

SUBSTANCE USE AND ASSOCIATED FACTOR AMONG SECONDARY  
AND PREPARATORY SCHOOL STUDENTS IN HOMACHO TOWN,  
HADIYA ZONE, SOUTH ETHIOPIA



By

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## **Abstract**

**Background:** The use of substances such as khat, alcohol or cigarette among adolescents are a global Phenomenon that can lead to decreased academic performance, increased risk of contracting Human immune virus (HIV) and Sexually transmitted disease (STD.) But studies targeting adolescent students on substance use are relatively scarce in Ethiopia

**Objective:**To assess prevalence and associated factors of substance use among secondary and preparatory school students in Homacho town, Hadiya zone, South Ethiopia.

**Method:** A school based cross-sectional study was conducted from February 1 to 20/2017 among 408 9<sup>th</sup> to 12<sup>th</sup> grade secondary and preparatory students in the Town of Homacho. Participants were selected using SRS by lottery method after stratification was made. The data were entered into Epi data version 3.1. Then cleaned and analyzed using SPSS version 20.0. The results of descriptive data were presented using text and tables. Bivariate and multivariable logistic regressions were employed to identify the predictor of substance use.

**Result:** The overall life time prevalence of substance use was 220 (53.9%) among the respondents. The current prevalence of substance use was 181(44.4%) (6.9% cigarette smoking, 20.1%, alcohol drinking and 24.5% khat chewing).sexes of the respondents, substance uses status of the respondent's father, mother, and friends were significantly associated with substance use status of the respondents. Respondents whose father, mother, and friend use substances (AOR [95% CI] 5.06 [2.580-9.950]), (AOR [95% CI] three [1.359-9.009]), (AOR [95% CI] 2.27 [1.370-3.773]) more likely to use substances respectively. On the other hands, currently living alone, current town residence and having monthly pocket money were also significantly associated with substance use of the respondents.

**Conclusions:**Prevalence of substance use is high in the study population. Family and friends of them are its predictors. Hence, school principals, town education office and health office need to tackle substance uses of the respondents by focusing on the identified factors.

**Keywords:** Substance use, khat chew, alcohol drink, cigarette smoking

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## **Abbreviations**

AOR Adjusted odd ratio

CI Confidence Interval

FGD Focus Group Discussion

HIV Human immune deficiency virus

P Prevalence of proportion

STD Sexually transmitted disease

WHO World Health Organization

AIDS Aquired immune disease syndrome

## **Chapter One: Introduction**

### **1.1 Back ground Information**

Substance use is a phenomenon which can be observed in different forms all around the world (1).

The history of drug production and use is part of the history of humanity itself. In the last Decades, however, due to its increased frequency, substance use has become a worldwide Public health problem, awakening the interest of researchers (2). The use of substances such as khat, alcohol or cigarette smoking among adolescents are a global Phenomenon that can lead to decreased academic performance, increased risk of contracting HIV(Human immune virus) and Sexually transmitted disease (STD)(3).senior Secondary students are most vulnerable to the above explained problem and are often prone to dangers due to lack of awareness on substance use (4). Globally, substance use of products such as alcohol, cigarette and khat leaves (*Catha edulis*) has become a major public health concern with accompanying socio-economic problems. Studies show that substance use, particularly in developing countries, has dramatically increased (5). Substance use usually begins during adolescence, but population- based studies targeting adolescent students are relatively scarce in low and middle-income countries (6).The use of substances such as alcohol, khat and cigarette smoking has become one of the rising major public health and socioeconomic problems worldwide (7).Substances are used and widely among African youth. This situation poses serious social and public health problems similar to those in most Western societies (8).

A study among Nigerian high school students indicated that lifetime prevalence of substance use was 87.3% whereas current use was 69.2% with multiple substance use being 57.4% (9). Lifetime prevalence rate of substance use was found to be 69.8% among college students in Kenya (10). In Ethiopia the commonly used substances were alcohol, cigarette or khat which frequently lead to addiction (11).The study conducted in Ethiopia show that Lifetime prevalence rate of substance use was found to be 34% in south east (12), 65% in north west (13) and 18% in Dire Dawa high school (14).

The factors contributing to youth substance use have been identified. It includes easy access to substances within immediate neighborhood, failure of school achievement, undesirable peer influence and negative peer's (15). Risk factors associated with increased adolescents substance use are family history of substance use(16-18), having friends who use substance (13, 19, 20) and sex (20, 21)

## 1.2 Statement of the problem

Use of substances such as alcohol, khat leaves (*catha edulis*) and tobacco has become one of the rising major public health and socio-economic problems worldwide. Recent trends indicate that the use of substances have dramatically increased particularly in developing countries

(22). Alcohol is a serious public health problem. Globally, harmful use of alcohol results in the death of 2.5 million people annually. Alcohol contributes nearly to 4% of deaths with 6.2% of all male deaths related to alcohol compared to 1.1% death of females worldwide. Annually, 320000 young people aged 15–29 years die from alcohol related causes resulting in 9% of all deaths in that age group globally (23). Early onset of drinking increases the likelihood of alcohol-related injuries, motor vehicle crash involvement, unprotected intercourse, and interpersonal violence (24). Alcohol use also contributes to youth suicides, homicides and fatal injuries (25).

The World Health Organization (WHO) report shows that beer 33%, spirits 22%, others 43% and wine 2% are consumed by people whose age is 15+ in Ethiopia (26). A study of high school students in Dire Dawa showed the prevalence of life time and current alcohol drinking is 34.2% and 19.6% respectively (27). Chat consumption has a negative impact on family and social life (28), (29). It may act as a factor that exacerbates family disruption (30). Several studies show that Chat is widely used among Ethiopian adolescents. A study done among high school adolescents in Eastern Ethiopia showed that the prevalence of khat chewing was 24.2% (31). Another study in Dire Dawa showed the prevalence of life time and current chewing of khat was 18.4% and 10.9% respectively (27).

Globally, direct cigarette smoking causes the death of more than 5 million people in a year. It kills more than tuberculosis, human Immune deficiency virus/ Acquired Immunodeficiency syndrome (HIV/AIDS) and malaria combined. In the next two decades the annual death from cigarette smoking is expected to rise to over 8 million, with more than 80% of those deaths projected to occur in low-and middle income countries (32). Tobacco smoking is the major single known cause of non-communicable diseases.(33) It is the most important risk factor for cardiovascular disease (CVD), obstructive pulmonary disease, malignancies of the respiratory and upper gastrointestinal tract, and causes death among millions of people worldwide (10).

cigarette smoking also is becoming an important public health problem in the developing countries (33). There is a high prevalence of cigarette smoking in Africa. The prevalence rate of cigarette use was 42.8% in Kenyan college students (10), 20.5% among 15 years old adolescents in Zambia, and even higher (37.2%) among males younger than 12 years old in Zambia (34). Another study in Nairobi documented a 32.2% prevalence of lifetime smoking (35). A study in Harer, eastern Ethiopia found a 12.2% prevalence of cigarette smoking among school adolescents (36). In Addis Ababa schools 10.1% prevalence of lifetime smoking was between 10.1%-11.5%, and current prevalence was 3%-5.6% (37) If substance use during adolescence is not addressed, problems escalate, become more difficult to solve, and the subsequent consequences can be severe, and substance use is sometimes the first sign of problematic behavior, and that it is more often part of a broader constellation of maladaptive behaviors that reduce academic performance and contribute to dropping out (38).

Alcohol, especially in high doses, or when combined with *khat* or cigarette, continues to claim the lives of many people (3). There is a growing epidemic of cigarette use among adolescents in the developing world. *khat* (*Catha edulis*) has been used in African countries for centuries as a mild stimulant. Harmful effects can occur with any psychoactive substance use (12) The history of substance use in Africa is relatively short. However, the use of substance in Africa is escalating rapidly from cannabis and chat use to the more dangerous drugs and from limited groups of drug users to a wide range of users (39).

Substance uses becoming increasingly common in Ethiopia. This is particularly the case in urban areas. While chat chewing was once traditionally confined to certain Islamic population religions, it is now consumed in locales throughout Ethiopia and by people of all religions, regions and ages (40). In Ethiopian high school students and higher education institutions, substance use has become one of the most serious problems in recent years (41).

## **Chapter 2: Literature Review**

### **2.1 Literature Review**

#### **2.1.2 Substance use**

Alcohol use; alcohol is commonly used as a disinhibitor, a sex facilitator, a symbol of masculinity, and a means of relaxation, recreation, socializing and improving communication skills. Alcoholic beverages are also used as a facilitator in approaching the opposite sex (42).

Khat use; khat (*Catha edulis*), a psycho stimulant substance, is thought to be the second most widely used substance in Ethiopia. Khat is an ever green plant that grows mainly in Ethiopia, Kenya, and Yemen and at high altitude in South Africa and Madagascar. It is the most often chewed but the leaves can be infused as a tea or dried and smoked (43).

Insomnia is a common problem after use of khat and sleep disturbance is highly prevalent among current users. It is caused by cerebral-stimulant action of chat chewing, is being overcome by different activities, depending on the local situation, such as indulgence in alcohol and abuse of sedatives and hypnotic drugs. khat chewing in some areas occurs with the use of other substances such as cigarette and cannabis (44).

Alcohol intake following khat chewing, commonly known in Ethiopia as “chebsi”, is perceived to overcome the effect of khat chewing. Therefore, most chat chewers are believed to drink after chewing. Some people, however, use drugs with sedative or hypnotic effects (45)

Cigarette use; which are rolled into cigars, shredded for use in cigarettes and pipes, processed for chewing, or ground into snuff, a fine powder that is inhaled through the nose (42) cigarette smoking contains noxious and cancer-producing ingredients. A long-term effect of tobacco is dependence (due to the substance nicotine it has) and other health ill effects such as bronchitis and coronary heart disease (46)

Despite this, many people continue to smoke because attempting to stop smoking involves enduring severe withdrawal symptoms. These symptoms include restlessness, dysphonic or depressed mood



### **2.1.3 Prevalence of substance use**

Alcohol and other substances (khat and cigarette) users estimated about 27 million, which is 0.6 percent of the world adult population (41). It is estimated that 9% of the global population age 12 or older are classified with dependence on psychoactive substances such as alcohol (22). By their senior year of high school, 80% of American adolescents have used alcohol and 61% have used tobacco (47). Different cross sectional studies conducted in different high schools reported different prevalence of substance use for example, In Saudi Arabia, the overall prevalence of khat chewing among student was 34.8% (48).

By the year 2006, the prevalence of smoking among Jamaican school-going adolescents was 16.7% (49). Harare, Zimbabwe, high school students also showed a higher prevalence of cigarette smoking of 28.8% (95% CI 25.3%–32.3%) (50). A study conducted in Dire dawa, high school students showed a higher lifetime prevalence of alcohol drinking (34.2%), cigarette smoking (13%), and shisha smoking (12.8%). prevalence of khat chewing (18.4%) (27). The lifetime prevalence of chat chewing of Harar, Ethiopia, high school students was 4.2%, (51). The lifetime prevalence of alcohol drinking in Dire Dawa and, Addis Ababa school students were (34.2%) (52). (45.7%) (53), respectively.

The life time prevalence of substance use among college students in Kenya was 69.8% (54). A cross-sectional study conducted on Substance use among adolescent high school students in India showed that, out of 416 students, 52 (12.5%) used or abused any one of the substances irrespective of time and frequency in lifetime; 26 (15.1 %) were among the urban students and 26 (10.7 %) were among their rural counterparts [21].

There was a cross sectional study among 456 respondents on Substance use among senior secondary school students in Abraka, Delta State, Nigeria, Alcohol use prevalence was 55%. there were more male (35%) than female (20%) drinkers; 45% began drinking at 11-15 years 42% drank at ceremonies; 10% drank for pleasure; 22% drank because they feel it was a sociable thing to do; 4% and 2% respectively drink because their parents and friends also drank 71% were currently drinking; Alcoholic wines are most favored (55) Study conducted on the assessment of

knowledge, attitudes and practices of psychoactive substance use among 402 secondary school students in, Tanzania 2013, only 6.5% of the surveyed students had history of psychoactive substance use and over 90% of the student believed that psychoactive substances can negatively affect students academically (21).

Findings survey research, among 2,600 secondary school students in Nigeria, 2013, revealed that 83.8% of the respondents use psychoactive substances while 16.2% do not; 58.7% of the substance users are males while 41.3% are females; the result also showed that the type of substance commonly used by the respondents amongst others was alcohol; various reasons for adolescent substance use were identified and desire for acceptance by friends/peers had the highest value of 72.7% (56).

Another cross-sectional and descriptive study on Substance use among secondary school students in an urban setting in Nigeria: prevalence and associated factors, a total of 402 students were studied alcohol and cigarette, their lifetime use prevalence rates were 9.2% and 5.2% [24] Descriptive cross sectional survey design on co-occurrence of alcohol, cigarette and other substance among 1088 secondary school students Kenya 2013, showed that alcohol was the most used drug (23.5%) followed by khat, cigarette smoking in that order and of the current alcohol drinkers, 47.6, 33.1, 28.7 and 26.6% had also used khat and cigarettes respectively (57).

There were also a school based cross-sectional study on high prevalence of substance use and Associated factors among high school adolescents in Northwest Ethiopia, 2012: a total of 651 Students were participated, and the current prevalence of substance use was 47.9% and life Time prevalence was 65.4% and the current and lifetime prevalence of alcohol use was 40.9% and 59% respectively (9). Another cross sectional study on the assessment of Substance use and Associated Factors among 423 sampled Students, East Gojjam, Ethiopia, 2013, the overall prevalence of substance use (7) was 14.1 % and the commonly abused substances were alcohol 13.4 %, chat 7.8 %, and cigarette 5.4 % (57). Cross sectional study conducted on the prevalence and associated factor of substance use among high school and preparatory schools of Ginnir town Bale Zone, Southeast Ethiopia 2014, among 220 students were included in the study revealed that the prevalence of substance use among male respondents were 31.2% ever drunk

alcohol, 48% khat chew and 12% ever smoke cigarette while 8.4%, 8% and 7% of female were ever drunk alcohol, khat chew or smoke cigarette respectively (58).

School Based Cross Sectional Survey on Prevalence and Predictors of Cigarette Smoking among Adolescents of Ethiopia, 2014, showed that the prevalence of cigarette smoking among adolescents were found to be 28.6% ever smokers, and 17.2% current smokers (46) Study conducted on Prevalence and determinants of adolescent cigarette smoking in Addis Ababa, Ethiopia 2006, [1868 respondents], 4.5% males and 1% females reported being current smokers ( $p < 0.01$ ) (42). On the other hand, a cross-sectional study was conducted to assess the prevalence of alcohol use and its predictors among high school students in eastern Ethiopia in 2010, with a total 1890 sampled students, 372 (22.2%) students drink alcohol, and out of these, 118 (31.7%) were females and 254 (68.3) males (27).

Study in Kenya showed that ever used alcohol were 41.9% followed by khat 30.9%, and cigarette 21.9% (59) The life time prevalence of smoking conducted among high school students in Ethiopia was 28.6% (60) The life time prevalence of smoking conducted in Addis Ababa was 20.8% (61) The life time prevalence of smoking conducted in Nigeria on psycho active substance were 20.5% (62) and 26.9% (63) The life time prevalence of Alcohol drinking conducted in Jamaica was 64% (64).

In Addis Ababa there was a cross-sectional study on determinants of alcohol drinking and its association with sexual practices among high school students in 2010, a total of 2551 students surveyed, life- time and current (last month) alcohol drinking were reported by 45.7% and 26.5% students, respectively (51).

There was cross sectional study prevalence of *Catha edulis* (khat) chewing and Its Associated Factors among Ataye among high school students in 2014, Northern Shoa, Ethiopia, among 378 sampled students the life time and current prevalence of chat chewing are 15.36% (95% 11.7, 19.8 and 13.25% (95% CI; 11.0, 18.1 respectively (18).

Institution based cross-sectional study conducted on Prevalence and Associated Factors of khat chewing Among Atse Fasil Campus Students, University of Gondar, North West Ethiopia, 2013 on a total of 310 sampled students showed that, current prevalence of khat chewing was found to be 6.95% and there were 6.72% female khat chewers and 11.7% male khat chewers and a large proportion 58.6% life time chewers were started khat chewing after joining university(65).

A cross-sectional study was conducted on 397 students of two high schools found in Gondar, Northwest Ethiopia 2008 revealed that 12.6% current prevalence of khat chewing, and that of

lifetime prevalence was 22.7%, and the lifetime prevalence was found to be significantly higher among males 30.2%, Muslims 42.9%, age group greater than 23 years 42.9%, Tigrian n 38.7%, and widowed (80%) than their respective counterparts (66)

#### **2.1.4 Factors associated to substance use**

Risk and protective factors can affect children in a developmental risk to trajectory or path. This Path captures how risks become evident at different stages of a child's life. For example, early Risks, such as out-of-control aggressive behavior, may be seen in a very young child. If not Addressed through positive parental actions, this behavior can lead to additional risks when the Child enters school. Aggressive behavior in school can lead to rejection by peers, punishment by teachers, and that put a child at risk for drug use. such as skipping school and associating with peers who abuse drugs (67)

The influences that generate drug use and abuse are many, most drug use initiation occurs with Friends or peers also using drug the stage has been set for this event much earlier by parents, the Community and society. Drug involvement can be conceptualized as reflecting several domains or areas, cultural/societal environment; interpersonal forces. (i.e., school, peers, and family) psycho behavioral factors (e.g), personality, attitudes, activities) and biogenetic influences. An individual can be considered at risk because of factors or forces within each of these areas (68)

According to study conducted in Brazil Factors associated with drug use among adolescent students, associations remained between drug use and parents' drug user in household (PR=1.61; 95% CI: 1.17-2.18, abuse PR=1.62; 95% CI: 1.27-2.07, and absence of religious practice (PR=1.31; 95% CI: 1.07-1.59 (2). According to study on Prevalence of substance use among students in Eldoret, western Kenya majority of those using substances wanted to relax (62.2%) or relieve stress (60.8%). Problems associated with alcohol use included quarrelling and fights, loss and damage to property problems with parents, medical problems and unplanned unprotected sex (69).

According study on Psychoactive Substances use (Khat, Alcohol and cigarette) and associated Factors among students, the commonest reason for chat, alcohol or cigarette using were to keep

alert while reading 46.1%, for relaxation 79% and to relief stress 36.6%, respectively. Being male was strongly and positively associated with khat use, drinking alcohol and cigarettesmoking AOR: 3.2, 95%CI: 1.83, 5.32, AOR: 2.62, 95%CI: (1.26, 4.32)] and AOR: 2.6, 95%CI :1.17, 5.76, respectively (22).

Study on Substance Abuse among Senior High School Students in Ghana showed a significant differences in rates of substance use among Ghanaian senior high students student across gender, age, boarding, relationship, location (city, town, rural), divorce, living with parents and religious affiliation (69)Findings survey research, among 2,600 secondary school students in Nigeria, 2013, the reasonsfor adolescent substance used 72.7% respondents to be accepted by friends/peer; 66.5%) use substances to boost their confidence; 60% to stay awake at night to read; 46.5% copy their parents and other family members; 8331.9% use substances to feel high 68 (26.2%) use substances due to lack of guidance; 24.4% use substances for relief from stress and boredom; 20% use substances for curiosity and to rebel against constituted authority while 17.7% use substances to boost their energy for sport (56).

Another institutional-based cross-sectional study was conducted among students of preparatory schools Southeast Ethiopia showed that sex, age, and substance use status of the respondents' father, mother, siblings, and best friend had an association with substance use (12) .A school based cross-sectional study on high prevalence of substance use and associated factors among high school adolescents in Ethiopia revealed that Siblings' use of substances (AOR [95% CI]: 2.72 [1.79, 4.14]), family history of alcohol and substance use (AOR [95% CI] 2.24 [1.39-3.59] and friends use of substances (AOR [95% CI] 2.14 [1.44-3.18] were factors positively associated with substance use (13).

Another cross sectional study on the assessment of Substance Abuse and Associated Factors among College Students in Northwest Ethiopia showed that sex [AOR, 95% CI; 3.55 (1.451,- 8.67)], peer pressure [AOR, 95% CI 3.40 (1.05-11.07)], family drug use [AOR, 95% CI; 2.69 (1.34- 5.44)], and personal pleasure [AOR, 95% CI 3.35 (1.32, 8.5) and , being male; coming from urban areas were strongly and positively associated with students to use substances (57)

A cross-sectional study design using a questionnaire and supplemented by focus group discussion (FGD) conducted to assess the prevalence and determinants of substance use among high school students in Dire Dawa, Ethiopia, that showed different statistically associated covariates including gender, grade in school, religion, ethnicity, presence of income, peer and social pressures, substance use by significant others, knowledge and attitudes about substance use, and parental factors (14).

Study conducted on determinants of alcohol drinking and its association with sexual practices Among high school students in Addis Ababa, Ethiopia: showed that the odds of current alcohol Use were more common among students aged 18 [AOR = 2.06; CI (1.16 - 3.56)] or 19 years or Older [(AOR = 2.52; CI (1.34 - 4.74))] than those aged 15 years. General Secondary School Students were more likely to drink alcohol than Preparatory Schools students [AOR = 1.81; CI (1.31 - 2.51)]. Getting pocket money [AOR = 1.45; CI (1.11 - 1.89)], having *shisha* smoking Family members [AOR = 2.25; CI (1.19 - 4.27)] or friends [AOR = 1.86; CI (1.18 - 2.93)], Having friends who drink alcohol [AOR = 1.72; CI (1.25- 2.38)] were significant predictors of current alcohol use (51)

There was cross sectional study on prevalence of *Catha edulis*(khat) chewing and Its associated Factors among Ataye among high school students in 2014, Ethiopia, revealed that 15 male students were 2 times more likely to chew chat than female students [Adjusted OR = 2.15, 95% CI = (1.02, 4.56)].

Those students who come from urban area were almost 2 times more likely to chew khat than students from rural areas [Adjusted OR = 1.89, 95% CI = (0.95, 3.79)]. Those students who have chewer friends were chewed chat about 3 times more likely than their counter part [Adjusted OR = 3.14, 95% CI = (1.53, 6.41)]. Besides, students who have chewer family were chewed khat 2.68 times more than those students who did not have family who chew khat [Adjusted OR = 2.68, 95% CI = (1.13, 6.37)] [18]. Prevalence, Factors and Consequences of khat chewing among High School Students of Gondar Town, Northwestern Ethiopia, revealed that lifetime chat chewing was associated with sex

AOR=3.4963,  $X^2 = 18.7832$ ,  $P=0.0000$ ), age  $X^2 = 13.6309$ ,  $P=0.0010$ ), religion  $X^2 = 13.1870$

P=0.0104, ethnicity  $X^2=8.5447$ , P=0.0360) source of money  $X^2=10.1689$ , P=0.0172, and family job ( $X^2=14.3173$ , P=0.0137. (66)

## **2.2 Significance of study**

Substance use needs the attention of teachers, health workers, parents, because it is a significant issue in the social, educational, health and other related sectors affecting the youth. Due to this, this study was proposed to assess the prevalence and associated factors of substance use. Since the most vulnerable group of the society is the youth, due consideration to carry out the study was given. Based on the attained findings, important suggestions will be made against drug issues.

It is hoped that the findings of this study will assist teachers, school administrators, parents and other concerned bodies to come up with appropriate intervention strategies that can help to curb the substance problem among students in Homacho town. It is also useful in contributing to the general body of knowledge in this area. The study has a firm belief that the result of this study will help to create awareness among school authorities on what motivated the students to substance use, the extent to which the youth at Homacho secondary and preparatory school are engaged in and to take relevant action. In addition to this, the study result will provide points for policy makers, school administration teachers, health workers and other decision makers on the prevalence of the problem faced by substance users and will try to guide designing a better intervention and plans to tackle the problems.

## **2.3 Conceptual frame work**

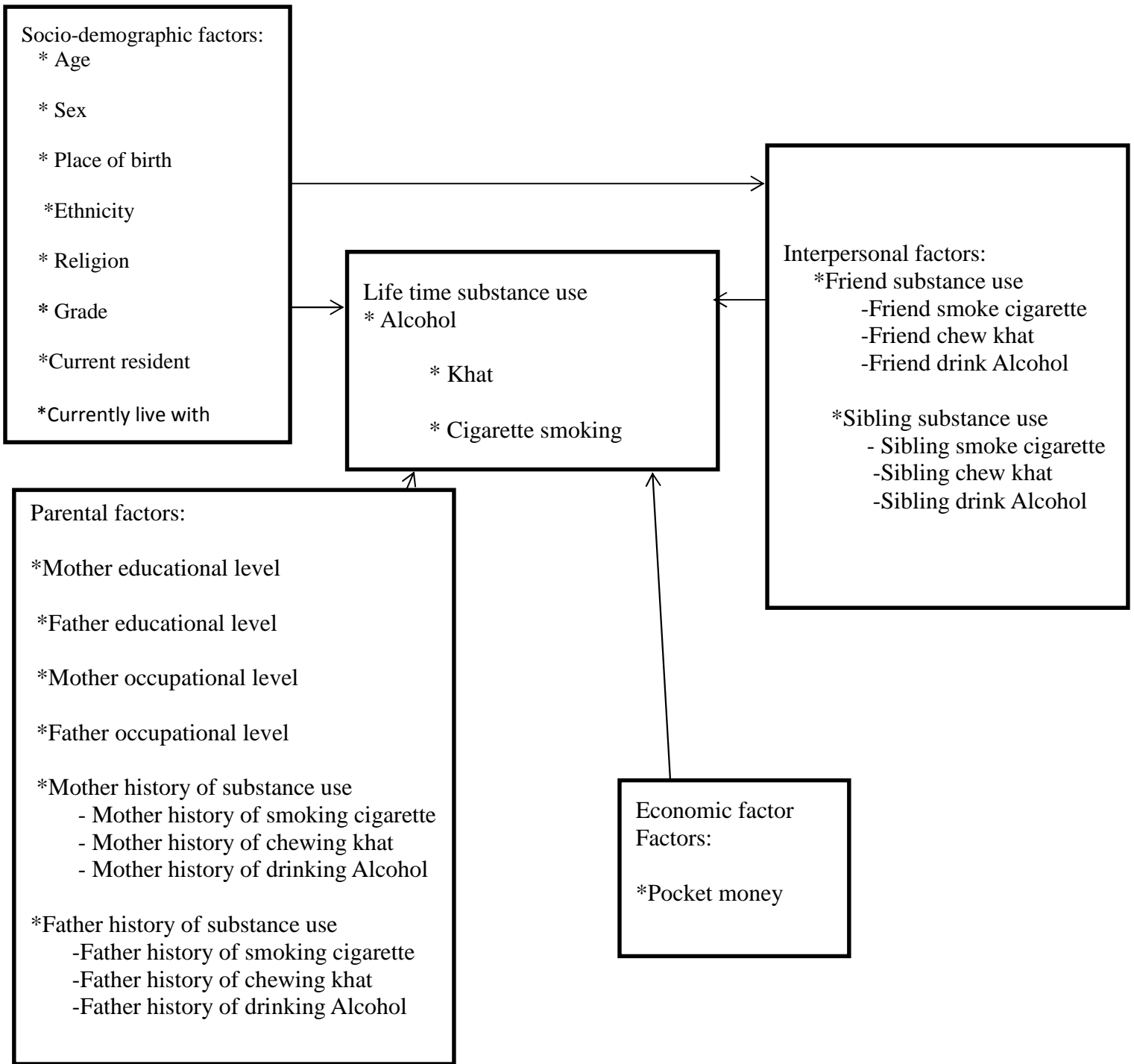


Fig 1 Conceptual framework of the study on substance use and its associated factors adapted from literature review.



## **Chapter 3: Objective**

### **3.1: General objective**

-To assess the prevalence and associated factor of substance use among secondary and preparatory school students in Homacho Town, Hadiya Zone, south Ethiopia, 2017

### **3.2: Specific objective**

-To determine the prevalence of substance use among secondary and preparatory school students in Homacho Town

-To identify factors associated with substance use among secondary and preparatory school students in Homacho Town

## **Chapter 4: Methods and materials**

### **4.1: Study area and period**

The study was conducted in Homacho secondary and preparatory school at Homacho town. Homacho town is found in Hadiya zone, SNNPR, and located 31km away of Hossana town and 263km away of Addis Ababa. The town is currently served as the administrative center of Gibe woreda. The major sources of livelihood for the town are small business, formal trade, civil service employment, daily labor, brokers and handcrafts, such as carpentry, pottery and metal works. There is one primary Hospital and one Health center in Homacho town. There was one campaign regularly done once in one month called, Hygiene and Sanitation campaign

Currently, there is one secondary and preparatory school called Homacho secondary and preparatory school in Homacho Town.

The school has four grade level (Grade 9 – 12). A total of 2451 students are enrolled in the education program. Grade 9, 10, 11 and 12 has 20 sections, 16 sections, 8 sections and 5 sections respectively There are a total of 1002 grade 9 students (male 682 & female 320), grade 10 occupies 814 students (male 443 & female 371), 380 students (male 205 and female 175) reside to grade 11 and grade 12 on the other hand incorporates 255 students (male 193 and female 62).

There were 6 clubs in Homacho secondary and preparatory school. Namely, voluntary service club, Hygiene and sanitation club, Tea and coffee club, HIV/AIDS club, student service club, Red Cross club. The study was conducted from March 1 to March 20 in Homacho secondary and preparatory school.

## **4.2 Study design**

School based Cross- sectional study was conducted to assess the prevalence and associated factor of substance use among students in Homacho secondary and preparatory school.

## **4.3 population**

### **4.3.1 Source population**

All students of Homacho secondary and preparatory school in Homacho town who are enrolling in regular program for academic year of 2017.

### **4.3.2 Study population**

Sampled students of Homacho Secondary and Preparatory school in Homacho town who satisfy inclusion and exclusion criteria.

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

### **4.4.1 Inclusion criteria**

All sampled students of Homacho secondary and preparatory school in Homacho town were included.

### **4.4.2 Exclusion criteria**

Students who were unable to respond because of illness were excluded.

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

### **4.5.1 Sample Size Determination**

The sample size was determined by using the formula for single population proportion for cross sectional study and taking the proportion as 40.9% (the prevalence of substance use among the respondents) 40.9%, 13.8%, and 6.8% of the respondents drank alcohol, chewed chat, and smoked cigarette, respectively (13) and with confidence level of 95% and degree of precision of 5% and adding a 15% of non-response rate as follows

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

Where n= the required minimum sample size

Level of confidence 95%, which gives the percentile of the normal distribution, = 1.96

d = Margin of error, assumed to be 5%

p = prevalence of substance use (alcohol) were, 40.9%

$$n = \frac{(1.96)^2 \cdot 0.409(1-0.409)}{(0.05)^2}$$

$$n = 371$$

Finally by adding 15% non-response rate, the sample size become =427

#### 4.5.2 Sampling technique

First study subject were stratified according to their academic level. Then the sample size was proportionally allocated for grade 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup>.

Table1 Stratification of students in Homacho secondary and preparatory school

Grade	Section	Total number of students	Sample allocation
9 <sup>th</sup>	20	1002	175
10 <sup>th</sup>	16	814	142
11 <sup>th</sup>	8	380	66
12 <sup>th</sup>	5	255	44
Total	49	2451	427

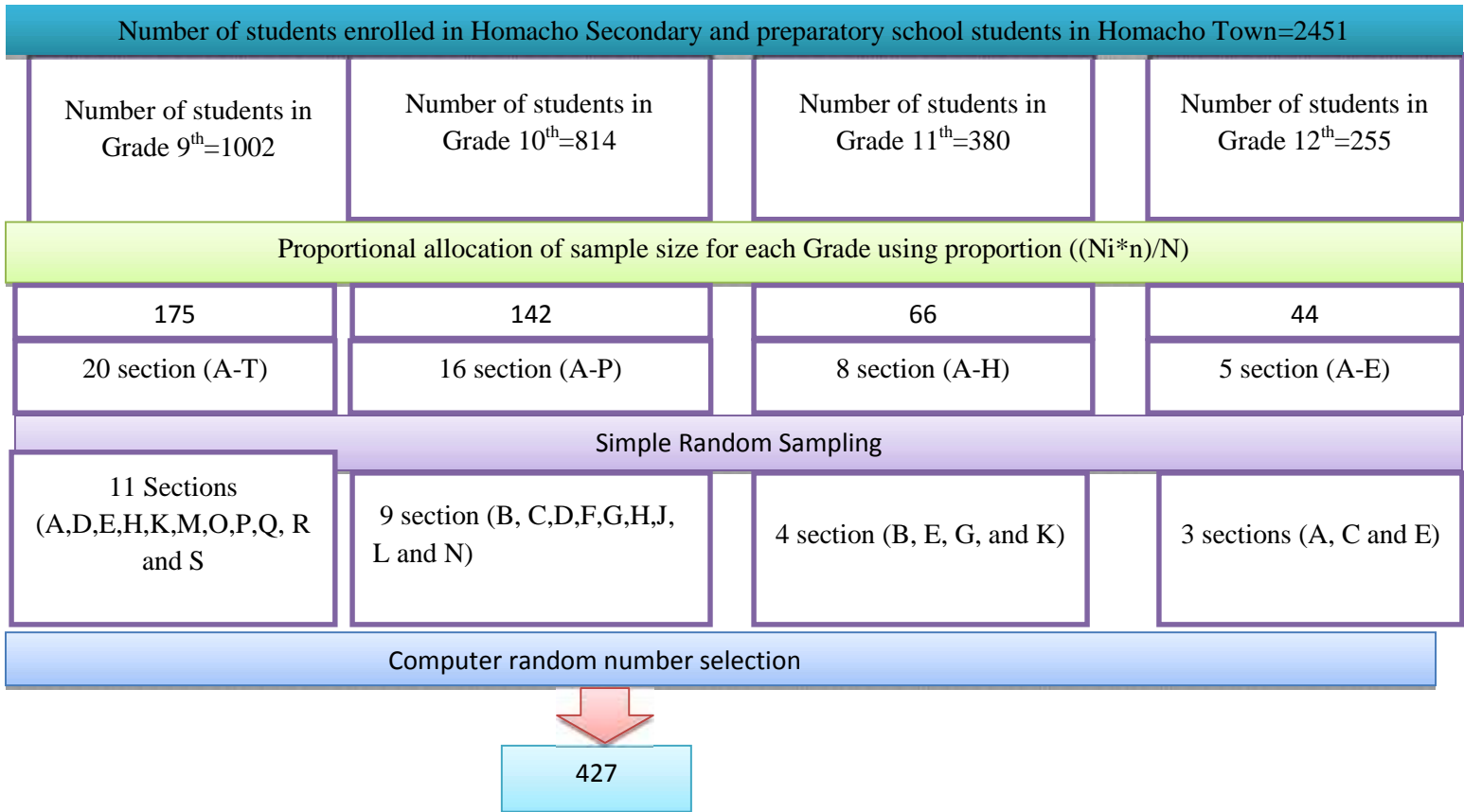


Figure 2 Schematic representation of the sampling procedure

## **4. 6 Data collection and measurement**

### **4.6.1 Study variable**

#### **Dependent variable**

- Life time substance use(khat use, alcohol use or cigarette smoking)

#### **Independent variable**

- Socio-demographic factors: Age, sex, religion, birth place, current residence, currently live with, grades.
- Interpersonal factors: friend substance use, sibling substance use
- Parental factors: mother and father educational level, mother and father occupational status, mother and father history of substance use
- Economic factors: monthly pocket money

### **4.6.2 Data collection instrument**

Self-administered questionnaire with closed ended questions was used.

### **4.6.3 Data collection procedure**

Data was collected using Self-administered questionnaire which covered substance use and its associated factors adapted from different literatures that was pertinent to the topic. The domain of the tool addressed the prevalence of substance use (cigarette, alcohol or khat) and its associated factors. To improve the internal consistency, the tools were originally prepared in English and later translated into hadiyisa for easier facilitation of the research. The tools were back translated into English to determine consistency of questions.

There were 6 data collectors. They were diploma holder nurses. The principal investigator supervised the data collection process. All data collectors were oriented for one day before the data collection period by principal investigator on the objectives of the study and how to administer the questionnaires, the issues of verbal consent, the right not to participate in the study, and how to assist the respondents on questions that were not clear during data collection.

## **4.7 Data processing and analysis**

The data on each coded questionnaire were entered into Epi data version 3.1. Then, the entire data were cleaned and corrected for errors if any. The data were exported to Statistical Package

for Social Science (SPSS) version 20.0 for analysis. First, descriptive data analysis was made. Then, binary and multiple logistic regressions analysis were made to assess the factor associated with the outcome variable.

Candidate variables with P value less than 0.25 in bivariate logistic regression were entered in to multiple logistic regressions by using Back ward LR method. A corresponding p-value of <0.05 was considered as a cutoff point to declare significant association. Before multivariable analysis, independent variables were checked for multi co-linearity effect using variance inflation factor.

#### **4.8 Ethical consideration**

Prior to data collection ethical clearance was obtained from the ethical clearance committee of the Jimma University. An official letter was written from Institute of health science of Jimma University to administrative body of zone. Formal letter of permission was produced from administrative bodies of the zone to the Homacho secondary and preparatory school which was located in, homacho town, the administrative center of Gibe woreda. Finally verbal consent was requested from every study participant included in the study during data collection time after offering adequate information about the study. Confidentiality was also be assured for the information provided.

#### **4.9 Data quality control**

The English version questionnaire was translated to hadiyisa and Amaharic and re-translated back to English language to check its consistency. Data collection instrument was pretested on 5% of the sample size outside study area. (In Morsito secondary and preparatory School) prior to the actual data collection. After pretesting, the Cronbach alpha's value was checked in different components of the questionnaire with the acceptable scale-reliability coefficient of (0.866). The data collection facilitators were trained for data collection. On top of this, supervisors followed data collection facilitators and the investigator has also checked for the collected data. The filled questionnaire was checked for its completeness.

#### **4.10 Operational definition**

**Substance:** it stands for alcohol, cigarette and chat that produce changes in mood, thinking, feeling, and/or behavior that can cause dependence (13).

**Substance use:** In this study it is referred to as use of at least one of the substances (cigarettes, Alcohol or khat) in an individual's life time to alter mood or behavior (7).

**Risk factors:** Characteristics or conditions within the individual or in the family, school or Community that increase the likelihood that someone will engage in the use of alcohol, cigarette or khat or discourage positive behavior that might prevent them (70, 71)

**Protective factors:** Factors, characteristics or conditions within the individual or in the family, School or community that increase the likelihood of positive health behaviors or outcomes or moderate and discourage behaviors that might lead to negative health outcomes (70, 71).

**Lifetime/Ever-use:** Referred to use of any of the substances at least once in an individual's life time (7).

**Current use** Adolescents' use of the substance at least once in the 30 days prior to data collection (7)

#### **4.11 Dissemination of finding**

The findings will be presented to the Jimma University scientific community and submitted to the department of epidemiology and college of public health and medical sciences.

The findings will also be communicated to the local health planners and other relevant stakeholders at zonal and Woreda level in the area to enable them take recommendations in to consideration during their planning process.

It can also be communicated to health planners and managers at regional level. Publications in peer reviewed, national or international journals will also be considered.



## Chapter 5. Results

### Respondents' Socio-demographic Characteristics

A total of 408 secondary and preparatory school students participated in the study with a response rate of (95.5%).

Majority (40.7%) of the respondents were currently living with their family. Two hundred fifty eight (63.2%) of the respondents were males and two hundred eighteen (53.5%) of the respondents were in age group of 15-19 years. Concerning place of birth of the respondents 65.7% and 34.3% were born in the urban and rural respectively. Two hundred seventy six (67.6%) of the respondents were currently living in urban. one hundred sixty seven (40.9%) of the respondents were from grade nine. Three hundred thirty one (81.1%) of the respondents were Hadiya by Ethnicity and 42.2% of the respondents were Protestant by religion (Table 2)

Table 2 Socio-demographic characteristics of the respondents, among secondary and preparatory school students, Hadiya zone, Southern Ethiopia, April 2017

Variables	Categories	Male N (%)	Female N (%)	Total N (%)
Age group	15-19	161(39.5)	87(21.3)	248(60.8)
	20-24	97(23.8)	63(15.4)	160(39.2)
Birth Place	Rural	81(19.9)	59(14.5)	140(34.3)
	Urban	177(43.4)	91(22.3)	268(65.7)
Current Resident	Rural	62(15.2)	70(17.2)	132(32.4)
	Urban	196(48)	80(19.6)	276(67.6)
Grade	9	103(25.2)	64(15.7)	167(40.9)
	10	80(19.6)	56(13.7)	136(33.3)
	11	45(11)	18(4.5)	63(15.5)
	12	30(7.4)	12(2.9)	42(10.3)
Ethnicity	Hadiya	208(51)	123(30.1)	331(81.1)
	Kambata	13(3.2)	10(2.5)	23(5.7)
	Gurage	23(5.6)	8(2)	31(7.6)

	Silte	14(3.4)	9(2.2)	23(5.6)
Religion	Protestant	110(27)	62(15.2)	172(42.2)
	Orthodox	106(26)	54(13.2)	160(39.2)
	Muslim	34(8.3)	28(6.9)	62(15.2)
	Others	8(2)	6(1.5)	14(3.4)
Currently living with	Family	100(24.5)	66(16.2)	166(40.7)
	Relatives	2(0.5)	3(0.7)	5(1.2)
	Friends	42(10.3)	30(7.4)	72(17.6)
	Alone	114(27.9)	51(12.5)	165(40.4)

### Parental, Interpersonal and Economic Characteristics

Concerning father and mother education one hundred seventy-two (42.2%) and one hundred seventy (41.7%) were in between grade 7-12 and one hundred thirty six (33.3%) and one hundred ten (27%) were in between grade 1-6 respectively (Table 3).

Table 3 Parental, Interpersonal and economic characteristics of respondents, among secondary and preparatory school students, Homacho town, Hadiya zone, Southern Ethiopia, April 2017

Variables	Categories	Male	Female	Total
		N (%)	N (%)	N (%)
Father Education	Illiterate	17(4.2)	23(5.6)	40(9.8)
	1-6 grade	88(21.6)	48(11.8)	136(33.3)
	7-12 grade	117(28.7)	55(11.5)	172(42.2)
Mother Education	University/collage diploma	36(8.8)	24(5.9)	60(14.7)
	illiterate	52(12.7)	24(5.9)	76(18.6)
	1-6 grade	59(14.5)	51(12.5)	110(27)
	7-12 grade	115(28.2)	55(13.5)	170(41.7)
Father	University/college diploma	32(7.8)	20(4.9)	52(12.7)
	Merchant	46(11.3)	48(11.8)	94(23)
	Farmer	159(39)	77(18.9)	236(57.8)

occupation	Employed	51(12.5)	21(5.1)	76(17.6)
	Others	2(0.5)	4(1)	6(1.5)
Mother	Merchant	69(16.9)	38(9.3)	107(26.2)
occupation	House wife	157(38.5)	92(22.5)	249(61)
	Employed	26(6.4)	15(3.7)	41(10)
	Others	6(1.5)	5(1.2)	11(2.7)
Monthly	Yes	88(21.6)	20(4.9)	108(26.5)
pocket				
money	No	170(41.7)	130(31.9)	300(73.5)

### Distribution of substance use among the respondents

The overall life time and current prevalence of substance use among the respondents was 220(53.9%) and 181(44.4%) respectively. The life time prevalence of cigarette smoking, alcohol drinking, and khat chewing, among the respondents were 16.7%, 23.5%, and 36.8% respectively (Table 4).

Table 4. Prevalence of substance uses of the respondents, among secondary and preparatory school students, Homacho town, Hadiya zone, Southern Ethiopia, and April 2017

Variables	Categories	Life time		Last one year		Last one month	
		N	%	N	%	N	%
Substance Use	Yes	220	53.9	186	45.6	181	44.4
	No	188	46.1	222	54.4	227	55.6
Cigarette	Yes	68	16.7	49	12	28	6.9
	No	340	83.3	359	88	380	93.1
Alcohol	Yes	96	23.5	89	21.8	82	20.1
	No	312	76.5	319	78.2	326	79.9
Khat	Yes	150	36.8	127	31.1	100	24.5
	No	258	63.2	281	68.9	308	75.5

## Distribution of substance use according to sex of the respondents

Regarding the distribution of substance use by sex, 162 (39.7%) and 136(33.3%) were Life time and current substance used male. From currently users males account 6.4% for cigarette smoking, 15.7 % for alcohol drinking, and 18.1 % for khat chewing (Table 5.)

Table 5 Percentage distribution of substance use of the respondents by sex, among secondary and preparatory school students, Homacho Town, Hadiya zone, Southren Ethiopia, April 2017

Variables	Categories	Male N (%)	Female N (%)	Total N (%)
Life time substance users	Yes	162(39.7)	58(14.2)	220(53.9)
	No	96(23.5)	92(22.5)	188(46.1)
Current substance users	Yes	136(33.4)	45(11)	181(44.4)
	No	122(29.9)	105(25.7)	227(55.6)
Life time smoked Cigarette	Yes	64(15.7)	4(1)	68(16.7)
	No	194(47.5)	146(35.8)	340(83.3)
Current cigarette smokers	Yes	26(6.4)	2(0.5)	28(6.9)
	No	232(56.8)	148(36.3)	380(93.1)
Life time drink alcohol	Yes	77(18.9)	19(4.7)	96(23.5)
	No	181(44.4)	131(32.1)	312(76.5)
Current alcohol Drinkers	Yes	64(15.7)	18(4.4)	82(20.1)
	No	194(47.5)	132(32.4)	326(79.9)
Life time chewed Khat	Yes	109(26.7)	41(10)	150(36.8)
	No	149(36.5)	109(26.7)	258(63.2)
Current khat chewer	Yes	74(18.1)	26(6.4)	100(24.5)
	No	184(45.1)	124(30.4)	308(75.5)

## The perceived reason for substance uses of the respondents.

The most reported reason for substance use was to overwork or learning (40.9%) followed by (24.1%) due to peer pressure (Table 6).

Table 6. Perceived reasons for substance use of the respondents among the users, Homacho Town, Hadiya zone, Southren Ethiopia, April 2017

Variables	Catego ries	Parental influence	Peer pressure	To overwork or Learning	For fun	To escape worries	Total
		N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Sex	Male	13(5.9)	44(20)	66(30)	22(10)	17(7.7)	162(73.6)
	Female	13(5.9)	9(4.1)	24(10.9)	4(1.8)	8(3.6)	58(26.4)
Age group	15-19	17(7.7)	34(15.5)	50(22.7)	13(5.9)	15(6.8)	129(58.6)
	20-24	9(4.1)	19(8.6)	40(18.2)	13(5.9)	10(4.5)	91(41.4)
Grade	9	13(5.9)	22(10)	34(15.5)	5(2.3)	9(4.1)	83(37.7)
	10	5(2.3)	15(6.8)	30(13.6)	8(3.6)	6(2.7)	64(29.1)
	11	5(2.3)	9(4.1)	15(6.8)	7(3.2)	4(1.8)	40(18.2)
	12	3(1.4)	7(3.2)	11(5)	6(2.7)	6(2.7)	33(15)
Birth Place	Rural	7(3.2)	19(8.6)	30(13.6)	10(4.5)	9(4.1)	75(34.1)
	Urban	19(8.6)	34(15.5)	60(27.3)	16(7.3)	16(7.3)	145(65.9)
Current Residence	Rural	4(1.8)	7(3.2)	19(8.6)	6(2.7)	3(1.4)	39(17.7)
	Urban	22(10)	46(20.9)	71(32.3)	20(9.1)	22(10)	181(82.3)
Religion	Protest	9(4.1)	18(8.2)	41(18.6)	9(4.1)	10(4.5)	87(39.5)
	Orthod	13(5.9)	27(12.3)	34(15.5)	15(6.8)	12(5.5)	101(45.9)
	ox Musli	4(1.8)	7(3.2)	14(6.4)	0(0)	1(0.5)	26(11.8)
	Others	0(0)	1(0.5)	1(0.5)	2(0.9)	2(0.9)	6(2.7)
Ethnicity	Hadiy	15(6.8)	48(21.8)	68(30.9)	19(8.6)	14(6.4)	164(74.5)
	Kamba	1(0.5)	1(0.5)	5(2.3)	0(0)	3(1.4)	10(4.5)
	Gurage	7(3.2)	19(0.5)	12(5.5)	4(1.8)	6(2.7)	30(13.6)
	Silte	3(1.4)	3(1.4)	5(2.3)	3(1.4)	2(0.9)	16(7.3)
Monthly pocket money	Yes	10(4.5)	18(8.2)	29(13.2)	14(6.4)	6(2.7)	77(35)
	No	16(7.3)	35(15.9)	61(27.7)	12(5.5)	19(8.6)	143(65)

## Bivariate Logistic Regression of Socio-demographic factors with substance use

To identify associated factors of substance use among respondents, binary logistic regression was computed. Among socio-demographic factors sex, current resident, currently living with, grade level and religion had an association ( $p < 0.05$ ) with substance use in the bivariate analysis

Therefore, male respondents were 2.67 times (COR [95% CI] 2.67 [1.769-4.051]) more likely to use substances compared to female respondents. Respondents who currently live alone, were 3.31[2.069-5.314] more likely to use substances compared to those living with their family. Currently living in the town or urban were 4.54 times more likely to use substance (COR [95% CI] 4.54 [2.900-7.177]) than those living in rural areas. Respondents in grade 12 were 3.71times [(COR [95% CI] 3.71 [1.67-8.23]) more likely to use substances as compared with the reference respondents in the grade nine. Respondents with Orthodox religion were 1.67 times (COR [95% CI] 1.67 [1.079-2.594]) more likely to use. Substances as compared with the protestant religion followers (Table 7).

Table 7 Bivariate logistic regression of socio-demographic factors of the respondents for substance use among secondary and preparatory school students, Homacho town, Hadiya zone, Southren Ethiopia April 2017

Variables	Categories	Life time Substance		COR 95% CI	P-value
		Used	Not used		
Sex	Male	162	96	2.67[1.769-4.051]*	0.000
	Female	58	92	1	
Age group	15-19	129	119	1	0.337
	20-24	91	69	1.21[0.816-1.815]	
Place of birth	Rural	65	145	1	0.918
	Urban	75	123	1.36[0.678-1.539]	
Current Resident	Rural	39	93	1	0.00
	Urban	181	95	4.54[2.9-7.117]*	

Grade	9	83	84	1	
	10	64	72	0.90[0.572-1.415]	0.647
	11	40	23	1.76[0.97-3.194]	0.063
	12	33	9	3.71[1.672-8.234]*	0.001
Ethnicity	Hadiya	172	159	1	
	Kambata	12	11	1.01[0.433-2.35]	0.984
	Gurage	21	10	1.94[0.887-4.249]	0.097
	Silte	15	8	1.73[0.716-4.199]	0.223
Religion	Protestant	87	85	1	
	Orthodox	101	59	1.67[1.079-2.594]*	0.022
	Muslim	26	36	0.70[0.393-1.268]	0.244
	Other	6	8	0.73[0.244-2.201]	0.58
Currently living with	Family	68	82	1	
	Relative	3	16	0.22[0.063-0.809]*	0.022
	Friend	28	46	0.73[0.415-1.297]	0.287
	Alone	121	44	3.31[2.069-5.314]*	0.000

\*p<0.05

### **Bivariate Logistic Regression of Personal/Interpersonal, parental and Economic Factors associated with substance use.**

Among the personal, interpersonal parental and economic variables, substance use status of the father, mother, siblings, friends and monthly pocket money had an association (p<0.05) with substance uses.

Respondents whose father, mother, sibling(s) and friends use substance were 5.12 times (COR [95% CI] 5.12[3.291-7.970]), 4.65 times (COR [95% CI] 4.65[2.575-12.289]), 3.14 times (COR [95% CI] 3.14[1.994-4.95]) and 4.42 times (COR [95% CI] 4.42[2.914-6.711]) more likely to use substances, respectively, when compared with those whose father, mother sibling(s) and friends not use these substances (Table 8).

Respondents who have monthly pocket money were 2.72 times (COR [95% CI] 2.72[1.697-4.383]) more likely to use substances as compared with those respondents who have not reported the history of having monthly pocket money (Table 8).

Table 8. Bivariate logistic regression of personal/interpersonal, parental and economic factors of the respondents for substance use among secondary and preparatory school students, Homacho town, Hadiya zone, Southern Ethiopia, April 2017.

Variables	Categories	Life time substance use		COR 95% CI	P-value
		Used	Not used		
Father occupation	Farmer	125	111	1	
	Merchant	59	35	1.49[0.917-2.144]	0.107
	Employed	34	38	0.79[0.468-1.348]	0.394
Mother occupational	Other	2	4	0.44[0.8-2.471]	
	House	59	48	1	
	Merchant	127	122	1.1[0.749-1.861]	0.474
Father education	Employed	27	14	1.56[0.928-3.700]	0.081
	Other	7	4	1.42[0.480-5.887]	0.417
	7-12 grade	96	76	1	
Mother education	Illiterate	25	15	1.31[0.650-2.677]	0.442
	1-6 grade	71	65	0.86[0.551-1.358]	0.528
	Some	28	32	0.69[0.384-1.249]	0.222
Father university	7-12 grade	90	80	1	
	Illiterate	43	33	1.15[0.672-1.996]	0.597
	1-6 grade	60	50	1.06[0.659-1.726]	0.793
Substance use	Some	27	25	0.96[0.515-1.788]	0.898
	Yes	126	39	5.12[3.291-7.970]*	0.000
	No	94	149	1	



Father	Yes	48	30	1.47[0.887-2.435]	0.135
drink	No	172	158	1	
Father	Yes	33	187	1.26[0.846-18.593]	0.80
smoke	No	23	165	1	
Father	Yes	46	14	3.28[1.743-6.195]*	0.000
chew	No	174	174	1	
Mother	Yes	119	101	4.65[2.575-12.289]*	0.000
Substanc	No	38	150	1	
Mother	Yes	9	211	3.96[0.691-2.182]	0.485
smoke	No	2	186	1	
Mother	Yes	44	8	5.62[2.984-7.249]*	0.000
drink	No	176	180	1	
Mother	Yes	12	2	5.36[1.185-24.287]*	0.029
chew	No	208	186	1	
Siblings	Yes	92	128	3.14[1.994-4.95]*	0.000
sub use	No	35	153	1	
siblings	Yes	34	13	2.46[1.257-4.817]*	0.009
smoking	No	186	175	1	
siblings	Yes	37	16	2.17[1.167-4.050]*	0.014
drinking	No	183	172	1	
siblings	Yes	22	2	10.33[2.397-44.553]*	0.002
chew					
khat					
	No	198	186	1	
Friends	Yes	146	58	4.42[2.914-6.711]*	0.000
substance	No	74	130	1	
Friends	Yes	162	177	1.51[0.890-2.576]	0.126
smoking	No	26	43	1	
Friends	Yes	84	42	2.14[1.386-3.327]*	0.001
drinking	No	136	146	1	
Friends	Yes	43	6	7.36[3.060-17.746]*	0.000
chew	No	177	182	1	
Pocket	Yes	77	31	2.72[1.697-4.383]*	0.000
money	No	143	157	1	

\*p<0.05

### Multiple logistic regression of factors for substance use of respondents

Male respondents were 1.99 times more likely to use substances than female (AOR [95% CI] 1.99 [1.195-3.339]). Currently living in the town or urban were 2.49 times more likely to use substance (AOR [95% CI] 2.49 [1.484-4.200]) than those living in rural areas. Respondents who were lived alone were 2.46times more likely to use substances (AOR [95% CI] 2.46 [1.472-4.112] than those who were living with their families. Respondents with father use substances had 2.90 times higher risk of using substances as compared to those respondents with no father history of substances use (AOR [95% CI] 2.90[1.729-4.872] (Table 9).Similarly respondents whose mother use substances were 3.88 times (AOR [95% CI] 3.88[1.492-10.130]more likely to use substances compared with those respondents whose their mother were not use. Respondents who had friends that used substances had 2.73 times higher risk of using substances than those students who had no friends who used substances (AOR [95% CI] 2.73[1.695-4.427] (Table 9).Respondents who have monthly pocket money were 2.18 times more likely to use substances (AOR [95% CI] 2.18[1.233-3.855]) than compared to those who have no monthly pocket money (Table 9)

Table 9: Multiple logistic regression of factors for substance use of respondents, among secondary and preparatory school students, Homacho town,Hadiya zone, Southren Ethiopia, April 2017

Variables	Categories	Life time substance use		COR 95% CI	AOR 95% CI	P-value
		Used	Not used			
Sex	Male	162	96	2.67[1.769-4.051]	1.99[1.195-3.339]*	0.008
	Female	58	92	1	1	
Current Resident	Rural	39	93	1	1	0.001
Currently	Urban	181	95	4.54[2.9-7.117]	2.49[1.484-4.200]*	
	Family	68	82	1	1	

living with	Alone	121	44	3.31[2.069-5.314]	2.46[1.472-4.112]*	0.001
Father	Yes	126	39	5.12[3.291-7.970]	2.90[1.729-4.872]*	0.000
substance	No	94	149	1	1	
use	Yes	119	38	4.65[2.575-12.289]	3.88[1.492-10.130]*	0.005
Mother	No	101	150	1	1	
substance						
use						
Friends						
substance	Yes	146	58	4.42[2.914-6.711]	2.73[1.695-4.427]*	0.000
use	No	74	130	1		
Pocket	Yes	77	31	2.72[1.697-4.383]	2.18[1.233-3.855]*	0.007
money	No	143	157	1		

\*p<0.05)

## Chapter 6. Discussion

The study assessed the prevalence and associated factors of substance use among secondary and preparatory school students of Homacho town, Hadiya zone, Southern Ethiopia. The overall prevalence of substance use among the respondents was 53.9%.

The result of findings showed that there is a high prevalence rate of substance use in the study area. This result was found higher than the prevalence of study conducted among high school adolescents done in Southeast Ethiopia which was 38% (12) and Northern Ethiopia which was 26.88% (58). The higher prevalence in the current study could be as a result of difference in methods. But it was lower than the prevalence of study done on substance use in Nigeria which was 83.8% and 87% (9, 56). The difference of this study from Nigeria studies could be as a result of large population sample and the socio-economic status as compared to adolescent students in Homacho Town.

The current study revealed that, specifically, 16.7%, 23.5% and 36.8% of the respondents had ever smoke cigarette, drank alcohol and chewed khat, respectively. Study conducted in southeast Ethiopia, reported that 23.6%, 17.15, and 4.6% (12) of the respondents drank alcohol, chewed khat, and smoked cigarette, respectively. It was lower than the current study, could be due to this study done only in the town where substances can easily available. The life time prevalence of smoking in this study was 16.7%, it was lower compared to study conducted among high school students in Ethiopia 28.6%.(60)The difference in prevalence could be due the scope of study that covered two big cities and conducted on large sampled size population and also It was lower than the prevalence of two studies conducted in Nigeria on psychoactive substance use 20.5% (62), and (26.9%) (63). This difference could be because the studies in Nigeria were conducted on large sample adolescent students.The life time prevalence of alcohol drinking in this study was (23.5%). It was lower than the Studies conducted in Addis Ababa, Ethiopia 45.7% (53). The difference in prevalence could be the easy access and availability of alcoholic beverages and drinking alcohol is a socially acceptable especially during ceremonial and holiday as well as a behavior learned from parents and older siblings.

The life time prevalence of khat chewing found to be 36.8%. It was higher than Study done in Northern shoa, Ethiopia, which were 15.36% (18) and Northwestern Ethiopia which were 12.6% (66). This result is in consistent with the findings done in Northwest Ethiopia which was 34.9% (13). The higher prevalence in the current study could be as a result of easily availability of khat user and seller around school.

The study found out that being male had association with substance use (AOR [95% CI] 1.99[1.195-3.333]). This finding is consistent with those of studies reported in northern shoa, Zambia and eastern Ethiopia (18, 34, 36)

The reason could be due to the fact that in male students the level of substance exposure is high and peer pressure is more common than female students. Moreover, many of the substances such as khat, tobacco, and alcohol are mostly practiced among males than females.

Currently living in the urban were 2.49 times more likely to use substance (AOR [95% CI] 2.49[1.484-4.200]) than those living in rural areas. Consistent findings were reported from Ghana (69) and in Northeast Ethiopia, that among college joining those students came from urban areas were more likely to use substances than those who were coming from rural areas (57). It can be assumed that the easier availability of substance (cigarette, alcohol, and khat) in cities and greater acceptance of their consumption can have contributed to this result and it can also be assumed that the lower rate of substance use in rural areas may be related to the effect of social and cultural values. Furthermore, many students from rural temporarily come to the town to attend high schools where there was no parental monitoring, this may expose them to learn and use substances.

Respondents who lived alone were 2.46 times more likely to use substances (AOR [95% CI] 2.46[1.472-4.112]) than those students who were living with their families. This result is also in line with the finding reported in Gondar town (72). It could be that living with family can have a protective effect for substance use due to parental supervision.

Respondents with father and mother used substances had 2.90 times and 3.88 times higher risk of using substances as compared to those respondents with no father and mother history of

substances used (AOR [95% CI] 2.90[1.729-4.872] and (AOR [95% CI] 3.88 [1.492-10.130] respectively. It is consistent with the finding reported among adolescents' high school students in Ethiopia, (12, 13, 18) and in Tanzania(21).

The possible explanation could be, family history of substance use (cigarette, alcohol or khat) leads to a learned behavior among adolescents regarding substance use. Since families were significant others of their sons, students with parental model (use substances) were more prone to using than their counter parts.

Friend's use of substances was also found to be predictor of substance use, with students who had friends used substances had 2.73 times 2.73[1.695-4.427] higher risk of using substances than those students who had no friends used substances. Consistent results were reported in, Ethiopia (12, 13, 18, 19), Tanzania (21) in Nigeria (56) and in Zimbabwe (50)

The possible explanation could be, Peer pressure is very powerful factor for influencing behavior especially in young people. Adolescents who affiliate with substance use peers may be pressured to use substances. This is because, youths directly persuade their friends to follow to their behavior; substance users encourage their untried peers to use.

Respondents who have monthly pocket money were 2.18 times more likely to use substances (AOR [95% CI] 2.18[1.233-3.855] than compared to those who have no history of monthly pocket money. The finding is consistent with study conducted in Addis Ababa, Ethiopia (53) that alcohol drinking practice in all students was strongly associated with getting pocket money and Gondar, Ethiopia (66), that the lifetime khat chewing was associated with source of money

The possible explanation could be, having pocket money could initiate adolescents to purchase and use the substances easily.

**Strength of the study:**

- Prospective data

**Limitations of the study:**

- The study was not representing the whole adolescents because youth out of school who were more involved in substance use were not included.

## **Chapter7. Conclusion and Recommendations**

### **7.1 Conclusion**

The current substance use prevalence of secondary and preparatory school students of Homacho town is high. The variables sex, current resident, currently living with whom, substance use of father, mother, friends and monthly pocket money were found to be significantly associated with substance use of the respondents.

The student's family was their model for practicing substance or not. Hence, school principals, town education office and health office must tackle substance use of the respondents through focusing the identified factors

### **7.2 Recommendation**

Overall, several factors contributed to increased substance use, and could be focused on in education to decrease risky behaviors among adolescents in school. Based on the findings of the study, the researcher makes the following recommendations:

For Sectors:

- Education office and health office in collaboration with other sector should create public awareness campaign to inform high risk group of substance user (mother, father, friends to desist from using substances as they serve as role models for the adolescents to use substance.

For School

- School management should establish and strengthen anti-social drugs club in the school to reduce the number of risk group of substance user (male, currently living alone and whose current residence is urban.)by providing education about substances.

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## **Annex 1 English Version**

Jimma University, College of Public health sciences Department of Epidemiology

Structured questionnaires for the prevalence of substance use and associated factors among secondary and preparatory school students in Homacho Town, Hadiya zone, southern Ethiopia

### **Consent form**

Hi, how are you? My name is Endale yoseph. I am attending my MPH in Epidemiology Jimma University. The purpose of this study is to get more information on prevalence and associated factors substance use among secondary and preparatory school students of Homacho Town that can be used to design appropriate intervention so as to address substance health problem of youths.

Therefore, your honest and genuine participation responding to the questions prepared is highly appreciated and helpful to attain the objective of the study. Your name will not be written on this form and no individual response will be reported to anybody. Hence, your answers are completely confidential.

You do not have to answer any question that you don't want to answer and you may refuse to answer all of the questions. Please, if you cooperate by responding to the questions it means that you have your own contribution to the success of this study.

If you have questions regarding this study or would like to be informed of the results after its completion, please do not hesitate to contact Endale yoseph (phone number 096-865-4927).

Would you willing to answer?

If yes, -----proceed to the next page

If no, ----- please stop here.

Thank You!

## Section1. Socio demographic and back ground information

<b>School</b> <b>name:</b> _____			
NUMB ER	QUESTION	Response	SKIP TO
<b>01</b>	What is your sex?	1 Male 2. Female	
<b>02</b>	Age in years	1 10-14 2 15-19 3 20-25 4 25 and above	
<b>03</b>	What grade are you in?	1. 9th 2. 10th 3 11th 4. 12th	
<b>04</b>	What is your religion?	1 protestant 2 orthodox 3 muslim 4 other	
<b>05</b>	To which ethinc group do you belong?	1 Hadiya 2 Kambata	



		3 gurage 4 silte	
<b>06</b>	What is your place of origin?	1 Rural 2 Urban	
<b>07</b>	What is your current residence?	1 Rural 2 Urban	
<b>08</b>	Do you have pocket money?	(1) Yes (2) No	
<b>09</b>	Which of the following best describes the family you currently live with?	(1) Family (2) relatives (3) friends (4) alone	

### **Family background**

NUMBER	QUESTION	RESPONSE	SKIP TO
10	With whom do you at present?	1 with parents ,brother and sisters 2 with father only 3 with mother only 4 with relatives	

		5 with peers	
11	What is your father educational attainment?	1 illiterate 2 1-6 grade 3 7-12 grade 4 Some university/college diploma 5 Other	
12	What is your mother educational attainment?	1 illiterate 2 1-6 grade 3 7-12 grade 4 Some university/college diploma 5 Other	
13	What is your father occupational status?	1 merchant 2 farmer 3 government employee 4 Other	
14	What is your mother occupational status?	1 merchant 2 house wife 3 government employee 4 Other	
15	Did your father use substance? (alcohol, cigarette or khat)	(1) Yes (2) No	If no go to 17
16	If yes which	(1) Cigarette	

	substance?	(2) Alcohol, (3) khat	
17	Did your mother use substance? ( alcohol, cigarette or khat)	(1) Yes (2) No	If no go to 19
18	If yes which substance?	(1) Cigarette (2). Alcohol (3). khat	
19	Did your siblings use substance? ( alcohol, cigarette or khat)	(1). Yes (2) .No	
20	If yes which substance?	(1) Cigarette (2) Alcohol, (3) khat	
21	Did your best friends use substance? (Alcohol, cigarette or khat)?	(1). Yes (2) .No	
22	If Yes which substance?	(1) Cigarette (2) Alcohol, (3) khat	

**Section2. Substance use status and associated factors.**

**The following are Question about Cigarette use**

<b>NUMBER</b>	<b>QUESTION</b>	<b>RESPONSE</b>	<b>SKIP TO</b>
<b>23</b>	Have you ever smoked cigarettes?	(1). Yes (2) .No	If No go to No.39
<b>24</b>	Have you ever smoked cigarette in the last 12 months?	(1). Yes (2) .No	
<b>25</b>	Have you ever smoked cigarette in the last 30 days?	(1). Yes (2) .No	
<b>26</b>	For how long you smoked?	_____months or _____years	
<b>27</b>	How old were you when you first smoked cigarette?	_____ years	

28	How often do you smoke cigarette?	(1) Daily (2) Weekly (3) Occasionally (4) Monthly (5) Other/ specify_____	
29	From where did you get money to buy cigarette?	(1). Parents (2) Friends (3). Relatives (4).Other/specify _____	
30	Do you use pocket money to buy cigarette?	(1) Yes (2) No	
31	When you first smoked cigarette, where did you get it?( you can tick more than one)	(1) Hotel/bar (2)From friends (3) Shop (4)From house. (5) purchased from street peddler's (6) Other/ specify_____	
32	Who introduce you first to use cigarettes (Smoked)?	(1) Friends (2). Parents	

		(3). Relatives (4) other/ specify_____	
<b>33</b>	What do you think that the reason you smoke?	(1) Parental influence (2) peer pressure (3) Overwork/learning (4) For fun (5) to escape worries or tension (6) others specify) _____	
<b>34</b>	How are you convinced into smoke cigarette? (you may choose more than one)	(1) Make one brilliant (2) Happier (3) Stronger/healthier (4) Work for long hrs (5) Have confidence (6) Boost appetite (7) Other/ specify_____	
<b>35</b>	Where do you smoke the cigarette?	(1) At home (2) At my friends place (3) In a bar (4) At chat chewing place (5) Others specify	

		_____	
<b>36</b>	Did you start smoking or use tobacco in a group or as an individual?	(1) Group (2) Individual	
<b>37</b>	Do you know cigarette smoking is harmful?	(1) Yes (2) No	
<b>38</b>	Do your parents know that you smoked cigarette?	(1) Yes (2) No	

**The following questions are about Alcohol use**

<b>NUMBE R</b>	<b>QUESTION</b>	<b>RESPONSE</b>	<b>SKIP TO</b>
<b>39</b>	Have you ever drunk any alcoholic beverage?	(1)Yes (2) No	If No, go to no 58
<b>40</b>	Have you ever drunk any alcoholic beverage in the last 12 months?	(1) Yes (2) No	
<b>41</b>	Have you ever drunk any alcoholic beverage in the last 30 days?	(1) Yes (2) No	

42	How often do you have Alcoholic beverages (local alcohol, tell. Teji, beer, daft, or Mixed drink)?	(1) Daily (2) Weekly (3) Occasionally (4) Monthly (5) Other/ specify_____	
43	How old were you when you first had drink alcohol?	_____ years	
44	For how long did you have drink alcohol? In Month or in years	_____ months or _____ years	
45	From where did you get money to buy alcohol/?	(1) Parents (2) Friends (3) Relatives (4) Other/ specify_____	
46	When you first had drink alcohol, where did you get it?( you can tick more than one)	(1) Hotel/bar (2) From friends (3) From local dink house (4) From my house. (5). Other/_____	
47	Who introduce you first to use	(1) Friends	



	alcohol?	(2) Parents (3) Relatives (4) Out of curiosity (5) siblings (6).Other/specify____ —	
<b>48</b>	What do you think the reason that you drink alcohol?	(1)Parental influence. (2) peer pressure (3) For fun (4) to escape worries/tension (5)others(specify)_ _____	
<b>49</b>	How are you convinced into drink alcoholic beverage? (you may choose more than one)	(1) Make one Happier (2) Stronger/healthier (3) Work for long hours (4) Have confidence (5) Boost appetite (6) Other/specify_____ _____	
<b>50</b>	Have you ever gotten in to trouble with your family for drinking alcoholic beverages?	(1)Yes (2).No	
<b>51</b>	Have your friends ever criticized		

	you for drinking alcoholic beverages?	(1) Yes (2) No	
<b>52</b>	Have you ever used alcoholic beverages and other substances at the same time (chat, smoking,)?	(1) Yes (2) No	

<b>53</b>	If question number 53 is YES what substance that you use at the same time?	(1) chat (2) cigarettes (3) Alcohol (4) Others/ specify _____ _____	
<b>54</b>	Where do you drink alcohol?	(1) At home (2) At my friends place (3) In a bar/local drink house (4) At my relatives place (5) Others _____	
<b>55</b>	Do your parents know that you drink alcohol?	(1) Yes (2) No	
<b>56</b>	Do you know alcohol drinking is harmful?	(1) Yes (2) No	

**The following are Question about khat chewing.**

NUMBER	QUESTION	RESPONSE	SKIP TO
57	Have you ever chewed chat?	(1)Yes (2) No	If No, finished
58	Ever chewed khat in the last 12 months?	(1) Yes (2) No	
59	Ever chewed khat in the last 30 days?	(1) Yes (2) No	
60	From where did you get money to buy khat?	(1) Parents (2) Friends (3) Relatives (4) Other/ specify _____ _____	
61	Do you use pocket money to buy chat?	(1) Yes (2) No	
62	Who introduce you first to chew khat?	(1) Friends (2) Parents (3) Relatives	

		(4) Other/ specify_____	
63	How do you convince yourself to chew khat?	(1) Make one brilliant (2) Happier (3) Stronger/healthier (4) Work for long hrs (5) Have confidence (6) Boost appetite (7)Other/ specify_____	
64	Why do you chew khat?	1 Parental influence 2 peer pressure 3 To over work 4 For fun 5 To escape 6 worries/tension others( specify) _____	

**Thank you for your cooperation**

## Annex 2: Hadiyisi version

### Hadiyisi Tirato

Ittamitako'o iyabayuwii, iyaayuwii hinkido'o xummami hee'illaka'ate? Ani Indaala yoseef jimmi univeersite'ene la'immi digre'e fayya'oomi bikkina epidimioolooje'e yakami losano soroobumuuya yoomo. Kinnuwa kanni woroon yoo xamichuwa xameena hasummi horoor woshi kinnuwi woriinsi mee'i losaani chaata qama'ooda'e, mee'i dimibisoo aga agooda'e, mee'i sigaara wirisooda'e la'imminate.

Kaka soroobimi horoor woshi hanaani kitaabamu keen (chaata, tamibaa'a wirtisimmi, dimibisoo agga agimmi) fayaa'oomane eebo hawuwa sorobiminate.kinnuwi kanni woroon yoo xamichuwa haniqo'isine dabarima xanitakolasi hannani soroobena hasumi wosha haniqo'isine soroobimi xanammoko

Ka xammichi woraqatane kinnuwi summa kitaabimi hasisooyo. Kinnuwi dabatako'i dabachimi ayenami kurammoyo.eebikina kinnuwi dabatako'i dabacha ayimmi la'iooyo.

Kanni woroon yooki xammichuwa dabataku'uya ayi chaakubee'i xammichuwi yoolasi kinnuwina ka xammichi woraqata uwu losisaancho xamima xanitakamo te'imi jimmi univeerisite'ene ihaa la'imi digire'e faya'oomi bikina soroobukuya yooki sorobaancho indaala yoseef silika qochchimine xamima xanitakamo.silki xig (0968654927).

Kanni woroon yooki xammichuwa dabatakamonihe?

Ooya yitakolasi, ----- asheelehe.

Sabakolasi, ----- gato ullehe.

Dabacha dabarimine haramitakami bikina bashila galaxoomo!

Baxxanchi mato: gaqi bikina caakisimma

Losa'in mi'nni summi \_\_\_\_\_

<b>Xigo</b>	Xa'mmicha	Dabacha	Muli xamichane
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<b>01</b>	Alibachi hinkane?	1 Goonicho 2 Meeniticho	
<b>02</b>	Umuri mee'o?	1 10-14 2 15-19 3 20-25 4 25 te'imi hanaanete	
<b>03</b>	Losa'ini baxanchi mee'o?	1 9 baxanicha 2 10 baxanicha 3 11 baxanicha 4 12 baxanicha	
<b>04</b>	Ammanati hinikane?	1 Ammanaanicho 2 Orittodokisa 3 Musiliimas 4 Catoliika 5 Ammanat bee'e	
<b>05</b>	Shumo'i hinikane?	1 Hadiya 2 Kambata 3 gurage 4 silte 5 amahara	
<b>06</b>	Hannone qaramititoki?	1 Gaxarane 2 Katamane	
<b>07</b>	Kaba yoonitoki hannonete?	1 Gaxarane 2 Katamane	
<b>08</b>	Agana siido birr yohonihe?	1 Yooko 2 Bee'e	
<b>09</b>	Kaba yoonitoki ayyenetee?	1 Anninee ammanee 2 Qarimanichinee 3 Beshichinee 4 Mullame	

**Mi'ini manni bikkina caakisimm**

Xigo	Xa'immicha	Dabacha	Mulli xamichane hige
10	Kaba ayenete yoonitoki?	1 mi'in mannine 2 Iyyani xale'ine 3 Iyyumi xale'ine 4 Iqarimannine 5 Ibeshuwinee	
11	Kiyyani losano hinikaa'ina losaa?	1 Mahami losubee'ane 2 1-6 baxancha afeebe'e losaako 3 7-12 baxancha afeebe'e losaako 4 Universte/colleegi diploma	
12	Kiyyumii losano hinikaa'ina losaate?	1 Mahami losubee'ane 2 1-6 baxancha afeebe'e losaako 3 7-12 baxancha afeebe'e losaako 4 Universte/colleegi diploma 5 mullane	

13	Kyyani baxi maricho?	1 Daddaraanicho 2 Abuulaanicho 3 Adi'ili baxaanicho 4 mullane	
14	Kyyumi baxi maricho?	1 Daddaraanichote 2 Mi'ini baxo baxamane 3 Adi'ili baxaanichonichote 4 Mullane	
15	Kiyyani ka ilageeni dimbisoo aga,chaata, tamibaa'a wirisima awaaxu bali yoohone?	1 Yooko 2 Bee'e	Bee'e yitilasi xammichi
16	Yooko yitilasi hinikane awaxami hee'uko?	1 Tamibaa'a wirisimma 2 Dimibisoo aga agima 3 Chaata qama'imma	
17	Kiyyuma ka ilageeni dimbisoo aga,chaata,tamibaa'a wirisima awaaxito'i bali yoohone?	1 Yooko 2 Bee'e	Bee'e yitilasi xammichi
18	Yooko yitilasi hinikane awaxitami hee'ilo'oki?	1 Tamibaa'a wirisimma 2 Dimibisoo aga agima 3 Chaata qama'imma	
19	Kini mine yooki oosii landii ka ilageeni dimbisoo aga,chaata,tamibaa'a wirisima awaaxamu bali yoohone?	1 Yooko 2 Bee'e	
20	Yooko yitilasi hinikane awaxamami hee'amukohi?	1 Tamibaa'a wirisimma 2 Dimibisoo aga agima 3 Chaata qama'imma	



21	Ki beshuwi ka ilageeni dimbisoo aga, chaata, tamibaa'a wirisima	1 Yooko 2 Bee'e	
22	Yooko yitilasi hinikane awaxamami hee'amukohi?	1 Tamibaa'a wirisimma 2 Dimibisoo aga agima 3 Chaata qama'imma	

**Baxxanichi lamo:**

**Kanni worooni yooki xammichuwi tamiba'a wirisimi bikkinaa kinnuwi tamibaa'a wirisitakona mashika'i ihoo luwi bikkina xamoothane.**

Xigo	Xammicha	Dabacha	Muli xamichane hige
23	Ati tamibaa'a wirisit bali yoohonihe?	1 Yooko 2 Bee'e	Bee'e yitilasi xammichi
24	Hugu 12 aga'ini worone tamibaa'a wirisit bali yoohonihe?	1 Yooko 2 Bee'e	
25	Hugu 30 bali worone tamibaa'a wirisit bali yoohonihe?	1 Yooko 2 Bee'e	
26	Hinikaa.ini amane wirisitito	_____ agana _____ hiinicho	
27	Luxeka tamibaa'a wirisima asheetit amane ki umuri mee'i hee'uko	_____ hiinicho	
28	Mee'a tamibaa'a wirisitoo?	1 Bllina balina 2 Sanitina santina 3 Mati mat amane 4 Agana agana 5 Mulekiyookilasi caakise_____	

<b>29</b>	Cigaara bitaleena bira haniinise siidokoki?	1 Mi'ini manniinse 2 Beshuwiinse 3 Qari manninse 4 Mulekiyookilasi caakise_____	
<b>30</b>	Tamiba'a wirisiteena ki kiisane birr hee'oonihe?	1 Hee'ooko 2 Hee'ooyo	
<b>31</b>	Luxxeka tamibaa'a wirisitoki hanonete?	1 Hooteela 2 Ibeshichi beyonihe 3 Suuqane 4 Gati minene 5 Googone 6 Mulekiyookilasi caakise_____	
<b>32</b>	Luxxeka ati tamibaa'a wirisitoo'isa isukoki ayete?	1 I beshi 2 Mi'ini manni 3 Qarimanni 4 Mulekiyookilasi caakise_____	
<b>33</b>	Tamiba'a wirisitoo'isina issoo mashika'i maha?	1 Mi'ini mana 2 Beshi 3 Qananaa'oomi bikina 4 Liramicha uwoo bikina 5 Kichecha horoo bikina 6 Mulekiyookilasi caakise_____	

<b>34</b>	Tamibaa'a wirisiteena hinkidi ki gaga amanisito?	1 Qoxasoo'isa moo'aa 2 Liramicha uwoohanooma la'aa 3 Faya'ooma uwoo bikkina 4 Qonanaa'oomisina haramoo'isa la'aa 5 Gagaammanamoomisina haramoo bikina 6 Huribaata bashila itoomibee'isa isoo bikina 7 Mulekiyookilasi caakise_____	
<b>35</b>	Kaba hanonete tamibaa'a wirisitookoki?	1 Minene 2 Beshichi beyone 3 Hoteelane 4 Chaata qama'akami minene 5 Mulekiyookilasi	
<b>36</b>	Kaba tamibaa'a wirisitookoki ayyennette?	1 Beshine 2 Mullami	
<b>37</b>	Tamibaa'a wirisimi jori ihukisa laqoohonihe?	1 La'oomo 2 La'oomoyo	
<b>38</b>	Tamibaa'a wirisitoo'isa ki mi'ini mani la'oohinihe?	1 La'ooko 2 La'ooyo	

**Kanni worooni yooki xammichuwi dimbisoo agi bikkina xammoohane**

Xigo	Xammicha	Dabacha	Muli xammichane hige
<b>39</b>	Kanni illageen dimbisoo agaggaa laqoohonihe?	1 La'oomo 2 La'oomoyo	La'oopmoyo yitilasi

			Xa'immich i 58 hige
40	Higu hinichone dimbisoo aga aggaa laqohonihe?	1 La'oomo 2 La'oomoyo	
41	Higu asgana dimbisoo agga aggahanihe?	1 Agaamo 2 Agumoyo	
42	Mee'a dimbisoo agga aggoo?	1 Bllina balina 2 Sanitina santina 3 Mati mat amane 4 Agana agana 5 Mulekiyookilasi	
43	Luxeka dimbisoo agga aggit ammane ki umur mee'i	_____ hiinicho	
44	Hinikaa'ni amaninaa dimbisoo agga agate?	_____ Agana _____ Hiionicho	
45	Dimbisoo agga awaxiteena bira hanii sidima xanttoto?	1 Mi'ini manniinse 2 Beshuwiinse 3 Qari maninse 4 Mulekiyookilasi caakise_____	
46	Luxxeka dimbisoo agga aggitoki hanonete?	1 Hoteelene 2 Beshichi beyyone 3 Aggi minene 4 Ni minene 5 mulekiyookilasi caakise_____	

47	Luxxeka dimbisoo agga aggo'isina isukkoki ayyettee?	1 Beshshuwi 2 M'ini manni 3 Qarimanni 4 Igaginemetete 5 Iyyabaayuwii ,iyyaayuwi 6 Mulekiyookilasi caakise_____	
48	Dimibisoo agga agoo'isina isoo mashika'i maha?	1 Mi'ini mana 2 Beshha 3 Qananaa'oomi bikina 4 Liramicha uwoo bikina 5 Kichecha horoo bikina 6 Mulekiyookilasi caakise_____	
49	Dimbisoo agga ageena ki gaga hinkid ammanisito?	1 Liramicha uwoohanooma la'aa 2 Faya'ooma uwoo bikkina 3 Qonanaa'oomisina haramoo'isa la'aa 4Gagaammanamoomisina haramoo bikina 5 Huribaata bashila itoomibee'isa isoo bikina 6 Mulekiyookilasi caakise_____	
50	Dimbisoo agga agгаа ki'n mi'in manni wocanti bali yohonihe?	1 Yooko 2 Bee'e	
51	Ki beshshuwi dimbisoo agga aggitee yaa sogu bali yohonihe?	1 Yooko 2 Bee'e	

52	Dimbisoo agгаа, chaata, tambaa'a matemaqemi awaxit bali yohonihe?	1 Yooko 2 Bee'e	
53	Hanaa'in xammichina yooko yitilas hinkakeeno ihukisa doo'ile	1 Chaata 2 Tambaa'a 3 Dimbisoo agгаа 4 Mulekiyookilasi caakise_____	
54	Dimbisoo agгаа hannonete aggoo?	1 Minene 2 Beshichi beyone 3 Agгаа minene 4 Qarimanni beyone 5 Mulekiyookilasi caakise_____	
55	Dimbisoo agгаа aggoo'isa mi'inni manni la'oohonihe?	1 La'ooko 2 La'ooyo	
56	Dimbisoo agгаа aggimi jori ihukkisa laqoohonihe?	1 La'ioomo 2 La'ioomoyo	

**Kannii worooni yooki xammichchuwi chaata qama'immi bikkinate**

Xigo	Xa'immicha	Dabachcha	Muli xa'immicha hige
57	Chaata qama'ili balli yoohonihe?	1 Yooko 2 Bee'e	Bee'e yitilas
58	Higu 12 aga'inni worone chaata qama'illi balli yoohonihe?	1 Yooko 2 Bee'e	
59	Higu 30 balli worone chaata qama'illi balli yohonihe?	1 Yooko 2 Bee'e	

60	Chaata bitaa'illena birra haniid sidoto?	1 Mi'inni manninise 2 Beshshuwiinse 3 Qari manniinse 4 Mulekiyookilasi caakise_____	
61	Chaata bitaa'illena kisane birr hee'ihonihe?	1 Hee'ooko 2 Hee'ooyo	
62	Luxxeka ati chaata qama'illo'isa isukkoki ayyete?	1 Beshi 2 Mi'inni manni 3 Qari manni 4 Mulekiyookilasi caakise_____	
63	Chaata qama'illerena ki gaga hinkidi amma'innisito?	(1) qoxasoo bikina (2) liramicha uwwo bikina (3) mishisoo bikina (4) bashili amane baxoomisa isoo bikina (5) Igagane ammanamoomisa isoo bikina (6) Icha hooro bikina (7)mulekim yookilas_____	

64	Chaata qama'illooisina isuki mashika'i maha?	1 Mi'inni manna qama'oo bikina 2 Basha qama'oo bikkina 3 baxo baxoomisa 4 Liramicha uwoo bikkina 5 Kichecha hooro bikkina 6Mulekiyookilasi caakise	
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Dabacha dabatako'i bikkina bashila galaxoomo.



**Annex 3: Declaration:**

I, the undersigned, declare that this Thesis is my original work and has not been presented for a Degree in this or any other University, and all source of materials used for this Thesis have been Fully Acknowledged.

Name: \_\_\_\_\_

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

Place: Jimma University

Date of Submission \_\_\_\_\_

This Thesis has been submitted with my approval as the University Advisor.

**Name of the First Advisor:** \_\_\_\_\_

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

**Name of Second Advisor:** \_\_\_\_\_

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

