

**RISKY SEXUAL PRACTICES AND ASSOCIATED FACTORS AMONG
ANTIRETROVIRAL TREATMENT (ART) ATTENDEES IN HEALTH
CENTERS OF ADDIS ABABA, ETHIOPIA**



By: Kassahun Demissie (BSc)

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Risky Sexual Practices and Associated Factors among Antiretroviral Treatment (ART) Attendees in Health Centers of Addis Ababa, Ethiopia

By: Kassahun Demissie (BSc)

Advisors :

- 1. Morankar Sudhakar (PhD,PGDP,HCMT,Professor)**
- 2. Mr. Shifera Asfaw (BSc,MPH)**

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Abstract

Background: Human immune deficiency virus/Acquired immune deficiency syndrome (HIV/AIDS) is one of the major public health problems throughout the world. Nowadays Antiretroviral Treatment (ART) is expanded in health institutions and HIV positive individuals who are eligible for ART are taking. Studies show re-infection and transmission of other sexually transmitted infections (STIs) is occurring within them.

Objective: the objective of this study was to assess risky sexual practice and associated factors among HIV positive ART attendee's in health centers of Addis Ababa.

Methods: Institution based cross-sectional study was employed in randomly selected health centers. Quantitative data collection methods were considered. Data were entered and analysed using SPSS version 16.0 statistical package. After the effect of each variable was observed by bivariate analysis, multiple logistic regressions analysis used to identify the predictors of risky sexual practice.

Results: Majority of the respondents 34.6% and 31.9% were in the age group 25-31 and 32-38 respectively. The mean age of the total respondents was 35.28 ± 8.94 (SD). From a total of 376 respondents 30.4% had a history of risky sexual practice which is inconsistent condom use in the three months prior to the study. Factors associated with risky sexual practice included: alcohol consumption (AOR=2.01,95% CI: 1.07, 3.77) single and widowed respondents were also significantly associated with odds of risk (AOR=0.29, 95%CI: 0.15, 0.59) and (AOR=0.32, 95% CI: 0.13, 0.77) respectively. Ethnicity (AOR=0.49, 95%CI: 0.27, 0.91) showed significant relationship with risky sexual practice.

Conclusion and recommendation: In this study 30.4% of respondents engaged in risky sexual practice. Health providers should encourage, support and allow clients towards effective utilization of condom.

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Acronyms

AAU	Addis Ababa University
AIDS	Acquired Immune-Deficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral
BMC	Biomedical Center
ETB	Ethiopian Birr
FDA	Food and Drug Administration
FHAPCO	Federal HIV AIDS Prevention and Control
HAART	Highly Active Antiretroviral Treatment
HAPCO	HIV AIDS Prevention and Control
HIV	Human Immune Deficiency Virus
ID	Identification Card
MPH	Masters of Public Health
OR	Odds Ratio
PLWHA	People Living with HIV AIDS
SPSS	Statistical Software Package Version 16.0
STDs	Sexually Transmitted Diseases
STIs	Sexually Transmitted Infections
USA	United States of America
SNNPRG	Southern Nations and Nationalities people's Regional Government

Chapter One: Introduction

1.1 Background

In Ethiopia Human Immune Deficiency virus (HIV) was first detected in stored sera collected in 1984 and the first two acquired immune deficiency syndrome (AIDS) cases were reported in 1986. In line with in 2005 it was estimated that a total of 1,320,000 were living with HIV/AIDS. Of these, 634,000 were living in rural areas and 686,000 in urban areas. It was estimated that in 2005, a total of 137,500 new AIDS cases, 128,900 new HIV infections (353 a day) including 30,300 HIV positive births and 134,500 (368 a day) AIDS deaths (including 20,900 in children under 15 years) occurred. The estimated total number of persons requiring Antiretroviral Treatment (ART) in 2005 was 277,800 (including 43,100 children). AIDS accounted for an estimated 34% of all young adult deaths 15-49 in Ethiopia and 66.3% of all young adult deaths between 15 and 49 years of age in urban Ethiopia [1, 2]. Over the past ten years, ART has become available for an ever-growing number of people living with HIV with 56% of those in need of treatment having access to it in 2011 as opposed to only 3% in 2003. In view of the non-affordability of ART by most HIV-infected persons in Ethiopia, the Ministry of Health (MOH) launched the free ART rollout program in January 2005[3, 4].

Until recently, the focus of HIV prevention effort worldwide was largely on people uninfected with HIV and for a long time, the sexual behaviour of HIV infected persons did not receive any serious attention for a variety of reasons. Initially, diagnosis of HIV-infection appeared to imply a death sentence. In this context, the sex life of those infected seemed a secondary issue making prevention focused on sexual behaviour hard to imagine. Furthermore, the conviction that stigmatization should be avoided also precluded an interest in the sexual behaviour of HIV infected persons [5, 6]. Although many HIV-infected individuals avoid risky behaviours, substantial numbers of HIV infected persons continue to engage in HIV transmission-risk behaviours and that lead them also to acquire re-infection by HIV of resistant strains to ARV drugs or acquiring other sexually transmitted diseases (STDs) which fasters AIDS progression [7, 8]. A review of studies on sexual risk behaviour among PLWHA by Crepaz [9] and his colleagues showed that a considerable percentage, between 10 and 60 percent, depending on the specific sex act of seropositive individuals continue to engage in unprotected sexual behaviours that place their partners at risk for infection and place themselves at risk for contracting secondary infections.

As more and more people with HIV live longer and healthier lives because of antiretroviral therapy, an increasing number of sexual transmissions of HIV may stem from those who know they are infected and engage in unprotected sex [10].

Antiretroviral therapy and sexual risk behaviours may be linked through several mechanisms. First, HIV-positive individuals who derive therapeutic benefit from highly active antiretroviral treatment (HAART) may attain improved quality of life and functional status with the alleviation of physiological, social, and psychological consequences of HIV disease. These gains may be accompanied by increases in sexual risk behaviours among individuals whose illness had previously inhibited those behaviours.

Second, individuals may hold unrealistic beliefs about the impact of antiretroviral therapy on disease transmission rates, and thus may perceive the consequences of transmitting HIV as being less serious than in the past and it is noteworthy that HIV infected patients who receive ART and who engage in HIV transmission risk behaviour may harbour and spread drug resistant HIV which add considerable public threat [7, 11].

In similar way, with the rollout of antiretroviral therapy in Ethiopia, where about 125,631 people are on antiretroviral treatment and has potential to prolong the lives of HIV-infected individuals, it is exceedingly important to understand the factors promoting risky sex among the HIV positive person, so that behavioural intervention can be designed optimally for them in order to curb secondary HIV transmission and potential re-infection with different or drug resistant strain of HIV. In few of previous studies in the country, which was focused on fertility preference, high risk sexual behaviour and disclosure status, there were descriptions of the rate of risky sexual behaviour among people living with HIV/AIDS [12].

1.2 Statement of the problem

The advent of highly active antiretroviral therapies has helped to improve the health status and life expectancy of people living with HIV. Improvements in health and life expectancy of HIV-infected people may lead to a belief that HIV is no longer a serious and deadly disease. ART significantly reduces patients' viral loads, often to undetectable levels, which may lead to the perception that they are no longer infectious. In addition, ART significantly improves physical health and quality of life, which may enable or encourage individuals to resume sexual activity, including unsafe sex [13, 14].

People living with HIV and AIDS (PLWHA) who engage in unprotected sex place their sex partners as well as themselves at substantial risk for Sexually Transmitted Infections (STIs). Unprotected sex even for people who already are living with the virus may entail contracting other kinds of STIs, including another strain of the HIV virus. It may also result in the transmission of drug-resistant HIV virus, which may require even more expensive second or third line regimens of anti-retroviral drug [15]. They may continue or resume high risk behaviours when their health improves with treatment. Sexual risky behaviours among HIV infected persons is of concern because of the risk of transmission to sero-discordant partners, or the risk of re-infection with new drug resistant viral strains [16].

Studies have established that when PLWHAs' adhere to ART, there is an improvement in their quality of life and a decrease in depression. The improved quality of life may lead to a significant increase in sexual activity and reproductive intentions for both men and women. Although PLWHA are given knowledge about safer sexual behaviour during the ART clinic sessions, there is growing evidence that suggests that people on ART are increasingly becoming sexually active and many of them are involved with partners who are HIV negative. Some of these people practice unsafe sexual behaviour patterns such as not using condoms and having multiple sexual partners [13].

Chapter Two: Literature Review

2.1 Literature review

Literature review is an evaluative report of studies found in the literature related to the selected area of the study. The review should describe, summarize, evaluate and clarify the literature. It is important to provide a context for the research, justify the research, show where the research fits into the existing body of knowledge, enable the researcher to learn from previous study and illustrate how the subject has been studied previously. Moreover, it helps to evaluate the depth and breadth of the research in regards to the topic and to develop conceptual framework and the instruments. To write a literature the first thing is synthesizing and evaluating information, identifying the main ideas of the literature and the main argument of the literature review and organize the main points of the literature review and finally literature review is prepared.

2.1.1 Sexual behaviour of people living with HIV/AIDS

More than 80% of the world's HIV infected patients reside in Sub-Saharan Africa. The infectious pool is enormous and the potential for further transmission of HIV arising from the sexual behaviour of those who already know their status cannot be overlooked [13]. Research has shown that many people who learn that they are infected with HIV alter their behaviours to reduce their risk of transmitting the virus [14, 15]. However, there are still men and women living with HIV/AIDS who experience difficulty maintaining safe sex practices and who place partners and themselves at considerable risk of sexually transmitted infections. Studies suggested that as many as one in three people living with HIV/AIDS engage in unprotected intercourse subsequent to knowing that they have HIV [7, 16].

A study conducted in South Africa among people living with HIV/AIDS in clinical care unit indicated that 30% reported one or more unprotected vaginal or anal sex events in the 3 months prior to the study with 27 different partners of which 39% of unprotected sex events were with partners perceived to be HIV negative or HIV status unknown and 5.6% sexually active participants reported having more than one sexual partner [17].

Another study in the same country showed that, among 413 HIV-positive men and 641 HIV-positive women demonstrated that 90% of men and 81% of women reported being sexually active in the 3 months prior to the study and for the entire sample, 40% of men and 18% of women had two or more sex partners during that time [18]. In a retrospective, cross-sectional study of HIV transmission risk behaviour and HIV drug resistance data of 333 HIV-positive

patients, 75 (23%) had unprotected sex during the 3 months prior to the study, resulting in 1126 unprotected sexual events with 191 partners of whom 155 were believed by patients to be HIV-negative or of unknown status [19].

As the study in Uganda shows, the proportion of PHLWAs that engaged in sexual activity with their husbands or wives was higher (51.3%) than that of PHLWAs that engaged in sexual activity with casual partners (15.8%) and boyfriends or girlfriends (32.9%). The findings also showed that majority of the PLWHAs (57.7%) engaged in sexual activity with one sexual partner while 42.3% engaged in with more than one sexual partner [13].

A study on sexual risk behaviours in a group of HIV-positive patients treated at public hospital HIV clinics in Santiago, Dominican Republic revealed that, among 129 participants, most patients (72.4%) had been sexually active since their HIV diagnosis. 72.8% of sexually active patients used condoms more frequently, 21.7% used condoms with the same frequency and 5.4% used condoms less often following their diagnosis of HIV [20]. Findings from a study conducted in Jimma specialized hospital, Ethiopia, among 705 sexually active people living with HIV/AIDS in the last three months study period indicated that, 169 (24%) of the HIV-positive sample reported having unprotected sex (not using a condom) during their most recent sexual intercourse. Sixteen of the unprotected sex events (9.4%) were with partners perceived to be HIV-negative and 65 (38.5%) with partners unknown HIV status [21].

In respect to life sexual partnerships prior to testing positive, from a study conducted in Addis Ababa public hospital disclosed that 293 (48.8%) responded they had one sexual partner, 162 (27.0%) two sexual partners and the rest 146 (24.3%) three or more partners. Before testing positive, 354 (58.9%) were married, 218 (36.3%) were unmarried, 30 (2.2%) were divorced, 10 (1.7%) widowed and the rest 6(1%) were separated.

In relation to their marriage before testing positive, most multiple sexual partnerships were among unmarried respondents (150), followed by those who were married (137) and the rest (21) were divorced, separated or widowed. With regards to condom utilization before testing positive, 0.8% reported as they used condoms in a consistent manner (always), while about 68.6% had never used a condom and the rest were irregular users [14].

2.1.2 Socio-demographic characteristics and risky sexual practice

The findings from a study that examined sexual behaviour of PLWHAs on ART in India, established that 61 percent of respondents reported having had sex during the reference period. Marital status was also strongly associated with sexual behaviour [22].

Socio-demographic variables do not always explain variations in sexual behaviour. A study in South Africa showed no effects of sex, ethnicity, socio economic status, education level, employment status on levels of risk behaviour [17].

But in a study done in South Western Uganda increasing order of magnitude, separated/divorced, never married, married polygamous and married monogamous were significantly more likely to be sexually active compared to the widowed which leads to encounter in risky sexual practice.. Respondents with more education and in the higher income brackets were also more likely to be sexually active. [23]

2.1.3 Social factors and risky sexual practice

A study conducted in Croatia showed that alcohol use before sex was reported by 36 (23%) men in the previous six months, but only 6 (16%) reported use in greater than 50% of encounters. Six (17%) women reported alcohol use before sex and none reported use in greater 50% of encounters. Thirty percent of men reported illegal drug use before sex but only 3% of them reported it more than 50% of the time; none of the woman reported this behaviour (5).

In a study on reproductive health needs of 454 PLWHA in Southern Nations Nationalities and Peoples, 53 of 454 of respondents (11.7%) reported that they consumed alcohol during the course of ARV treatment. Of these, 47.2%, had used it on a daily basis, and 28 (52.8%) had used it once in two weeks. Thirty two (7%) of the study subjects also reported that they use other substances like *khat*, *shisha* and smoking during the course of ARV treatment. Among those users the commonly used substances were cigarettes (84.45%), *Khat* (43.8%) and *shisha* (6.3%) and this study revealed that those who reported alcohol use were found to have a six fold increased odds of practicing current risky sexual behaviour compared to non-users [24]. In the Dominican Republic, among 59 respondents who practiced unprotected intercourse, (10.2%) of them were due to drink and didn't think of condom use [20].

There is also growing evidence that stigma and discrimination contribute to risky behaviours in HIV positive as that acting as HIV negative individuals. Study from France based on a large representative sample of PLWHA shows that perceived stigma is associated with risky health behaviours such as unprotected sex [25].

2.1.4 Disclosure of HIV status

Regarding to disclosing of HIV status, study conducted in Uganda AIDS-related stigma cause secrecy about one's HIV status as well as secrecy about past sexual experiences related to

HIV risks. As it is seen in this study, although most of respondents have disclosed their HIV status to their current partners, they have not done so to all their past sexual partners. This is in line with the study conducted by Seth C. Kalichman, on HIV transmission Risk Behaviours of Men and Women Living with HIV-AIDS Prevalence, Predictors, and Emerging Clinical Interventions, which found that some people who have HIV infection do not disclose their HIV status to their entire sex partners. Notifying past sex partners about testing HIV sero positive is less common [26].

While Crepaz, [9] did not find an association between disclosing HIV status and lower condom use, but recent studies have found an association between nondisclosure and rates of multiple partners and unprotected sex in some settings. More research may be needed to sort out these inconsistent findings [19]. Other studies show that, disclosure of HIV status is often associated with a marked anxiety and fears of rejection, which hinders safe sex. [11]

In this study disclosure, although is mostly beneficial for participants and their relationships as it plays a central role in sustaining safe sex, but by itself appears insufficient to guarantee protected sex, due to other factors and cultural norms like the desire of children that influence sexual risk behaviours [13]. The findings from the study showed that there was a significant relationship between status disclosure and the sexual behaviour of the PLWHA. The findings further revealed that 40.8% of the PLWHA who were faithful and used condoms disclosed their status to their partners. Only 21.1% of the partners who were not faithful and did not use condoms during the reference time disclosed their status. Non status disclosure (12%) was highly observed amongst PLWHAs who were not faithful and did not use condoms with their partners during the reference time.

2.2 Conceptual frame work

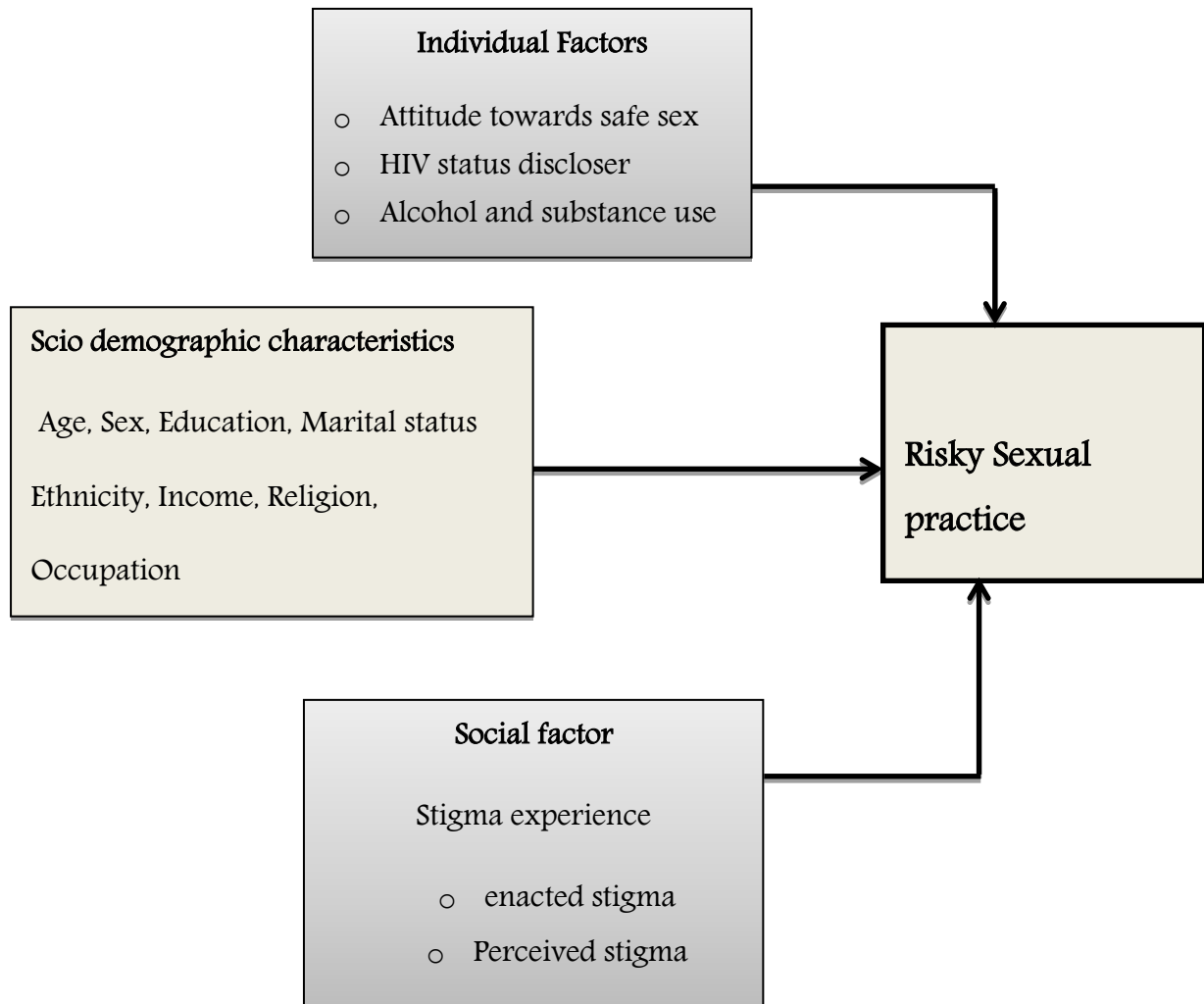


Figure: 1 Schematic diagrams showing conceptual frame work of risky sexual practices

The conceptual framework is adapted from (Dessie et al , 2009)

The conceptual framework represents factors when studying risky sexual practices among HIV positive persons taking ART. Each component was considered as making an independent contribution to predict the sexual risky behaviour among people living with HIV who are on ART .It illustrates the relationship between different variables and how they bring an impact on risky sexual practices. The dependent variable is risky sexual practices. With regard to independent factors; socio demographic factors include age, religion, sex, marital status, and ethnicity, and religion, occupational and educational status. Likewise attitude towards safe sex, HIV status disclosure, alcohol and substance use are individual factors in addition, stigma experience the other factor which is under social factors. These independent factors might influence ones intentions to engage in risky sexual practices.

2.3 Significance of the study

The population of PLWHA is the key in preventing the spread of HIV. While targeting the entire population, more effort should be directed to PLWHA for the sake of protecting them from being re-infected with probable resistant HIV strain at the same time halt transmission of HIV to others.

The results of this study will contribute towards designing HIV prevention interventions incorporating specific needs of PLWHA.

It helps health planners to focus on the identified findings which influence risky sexual practices.

It helps all stakeholders to establish and demonstrate transparency and shared responsibility on activities that could decrease risky sexual practices.

It creates information for researchers to work on the identified factors related with unprotected sex in order to bring changes ART clients.

Furthermore, the study could possibly generate information in the area of the topic for large scale researchers to investigate further empirical indications to control those factors which are attributable to risky sexual practices of ART attendants in the study area.

Chapter Three: Objectives of the Study

3.1 General Objective

To assess risky sexual practice and associated factors among people living with HIV/AIDS, those who are on ART in Addis Ababa public health centers.

3.2 Specific Objectives

- To assess the prevalence of the risky sexual practices among adult ART attendants.
- To identify factors those are associated with the risky sexual practices among adult ART attendants.

Chapter Four: Methods and materials

4.1 Study area and period

The study was conducted in Addis Ababa, the capital city of Ethiopia which covers an area of 520.14 km². According to the City Government of Addis Ababa the total population is 3,149,999 with a male to female ratio of 47.64 % & 52.36 % and with an average of 4.1 persons per household. The health institutions in the city comprise a total of 43 hospitals, 32 health centers, 109 special clinics, 169 higher clinics and 146 medium clinics. Among these currently ART service is provided in 31 health facilities which are under Addis Ababa Health Bureau and a total of 80,071 HIV positive adults visiting these health facilities and have been taking ART in 2012/2013 fiscal year. This study was conducted in randomly selected health institutions from October 05 -November 05 /2013 in Addis Ababa.

4.2 Study design

A facility based cross sectional study was conducted to assess risky sexual practices and associated factors among ART clients towards HIV/AIDS.

4.3 Source Population

The source population was all HIV positive clients of age above 18 who started ART in health institution twelve months prior to this data collection

4.4 Study population

The study population sampled HIV positive clients of age above 18 who are on ART in the respective health institutions during the study period

4.5 Inclusion and exclusion Criteria

Inclusion criteria: HIV positive clients whose age was above 18, sexually active and have started ART 12 months before the data collection in the selected health centers of Addis Ababa.

Exclusion criteria: HIV positive clients who were ill and unable to respond during data collection were excluded from the study.

4.6 Sample size determination and Sampling techniques

The sample was calculated using single population proportion and the formula is just displayed below:

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

Prevalence of risky sexual practice after initiation of ART (unprotected sex) (p) is(36.9%)

Level of significance to be 5% ($\alpha = 0.05$), $Z_{\alpha/2} = 1.96$ and

Margin of error to be 5% ($d = 0.05$).

The formula for calculating the sample size is:

$$n = \frac{(1.96)^2 \times (0.369 \times (1-0.369))}{(0.05)^2} = \frac{3.84 \times (0.369 \times 0.631)}{0.0025} = \frac{0.894}{0.0025} = 358$$

Non response rate = $0.05 \times 358 = 17.9 = 18$

P = Prevalence of risky sexual practice (unprotected sex) after initiation of ART

d = Marginal error between the sample and population (0.05)

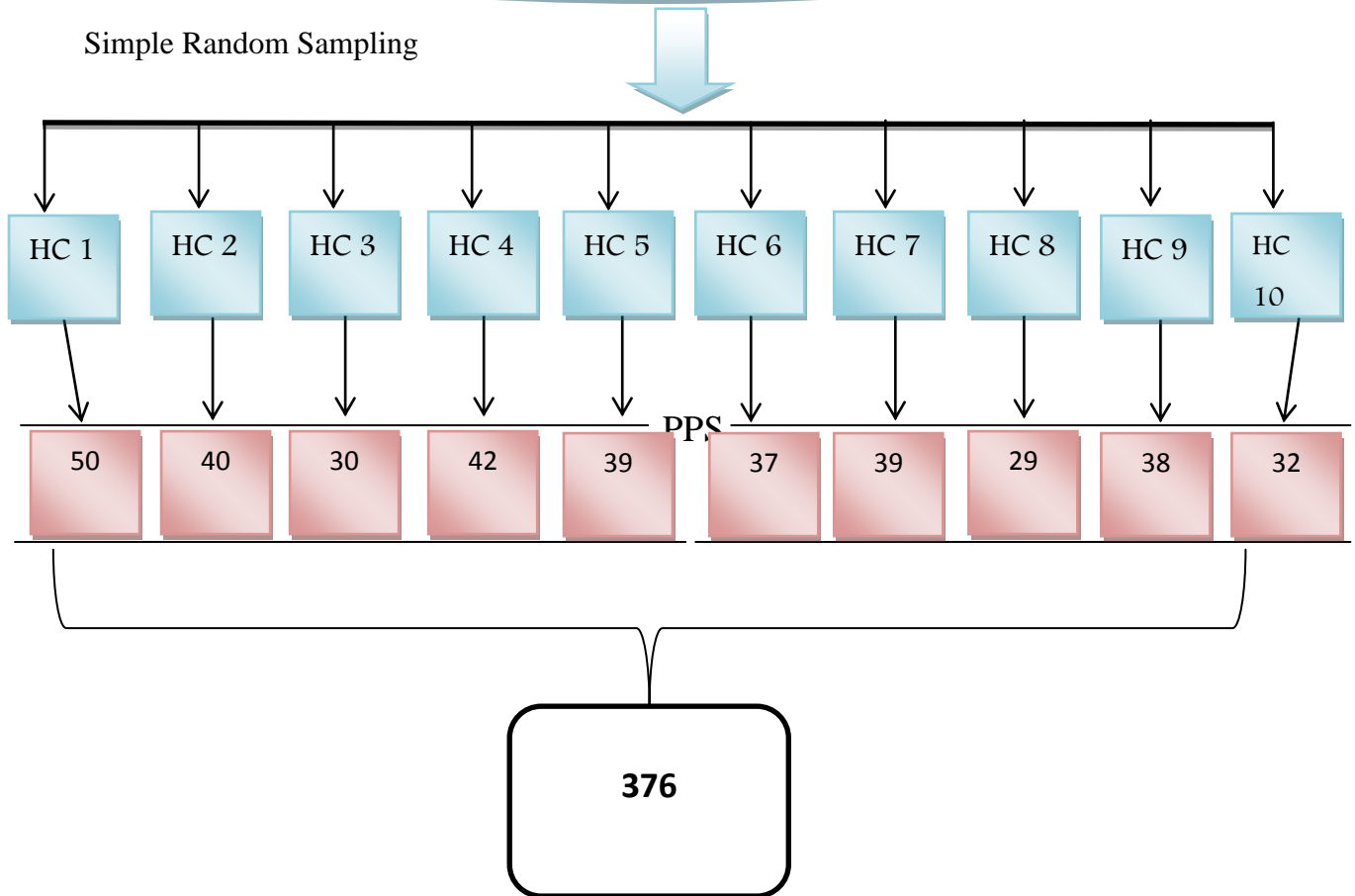
Z = Critical value at 95% confidence interval (1.96)

The non-response rate of 5% was added, that is 0.05×358 which is equal to 18. Therefore, the sample size for the research is $18 + 358 = 376$

The study was conducted on randomly selected 10 health centers out of 31 health centers which were offering ART. Private health sectors were excluded due to the assumed socio economic differences between those who utilize private health institutions and public health institution. In addition to this ART service were not well developed and expanded in these private health institutions. Prior to starting of data collection be, the total numbers of clients who were on ART during the study period were identified and the total samples for each facility were proportionally allocated to the size of adult ART clients who were taking ART service in the respective health institution. Finally, every client who came for ART services, fulfilled the inclusion criteria and consented to participate was interviewed till the required sample size was met.

Thirty one health centers those are providing ART

Simple Random Sampling



Key: PPS = probability proportional to size

HC = health center

Name of health centers

1. Kotebe health center	1800	6. Saris health center	1333
2. Yeka health center	1441	7. Addis ketema health center	1405
3. Woreda 9 kolfekeranyo	1080	8. Kirkos health center	1045
4. Bole 17 health center	1512	9. Akaki health center	1381
5. Arada health center	1405	10. Woreda 9 kolfekeranyo	1152

Figure 2: Schematic representation of random sampling technique of the study in Addis Ababa health centers (N=13,613)

4.7 Variables

4.7.1 Dependent variables

- ✚ Risky sexual practice

4.7.2 Independent Variables

- ✚ Socio demographic characteristics

Age, Sex, Education, Marital status, Ethnicity, Income, Religion and Occupation

- ✚ Individual factors

- Attitude towards safe sex
- HIV status disclosure
- Alcohol and substance use

- ✚ Social factor

- Stigma experience

4.8 Operational definitions

Socio demographic characteristics: such as, age, sex, educational status, area of residence, occupation, religion, income and marital status.

Attitude towards safe sex: measured by summed score of items which are related to attitude towards safe sex on 5 -point Likert's scale approaching to high scores considering as positive attitude and low scores as negative attitude towards safe sex. Responses were made on a five-point Likert's scale, ranging from 1 (strongly agree) to 5 (strongly disagree) with a value of 3 as don't s know.

HIV status discloser: the act of informing another person or persons of the HIV positive status of an individual. It occurs in a context whereby HIV testing and counselling remains confidential and HIV infected individuals were given the responsibility of disclosing the test results to their sexual partners measured by four items with 'Yes' and 'No' answers then among these, if the respondents answer three questions and above as 'Yes' is considered as disclosing his/her HIV results [14].

Alcohol and Substance use: Use of at least any one of the following substances: alcohol, Khat, cigarette, Shisha, Hashish or drug that are assumed to affect level of thinking and increase risk of involving in risky sexual behaviour. The respondents those use one of the substances and/or alcohol is considered as users [14].

Substance use: Using of substances (drugs and chemicals) for any reason other than medical Purposes so that respondents those use one of the substances is considered as users.

Stigma experience: has been categorized in two dimensions, perceived and enacted.

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.

Perceived stigma: Is expressed when a person either experiences or fears discrimination due to being or becoming HIV-positive.

Risky sexual practice: Inconsistent use of condom or no condom protected sex with HIV negative, positive or unknown-status partners in the previous three months [14]. In this research this variable measured by 'Yes', 'No' and I don't know answer if the respondent answer as 'Yes' considered as engaged in risky sexual practice.

4.9 Instruments and Measurements

Pretested and structured questionnaire were used. The instrument was translated to local Amharic language from English language and back to English language by different individuals who were blind to the original version of the questionnaire in order to facilitate reliable responses to underline questions and keep the original meaning of the instrument.

Study questionnaire for each items are adopted and adapted from previously conducted similar study [14, 16] and modified to the local context. The instrument contains six parts: starting from socio demographic status of the clients (08 items). Next to this, stigma assessed by four questions addressing enacted stigma (stigmas encountered since testing positive related to avoidance, social rejection and shame) with Yes/No response and six questions addressing perceived stigma (any felt stigmas related to avoidance, social rejection, and shame) with Yes or No responses derived from study on predictors of stigma among people living with HIV/AIDS [25]. Yes was coded as (1) and No and I don't know as (0). Each respondent's score was summed and those score high above the mean were considered as stigmatized and felt stigmatization [14]. Risky sexual practice which is assessed by condom- unprotected sex with either HIV-negative, positive or unknown sero-status partners in the previous three months; alcohol and substance use (04 items) and HIV status disclosure (04 items) with a combination of response formats of multiple responses and 'Yes', 'No' and 'don't know' assuming score of 'yes'=1, either of 'don't know' or 'No' = 0 and for every correct item there will be a reversed incorrect item .

Attitude towards safe sex (10 items) , all of which eliciting responses on a five-point Likert's scale format ranging from 'strongly disagree' to 'strongly agree' was included. Each of the responses scored: 'strongly disagree'=1, 'disagree'=2, 'undecided/not sure'=3, 'agree'=4 and 'strongly agree'=5.

After reversed for negatively worded items to positively worded items, score was summed for each respective factors and construct validity was ensured. To ensure reliability of the scale, internal consistency of items was seen separately for each construct using Chronbach's alpha score of $\geq 70\%$ as cut off point.

4.10 Data Collection Procedure

The data was collected for 30 days in each study health centers. And it was collected through face to face interview with patients who were on ART in those selected health enters by using the instrument. Ten trained nurses were involved in data collection and were supervised by 3 masters' students. For all data collectors and supervisors one day training was given on data collection instrument, interview technique and importance of taking informed consent before data collection starts. Each day data was checked for completeness and consistency.

4.11 Data Entry and analysis

All filled questionnaires were checked for completeness and consistency, edit manually and entered into SPSS statistical package version 16.0 for further analysis. Frequencies, proportion and summary statistics were used to describe the study population in relation to relevant variables and presented by using tables. Bivariate analysis was used primarily to check which variables have association with the dependent variable then variables found to have p-value of less than 0.05 were entered in to multiple logistic regressions for controlling the possible effect of confounders. Finally the variables which have significant association (P-value < 0.05) were identified on the basis of OR with 95% CI.

4.12 Data quality assurance

The quality of data were ensured by using a standardized instruments and pre-testing of the questionnaires in one of those health facilities other than the selected ones on 5% of the participants, and by giving training for the data collectors and supervisors before the actual data collection performed. Appropriate modifications were made after reviewing the pre-test result and overall supervision was made by the principal investigator. Every day after data collection, questionnaires were reviewed and checked for completeness, accuracy and clarity

by the supervisors and principal investigator and the necessary feedback was offered to data collectors prior to collect the next data.

4.13 Ethical clearance

Letter of ethical clearance was obtained from Research Ethics Committee of Jimma University. Then formal letter was addressed to Addis Ababa Administrative Health bureau, Sub city health offices and the respective health centers. All respondents were asked for their willingness of participation in the study and verbal consent was obtained after convincing respondents' issues of confidentiality. Questionnaire was labelled with ID number not by name in order to keep its confidentiality.

4.14 Dissemination of the result

The research defended for the fulfilment in Master of Public Health in health education and behavioural sciences at Jimma University. The result of this study will be submitted to Jimma University department of health education and behavioural sciences. In addition to this, it will be send to Addis Ababa City administration health bureau and the respective Sub cities and health centers.

Chapter Five: Results

5.1 Results

5.1.1 Socio-demographic Characteristics

A total of 376 respondents participated in the study. The majority of the respondents, 244 (64.9 %), were females while 132 (35.1%) were males. The mean age of the total respondents was 35.28 (SD 8.94).Majority of the respondents(34.6%) and (31.9%) were in the age group 25-31 and 32-38 respectively. The other respondents 18.4% were in the age group 39-45 and10.4% were 46 and above were as least number 4.8% were in the age group 18-24.In their ethnicity, about half of them, 191 (50.8%) were Amhara, 97 (25.8%) were Oromo, 27 (7.2%) were Tigrie, 50 (13.3%) were Guraghe and the rest were other ethnic groups. About one third, 84 (22.3 %), attended grades 9-12, whereas 119 (31.6%) attended grades 1-8 and 39 (10.4%) were above grade 12.The rest 44(11.7%) were able to read and write and 49(13%) unable to read and write. Orthodox followers were about 291 (77.4 %) followed by Muslim 41 (10.9 %) and the rest were Protestant and Catholic attendants. Regarding their marital status, 196 (52.1%) were married, 74 (19.7%) never married and the rest were divorced, widower or widowed. In respect to their employment status, 255 (67.9 %), were employed the rest were unemployed. With regard to income 26.1 % had with in an income category of 150-300 and 651-1200 ETB. Similarly, 24.5% and 23.4% had with in an income category of 1201-6000 and 301-650 ETB respectively (Table 1).

Table 1: Socio-demographic characteristics of the respondents among ART attendants in selected Health centers of Addis Ababa, 2013.

Characteristics	Frequency (N =376)	Percent (%)
Sex		
Male	132	35.1
Female	244	64.9
Age		
18-24	18	4.8
25-31	130	34.6
32-38	120	31.9
39-45	69	18.4
>=46	39	10.4
Ethnicity		
Amhara	191	50.8
Oromo	97	25.8
Tigre	27	7.2
Guraghe	50	13.3
Other*	11	2.9
Educational status		
Unable to read and write	49	13.0
Able to read and write	44	11.7
Grade1-8	119	31.6
Grade9-10	84	22.3
Grade11-12	41	10.9
Above grade12	39	10.4
Religion		

Orthodox	291	77.4
Protestant	32	8.5
Muslim	41	10.9
Other **	12	3.2
Marital status		
Married	196	52.1
Single	74	19.7
Widow	44	11.7
Widower	11	2.9
Divorced	51	13.6
Occupational status		
Employed	255	67.9
Unemployed	121	32.1
Income status		
150-300	98	26.1
301-650	88	23.4
651-1200	98	26.1
1201-6000	92	24.5

(*- indicates wolyta, dorzie,siltie,gamo,hadya)

(**-indicates Catholic,Adventist, no religion)

5.2 Individual factors among ART attendants

From individual factors, attitude towards safe sex of 376 individuals, the mean score was 26.55 with a standard deviation of 3.94. The range was 25, with the highest score = 38, and the lowest score = 13 (Table 2).

Table 2: Attitude towards safe sex of respondents among ART attendants in selected Health centers of Addis Ababa, 2013.

Variable	frequency	Mean	Standard deviation	Range
Attitude sum	N=376	26.55	3.94	25

Regarding to alcohol consumption one six, 61 (16.2 %) of the respondents had a history of alcohol consumption in the last three months; among this the majority 13.3% used alcohol two or fewer times per week and the rest three or more times. Concerning, substance use 23.8% had a history of substance use and 74 (19.7%) used *khat* and the remaining 9(2.5%) and 6(1.6%) used cigarettes and shisha respectively. This finding further revealed that about HIV sero status disclosure about half of the respondents 56.1% were disclosed their sero status to their friends and family whereas as 165 (43.9%) were not disclosed (Table 3).

Table 3: HIV status disclosure, alcohol and substance use of respondents among ART attendants in selected Health centers of Addis Ababa, 2013.

Variable		Frequency (N=376)	Percent
Alcohol and substance use			
Alcohol use	Yes	61	16.2
	No	315	83.8
Khat	Yes	74	19.7
	No	302	92.3
Smoking	Yes	9	2.4
	No	367	97.6
Shisha	Yes	6	1.6
	No	374	99.5
HIV status disclosure			
	Yes	211	56.1
	No	165	43.9

5.3 Social factor

5.3.1 Stigma experience

Regarding to stigma experience 122(32.4) % of the respondents had experienced a history of stigma who were under enacted stigma whereas 254(67.6%) had protected from stigmatization. Similarly, 171(45.5%) who were under perceived stigma were felt in stigmatization (Table 4).

Table 4: Stigma experience of respondents among ART attendants in selected Health centers of Addis Ababa, 2013.

Variable	Frequency (N=376)	Percent
Stigma experience		
Enacted stigma		
Stigmatized	122	32.4
Not stigmatized	254	67.6
Perceived stigma		
Stigmatized	171	45.5
Not stigmatized	205	54.5

5.4 Risky sexual practice (inconsistent use of condom) among HIV positive ART attendants

The finding indicated that thirty point four 115(30.4%) of the respondents involved in practicing risky sexual practice the rest were not engaged in risky sexual practice (Table 5).

Table 5: Risky sexual practices among ART attendants in selected Health centers of Addis Ababa, 2013

Variable	Frequency	Percent
Inconsistent condom use		
Yes	115	30.4
No	261	69.6

5.2 Bivariate logistic regression analysis

5.2.1 Bivariate analysis of socio-demographic characteristics and risky sexual practice

A total of 115(30.4%) of the clients were experienced inconsistent condom use. Among this 51(44.3%) of males and 64(55.7%) of females had engaged in this risky sexual practice in the last three months of the study. In comparison with female clients males were 1.8 times to engaged in risky sexual practice as compared with females (COR=1.799, 95% CI: 1.144, 2.829).Majority (34.6%) of the clients were in the age group 25-31.Similarly, 31.9% of the clients were in the age group 32-38.The age group 39-45 had an odds of (COR=1.291, 95% CI: 0.692, 2.408) as compared with the age group 25-31. In contrast with the above result clients whose age 46 and above had odds of (COR=0.951, 95% CI: 0.430, 2.103).Regarding to educational status clients who attended grade 11-12, unable to read had an odds of (COR=0.559, 95% CI: 0.235, 1.328) and (COR=0.748, 95% CI: 0.350, 1.598) respectively as compared with clients who were in grade 1-8. Similarly, clients who were grades9-10and clients above grade12 had an odds of (COR=1.052, 95% CI: 0.573, 1.929) and (COR=1.153, 95% CI: 0.533, 2.495) respectively as compared with grade 1-8.In line with marital status single and widow clients were less likely engaged in risky sexual practices as compared with married ones with an odds of (COR=0.320, 95% CI:0.165,0.621)and (COR=0.284,95% CI: 0.120, 0.669) respectively. Respondents of Oromo ethnic group were less likely engaged in risky sexual practice as compared with Amhara with an odds of (COR=0.524,95% CI:0.294,0.933).Concerning income, clients with an income category 301-650 ETB had odds of (COR=1.432, 95%CI: 0.764, 2.686) as compared with an income category 150-300ETB. Likewise, clients with an odds of (COR=1.168, 95% CI: 0.619, 2.205) laid in the income category 1201-6000ETB.The unemployed clients had an odds of (COR=0.970, 95% CI: 0.606, 1.554) as compared with the employed ones (Table 6).

Table 6: Bivariate analysis of each socio demographic characteristics with risky sexual practice among ART attendants in Addis Ababa health centers, 2013

Variable	Inconsistent condom use		COR (95%CI)
	No	Yes	
Sex			
Male	81(31%)	51(44.3%)	1.799(1.144-2.829)*
Female	180(69%)	64(55.7%)	1.00
Age			
18-24	12(4.6%)	6(5.2%)	1.211(0.423-3.460)
25-31	92(35.2%)	38(33.0%)	1.00
32-38	84(32.2%)	36(31.3%)	1.038(0.603-1.787)
39-45	45(17.2%)	24(20.9%)	1.291(0.692-2.408)
>=46	28(10.7%)	11(9.6%)	0.951(0.430-2.103)
Educational status			
Unable to read and write	37(14.2%)	12(10.4%)	0.748(0.350-1.598)
Able to read and write	25(9.6%)	19(16.5%)	1.752(0.859-3.576)
Grade1-8	83(31.8%)	36(31.3%)	1.00
Grade9-10	57(21.8%)	27(23.5%)	1.052(0.573-1.929)
Grade11-12	33(12.6%)	8(7.0%)	0.559(0.235-1.328)
Above grade12	26(10.0%)	13(11.3%)	1.153(0.533-2.495)
Marital status			
Married	117(44.8%)	79(68.7%)	1.00
Single	61(23.4%)	13(11.3%)	0.320(0.165-0.621)*
Widow	34(14.2%)	7(6.1%)	0.284(0.120-0.669)*
Widower	9(3.4%)	2(1.7%)	0.333(0.070-1.584)
Divorced	37(14.2%)	14(12.2%)	0.568(0.288-1.119)
Religion			
Orthodox	201(77%)	90(78.3%)	1.00
Catholic	8(3.1%)	2(1.7%)	0.565(0.118-2.712)
Protestant	23(8.8%)	9(7.8%)	0.884(0.393-1.987)
Muslim	27(10.3%)	14(12.2%)	1.171(0.586-2.340)

Ethnicity			
Amhara	127(48.7%)	64(55.7%)	1.00
Oromo	77(29.5%)	20(17.4%)	0.524(0.294-0.933)*
Tigre	16(6.1%)	11(9.6%)	1.386(0.607-3.162)
Guraghe	35(13.4%)	15(13.0%)	0.864(0.439-1.699)
Other	6(2.3%)	5(4.3%)	1.680(0.494-5.717)
Occupational status			
Employed	178(68.2%)	77(67.0%)	1.00
Unemployed	83(31.8%)	38(33.0%)	0.970(0.606-1.554)
Income status			
150-300	72(27.6%)	26(22.8%)	1.00
301-650	58(22.2%)	30(26.3%)	1.432(0.764-2.686)
651-1200	67(25.7%)	31(27.2%)	1.281(0.690-2.378)
1201-6000	67(24.5%)	27(23.7%)	1.168(0.619-2.205)

(*- p value <0.05)

5.2.2 Individual factors and risky sexual practices

Regarding to individual factors attitude towards safe sex didn't reliable when reliability of the scale, internal consistency of items was seen separately for the items using Chronbach's alpha score of $\geq 70\%$ as cut off point done.

In line with HIV status disclosure of respondents had an odds (COR=0.795, 95% CI: 0.511, 1.235) were not disclosed their HIV status to their parents and friends as compared with clients who were disclosed their HIV status. Those clients who consumed alcohol (COR=2.048, 95% CI: 1.168, 3.593) had about two times at risk as compared with clients who did not took alcohol. With regard to substance use, individuals who had a history of khat had an odds of (COR=1.029, 95% CI: 0.594, 1.784) as compared with individuals who had not a history of khat. Similarly, individuals who had a history of smoking and shisha had (COR= 0.642, 95% CI: 0.131, 3.140) and (COR=0.449, 95% CI: 0.052, 3.888) respectively (Table 7).

Table 7: Bivariate analysis of individual factors with risky sexual practices among ART attendants in Addis Ababa health centers, 2013

Variables	<u>Inconsistent condom use</u>		COR (95% CI)
	No	Yes	
HIV status disclosure			
Yes	151(57.9%)	60(52.2%)	1.00
No	110(42.1%)	55(47.8%)	0.795(0.511-1.235)
Alcohol use			
Yes	34(13.0%)	27(23.5%)	2.048(1.168-3.593)*
No	227(87.0%)	88(76.5%)	1.00
Khat			
Yes	51(19.5%)	23(20.0%)	1.029(0.594-1.784)
No	210(80.5%)	92(80%)	1.00
Smoking			
Yes	7(2.7%)	2(1.7%)	0.642(0.131-3.140)
No	254(97.3%)	113(98.3%)	1.00
Shisha			
Yes	5(1.9%)	1(0.9%)	0.449(0.052-3.888)
No	256(98.1%)	114(99.1%)	1.00

(* - P value <0.05)

5.2.3 Social factor and risky sexual practice

Regarding to stigma experience 45(39.1%) of respondents who were under enacted stigma were stigmatized with an odds (COR=0.651, 95%CI: 0.411, 1.031) engaged in risky sexual practice as compared with respondents who were not stigmatized. Similarly, respondents who were under perceived stigma 58(50.4%) of them were felt in stigmatization as well as engaged in risky sexual practice with an odds of (COR=0.750, 95% CI: 0.483, 1.165) as compared with respondents who were not felt in stigmatization (Table 7).

Table 8: Bivariate analysis of social factors with risky sexual practices among ART attendants in Addis Ababa health centers, 2013

Variable	<u>Inconsistent condom use</u>		COR (95%CI)
	No	Yes	
Stigma experience			
Enacted stigma			
Stigmatized	77(29.5%)	45(39.1%)	0.651(0.411-1.031)
Not stigmatized	184(70.5%)	70(60.9%)	1.00
Perceived stigma			
Stigmatized	113(43.3%)	58(50.4%)	0.750(0.483-1.165)
Not stigmatized	148(56.7%)	57(49.6%)	1.00

5.3 Independent factors of risk sexual practice

5.3.1 Multiple logistic regression analysis of variables with risky sexual practice

Factors that are independently associated with risky sexual practice were explored by using multivariate analysis. Those variables which showed significant association with P value less than 0.05 with risky sexual practices from socio-demographic characteristics and individual factors in bivariate analysis were included for the multivariate analysis. Variables retained in the final models were ethnicity, marital status and alcohol consumption associated with unprotected sex. From marital status single and widowed respondents were significantly associated with odds of risk (AOR=0.299, 95%CI: 0.151, 0.594) and (AOR=0.316, 95% CI: 0.129, 0.778) respectively. Ethnicity also showed significant relationship with risky sexual practice. (AOR=0.499, 95%CI: 0.274, 0.907). When we consider individual factors alcohol consumption was significantly associated with odds of (AOR=2.008, 95%CI: 1.070, 3.768) (Table 9).

Table 9: Multiple logistic regression analysis of socio demographic characteristics and individual factors with risky sexual practice (inconsistent condom use) among ART attendants in Addis Ababa health centers, 2013

Variables	<u>Inconsistent condom use</u> Yes(%)	COR (95%CI)	AOR (95%CI)
Ethnicity			
Amhara	64(55.7%)	1.00	1.00
Oromo	20(17.4%)	0.524(0.294-0.933)*	0.499(0.274-0.907)*
Tigre	11(9.6%)	1.386(0.607-3.162)	1.732(0.718-4.183)
Guraghe	15(13.0%)	0.864(0.439-1.699)	0.928(0.455-1.891)
Other	5(4.3%)	1.680(0.494-5.717)	1.691(0.480-5.953)
Marital status			
Married	79(68.7%)	1.00	1.00
Single	13(11.3%)	0.320(0.165-0.621)*	0.299(0.151-0.594)*
Widow	7(6.1%)	0.284(0.120-0.669)*	0.316(0.129-0.778)*
Widower	2(1.7%)	0.333(0.070-1.584)	0.251(0.050-1.266)
Divorced	14(12.2%)	0.568(0.288-1.119)	0.637(0.315-1.287)
Alcohol use			
Yes	27(23.5%)	2.048(1.168-3.593)*	2.008(1.070-3.768)*
No	88(76.5%)	1.00	1.00

* Statistically significant (P<0.05).

Chapter Six: Discussion

Many people who are HIV positive alter their behavior to reduce their risk of transmitting the virus [18]. However, among those who remain sexually active, many complain of having trouble in using condom regularly and there are still men and women living with HIV who encountered difficulty in maintaining safe sex [27, 28]. This study showed that 30.4% of the respondents had engaged in risky sexual practice, inconsistent use of condom during sexual intercourse within the three months prior to the study. This result is consistent with the study conducted in South Africa and Kenya which had a prevalence of 30 % and 28% respectively. This may be due to similarity in geographical area. In contrary, it is higher than the study which was conducted in United States which accounts a prevalence of 23% [21, 30, and 31]. This may be attributed in different culture, economy and life style of these two countries. Other study conducted in Dar Es Salaam, Tanzania showed that prevalence of unprotected sex was 40.0% regardless of sex [32]. This revealed that, it is higher as compared with my study. In comparison with studies conducted in Addis Ababa and Uganda with a prevalence of 36.9% and 54.5% respectively is higher than the prevalence from my study [14, 23].

Independent variables, ethnicity, marital status and alcohol consumption showed significant relationship with risky sexual practice in multiple logistic regressions. Marital status, in this study half of the respondents were married which accounts 52.1%. The remained were single, widowed and divorced. There was a significant relationship established between marital status and the risky sexual practice of respondents who were taking ART. This also supported by a study conducted in Central Uganda which is significant relationship with the risky sexual practice [13]. With this study, married respondents were more likely engaged in risky sexual practices as compared with single and widowed respondents. This might be due to the high intention to have a child and half of the study subjects laid in marital relationship. Being single showed significant association like that of a study conducted in South Western Uganda [23]. In addition to this widowed individuals were significant relationship with risky sexual practice. But in studies conducted in South Africa and Ethiopia being widowed did not show any significant association with risky sexual practices [29, 24].

The prevalence of alcohol consumption in my sample is 16.2%. This leads in sexual situations to have more engagement of risky sexual practice. Studies have established that engaging in sex under the influence of alcohol can weaken judgment, compromise power relations, and increase risky sexual behaviour. In relation to this, about one sixth of the respondents

admitted consumption of alcohol in the previous three months. Those who used alcohol in the last three months had about two fold higher to have risky sexual practice than those who did not use alcohol. Similarly, in a study conducted in Addis Ababa showed that consumption of alcohol in the last three months had two times more likely to have risky sexual practice than those who did not use alcohol in the bivariate analysis [14]. This also supported by research conducted in SNNPRG that those who reported alcohol use were found to have six times increased in practicing risky sexual behaviour compared to non-alcohol users [24].

Furthermore, in a study conducted in South Africa on Sexual risk behaviour among HIV-positive individuals in clinical care in urban KwaZulu-Natal, consumption of alcohol had significant relationship with commission of risky sexual practice which was similar in study conducted in South Western Uganda, [21, 23]. Similarly, in a study conducted in Papua New Guinea alcohol consumption statistically associated with risky practice. Individuals in this study had about two times to have risky sexual practice as compared to non-alcohol users [33]. This finding was very similar with my study which showed those individuals who were consumed alcohol had 2 times to have this practice. This may be due to alcohol use can hinder the think and decision making ability about safe sex.

This study found that there was a significant association between having risky sexual practice and ethnicity, marital status and alcohol consumption in the last three months of the study. On the other hand being single and widowed was less likely to engage in risky sexual practices as compared with married couples.

Chapter Seven: Conclusion and recommendation

Conclusion

This study revealed that 30.4% of the respondents continued to have risky sexual practice. This proportion was similar with the study done in South Africa and Kenya which had a proportion of 30% and 28% respectively even a slight difference from Kenyan study. But it was higher proportion from that of a study conducted in United States which accounts a prevalence of 23%. Even though, it was higher from USA study it was lower as compared with studies conducted in Addis Ababa, Dar Es Salaam and Uganda with a proportion of 36.9%, 38.8% and 40 % respectively. The existence of similar prevalence is might be due to similarity in geographical areas. The reason why the prevalence is decreased from previous study of Addis Ababa could be the increment of awareness about risky sexual practice.

Marital status, alcohol use and ethnicity were statistically associated variables. In line with this, widowed and single individuals were less likely engaged in risky sexual practice as compared with married ones. Individuals who were alcohol users had two times to engage in risky sexual practice. This may be due to alcohol use can hinder the think and decision making ability about safe sex. It could be improve the risk of re-infection and infection of HIV by overcoming the predictor variables of risky sexual practice.

Recommendations

For sub cities

- ✚ Experts who are responsible for prevention of disease at this level should follow the existence of proper counselling as well as health education by strengthening supportive supervision and conducting basic and refreshment training for the health providers.

For health providers

- ✚ Health education might be provided to ART clients at their appointments and in follow- up care and other necessary interventions through their counsellors.
- ✚ Health providers should encourage, support and allow clients towards effective utilization of condom.

For researcher

- ✚ Researchers should conduct further studies on the identified factors.

Ministry of health and Addis Ababa City Administration Health bureau should conduct further assessment on married couples why they were more likely engaged in risky sexual practice.

Strength and Limitation

Strength

The study addresses an important area, risky sexual practice and factors related among HIV positive clients. The study findings give an insight for further research in this area and may guide program planners in prevention of transmission and re-infection with HIV among those uninfected and infected respectively.

Limitations

- ✚ The study was a cross sectional design and couldn't address the dynamic nature of sexual behaviour that could be better addressed through longitudinal study.
- ✚ The research addressed sensitive issue of ART clients and the possibility of social desirability bias is unavoidable.

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Annex II. Questionnaire

Participant information sheet and consent form

My name is _____. I am here to study assessment of risky sexual practices and associated factors among patients who are taking ART service in Addis Ababa. You are selected to participate in this study. The information you provide will help to plan on prevention of transmission of resistant strain of HIV and other sexually transmitted infections. The interview takes an average of 30 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to other persons. Your name will not be written on this form, and will never be used in connection with any of the information you tell me. Participation in this survey is voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate fully in this survey since your views are important.

Are you willing to participate in the study? Yes ____ No ____ Ok thanks

Yes may I begin the interview now? YES –Continue

Place of data collection:

Sub city _____ Health Center _____

Date of data collection _____

Name of the data collector _____ Signature _____

I certify that I have filled this questionnaire in accordance with the training I was given and instructions stated in it. I confirm that the information in it is correct.

Name of Supervisor _____ Signature _____

Date Checked _____

1. Socio demographic characteristics

No	Items	Response
101	Sex	1. Male 2.Female
102	Age	_____
103	Educational level	1. Unable to read and write 2. Grade 1-8 3. Grade 9-10 4. Grade 11-12 5. 12+
104	Marital status	1. Married 2. Single 3. Widow 4. Widower 5. Divorced
105	Religion	1. Orthodox 2. Catholic 3. Protestant 4. Muslim Other (Specify) _____
106	Ethnicity	1. Amhara 2. Oromo 3. Tigre 4. Guragae Others (specify)_____
107	Occupation	1. Government employee 2. Private employee 3.Daily laborer 4.Merchant Other (specify)_____
108	Monthly Income	_____ Eth. Birr

2. Individual Factors

2.1 Attitude towards safe sex among HIV positive ART attendants

Instructions: Write the appropriate number reflecting the respondent opinion as follows:

Strongly agree(SA)=1, Agree(A)=2, Undecided(U)=3, Disagree (D)=4, Strongly disagree(SD)=5

No	Item	SA	A	U	D	SD
201	Getting infected with another strain of HIV would cause little additional harm to my health.					
202	It would be more difficult to treat my HIV disease if I got another strain of HIV					
203	If my viral load is very low, I do not need to be concerned about infecting a person I have sex without using a condom.					
204	Getting infected with a sexually transmitted disease would cause little additional harm to my health.					
205	Condom as protection is an effective method for preventing the spread of HIV and other sexually transmitted disease					
206	Condoms is an excellent means of protection from HIV infection					
207	Condoms as protection is uncomfortable for both partners					
208	Condoms as protection decrease(ruin) the sex act					
209	There is reduced concern to practice safe sex because of ARV Rx.					
210	Condom as protection is unreliable.					

2.2 Information on alcohol and substance use among HIV positive ART attendants

301	During the last three month have you ever drunk alcohol?	1.Yes 2.No
302	if you answer is ,yes, how many times per week have you consumed in the last week	1.once per week 2.twice per week 3.three times per week 4.four times per week 5.five times per week 6.times per week 7.seven times per week 8.above seven times per week
303	During the last three month did You takedrug or any substance?	1.Yes 2.No
304	Which of the following substances have you tried?	
	Khat	1.Yes 2.No
	Smoking	1.Yes 2.No
	Hashish	1.Yes 2.No
	Other(specify)_____	

2.3. Assessing HIV status discloser among HIV positive ART attendants

No	Item	Response
401	Do you disclose your HIV status to your partner	1. Yes 2. No 3. I don't know
402	Do you disclose your HIV status for your family	1. Yes 2. No 3. don't know
403	Haven't you fear of to disclose your HIV status?	1. Yes 2. No 3. I don't know
404	Disclosing your HIV status is advantageous for you and your partner?	1. Yes 2. No 3. I don't know

4. Question assessing stigma and among HIV positives ART attendants

No	Item	Response
501	Because you are HIV positive children kept away from you	1. Yes 2. No 3. I don't know
502	Because you are HIV positive you had to move from your place	1. Yes 2. No 3. I don't know
503	Because you are HIV positive you lost a friend	1. Yes 2. No 3. I don't know
504	Because you are HIV positive Someone refused to hug you	1. Yes 2. No 3. I don't know
505	Because you are HIV positive you felt people avoided you	1. 1.Yes 2. 2.No 3. I don't know
506	Because you are HIV positive you feared family rejection	1. Yes 2. No 3. I don't know
507	Because you are HIV positive you feared losing friends	1. Yes 2. No 3. I don't know
508	Because you are HIV positive you felt blamed by others	1. Yes 2. No 3. I don't know
509	Because of you are HIV positive you felt ashamed	1. Yes 2. No 3. I don't know
510	Because you are HIV positive you felt others were uncomfortable	1. Yes 2. No 3. I don't know

6. Assessing risky sexual practices among HIV positive ART attendants

No	Items	Response	
601	Don't you use condom consistently after you have started ART in the last three months?	1. Yes 2. No 3. I don't know	
601.1	Do you have sexual intercourse rather than your steady partner?	1. Yes 2. No 3. I don't know	
601.2	Don't you use condom for fear of re infection?	1. Yes 2. No 3. I don,t know	

Thank you for your time

Annex II Information Sheet and Consent from (Amharic version)

ጅም ዩኒቨርሲቲ የህክምና ፋኩልቲ የሀረተሰብ ጤና ሳይንስ ክፍል

ጤናይሰጥልኝ ስሜ ----- ይባላል። በዚህ ሰዓት በዚህ የተገኘሁት በጅም ዩኒቨርሲቲ የሀረተሰብ የጤና አጠባቅ ትምህርት ክፍል የድህረ ምረቃ እጩ ተመራቂዎች አንዱ ለሆኑት ተመራቂ ጥናቱን ለማካሄድ ነው። እርስዎ ሳይንሳዊ መሠረት ባለው መስፈርት ጥናቱ ውስጥ ስለተካተቱ ተሳትፎዎትን እያደነቅን ከዚህ ጥናትም የሚገኘው ውጤት የፀረ ኤች አይ ቪ ኤድስ ህክምናችውን በመከታተል ላይ ላሉ ተገልጋዮች ተጋላቸጭ ከሆነ የወሲብ ህይወት ለመከላከል የሚያስችል እቅድ ለማውጣትና ለመተግበር ራሱን የቻለ አስተዋፅኦ ይኖረዋል ብለን እናምናለን።

ይህ መጠይቅ የተዘጋጀው በአዲስ አበባ ጤና ጣቢያዎች ውስጥ የጸረኤች አይ ቪ ኤድስ ህክምናዎችን ከሚከታተሉት ሰዎች ስለወሲብ ህይወታቸው ለመጠየቅ ነው ። የጥናቱ ዋና አላማ ኤች አይ ቪ ፖዘቲቭ ሰዎች ወሲብ ሁኔታቸው ምን እንደሚመስል መረጃ ለማግኘት ነው ። ከተለያዩ ታካሚዎች የሚገኙት መራጃዎች አንድ ላይ ተደምረው እየተሰጠላቸው ህክምና ለማሻሻል እና የተጠናከረ የፀረ ኤች አይ ቪ ኤድስ መቆጣጠሪያና መከላከያ ዘዴዎች ለመዘርጋት ትልቅ እገዛ ያደረጋል ። አንድ የማረጋገጥላችሁ ነገር በዚህ መጠይቅ ውስጥ ስሞትንና እርሶን ለመለየት የሚያስችሉ ነገሮች አይጻፉም ። የሚሰጡት መረጃ ከጥናታዊ ጽሁፍ ውጪ ለሌላ ለምንም አገልግሎት አልጠቀምም። መመለስ ያልፈለጉ ጥያቄዎችን እዲመልሱ አይገደዱም በጥናቱ ላለመካፈል በማንኛውም ጊዜ መወሰን ይችላሉ ነገርግን ትክክለኛውን መረጃ እንዲሰጡኝ አበረታታለሁ።

መጠይቁ ከ30 ደቂቃ በላይ አይወስድቦትም ። ግልጽ ያልሆነ ነገር ካለ በማንኛውም ጊዜ መጠየቅ ይቻላል።

አጥኝው ስለጥናቱ አላማና ሌሎች የሚስፈልጉትን መረጃዎች በትክክል አስረድቶኛል በተጨማሪም በጥናቱ ላይ ላለመካፈል መብት እንዳለኝ እና በሚያስፈልገኝ ጊዜ ማቋረጥ እንደምችል ተነግሮኛል ።

በዚህም ላይ በመመስረት በጥናቱ ላይ ለመካፈልና የተጠየቀውን መረጃ ለመስጠት መስማማቴን አረጋግጣለሁ።

በጥናቱ ላይ ለመካፈል ፈቃደኛነት አዎ አይደለም
ተጠያቂው ከተስማሙ ወደ ጥያቄዎቹ ይለፉ
ተጠያቂው ካልተስማሙ አመሰግነው ወደ ሌላ ተጠያቂ ይለፉ
መረጃው የተሰበሰበበት ቦታ

ክፍለ ከተማ ----- ወረዳ -----
መረጃ የተሰበሰበበት ቀን -----
መረጃውን የሰበሰበው ሰው ስም -----

ፊርማ -----
ይህንን መጠየቂያ ቅጽ በሰለጠንኩት መሰረት እና በቅፁ ውስጥ በተቀመጠው ትዕዛዝ መሰረት በትክክል መሙላቴን ትክክል መሆናቸውን ማረጋገጥ እወዳለሁ።
የተቆጣጣሪው ስም -----
ፊርማ -----

ክፍል አንድ፡- ስለ ማህበራዊና ዲሞግራፊያዊ መረጃዎች (Socio demographic information)

ተ/ቁ	ጥያቄዎች	መልስ
101	የተጠያቂው ፆታ	1. ወንድ 2. ሴት
102	የተጠያቂው ዕድሜ	-----
103	የትምህርት ደረጃ	1. ማንበብና መጻፍ የማይችል 2. ማንበብና መጻፍ 3. ከ1-8 ክፍል 4. ከ9-10 5. ከ11-12 6. ከ12 ክፍል በላይ
104	የጋብቻ ሁኔታ	1. ያገባ 2. ያላገባ 3. ባለ የሞተባት 4. ሚስቱ የሞትችበት 5. የፈታ
105	ሀይማኖትዎ ምንድን ነው	1. ኦርቶዶክስ 2. ካቶሊክ 3. ፕሮቴስታንት 4. እስልምና 5. ሌተ(ይጠቀስ)----
106	ብሔሮት ምንድን ነው	1. አማራ 2. ኦሮሞ 3. ትግሬ 4. ጉራጌ 5. ሌላ(ይጠቀስ)
107	ስራዎ ምንድን ነው	1. የመንግስት ሰራተኛ 2. የግል ሰራተኛ 3. የቀንሰራተኛ 4. ነጋዴ 5. ሌላ (ይጠቀስ)
108	ውርሃዊ ገቢዎ ስንት ነው	በኢትዮጵያ ብር -----

2. ግለሰባዊ ሁኔታዎች

2.1 ተጠያቂዎች አስተማማኝ ለሆነ የግበሪስጋ ግንኙነት ያላቸው ግንዛቤ

መመሪያ፡- የተጠያቂውን መልስ የሚወክለውን ቁጥር ይጻፉ

በጣም እስማማለሁ = 1፣ እስማማለሁ = 2፣ አላውቅም = 3፣ አልስማማም = 4፣ በጣም አልስማማም = 5

ተ.ቁ	ጥያቄ	በጣም እስማማለሁ	እስማማለሁ	አላውቅም	አልስማማም	በጣም አልስማማም
201	በሌላ ኤች አይ ቪ ዝርያ መጠቃት በእርስዎ ጤና ላይ የሚያመጣው ጉዳት ጥቂት ነው					
202	በተጨማሪ ኤች አይ ቪ ዝርያ መጠቃት ህክምናዎትን አስቸጋሪ ያደረገዋል					
203	በደሞዎት ውስጥ ያለው ቫይረስ ብዛት ትንሽ ከሆነ ያለኮንደም ወሲብ የፈጸሙበትን ሰው ኤች አይ ቪ ይያዛል ብሎ መጨነቅ አያስፈልግም					
204	በአበለዘር በሽታ መጠቃት በጤናዎት ላይ የሚመጣው ጉዳት ጥቂት ነው					
205	ኤች አይቪ እና ሌሎች የአባለዘር በሽታዎችን ለመከላከል ኮንደም መጠቀም አስተማማኝ ዘዴ ነው					
206	ኮንደም ኤች አይ ቪን ለመከላከል እጅግ በጣም ጥሩ የሆነ ዘዴ ነው					
207	በወሲብ ግንኙነት ጊዜ ኮንደም መጠቀም ለሁለቱም ተጓዳኞች ምቹ አይደለም					
208	በወሲብ ግንኙነት ጊዜ ኮንደም መጠቀም ወሲባዊ ስሜትን ይቀንሳል					
209	የጸረ ኤች አይ ቪ መድሃኒት በመምጣቱ ምክንያት ጥንቃቄ የተሞላበት ወሲባዊ ግንኙነት አመለካከት ቀንሷል					
210	የኮንደም መከላከያነት አስተማማኝ አይደለም					
ድምር						
2.2 አልኮል እና እጽ አጠቃቀምን በተመለከተ የተዘጋጀ ጥያቄዎች						

ተ.ቁ	ጥያቄ	መልስ
301	ባለፉት 3 ወራት ውስጥ አልኮል ተጠቅመው ያውቃሉ	1. አዎ 2. አይደለም
302	መልስዎ አዎ ከሆነ በሳምንት ምን ያህል ጊዜ ይጠቀማሉ?	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. በሳምንት ሰባት ጊዜ 8. በሳምንት ከሰባት ቀን በላይ
303	ባለፉት 3 ወራት ውስጥ እጽ(ሰብስታንስ) ተጠቅመው ያውቃሉ	1.አዎ 2. አይደለም
304	የትኛውን እጽ(ሰብስታንስ) ተጠቅመው ያውቃሉ	
	ጫት ሲጋራ ሀሽሽ (Hashish) ሺሻ (Shisha) ሌላ (ይጠቀስ)	1.አዎ 2. አይደለም 1.አዎ 2. አይደለም 1.አዎ 2 አይደለም 1.አዎ 2 አይደለም -----
2.3 ቫይረሱ በደሞዎ ውስጥ መኖሩን ለሌሎች መግለጽ ላይ የተዘጋጁ ጥያቄዎች		
ተ.ቁ	ጥያቄ	መልስ
401	ቫይረሱ በደሞዎ መኖሩን ለሳይኛዎ ተናግረዋል	1. አዎ 2. አይደለም 3. አላውቅም
402	ቫይረሱ በደሞዎ ውስጥ መኖሩን ለቤተሰብዎ ተናግረዋል ?	1. አዎ 2. አይደለም 3. አላውቅም
403	ቫይረሱ በደሞዎ ውስጥ መኖሩን ለቤተሰብዎ መናገር ይፈራሉ ?	1.አዎ 2.አይደለም 3.አላውቅም
404	ቫይረሱ በደሞዎ ውስጥ መኖሩን ለቤተሰብዎ መናገር ለእርስዎና ለሳይኛዎ ጥቅም አለው ?	1.አዎ 2.አይደለም 3.አላውቅም
5 መድሎን መገለልን በተመለከተ የተዘጋጁ ጥያቄዎች		
ተ.ቁ	ጥያቄ	መልስ

501	ኤች አይ ቪ ፖዘቲቭ በመሆንም እርስዎን የሚሸሹ ልጆች አሉ	1. አዎ 2. አይደለም 3. አላውቅም
502	ኤች አይ ቪ ፖዘቲቭ በመሆንም ከሚኖሩበት ቦታ ሸሽተዋል	1. አዎ 2. አይደለም 3. አላውቅም
503	ኤች አይ ቪ ፖዘቲቭ በመሆንም ጓደኛዎን አጥተዋል	1. አዎ 2. አይደለም 3. አላውቅም
504	ኤች አይ ቪ ፖዘቲቭ በመሆንም እርሶን ማቀፍ የማይፈልጉ ሰዎች ነበሩ	1. አዎ 2. አይደለም 3. አላውቅም
505	ኤች አይ ቪ ፖዘቲቭ በመሆንም በሌሎች ሰዎች የሚጠሉ ይመስሉታል	1. አዎ 2. አይደለም 3. አላውቅም
506	ኤች አይ ቪ ፖዘቲቭ በመሆንም በቤተሰብ እንዳይገለሉ ይፈራሉ	1. አዎ 2. አይደለም 3. አላውቅም
507	ኤች አይ ቪ ፖዘቲቭ በመሆንም ጓደኛዎትን አጣለሁ ብለው ይሰጋሉ	1. አዎ 2. አይደለም 3. አላውቅም
508	ኤች አይ ቪ ፖዘቲቭ በመሆንም በሰዎች የሚነቀፉ ይመስሉታል	1. አዎ 2. አይደለም 3. አላውቅም
509	ኤች አይ ቪ ፖዘቲቭ በመሆንም ሀፍረት ይሰማዎታል	1. አዎ 2. አይደለም 3. አላውቅም

510	ኤች አይ ቪ ፖዘቲቭ በመሆንም ሌሎች ሰዎች ምችት የማይሰማቸው ይመስሉታል	1. አዎ 2. አይደለም 3. አላውቅም
	6 የፀረ ኤች አይ ቪ ኤድስ ክትትል ላይ ያሉ ተገልጋይዎች የወሲብ ህይወታቸው የሚመለከት መጠይቆች	
ተ.ቁ	ጥያቄ	መልስ
601	የፀረ ኤች አይቪ መድሀኒት መውሰድ ከጀመሩ ወዲህ ላለፉት ሶስት ወራት ኮንዶምን በትክክል አይጠቀሙም ነበር	1. አዎ 2. አይደለም 3. አላውቅም
601.1	ከጓደኛዎ ሌላ ከሌላሰው ጋር የግብረ ስጋ ግንኙነት አያደርጉም ነበር	1. አዎ 2. አይደለም 3. አላውቅም
601.2	በሌላ የቫረስ አይነት ላለመያዝ ኮንዶም አይጠቀሙም ነበር	1. አዎ 2. አይደለም 3. አላውቅም

ስለነበረን ቆይታ እናመሰግናለን ::