

ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCES
SCHOOL OF PUBLIC HEALTH



**ASSESSMENT OF RISKY SEXUAL BEHAVIOR AND ITS
ASSOCIATED FACTORS AMONG STUDENTS IN SELECTED
PRIVATE UNIVERSITIES, ADDIS ABABA ETHIOPIA**

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This is to certify that the Thesis prepared by Hadas Dimetros, entitled: risky sexual behavior among private university students in Addis Ababa and thesis submitted to school of public health Addis Ababa University in partial fulfillment of the requirements for the degree of masters in public health. Complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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ACRONYMS

AIDS	-----	Acquired Immune Deficiency Syndrome
HIV	-----	Human Immune Deficiency Virus
MOH	-----	Ministry of Health
STD	-----	Sexually Transmitted Disease
STI	-----	Sexually Transmitted Infection
UNAIDS	-----	United Nations Agency for International Development
WHO	-----	World Health Organization

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ABSTRACT

Background: Risky sexual behavior accounts for a large number of opportunities for acquiring HIV infection and other STIs. Students of higher learning institutions are with multiple socio-cultural backgrounds and begin independent life at younger age.

Methods: A cross-sectional study was conducted among 588 randomly selected undergraduate students from private universities in Addis Ababa, from December 2018 to October 2019. Study participants were selected using multi stage stratified sampling technique. Interviewer administer pretested structured questionnaire was used to collect the data. The data was entered into Epi-data version 4.4.2.1 then exported to SPSS version 21 for analysis. Descriptive analysis (Frequency, mean, and proportion) and regression analysis was done to summarize findings.

Results: Overall, 32.6% of study participants started sexual intercourse at the time of study. The median age at first sexual intercourse was 18.3. About 66.7% of respondents were engaged in risky sexual behavior in their life time. Students who attended their high school education at private schools (AOR=3.160; 95% CI= 1.406, 7.103), first age at sex (AOR = 0.075; 95% CI = 0.030, 0.190), and condom use at first-time sexual intercourse (AOR = 5.594; 95% CI = 2.223, 14.076) were significantly associated with risky sexual behavior.

Conclusions:

The finding of this study identified that significant numbers of students engaged in risky sexual behaviors by having multiple sexual partner and inconsistency/non-use of condom in their life time. Therefore, understanding factors associated with risky sexual behavior is important for implementing comprehensive interventions and prevent multiple risk factors among private university students.

1. INTRODUCTION

1.1 Background

Risky sexual behavior is commonly defined as behavior that increases susceptibility of an individual to problems related to sexuality and reproductive health. It includes having sex at an early age, having multiple sexual partners, having sex while under the influence of alcohol or drugs and unprotected sexual behaviors(1). Risky sexual behavior primarily is happened in adolescence ages in Africa and causes unproductive man powers of countries. Sub- Saharan Africa remains most severely affected with nearly one in every 20 adults with HIV and accounting for 69% of the people living with human immunodeficiency virus worldwide. Different studies also revealed that young adults in Sub Saharan Africa were also tend to engage in having risky sexual behaviors: multiple sexual partner, concurrent sexual partners and unprotected sexual intercourse(2). Ethiopia is one of the African countries that loses these productive powers through risky sexual behaviors in universities: and regular private universities are one of them.

Especially in heterogeneous nations like Ethiopia, students of higher learning institutions are with multiple socio-cultural backgrounds begin autonomous life at younger age for first time and they rush to a range of maladaptive high-risk extracurricular activities like alcohol use, substance and risky sexual abuse(3). They are also assumed to be exposed to many risky sexual behaviors (4). Multiple sexual partners, unprotected sexual intercourse, engaging in sex with older partners and non-regular partners such as commercial sex workers are the most common risky sexual behavior in the university. Adolescents represent a huge segment of potentially vulnerable population and an increasing number of them are involved in unsafe/risky sexual practices and hence face undesired health outcomes such as unplanned pregnancy, too early childbirth, unsafe abortion and sexually transmitted disease(5).

Risky Sexual behavior accounts for a large number of opportunities for acquiring HIV infection, and alcohol use has been shown to increase high-risk sexual behavior. Alcohol plays a central role in facilitating risky sexual relationship through personal consumption and encouraging existing and potential sexual partners to consume. High alcohol consumption is associated with having more sexual partners: it is also related to early sexual debut along with increased sexual risk

behaviors such as non-use of condom and higher level of sexual transmitted infections, unwanted pregnancies and abortions(6). Similarly, among risky sexual behaviors, multiple sexual partnerships are one of it. Having two or more sexual partners that overlapped in time; individuals who have concurrent sexual partners increase their risk of contracting HIV/AIDS, STDS, and multiple sexual partnerships have been identified as a key driver of HIV transmission caused by risky sexual behavior. It is evident that multiple sexual partnerships are a risky sexual behavior in which youth engaged. Accordingly, studies conducted in different parts of Africa among adolescents and young adults declared that having multiple sexual partners in these segments of population is fairly common and it is one part of risks in youths (7).

In contrary, healthy sexual development is an important goal of adolescence. It is a developmental process that can achieve successfully & lead to healthy intimate and sexual relationships, self-efficacy and autonomy in one's sexual decision-making, and establishment of one's sexual identity. To help youths successfully navigate through this developmental transition, there is a need to understand the trends surrounding adolescent sexual behaviors, the health benefits and detriments that accompany these behaviors, and the resources and interventions that are available. A useful framework for understanding optimal sexual health was developed by a group of experts convened by the World Health Organization (WHO). According to international experts, sexual health is not merely the absence of disease, dysfunction, or infirmity, rather it is a state of physical, emotional, mental, and social wellbeing in relation to sexuality, with the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination, and violence (8). Therefore; the study aimed to assess risky sexual behavior and its associated factors among private regular university students in Addis Ababa, Ethiopia.

1.2 Statement of the problem

Students especially, in high school and preparatory join and develop peer network which could affect their sexual behavior either positively or negatively. More or less these teenagers and youngsters join universities after completing their preparatory educations and they are from different perspectives and backgrounds of risky sexual behaviors. Majority of them are at beginning or mid adolescence levels where sexual socialization, experimentation and identity building takes place: thus, university students are too many in numbers that increases risks. Therefore, assessing risky sexual behaviors and its associated factors is crucial to determine the magnitude of risky sexual behaviors at regular private university levels (9). Hence, sexual activity at younger ages is increasing alarmingly,(10) risk arises from individuals engaging in risk-taking behavior for a variety of reasons like lack of information on HIV, STDs, being unable to negotiate safer sex, or may not have access to use condoms.

Risky sexual behavior remains the most persistent challenges of adolescences in universities. Risky sexual behaviors including early sexual debut, unprotected sexual intercourse, multiple sexual partner and changing sexual partners one and more times occur commonly. The intensity of involvement in risky sexual behavior ranges from no sexual relationship to unprotected sexual relationship with multiple partner and prostitution. Sexually active teenagers who exhibits few positive or pre-socially behaviors such as involvement in organized action at universities are at high risk for outcomes such as early sexual activity and pregnancy during their teenage years (11) and unwanted life disorders of the future. Finally, the country loses educated man powers via risky sexual behaviors.

In this regard, very few researches have been done in risky sexual behaviors of regular private universities in Ethiopia where more students are potentially joined. Since the problem is serious among private regular university students in Addis Ababa, Ethiopia; therefore, this research is envisioned to fill the gap by expanding available research finding in order to assess risky sexual behavior of private regular university students in Addis Ababa. Accordingly, the researcher undertakes this particular study to fill the knowledge gap in the aforementioned area.

1.3. Significance of the Study

Investigating the risky sexual behavior among private universities in Addis Ababa is highly useful to understand sexual and reproductive health problems in social arrangements and design strategies that would tackle the adverse consequences of risky sexual behaviors. The findings of this study can have public health importance through providing evidence-based information to policy makers, program planners and health service providers on the problem which is subsequently essential to design and implement appropriate interventions. It significantly can support the design and implementation of prevention programs at private universities and serve as reference for other researchers who conduct their study in related areas.

2. LITERATURE REVIEW

2.1 Risky Sexual behavior

Risky sexual behavior is any behavior that increases the probability of negative consequences associated with sexual contact, including HIV/AIDS or any other STD, abortion and unplanned pregnancy, having multiple sexual partners, having risky casual or unknown sexual partners, early sexual initiation and failure to discuss risk topics prior to intercourse and failure to take protective actions, such as use of condoms and birth control(12).

Risky sexual behaviors in university students in Ethiopia were assessed in different studies but the situations in private universities were not duly performed. This risky sexual behavior accounts for a large number of opportunities for acquiring HIV infection. The trends in sexual activity by youngsters are increasing alarmingly in the world. Especially university students are pretty much active in risky sexual activities in the world. In many countries like Ethiopia the majority of young age people are sexually active before age of 20 and premarital sex is common among 15-19 years old(10).

A study in Aksum University Shire campuses in 2017 similarly stated that out of the total respondents, 60.6% students had sexual experience and from the total respondents 37.9% of them reported that their first sexual intercourse was before age of 18 years while 51.2% of them had their first sex at above or equal to 18 years(2).

In a study done in South West Ethiopia, most 54(50.94%) of them had multiple sexual partner. Most of the participants didn't use any form of contraceptive and or barriers during their first sexual exposure. Regarding to their sexual partner, about 20 (18.87%) of them were had sex with commercial sex workers (13).

An institution-based study done in Gondar city in 2017 revealed that 12.8% prevalence of risky sexual behavior among high school students. In this study, two out of five sexually active respondents ever had unprotected sexual intercourse, alcohol use, lack/absence of parental monitor, watching pornographic movies, not having parental discussion on sexual and reproductive health issues and peer pressure, were factors which significantly increases the odds of risky sexual behavior among youth(14).

According to studies there are special factors that contribute to the increment of risky sexual behaviors in university students. Among these, lack of adolescent friendly sexual and reproductive health services, no close parental supervision (15) unsatisfactory knowledge, low risk perception, cultural difference, female's low negotiation skills in condom use, living environment, attitude towards widespread substance use and peer pressure towards STIs and HIV. These factors highly increase the threat of risky sexual behaviors since, university students are too many in numbers and perspectives.

2.1.1 Multiple sexual partners

Multiple sexual partnerships are having two or more sexual partners that overlapped in a time: individuals who have concurrent sexual partners increases their risk of contracting HIV/AIDS/STI and multiple sexual partnerships have been identified as a key driver of HIV transmission(7).

The number of sexual partners is an important indicator of risky sexual behavior. The study in 2013 in private health science college in Addis Ababa showed that 35.5% of them have multiple sexual partners (16) that shows doubles the risk once and again. Many studies among sexually active University/college students indicated high rate of multiple sexual partners in Nigeria (40%), China (10%) and in Mexico (6%). Likewise some African studies in South Africa and Uganda also showed high rate of multiple sexual partners in universities(17).

Studies in Ethiopia show that students in higher years of study, non-resident students, students with frequent short and long-distance mobility and students who are alcoholic reported multiple sexual partners. The study in Mizan high school in South West, Ethiopia in 2016 stated that from the total population of 308 students, 204 were between the ages of 16-18 years who were highly active in multi sexual partners. Similarly a study in Jimma described that out of 117 students, 69(59%) had first sexual intercourse at age of less than or equal to 18 years(12).

A study in Hossana College of Health Sciences figured that from the total of 372 students participated in the study, 70.5% were in the age group 18-19 years(18). A study done in Axum university assessing risky sexual behavior revealed almost 60% students ever had sexual activity. Of which 86 (83.5%) and 112 (64.4%) reported having inconsistent condom use and multiple sexual partners respectively. Even though more than half of first sexual intercourse (61.5%) starts due to their desire but still peer pressure and alcohol have significant effect. Similarly, the study indicated that a significant segment of students has risk sexual behaviors which increase

individuals' risk of acquiring HIV/AIDS. Unless appropriate age and institutional targeted interventions exist, certain behaviors can place the university students at greater risk of HIV infection and sexually transmitted diseases (2).

2.1.2 Condom use

Condom is considered as one of the main preventive method of unwanted pregnancy, HIV/AIDS and other sexually transmitted infections (STIs). According to WHO 2011 report among top ten risk factors in the global burden of all diseases unsafe sex was the second (2).

In taking preventive measures, the prevalence of consistent condom use in universities are very low (17). Since the consistent and correct uses of condoms reduce the risk of HIV/AIDS prevention programs often include the promotion and distribution of condoms. Proponents of contraception education and condom availability programs argue that teenagers especially in university are sexually active and must be provided with the means to protect themselves against pregnancy and sexually transmitted disease (19).

Among the reasons for inconsistent condom use are being fresh man, alcoholic, knowledge and skill gap, insufficient promotion of condoms, availability and access, having permanent relation, disliking using condoms and feeling that condoms decrease sexual satisfaction(17). Many youth face difficulties obtaining condoms because of the cost and limited accessibility. Condoms have not been made sufficiently available in places of young people such as Universities. Negative beliefs about condoms are significantly associated with less frequent condom use in various populations (20).

In a study called 'beyond knowledge: patterns of sexuality and correlates of high-risk behavior among urban youth in Addis Ababa, Ethiopia, knowledge scores were compared between urban and rural areas from Gondar, Ethiopia which revealed that more than 90% of the adolescents are aware of HIV/AIDS & 74.2% confessed having heard about HIV/STD but at the same time 89.9% did not know anything about condom (21).

A study conducted in sexual behavior in-school and out-of-school youths in Ethiopia indicated that Over 20% of out-of-school youth had unprotected sex during the 12-month period prior to the interview compared to 1.4% in-school youth. The odds of unprotected sex were slightly higher

among males compared to females. Larger effect sizes were, however associated with younger age: In those aged 15–19 years compared to those age 20–24 years (3).

2.1.3 HIV/AIDS and STI

Globally, approximately half of the new human immunodeficiency virus (HIV) infections occur in the age group 15 to 24 years (11) and account for 22% of (50% are female) total population. In sub Saharan Africa, adolescent girls and young women account for 25% new HIV infection among adult. 2016 WHO HIV/AIDS report, adolescent and young people aged 15-24 years are at particular high risk of HIV infection, accounting for 34% and in Sub-Saharan Africa 37% of new HIV infection among adults (22).

On its third decade of the epidemics, HIV/AIDS is still imposing an irrefutable threat to contemporary world. The swift spread of the disease makes its impact much more pronounced. According to the UNAIDS estimate, 40 million people were living with HIV/AIDS by the end of 2003; the figure rose by 7 million in five years. There were 5 million new infections and 3 million deaths globally in the same year. More than half of those newly infected cases are between 15 to 24 years old (21).

Addis Ababa, the study area of this research, has a high prevalence of HIV, shelters people from heterogeneous backgrounds with prominent socioeconomic differences, and is home to all kinds of evil that come with urbanization (21).

In 2010 about 70% of new HIV infections and 68% of all people living with the virus resided in sub Saharan Africa region. Besides, concurrent sexual partnerships were suggested as a possible explanation for why HIV epidemics are so much more severe in sub-Saharan Africa than elsewhere in the world (23).

2.2 Substance use

Substance use affects millions of youths worldwide in each year. Students are highly involved in psychoactive substances use and they are highly vulnerable to the consequences of psychoactive substance, and also for unprotected sex and other risk behaviors that lead to HIV/AIDS/STIs infection (16).

In a study of 431 students in selected private universities in southwest Nigeria on assessment of alcohol and substance use show that the prevalence of 85% alcohol consumption among respondent students (24).

Researches indicated, especially in recent times, that the use of substances among university students is getting very high. Substance use survey in Sudan reported an overall prevalence of substance use as 31%. The study reported current prevalence of tobacco (13.7%), cannabis (4.9%), cocaine (0.7%), and heroin (0.5%) use (25). In relation to Sudan, in Kenya lifetime prevalence rate of any substance use was reported as 69.8% for alcohol, 51.9% for cigarette, 42.8% for cannabis, and 2% for cocaine.(26, 27) and the same is true in Ethiopian: students of universities are youths with multiple nations, religious beliefs and socio-cultural back grounds begin autonomous life at younger age for first time and they rush to a range of maladaptive high-risk extracurricular activities like alcohol use, substance use and sexual abuse (28).

Study done on substance use and associated factor among University students in Alemaya university revealed that from a sample of 1040 students alcohol was the most used substance at 50.2% (26). A cross sectional data collected from Addis Ababa University medical students on Substance use and its predictors, show that out of 632 samples 31.4% students are ever drunk alcohol (29).

The use of alcohol, chat and tobacco among students are seriously harmful and leads to increase health problems and or death, decrease academic performance, reduce productivity, hopelessness and increase risky sexual behaviors (30). In this regard students are lacking hope, victims of different forms of violence and abuse, or obliged to live with harmful habits (31).

Due to their large proportion, adolescents and youths are vulnerable to variety of psychological, physical, social and sexual risky behaviors. Consumption of licit and illicit substance and its multidimensional consequence is one of the current challenges of young population group not only in universities but also in youth centers.

A study in Aksum University about substance use stated that students are highly involved in drinking alcohol, chewing chat and smoking cigarette incessantly. This study finding showed that from the total respondents about 46.7% (drinks alcohol), 14.3% (chews chat), and 16.8 % (smokes cigarette) seriously (2).

In general, the above studies indicated that substance use behavior and its risk factors vary across different university studies. Production and customization of substances, especially chat, by the nearby community may also greatly affect students' utilization of substances.

2.3 Risky sexual behavior and substance use

Substance use is a major global public health problem that creates impaired health: create harmful behaviors, and major economic and social burdens of one country as a whole (32). Adolescence are particularly at risk for substance use, they are most likely to be influenced by peers, lectures or teachers and role models who may be involved and addicted in the use of substances. The most adverse consequences associated with substance use disorders include, significantly increase the likelihood of risky sexual behaviors: unprotected sex, miss use of condoms, decrease the selection of sexual partners and can increase the number of partners and irresponsible sexual activity. These dominantly alarmingly increase the susceptibility to sexually transmitted infections and deaths at all (16).

Another study conducted in Bahirdar, Ethiopia, found that among 790 samples of Bahirdar private college students reported that 50.7% respondent had sexual intercourse and who were using alcohol were more than three times likely to have multiple sexual partner compared to nonusers (7). Institutional based cross-sectional study carried out in Mekelle private collage showed that from 509 respondents 77.5% reported sexually active and 66.2% are not used condom consistently. Also 27.1% student use alcohol prior to their sexual encounter and 30.5% reported have had multiple sexual partners. Student state that having sexual partner considered as a sign of modernization (17).

These above statements show that countries have lost productive and literate youths and adolescence with substance use and risky sexual practices that increases the country dependency in each home. In other words, students also missed classed and gets fired of universities even if they do have skills and knowledge to perform due to their substance use and risky sexual practices.

2.4 Factors influencing risky sexual behaviors

Many factors influence adolescents' level of sexual risk-taking behaviors. Poverty, ethnicity, religiosity, age at puberty, peer relations, school performance, involvement in other risk-taking behaviors and family composition and relationships have all been identified as determinants of adolescent sexual behavior among youths in United States (17).

Meta-analysis conducted to assess the association between risky sexual behavior and level of education and economic status in male youth. The pooled odds ratio showed a statistically significant association of higher-risk sex with male youth younger than 20 years, living in urban centers, well educated, and of a high economic status. The overall proportion of condom use during youths' most recent higher-risk sexual encounter was 40% and 51% among 15–19-year-olds and 20–24-year-olds, respectively. Male youth's socioeconomic status is directly related to the likelihood that they practice higher-risk sex. The relationship between income and sexual behavior should be explored further(33).

Currently, significant numbers of youths are located in higher institutions where they are exposed to different new risky behaviors. Beside the individual biological and psychological vulnerability, peer pressure, social, environmental, academic pressures and being free of their parental influences may aggravate university students' engagement to risk behaviors like substance use (26).

Many factors affect the timing of first sex. World Health Organization review of studies in 53countries found common protective and risk factors in all regions of the world: positive relationships with parents, teachers, and spiritual beliefs decreased the likelihood of early sex, while risk factors included engaging in other hazardous behaviors and having friends who are sexually active (4).

The respondents age, sex, income/pocket money/ and educational level are the main demographic risky sexual factors in universities. A study done in South Africa university students about risky sexual behaviors revealed that 32% of the total participant had multiple sexual partners and 36% of them are males and 49% are female students. The report showed that they even did not use condom consistently with their new sexual partners (34). In Sudan being a male student was the

principal predictor for substance use. Likewise, in Kenya Males having statistically significantly higher rates than females (26).

In Ethiopia studies in universities also showed, students start sex in the first year second semester highly and increase their substance use frequently especially males' use substances than females and females are the predecessors of males. In universities due to insufficient income female students get dependency on males and in one or other way they get themselves in substance use and risky sexual practices (35). In this cause first age also played great initiation on risky sexual practices (36).

The findings of the above studies conducted in in foreign countries as well as in different parts Ethiopia private collage concluded on the prevalence and the factors for the youth to engage in risky sexual activities. However, none of them addresses Addis Ababa private University students' risk sexual behavior and associated factors. Therefore, this study will strive to fill this empirical gap.

Conceptual frame work

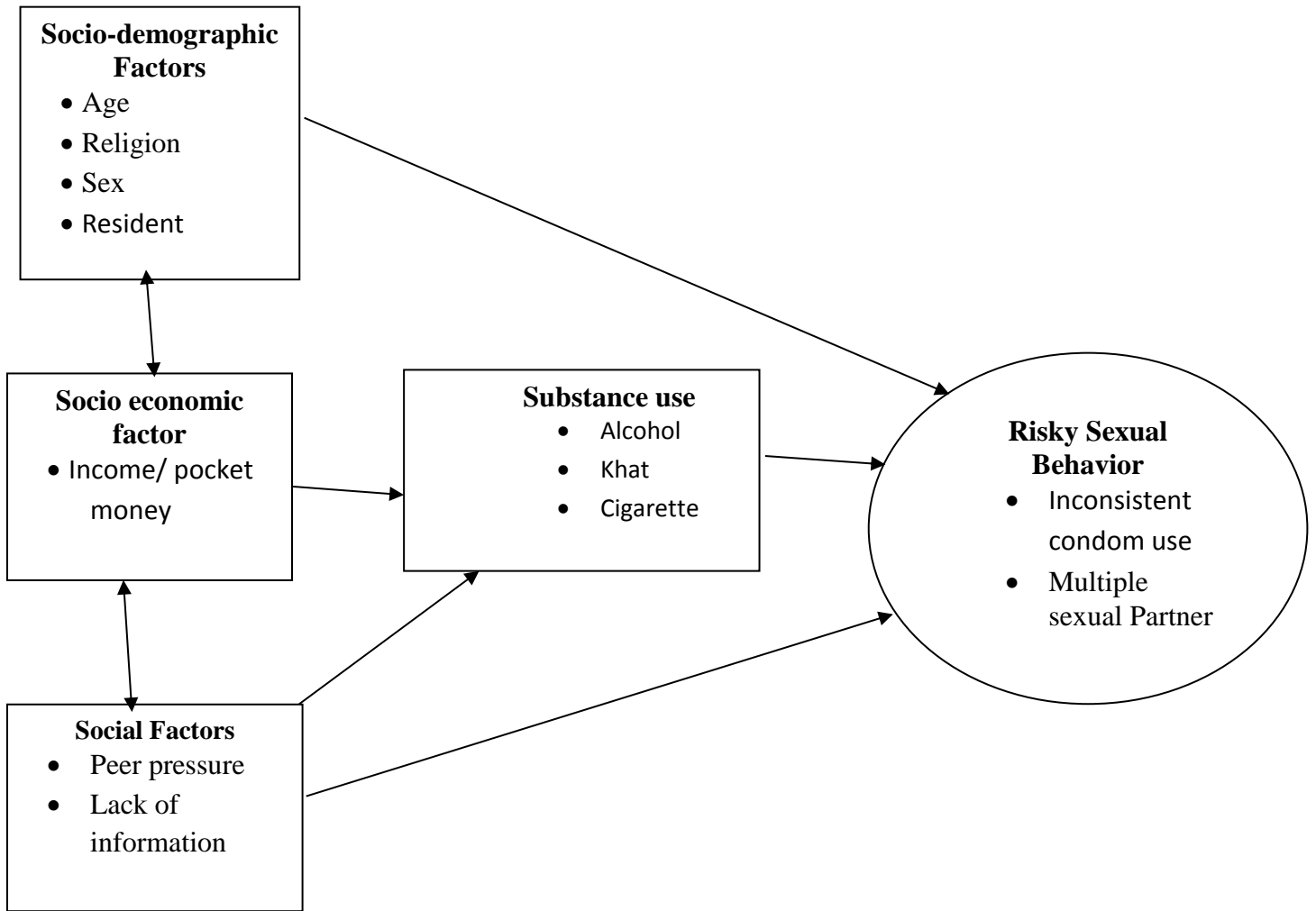


Figure 1. Conceptual framework for the study of risk sexual behavior, Addis Ababa, Ethiopia, 2019.

3. OBJECTIVES

3.1 General objective

The general objective of this study is to assess risky sexual behavior and its associated factors among private regular university students in Addis Ababa, Ethiopia.

3.2 Specific objectives

The study has the following specific objectives:

- ❖ To determine magnitude of risky sexual behavior among regular private university students in Addis Ababa.
- ❖ To identify factors associated with risky sexual behaviors, among regular private university students in Addis Ababa.

4. METHODS AND MATERIALS

4.1 Study Area and period

The study was carried out in selected private universities found in Addis Ababa, Ethiopia. Addis Ababa, the capital of Ethiopia with an area of 540 km² between 9⁰N latitude and 38⁰ E longitudes at range of 2200-2800 meter above sea level. The city divides in to 10 sub cities with 116 woredas. Addis Ababa city administration has 38 private higher educational institutions: out of which only five are recognized as University namely: Admas University, Alpha University, Rift Valley University, St Mary's University and Unity University: and around 26,812 students were enrolled in all private Universities. The study was conducted between December 2018 to October 2019.

4.2 Study Design

The study design was institutional based cross-sectional study with quantitative data collection method.

4.3 Source of Population

All five private university regular students who were registered in 2018/2019 academic year and attending their undergraduate classes in Addis Ababa.

4.4 Study population

All regular undergraduate students who were enrolled 2018/2019 academic year from selected universities.

4.5 Inclusion criteria

All regular day time students aged 15 to 24 years at time of data collection who have volunteered to participate in the study.

4.6 Exclusion criteria

Students who were ill during the data collection time.

4.7 Sample size

The sample size was calculated using single population proportion formula with the following assumptions. Marginal error (d) of 5%, confidence interval of 95% and $Z_{\alpha/2}$ is the value of the

standard normal distribution corresponding to a significant level of alpha (α) of 0.05, which is 1.96, taking 45.3% prevalence of multiple sexual partner among private college students in Bahirdar (23), a design effect of 1.5 and non-response of 5%.

$$n = \frac{Z^2 P (1-P)}{d^2}$$

Where Z=95% confidence interval (1.96)

d=margin of sampling error (0.05)

P= estimates prevalence rate (45.3%)

Non-response rate = 5%

n=minimum sample size

$$= \frac{(1.96)^2 \cdot 0.453 (1-0.453)}{(0.05)^2}$$

$$= \frac{3.8 \times 0.453(0.547)}{0.0025}$$

$$= \frac{0.9416058}{0.0025} = 376 * 1.5 = \underline{\underline{564}}$$

5% non-response rate= 28

The final sample size = 592

4.8 Sampling procedures

Multistage sampling technique was employed in order to select a fairly representative sample of students from five private universities in Addis Ababa, accordingly, the first stage two universities were selected by using lottery method out of five and sample size was distributed equally to proportion to population size of each university. For the second stage of sampling department in each university was the sample unit, and selection of department was made using simple random sampling technique after taking list of departments. Then, the students were stratified based on

year of study. Finally, simple random sampling technique was applied to select study units in each year of study and to their class size.

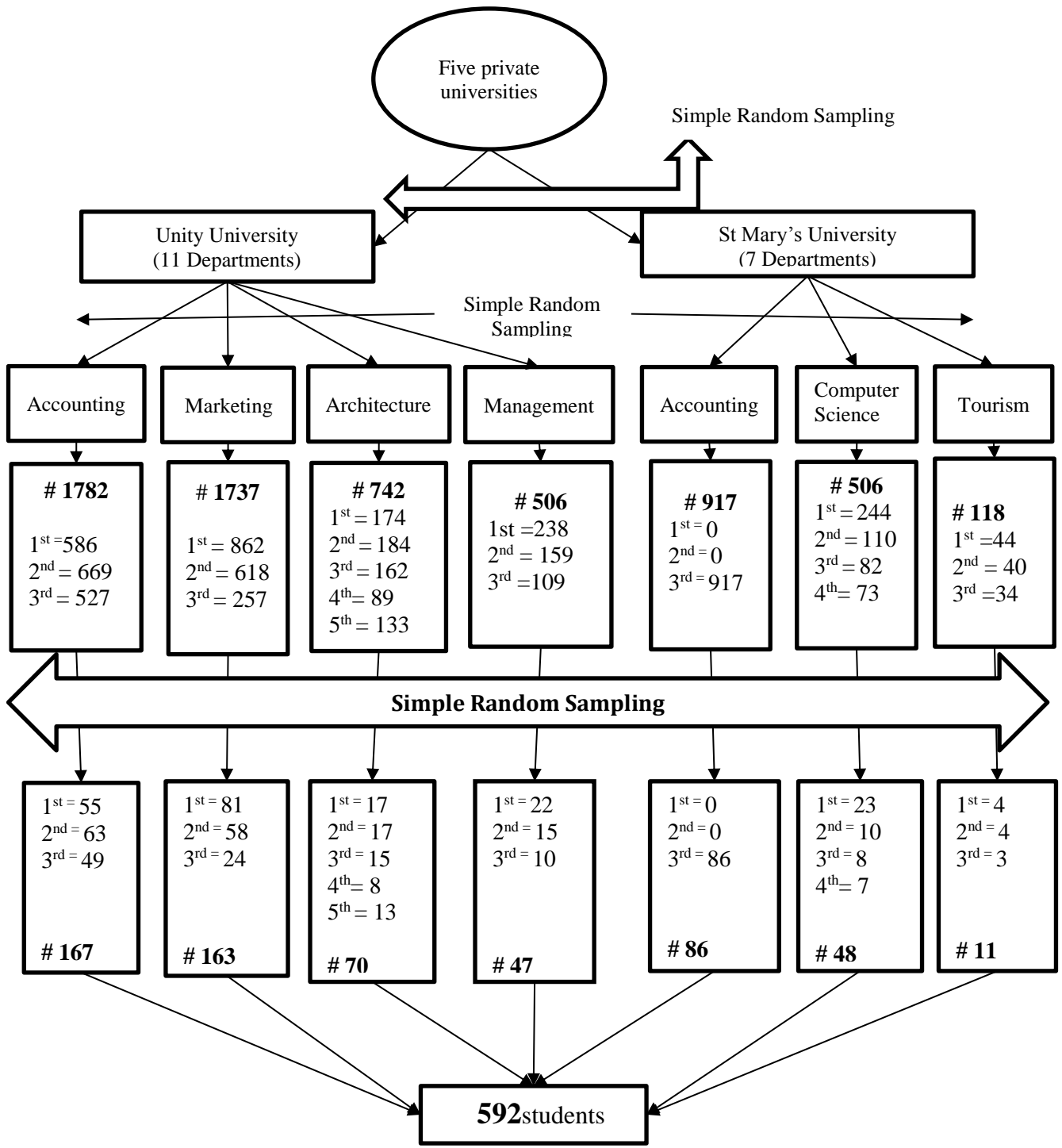


Figure 2. Schematic presentation of sampling procedure, Addis Ababa, Ethiopia, 2019

4.9 Data collection tool and procedures

The data collection instrument was developed after revising questionnaire from similar study and adapting it to the objective of the present study. The questionnaires were composed of closed-ended question that were completed through interview. Questionnaire was prepared in English and then translate to Amharic language. It consisted of different parts like socio-demographic variables, substance use and sexual history.

Data were collected anonymously after obtaining informed consent and, using face to face interviewing technique. Two BSc and four diploma nurses with prior experience on data collection were recruited to supervise and do the actual data collection respectively. Data collection has commenced after the principal investigator provide two days training on ways of conducting the interview and filling the questionnaire based on a prepared instruction. The questionnaire was 5% pretested in a similar setting among private university not selected for the survey to ensure understandability. Feedback from the supervisors and facilitators were incorporated to enrich the questionnaire and make it more applicable to the local situations.

4.10 Study Variables

- **Dependent Variable:**

Risky sexual behaviors: Inconsistent condom use and multiple sexual partner.

- **Explanatory Variables:**

Substance use history: alcohol use, smoking cigarettes, chewing khat

Socio-demographic: age, sex, religion, resident

Socio-economic factors: income/pocket money

Social factors: peer pressure, lack of information

4.11 Operational definitions

- **Risky sexual behavior:** In this study it is defined as one of the following; have sex with more than one sexual partner or have unprotected/non-consistent condom use with non-regular sexual partner in life time.
- **Non-regular partner:** sexual partner who did not live together.
- **Multiple sexual partner:** having more than one sexual partner in life time.
- **Inconsistence condom use:** a person who does not use condom consistently and correctly.

- **Unprotected sex:** a penetrative vaginal sex without using condom consistently with any partner other than a regular partner.
- **Substance use:** use of at least any one of the following substances: alcohol, cigarettes, khat that are assumed to increase risk of involving in risky sexual behavior.
- **Sexually active:** is defined as an action of engage sexual intercourse among opposite sexes in life time.

4.12 Data management

Data quality was maintained through 5% pretesting of questionnaires and training of data collectors and supervisors. Data was checked for its completeness and consistency at every step of data management by the principal investigator before data entry, and the information entered was checked in 10% of randomly selected questionnaire.

4.13 Data Analysis

Data were collected, checked for completeness, entered into Epi-data version 4.4.2.1 and cleaned, and exported to SPSS version 21 for analysis. The descriptive analysis (Frequency, mean, and proportion) was done to summarize findings. Results were presented by tables. Binary logistic regression was used to predict variables which have association with outcome variable. Variables which have a significant association at p-value <0.05 in the bivariate analysis were taken to multivariable analysis to include all potential variables. Odds ratio and its 95% CI was used to check for the existence and strength of association between independent and outcome variables. P-value of less than 0.05 was considered as statistically significant in the multivariable analysis.

4.14 Ethical consideration

Ethical clearance was obtained from Addis Ababa University School of Public Health Ethics and research Committee. Official letter was written to each Universities from the School of Public Health. During the interview, each individual was informed about the aim of the study and on the possible benefit of the study and written consent was obtained from each respondent. Confidentiality was strictly maintained in the study by omitting their names including their identifiers. The participants were assured that they have full right to participate or withdraw from the study.

4.15 Dissemination of results

The finding of this study will be submitted to Addis Ababa University, School of Public Health, Ministry of health and Addis Ababa city administration health Bureau and also respective Universities. The finding will also be disseminated to different stakeholders that will have contribution on the prevention of risky sexual behavior.

5. RESULTS

5.1 Socio demographics characteristics of the study participants

Out of 592 samples calculated, data was collected on 588 participants, which resulted in the response rate of 99%. As presented in table 1, 306 (52%) of the respondents were male and rest 282 (48%) were females. The overall mean age of the study participants was 21.12 (± 1.58) years. Majority of the study participants 498 (84.69%) were in the age range of 20-24 years, while 90 (15.31%) were between 15-19 years. Similarly, 570 (96.94%) of the study participants were unmarried and the remaining 18 (3.06%) married. Regarding religion Orthodox were the majority 442 (75.17%), followed by Protestant 93 (15.82%), and Muslim 43 (7.31%). In terms of the participants ethnicity 273 (46.43%) of the study participants were Amhara.

When we see where the study participants attended their high school education, 196 (33.33%) of them were at government school, 371 (63.10%) private school. While students were at high school, 398 (67.69%) lived with both of their parents, followed by 66 (11.22%) with relatives, and 61 (10.38%) with mother only.

Though all of the study participants 588 (100%) had permanent monthly pocket money, the amount varied from individual to individual. About two-third 381(64.80%) of the respondents obtained more than 450-birr monthly basis.

Table 1. Socio demographic characteristics of the study participants, Addis Ababa, Ethiopia, 2019

Characteristics	Number (%)		
	Male (n=306)	Female (n= 282)	Total (N= 588)
Age			
15-19	32 (10.46)	58 (20.57)	90 (15.31)
20-24	274 (89.54)	224 (79.43)	498 (84.69)
	Mean \pm SD	21.12 \pm 1.58 years	
Marital status			
Unmarried	303 (99.02)	267 (94.68)	570 (96.94)
Married	3 (0.98)	15 (5.32)	18 (3.06)
Religion			
Orthodox	227 (74.18)	215 (76.24)	442 (75.17)
Protestant	54 (17.65)	39 (13.83)	93 (15.82)
Muslim	23 (7.52)	20 (7.09)	43 (7.31)
Ethnicity			
Amhara	133 (43.46)	140 (49.65)	273 (46.43)
Oromo	63 (20.59)	64 (22.69)	127 (21.60)
Gurage	58 (18.96)	34 (12.06)	92 (15.65)
Tigray	33 (10.78)	32 (11.35)	65 (11.05)
Other	19 (6.21)	12 (4.25)	31 (5.27)
Types of high school attended			
Governmental school	117 (38.23)	79 (28.01)	196 (33.33)
Private school	185 (60.46)	186 (65.96)	371 (63.10)
Religious/missioners school	4 (1.31)	17 (6.03)	21 (3.57)
Respondents now living with			
Father and mother	209 (68.30)	189 (67.02)	398 (67.69)
Relatives	44 (14.38)	22 (7.80)	66 (11.22)
Mother only	19 (6.21)	42 (14.89)	61 (10.38)
Amount of pocket money			
<150	33 (10.78)	23 (8.16)	56 (9.52)
151-450	85 (27.78)	66 (23.4)	151 (25.68)
451-600	54 (17.65)	56 (19.86)	110 (18.71)
>600	134 (43.79)	137 (48.58)	271 (46.09)

5.2 Socio Demographic Characteristics of the Respondents Family

From the total sampled students 206 (35.03%) of them reported that their fathers have higher education first degree and above, 165 (28.06%) reported attainment of 12+ 1 or above education, 110 (18.71%) grade 7-12 level, 39 (6.63%) only read and write, 30 (5.11%) grade 1-6 and 19 (3.23%) have stated their fathers as not having any form of education.

From the total participants, 233 (39.63%) of them have answered that their mothers to have 12+1 or more educational level, 155 (26.36%) of the students mothers have attended education grades 7-12, 61 (10.37%) of participants mother were a first and above degree holders, 53 (9.01%) of sampled students mother had grade 1-6 education level and the rest 48 (8.16%), 21 (3.57%) and 17 (2,90%) of the study participants mother were illiterate, can read and write and other respectively (table-2).

Concerning study participants' father's occupational status as indicated in the same table-2, majority of the students 287 (48.81%) have reported that their fathers were employed in private sector.

On the other hand, from the total 268 (45.60%) of the sampled students' mother were house-wives, 153 (26.00%) of the participants mother were employed in private sector, 105 (18.80%) of the students' mother had engaged in private business and 3 (0.50%) of them answered that their mother were housekeepers, 1 (0.20%) respondent said that his mother was a daily laborer and the rest 58 (9.09%) participants replied other.

Table 2. Socio demographic characteristics of the Respondents Family Addis Ababa, Ethiopia, 2019

Characteristics	Number (%)		
	Male (n=306)	Female (n= 282)	Total (N= 588)
Father educational level			
Illiterate	8 (2.62)	11 (3.90)	19 (3.23)
Read and write	24 (7.84)	15 (5.32)	39 (6.63)
Grade 1-6	16 (5.23)	14 (4.96)	30 (5.11)
Grade 7-12	53 (17.32)	57 (20.21)	110 (18.71)
12+1 or more	100 (32.68)	65 (23.05)	165 (28.06)
1st degree and above	100 (32.68)	106 (37.60)	206 (35.03)
Other	5 (1.63)	14 (4.96)	19 (3.23)
Mother educational level			
Illiterate	12 (3.92)	9 (3.19)	21 (3.57)
Read and write	29 (9.48)	19 (6.70)	48 (8.16)
Grade 1-6	22 (7.20)	31 (11.00)	53 (9.01)
Grade 7-12	77 (25.16)	78 (27.66)	155 (26.36)
12+1 or more	127 (41.50)	106 (37.60)	233 (39.63)
1st degree and above	30 (9.80)	31 (11.00)	61 (10.37)
Other, specify	9 (2.94)	8 (2.84)	17 (2.90)
Father's occupation			
Daily laborer		2 (0.71)	2 (0.34)
Farmer	10 (3.27)	5 (1.77)	15 (2.60)
Civil servant	85 (27.78)	46 (16.30)	131 (22.30)
Employed in private sector	143 (46.73)	144 (51.06)	287 (48.81)
Has private business	56 (18.30)	62 (22.00)	118 (20.00)
Other (specify)	12 (3.92)	23 (8.16)	35 (5.95)
Mother's occupation			
House wife	141 (46.08)	127 (45.00)	268 (45.60)
Daily laborer	1 (0.32)		1 (0.20)
Maid servant	2 (0.65)	1 (0.35)	3 (0.50)
Employed in private sector	78 (25.49)	75 (26.60)	153 (26.00)
Has private business	47 (15.36)	58 (20.60)	105 (18.80)
Other (specify)	37 (12.10)	21 (7.45)	58 (9.90)

5.3 Substances used by the study participants

The use of substance by students of private university in Addis Ababa City was summarized in table-3. Accordingly, this study indicates that out of the total respondents, 229 (38.95%) of them have never consumed alcohol and the rest 359 (61.05%) students had consumed alcohol. From those students who have ever used alcohol, 252 (75.45%) of them have consumed occasionally. Whereas 80 (23.95%) participants reported moderate alcohol consumption and the rest 2 (0.60%) respondents were usual consumers. Parallely, over the last 12 months, 24 (6.72%) students reported that they have not consumed alcohol and 333 (93.28%) had taken alcohol.

The other substance which was asked to the study participants is khat. Out of the sampled students, 539 (91.66%) reported that they have never chewed khat and 49 (8.34%) reported that they have chewed khat. Further, among those students who chewed khat, 1 (2.70%) student responded of chewing khat at every day, and 19 (38.80%), 13 (26.53%), 3 (6.10%), and 13 (26.53%) students have chewed khat twice a week, once a week, once a month and occasionally respectively (table-3).

The third substance use this study has tried to investigate was Cigarette. Thus, as it is evident in table table-3, out of the total sampled respondents, 568 (96.60%) of them have never smoked cigarette, but the remaining 20 (3.40%) participants had smoked cigarette. Regarding to the frequency of cigarette smoking, 4 (20.00%) student smokes daily, 13 (65.00%) sometimes and 3 (15.00%) usually.

Table 3. Substance used by students of private universities, Addis Ababa, Ethiopia, 2019

Characteristics	Number (%)		
	Male (n=306)	Female (n= 282)	Total (N= 588)
Ever consumed an alcohol (=588)			
No	114 (37.25)	115 (40.78)	229 (38.95)
Yes	192 (62.75)	167 (59.22)	359 (61.05)
Frequency of Alcohol consumption (=359)			
Usual consumer	2 (1.14)		2 (0.6)
Moderate consumer	54 (30.86)	26 (16.35)	80 (23.95)
Occasional consumer	119 (68.00)	133 (83.65)	252 (75.45)
Alcohol consumption with the last 12 months (=359)			
No	17 (8.90)	7 (4.22)	24 (6.72)
Yes	174 (91.10)	159 (95.78)	333 (93.28)
Ever chewed khat (n=588)			
No	269 (87.91)	270 (95.74)	539 (91.66)
Yes	37 (12.09)	12 (4.26)	49 (8.34)
Frequency of khat chewing (n=49)			
Every day	1 (2.70)		1 (2.04)
Twice a week	12 (32.43)	7 (58.33)	19 (38.8)
Once a week	9 (24.32)	4 (33.33)	13 (26.53)
Once a month	3 (8.11)		3 (6.10)
Occasionally	12 (32.43)	1 (8.34)	13 (26.53)
Smoke cigarettes (=588)			
No	288 (94)	280 (99.30)	568 (96.60)
Yes	18 (6.00)	2 (0.70)	20 (3.40)
Frequency of smoking cigarettes (n=20)			
Daily	4 (22.22)		4 (20.00)
Sometimes	11 (61.11)	2 (100)	13 (65.00)
Usually	3 (16.67)		3 (15.00)

5.4 Sexuality pattern of the study participants

As the survey data portrayed in table-4 from the total study participants, 192 (32.65%) of the students ever had sex, while 396 (67.35%) of them have never practiced sexual intercourse. From those students who were sexually active, 94 (49.00%) had got their first sex before the age of 18 years, whereas 98 (51.00%) of participants have commenced sex at the age of 18 years and older years. The sexually active students mean age of first sexual intercourse was 18.31 with a standard deviation of ± 1.78 .

The study participants were asked to mention the type of relation they had with their first partner, majority 148 (77.00%) replied a friend, 9 (4.70%) an acquaintance, 22 (11.50%) a fiancé, 10 (5.20%) a spouse and 3 (1.60%) a relative. Likewise, among those students who started sex, only 80 (41.70%) students had one sexual partner, while the rest 112 (58.30%) had two or more sexual partners. On the other hand, the last 12 months sexuality pattern of the participants showed that 135 (70.30%) students had sexual intercourse with one person and 57 (30.00%) with two and more persons.

Table 4. Sexual behavior of private university students, Addis Ababa, Ethiopia, 2019

Characteristics	Number (%)		
	Male (n=306)	Female (n= 282)	Total (N= 588)
Ever had sex (=588)			
No	167 (54.58)	229 (81.20)	396 (67.35)
Yes	139 (45.42)	53 (18.80)	192 (32.65)
Age at first sex (n=192)			
<18	76 (54.68)	18 (34.00)	94 (49.00)
>18	63 (45.32)	35 (66.00)	98 (51.00)
Mean age at first sex \pm SD	18.31 \pm 1.78		
Relation to your first partner (n=192)			
An acquaintance	7 (5.04)	2 (4.00)	9 (4.70)
A friend	114 (82.00)	34 (64.00)	148 (77.00)
Fiancé	15 (10.80)	7 (13.00)	22 (11.50)
Spouse	0	10 (19.00)	10 (5.20)
A relative	3 (2.16)	0	3 (1.60)
Decide to have sexual intercourse the first time (n= 192)			
Fell in love	30 (21.60)	18 (34.00)	48 (25.00)
Had desire	102 (73.40)	23 (43.40)	125 (65.00)
I got married	0	12 (22.60)	12 (6.30)
How many sexual partners (n= 192)			
One person	45 (32.40)	35 (66.00)	80 (41.70)
Two and more people	94 (67.60)	18 (34.00)	112 (58.30)
Total number of persons ever had sex 12 months (n= 192)			
One person	86 (62.00)	49 (92.50)	135 (70.30)
Two and more people	53 (38.00)	4 (7.50)	57 (30.00)
Risky Sexual behavior (n=192)			
No	42(30.2)	22(41.5)	64 (33.3)
Yes	97(69.7)	31(58.5)	128(66.7)

5.5 Factors associated with sexual risk behavior

Table 5 shows binary logistic regression analysis results of socio demographic and substance use variables with risky sexual behavior. In bivariate analysis type of high school attended were significantly associated with the outcome variable. Students who attended their high school education at private school had 2.5 odds of risky sexual behavior compared to the government schools (COR=2.5, 95% CI= 1.351, 4.77).

Table 5. Bivariate analysis of participants' risk sexual behavior with socio-demographic and substance use factors, private universities of Addis Ababa, Ethiopia, 2019.

Variables	Risk Sexual Behavior			
	Yes (%)	No (%)	Crude OR (95%CI)	P value
Sex				
Male	97(69.8)	42(30.2)	0.61(0.317, 1.175)	0.14
Female	31(58.5)	22(41.5)	1	
Age				
15-19	11(84.6)	2(15.4)	1	
20-24	13(10)	117(90)	0.343(0.074, 1.597)	0.173
Year of Study				
1st year	56(66.6)	28(33.3)	1	
2nd year	42(72.4)	16(27.6)	1.312 (0.631, 2.732)	0.467
3rd year	21(53.8)	18(46.2)	0.583 (0.268, 1.267)	0.173
4th year and 5th year	9(81.8)	2(18.2)	2.250 (0.455, 11.121)	0.320
Type of High school attend				
Government	39(54.1)	33(45.9)	1	
Private	84(77)	28(23)	2.538 (1.351, 4.77)	0.004
Living With				
Father and Mother	75(67.5)	36(32.5)	1	
Father or Mother only	15(60)	10(40)	0.720 (0.295, 1.759)	0.471
Others	38(67.8)	18(32.2)	1.013 (0.510, 2.015)	0.970
Permanent Pocket Money				
<600	39(54.9)	32(45.1)	1	
>600	89(73.5)	32(26.5)	2.282 (1.230,4.233)	0.009
Alcohol				
Never Drink	20(76.9)	6(23.1)	1	
Drink	108(65)	58(35)	0.559 (0.213, 1.468)	0.23
Khat				
Never Chewed	100(64.1)	56(35.9)	1	
Chewed	28(77.7)	8(22.2)	1.960 (0.837,4.591)	0.121
Substance use	128 (66.6)	64 (33.4)	0.675(0.253, 1.806)	0.434

Table 6 shows binary logistic regression analysis on students' sexual history variables. Variable that were identified to have strong association with risk sexual behavior were age at first sex, age of first sexual partner, condom use during the first sexual practice and HIV test experience (table-6). Accordingly, students who had their first sexual intercourse-at and above the age of 18 years were less likely to exhibit risky sexual behavior than those who had their first sex below 18 years (COR=0.083; 95% CI = 0.037, 0.183).

Students who had their first sexual intercourse with a person who was younger than themselves were less likely to have risky sexual behaviors than those who had the same experience with a person in the same as they were (COR=0.88; 95% CI = 0.010, 0.769).

Students who never used condom at their first-time sexual intercourse were four times more risky sexual behavior than those who ever used condom at their first-time sexual interaction (COR = 3.927; 95% CI = 1.890, 8.161)

Students who were never had HIV test experience 60% less likely at risk than students who had HIV test experience (COR = 0.405; 95% CI = 0.216, 0.758)

Table 6. Bivariate analysis of participants' risk sexual behavior with sexual history, private university of Addis Ababa, Ethiopia, 2019.

Variables	Risk Sexual Behavior			
	Yes (%)	No (%)	Crude OR (95%CI)	P value
First age of Sex				
<18	11(84.6)	215.4)	1	
≥18	117(65.3)	62(34.7)	0.083 (0.037, 0.183)	0.0001
Age of first sexual partner				
The same age	112 (69.5)	49 (30.5)	1	
Younger	1 (16.6)	5 (83.4)	0.88 (0.010, 0.769)	0.028
Older than	15 (93.7)	1 (6.3)	0.656 (0.276, 1.563)	0.341
Frequency of condom use				
Regularly	48 (63.1)	28 (36.9)	1	
Sometimes	43 (57.3)	32 (42.7)	0.929 (0.47,1.81)	0.82
Never	10 (52.6)	9 (47.4)	0.235 (0.23,1.78)	0.4
Condom use history during first time sexual intercourse				
Yes	16 (41)	23 (59)	1	
No	112 (73.2)	41 (26.8)	3.927 (1.890, 8.161)	0.0001
Condom use history during last time sexual intercourse				
Yes	66 (61.6)	41 (38.4)	1	
No	62 (72.9)	23 (27.1)	1.675(0.903, 3.104)	0.1
Sex for Economic Purpose				
Never for economy	26(56.5)	20(43.5)	1	
Sex for Economic	2(66.6)	1(33.3)	0.650 (0.055, 7.686)	0.733
Undergo HIV test				
Yes	58(57.4)	43(42.6)	1	
No	70(76.9)	21(23.1)	0.405 (0.216, 0.758)	0.005

Multivariable logistic regression analysis of participants' risk sexual behavior

To determine the association between the outcome variable and confounding variables, binary logistic analysis was made and all variables that have association at P- value < 0.05 with the outcome variable in binary logistic analysis were included in the multivariate regression model. Thus, after controlling the effect of confounding variables through the application of multivariable logistic regression, type of high school attend, first age of sex, and use of condom at first time sexual intercourse were found to have statistically significant association with risky sexual behavior ($P < 0.05$).

Students who attended their high school education at private schools were 3.1 times more likely exposed to risky sexual behavior compared to those who attended their high-school education at government schools (AOR = 3.160; 95% CI = 1.406, 7.103). However, there was no significance difference in sexual behavior between students who attended education in religious and government schools.

The multivariate analysis results also revealed that, a strong association with risk sexual behavior was first age of sex (table-7). Accordingly, students who conducted their first sexual intercourse at 18 years and older were 0.07 times less likely at risk than students who had their first sex below the age of 18 years (AOR = 0.075; 95% CI = 0.030, 0.190).

The other variable which showed that, there was statistically significance association between condom use at the first sex and risky sexual behavior; respondents who never used condom at their first-time sexual intercourse exhibit risky sexual behavior 5.5 times more than those who ever used condom at their first-time sexual interaction (AOR = 5.594; 95% CI = 2.223, 14.076) (table-7).

Table 7. Multiple logistic regression analysis of participants' risk sexual behavior with possible predictors, private university of Addis Ababa City, Ethiopia, 2019.

Variables	Risky Sexual Behavior				
	Yes (%)	No (%)	Crude OR (95%CI)	Adjusted OR (95%CI)	P value
Type of High school Attend					
Government	39(54.1)	33(45.9)	1	1	
Private	84(77)	28(23)	2.538 (1.351, 4.77)	3.160 (1.406, 7.103)	0.005
First age of Sex					
<18	11(84.6)	215.4)	1	1	
≥18	117(65.3)	62(34.7)	0.083 (0.037, 0.183)	0.075 (0.030, 0.190)	0.0001
Condom use history during first time sexual intercourse					
Yes	16(41)	23(59)	1	1	
No	112(73.2)	41(26.8)	3.927 (1.890, 8.161)	5.594 (2.223, 14.076)	0.0001
Age of first sexual partner					
The same age	112(69.5)	49(30.5)	1	1	
Younger	1 (16.6)	5 (83.4)	0.88 (0.010, 0.769)	0.100 (0.009, 1.130)	0.063
Older than	15 (93.7)	1 (6.3)	0.656 (0.276, 1.563)	0.713 (0.235,2.160)	0.549
Undergo HIV test					
Yes	58(57.4)	43(42.6)	1	1	
No	70(76.9)	21(23.1)	0.405 (0.216, 0.758)	1.878(0.842, 4.189)	0.123

6. DISCUSSION

The study was conducted among 588 regular undergraduate private university students in Addis Ababa using structured questionnaire to assess the risky sexual behavior and its associated factors among private university students of Addis Ababa.

Adolescent's and youth's sexual activities have been increased globally. Likewise, several studies showed that premarital sexual activities increased among adolescents in Sub-Saharan Africa(4). This study showed that about 66.7% of respondents were engaged in risky sexual behavior in their life time and findings found higher than study conducted among youth center of Addis Ababa and 43.1%(37) and Southern Ethiopia Boditti high school 17.9%(38). This difference might be related to the characteristics of the study participants, design, study area and difference in time.

Age at first sex is an important indicator of risky sexual behavior. This study showed that the mean age for first sexual intercourse was 18.3 ± 1.78 (SD) years. This is in line with the finding from Bahir Dar private college (18.7 ± 1.97 (SD) years (23) and In contrast, the mean age of sex was a bit higher than findings of Jimma University(17.7 years)(39). This disparity in the mean age at first sex among university of different studies could be due to cultural background, socio demographic characteristics, different in sample size and living arrangement i.e. majority of students in this study reported living with both parents 398 (67.69%).

This study documented that 32.65% of undergraduate private university students ever had sexual activity and the findings found consistent with a study conducted at Haremeya University (33.5%)(28). However, the evidence from Mekelle private college, (25.6%) indicated a lower percentage(17). University students are at a stage in their living characteristics by searching, discovering, and experimentation include sexual activities.

The study informed that a history of attending at private high school were statistically significant for a risky sexual behavior (AOR=3,160% CI;1.406, 7.103) and which was higher than a study done in Alemaya university (AOR=2.42% CI; 0.66, 8.90) (28). Access to romantic and pornographic films, and mobile phones use variation possibly affect the difference between the two studies.

Students who were 18 years and older at first initiation of sex were found to have lower odds of risky sexual behavior in the multivariable logistic regression analysis. Student whose age greater than 18 years had 92.5% reduced risk of experiencing risky sexual behavior compared with student whose age was less than 18 years (AOR= 0.075, 95% CI; 0.030, 0.190). This finding is higher, reduced risky behavior than study done in Addis Ababa (AOR= 0.21, 95% CI; 0.12, 0.38)(37). Educational background of the study participants might be possible reason for this variation. However, it is not inline the findings of study done in Thailand. The difference might be due to cultural variation between the countries(40)

Using a condom, at the first time of sexual intercourse was found to be significantly associated with risky sexual behavior in multivariable logistic regression analysis. Student who had not used condom at first time of sexual intercourse were 5.5 times more likely to have risky sexual behavior (AOR=5.594, 95% CI; 2.223, 14.076). This finding a bit higher than study done in Debretabor university (AOR=3.2, 95% CI; 1.2-10.5)(41).The variation might be due to decreased awareness to private universities and difference in study setting as well as methodology used might be considered as a reason.

7.STRENGTH AND LIMITATION OF THE STUDY

7.1 Strength of the study

- The survey returned high response rate.

7.2 Limitation of the study

- The cross-sectional nature of the study only allows interpretation of analysis results at the level of association, not causal links.
- Possibility of underreporting of risky sexual behavior due to personal matters of sensitive issues
- Recall bias related to the age at first sexual intercourse and whether or not used condom.
- Inability to recall the number of sexual partners they have had prior to the data collection.
- If data collection tools were triangulated with qualitative data collection technique, the quality of the evidence would have been improved.

8. CONCLUSION

8.1 Conclusion

In conclusion, with the above limitations, this study identified that significant numbers of students engaged in risky sexual behaviors (66.7%) among undergraduate private university students of Addis Ababa. Which are proven by having multiple sexual partner and inconsistent condom use. History of attending at private high school, age at initiation of sex, and using condom at first time of sexual intercourse were significantly associated with risky sexual behavior of these students. Therefore, understanding magnitude and associated factors of risky sexual behavior is important for concerned body to design and implement comprehensive reproductive health interventions with the aim of preventing and reducing multiple risk factors among private university students.

9. RECOMMENDATIONS

Based on the findings, the following recommendations are forwarded to be implemented by concerned officials

For Ministry of Education:

- Sexual and reproductive health education should be incorporated into the school curriculum.

For Ministry of Health:

- Health professionals should counsel university students on consistent condom use to prevent the outcomes of risky sexual behavior.

For Health programmers/policy maker

- School based sexual and reproductive health intervention programs like condom distribution and education at private high school students must be organized, strengthened, effectively implemented and monitored to reduce risky sexual behavior.

For researchers

- Qualitative study needs to be conducted to explore the reasons why students who attended their high school education at private school involve in risky sexual behavior.

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ANNEX 1: ENGLISH QUESTIONNAIRES

1. Information sheet

Greeting,

How are you, I am _____. I came from Addis Ababa University, Collage of Health Science, and School of Public Health to conduct a research. The purpose of this study is to assess risky sexual behavior of private universities students to help policy makers to plan and take measures regarding risky sexual behavior prevention and control programs.

I am going to ask you some very personal questions that some people find difficult to answer. Your answers are completely confidential. Your name will not be written on this form, and will never be used in connection with any of the information you tell me. You do not have to answer any question that you do not want to answer, and you may end this interview at any time you want to. However, your honest answers to these questions will help us better understand on the assessment risky sexual behavior. We would greatly appreciate your help in responding to this survey. The survey will take about 15 minutes to fill the questioner.

2. Informed consent

Having the above information, I invite you to participate in the study, with honor. I, the under signed, will like to confirm that, as I give consent to participate in the study, it is with clear understanding and recognition of:

- The objective of the study, and
- My right to resign from the study during any stage of the study.

I confirmed my agreement with my signature after the detailed objective of the study has been explained to me in the language I understand well.

Participant's Signature _____ Signature of the data collector _____

Date _____

Date _____

Remark: for any inconvenience and problem related to questionnaire please contact principal investigator.

Principal investigator: Hadas Dimetros Tele: +251 9 11371941 Email: hadasdime@yahoo.com

Section one: Socio-demographic characteristics

No	Questions and filters	Response	Skip to Q no
Q101	Record sex of the respondent	1. Male 2. Female	
Q102	How old are you? (in completed year)	_____ year 99. Don' t know year	
Q103	Year of study?	1. First year 2. Second year 3. Third year 4. Fourth year 5. Fifth year	
Q104	What is your marital status?	1. Unmarried 2. Married 3. Divorced 4. Widowed 5. Separated	
Q105	What is your religion?	1. Orthodox 2. Protestant 3. Catholic 4. Muslim 5. Other(specify)_____	
Q106	To which ethnic group do you belong?	1. Amhara 2. Oromo 3. Gurage 4. Tigray 5. Other (specify)_____	
Q107	In what type of school did you attend your high school?	1. Public/governmental school 2. Private school 3. Religious /missionary 4. Others (specify) _____	

Q108	With who you are livings now?	<ol style="list-style-type: none"> 1. With father and mother 2. With mother only 3. With father only 4. With relatives 5. Fiancé 6. Spouse 7. Alone (private on rented house) 8. Friends 9. Other (specify)_____ 	
Q109	Father's educational level?	<ol style="list-style-type: none"> 1. Illiterate 2. Read and write 3. Grade 1-6 4. Grade 7-12 5. 12+1 or more 6. 1st degree and above 7. Other, specify_____ 	
Q110	Mother's educational level?	<ol style="list-style-type: none"> 1. Illiterate 2. Read and write 3. Grade 1-6 4. Grade 7-12 5. 12+1 or more 6. 1st degree and above 7. Other, specify_____ 	
Q111	What is your father's occupation? (if alive)	<ol style="list-style-type: none"> 1. Daily laborer 2. Farmer 3. Civil servant 4. Employed in private sector 5. Has private business_____ 6. Other (specify)_____ 	
Q112	What is your mother's occupation? (if alive)	<ol style="list-style-type: none"> 1. House wife 2. Daily laborer 3. Maid servant 4. Employed in private sector 5. Has private business_____ 6. Other (specify)_____ 	
Q113	Do you have permanent pocket money?	<ol style="list-style-type: none"> 1. Yes 2. No _____201 	
Q114	How much pocket money do you get from your parents or relatives per month?	<p>_____ETB</p> <ol style="list-style-type: none"> 1. <150 birr 2. 151-300 birr 	

		3. 301-450 birr 4. 451-600 birr 5. > 600 birr	
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Section two: Substance and Alcohol use

No	Questions and filters	Response	Code
Q201	Have you ever consumed an alcoholic drink (tella/beer/wine...)?	1. Yes 2. No <input type="checkbox"/>	206
Q202	How old were you when you had your first drink of alcohol?	1. 7 years old or younger 2. 8 or 9 years old 3. 10 or 11 years old 4. 12 or 13 years old 5. 14 or 15 years old 6. 16 -18 7. Above 18	
Q203	During the last 12 months, did you drink alcohol?	1. Yes 2. No <input type="checkbox"/>	206
Q204	During the last 12 months, how often Have you had drinks containing alcohol?	1. Usual consumer 2. Moderate consumer 3. Occasional consumer	
Q205	Do alcohol drink increase your sexual desire?	1.yes 2.no <input type="checkbox"/>	206
Q206	Do you currently smoke cigarettes?	1.yes 2.no <input type="checkbox"/>	208
Q207	How often do you smoke?	1. Daily 2. Sometimes 3. Usually	
Q208	Have you ever chewed khat?	1.yes 2.no <input type="checkbox"/>	301
Q209	How often did you chew khat in the last 12 months?	1. Every day 2. Twice a week 3. Once a week 4. Once a month 5. Occasionally	

Q210	Do chewing khat increase your sexual desire?	1. Yes 2. No <input type="checkbox"/>	301
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Section three: Sexual history

No	Questions and filters	Response	Code
Q301	Have you ever had sexual intercourse?	1. Yes 2. No <input type="checkbox"/>	318
Q302	At what age did you first have sexual intercourse?	Age in years _____ 99. Don't know	
Q303	What is/was the relation to you of your first partner?	1. An acquaintance 2. A friend 3. Fiance 4. Spouse 5. A relative 6. Other (specify) _____	
Q304	Why did you decide to have sexual intercourse the first time? (multiple answer may be possible)	1. Fell in love 2. Had desire 3. I got married 4. Raped 5. To get money and other gifts 6. Peer pressure 7. Was drunk or stoned 8. Others, specify _____	
Q305	How much older or younger was the person with whom you had your first sexual experience?	1. More than 10 years older 2. 5-10 years older 3. Less than 5 years older 4. Younger 5. He/she was an age like me 6. Don't know	
Q306	How many sexual partners have you had so far?	1. With one person 2. With two people 3. With three people 4. With four people 5. With five to nine people 6. With ten or more people	
Q307	How many people in the total have you ever had sexual intercourse with during the last 12 months?	1. With one person 2. With two people 3. With three people 4. With four people 5. With five to nine people	

		6. With ten or more people	
Q308	Have you ever used a condom?	1. Yes 2. No 	312
Q309	How often did you use condom in the last 12 months?	1. Regularly  2. some times 3. Never	313
Q310	Did you use a condom the first time you had sexual intercourse?	1. Yes 2. No	
Q311	Did you use a condom the last time you had sexual intercourse?	1. Yes 2. No	
Q312	If you have not used condom at all, or haven't used it consistently what was the reason? (multiple answer is possible)	1. Not available 2. Too expensive 3. Ashamed to ask my partner 4. Partner objected 5. Used another contraceptive 6. Don't like them 7. Wanted to get pregnant 8. Ashamed to buy 9. I trust my partner 10. I was drunk or stoned 11. Didn't think of it 12. I didn't know how to use it 13.it decreases satisfaction/pleasure 14. It bursts 15. My religion prohibits 16. Others, specify _____	
Q313	[for males], have you ever had sexual intercourse with commercial sex workers?	1. Yes 2. No 	316
Q314	[for males], have you ever used a condom when making sexual intercourse with commercial sex workers?	1. Yes 2. No	
Q315	[for females], have you ever had sexual intercourse for economic purpose?	1. Yes 2. No	
Q316	Have you ever had the following symptoms last 12 months?	Yes no	

	1. Genital ulcer 2. Genital discharge 3. Burning sensation 4. Swelling around genital and groin	1 2 1 2 1 2 1 2	
Q317	If yes for q316, for any items did you seek medical care from a health institution?	1. Yes 2. No	
Q318	Do you have any source of information about sexuality? HIV/AIDS? STIs?	Yes no 1 2 1 2 1 2	
Q319	Is there anything a person can do avoid getting STI and HIV/AIDS? (multiple answer is possible)	1. Sexual abstinence 2. Avoid casual sex 3. Remain faithful to a partner 4. Use condoms in every act of sexual intercourse 5. Avoid sex with CSWs	
Q320	Which diseases do you know about STI? (multiple answer is possible)	1. Gonorrhoea 2. Syphilis 3. Chancroid 4. HIV/AIDS	
Q321	How can one prevent HIV/aids? (multiple answer is possible)	1. Abstain from sexual intercourse 2. One to one only sexual relationship 3. Condom use 4. Avoid unsafe injections 5. Avoid contaminated sharp objects	
Q322	Have you ever heard about voluntary counseling and testing for HIV?	1. Yes 2. No	
Q323	Did you ever undergo HIV test?	1. Yes 2. No	

ANNEX 2: AMHARIC QUESTIONNAIRES

አዲስ አበባ ዩኒቨርሲቲ፣ ጤና ሣይንስ ኮሌጅ፣ የህብረተሰብ ጤና አጠባበቅ ትምህርት ክፍል

የተሳታፊው መለያ ቁጥር _____

የአማረኛ መጠይቅ

1. የመረጃ ቅጽ

ጤና ይስጥልኝ!

እኔ _____ እባላለሁ። የመጣውን ከአዲስ አበባ ዩኒቨርሲቲ ጤና ሣይንስ ኮሌጅ የህብረተሰብ ጤና አጠባበቅ ትምህርት ክፍል ሲሆን የመጣሁበት ምክንያት ጥናት ለማድረግ ነው። አንዳንድ ሰዎች ለመመለስ አስቸጋሪ የሆኑ አንዳንድ የግል ጥያቄዎችን እጠይቃችኋለሁ። የእርስዎ መልሶች ሙሉ በሙሉ ሚስጥራዊ ይሆናሉ። ስምዎ በዚህ ቅጽ ላይ አይጻፍም፣ እና ከነገሩን ማንኛውም መረጃ ጋር በተያያዘ ጥቅም ላይ አይውልም። መመለስ የማይፈልጉትን ማንኛውም ጥያቄ መልስ መስጠት የለብዎትም፣ እናም ይህን ቃለ-መጠይቅ በፈለጉት ጊዜ ሊያቆሙት ይችላሉ። ነገር ግን፣ ለእነዚህ ጥያቄዎች ትክክለኛ መልስዎ በግምገማው ላይ አደጋ ሊያስከትል የሚችል ወሲባዊ ባህሪ በተሻለ ሁኔታ እንድንረዳ ያግዘናል። ለዚህ ጥናት ምላሽ ለመስጠት ለሚደርጉት ጥረት በጣም አመሰግናለሁ ነን። ጥናቱ ጥያቄውን ለመሙላት 15 ደቂቃ ያህል ይወስዳል።

2. የስምምነት ማረጋገጫ ቅጽ

ይህንን ግንዛቤ ውስጥ በማስገባት በጥናቱ ላይ እንድትሳተፍ/ፊ በአክብሮት እጠይቃለሁ።

እኔ ከዚህ በታች ፊርማዬ የተቀመጠው በጥናቱ በፍቃደኝነት እንደምሳተፍ የሚከተሉትን ግንዛቤ ውስጥ በማስገባት ነው።

- የጥናቱ ዓላማ

2. በጥናቱ የሚካተቱ ጥያቄዎችንና የጥናቱ አስፈላጊነት

በሚገባኝ ቋንቋ ስለተገለጸልኝና ስለተብራራልኝ በጥናቱ ለመሳተፍ ፍቃደኛ መሆኔን በፊርማዬ አረጋግጣለሁ።

የተሳታፊው ፊርማ _____

የመረጃ ሰብሳቢው ፊርማ _____

ቀን _____

ቀን _____

ማሳሰቢያ: ያልገባዎት ወይም ጥያቄ የሆነበዎት ሁኔታ ካለ የጥናቱ ዋና ተሳታፊን መጠየቅ ይችላሉ።

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ክፍል አንድ፡ ስለ ማኅበራዊ-ስነ-ሕዝብ ባህሪ መጠይቅ

ቁጥር	ጥያቄዎች እና ማጣሪያዎች	ምላሽ	ይዘላሉ
ቁ101	የምላሽ ሰጪውን ጾታ መዝግቡ	1. ሴት 2. ወንድ	
ቁ102	እድሜዎ ስንት ነው? (በሙሉ ዓመት)	_____ አመት 99. አመቱን ለማያውቅ	
ቁ103	ስንተኛ አመት ነዎት?	1. የመጀመሪያው አመት 2. የሁለተኛ ዓመት 3. ሰባተኛ ዓመት 4. አራተኛው ዓመት እና ከዚያ በላይ 5. አምስተኛ ዓመት	
ቁ104	የጋብቻ ሁኔታዎ ምንድነው?	1. ያላገባ/ች 2. ያገባ/ች 3. የፋታ/ች 4. የትዳር አገር የሞተችበት/ተበት 5. የተለያየ	
ቁ105	ሃይማኖትዎ ምንድን ነው?	1. አርቶዶክስ 2. ፕሮቴስታንት 3. ካቶሊክ 4. ሙስሊም 5. ሌላ (ይግለጹ) _____	
ቁ106	የትኛው ብሄር (ብሄረሰብ) አባል ነዎት?	1. አማራ 2. ኦሮሞ 3. ጉራጌ 4. ትግራይ 5. ሌላ (ይግለጹ) _____	
ቁ107	በሁለተኛ ደረጃ ትምህርት ቤትዎ ውስጥ ምን አይነት ትምህርት ቤት ገብተው ነበር?	1. የሕዝብ / መንግሥታዊ ትምህርት ቤት 2. የግል ትምህርት ቤት 3. ሀይማኖታዊ / ሚስዮናዊ 4. ሌሎቹ (ዝርዝር ይግለጹ) _____	
ቁ108	አሁን ከማን ጋር ይኖራሉ?	1. ከአባትና ከእናት ጋር 2. ከእናት ጋር ብቻ 3. በአባት ብቻ 4. ከዘመዶች 5. ከፍቅረኛ ጋር 6. ከባለቤት 7. ለብቻ (በኪራይ የተያዘ ቤት) 8. ከጓደኞች 9. ሌላ (ይግለጹ) _____	
ቁ109	የአባት የትምህርት ደረጃ?	1. ማንበብና መጻፍ የማይችል 2. ማንበብና መጻፍ የሚችል 3. ከ 1 ኛ እስከ 6 ኛ 4. ከ 7 ኛ -12 ኛ 5. 12 + 1 ወይም ከዚያ በላይ 6. የመጀመሪያ ዲግሪ እና ከዚያ በላይ 7. ሌላ, ይግለጹ _____	

ቁ110	የእናት የትምህርት ደረጃ?	<ol style="list-style-type: none"> 1. ማንበብና መጻፍ የማይችል 2. ማንበብና መጻፍ የሚችል 3. ከ 1 ኛ እስከ 6 ኛ 4. ከ 7 ኛ -12 ኛ 5. 12 + 1 ወይም ከዚያ በላይ 6. የመጀመሪያ ዲግሪ እና ከዚያ በላይ 7. ሌላ, ይግለጹ _____ 	
ቁ111	የእባትህ/ሽ ሥራ ምንድነው፣ በህይወት ካለ?	<ol style="list-style-type: none"> 1. የቀን ስራተኛ 2. ገበሬ 3. የመንግስት ስራተኛ 4. በግል ዘርፍ 5. የግል ንግድ ነው. 6. ሌላ (ይግለጹ) _____ 	
ቁ112	የእናትህ/ሽ ስራ ምንድነው፣ በህይወት ካለች?	<ol style="list-style-type: none"> 1. የቤት አመቤት 2. የቀን ስራተኛ 3. የባለቤት አገልጋይ 4. በግል ዘርፍ 5. የግል ንግድ ነው. 6. ሌላ (ይግለጹ) _____ 	
ቁ113	የኪስ ገንዘብ አለዎት?	<ol style="list-style-type: none"> 1. አዎ 2. አይ _____ 201 	
ቁ114	በወር ከወላጆቻቸው ወይም ዘመዶቻቸው ምን ያህል የኪስ ገንዘብ ያገኛሉ?	<p>_____ ብር</p> <ol style="list-style-type: none"> 1. <150 ብር 2. 15-300 ብር 3. 301-450 ብር 4. 451-600 ብር 5. > 600 ብር 	

ክፍል ሁለት፡ አልኮል፣ ሲጋራና ጫት አጠቃቀም

ቁጥር	ጥያቄዎች እና ማጣሪያዎች	ምላሽ	ይዘላሉ
ቁ201	የአልኮል ምርቶችን እንደ ጠላ፣ ቢራ፣ ወይን፣ ወዘተ ተጠቅመው ያውቃሉ?	<ol style="list-style-type: none"> 1. አዎ 2. አይ _____ 206 	
ቁ202	ለመጀመሪያ ጊዜ መጠጥ ሲጠጡ ዕድሜዎት ስንት ነበር?	<ol style="list-style-type: none"> 1. 7 አመት ወይም ከዚያ በታች 2. 8 ወይም 9 አመት 3. 10 ወይም 11 ዓመት 4. 12 or 13 ዓመት 5. 14 ወይም 15 ዓመት 6. 16-18 7. 18 አመት በላይ 	
ቁ203	ባለፉት 12 ወራት ውስጥ አልኮል ጠጥተዋል?	<ol style="list-style-type: none"> 1. አዎ 2. አይ _____ 206 	

ቁ204	ባለፉት 12 ወሮች ውስጥ የአልኮል ይዘት ያለባቸው መጠጦችን ምን ያህል ጊዜ ተጠቅመዋል?	1. መደበኛ ተጠቃሚ 2. መጠነኛ ተጠቃሚ 3. አልፎ አልፎ ተጠቃሚ	
ቁ205	የአልኮል መጠጥ መጠጣት የግብረ ስጋ ፍላጎትዎን ይጨምራል?	1. አዎ 2. አይ <input type="text"/>	206
ቁ206	በአሁኑ ጊዜ ሲጋራ ያጨሳሉ?	1. አዎ 2. አይ <input type="text"/>	208
ቁ207	ምን ያህል ነው የሚያጨሰት?	1. በየቀኑ 2. አንዳንድ ጊዜ 3. ሁልጊዜ	
ቁ208	ጫት ቅመው ያውቃሉ?	1. አዎ 2. አይ <input type="text"/>	301
ቁ209	ባለፉት 12 ወሮች ውስጥ ምን ያክል ጊዜ ቅመዋል?	1. በየቀኑ 2. በሳምንት ሁለት ጊዜ 3. በሳምንት አንድ ጊዜ 4. በወር አንዴ 5. አልፎ አልፎ	
ቁ210	ጫት መቃም የግብረ ስጋ ፍላጎትዎን ይጨምራል?	1. አዎ 2. አይ <input type="text"/>	301

ክፍል ሶስት: የግብረ ስጋ ግንኙነትን የተመለከተ መጠይቅ

ቁጥር	ጥያቄዎች እና ማጣሪያዎች	ምላሽ	ይዘለሉ
ቁ301	የግብረ ስጋ ግንኙነት ፈፀመው ያውቃሉ?	1. አዎ 2. አይ <input type="text"/>	318
ቁ302	መጀመሪያ የጾታ ግንኙነት የፈጽሙበት እድሜ ስንት ዓመት ነበር?	እድሜ በአመት _____ 99. ለማይታወቅ	
ቁ303	ከእርስዎ የመጀመሪያ አጋርዎ ጋር ያለው/የነበረው ግንኙነት ምንድነው?	1. ትውውቅ 2. ጓደኛ 3. እጮኛ 4. ባለቤት 5. ዘመድ 6. ሌላ (ይግለጹ) _____	
ቁ304	ለምን ለመጀመሪያ ጊዜ የወሲብ ግንኙነት ለማድረግ ወሰኑ? (ከአንድ በላይ መልሶች ሊኖሩ ይችላሉ)	1. በፍቅር ተይዘው 2. ፍላጎት ስለነበርዎት 3. በጋብቻ ምክነያት 4. ተደፍረው 5. ገንዘብ እና ሌሎች ስጦታዎች ለማግኘት 6. የእኩዮች ተጽዕኖ 7. በስካር 8. ሌሎች; (ይግለጹ) _____	
ቁ305	መጀመሪያ ላይ የግብረ ስጋ ግንኙነት ያደረግዎት ሰው እድሜ ከእርስዎ ጋር ሲነፃፀር ምን ያክል ነበር?	1. በ 10 ዓመት የሚበልጥ/ የምትበልጥ 2. ከ 5-10 ዓመታት የሚበልጥ/ የምትበልጥ	

		3. ከ 5 ዓመት የሚያንስ/ የምታንስ 4. አቻ እድሜ ላይ የነበረ/የነበረች 99. ላልታወቀ	
ቁ306	እስካሁን ድረስ ምን ያህል የወሲብ አጋር አላችሁ?	1. ከአንድ ሰው ጋር 2. ከሁለት ሰዎች ጋር 3. በሦስት ሰዎች 4. ከአራት ሰዎች ጋር 5. ከአምስት እስከ ዘጠኝ ሰዎች 6. አስር ወይም ከዚያ በላይ ሰዎች	
ቁ307	ላለፉት 12 ወራት ውስጥ ከምን ያህል ሰዎች ጋር ወሲባዊ ግንኙነት ፈጽመዋል?	1. ከአንድ ሰው ጋር 2. ከሁለት ሰዎች ጋር 3. በሦስት ሰዎች ጋር 4. ከአራት ሰዎች ጋር 5. ከአምስት እስከ ዘጠኝ ሰዎች ጋር 6. አስር ወይም ከዚያ በላይ ሰዎች ጋር	
ቁ308	ኮንዶም ተጠቅመው ያውቃሉ	1. አዎ 2. አይ <input type="checkbox"/>	312
ቁ309	ባለፉት 12 ወሮች ውስጥ ስንት ጊዜ ኮንዶም ይጠቀሙ ነበር?	1. በመደበኛነት <input type="checkbox"/> 2. አንዳንድ ጊዜ 3. በጭራሽ	313
ቁ310	ለመጀመሪያ ጊዜ የወሲብ ግንኙነት ሲያደርጉ ኮንዶም ተጠቅመዋል?	1. አዎ 2. አይ	
ቁ311	ለመጨረሻ ጊዜ የወሲብ ግንኙነት ሲያደርጉ ኮንዶም ተጠቅመዋል?	1. አዎ 2. አይ	
ቁ312	ኮንዶም ጨርሶ የማይጠቀሙ ከሆነ ወይም ኮንዶምን እያቆራረጡ የሚጠቀሙ ከሆነ ምክንያቱ ምን ይሆን? (ከአንድ መልሶች ሊመርጡ ይችላሉ)	1. አይገኝም 2. በጣም ውድ ስለሆነ 3. የአገልግሎት ጓደኛዬን መጠየቅ እፍረት ስለተሰማኝ 4. በወስብ ጓደኛ ተቃውሞ 5. ሌላ የወሊድ መቆጣጠሪያ መጠቀም 6. አለመውደድ 7. ለማርገዝ/ለማስረገዝ 8. ለመግዛት ማፈር 9. የፍቅር ጓደኛን በማመን 10. አልኮል በመጠጣት በመስከር 11. አይመስለኝም 12. እንዴት መጠቀም እንዳለብኝ አላወቅሁም ነበር 13. እርካታ መቀነስ / ደስታን ይቀንሳል 14. ይደክማል 15. ሃይማኖቱ ይከለክላል 16. ሌሎች, (ይግለጹ) _____	
ቁ313	[ለወንዶች], ከሴተኛ አዳሪዎች ጋር የግብረ ስጋ ግንኙነት ፈጽመህ ታውቃለህ?	1. አዎ 2. አይ <input type="checkbox"/>	316
ቁ314	[ለወንዶች], ከሴተኛ አዳሪ ጋር የግብረ ስጋ ግንኙነት ሲፈጽሙ ኮንዶም ተጠቅመህ ታውቃለህ?	1. አዎ 2. አይ	
ቁ315	[ለሴቶች], ለንግድ ወይም ለኢኮኖሚያዊ ጥቅም ስትይ የግብረ ስጋ ግንኙነት ፈፅመሽ ታውቁያለሽ?	1. አዎ 2. አይ	
ቁ316	ባለፉት 12 ወራት ውስጥ ከዚህ በታች የተጠቀሱትን ምልክቶች አይተዋል?	አዎ አይ	

	1. የብልት አካባቢ ቁስለት 2. ከብልት የሚወጣ ፈሳሽ 3. የማቃጠል ስሜት 4. የጾታ ብልትን እና የሽንት መውጫ አካባቢ እብጠት	1 1 1 1	2 2 2 2	
ቁ317	ለ ቁ316 አዎ ካሉ፣ ለየትኛውም ምልክት ከጤና ተቋማት የሕክምና እንክብካቤን ይፈልጋሉ?	1. አዎ 2. አይ		
ቁ318	ስለ ወሲባዊነትና በወሲብ ስለ የሚተላለፉ በሽታዎች መረጃ አለዎት? ስለ ወሲብ? ስለ ኤች አይ ቪ / ኤድስ? ስለ አባላዘር በሽታዎች?	አዎ 1 1 1	አይ 2 2 2	
ቁ319	አንድ ሰወ. በኤች. አይ. ቪ ወይም በሌሎች በወሲብ ከሚተላለፉ በሽታዎች ራሱን እንዴት ሊጠብቅ ይችላል (ከአንድ መልሶች ሊመርጡ ይችላሉ)		1. የታወቁ ግንኙነቶችን ከማድረግ መታቀብ 2. በድንገት የሚደረግ የግብረ ስጋ ግንኙነት አለማድረግ 3. ለወሲብ ባልደረባ ታማኝ መሆን 4. በእያንዳንዱ የወሲብ ግንኙነት ጊዜ ኮንዶም መጠቀም 5. ከሌተኛ አዳሪዎች ጋር የግብረ ስጋ ግንኙነትን አለማድረግ	
ቁ320	ስለ የትኛው (የትኞቹ) በሽታዎች ታውቃለህ/ሽ? (ከአንድ መልሶች ሊመርጡ ይችላሉ)		1. ጨብጥ 2. ቁጥኝ 3. ከርግር 4. ኤች አይ ቪ / ኤድስ	
ቁ321	ከኤች አይ ቪ / ኤድስ ራሱን እንዴት መከላከል ይችላል? (በርካታ መልሶች ሊደረጉ ይችላሉ)		1. መታቀብ 2. አንድ ለአንድ መወሰን 3. ኮንዶምን መጠቀም 4. የተበከሉ/አጠራጣሪ መርፌዎችን አለመጠቀም 5. የተበከሉ ስለታማ ነገሮችን ማስወገድ	
ቁ322	ስለ በፈቃደኝነት ላይ የተመሰረተ የኤች አይ ቪ ምርመራ እና ምርመራ ስምተህ ታውቃለህ?	1. አዎ 2. አይ		
ቁ323	የኤች አይ ቪ ምርመራ ተደርጎለት ያውቃል?	1. አዎ 2. አይ		

I, the undersigned, MPH student declare that this thesis is my original work in partial fulfillment of for the degree of Masters of Public Health in Reproductive and Family Health.

Name of the investigator Hadas Dimetros

Date _____signature _____

Approval of the primary Advisor and examining board

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Date: _____Signature _____

Name of external examiner: _____

Date. _____Signature

Name of internal external examiner: _____

Date _____ Signature