee keena cudurka AIDSka?</i>	Jawaab male	99	
S-1011	<i>Dadku ma awoodi karaan inay ka hortagaan il ma 'aragtayga sababa /keena cudurka AIDSka hadii ay si sax ah u isticmalaan kondhomka mar kasta ooy galmo samaynayaan?</i>	<i>Haa</i>	1	
		<i>Maya</i>	2	
		<i>Ma garanayo</i>	88	
		Jawaab male	99	
S-1012	<i>Dadku ma awoodi karaan inay ka hortagaan il ma 'aragtayga sababa /keena cudurka AIDSka hadii la galmood sameeyaan lamaane gaar kuu ah oo kal sooni isku qaba?</i>	<i>Haa</i>	1	
		<i>Maya</i>	2	
		<i>Ma garanayo</i>	88	
		Jawaab male	99	
S-1013	<i>Dadku ma awoodi karaan inay ka hortagaan ama ay iska ilaaliyaan il ma 'aragtayga sababa /keena cudurka AIDSka hadii ay wax galmood ah ayna samaynin?</i>	<i>Haa</i>	1	
		<i>Maya</i>	2	
		<i>Ma garanayo</i>	88	
		Jawaab male	99	
S-1014	<i>Fadlan marabo inaan ogaado nadiijada balse waligaa ma iska baadhay cudurka HIV/ AIDSka?</i>	<i>Haa</i>	1	
		<i>Maya</i>	2	
		<i>Maya response</i>	99	S-1018
S-1015	<i>Fadlan marabo inaan ogaado nadiijada balse adigu ma ogaatay nadiijada badhitaanka dhiigaaga?</i>	<i>Haa</i>	1	
		<i>Maya</i>	2	
		<i>Maya response</i>	99	
S-1016	Goorma ayaa ahayd baadhitaankii ugu danbeeyay eed iska baadho cudurka HIV? AIDSka ?	<i>Sanadkii ugu danbeeyay gudihiisa</i>	1	
		<i>Mudo u dhaxaysa 1-2 sano</i>	2	
		<i>Mudo u dhaxaysa 2-4 sano</i>	3	
		<i>Mudo laga joogo 4 sano & in kabadan.</i>	4	
		<i>Ma garanayo</i>	88	
		Jawaab male	99	
S-1017	Baadhitaanka aad iska baadhay cudurka HIV/AIDS ma wuxuu ahaa mid si mutadawacnimo ah aad iskaga baadhay mise waa mid baahi ku qabatay awgeed aad isku baadhay?	<i>Si mutadawacnimo ah</i>	1	
		<i>U baahday</i>	2	
		<i>Ma garanayo</i>	88	
		Jawaab male	99	
S-1018	Hada baadhitaanka aad u timid ma mid si mutadawacnimo ah aad iskaga baadhaysaa mise waa mid baahi ku qabatay awgeed ah?	<i>U baahday</i>	1	
		<i>Ma garanayo</i>	2	
		Jawaab male	99	
S-1019	Hadii baadhitaankaagu yahay mid baahi awgeed ah: Ayaa ku sheegay ama ka codsaday inaad iska	<i>Gobaha cafim dawliga ah.</i>	1	
		<i>Gobaha cafim garka</i>	2	

S.N	NAOCA SU'AASHA	NOOCA KOODHKA LA SIIYAY	UGUDUB SU'AASHA	KOODHKA
	baadho?	<i>loo leeyahay.</i>		
		<i>Military institution</i>	3	
		<i>Xafiis dawli ah</i>	4	
		<i>Goob saaxiib</i>	5	
		<i>Haayada aan dawli ahayn</i>	6	
		<i>Iskuulka</i>	7	
		<i>Goobaha diinta lagu caabudo</i>	8	
		<i>Safaarada</i>	9	
		<i>Kale -----</i>		

WAAD KU MAHADSANTAHAY SIDA FIICAN EED UGA QAYB QAADATAY.