

**RISKY SEXUAL BEHAVIOR AND ASSOCIATED FACTORS  
AMONG PEOPLE LIVING WITH HIV ATTENDING ART CLINIC  
AT NEKEMTE REFERRAL HOSPITAL, WEST ETHIOPIA.**



**BY:**

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**DEPARTMENT OF NURSING AND MIDWIFERY**

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## **ABSTRACT**

**Background:** - Nearly two and half decades after the first case was diagnosed, HIV/AIDS remains a major public health problem. Among HIV-positive individuals practice of risky sexual behaviors is the major effective driver of the HIV epidemic, this behavior expose their partners for HIV and for HIV positive partners expose to a risk of supra-infection by other strains. However; little is known about risky sexual behavior among people living with HIV attending antiretroviral therapy in Ethiopia particularly in the study area.

**Objective:** This study was aimed to assess the prevalence of risky sexual behavior and its associated factors among people living with HIV, attending ART clinic at Nekemte referral hospital from March to April, 2016.

**Methodology:** A facility based cross-sectional study was conducted by using quantitative method to study prevalence and associated factors of risky sexual behavior among PLHIV attending Antiretroviral therapy clinic at Nekemte referral hospital from March to April, 2016. A total of 337 clients were included in the study. Consecutive sampling technique was used to select the study participants; data was collected through face to face interview. Data was entered into Epi-data Version 3.1 and analyzed using SPSS version 20. Variables significant at bivariate logistic regression analysis at  $p < 0.25$  were considered as candidate for the multivariable logistic regression analysis and statistical significance were declared at  $p < 0.05$ .

**Result:** - About one third (32.9%) of the study participants were engaged in risky sexual behavior in the past three months prior to the study. In this study participants those who had multiple sexual partner (AOR=6.38,95% CI:1.65,24.74), had positive sero-status partner (AOR=2.68,95% CI:1.31,5.5), did not disclose sero-status (AOR=5.99, 95% CI:1.36,26.35), desire for child (AOR=2.6,95% CI:1.5,4.51), experienced perceived stigma (AOR=2.63,95% CI:1.5,4.62) and those who did not get education/counseling on importance of protecting self from strain (AOR=5.64,95% CI:3.19,9.96) were more likely to engaged in risky sexual behavior.

**Conclusion & recommendation:** The study revealed that about one third of study participants were engaged in risky sexual behavior & efforts to increase awareness through health education were highly recommended.

**Key words:** - HIV, risky sexual behavior, ART, Nekemte referral hospital.

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

AIDS: - Acquired Immune Deficiency Syndromes

AOR: Adjusted Odd Ratio

ART: - Anti-Retroviral Therapy

ART clinic: Anti retro viral therapy clinic

ARV:-Anti-Retro-Viral

COR: Crude Odd Ratio

EDHS: Ethiopian Demographic and Health Survey

ETB: - Ethiopian Birr

HAART: - Highly Active Antiretroviral Treatment

HIV: - Human Immune Deficiency Virus

IRB: - Institutional Review Board

JU: - Jimma University

PLHIV:-People Living With HIV/AIDS

SPSS:-Statistical Package for Social Science

UNAIDS: -United Nations Program on HIV/AIDS

WHO: - World Health Organization

# **CHAPTER ONE: INTRODUCTION**

## **1.1. BACK GROUND**

According to WHO definition, human immunodeficiency virus (HIV) is a retrovirus that infects cells of the immune system, destroying or impairing their function. As the infection progresses, the immune system becomes weaker, and the person becomes more susceptible to infections. HIV is transmitted through unprotected sexual intercourse (anal or vaginal), transfusion of contaminated blood, sharing of contaminated needles, and between a mother and her infant during pregnancy, childbirth and breastfeeding (1).

Risky sexual behavior is commonly defined as behavior that increases one's risk of contracting sexually transmitted infections and experiencing unintended pregnancies (2).

In Africa HIV is spread primarily through unprotected sex and practicing safe sex such as condom use can reduce it. Effective protection would require condom use at every sexual encounter, but for many people in Africa condom use is not an easy option despite years of condom distribution intervention (3).

The complex nature of sexual behavior and sexuality complicates efforts to combat HIV spread and limits the effectiveness of many prevention efforts. Positive prevention approach has been taken as the main strategies to reduce HIV transmission; this approach takes behavioral factors that may result in increased HIV transmission to uninfected sexual partners in to consideration (4, 5).

Counselors define benefits of condom use in terms of avoiding re-infection with another HIV-strain or sexually transmitted infection or unwanted pregnancy and warned against unprotected sex with other people living with HIV, even if they were taking ART (6).

## 1.2. STATEMENT OF THE PROBLEM

Nearly two and half decades after the first case was diagnosed, HIV/AIDS remains a major public health problem. According to UNAIDS global statistics about 5.8 million people were accessing antiretroviral therapy by June 2015. At the end of 2014, 36.9 million (34.3 million–41.4 million) people globally were living with HIV, 2 million (1.9 million–2.2 million) people became newly infected with HIV and 1.2 million (980 000–1.6 million) people died from AIDS-related illnesses (7).

In sub-Saharan Africa in 2014, there were 25.8 million (24.0 million–28.7 million) people living with HIV, there were an estimated 1.4 million (1.2 million–1.5 million) new HIV infections, 90 000 (670 000–990 000) people died of AIDS-related causes. Five out of seven people on antiretroviral therapy live in sub-Saharan Africa (7).

According to Ethiopian Demographic and Health Survey (EDHS) 2011 report, the prevalence of HIV among women age 15-49 HIV is 1.9 percent, and among men age 15-49 and 15-59, HIV prevalence is 1.0 percent (8).

In 2013, in Ethiopia there were an estimated 793,700 (716,300-893,200) people living with HIV and there were approximately 45,200 (36,500-55,200) AIDS related deaths (9).

The epidemics of HIV are increased and propagated from time to time by new cases of infection, which result from transmission from infected persons to uninfected susceptible individuals (10).

Currently, as a result of increased access and success of highly active antiretroviral therapy (HAART) in dramatically decreasing morbidity and mortality from HIV disease, many HIV-infected persons are now living longer, healthier and they may seek a return to an active ‘normal’ life, including sexual activity and it may lead to belief that HIV is no longer a serious and deadly disease (11, 12, and 13). Risky sexual behavior among people receiving ART is an area of concern; hence it is the major effective driver of the HIV epidemic. Among PLHIV these behaviors are common and potentially expose their partners and for HIV-positive partners these habits expose to a real risk of supra infection by other strains of HIV (5, 14, and 15).

The magnitude of unprotected sexual practice among PLHIV is high in Sub-Saharan Africa; about more than one in three of PLHIV were engaged in risky sexual practice (10, 16, and 17).

In Ethiopia the magnitude of risky sexual behavior among PLHIV is also high, about more than one third and nearly one quarter of respondents engage in risky sexual behavior in Addis Ababa& Debrezeit respectively (18, 19).

In HIV related studies risky sexual behavior has been one of the most documented topics. It has driven most HIV intervention and programs worldwide and especially in sub- Saharan Africa which is most affected area (20).

However; little is known about risky sexual behavior among PLHIV attending ART in Ethiopia particularly in study area. Therefore, the current study aimed to assess the prevalence and associated factors of risky sexual behavior among PLHIV attending ART clinic at Nekemte referral hospital.

## **CHAPTER TWO**

### **2.1. LITERATURE REVIEW**

#### **2.1.1. Prevalence of risky sexual behavior**

The prevalence of risky sexual behavior/condom unprotected sex was high among PLHIV and the magnitude was varying from country to country. According to a study conducted in Togo among PLWHA attending ART, about 34.6% reported having unsafe sex (17). Study from Uganda showed that the prevalence of consistent condom use was 41.3% (300/731) (10). In the same country study from south western Uganda showed that the frequency of unprotected sex at the last intercourse was 25.9% and 22.1% among the men and women respectively (21). In South Africa Of the sexually active patients (N=71), 23 (30%) reported one or more unprotected vaginal or anal sex events in the prior 3 months with 27 different partners (22). Study conducted in Kenya showed that out of 515 respondents close to one-third of patients reported inconsistent condom use (16). Although in Tanzania, Engaging in unprotected sex was found to be high among young people living with HIV; prevalence of unprotected sex was 40.0% among young males and 37.5% among young females (5).

In Ethiopia, study conducted in Addis Ababa among PLHIV in selected health centers showed that about 30.4% of the respondents had engaged in risky sexual behavior/inconsistent use of a condom during sexual intercourse within the last 3 months prior to the study period (23). Another study conducted among ART attendees in Addis Ababa Public Hospitals showed that more than one-third (36.9%) had a history of risky sexual practices in the three months prior to the study (19).

#### **Factors associated with risky sexual behavior**

Factors associated with sexual risk behavior includes:-socio-demographic characteristics, partner related factors, clinical related factors, psychosocial factor (stigma, alcohol/substance use), child related and health service related factors.

### **2.1.2. Socio-demographic characteristics factors and risky sexual behavior**

According to study conducted in Nigeria, Lagos socio-demographic characteristics, i.e., education, religion, marital status and age were found not to be associated with condom use; but the sex was associated with condom use. According to this study being male was found to be associated with condom use during last sex act (24).

According to study conducted in Ghana participants who were widows or divorcees were 3.5 times more likely to use condoms during their last sexual intercourse than those who were single. Male and female participants aged 35-44 years had a 3.3-fold increased odd of condom use with regular sex partner. Those with secondary education or higher were approximately three times as likely to use condoms with their regular sex partner as those with primary education or less (25). Study conducted in south western Uganda among PLHIV showed that, respondents with more education and higher income were more likely to be sexually active (21), educational status and monthly income were not associated with risky sexual behavior as showed by study conducted in Kampala, Uganda(38).

Study from Nigeria showed that Non-use of condom was more among the unmarried than the married respondents (26). Study from South Africa showed higher rates of consistent condom use among HIV-positive participants at the urban site (81% of men and 78% of women) than at the rural site (52% of men and 46% of women) (27).

Study conducted in Papua New Guinea showed that consistent condom use was lowest amongst married couples, those who reported not being married or engaged reported higher rates of consistent condom use compared with those who were married (28).A cross sectional study conducted in an urban informal settlement in Kenya indicated that employment of any kind was associated with a possible protective effect against inconsistent condom use; employed patients had decreased odds of inconsistent use than unemployed patients (16).

Study conducted in Addis Ababa, gender has a significant effect on risky sexual practice, males are one and half times more likely to engage in risky sexual practice than females, being single and widowed respondents were significantly associated with risky sexual practice (23).

### **2.1.3. Partner related factors and risky sexual behavior**

According to study conducted in Uganda, participants those who had more than one sex partner in the 12 months preceding the study were significantly more likely to have consistently used condom after initiating ART(29). Study conducted in western India among PLWHA showed that having unknown/positive sero-status of the partners were 3 times more likely to engage in unsafe sex (42).

Study from Johannesburg, South Africa indicated that, participants who were aware of their partner's HIV status were four times more likely to use condoms in a consistent manner than those who were not (30).

In South Africa, Cape Town, Sexual transmission risk behaviors were reported mostly in people who had not disclosed their HIV status to sex partners. People who had not disclosed their HIV status to partners reported more sex partners in each HIV status category and reported more unprotected vaginal and anal intercourse than people who had disclosed. The relationship between engaging in unprotected intercourse and not disclosing HIV status to partners was most apparent when partners were of unknown HIV status (31).

Another study from South Africa indicated that women whose last sex was with a casual partner, those who had not disclosed their HIV status to their sex partner were more than twice as likely to have had unprotected sex, after controlling for the same potential confounders( 32).

In South India the proportion of sex acts that were protected by condoms was lower among concordant participants (88%) compared to discordant participants (99.2%) (33).

According to study conducted in Mozambique respondents reporting a concurrent relationship or unprotected sex with a partner who was HIV-negative or whose HIV status was unknown were less likely to disclose their HIV status to their sexual partners (34).

According study conducted in Cameroon among HIV infected women showed that disclosure of HIV sero-status to the main partner has been associated with safer sexual practices (35).

In Addis Ababa a study showed that those who had a mix of both casual and steady partners had a higher likelihood of unprotected sex than those with either casual partners or steady partners, and the odds of practicing unprotected sex was 4.7 times higher among those with a mix of partners than those who had steady partner, also the odds of practicing unprotected sex was 2.67 times higher among those had multiple sexual partner than those had single (19).

A Study from Tanzania showed that individuals aware of their partner's HIV status were more likely (22.7% vs. 12.2%) to use condoms than those unaware of their partner's HIV status. Clients with HIV-positive partners were significantly more likely (26.8% vs. .2%) than those with HIV-negative partners to use condoms consistently (36).

#### **2.1.4. Clinical related factors and risky sexual behavior**

Study from United state showed that HIV-infected adults who were virally suppressed were significantly less likely than those who were not virally suppressed to engage in vaginal or anal sex and unprotected vaginal or anal sex. Persons who were virally suppressed were also less likely to engage in unprotected vaginal or anal sex with a partner of negative or unknown HIV status (37). Study conducted in Kenya showed that patients who had been on ART for more than 19 months had a significantly decreased odds of inconsistent condom use compared with those who had been on treatment for less than six months (16).



### **2.1.5. Child related factors (fertility desire) and risky sexual behavior**

According to study conducted in the south India, the desire to have children was an important predictor of reporting unprotected sex, and the fewer number of children participants had, the more likely they were to report unprotected sex. HIV-infected individuals may perceive a greater impetus to have children more quickly compared to uninfected individuals because of a limited lifespan imposed by HIV infection. Participants who already had one or more children were not more likely to engage in unprotected sex (33).

A Study conducted in Uganda, Kampala showed that, desire for more children was a strong independent predictor of engaging in high risk sex (38).

According to study from SNNP region, respondents those who had risky sexual behavior were 2 times more likely to desire children than their counter parts (39). Study conducted among HIV infected men and women in Uganda showed that about 16% of HIV-infected men and women desired more children and of these, men were almost four times more likely to want more children than the women (27% vs. 7 %,) (40).

### **2.1.6. Alcohol use and psychosocial factors and risky sexual behavior**

According to study conducted in Nepal, 16.7% of the respondents consumed alcohol during last sex with regular partner; alcohol consumption during last sex with regular partners was one of the significant predictors of unprotected sex (41). According to study from Addis Ababa, 61 (16.2%) of the respondents had a history of alcohol consumption in the last 3 months; concerning other substance use, 89 (23.7%) had a history of substance use and 74 (19.7%) used khat and the remaining nine (2.5%) and six (1.6%) used cigarettes and shisha, respectively (23).

Study from SNNP region shows that taking alcohol, and using substance like cigarette and/or khat were positively and significantly associated with current risky sexual behavior and those who reported alcohol use were found to have a six fold increased odds of practicing current risky sexual behavior compared to nonusers (39).

One third had experienced enacted stigma since they had tested positive and nearly half (49.1%) had perceived stigma in the three months prior to the study. Those who had experienced enacted stigma and perceived stigma were more likely to have engaged in unprotected sex (19).

### **2.17. Health service related factors and risky sexual behavior**

According to cross sectional study conducted in Uganda among PLHIV showed the importance of counseling and education as means of reducing risky sexual practice. According to this study those who had not received counseling on prevention of acquisition of another strain of HIV and those who had not attended HIV prevention discussion group had reduced prevalence ratios of using condoms consistently (10).

Another study from western India showed that, not receiving counseling regarding sexual behavior was found to be significantly associated with unsafe sex. According to this finding those who had not received such counseling were 7 times more likely to engage in unsafe sex (42).

Generally the prevalence of risky sexual behavior/condom unprotected sex among people living with HIV were high, more than one third of participants were engaged in this practice and different factors such as socio-demographic characteristics, partner related factors, clinical related factors, psychosocial factors, fertility desire and education/counseling service were associated with risky sexual behavior.

## CONCEPTUAL FRAME WORK

This conceptual frame work was developed after reviewing relevant literatures related to risky sexual behavior of PLHIV. As shown by diagram below, risky sexual behavior was outcome variable and other variables in each box were independent variables.

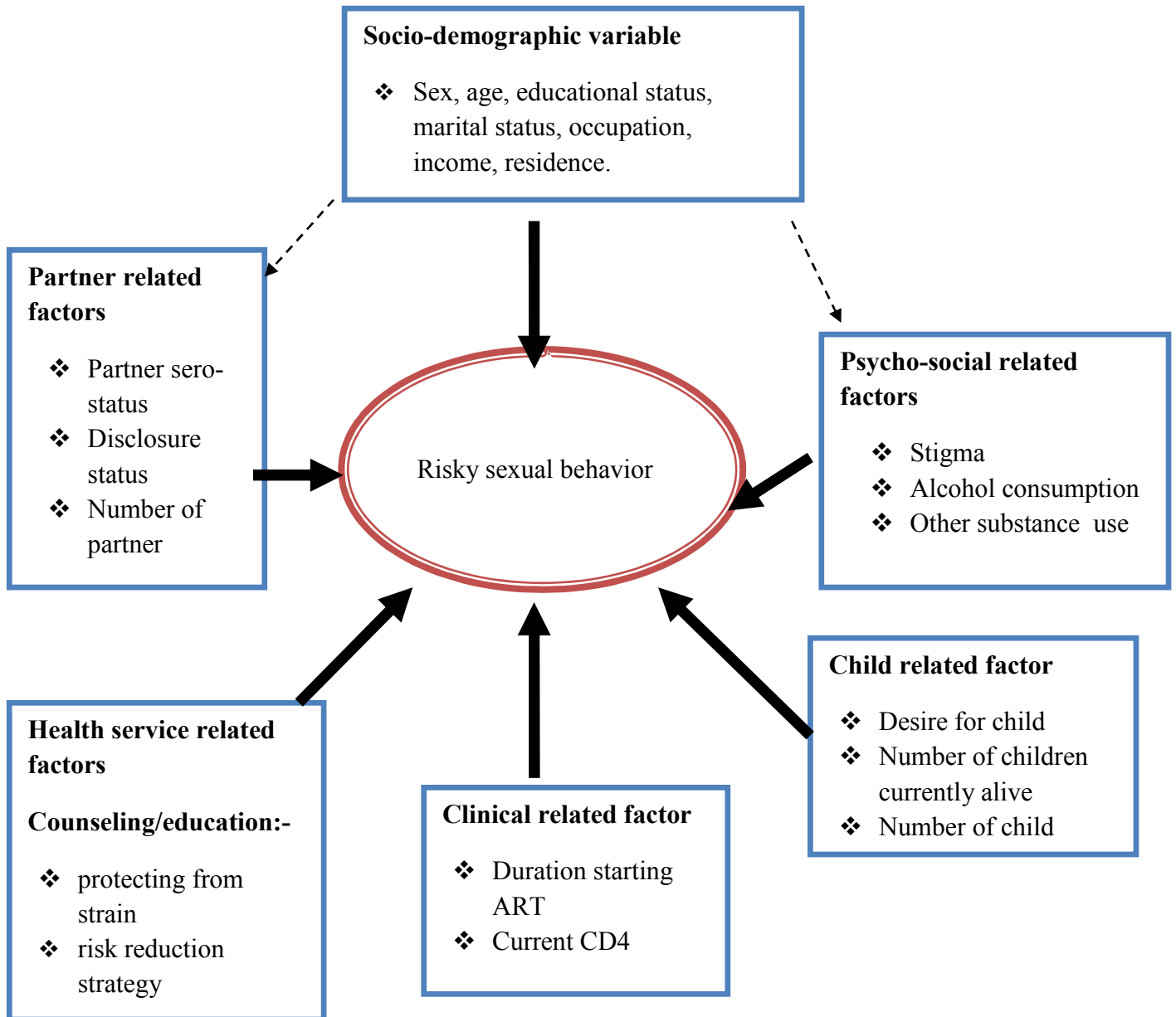


Figure1. Conceptual framework developed after reviewing relevant literatures.

## **2.2. SIGNIFICANCE OF THE STUDY**

Studying risky sexual behavior among PLHIV is crucial to stimulate effective interventions and prevention programs to promote safer sex. The result of this study helps to decrease further transmission of HIV to uninfected person and improves quality of life and activities of PLHIV. The study will be helpful to identify associated factors with risky sexual behavior which is essential for policy makers and care provider to take appropriate action.

The study result will be helpful to improve service provided for PLHIV in health care facility and enables ART counselors to focus on secondary prevention strategies. Also it will be helpful for the future researchers and organizations working in this sector.

In Ethiopia the focus of HIV prevention is mainly concerned on uninfected person to prevent them from becoming infected with HIV and the issue of risky sexual behavior among PLHIV did not receive more attention yet. Few studies were conducted in Ethiopia, this study can address the information gap on risky sexual behavior by adding child related a factor and health service factors to previous study.

## **CHAPTER THREE: OBJECTIVES**

### **3.1. General Objective:**

To assess prevalence of risky sexual behavior and its associated factors among people living with HIV/AIDS, attending ART clinic at Nekemte referral hospital, East Wollega, Oromia region, West Ethiopia, 2016.

### **3.2. Specific Objectives**

1. To assess prevalence of risky sexual behavior among PLHIV attending ART clinic at Nekemte Referral hospital from March to April, 2016.
2. To identify factors associated with risky sexual behavior among PLHIV attending ART clinic at Nekemte Referral hospital from March to April, 2016.

## **CHAPTER FOUR: METHODS AND MATERIALS**

### **4.1. Study area and period**

The study was conducted in Nekemte referral hospital which is located in East wollega zone, Nekemte town. Nekemte town is located at a distance of about 331 KM to the west of the capital city, Addis Ababa. A town's altitude ranges from 1960 to 2170 Meters above sea level where as its average annual rain fall is 1854.9mm and the average temperature ranges from 14<sup>o</sup>c to 26<sup>o</sup>c. The town has one referral hospital and two public health centers.

Nekemte referral hospital was established by Swedish missionary in 1932 and it provides curative, preventive and rehabilitative services to East Wollega zone as well as to the nearby population of West Wollega zone, Horro Guduru zone, Kellam Wollega zone, Ilu Ababora zone, West Shoa and Benshangul Gumuz. ART service for Nekemte Referral hospital was initiated in 2005 and has one clinic. Currently, in the adult ART clinic, about 2105 clients were started ART. The study was conducted in Nekemte Referral hospital from March to April 2016.

### **4.2. Study design**

A facility based cross-sectional study design was used to study prevalence of risky sexual behavior and associated factors among PLHIV attending ART clinic at Nekemte referral hospital.

### **4.3. Population**

#### **4.3.1 Source population**

Source population was all adult clients living with HIV/AIDS, who were on ART and visited the Nekemte referral hospital ART clinic.

#### **4.3.2. Study population**

The study population was adult clients on ART, and who were sexually active in the three months prior to the study period.

#### **4.4. Inclusion and Exclusion criteria**

##### **4.4.1. Inclusion criteria**

People living with HIV/AIDS who were on ART treatment and sexually active in previous three months and 18 years of age and above were included in the study.

##### **4.4.2. Exclusion Criteria**

People living with HIV/AIDS who were unable to communicate, seriously ill and who had made less than two visits to ART clinic were excluded from the study.

#### **4.5. Sample size determination and sampling technique**

##### **4.5.1. Sample size determination:**

The sample size of the study was calculated by using single population proportion formula as:

$$n = \frac{(Z_{\alpha/2})^2 P (1-P)}{d^2} = \frac{(1.96)^2 0.369(1- 0.369)}{(0.05)^2} =$$

Assumption:

P =estimate of the prevalence risky sexual practice among PLHIV conducted in selected Hospital at Addis Ababa, 36.9 %( 19).

d = Margin of sampling error tolerated- 5% (0.05)

$\alpha$  = Critical value at 95% confidence interval of certainty (1.96)

Then the sample size become 358

Since the source population was 2105 clients that is below 10,000 finite population corrections formula was needed.

$$N_f = \left( \frac{n}{1 + \frac{n}{N}} \right) = \left( \frac{358}{1 + \frac{358}{2105}} \right) = 306$$

Where  $N_f$  = the sample size from a finite population

$N$  = number of PLHIV attending ART in Nekemte referral hospital.

$n$  = Sample size estimation of single population proportion

Finally by adding non response rate of 10% the total sample size becomes 337.

#### **4.5.2. Sampling technique**

Consecutive sampling technique was used to select study participants. Participants were selected based on inclusion criteria until required sample size was achieved.

### **4.6. Variables**

#### **4.6.1. Dependent variables**

Risky sexual behavior

#### **4.6.2. Independent variables**

**Socio demographic characteristics** such as: - age, sex, educational status, marital status, occupation, residence and income status.

**Partner related factors:** - number of partners, HIV status of partner and disclosure status.

**Clinical related factors:** duration after started ART, Current CD4 count.

**Psycho-social factors:** stigma, alcohol consumption and other substance use.

**Child related factors:** - desire to have child, number of child desired, and number of child/children currently alive.

**Health service factors:** -education/ counseling on importance of protecting self from HIV strain, risk reduction strategy& attending HIV prevention discussion/support group.



## **4.7. Data collection instruments and procedure**

### **4.7.1. Data collection instrument**

Structured questionnaire was developed after reviewing relevant literatures (10, 19) and modified to the local context based on the study objectives.

The questionnaire was prepared in English and was translated to local language Afan Oromo and Amharic and then retranslated to English to check consistency. The questionnaire was designed to obtain information on socio demographic characteristics; partner related factors, clinical related factors, health related service, child related factors, psycho social related factors and pattern of condom use.

In this study, Stigma was assessed in two ways; the first is enacted stigma was assessed with eight Yes (coded as 1)/No (coded as 0) response option questions addressing stigma encountered after testing positive. The second is perceived stigma with seven Yes (coded as 1) and No (coded as 0) questions encountered three months prior to the study adopted from study conducted on risky sexual practice among PLHIV (19). In both cases, each respondent's score was summed and scores above the mean indicated enacted and perceived stigma.

The outcome variable risky sexual behavior was measured by inconsistent use of condoms or no condom-protected sex with HIV-negative, HIV-positive, or unknown-status partners in the previous 3 months (17, 19, and 23).

### **4.7.2. Data collection procedures**

The study was conducted for one month; two nurses who work in ART unit were recruited as data collectors and one senior BSC nurse as supervisor. Face to face interview and card review (for CD4 count) was conducted. The interview was conducted in an isolated private room.

### **4.7.3. Data quality control**

To ensure the quality of data, questionnaire was prepared first in English and was translated to Afan Oromo and Amharic and then was translated back to English version by another person to check consistency.

Data collectors and supervisor were trained for one day by the principal investigator on the tool, sampling procedure, consent form, how to interview and data collection procedures.

During the data collection procedures, all the collected data was reviewed and checked daily for its completeness by the supervisor.

#### **4.8. Pretest**

Prior to data collection the tool was pretested among 5% (17) of study population at Gimbi Hospital to ensure the clarity and applicability of the tool and then necessary modifications and correction were taken.

#### **4.9. Data processing and analysis**

After collection of data from the client's field data cleansing and coding was conducted. Data was entered into Epi-data Version 3.1 and exported to SPSS 20 for analysis. Descriptive analyses like percentages and frequency distributions were used in the form of tables and graphs.

Bivariate logistic regression analyses was carried out to assess association between the dependent and all the independent variables and to identify candidate for multivariable analysis.

Variables significant at  $p < 0.25$  were considered as candidate for the multivariable logistic regression analysis and then independent variables, which had a statistically significant association with the dependent variable at  $P < 0.05$ , were entered to the final regression model. Results were reported as the odds ratios (OR) with respective 95% CI.

#### **4.10. Ethical consideration**

Ethical clearance was obtained from Institutional Review Board of Jimma University, College of Health Sciences. A formal letter from college of Health sciences of Jimma University was submitted to Nekemte Referral hospital, then permission and support letter was written to ART clinic of Nekemte referral hospital.

Oral consent was obtained from each study participants before the interview and confidentiality of the data was insured. The respondents' right to refuse or withdraw from the interview was taken in to consideration and confidentiality for collected data was also ensured throughout the study process.

#### **4.11. Dissemination plan**

The findings of this study will be disseminated to JU, Nekemte referral hospital, East Wollega Zone health Bureau and Oromia health bureau. The findings will be presented in different seminars, meetings and workshops. After the end of the study, all effort will be made to publish the thesis in reputable journal.

#### **4.12. Operational definition**

**Risky sexual behavior:** Inconsistent use of condom or no condom protected sex with HIV negative, positive or unknown-status partners in the previous three months.

**Safe sex:** Sexual encounter with consistent use of condom in the previous three months.

**Sexually active:** Those who have a partner and had engaged in sexual intercourse in the previous three months

**Consistent use of condom:** Condom use reported to be always in the previous three months.

**Multiple partners:** Having two or more sexual partner in the past three months.

**Enacted stigma:** Is expressed when a person discriminates against those living with HIV/AIDS (whether in thought or in action) and sees those people as very different from himself.

It was measured by using 8 items and score above mean were considered as stigmatized

**Perceived stigma:** Is expressed when a person either experiences or fears discrimination due to being or becoming HIV-positive. It was measured by using 7 items and score above mean were considered as stigmatized.

**Changed sexual desire:** Sexual desire after receiving ART drugs compared to sexual desire prior to diagnosis (increased/decreased).

## CHAPTER FIVE: RESULTS

### 5.1. Socio demographic characteristics of respondents

A total of 337 respondents were involved in the study with response rate of 100%. Majority of the respondents 187(55.5%) were females. The mean age of the study participants were 36.05( SD ±8.17) and majority of the study participants 147 (43.6%) were in the age category of 35-44 years. Regarding educational status, majority 148(43.9%) of study participants had completed primary school. One hundred sixty one (47.8%) were protestant follower and two hundred eighty two (83.7%) were from Oromo ethnicity. Concerning marital status, majority of respondent 314(93.2%) were married. Concerning place of residence, majority of study participants 312(92.6%) were from urban area. Majority of respondents 159(47.2%) monthly income were below 500ETHbirr (Table 1).

Table1.Socio-demographic characteristics of PLHIV attending ART clinic at Nekemte referral hospital, East Wollega, Ethiopia, April, 2016.

<b>Characteristics</b>	<b>Frequency(n)</b>	<b>Percent (%)</b>
<b>Sex</b>		
Male	150	44.5
Female	187	55.5
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Age (years)</b>		
18-24	8	2.4
25-34	129	38.3
35-44	147	43.6
>=45	53	15.7
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Educational status</b>		
No formal education	55	16.3
Primary	148	43.9
Secondary	76	22.6
College and above	58	17.2
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Religion</b>		
Orthodox	147	43.6
Muslim	25	7.4
Protestant	161	47.8
Others <sup>1</sup>	4	1.2
<b>Total</b>	<b>337</b>	<b>100</b>

<b>Ethnicity</b>		
Oromo	282	83.7
Amhara	45	13.4
Others <sup>2</sup>	10	3
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Occupation</b>		
Government employee	78	23.1
Private employee	52	15.4
House wife	69	20.5
Daily laborer	88	26.1
Merchant	33	9.8
Others <sup>3</sup>	17	5
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Current residence</b>		
Urban	312	92.6
Rural	25	7.4
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Marital status</b>		
Single	17	5
Married	314	93.2
Widowed/divorced	6	1.8
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Monthly income</b>		
<=500	159	47.2
501-999	38	11.3
>=1000	140	41.5
<b>Total</b>	<b>337</b>	<b>100</b>

\*Notes: \_ Others 1=Adventist, catholic, wakefata & hawariyat 2= Tigre, Guraghe, welayita & silte 3=student, farmer, commercial sex worker & house maid.

## 5.2 Partner related factors and pattern of condom use

Majority of the study respondents 322(95.5%) had single sexual partner in the past three months. From those who had single partner majority of them 317(98.4 %) had steady partner. More than half 8(53.3%) of respondents had steady partner of those with multiple sexual partners. Regarding sexual desire after starting ART, about 186(55.2%) of study participants stated that their sexual desire had not changed. About 243(72.1%) respondent's partner sero-status was positive and three hundred twenty one (95.3%) disclosed to their partner (Table 2).

From a total of 337 study respondents about 226(67.1%) were used condom consistently, 56(16.6%) used sometimes and 55(16.3%) were not used at all in the past three months prior to study (figure 2). Majority of study participants 99(89.2%) were failed to use with steady partners of those who did not use condom consistently or at all. In this study the prevalence of risky sexual behavior (inconsistent or no use of condom) is 111(32.9%) (figure 3).

Table 2. Partner related characteristics and pattern of condom use of PLHIV attending ART clinic at Nekemte referral hospital, East Wollega, Ethiopia, April 2016.

<b>Characteristics</b>	<b>Frequency (n)</b>	<b>Percent (%)</b>
<b>Number of partners</b>		
Single	322	95.5
Multiple	15	4.5
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Kind of partner for single</b>		
Steady	317	98.4
Casual	5	1.6
<b>Total</b>	<b>322</b>	<b>100</b>
<b>Kind of partner for multiple</b>		
Steady	8	53.3
Casual	7	46.7
<b>Total</b>	<b>15</b>	<b>100</b>
<b>Sexual desire after ART</b>		
Improved	26	7.7
The same as before	186	55.2
Decreased	125	37.1
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Condom use</b>		
Yes	282	83.7
No	55	16.3
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Pattern of condom use</b>		
Always	226	67.1
Sometimes	56	16.6
Never	55	16.3
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Failed to use condom</b>		
Steady partner	99	89.2
Casual	10	9
Both	2	1.8
<b>Total</b>	<b>111</b>	<b>100</b>

<b>Partner sero-status</b>		
Negative	76	22.6
Positive	243	72.1
Unknown	18	5.3
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Disclose sero-status</b>		
Yes	321	95.3
No	16	4.7
<b>Total</b>	<b>337</b>	<b>100</b>

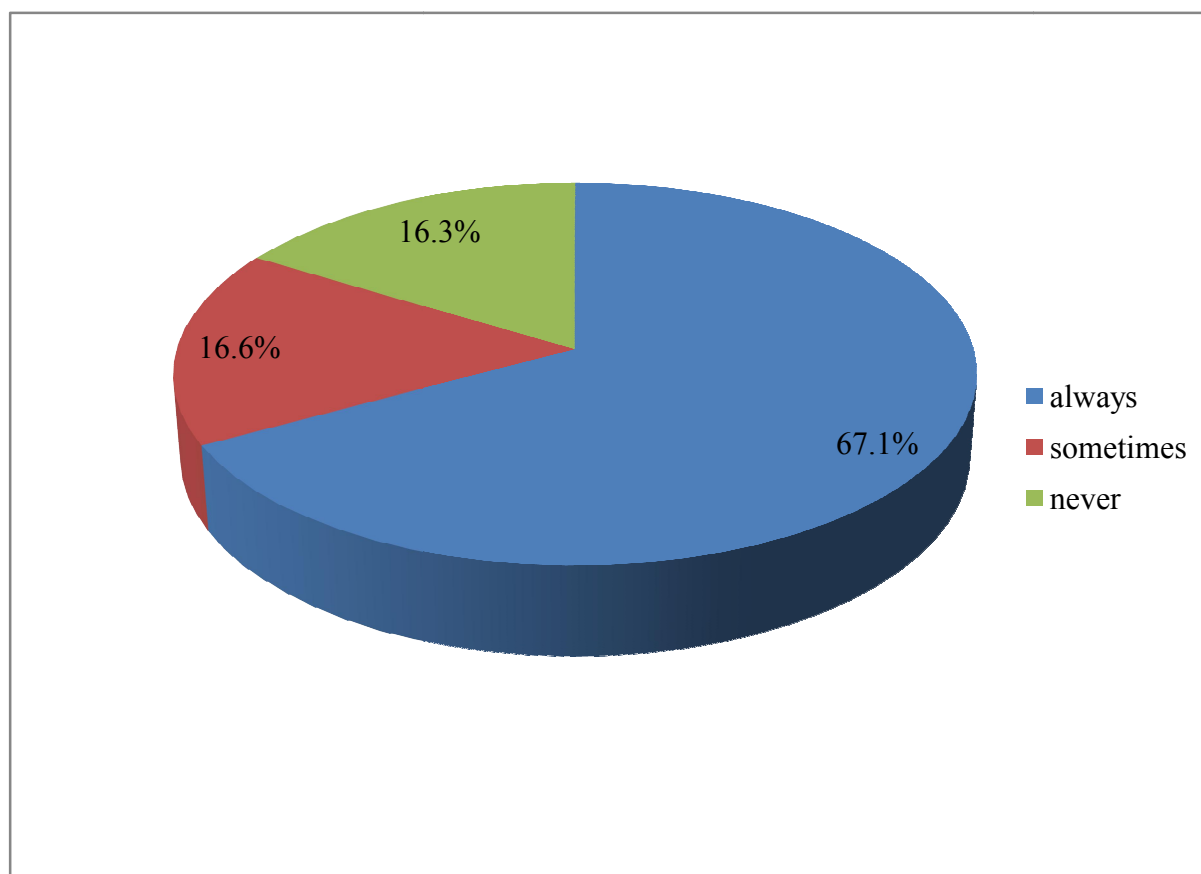


Figure 2. Pattern of condom use among PLHIV attending ART clinic at Nekemte referral hospital, April, 2016.



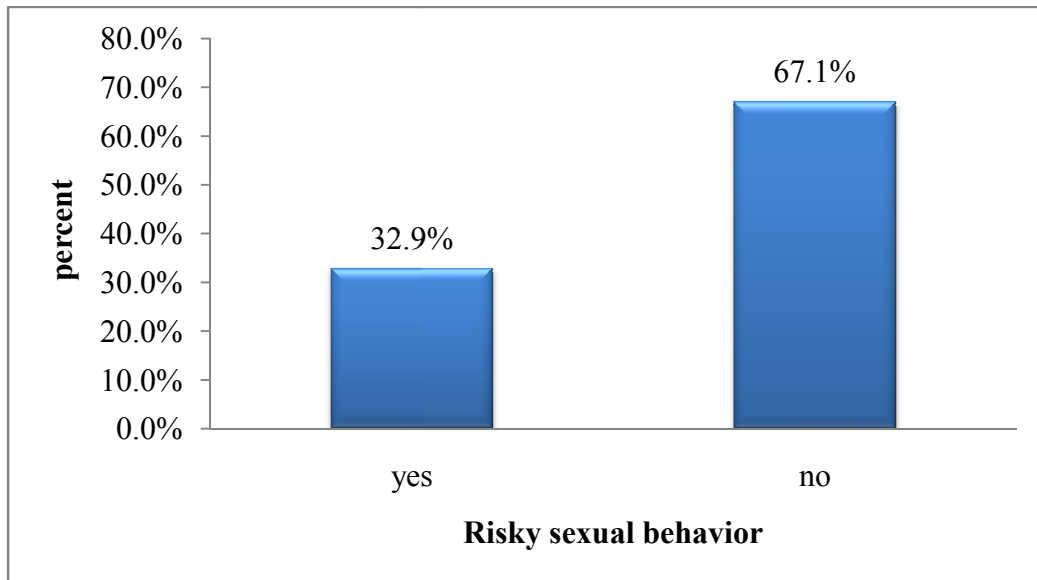


Figure 3. Prevalence of risky sexual behavior among PLHIV attending ART at Nekemte referral hospital, April, 2016.

### 5.3. Clinical and psychosocial characteristics of respondents

About 269(79.8%) of the respondents started ART medication more than 2years ago. Majority of them 304(90.2%) had CD4 count greater than 200 cells/mm<sup>3</sup>. Only 41(12.2%) respondents consumed alcohol in the past three months, from those 27(65.9%) drank once per week. Regarding substance use, about 14(4.2%) had history of substance use in the past three months, of those 10(71.4%) used chat, 2(14.3%) used cigarette and 2(14.3%) used hashish. Regarding stigma, about 96(28.5%) had experienced enacted stigma and about 139(41.2%) are experiencing perceived stigma (Table 3).

Table 3. Clinical and psychosocial characteristics of PLHIV attending ART clinic at Nekemte referral hospital, East Wollega, Ethiopia, April, 2016.

<b>Characteristics</b>	<b>Frequency(n)</b>	<b>Percent (%)</b>
<b>Duration after ART</b>		
<1year	25	7.4
1-2yeas	43	12.8
>2years	269	79.8
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Current CD4(cells/mm<sup>3</sup>)</b>		
<=200	33	9.8
>200	304	90.2
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Drunk alcohol</b>		
Yes	41	12.2
No	296	87.8
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Frequency to consume(per week)</b>		
Once	27	65.9
Twice	10	24.4
Three times	3	7.3
Everyday	1	2.4
<b>Total</b>	<b>41</b>	<b>100</b>
<b>Substance use</b>		
Yes	14	4.2
No	323	95.8
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Type of substances used</b>		
Chat	10	71.4
Cigarette	2	14.3
Hashish	2	14.3
<b>Total</b>	<b>14</b>	<b>100</b>
<b>Enacted stigma</b>		
No	241	71.5
Yes	96	28.5
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Perceived stigma</b>		
No	198	58.8
Yes	139	41.2
<b>Total</b>	<b>337</b>	<b>100</b>

#### 5.4. Child desire and health related service characteristics

Majority of respondents 311(92.3%) had at least one child who are currently alive. Regarding fertility desire 143(42.4%) desire to have children in the future, from those 75(52.4%) desire to have two children. Concerning health related service given for the respondents in past three months, 231(68.5%) get education/counseling on importance of protecting self from different strain and 262(77.7%) were educated on risk reduction strategy (Table 4).

Table 4. Fertility and health service related characteristics of PLHIV attending ART clinic at Nekemte referral hospital, East Wollega, Ethiopia, April, 2016.

<b>Characteristics</b>	<b>Frequency(n)</b>	<b>Percent (%)</b>
<b>Number of children alive</b>		
0 or none	26	7.7
>=1	311	92.3
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Desire for child</b>		
Yes	143	42.4
No	194	57.6
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Number of child desired</b>		
1	59	41.3
2	75	52.4
>=3	9	6.3
<b>Total</b>	<b>143</b>	<b>100</b>
<b>Education on importance of protecting from strain</b>		
Yes	231	68.5
No	106	31.5
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Education on risk reduction strategy</b>		
Yes	262	77.7
No	75	22.3
<b>Total</b>	<b>337</b>	<b>100</b>
<b>Attend HIV prevention discussion/ support group</b>		
Yes	168	49.9
No	169	50.1
<b>Total</b>	<b>337</b>	<b>100</b>

### **5.5. Bivariate logistic regression analysis**

In bivariate analysis socio demographic characteristics such as age, educational status, occupation, current residence, marital status, and monthly income were showed significant association at  $p < 0.25$  but sex of respondents did not show association. Number of partner, partner sero-status, disclosure status, , duration after ART, number of children currently alive, desire for child, alcohol and substance use, perceived stigma, enacted stigma, education and or counseling on protection of self from different strain, education on risk reduction strategy and attend HIV prevention discussion/ support group variables were also showed significant association at  $p < 0.25$ . Current CD4 count and number of child desired were not associated at bivariate analysis (Table 5).

Finally variables those showed significant association at p-value  $< 0.25$  were considered as candidate for multivariable logistic regression analysis.

Table 5. Bivariate logistic regression analysis of factors associated with risky sexual behavior among PLHIV attending ART clinic at Nekemte referral hospital, East Wollega, April , 2016.

Characteristics	Risky sexual behavior		COR(95%CI)	P value
	Yes n (%)	No n (%)		
<b>Sex</b>				
Male	47/150(31.3%)	103/150(68.7%)	0.877(0.55,1.387)	0.575
Female	64/187(34.2%)	123/187(65.8%)	1	
<b>Age (years)</b>				
18-24	6/8(75%)	2/8(25%)	6.94(1.26,38.14)*	0.026
25-34	42/129(32.6%)	87/129(67.4%)	1.12(0.56,2.23)	0.75
35-44	47/147(32%)	100/147(68%)	1.08(0.55,2.15)	0.81
>=45	16/53(30.2%)	37/53(69.8%)	1	
<b>Educational status</b>				
No formal education	24/55(43.6%)	31/55(56.4%)	1.58(0.74,3.41)*	0.235
Primary	46/148(31.1%)	102/148(68.9%)	0.926(0.483,1.77)	0.816
Secondary	22/76(28.9%)	54/76(71.1%)	0.836(0.399,1.75)	0.635
College and above	19/58(32.8%)	39/58(67.2%)	1	
<b>Occupation</b>				
Government employee	21/78(26.9%)	57/78(73.1%)	1	
Private employee	15/52(28.8%)	37/52(71.2%)	1.1(0.504,2.4)	0.81
House wife	24/69(34.8%)	45/69(65.2%)	1.45(0.716,2.93)	0.30
Daily laborer	32/88(36.4%)	56/88(63.6%)	1.55(0.8,3.01)*	0.194
Merchant	12/33(36.4%)	21/33(63.6%)	1.55(0.65,3.69)	0.32
Others <sup>3</sup>	7/17(41.2%)	10/17(58.8%)	1.9(0.64,5.64)*	0.247
<b>Current residence</b>				
Urban	100/312(32.1%)	212/312(67.9%)	1	
Rural	11/25(44%)	14/25(56%)	1.67(0.73,3.8)*	0.225
<b>Marital status</b>				
Married	98/314(31.2%)	216/314(68.8%)	1	
Single	9/17(52.9%)	8/17(47.1%)	2.48(0.929,6.62)*	0.07
Widowed/divorced	4/6(66.7%)	2/6(33.3%)	4.41(0.794,24.47)*	0.09
<b>Monthly income</b>				
<=500	62/159(39%)	97/159(61%)	1	
501-999	8/38(21.1%)	30/38(78.9%)	0.417(0.18,0.969)*	0.042
>=1000	41/140(29.3%)	99/140(70.7%)	0.648(0.399,1.05)*	0.079
<b>Number of partner</b>				
Single	100/322(31.1%)	222/322(68.9%)	1	
Multiple	11/15(73.3%)	4/15(26.7%)	6.1(1.89,19.64)*	0.002
<b>Partner sero-status</b>				
Negative	15/76(19.7%)	61/76(80.3%)	1	
Positive	86/243(35.4%)	157/243(64.6%)	2.23(1.195,4.15)*	0.012
Unknown	10/18(55.6%)	8/18(44.4%)	5.08(1.713,15.08)*	0.003

<b>Disclose sero-status</b>				
Yes	99/321(30.8%)	222/321(69.2%)	1	
No	12/16(75%)	4/16(25%)	6.73(2.11,21.376)*	0.001
<b>Duration after ART</b>				
<1year	11/25(44%)	14/25(56%)	1.7(0.741,3.9)*	0.21
1-2yeas	15/43(34.9%)	28/43(65.1%)	1.16(0.589,2.28)	0.67
>2years	85/269(31.6%)	184/269(68.4%)	1	
<b>Current CD4</b>				
<=200	11/33(33.3%)	22/33(66.7%)	1	
>200	100/304(32.9%)	204/304(67.1%)	0.98(0.457,2.1)	0.959
<b>Drunk alcohol</b>				
Yes	22/41(53.7%)	19/41(46.3%)	2.69(1.389,5.22)*	0.003
No	89/296(30.1%)	207/296(69.9%)	1	
<b>Substance use</b>				
Yes	9/14(64.3%)	5/14(35.7%)	3.9(1.275,11.93)*	0.017
No	102/323(31.6%)	221/323(68.4%)	1	
<b>Enacted stigma</b>				
No	71/241(29.5%)	170/241(70.5%)	1	
Yes	40/96(41.7%)	56/96(58.3%)	1.71(1.046,2.79)*	0.032
<b>Perceived stigma</b>				
No	49/198(24.7%)	149/198(75.3%)	1	
Yes	62/139(44.6%)	77/139(55.4%)	2.45(1.54,3.89)*	<0.001
<b>Number of children current alive</b>				
0 or none	16/26(61.5%)	10/26(38.5%)	3.64(1.59,8.31)	0.002
>=1	95/311(30.5%)	216/311(69.5%)	1	
<b>Desire for child</b>				
Yes	65/143(45.5%)	78/143(54.5%)	2.68(1.68,4.27)*	<0.001
No	46/194(23.7%)	148/194(76.3%)	1	
<b>Number of child desired</b>				
1	26/59(44.1%)	33/59(55.9%)	1	
2	36/75(48%)	39/75(52%)	1.17(0.591,2.32)	0.65
>=3	3/9(33.3%)	6/9(66.7%)	0.635(0.145,2.78)	0.547
<b>Education on HIV strain</b>				
Yes	46/231(19.9%)	185/231(80.1%)	1	
No	65/106(63.1%)	41/106(38.7%)	6.37(3.84,10.58)*	<0.001
<b>Education on risk reduction strategy</b>				
Yes	75/262(28.6%)	187/262(71.4%)	1	
No	36/75(48%)	39/75(52%)	2.3(1.36,3.89)*	0.002
<b>Attend HIV prevention/support group</b>				
Yes	50/168(29.8%)	118/168(70.2%)	1	
No	61/169(36.1%)	108/169(63.9%)	1.33(0.845,2.1)*	0.217

Notes \* shows significant at value <0.25

### **Multivariable logistic regression analysis**

In the final model number of partner, partner sero-status, disclosure status, desire for child, perceived stigma and education on importance of protection of self from different strain were statistically significantly associated with risky sexual behavior/condom unprotected sex at P-value <0.05.

Respondents who had multiple sexual partners were 6.38 times more likely to engage in risky sexual behavior than those had single partner (AOR=6.38, 95% CI: 1.65, 24.74).

Study participants with partner positive sero-status were 2.68 times more likely to engage in risky sexual behavior than participants with negative sero-status partner (AOR=2.68, 95% CI: 1.31, 5.5).

Those who didn't disclose their status to their partner were 5.99 times more likely to engage in risky sexual behavior than those who disclosed (AOR= 5.99, 95% CI: 1.36, 26.35).

Those who felt stigma in the past three months were 2.63 times more likely to engage in risky sexual behavior than those who didn't (AOR=2.63,95% CI: 1.5,4.62).

Those who desire for child were 2.6 times more likely to engage in risky sexual behavior than those who had no desire for child (AOR=2.6, 95% CI: 1.5, 4.51).

Respondents who did not get education/counseling on importance of protecting self from different strain were 5.64 times more likely to engage in risky sexual behavior than those who get (AOR=5.64,95%, CI:3.19,9.96) (Table 6).

Table 6. Multivariable logistic regression analysis of factors associated with risky sexual behavior among PLHIV attending ART at Nekemte referral hospital, April, 2016.

<b>Characteristics</b>	<b>Risky sexual behavior(yes)</b>	<b>COR(95%)CI</b>	<b>AOR(95%)CI</b>
<b>Age (years)</b>			
18-24	6/8(75%)	6.94(1.26,38.14)	0.368(0.046,2.93)
25-34	42/129(32.6%)	1.12(0.56,2.23)	0.67(0.28,1.59)
35-44	47/147(32%)	1.08(0.55,2.15)	0.69(0.29,1.65)
>=45	16/53(30.2%)	1	
<b>Educational status</b>			
No formal education	24/55(43.6%)	1.58(0.74,3.41)	0.79(0.258,2.47)
Primary	46/148(31.1%)	0.926(0.483,1.77)	0.47(0.186,1.22)
Secondary	22/76(28.9)	0.836(0.399,1.75)	0.71(0.278,1.81)
College and above	19/58(32.8%)	1	
<b>Occupation</b>			
Government employee	21/78(26.9%)	1	
Private employee	15/52(28.8%)	1.1(0.504,2.403)	0.96(0.326,2.83)
House wife	24/69(34.8%)	1.45(0.716,2.93)	1.46(0.49,4.33)
Daily laborer	32/88(36.4%)	1.55(0.8,3.01)	1(0.334,3.01)
Merchant	12/33(36.4%)	1.55(0.65,3.69)	2.04(0.599,6.9)
Others <sup>3</sup>	7/17(41.2%)	1.9(0.64,5.64)	1.21(0.234,6.3)
<b>Current residence</b>			
Urban	100/312(32.1%)	1	
Rural	11/25(44%)	1.67(0.73,3.8)	1.92(0.714,5.16)
<b>Marital status</b>			
Married	98/314(31.2%)	1	
Single	9/17(52.9%)	2.48(0.929,6.62)	0.98(0.214,4.55)
Widowed/divorced	4/6(66.7%)	4.41(0.794,24.47)	3.68(0.399,34.06)
<b>Monthly income</b>			
<=500	62/159(39%)	1	
501-999	8/38(21.1%)	0.417(0.18,0.969)	0.45(0.163,1.26)
>=1000	41/140(29.3%)	0.648(0.399,1.05)	0.6(0.33,1.09)
<b>Number of partner</b>			
Single	100/322(31.1%)	1	
Multiple	11/15(73.3%)	<b>6.1(1.89,19.64)</b>	<b>6.38(1.65,24.74)*</b>
<b>Partner sero-status</b>			
Negative	15/76(19.7%)	1	
Positive	86/243(35.4%)	<b>2.23(1.195,4.15)</b>	<b>2.68(1.31,5.5)*</b>
Unknown	10/18(55.6%)	5.08(1.713,15.087)	0.76(0.17,3.32)



<b>Disclose sero-status</b>			
Yes	99/321(30.8%)	1	
No	12/16(75%)	<b>6.73(2.11,21.376)</b>	<b>5.99(1.36,26.35)*</b>
<b>Duration after ART</b>			
<1year	11/25(44%)	1.7(0.741,3.9)	1.62(0.557,4.71)
1-2years	15/43(34.9%)	1.16(0.589,2.28)	1.25(0.52,2.99)
>2years	85/269(31.6%)	1	
<b>Drunk alcohol</b>			
Yes	22/41(53.7%)	2.69(1.389,5.22)	1.98(0.89,4.41)
No	89/296(30.1%)	1	
<b>Substance use</b>			
Yes	9/14(64.3%)	3.9(1.275,11.93)	2.45(0.616,9.74)
No	102/323(31.6%)	1	
<b>Enacted stigma</b>			
No	71/241(29.5%)	1	
Yes	40/96(41.7%)	1.71(1.046,2.795)	1.36(0.71,2.62)
<b>Perceived stigma</b>			
No	49/198(24.7%)	1	
Yes	62/139(44.6%)	<b>2.45(1.54,3.89)</b>	<b>2.63(1.5,4.62)*</b>
<b>Number of children current alive</b>			
0 or none	16/26(61.5%)	3.64(1.59,8.31)	1(0.273,3.7)
>=1	95/311(30.5%)	1	
<b>Desire for child</b>			
Yes	65/143(45.5%)	<b>2.68(1.68,4.276)</b>	<b>2.6(1.5,4.51)*</b>
No	46/194(23.7%)	1	
<b>Education on HIV strain</b>			
Yes	46/231(19.9%)	1	
No	65/106(63.1%)	<b>6.37(3.84,10.58)</b>	<b>5.64(3.19,9.96)*</b>
<b>Education on risk reduction strategy</b>			
Yes	75/262(28.6%)	1	
No	36/75(48%)	2.3(1.36,3.89)	0.68(0.29,1.56)
<b>Attending HIV discussion/support group</b>			
Yes	50/168(29.8%)	1	
No	61/169(36.1%)	1.33(0.845,2.1)	1.23(0.66,2.27)

Note \*Shows statistically significant at p value<0.05.

## CHAPTER SIX: DISCUSSION

The main objective of this study was to assess prevalence of risky sexual behavior and associated factors among PLHIV attending ART.

The study showed that about 32.9% of respondents were engaged in risky sexual behavior (condom unprotected sex) in the past three months. This finding is consistent with study conducted in Togo which showed that about 34.6% of respondents reported unsafe sex (17), in Kenya about one third of respondents reported inconsistent condom use (16), and study conducted in selected health center in Addis Ababa showed that about 30.4% reported risky sexual practice (23). The prevalence is nearly consistent. This might be due to similarity in socioeconomic status of the study population. Study from Tanzania showed that about (40% males & 37.5% females) of respondents engaged in unprotected sex (5). This value is higher than the current study. The difference might be due to variation in study unit, they considered only young age (<24 years) respondents. The prevalence of this study is higher than study in Debrezeit in which prevalence of unprotected sex was 22.2 % (18), the reason might be due to high reported desire to have child in current study or discrepancy in time duration might also create variation between the findings, one month sexual practice were used to measure prevalence of unprotected sex in that study, but three months in current study.

In this study those who had multiple sexual partners were 6.38 times more likely to engage in risky sexual behavior than those had single partner (AOR=6.38, 95% CI: 1.65, 24.74). This is in line with a study in Addis Ababa in which practicing sexual risk practice was higher among who had multiple sexual partners than those who had single partner (19). The possible explanation might be due to individuals those who had multiple sexual partners might not disclose their status to their partners, particularly those engaged in commercial sex.

The study result showed that respondents who had positive partners were 2.68 times more likely to be engaged in risky sexual behavior compared to those who have negative partner (AOR= 2.68, 95% CI: 1.31, 5.5).

Consistent with the current study, a similar study conducted in western India showed that having positive sero-status of the partner were 3 times more likely to engage in unsafe sex (42). The possible explanation might be due to misunderstanding of respondents that condom is not important if both of them were positive. This might hasten HIV re-infection with different strain and may lead to drug resistance. In contrast with this a study findings from Tanzania showed that Clients with HIV-positive partners were significantly more likely than those with HIV-negative partners to use condoms consistently (36).

Disclosing sero-status to partner showed significant association with risky sexual behavior in this study. Participants who did not disclose their sero-status to their partners were 5.99 times more likely to engage in risky sexual practice than those who disclosed ( AOR= 5.99, 95% CI: 1.36, 26.35).This is consistent with a study from South Africa, Cape Town where sexual transmission risk behaviors were reported mostly in people who had not disclosed their HIV status to sex partners and study conducted among HIV infected women in Cameroon showed that disclosure of HIV sero-status to the main partner has been associated with safer sexual practices (31,35), another study conducted in Johannesburg, South Africa also indicated that, participants who were aware of their partner's HIV status were four times more likely to use condoms in a consistent manner than those who were not (30). This might be due to the possibility that partners who did not know his/her status might not push to use condom during sex.

In this study individual who felt stigmatized in the last three months were 2.63 times more likely to engage in risky sexual behavior than those who didn't (AOR=2.63, 95% CI: 1.5, 4.62).This is in line with a study from western India which showed that, unsafe sex was found to be significantly higher among those who perceived stigma and experienced domestic violence (42). Another study from Addis Ababa (19) showed that those who experienced enacted and perceived stigma were more likely to engage in risky sexual behavior. This might indicate that individuals who felt stigmatized were afraid to disclose their status and ideas to their partner.

Desire for child showed strong association with risky sexual behavior. Participants those who desire for child/children were 2.6 times more likely to engage in risky sexual practice than those who did not desire (AOR=2.6, 95% CI: 1.5, 4.51). In line with this, a study conducted in south India showed that, the desire to have children was an important predictor of reporting unprotected sex (33), also study conducted in Uganda, Kampala showed that desire for more children was a strong independent predictor of engaging in high risk sex(38), Again a study from SNNP conducted on fertility desire showed that respondents who had risky sexual behavior were 2 times more likely to desire children than their counter parts (39).This might be due to their fertility desire and intention to have child/children in the future.

Education/counseling given for the participants was an important strategy to reduce risky sexual behavior. The study result showed respondents who did not get education on importance of protecting self from strain were 5.64 times more likely to engage in risky sexual behavior than those who got (AOR=5.64, 95%, CI: 3.19, 9.96).This finding is consistent with a study from Uganda that showed those who had not received counseling on prevention of acquisition of another strain of HIV had reduced prevalence ratios of using condoms consistently (10). Again a study from Western India also showed that, not receiving counseling regarding sexual behavior was found to be significantly associated with unsafe sex. Those who had not received counseling were 7 times more likely to engage in unsafe sex (42). The reason might be due to the fact that progressive education and or counseling given on the importance of protecting self from strain could change their behavior to practice safe sex.

A study from Nepal revealed that, alcohol consumption and substance use were one of significant predictors of unprotected sex (41). Nevertheless in this study alcohol and substance use did not show association. The difference might be due to variation in characteristics of respondents and study setting.

## **LIMITATION OF THE STUDY**

When interpreting the result of this study the following limitation should be taken in to consideration; first, the study addressed sensitive issue, social desirability bias is unavoidable and this could under estimate the prevalence of risky sexual behavior.

Second, study populations were selected through consecutive sampling technique and this may limit generalizability of the finding.

## **CHAPTER SEVEN: CONCLUSION AND RECOMMENDATION**

### **7.1. CONCLUSION**

This study revealed that about one third of study participants were engaged in risky sexual behavior in the past three months prior to study.

Study identified that:- respondents who had multiple sexual partners, positive sero-status partners, didn't disclose their status to their partner, desire for child, experienced perceived stigma and did not get education and or counseling on importance of protecting self from different HIV strain were more likely to engaged in risky sexual behavior/condom unprotected sex .

### **7.2. RECOMMENDATION**

Based on the study result the following recommendation is forwarded to concerned bodies:-

Nekemte referral hospital in collaboration with health care provides should enhance, encourage and announce consistent condom use among PLHIV. ART nurse counselors should integrate behavioral change intervention and secondary prevention strategies to education and or counseling session of clients. ART counselors should encourage the clients to disclose their status to their partner. To minimize risk of re-infection with new HIV strain, health care provider should provide health education for those who desire for child. Finally further longitudinal study is recommended to address the determinant of risky sexual behavior among PLHIV.

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# ANNEXES

## ANNEX I:-ENGLISH VERSION QUESTIONNAIRE

### JIMMA UNIVERSITY

### COLLEGE OF PUBLIC HEALTH AND MEDICAL SCIENCES

### DEPARTMENT OF NURSING

#### General Information

Hello Dear/Madam! My name is \_\_\_\_\_ I am a data collector for the research to be conducted by Getu Mosisa, a post graduate student in adult health nursing, Jimma University College of health sciences. The title of his research is sexual risk behavior among HIV patients attending ART clinic at Nekemte referral hospital. The main aim of the research is to obtain basic information about the sexual behavior of people living with HIV attending ART. Surely your name will not be documented in the questionnaires and the information you provide us will be kept confidential.

You are not forced to participate and you have the right to decline at any time in between but the information you provide is curtail for improving the service provided in the ART clinic setting and stimulate effective prevention and intervention strategy, so don't hesitate to forward the correct information. You can ask any questions at any time.

Are you willing to participate in the study? Agree  Disagree

Interviewer signature \_\_\_\_\_ Date \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Questionnaire code \_\_\_\_\_

**Part I. Socio-demographic information**

<b>S/No.</b>	<b>Questions</b>	<b>Choice</b>	<b>Skip</b>
101.	Age	_____ in year	
102.	Sex	1. Male 2. Female	
103.	Educational status	1. No formal education 2. Primary 3. Secondary 4. College and above	
104.	Religion	1. Orthodox 2. Muslim 3. Protestant 4. Catholic 5. Others(specify)_____	
105.	Ethnicity	1. Oromo 2. Amhara 3. Tigre 4. Guraghe 5. Other(specify)_____	
106.	Occupation	1. Government employee 2. Private employee 3. House wife 4. Daily laborer 5. House maid/servant 6. Merchant 7. Other(specify)_____	

107.	Marital status	1. Single 2. Married 3. Widowed 4. Divorced 5. Separated	
108	Income (monthly in ETB)	_____ (in birr).	
109	Current residence	1. Urban 2. Rural	

**Part II:-Questions assessing sexual behavior and partner relation of patients currently on ART**

<b>S.No</b>	<b>Questions</b>	<b>Choice</b>	<b>Skip</b>
201	With how many partners did you have sex in the last three months?	1. One 2. Two 3. Three 4. Four 5. Five and above	<i>If two and above skip to Q 203</i>
202	If your answer is <b>one</b> , for <b>Question 201</b> What is the kind of partnership you have?	1. primary/steady partner/s 2. casual partner/s	
203.	If your answer is <b>2</b> and above for <b>Question 201</b> , identify the kind of partners?	1. Steady partner/s 2. Causal partner/s	
204.	How is your sexual desire after you started ART treatment?	1. Desire is improved compared to before 2. Desire is normal as before 3. Desire is decreased as compared to before	
205.	Did you use condom in the last three months?	1. Yes 2. No	<i>If no skip to Q 207</i>

206.	If yes to <b>Q 205</b> , how often did you use condom?	<ol style="list-style-type: none"> <li>1. Always</li> <li>2. Sometimes</li> </ol>	
207	If your answer is either of <b>2 for Q 206 and 2 for Q 205</b> with whom you did you fail to use condom?	<ol style="list-style-type: none"> <li>1. Casual partner</li> <li>2. Steady partner</li> <li>3. In both type of partners</li> </ol>	
208	What is/are the HIV sero -status of the person/s with whom you had sex in the last three months?	<ol style="list-style-type: none"> <li>1. Negative</li> <li>2. Positive</li> <li>3. Unknown</li> </ol>	
209	Have you disclosed your sero-status to your partner?	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>	

**Part III: - Clinical related questions**

S.No	Questions	Choice	Skip
301.	How long have you known that you are infected with HIV/AIDS?	<ol style="list-style-type: none"> <li>1. &lt; 1years</li> <li>2. 1-2 years</li> <li>3. 2-5 years</li> <li>4. 5 years</li> </ol>	
302.	Duration since starting ART?	<ol style="list-style-type: none"> <li>1. Less than or equal to 12 months</li> <li>2. 13-24 months.</li> <li>3. 24 months</li> </ol>	
303.	What is the patient's current CD4 count? <b>From patient card</b>	_____	

**Part IV: \_ Alcohol and substance use related questions**

<b>S.No</b>	<b>Questions</b>	<b>Choice</b>	<b>Skip</b>
401	During the last three month have you ever drunk alcohol?	1. Yes 2. No	<i>If no skip to Q 403</i>
402.	If yes, how many times per week have you consumed in the last month?	1. Once per week 2. Twice per week 3. Three times per week. 4. Four times per week. 5. Five times per week. 6. Six times per week 7. Every day	
403	During the last three month have you tried any substances?	1. Yes 2. No	
404	Which of the following substances have you tried, if any?	1. Chat 2. Cigarette 3. Cocaine 4. Hashish 5. Others (specify) _____.	



**PART V: \_ Child related questions**

S.No.	Questions	Choice	Skip
501.	How many children do you have currently?	_____ (in number)	
502.	Do you have a desire for any/more children?	1. Yes 2. No	<b>If no skip to part VI</b>
503.	If yes, how many children you desire to have?	_____ (in number)	

**PART VI: - Stigma related questions**

S.No.	Questions	Choice	Skip
601.	<b>Enacted type of stigma in their life</b>		
	1. Because you are HIV positive someone refused to eat with you.	1.Yes 2.No	
	2. Because you are HIV positive someone refused to hug you.	1.Yes 2.No	
	3. Because you are HIV positive children kept away from you.	1.Yes 2.No	
	4. Because you are HIV positive you had to move from your place.	1.Yes 2.No	
	5. Because you are HIV positive you were beaten up	1.Yes 2.No	
	6. Because you are HIV positive you are/were verbally threatened.	1.Yes 2.No	
	7. Because you are HIV positive you lost a friend.	1.Yes 2.No	
	8. Because you are HIV positive, avoided/ignored by a family member.	1.Yes 2.No	

602	<b>Perceived stigma in the last three months</b>		
	1. Because you are HIV positive you felt others were uncomfortable.	1.Yes	2.No
	2. Because you are HIV positive you felt people avoided you.	1.Yes	2.No
	3. Because you are HIV positive you feared family rejection.	1.Yes	2.No
	4. Because you are HIV positive you feared losing friends.	1.Yes	2.No
	5. Because you are HIV positive you felt blamed by others.	1.Yes	2.No
	6. Because you are HIV positive you thought HIV was punishment.	1.Yes	2.No
	7. Because you are HIV positive you felt ashamed.	1.Yes	2.No

**PART VII: \_ Health service related factors**

<b>S.No.</b>	<b>Questions</b>	<b>Choice</b>	<b>Skip</b>
	In the past three months did you Receive the following from the hospital?		
701.	Education and/or counseling on the importance of Protecting yourself from a different strain of HIV.	1. Yes 2. No	
702.	Education and/or counseling on risk reduction strategies – safer sex and how you can prevent transmitting HIV to someone else.	1. Yes 2. No	
703.	You have attended a HIV prevention discussion or support group.	1. Yes 2. No	

**Thank you!!!!**

## ANNEX II: - AFAN OROMO VERSION QUESTIONNAIRE

**Yuuniiveersiitii Jimmaa**

**Kolleejjii Saayinsii fayyaatti**

**Muummee barnoota nursiingii fi Midwifarii**

### **Gucha odeeffannoo walii gala.**

Akkam nagaa dhaa?

Ani maqaan koo \_\_\_\_\_ jedhama odeeffannoo sassabaa qorannoo barataa Digrii lammaffaa gita fayyaa ga'eessota ogummaa narsiitin yuuniversity Jimmaa, kolleejjii saayinsii fayyaa kan ta'e barataa Geetuu Moosisaaf funnanuu dha. mata dureen qorannichaa Amala walqunnamtii saala miidha geessisan namootni HIV'n dhiiga isaanii keessatti argamu qabani fi wantoota isaaf saaxilan kan jedhuu yoo ta'u qorannichi hospiitala rifiraala naqamteetti gaggeffama. Odeeffannoon funnanamu Kun iccitiin isaa eegamaa fi kaayyoo qorannichaa duwwaaf kan oluuf fi odeeffaannoon waa'ee eenyummaa kan ibsu maqaa keessannii fi wantoota biraa kan maqaa keessan ibsu kan hin galmoofnee yoo ta'u odeeffannoon funnamu kun qorataa duwwaaf kan laatamuu dha. Qorannoo kanaaf deebii keennuu dhiisuus ta'ee yeroo barbaaddannitti addaan kutuuf mirgi keessan seeraan eegaamaa dha. Haa ta'u malee galmaga'iinsa qorannoo kanaaf gummachi keessan murteessaa dha.

Qorannoo kana keessatti hirmachuuf fedhii qabduu? A. Eeyyee B. Lakkii

Mallattoo odeeffannoo sassabaa \_\_\_\_\_ Guyyaa \_\_\_\_\_

Koodii questionnaire \_\_\_\_\_.

**Kutaa I: \_ Gaaffilee waa'ee jireenya dinagdee fi hawwaasummaa ilaallatan**

<b>Lakk.</b>	<b>Gaaffilee</b>	<b>Filmaata</b>	<b>Darbi</b>
101.	Umrii	_____ (waggaa dhaan)	
102.	Saala	1. Dhiira 2. Dhalaa	
103.	Sadarkaa barnootaa	1. Barumsa idilee kan hin baranne 2. Sadarkaa tokkoffaa kan barate 3. Sadarkaa lammaffaa kan barate 4. Kollejji fi isa ol kan barate	
104.	Amantaa	1. Ortodoksii 2. Musiliima 3. Pirotestaanti 4. Kaatoliki 5. Kan biroo( haa ibsamu)_____	
105.	Qomoo	1. Oromoo 2. Amaraa 3. Tigiree 4. Guraagee 5. Kan biroo( haa ibsamu)_____	
106.	Hojii	1. Hojjataa mottummaa 2. Hojjataa dhuunfa 3. Haadha manaa 4. Dafqaan bulaa 5. Hojjattuu mana keessaa 6. Daldalaa 7. Kan biroo( haa ibsamu)_____	

107.	Haala fuudhaa fi heerumaa	<ol style="list-style-type: none"> <li>1. Kan hin fuune yookiin kan hinheerumne</li> <li>2. Kan fuudhe/heerumte</li> <li>3. Kan abbaan mana jalaa du'e</li> <li>4. Kan wal hiikan</li> <li>5. Kan gargar bahan</li> </ol>	
108.	Galii argattan (gara ji'atti jijjiruun mallaqaan meeqa?)	_____ (qarshiidhaan)	
109.	Iddoo jireenyaa	<ol style="list-style-type: none"> <li>1. Magaalaa</li> <li>2. Baadiyyaa</li> </ol>	

**Kutaa II: - Gaaffilee amala walqunnamtii saala fi hariiroo hiriya wal-qunnamtii saala waliin qaban ilaalan.**

<b>Lakk.</b>	<b>Gaaffilee</b>	<b>Filmata</b>	<b>Darbi</b>
201.	Ji'oota sadan darban keessatti Hiriya wal qunnamtii saala wajjiin raawwatte meeqa qabdaa?	<ol style="list-style-type: none"> <li>1. Tokko</li> <li>2. Lama</li> <li>3. Sadi</li> <li>4. Afur</li> <li>5. Shani fi isa ol</li> </ol>	<i>Deebiin kee lama fi isa ol yoo ta'e gara gaaffii 203 tti darbi.</i>
202.	Deebiin gaaffii 201 'tokko' yoo ta'e gosa hiriya keeti adda baasi	<ol style="list-style-type: none"> <li>1. Abba mana /haadha manaa/jaalallee dhiira/dubra</li> <li>2. Hiriya biroo</li> </ol>	
203.	Deebiin gaaffii 201 'lama fi isa ol' yoo ta'e hiriyaan walqunnamtii saala kee isa kam ture?	<ol style="list-style-type: none"> <li>1. Abba mana /haadha manaa/jaalallee dhiira/dubra</li> <li>2. Hiriya biroo</li> </ol>	

204.	Ergaa qorichaa HIV fuudhachuu jalqabdee fedhiin ati walqunnamtii saalaf qabdu maal fakkata?	<ol style="list-style-type: none"> <li>1. Dabaleera</li> <li>2. Isa duraatiin garagarummaa hinqabu</li> <li>3. Gadi bu'eera</li> </ol>	
205.	Ji'oota sadan darban keessatti kondoomi fayyadamteerta?	<ol style="list-style-type: none"> <li>1. Eeyyee</li> <li>2. Lakkii</li> </ol>	<b><i>Deebiin kee lakkii yoo ta'e gara gaaffii 207tti darbi</i></b>
206.	Deebiin gaaffii 205 ffaa kee eeyyee yoo ta'e si'a meeqa fayyadamte?	<ol style="list-style-type: none"> <li>1. Yeroo hunda</li> <li>2. Altokko tokko</li> </ol>	
207.	Deebiin kee gaaffii 206 ffaa "2" fi gaaffii 205 ffaa "2" yoo ta'e eenyu wajjiin kondoomi hin fayyadamne?	<ol style="list-style-type: none"> <li>1. Hiriya dhaabbata waliin</li> <li>2. Hiriya yeroo waliin</li> <li>3. Lamanuu waliin</li> </ol>	
208.	Enyumman dhiigaa hiriya walqunnamtii saala kee maali?	<ol style="list-style-type: none"> <li>1. Negativii</li> <li>2. Pozativii</li> <li>3. Hin beekamu</li> </ol>	
209.	Waa'ee eenyumma kee hiriya keetti himteerta?	<ol style="list-style-type: none"> <li>1. Eeyyee</li> <li>2. Lakkii</li> </ol>	

**Kutaa III. Gaaffilee ragaa kilinikaa hirmaattoota ilaaluuf qophaa’an.**

<b>Lakk</b>	<b>Gaaffilee</b>	<b>Filmata</b>	<b>Darbi</b>
301	Ergaa HIV ‘n dhiiga kee keessatti argame hagam ta’eera?	<ol style="list-style-type: none"> <li>1. waggaa tokko gadi</li> <li>2. Waggaa 1-2</li> <li>3. waggaa 2-5</li> <li>4.waggaa shani ol</li> </ol>	
302	Ergaa qorichaa eegaltee hagam ta’eera?	<ol style="list-style-type: none"> <li>1. Waggaa tokko gad</li> <li>2. Waggaa 1-2</li> <li>3. Waggaa lama ol</li> </ol>	
303.	CD4’n hirmaata kana meeqa	_____ ( <b>Kaardii irraa</b> )	

**Kutaa IV: Gaaffilee waa’ee dhugaati fi fayyadama aarada ilaaluuf qophaa’an.**

<b>Lakk</b>	<b>Gaaffilee</b>	<b>Filmata</b>	<b>Darbi</b>
401.	Ji’oota sadan darban keessatti alkoolii dhuugdeettaa?	<ol style="list-style-type: none"> <li>1. Eeyyee</li> <li>2. Lakkii</li> </ol>	<b><i>Lakkii yoo ta’e gara gaaffii 403tti darbi</i></b>
402.	Deebiin kee eeyyee yoo ta’e ji’a darbe keessatti torbeetti si’a meeqa dhugde?	<ol style="list-style-type: none"> <li>1. Si’a tokko</li> <li>2. Si’a lama</li> <li>3. Si’a sadi</li> <li>4. Si’a afur</li> <li>5. Si’a shan</li> <li>6. Si’a ja’a</li> <li>7. Guyyaa hunda</li> </ol>	
403.	Ji’oota sadan darban keessatti wantoota araada nama qabsiisan yaaltee beektaa?	<ol style="list-style-type: none"> <li>1. Eeyyee</li> <li>2. Lakkii</li> </ol>	

404.	Deebiin gaaffii 403 “eeyyee” yoo ta’e isa kam yaalte beektaa?	<ol style="list-style-type: none"> <li>1. Caatii</li> <li>2. Sigaaraa/tambo</li> <li>3. Kokayinii</li> <li>4. Hashiisha</li> <li>5. Kan biroo haa ibsamu_____</li> </ol>	
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**KutaaV - Gaaffilee hawwii ijoollee godhachuuf hirmaattootni qaban ilaalatan**

<b>Lakk.</b>	<b>Gaaffilee</b>	<b>Filmata</b>	<b>Darbi</b>
501.	Ijoolleen amma lubbuun jiran meeqa qabda?	_____lakkoofsan	
502.	Fedhii ijoollee horachuu qabda?	<ol style="list-style-type: none"> <li>1. Eeyyee</li> <li>2. Lakkii</li> </ol>	<i><b>Yoo lakki ta’e gara gaaffii kutaa VI tti darbi</b></i>
503.	Deebiin kee gaaffii 503 “eeyyeen” yoo ta’ee ijoollee meeqa godhachuu barbaaddaa?	_____lakkoofsan	



**Kutaa VI: Gaaffilee ilaalcha hirmaattotni loogii irratti qaban ilaalan**

Lakk.	Gaaffilee	Filmaata	Darbi
601.	<p><b><u>Loogii alaa hirmaatarra ga’u(Erga HIVpozativii ta’ani)</u></b></p> <ol style="list-style-type: none"> <li>1. Sababa ati dhukkuba HIV/AIDS qabatteef namotni si waliin nyaachu lagatuu</li> <li>2. Sababa ati dhukkuba HIV/AIDS qabatteef namnootni nagaa sin gaafatan</li> <li>3. Sababa ati dhukkuba HIV/AIDS qabatteef daa’imman si dheessu.</li> <li>4. . Sababa ati dhukkuba HIV/AIDS qabatteef iddoo keeti si sochoosu.</li> <li>5. Sababa ati dhukkuba HIV/AIDS qabatteef ni rukutamta.</li> <li>6. Sababa ati dhukkuba HIV/AIDS qabatteef namootni jechaan si qocolu.</li> <li>7. Sababa ati dhukkuba HIV/AIDS qabatteef hiriya dhabde.</li> <li>8. Sababa ati dhukkuba HIV/AIDS qabatteef maatiin kee sitti dheekame.</li> </ol>	<ol style="list-style-type: none"> <li>1. Eeyyee 2. Lakkii</li> <li>1. Eeyyee 2. Lakkii</li> <li>1. Eeyyee 2. Lakkii</li> <li>1. Eeyyee 2. Lakkii</li> <li>1. Eeyyee 2. Lakkii.</li> <li>1. Eeyyee 2. Lakkii</li> <li>1. Eeyyee 2. Lakkii</li> <li>1. Eeyyee 2. Lakkii</li> </ol>	

602	<p><b><u>Ilaalcha loogiif hirmaatan ji'oota</u></b>  <b><u>sadan darbanii keessatti qabu</u></b></p> <ol style="list-style-type: none"> <li>1. Sababa ati dhukkuba HIV/AIDS qabatteef namootni kan akka sitti hin tollee yaadde.</li> <li>2. Sababa ati dhukkuba HIV/AIDS qabatteef namootni akka si gatan yaadde.</li> <li>3. Sababa ati dhukkuba HIV/AIDS qabatteef maatiin na gatu jette sodattee.</li> <li>4. Sababa ati dhukkuba HIV/AIDS qabatteef hiriyaan dhaba jettee sodaatte.</li> <li>5. Sababa ati dhukkuba HIV/AIDS qabatteef namootan nan abaramaa jette yaadde.</li> <li>6. Sababa ati dhukkuba HIV/AIDS qabatteef HIV'n adabbiidha jette dubbatte.</li> <li>7. Sababa ati dhukkuba HIV/AIDS qabatteef qaanofte.</li> </ol>	<ol style="list-style-type: none"> <li>1. Eeyyee 2. Lakkii</li> <li>1. Eeyyee 2. Lakkii</li> <li>1. Eeyyee 2. Lakkii</li> <li>1. Eeyyee 2. Lakkii</li> <li>1. Eeyyee 2. Lakkii</li> <li>1. Eeyyee 2. Lakkii</li> <li>1. Eeyyee 2. Lakkii</li> </ol>	
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**Kutaa VII: Gaaffilee haala tajaajila keennisa fayyaa ilaalan.**

<b>Lakk.</b>		<b>Filmaata</b>	<b>Darbi</b>
	Ji'oota sadan darban keessatti tajaajilota armaan gadi hoospitala kana argateerta?		
701.	Gorsa/barumsa waa'ee bu'aa of eeggannoo gosa vaayirasii HIV adda addaa irraa of eeguu.	1. Eeyyee 2. Lakkii	
702.	Barumsa/gorsa waa'ee mala ittin amala badaa hir'isan kan akka wal qunnamtii saala balarraa bilisaa fi akka vayirisichaa nama birarraa ittisan	1. Eeyyee 2. Lakkii	
703.	Walitti qabama ittisa HIV godhamu irratti ni hirmaattaa?	1. Eeyyee 2. Lakkii	

**Galatooma!!!!!!!!!!!!!!**

**ANNEX III:- AMHARIC VERSION QUESTIONNAIRRE**

**መጠይቅ በአማርኛ ትርጉም**

**ጅም ዩኒቨርሲቲ**

**የህብረተሰብ ጤና ሳይንስ ኮሌጅ**

**ነርቪንግ ትምህርት ክፍል**

**የፈቃደኝነት ውል**

ጤና ይስጥልኝ። እኔ -----እባላለሁ፤ በጅም ዩኒቨርሲቲ የህብረተሰብ ጤና ሳይንስ ኮሌጅ የድህረ ምረቃ ተማሪ በሆነው አቶ ጌቱ ሞሲሳ ለሚሰራው ጥናት መረጃ ሰብሳቢ ነኝ። የትናቱ ርዕስ አደጋ ያለው የግብረ ስጋ ግንኙነት ባህሪ በ ኤች.አይ.ቪ ቫይረስ በደማቸው ያለባቸው እና በነቀምቴ ሆስፒታል የፀረ-ኤድስ መድሃኒት ክትትል ላይ ያሉ ታካሚዎች በሚል ነው። የጥናቱ ዋና አላማ ኤች.አይ.ቪ ቫይረስ በደማቸው ያለባቸው ታካሚዎች ስላላቸው አደጋ ያለው የግብረ ስጋ ግንኙነት ባህሪ መሰረታዊ መረጃ ለማግኘት ነው። በእርግጠኝነት ስምዎት በመጠይቁ ውስጥ የማይካተት ሲሆን የሚሰጡትም ምላሽ በሚሰጠር ይያዛል።

በጥናቱ ለመሳተፍ አይገደዱም፤ በማንኛውም ጊዜ መጠይቁን ማቋረጥ ይችላሉ። ግን የሚሰጡን መረጃ ከART ክለሲክ ለሚያገኙት አገልግሎት መሻሻል ወሳኝ ከመሆኑም በላይ የበሽታውን ስርጭት ለመከላከልና ለመተግበር የተሻለ እስትራቴጂ ለመቅረፅ የረዳል። ስልዚህ እባክዎትን ትክክለኛውን መረጃ ከመስጠት አይቆጠቡ። በማንኛውም ጊዜ ማብራሪያ መጠየቅ ይችላሉ።

በጥናቱ ለመሳተፍ ይስማማሉ

ሀ. እስማማለሁ

ለ. አልስማማም

ለትብብርዎ በጣም እናመሰግናለን።

የመረጃ ሰብሳቢው ስም፡-----ፊርማ-----ቀን-----

ክፍል 1: ማህበራዊ መጠይቅ

ተ.ቁ	ጥያቄ	ምርመራ	
101	እድሜ	_____ አመት	
102	ጾታ	1. ወንድ 2. ሴት	
103	የትምህርት ደረጃ	1. ያለተማረ(ች) 2. የመጀመሪያ ደረጃ 3. ሁለተኛ ደረጃ 4. ኮሌጅ እና ከዚያ በላይ	
104	ሀይማኖት	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ(ጥቀስ)_____	
105	ብሄር	1. ኦሮሞ 2. አማራ 3. ትግሬ 4. ጉራጌ 5. ሌላ(ጥቀስ)_____	
106	ስራ	1. የመንግስት ሰራተኛ 2. የግል ሰራ 3. የቤት እመቤት 4. የቀን ሰራተኛ 5. የቤት ሰራተኛ 6. ነጋዴ 7. ሌላ(ጥቀስ)_____	

107	የትዳር ሁኔታ	1. ያላገባ(ች) 2. ያገባ(ች) 3. የሞተበት(ባት) 4. የፈታ(ች) 5. የተሌያየ(ች)	
108	አማካይ ወርሃዊ ገቢ (ቡብር)	_____	
109	አድራሻ	1. ከተማ 2. ገጠር	

ክፍል 2: ቅጥለው ያሉት መጠይቆች ሚያተኩሩት ስለ ጾታዊ (ግብረ ስጋ) ግንኙነት ላይ ስላሉት ባህሪ እና ካወሲብ አጋርዎት ጋር ያልዎት ግንኙነት ላይ ነው።

ተ.ቁ	ጥያቄ	ምርጫ	ዝላል
201	ባለፉት 3 ወራት ውስጥ ከስንት ሰዎች ጋር የግብረ ስጋ ግንኙነት ፈጽመው ያውቃሉ?	1. 1 2. 2 3. 3 4. 4 5. 5 እና ከዚያ በላይ	መልስዎ 2 እና ከዚያ በላይ ከሆነ ወደ ጥያቄ 203 የሂዱ
202	ለጥያቄ 201 መልስዎ 1 ከሆነ ከወሲብ አጋርዎት ጋር ምን ዓይነት ግንኙነት ነበርዎት?	1. የመጀመሪያ (ቋሚ) 2. ግዜአዊ (ቋሚ ያልሆነ)	
203	ለጥያቄ 201 መልስዎ 2 እና ከዚያ በላይ ከሆነ ከወሲብ አጋርዎችዎ ጋር ምን ዓይነት ግንኙነት ነበርዎት?	1. ቋሚ 2. ግዜአዊ (ቋሚ ያልሆነ)	
204.	ART ከጀመሩ በኋላ የወሲብ ፍላጎትዎ ምን ይመስላል?	1. ፍላጎቴ ከቀድሞው ተሽሽሎዋል 2. ምንም ለውጥ የለም 3. ፍላጎቴ ከቀድሞው ቀንሶዋል	
205.	ባለፉት 3 ወራት ከንድምን በመጠቀም የግብረ ስጋ ግንኙነት ፈጽመው ያውቃሉ?	1. አዎ 2. የለም	መልስዎ የለም ከሆነ ወደ ጠያቂ 207

206.	ለጥያቄ 205 መልስዎ አዎ ከሆነ ምን ያህል ጊዜ ተጠቅመዋል?	<ol style="list-style-type: none"> <li>1. ሁልጊዜ</li> <li>2. አንድ-አንድ ጊዜ ( በግማሽ)</li> </ol>	
207	ለጥያቄ 206 መልስዎ 2 ከሆነ እና ለጥያቄ 205 መልስዎ 2 ኮንዶምን የልተጠቀሙት ከማ ጋር ነበር ?	<ol style="list-style-type: none"> <li>1. ከጊዜያዊ የወሲብ አጋሮቼ ጋር</li> <li>2. ከቋሚ የወሲብ አጋሮቼ ጋር</li> <li>3. ከሁለቱም ጋር</li> </ol>	
208	ባለፉት 3 ወራት ውስጥ የግብረሰጋ ግንኙነት ያደረጓቸው ሰዎች የ HIV የደም ምርመራ ውጤታቸው ምንድን ነው?	<ol style="list-style-type: none"> <li>1. ኔጌቲቭ</li> <li>2. ፖዘቲቭ</li> <li>3. አይታወቅም</li> </ol>	
209	HIV በደም ውስጥ ስለመኖሩ ለወሲብ አጋርዎ (ጓደኛዎ) አሳውቀው ያውቃሉ?	<ol style="list-style-type: none"> <li>1. አዎ</li> <li>2. የለም</li> </ol>	

**ክፍል 3: - ህክምናን መሰረት ያደርጉ መጠይቆች**

ተ.ቁ	ጥያቄ	ምርጫ	ዝላል
301.	HIV በደም ውስጥ እንዳለ ካወቁ ምን ያህል ጊዜ ሆነ?	<ol style="list-style-type: none"> <li>1. ከ 1 ዓመት በታች</li> <li>2. 1-2 ዓመት.</li> <li>3. 2-5 ዓመት.</li> <li>4. ከ 5 አመታት በላይ.</li> </ol>	
302.	ፀረ ኤች.አይ.ቪ እንክብል (ART) ከጀመሩ ምን ያህል ጊዜ?	<ol style="list-style-type: none"> <li>1. 12 ወራት ወይም ከዚያ በታች</li> <li>2. 13-24 ወራት.</li> <li>3. ከ 24 ወራት በላይ</li> </ol>	
303.	የታካሚው CD4 ቁጥር ስንት ነው? (ከካርዱ ላይ)	_____	

**ክፍል IV: \_ አልኮል እና ሌሎች እጾች ላይ የሚያተኩር መጠይቅ**

ተ.ቁ	መጠይቅ	አራጮች	ዝላል
401.	ባለፉት ሶስት ወራት ውስጥ አልኮል ጠትተው ያውቃሉ?	1. አዎ 2. የለም	መልስዎ የለም ከሆን ወደ ጥያቄ 403 ይሂዱ
402.	መልስዎ አዎ ከሆነ ባለፉት ሶስት ወራት ውስጥ በሳምንት ስንት ጊዜ ጠጥተዋል?	1. በሳምንት አንድ ጊዜ 2. በሳምንት ሁለት ጊዜ 3. በሳምንት ሶስት ጊዜ. 4. በሳምንት አራት ጊዜ. 5. በሳምንት አምስት ጊዜ. 6. በሳምንት ስድስት ጊዜ 7. በየቀኑ.	
403.	ባለፉት ሶስት ወራት ውስጥ እጾች ተጠቅመው ያውቃሉ?	1. አዎ 2. የለም	
404.	መልስዎ አዎ ከሆነ ከሚከተሉት እጾች ውስጥ የትኛውን ሞከረው የውቃሉ?	1. ጫት 2. ሲጋራ 3. ኮኬይን 4. ሀሺሽ 5. ሌላ (ይጥቀሱ) _____.	

**ክፍል V: የልጅ ፍላጎት በተመለከተ**

ተ.ቁ	መጠይቅ	አማራጮች	ዝላል
501.	ስንት ልጆች በህይወት አሉዎት?	_____ (በቁጥር)	
502.	ወይም ተጨማሪ ልጅ እንዲኖርዎት ፍላጎት አሉዎት?	1. አዎ 2. የለም	መልስዎ የለም ከሆነ ወደ ክፍል ስድስት ይሂዱ
503.	መልስዎ አዎ ከሆነ ስንት ልጅ እንዲኖርዎት ይመኛሉ?	_____ (በቁጥር)	



ክፍል VI: - መገለል(መድልዎን) በተመለከተ

ተ.ቁ	መጠይቅ	አማራጮች	ዝላል																
601.	<p><b>በህይወት ዘመን ላይ በተግባር የታዩ የመገለል(መድልዎ) አይነቶች</b></p> <ol style="list-style-type: none"> <li>1. ቫይረሱ በደም ስላለ ከእሱ ጋር አብሮ አልመገብም ያለ ሰውአለ::</li> <li>2. ቫይረሱ በደም ስላለ እርስዎን አቅፎ ሰላምታ ለመስጠት የተወሰደውአለ::</li> <li>3. ቫይረሱ በደም ስላለ ልጆችን ከእርሶ ያራቀ አለ::</li> <li>4. ቫይረሱ በደም ስላለ ከአከባቢዎ መሸሽ የነበረብዎት ጊዜ ነበር::</li> <li>5. ቫይረሱ በደም ስላለ የተመቱበት ጊዜ አለ::</li> <li>6. ቫይረሱ በደም ስላለ በቃላት ማስፈራራት (ዛቻ) ደርሶቦትዎታል::</li> <li>7. ቫይረሱ በደም ስላለ ጓደኛ አጥተዋል::</li> <li>8. ቫይረሱ በደም ስላለ ከቤተሰብ አባላት እርሶን የማያናግር (የዘጋዎት) አለ::</li> </ol>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">1. አዎ</td> <td style="width: 50%; border: none;">2. የለም</td> </tr> <tr> <td style="border: none;">1. አዎ</td> <td style="border: none;">2. የለም</td> </tr> <tr> <td style="border: none;">1. አዎ</td> <td style="border: none;">2. የለም</td> </tr> <tr> <td style="border: none;">1. አዎ</td> <td style="border: none;">2. የለም</td> </tr> <tr> <td style="border: none;">1. አዎ</td> <td style="border: none;">2. የለም</td> </tr> <tr> <td style="border: none;">1. አዎ</td> <td style="border: none;">2. የለም</td> </tr> <tr> <td style="border: none;">1. አዎ</td> <td style="border: none;">2. የለም</td> </tr> <tr> <td style="border: none;">1. አዎ</td> <td style="border: none;">2. የለም</td> </tr> </table>	1. አዎ	2. የለም	1. አዎ	2. የለም	1. አዎ	2. የለም	1. አዎ	2. የለም	1. አዎ	2. የለም	1. አዎ	2. የለም	1. አዎ	2. የለም	1. አዎ	2. የለም	
1. አዎ	2. የለም																		
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1. አዎ	2. የለም																		
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1. አዎ	2. የለም																		
1. አዎ	2. የለም																		
602	<p><b>ባልፉት 3 ወራት ውስጥ የጋጠሙ የመገለል ስሜት</b></p> <ol style="list-style-type: none"> <li>1. ቫይረሱ በደም ስላለ ስዎች የማይመቻችው መስሎዎት ያውቃል::</li> <li>2. ቫይረሱ በደም ስላለ በስዎች የመገለል ስሜት ተሰምቶዎት ያውቃሉ::</li> <li>3. ቫይረሱ በደም ስላለ በቤተሰብ መገፋት(መወገዝን) ፈርተው ያውቃሉ::</li> <li>4. ቫይረሱ በደም ስላለ ጓደኛ አጣለው ብለው ሰግተው ያውቃሉ::</li> <li>5. ቫይረሱ በደም ስላለ በሌሎች የሚወቀሱ መስሎ ተሰምቶዎትየውቃሉ::</li> <li>6. ቫይረሱ በደም ስላለ የHIV ህመምተኛ መሆን ቅጠት ነው ብለው አስበው ያውቃሉ::</li> <li>7. ቫይረሱ በደም ስላለ አፍረት ተሰምቶዎት (ተሸማቀው) ያውቃሉ::</li> </ol>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">1. አዎ</td> <td style="width: 50%; border: none;">2. የለም</td> </tr> <tr> <td style="border: none;">1. አዎ</td> <td style="border: none;">2. የለም</td> </tr> <tr> <td style="border: none;">1. አዎ</td> <td style="border: none;">2. የለም</td> </tr> <tr> <td style="border: none;">1. አዎ</td> <td style="border: none;">2. የለም</td> </tr> <tr> <td style="border: none;">1. አዎ</td> <td style="border: none;">2. የለም</td> </tr> <tr> <td style="border: none;">1. አዎ</td> <td style="border: none;">2. የለም</td> </tr> <tr> <td style="border: none;">1. አዎ</td> <td style="border: none;">2. የለም</td> </tr> </table>	1. አዎ	2. የለም	1. አዎ	2. የለም	1. አዎ	2. የለም	1. አዎ	2. የለም	1. አዎ	2. የለም	1. አዎ	2. የለም	1. አዎ	2. የለም			
1. አዎ	2. የለም																		
1. አዎ	2. የለም																		
1. አዎ	2. የለም																		
1. አዎ	2. የለም																		
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1. አዎ	2. የለም																		
1. አዎ	2. የለም																		

**ክፍል VII: \_ የጤና አገልግሎት ተዛማጅ ሁኔታዎች**

ተ.ቁ	መጠይቅ	አመራሮች	ዝላል
	ባለፉት 3 ወራት ውስጥ የሚከተሉትን ነገሮች ከሆስፒታል አግኝትው ያወቃሉ?		
701.	እራስዎን ከሌላ የተለየ የ HIVዝርያ ስለመጠበቅ(መከላከል) ጥቅም ትምህርት ወይም ምክር	1. አዎ 2. የለም	
702.	ተጋላጭነትን ስለመቀነስ እና ቫየረሱ ወደ ሌላ ሰው እንዳይተላለፍ ስለመከላከል እስትራቴጂ ትምህርት ወይም ስልጠና	1. አዎ 2. የለም	
703.	HIVን የመከላከል ወይይት ወይም እረዳታ ቡድን ታድመው ያውቃሉ.	1. አዎ 2. የለም	

**እናመሰግናልን::**

DECLARATION

I, the undersigned, declare that this thesis is my original work, has not been presented for a

degree in this or any other university and that all sources of materials used for the thesis have been fully acknowledged.

Name: GETU MOSISA KEBEBEW

Signature: \_\_\_\_\_ Date \_\_\_\_\_

Name of the institution: JIMMA UNIVERSITY

Date of submission: \_\_\_\_\_

This thesis has been submitted for examination with my approval as University advisor

Name of the first advisor

PROFESSOR KIFLE WOLDEMICHAEL (MD, MPH)

Signature: \_\_\_\_\_ Date \_\_\_\_\_

Name of the second advisor

MR. FANTAHUN AYALEW (BSC, MSCN)

Signature: \_\_\_\_\_ Date \_\_\_\_\_