



**WOLKITE UNIVERSTIY  
COLLEGE OF MEDICINE AND HEALTH SCIENCE  
DEPARTMENT OF PUBLIC HEALTH**

**ASSESSMENT OF SUBSTANCE ABUSE AND ASSOCIATED FACTORS AMONG  
WOLKITE UNIVERSTIY STUDENTS, WOLKITE ETHIOPIA,2021**

A Research thesis submitted to Department of Public Health, College of Medicine and Health Science, Wolkite University; in Partial Fulfillment for the Requirement of the Degree of Public Health (BSc-PH)

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## ABSTRACT

**BACKGROUND:** Being a global burden of youths, substances use is unhealthy behavior that exposes youths to health and social problems. Knowledge of the prevalence and predictors of substance use behavior among university students is important for designing periodic and locally appropriate interventions. This study is conducted to assess the prevalence and predictors of substances among Wolkite University students.

**METHODS:** A cross sectional descriptive study was conducted on October 2021 to assess substance abuse among wolkite university students, Ethiopia. In this study a total of 3950 students were participated. The systematic random sampling technique was used to select the sampled participants. The collected data were cleaned and its completeness were checked on daily basis before entering the data to SPSS Version 20 for analysis. Descriptive statistics, chi square analysis and logistic regression analysis were done to examine the association between dependent (substance use behavior) and explanatory variables. Statistical significance level was declared at p-value 0.05.

**RESULTS:** The overall current prevalence of substance abuse among the respondents was 169 (45.9%). Specifically, 109 (64.5 %) were khat abusers, 27 (16%) were alcohol abusers, 23 (13.6%) were cigarette abusers, 8 (4.7%) /was abuse marijuana or hashish and 2 (1.2%) were cannabis abusers. Being a male, and having a lot of pocket money were among the top risk factors for substance use behavior of respondents. Poor appetite, headache and psychological distress are the commonly encountered health and psychological consequences of substance use. sex, religion, department, area of growth and monthly pocket money were found to be significantly associated with substance abuse.

**CONCLUSION AND RECOMMENDATION:** Significant numbers of students in wolkite University were consuming substances like khat, alcohol and cigarette. Most of them use those substances due to peer pressure and easily availability of the substance around the campus. Therefore, wolkite university should pay attention for recreational facilities, means for the youth to spend their time rather than using the substances and health education should be rendered to the University students about its advantages and disadvantages clearly.

## **TABLE OF CONTENT**

|                                      |           |
|--------------------------------------|-----------|
| <b><u>CHAPTER ONE</u></b>            | <b>3</b>  |
| 1. <u>INTRODUCTION</u>               | 3         |
| 1.1 <u>BACKGROUND</u>                | 3         |
| 1.2 statement of problem             | 5         |
| 1.3 <u>SIGNIFICANCE OF THE STUDY</u> | 7         |
| <b><u>CHAPTERTWO</u></b>             | <b>8</b>  |
| <u>LITERATUREREVIEW</u>              | <b>8</b>  |
| 2.1 over view                        | 8         |
| 2.2Drug Use: Concerns and Processes  | 9         |
| 2.3consequences of substance use     | 10        |
| 2.4 prevalence                       | 11        |
| 2.5 conceptual frame work            | 15        |
| <b><u>CHAPTERTHREE</u></b>           | <b>16</b> |
| <u>OBJECTIVES</u>                    | 16        |
| 3.1. <u>GENERAL OBJECTIVES</u>       | 16        |
| 3.2. <u>SPECIFIC OBJECTIVES</u>      | 16        |
| <b><u>CHAPTER FOUR</u></b>           | <b>17</b> |
| <u>METHODS AND MATERIALS</u>         | 17        |
| 4.1. <u>STUDY AREA AND PERIOD</u>    | 17        |
| 4.2. <u>STUDY DESIGN</u>             | 17        |
| 4.3. <u>POPULATION</u>               | 17        |
| 4.3.1. <u>SOURCE POPULATION</u>      | 17        |
| 4.3.2. <u>STUDY POPULATION</u>       | 17        |

|                                                            |    |
|------------------------------------------------------------|----|
| <u>4.4. SAMPLE SIZE DETERMINATION</u> .....                | 18 |
| <u>4.4.1. SAMPLE SIZE</u> .....                            | 18 |
| <u>4.5 SAMPLING PROCEDURE</u> .....                        | 19 |
| <u>4.6. VARIABLES</u> .....                                | 20 |
| <u>4.6.1. DEPENDENT VARIABLES</u> .....                    | 20 |
| 4.7 operational definition.....                            | 21 |
| <u>4.8. DATA COLLECTION INSTRUMENT AND PROCUDERE</u> ..... | 22 |
| <u>4.8.1 Data collection instrument</u> .....              | 22 |
| <u>4.8.2 Data processing</u> .....                         | 22 |
| <u>4.9. DATA QUALITY ASSURANCE</u> .....                   | 23 |
| <u>4.10.PLAN FOR DATA ANALYSIS</u> .....                   | 23 |
| 4.12.work budget.....                                      | 23 |
| chapter 5 result.....                                      | 24 |
| chapter 6 summary,conclusion ,recommendation.....          | 32 |
| 6.1 conclusion.....                                        | 32 |
| 6.2 recommendation.....                                    | 33 |
| Reference.....                                             | 34 |
| Questionaries.....                                         | 35 |

## ACRONYMS AND ABBREVIATIONS

|      |                                     |
|------|-------------------------------------|
| AIDS | Acquired Immune Deficiency Syndrome |
| CNS  | Central nervous system              |
| GPA  | Grade point average                 |
| GDP  | Gross Domestic Product              |
| HIV  | Human Immune Deficiency Virus       |
| MOH  | Ministry of Health                  |
| TB   | Tuberculosis                        |
| WHO  | world health organization           |

## List of tables

Table 1: Distribution of respondents by socio demographic characteristics in wolkite University students, wolkite, Ethiopia, October 2021.

Table 2: Frequency of substance users and non-users among wolkite University students, wolkite, Ethiopia, October 2021.

Table 3 sociodemographic distribution of the students on substance abuse and non abuse among wolkite University students, wolkite Ethiopia, October 2021.

Table 4: Responses of students on reasons to use of the substance among wolkite University students, wolkite Ethiopia, October 2021.

Table 5: Responses of students about their Average days of chewing khat and alcohol among wolkite University students, wolkite Ethiopia, October 2021.

Table 6: health and psychological problems of drug abuse among wolkite University students, wolkite Ethiopia, October 2021.

Table 7 Regression Analysis of substance abuse and its associated factors among wolkite university students, wolkite Ethiopia, October, 2021

## **List of figures**

Fig 1. Distribution of participants by their monthly money in pocket in wolkite University students, wolkite,Ethiopia, October 2021.

Fig 2. Distribution of students by substance abuse and non- substance abuse among wolkite Universitystudents, wolkite Ethiopia, October 2021.

Fig 3: Responses of students about what kind of drug they use among wolkite Universitystudents, wolkite Ethiopia, October 2021.

Fig 4: type of alcohol the respondents use among wolkite Universitystudents, wolkite Ethiopia, October 2021



## **CHAPTER ONE**

### **1. INTRODUCTION**

#### **1.1. BACKGROUND:**

Substance abuse is a chronic debilitating disease with significant morbidity & which affects individuals and their families. One-tenth of peoples who use illicit drug suffer from drug or substance use disorder like drug dependence. Around 275 million peoples use drugs worldwide in the last year, while over 36 million peoples suffered from drug use disorder, according to world drug report 2021. **(1)** Substance use is one of the common behaviors considered as Negative risk taking by the WHO. A high frequency of substance abuse among youth population is global problem including developing countries with negative health, economic and social impacts. Several factors including intense academic pressure, independence from family/guardian control, peer pressure, and the desire to experiment with new things in their life make college students more vulnerable to substance use. Khat, Alcohol, and Cigarette are among the commonly used substances among youth in Ethiopia including university students. There is also evidence indicating the use of illicit drugs such as Hashish, Cocaine, Cannabis, Sleeping pills, Amphetamine, Opioids, and “Shisha”. **(2)**

Alcohol is most commonly used substance with multiple impacts on youth worldwide. A higher prevalence of alcohol use, binge drinking, and heavy alcohol use was reported among the US college students. Significantly higher ever and current alcohol consumption was also reported in Sub-Saharan African countries such as Uganda, Zimbabwe. Studies performed in different parts of Ethiopia also indicate alcohol use prevalence ranging from 22.6% to 59%. Alcohol consumption is associated with sex, age group, religion, marital status, year of study, family income, and family use of alcohol. **(3)**

Khat, *Catha edulis*, is an indigenous plant with stimulant properties widely cultivated and used by chewing the fresh bud in east African and some Middle East countries. It produces CNS stimulant effect, euphoria and excitement due to its cathine/nor pseudoephedrine/ and cathione/a-aminopropiophnone/ contents. Previous studies reported a higher prevalence of khat use among university students in different parts of Ethiopia. Gender, age group, religion, marital status,

family use of khat, family occupation, and year of study were identified predictors of khat chewing. **(2)**

The other substance that is widely used among college-age youth is tobacco. It is used in the form of smoke due to the pleasurable and rewarding effect of its active constituent, nicotine. The global projected prevalence of current users of some form of tobacco among people aged 15 years and above is 22.8%. Ethiopia accounts for more than 2.6 million current tobacco smokers, based on population estimates published by the United Nations Population Division (UNODC World drug report 2021). **(1)**

It is also an important issue in Ethiopian Higher institutions. Shisha, Cannabis, and Marijuana have commonly used substances among university students in different parts of Ethiopia. Reduced academic performance and negative impacts on future productivity were identified by several studies as impacts of illicit drug use among university students. The risk of failing to adapt to academic life and low GPA increases among alcohol and cannabis co-users. **(2)**

The current study aimed to determine the magnitude of substance use among regular undergraduate students in the Wolkite University and identifying the factors associated with their use. We hypothesized that demographic and mental health characteristics such as psychological distress, depression, anxiety suicidal attempt can be used to predict khat chewing, alcohol use, cigarette smoking, and use of illicit drugs among university students. **(2)**

## **1.2. STATEMENT OF THE PROBLEM**

In 2012, about 3.3 million net deaths, or 5.9% of all global deaths, were attributable to substance consumption which is greater than deaths caused by HIV/AIDS, violence or TB. The WHO has just released a global status report on substance and health which finds that 2.5 million people worldwide die each year from alcohol use. Substance consumption is the world's 3<sup>rd</sup> largest risk factor for diseases and disability accounting for 5.5 % of disability adjusted life years lost globally, that is 136 million years of life lost through dying early or living with an substance related disability (5) , mostly in middle income countries it is the greatest risk.

Harmful use of substances results in the deaths of 2.5 million people annually, and it causes illness and injuries to millions of people and increasingly affects younger generations and drinkers in developing countries (1).

Results from the 2014 National survey on drug use and health: National findings revealed that current abuse of illicit drugs was higher for young adults aged 18 and above (6.8%), which is 16.3million adult age, than for youths aged 12-17 (2.7%) (3).

Data from the WHO Global substance database show wide variations in per capita consumption of recorded substance in African countries; ranging from less than 1litre of pure alcohol in some countries mostly Muslim's countries to greater than10litres in couple others (5).

In Great Britain, up to 25% of work place accidents and around 60% of total accidents at work may be linked to substance. In India about 40% of work accidents have been attributed to substance use. Substance abuse can impair how a person performs as apparent, a partner as well as, how he/ she contributes to the functioning of the house hold. Effect can include physical and behavioral problem such as trouble with: -learning and remembering, understanding and following direction, controlling emotion and communicating and socializing (1).

Over half of Ethiopian population consists of young people between the ages of 15-24years. Many of the youth face diverse problems and live with constant life challenges especially in

urban centers of the country. In Addis Ababa alone it is believed that there are over 100,000 people living on the streets and more than half of these are young people. These young people are often involved in socially undesirable practices, such as drug and alcohol abuse. Many youths commit crimes more than half of the entire arrested criminals are youth people who are drug abusers, especially alcohol and other harmful practices in Ethiopia. Understanding the student's appreciation of health risks of substance use can greatly assist substance related problems prevention strategy. Information has a powerful influence on behaviors, these strategies are needed that give sufficient information to make informed decision about their health. Studies have shown that substance use by youth and young adults increases the risk of both fatal and nonfatal injuries. (6)

Health problems associated with alcoholism, among adolescents and youth aged between 15-24 revealed that health problems were common like a mental health problem, such as depression, anxiety, or schizophrenia, a young adult experiencing peer pressure, have low self-esteem, experience a high level of stress, live in a family or culture where alcohol use is common and accepted. (2)

There are a lot of substance abuse related problems experienced by students at higher institution including Wolkite University, due to lack of appropriate information about the risks of substance abuse. Even though the number of students who are taking commonly known substances is believed to be increasing from time to time, to the best of our knowledge, there is no scientific data showing the magnitude and the associated factors of the behavior in the study area. Therefore, the main aim of the study is to determine the current prevalence and associated factors of substance abuse among students in Wolkite University.

### **1.3 SIGNIFICANCE OF THE STUDY**

Substance abuse is associated with increased risk of committing criminal offences including domestic violence, rape and loss of employment which leads to financial problems and also cause a number of physical symptoms such as liver cirrhosis, nutritional deficiencies and cancer. This study will help to provide significant information on the level of current situation of Substance abuse and associated factors in Wolkite University students. It may also serve as a baseline data for other studies of similar kind. It will provide information for planners in Wolkite University when designing effective interventions to influence substance use behaviors of their students.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Overview**

Drug is defined by different authors in different ways. Broadly speaking, a drug is any substance that, when absorbed into the body of a living organism, alters normal bodily function. It changes mood, perception or consciousness. Drugs are any substance, natural or artificial, other than food that by its chemical nature alters structure of function in the living organism. Drug abuse refers the use of a substance in a manner, amounts or situations such that the drug use causes problems or greatly increases the chances of problems occurrence. The problems may be social, occupational, psychological or physical. (13)

In Ethiopia, drugs such as khat, alcohol, Tobacco and to some extent other drugs like Marijuana are used at young age group of the population. Drug use and abuse increases the chance of having many problems at early age like risky sexual practices that causes failure in academic performance, in danger that are the future hope of the country and this will alienate the youth from their education. This affects the social, economic, and political aspects of the country directly and indirectly. Although the issue of Education in youngsters and drug use are closely interlinked. Much research are not done in order to tackle the problem.(3)

## **2.2 Drug Use: Concerns and Processes**

According to WHO 2005 report, drug use can lead to illness and even to death. Alcohol and substance misuse cause significant morbidity and mortality (particularly from injuries) and societal harm such as social disruption from crime, unemployment and marital disharmony. Drug abuse affects all aspects of abusers' life. It can cause serious health complications by affecting every organ of the body, including the main thinking system of the brain, also damages one's emotional stability, finance and ability to build and sustain satisfying relationships with other people. But the problem doesn't stop here it continues crashing family, friends, and even the greater community one lives in. Around the global, there are an estimated 8.4% of the world population aged 15 years and above abuse substances, while the majority of illegal drugs are consumed in industrialized nations, drug addictions is no longer the rich nations problem or the poor nations affliction, it crosses nations, ethnic, religious classes and gender lines (1).

About 12% of Canadian adults have had a substance dependence problem at some time in their life. (7) The World Health Organization estimates that about 250 million people throughout the world suffer from substance dependence.

Peer pressure, social interactions, boredom, curiosity, gender, the media, and low self-esteem may also cause some youth to use and abuse certain substance. Youth may experience pressure from friends, find substances readily available at social gatherings, or simply feel bored on the weekends. We lived in a society where youth are constantly being bombarded with mixed messages, with media glorifying drinking, partying, and living extremes, while being told by many prevention and treatment programs to completely abstain from these substance (Office of National Drug control Policy, 2001). This in turn can lead to numerous reasons as to why a youth may choose to use and/ or abuse substances, or completely abstain for their entire lives. It can be extremely challenging to discover exactly why a youth becomes involved with substance use and/ or abuse, and it may never be possible to state why all youth become involved with these activities (7).

According to the Department of Justice (August, 2002), prescription-type pain relievers, sedatives, stimulants, and tranquilizers are the most commonly used and abused by American youths, yet this information was only found in one article, out of the hundred that were searched.

In the 2002 National Youth Risk Behavior Survey half of learners (49.1%) between Grades 8 and 11 had substance at least once in their lifetime. In the 30 days Preceding the survey 31.3% used drugs on one or more days (29% of males and 18% of females). Significantly higher percentages of white and colored learners had ever drunk alcohol and used other drugs. Rates of using alcohol and other drugs increased with age and grade (11). Comparisons of data across different studies suggests that over time there has been an Increase in the proportion of people abusing drugs amongst South Africans with particular Increases among young, black African males and females. In 2000 alcohol was responsible for 4% of the global burden of disease – more or less equal to the damage caused to society by tobacco use (4.1%) (9).

Contribution to the global burden of disease was considerably higher in developed (9.2%) than developing countries, in part due to the greater consumption of substance in these countries and in part due to the high burden from other diseases in developing countries (such as AIDS, Malaria, childhood illnesses etc.).(3)

## **2.3 consequences of substance use**

### **Health consequences**

Both acute intoxication and chronic/long term may have adverse effects on the brain, central nervous and muscular system, liver, heart (though there are also some positive effects for certain groups of people), blood cells, Gastrointestinal system, respiratory system, reproductive system as well as the Immune system. Its use contributes to more than 90 diseases and conditions. The Following conditions are some of the most important. The prevalence rates of most of these diseases in South Africa is generally not known and unless specifically stated rates refer to international figures (5).

Drugs has numerous adverse effects on blood cells and their functions. For example heavy drinking can cause generalized suppression of blood cell production and the Production of abnormal blood cell precursors that cannot manufacture cells. There is evidence that blood pressure increases with increased drinking. A study in India found alcohol consumption to be a significant risk factor for hypertension. A Meta-analysis found that 11% of cases of hypertension in males and 6% in females could be directly causally attributed to alcohol. (5)



A meta-analysis of more than 200 studies found that alcohol & those drugs strongly increased the risks of various types of cancers (oral cavity, pharynx, esophagus and larynx) and found statistically significant increases in risk for cancers such as stomach, colon, rectum, liver, breast and ovaries. (5)

### **Social Consequence**

Drug abusing behavior creates a problem on the social life of the youths. They will experience social alienation like avoidance from their family and the society, due to their drug abusive behavior. The drug they took encourages them to engage in delinquent activities like stealing, fighting, harassing or abusing others verbally and physically. (5)

### **Psychological consequence**

Chronic drug use can alter a person brain structure and function, resulting in long term psychological effects, as such: depression, anxiety and panic disorders. (5)

### **Behavioral consequence**

Impaired Judgment and coordination resulting from the use of alcohol and other drugs are associated with acquaintance assault and rape, hazing, falls, drowning and other injuries; contracting sexually transmitted infections including AIDS; and unwanted or unplanned sexual experiences and pregnancy. (5)

## **2.4 prevalence of substance use**

According to the National Institute on Drug Abuse (2000), alcohol is the most abused psychoactive drug in the United States with approximately 90% of students using it before they leave high school. In Nigeria a report by NAFDAC (2008) found that alcohol is also the most commonly abused drug with about 61% of the population engaging in its use. The same report indicated that 40.9% of students were abusing alcohol in Nairobi Province and 26.3% in Central Province.

study conducted from April to June 2012 to assess psychoactive substances use and associated factors among students in Axum University, the result of alcohol abuse indicated that life time and current alcohol use was 34.5% and 32.8% respectively. These results were lower than a study done at Federal University of Alagoas, Brazil and among college students in Eldoret,

Western Kenya with drug consumption rate of 87.6% and 51.9% respectively. (7) Similarly, the reported rate of alcohol consumption was lower than a study done among adolescents in rapidly developing countries with prevalence of 49% and 48% for male and female respectively.

A cross-sectional study conducted to determining the prevalence of substance abuse and its associated factors among students of Debra Marko's Poly Technical College in 2014, overall prevalence of substance abuse 14.1 %. (15)

The WHO had released a global status report on substances and health which finds that 3.5 million people worldwide die each year from Substance abuse. Based on analysis of 100 individual country profiles, the WHO has released the global status report on alcohol and health focused on analyzing available evidence on alcohol consumption, consequences and policy interventions at global, regional and international level (5)

According to the Ethiopian Demographic and Health Survey (EDHS) 2016, the prevalence of alcohol use among men and women is 46% and 35% respectively. Prevalence of tobacco use among men and women is 4% and 0.6% respectively. The prevalence of chat chewers among men and women is 27% and 12% respectively. (14)

A cross-sectional study assesses the prevalence and determinants of substance use among high school students in Dire Dawa, Ethiopia. From December, 2010 to January, 2011, 34.2% alcohol drinking (n=762). (19)

## **2.5. Risk factors**

To sum up, what have been mentioned in the literature reviews there are a lot of substance abuse related problems experienced by students in higher institution and the whole society of varied countries and there are various contributing factors that make students to abuse drugs, among which may be lack of appropriate information about the risk alcohol abuse.

### **2.5.1 Individual Risk Factors**

Personal feeling one develops about the future, self-confidence and self-esteem has a big role on one's drug usage. Individual risk factors include antisocial behavior, alienation, or rebelliousness, and favorable attitudes toward the problem behavior. Hawkins, Lishner, and

Catalano (1999:92) report that childhood antisocial behaviors appear most strongly related to serious behavior problems such as drug abuse and much less strongly related to occasional or experimental use of drugs or alcohol. Considering rebelliousness, Nowinski (2007) contends that the adolescent personality, which can be characterized as risk-taking, hedonistic, limited time perspective, here and-now centered, and rebellious, is in itself a risk factor. In fact, the author asserts that when personality factors are left unconstrained they could lead to disaster. According to Canadian Center On Substance Abuse CCSA (2017) put age as a strong determinant factor on period of adolescence; attitude and beliefs about the risks of drug use, impulsivity and sensation seeking, and childhood psychological (conduct) disorders are as well revealed. Another individual risk factor for problem behavior is a positive attitude towards that behavior by the youth. Robins and Przybeck (1999:191) reported that "none of the factors found to predict drug use was useful in predicting progressions from use to problem use except by early age of onset." (7)

### **2.5.2 Poor Parental relationship and lack of monitoring**

Poor parental monitoring; distant, uninvolved, and inconsistent parenting; and unclear family rules, expectations, and rewards are all considered family risk factors. Adolescents who came from families where there is lack of monitoring and support, are prone to risky behaviors. On the other hand, strong family which includes stable family processes such as good parent-teen communication, higher family connectedness and parental monitoring which can function as preventive mechanisms against drug abuse behaviors. Parental drug use or parental attitudes approving drug use appear to influence children to substance abuse. Since parents serve as models for their children's behavior in so many ways, it is not surprising that children whose parents smoke, drink heavily or use illegal drugs are more likely to do so than children whose parents do not.(7)

### **2.5.3 Easily availability of the substances**

The availability of substance increases the likelihood of substance use in students and increases use in adults. Parents ,the home and school environment are important in adolescent and young adult use also because of pattern of socialization around substance use. (7)

#### **2.5.4 Peer pressure**

Peers are people who are part of the same social group, so the term “peer pressure” means the influence the peers can have on each other. It may cause students to develop addiction causing them to neglect schoolwork and social activities, and use exercise. These can also lead to numerous health consequences. (7)

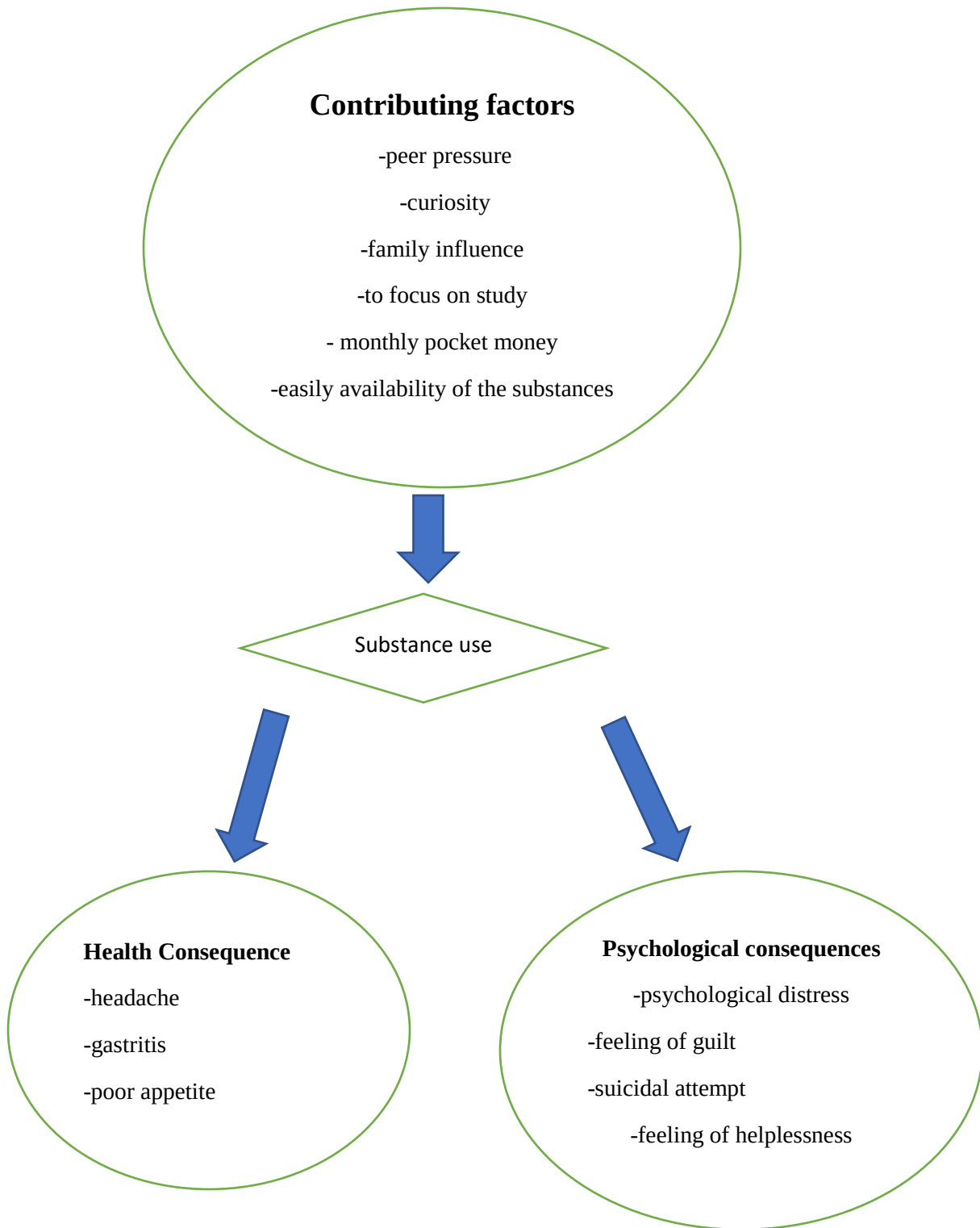
#### **2.5.5 Monthly pocket money**

Monthly pocket money has great contribution for campus students to be engaged in drug abuse excess pocket money given to students has been cited as a common factor leading to drug abuse. Pocket money given to students should not be excessive and that there should be a heightened focus on educating students on proper use of pocket money.

#### **2.5.6 Region where the person comes**

Students from an area where substance abuse is dominant are more likely to be involved in abusing of substances. Students from those regions are highly engaged in abusing starting from the first year of their college enrollment.

## Conceptual framework



## CHAPTER THREE

### OBJECTIVES

#### 3.1. GENERAL OBJECTIVES

-To assess Substance abuse and associated factors among Wolkite University students in October 2021.

#### 3.2. SPECIFIC OBJECTIVES

-To assess the prevalence of Substance abuse among students of Wolkite University students in October 2021.

-To describe factors associated with Substance abuse among students in Wolkite University in October 2021.

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## **CHAPTER FOUR**

### **METHODS AND MATERIALS**

#### **4.1. STUDY AREA AND PERIOD**

The study was conducted at Wolkite University in gubresubcity, which is located in south west of Addis Ababa in the SNNPRS. Wolkite University is one of the third generation universities established in 2004. The total student population of Wolkite university range from 15,000 to 19,999 students. Currently, due to semester break there are fresh and medical students (first, second, third, fourth and fifth year medicine students and 3<sup>rd</sup> year public health students) which is totally around 3950.

The study area was conducted among Wolkite University first year and medical undergraduate students. The study was conducted on October 2021.

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#### **4.2. STUDY DESIGN**

Institution based cross-sectional study design were employed. Quantitative methods of data analysis were used. The Chi-square test was used to determine the significant association of the students' lifetime drug abuse and other variables in the study.

#### **4.3. POPULATION**

##### **4.3.1. SOURCE POPULATION**

All Students registered for regular undergraduate program of Wolkite University.

##### **4.3.2. STUDY POPULATION**

All regular undergraduate students in Wolkite University who are attending class during the study period.

## 4.4. SAMPLE SIZE DETERMINATION

### 4.4.1. SAMPLE SIZE

The sample size is determined by formula of sample size determination for population

$$\text{i.e.: } n = \frac{(Z_{\alpha/2})^2 \times pq}{d^2} = \frac{(1.96)^2 \times (0.5 \times 0.5)}{(0.05)^2} = 384$$

Where: n – minimum sample size

P – Estimate of the prevalence rate of substance abuse for the population

d- The margin of sampling error tolerated (5%)

$Z_{\alpha/2}$  – the standard normal variable at 1-2 confidence level and is mostly 5%

But the source population (N) is <10,000; the sample size was modified using the correction formula.

$$\begin{aligned} N_f &= \frac{n}{1 + \frac{n}{N}} \\ &= \frac{384}{1 + \frac{384}{3950}} \\ &= 350 \end{aligned}$$

With 5% of non-response rate; the final sample size was calculated as:

$$\begin{aligned} N_f &= n_f + 5\% n_f \\ &= 350 + 17.5 \\ &= 367.5 = 368 \end{aligned}$$



#### **4.5 SAMPLING PROCEDURE**

The study subjects were selected using systematic random sampling technique, Individuals are taken at regular intervals down the list. The first unit to be selected is taken at random from among the first **K** units.

The sampling interval is calculated as

, where  $k$  = sampling interval

$N$  = total number of students

$n$  = sample size

$k = 3950/368$

$k = 10.7 = 11$

#### **Eligibility criteria**

##### **Inclusion Criteria of the sample**

All Students of Wolkite University who are second- and third-year undergraduate students were included in this study.

##### **Exclusion Criteria of the sample**

Students who are not volunteer to give response who are not available during data collection and critically ill to the level that unable to communicate with data collectors during data collection period were excluded.

## 4.6. VARIABLES

### 4.6.1. DEPENDENT VARIABLES

Substance abuse

### 4.6.2 INDEPENDENT VARIABLES

-Year of study - Monthly pocket money

- Age -Peer pressure

-Sex -easy availability of drugs

-Religions -Family influence

-department

-area of growth

## 4.7 Operational definition

**Drug:** covers substances of alcoholic drinks, tobacco, khat, hashish, benzine and other drugs

**Substance use:** any non-excessive use of addictive substances.

**Substance Abuse:** any excessive use of addictive excluding uses for therapeutic purposes.

**Addictive substance:** is any substance which changes the way the body functions mentally, physically, or emotionally.

**Alcohol:** A thin, clear liquid with a harsh burning taste.

**Alcoholism:** compulsive and uncontrolled consumption of alcoholic beverages, usually to the detriment of the drinker's health, personal relationships, and social standing.

**Alcohol abuse:** the recurring use of alcoholic beverages despite its negative consequences (a habitual misuse of alcohol).

**Alcohol dependence:** A substance related disorder in which an individual is addicted to alcohol either physically or mentally, and continues to use alcohol despite significant areas of dysfunction, evidence of physical dependence, and/or related hardship.

**Excessive alcohol consumption:** Excessive alcohol use includes binge drinking, heavy drinking, any alcohol use by people under the minimum legal drinking age, and any alcohol use by pregnant women.

**Hangover:** Occurs in anyone after a single episode of heavy alcohol use and is characterized by nausea, vomiting, sweating, fatigue, shakiness, headache, sensitivity to light and irritability.

**Smoking:** is the inhaling or tasting of smoke produced by burning substances, most commonly tobacco.

**Cigarette smoking:** active smoking of one or more manufactured or hand rolled tobacco cigarettes per day.

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## **4.8 DATA COLLECTION INSTRUMENT AND PROCUDERE**

### **4.8.1 Data collection instrument**

Data was collected using self-administered questionnaire which has close ended structured form developed in English.

The questionnaire which was developed based on reviewed literature consists of items on socio-demographic characteristics of the respondents, contributing factors and problems of substance use. Data were collected by three graduating class students of public health department of Wolkite university

### **4.8.2 Data processing and analysis**

Quantitative method of data analysis was used. The data obtained through questionnaires was cleaned, categorized and coded. Among descriptive statistics, Percentage, frequency tables and graphical representations were used. All variables of the questionnaire were created in SPSS version 20 and every data has been entered accordingly. The data was fed in to the computer and analyzed by the principal investigator using the SPSS. Results were tabulated in relevant tables. Data cleaning has been made to ensure the consistency and address missing values. All relevant steps such as editing of responses, post coding, entry and data cleaning procedures were followed. The qualitative information obtained from participants during interviews was summarized and analyzed thematically. After the transcription of the recorded information, it was written in a note form. Direct quotations of the words of participants were also used. The key informants' suggestions were also included in order to triangulate the data obtained from different directions. Finally, a summary conclusion and recommendations were made based on the results of the study. After analysis chi-square test was used to assess significance of association between variables.

#### 4.9. DATA QUALITY ASSURANCE

After orienting data collectors, questionnaire were pretested using 5% of the study population to check clarity of data on students of Wolkite University on October 2021. During the actual data gathering the investigator made close supervision. Proper explanation were given to data collectors and they were supervised during data collection time and the collected data were handled properly. The data was checked for consistency, completeness and accuracy. All questionnaires and documents kept properly for possible checking.

#### 4.10. ETHICAL CONSIDERATION

Ethical clearance was obtained from Wolkite university department of Public Health to the study site authority and verbal consent was obtained from each study subject included in the study before distributing the questionnaires to them. The purpose and objectives of the study was explained to the students and administrative officials. The respondents were informed about purpose of the study and confidentiality of the information.

#### 4.11 Budget

|   | Participants                                        | Total participants | Cost unit(ET-birr) | Total duty days | Amount of budget | Remark |
|---|-----------------------------------------------------|--------------------|--------------------|-----------------|------------------|--------|
| 1 | Logistics (Pen,Paper, Scientific calculator, Rural) |                    |                    |                 | 500.00           |        |
| 2 | Copy and Printing                                   |                    |                    |                 | 1840             |        |
| 3 | Transportation                                      | 3                  | 50                 | 2               | 300              |        |
| 4 | Mobile card                                         | 3                  | 50                 |                 | 150              |        |
|   | Total                                               |                    |                    |                 | 2,790            |        |
| 5 | Contingency (10%)                                   |                    |                    |                 | 279              |        |
|   | Grand Total                                         |                    |                    |                 | 3,069<br>=3,070  |        |

## CHAPTER FIVE

### Results

In this chapter, the quantitative data collected through data gathering tool are presented. It is classified into three parts. The first part describes the sociodemographic characteristics and background of the participants; and the second part shows the prevalence of drug use and the third part is about the associated factors of substance abuse.

#### 5.1 characteristics and background of the participants

##### 5.1.1 socio demographic characteristics

Table 1: Distribution of respondents by socio demographic characteristics in wolkite University students, wolkite, Ethiopia, October 2021.

| Variable      |            | Frequency | Percentage |
|---------------|------------|-----------|------------|
| Sex           | Male       | 262       | 71.2       |
|               | Female     | 106       | 28.8       |
|               | Total      | 368       | 100.0      |
| Age           | 18-23      | 337       | 91.6       |
|               | >24        | 31        | 8.4        |
|               | Total      | 368       | 100        |
| Religion      | Orthodox   | 204       | 55.4       |
|               | Muslim     | 102       | 27.7       |
|               | Protestant | 47        | 12.8       |
|               | Other      | 15        | 4.1        |
|               | Total      | 368       | 100.0      |
| Year of study | Fresh      | 245       | 66.5       |
|               | Senior     | 123       | 33.5       |
|               | Total      | 368       | 100.0      |
| Department    | Natural    | 192       | 52.2       |
|               | Social     | 68        | 18.5       |

|                       |               |     |       |
|-----------------------|---------------|-----|-------|
|                       | Medicine      | 79  | 21.5  |
|                       | public health | 29  | 7.9   |
|                       | Total         | 368 | 100.0 |
| <b>Area of growth</b> | Urban         | 153 | 41.6  |
|                       | Rural         | 215 | 58.4  |
|                       | Total         | 368 | 100.0 |

As it can be seen from the above table among the total of 368 study participants, 262 were males and 106 were females. Most of the respondents were fall into 18-23 age group which is 337 and the rest were >24 years old which was 31. Most of the respondents were orthodox religion 204 followers which is followed by Muslim religion follower which accounts 102. Most of the respondents were fresh students which is 245 the rest of the respondents were seniors which account 123. Natural science students were predominant which is 192 followed by medicine students which accounts 21.5%(79) followed by social science students which are 68. Most of the students come from rural part of Ethiopia which are 215 in number and the rest were from urban area which are 153 of them.

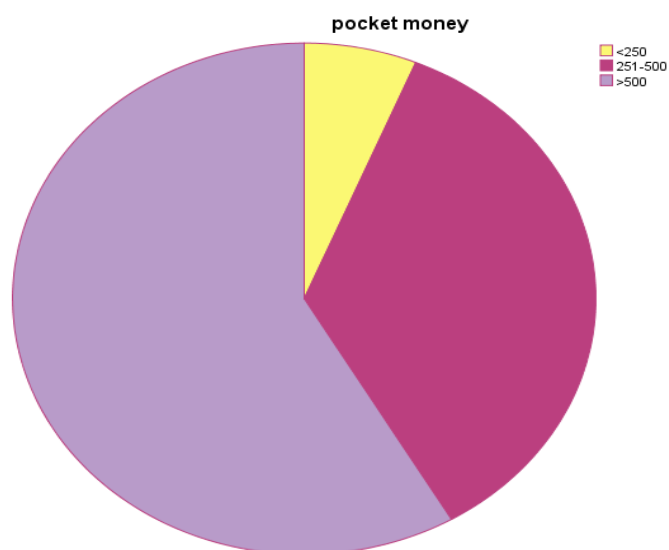


Figure 1 Distribution of participants by their monthly money in pocket in wolkite University students, wolkite, Ethiopia, October 2021

Most of the students pocket money is > 500 birr which accounts 58.4 % followed by 251- 500 birr which is 35.3%.

### 5.1.2 Contributing factors for Substance abuse

#### Substance use

Table 2 Frequency of substance users and non-users among wolkite University students, wolkite, Ethiopia, October 2021.

| Substance use | Frequency | Percent |
|---------------|-----------|---------|
| Yes           | 169       | 45.9    |
| No            | 199       | 54.1    |
| Total         | 368       | 100.0   |

Among 368 respondents 169(45.9%) were substance users and 199(54.1%) were non substance users were found among wolkite university students.

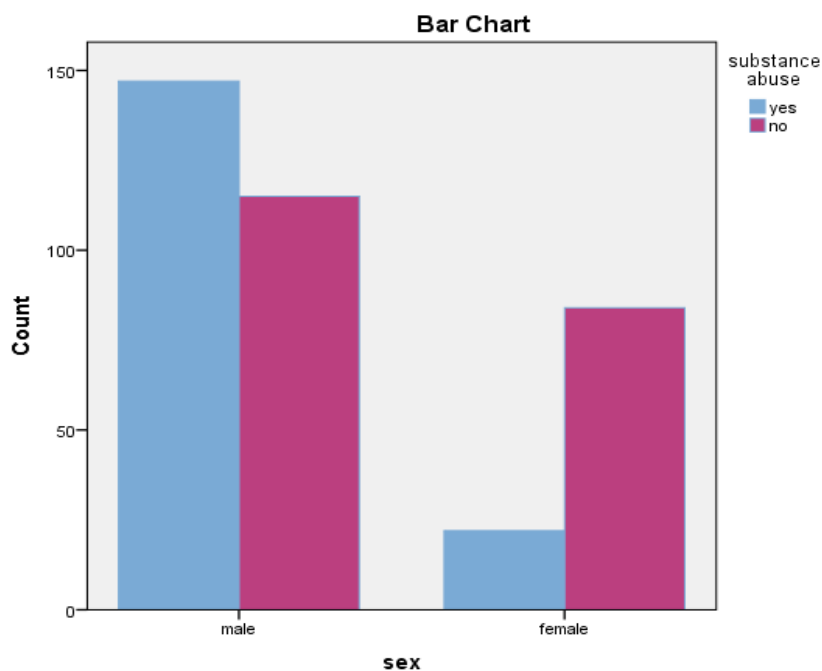


Figure 2. Distribution of students by substance abuse and non- substance abuse among wolkite University students, wolkite Ethiopia, October 2021.



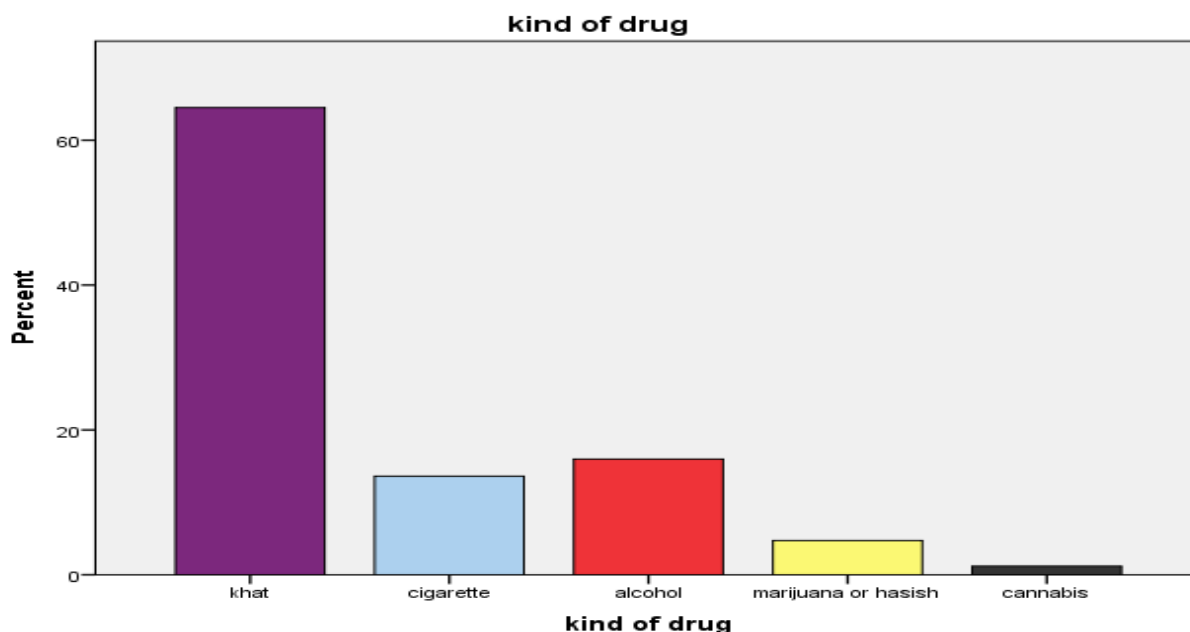


Figure 3 Responses of students about what kind of drug they use among wolkite University students, wolkite Ethiopia, October 2021.

Among 169 of drug abusers, majority of them which are 109 of them were khat users followed by alcohol users which are 27 and others use cigarette which are 23.

### 5.1.3 Drug Use Behavior and Practice

#### Reasons of using the drugs

Table 4: Responses of students on reasons to use of the substance among wolkite University students, wolkite Ethiopia, October 2021.

| Reasons for drug use                 | frequency | Percentage |
|--------------------------------------|-----------|------------|
| family influence                     | 1         | 0.59       |
| peer pressure                        | 79        | 46.74      |
| easily availability of the substance | 45        | 26.6       |
| it helps me study hard               | 36        | 21.3       |
| Curiosity                            | 8         | 4.73       |
| Total                                | 169       | 100        |

Students were asked why they chew khat. Accordingly, 79(46.7%) were said due to peer pressure, 45(26%) said because of easily availability of the drug and around 36(21.3%) said that it helps them to study.

Table 5: Responses of students about their Average days of chewing khat and alcohol among wolkite University students, wolkite Ethiopia, October 2021.

| <b>On average for how many days do you chew khat ?</b> | <b>F</b> | <b>%</b> | <b>On average how frequently do you drink alcohol?</b> | <b>F</b> | <b>%</b> |
|--------------------------------------------------------|----------|----------|--------------------------------------------------------|----------|----------|
| less than once per week                                | 44       | 27.16    | Daily                                                  | 5        | 6.32     |
| once per week                                          | 25       | 15.43    | 3-4 days a week                                        | 31       | 39.24    |
| Greater than once per week but not everyday            | 69       | 42.61    | Occasionally                                           | 40       | 50.6     |
| Every day throughout the week                          | 24       | 14.8     | rarely/on holidays                                     | 3        | 3.8      |
| Total                                                  | 162      | 100      | Total                                                  | 79       | 100      |

Total of 162, majority of the students (69) chew khat greater than once per week but not every day and 44 of them chew khat less than once per week. when we come to the frequency of drinking alcohol majority of the students drink alcohol occasionally which are 40 of them and 31 of them drink 3 to 4 times per week.

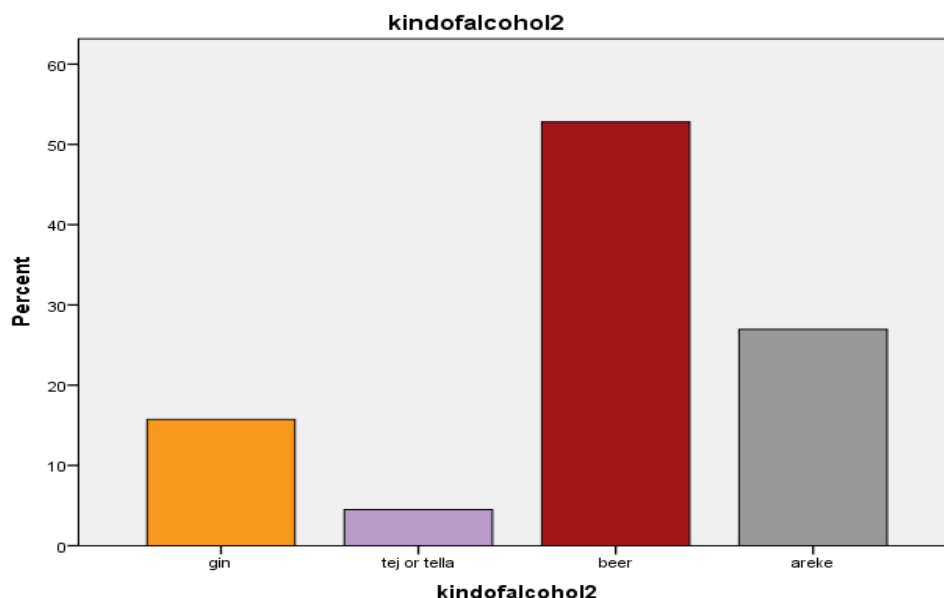


Figure 4: type of alcohol the respondents use among wolkite University students, wolkite Ethiopia, October 2021.

Of the total alcohol users beer is the most frequently used which accounts 52.8% followed by areke 27% then by gin 15.7%.

#### 5.1.4 Consequences of Drug Abuse

Table 6 health and psychological problems of drug abuse among wolkite University students, wolkite Ethiopia, October 2021.

|                              |                                      | Frequency | Percentage |
|------------------------------|--------------------------------------|-----------|------------|
| <b>Health problem</b>        | Headache                             | 41        | 24.26      |
|                              | Gastritis                            | 14        | 8.28       |
|                              | Poor appetite                        | 105       | 62.13      |
|                              | Other                                | 9         | 5.32       |
|                              | Total                                | 169       | 100        |
| <b>Psychological problem</b> | Psychological distress               | 60        | 40.3       |
|                              | Strong feeling of guilt              | 16        | 10.7       |
|                              | Feeling of helplessness/hopelessness | 36        | 24.16      |
|                              | Others                               | 37        | 24.83      |
|                              | Total                                | 149       | 100        |

Among the total of 169 respondents majority of them (105) were having poor appetite followed by headache which are 41 of them and gastritis is experienced by 14 of them. When we came to the psychological consequences psychological distress is experienced by 60 of the students and 36 of them were feeling hopelessness.

## 5.2 Prevalence of substance abuse

Of the total respondents, 45.9% of the students were substance users. Among those males are 86.98% and 87.57% of the students are in 18-23 years of age. 62.13% were orthodox religion followers and 44.97% are from natural science department. 53.84% of them came from rural area and 63.3% of the students have pocket money >500 birr.

## 5.3 Factors associated with substance abuse among wolkite university students

Different age, sex, department, religion, year of study, monthly pocket money and place of growth were tested for their association with substance abuse among wolkite university students by binary logistic regression analysis. First the association of each variable with the presence of substance abuse among students was assessed by the binary logistic regression and then their variables which were less than 0.25 were entered to the multivariate regression. Again, those variables were analyzed in to multivariable logistic regression and variables having a significance of less than or equal to 0.05 were taken as significant variables.

### 5.3.1 LOGISTIC REGRESSION ANALYSIS

Table 7 Regression Analysis of substance abuse and its associated factors among wolkite university students, wolkite Ethiopia, October, 2021

| Variables | Category | Substance use |             | 95% C.I(COR)        | 95% C.I(AOR)         | P-VALUE |
|-----------|----------|---------------|-------------|---------------------|----------------------|---------|
|           |          | Yes           | No          |                     |                      |         |
| Sex       | Male     | 147(86.98%)   | 115(57.78%) | 4.881 (2.876-8.284) | 5.329(2.714-10.462)  | 0.000   |
|           | Female   | 22(13.01%)    | 84(42.21%)  |                     |                      |         |
| Age       | 18-23    | 148(87.57%)   | 189(94.97%) | 0.373(0.170-0.816)  | 0.148(0.038 – 0.579) | 0.06    |
|           | >24      | 21(12.42%)    | 10(5.02%)   |                     |                      |         |
| Religion  | Orthodox | 105(62.13%)   | 99(49.75%)  |                     | 0.080(0.009-0.674)   | 0.020   |
|           | Muslim   | 46(27.21%)    | 56(28.14%)  | 1.291(0.801-2.080)  | 0.074(0.008-0.641)   | 0.018   |

|                 |               |            |            |                      |                    |       |
|-----------------|---------------|------------|------------|----------------------|--------------------|-------|
|                 | Protestant    | 4(2.36%)   | 43(21.6%)  | 11.402(3.947-32.932) | 0.004(0.00-0.046)  | 0.000 |
|                 | Other         | 14(8.28%)  | 1(0.502%)  | 0.076(0.010-0.587)   |                    |       |
| Department      | Natural       | 76(44.97%) | 116(58.3%) |                      | 0.71(0.011-0.459)  | 0.005 |
|                 | Social        | 27(16%)    | 41(20.6%)  | 0.995(0.565-1.751)   | 0.079(0.011-0.549) | 0.010 |
|                 | Medicine      | 45(26.62%) | 34(17.08%) | 0.495(0.291-0.842)   | 0.494(0.143-1.706) | 0.264 |
|                 | Public health | 21(12.42%) | 8(4.02%)   | 0.250(0.105-0.592)   |                    |       |
| Place of growth | Urban         | 78(46.15%) | 75(37.7%)  | 1.417(0.934-2.150)   | 2.123(1.191-3.783) | 0.011 |
|                 | Rural         | 91(53.84%) | 124(62.3%) |                      |                    |       |
| Pocket money    | <250          | 20(11.83%) | 3(1.50%)   |                      | 0.71(0.011-0.459)  | 0.005 |
|                 | 250 – 500     | 42(24.85%) | 88(44.22%) | 13.968(3.931-49.637) | 0.079(0.011-0.549) | 0.010 |
|                 | >500          | 107(63.3%) | 108(54.3%) | 6.729(1.942-23.313)  | 0.494(0.143-1.706) | 0.264 |

## Factors Significantly Associated Towards Substance Abuse

According to our study, male respondents were found to be 5.3 times more likely to abuse substance than female respondents 5.329, (2.714-10.462),  $p=0.000$ ]. those who are orthodox religion followers are 92% more prevalent than other religions [AOR=0.080,95% CI (0.009-0.674),  $p=0.020$ ]. natural science students are 39% less likely to abuse a substance than other departments [AOR=0.71,95% CI (0.011- 0.459). students who came from rural area were found to be 2.13 times more likely to abuse substance than students who came from urban area [AOR=2.123,95% CI (1.191-3.783),  $P= 0.011$ ]. those who have monthly pocket money are 71 % less likely to use substance than those who have more pocket money [AOR= 0.71,95% CI (0.011-0.459),  $P=0.264$ ].

## **CHAPTER SIX**

### **Conclusion and Recommendations**

In this section, in light of the analysis of the information gathered the following results and conclusions were drawn.

#### **6.1 Conclusion**

Based on the findings the following conclusions were drawn:

- khat, Alcoholic drinks and cigarette are the most commonly used drugs among wolkite university students.
- Having peer pressure, easily availability of drugs, assumption that the substance helps them to study, insufficient youth recreational amenities all contribute for students' drug abuse behavior.
- Beer is the commonly used alcohol followed by gin.
- most of the students spent their time by chewing khat greater than once per week but not everyday.
- Students who abuse drugs have been encountering one or more of the following problems psychological, health and social problems that have a negative implication on their life.

## **6.2 Recommendations**

Based on the results of the study, the following possible recommendations are forwarded:

1. Organize various awareness creation sessions about the nature and consequence of drug abuse for students by their teachers because they are the closest role models for the students.
2. GOs and NGOs which are working on the cases of youths should give drug abuse treatments and government should design policies against drug abuse.
- 3 Working hard on preventive advertisements.
4. Building strong student network at the campus that work on the issue of drug use and establishing anti-drug clubs and student association.
5. Building ethical standards of students through ethics and moral committees in the university and outside of the compound.

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## **ANNEX -: QUESTIONNAIRES**

### **WOLKITE UNIVERSITY**

#### **COLLEGE OF MEDICINE & HEALTH SCIENCE DEPARTMENT OF PUBLIC HEALTH, 2021**

Questionnaires to assess Substance abuse and associated factors among Wolkite University students

Instruction: -

1. Each participant is kindly requested to fill the questionnaires alone, and discussion is not allowed.
2. If there is a problem in understanding the questionnaires, students can ask data collectors for any clarification.
3. Answer the question by encircling the options below. writing the name or ID number is not important, you can mark more than one if possible.

#### **Part 1) General back ground information**

**1.1. Sex:**

1) Male

2) Female

**1.2. Age:** \_\_\_\_\_

**1.3. Religion**

1) Orthodox

2) Muslim

3) Protestant

4) others, Specify

**1.4. year of study**

1) fresh

2) senior

**1.5. Department**\_\_\_\_\_

**1.6. Where did you grow up?**

- 1) Urban area                      2) Rural area

**1.7. Region where you grew up?**

- 1) North Ethiopia                      4) West Ethiopia                      7) Addis Ababa  
2) South Ethiopia                      5) Central Ethiopia                      8) Dire dawa  
3) East Ethiopia                      6) Harar

**1.8. Monthly pocket money\_\_\_\_\_**

- 1) <250 Birr                      2) 251-500 Birr                      3) >500 Birr

## **Part 2 Contributing factors for Substance abuse**

**2.1. Have you ever consumed Substances in your life?**

- 1) Yes                                              2) No

**2.2. If your answer for question #2.1, what kind of substance or drug do you use?**

- 1) Khat                                              5) Cannabis  
2) Cigarette                                              6) inhalants (aerosol, benzene)  
3) Alcohol                                              7) other, specify  
4) Marijuana or hashish

**2.3. At what age you started? \_\_\_\_\_**

**2.4. What is the reason (if ever) for abusing each of the substances ?**

- 1) Family influence                      3) It helps me study hard  
2) Peer pressure                      4) Curiosity (to see what it feels)  
3) Easily availability of the substance                      5) Other substance (specify:\_\_\_\_\_

**2.5. How difficult do you think it would be for you to get the substance if you want?**

- 1) Impossible                      3) Fairley difficult                      5) Very easy  
2)Very difficult                      4) Fairly easy

### Part 3: Questions on substance use behavior/practice

### 3.1. Do you chew khat?

- [illegible]

### 3.2. If yes, why do you chew khat?

- 1) To pass the time  
2) To stay awake  
3) To socialize  
4) I'm addicted  
5) Other (specify)\_\_\_\_\_

**3.3.** During the past 30 days, for how many days did you chew khat?

- 1) For 5-8 days
- 2) For 9-12 days
- 3) 13-16 days
- 4) For 17-20 days
- 5) For >21 days

### 3.4. How long have you been chewing khat?

- 1) For shorter than 6 months
- 2) between 6 months-a years
- 3) For 1-3years
- 4) For longer than3 years

**3.5.** On average for how many days do you usually chew khat?

- 1) Less than once per week
- 2) Once per week
- 3) More than once per week but everyday
- 4) Everyday through the week

### 3.6. With whom do you chew khat?

- 1) Always alone      2) Usually alone      3) Usually with other      4) Always with others

3.7. What other drugs do you use during chewing khat? (Multiple responses are possible)

- 1) Cigarette                      3) Shisha                      5) Other specify\_\_\_\_\_
- 2) Marijuana                  4) I don't use

**3.8. Do you drink alcohol?**      1)Yes      2). No If NO go to Q.3.11

### 3.9. Why do you drink alcohol?

- 1) To pass the time
- 2) To socialize
- 3) To fight depression
- 4) I'm addicted
- 5) To forget my problems
- 6) Other specify\_\_\_\_\_

**3.10.** On average how frequently do you drink alcohol?

- 1) Always (daily)  
2) Often (3-4perweek)
- 3) Occasionally (1-4permonth)  
4) Rarely (on holidays)

**3.11.** what kind of alcohol do you usually use? [Multiple responses are possible]

- 1) Gin                                4) "Areke"  
2) "Tej" or "Tela"          5) other, specify \_\_\_\_\_  
3) beer

### 3.12. Do you smoke cigarette?

- 1) Yes
- 2) No

**3.13.** How many pieces/packs of cigarette do you smoke per day? \_\_\_\_\_

#### **Part 4 Problem of substance use**

#### 4.1. Do you have any problems due to habit of consumption?

- 1) Yes
- 2) No

**4.2.** If you answer for question No 4.1 yes, select the problem you faced

- 1) Excess spending on substances
- 2) absenteeism from class due to substance related problems
- 3) Conflicts with peers
- 4) If other, specify \_\_\_\_\_

**4.3.** Does habit of Substances expose you to any of the following situation?

- 1) Exposure to unsafe sexual intercourse
- 2) Rape
- 3) Violence
- 4) If other, specify \_\_\_\_\_

**4.4.** Which of the following consequences (psychological aspects) have you experienced due to drug use? [Multiple responses are possible]

- |                            |                            |
|----------------------------|----------------------------|
| 1) Psychological distress  | 4) Feeling of helplessness |
| 2) Strong feeling of guilt | 5) Other (specify) _____   |
| 3) Suicide attempt         |                            |

**4.5.** Have you ever suffered from any other health problems?

- |                  |                            |
|------------------|----------------------------|
| 1) Headache      | 4) Heart disease           |
| 2) Liver disease | 5) Poor appetite           |
| 3) Gastritis     | 6) If other, specify _____ |

**4.6.** Have you ever tried to stop taking the drugs?

- |        |                    |
|--------|--------------------|
| 1) Yes | 2) no (why?) _____ |
|--------|--------------------|

**4.7.** Have you ever experienced withdrawal symptoms when you stopped taking drugs?

**1) yes**

**2) no**

**4.8** If yes, state the symptoms \_\_\_\_\_

\_\_\_\_\_

Thank you for your patience and cooperation for responding the question

Name of the data collectors \_\_\_\_\_ Sign \_\_\_\_\_ Date \_\_\_\_\_