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**LIST OF ABBREVIATIONS**

AYRH	Adolescent and Youth Reproductive Health
CSA	
DACA	Administration and Control Authority
ECDD	
EDHS	
FGDs	Focus Group Discussions
FMACA	Food and Medicine, Administration and Control Authority
HEP	Health Extension Programme
ID	Identification
IEC	Information, Education and Communication
MOC	Ministry of Communication
MOE	Ministry of Education
MoFE	Ministry of Finance and Economy
MOH	Ministry of Health
MOT	Ministry of Industry and Trade
MOY	Ministry of Youth
NGOs	Non-governmental Organisations
NIH	National Institute of Health
PBC	Planned Behaviour Change
PHCU	Primary Health Care Unit
SD	Standard drink
SNNPR	South Nation, Nationalities and Peoples Regional
SOPs	Standard Operating Procedures
SPSS	Statistical Package for the Social Sciences
TPB	Theory of planned behaviour
TRA	Theory of Reasoned Action
TVET	Technical and Vocational Training
Unisa	University of South Africa
USA	United States of America
WHO	World Health Organization

# CHAPTER 1

## INTRODUCTION TO THE RESEARCH STUDY

### 1.1 BACKGROUND INFORMATION ABOUT THE RESEARCH PROBLEM

In recent years, new universities are being opened in many parts of the country. Currently there are 33 universities providing higher education to hundreds of thousands of students. Compared to only two universities prior to 1991, this is a radical change both in terms of number of universities and student population. This opened opportunities for higher education as well as flow of young people from different parts of the country to these universities. Students come to universities with different social, economic, cultural backgrounds and academic status. Separated from their families and friends, they may find the university environment different from the places where they were raised. In the new academic environment, they may face new challenges which they have not known in their earlier lives. Sharing a single living room with five to six students, meal arrangements in cafeteria and long queues, competition among themselves, class scheduling may lead to stress and depression, experiencing uncomfortable feelings, sleep disorders, and other psycho-somatic pains. In the new environment, some may adopt new coping mechanism, a few of which may have serious consequences (Author 2015a:5; Zwolinski 2013:3).

Among these coping mechanisms is the use of substances such as khat, alcohol and other stimulants. This will eventually lead to addiction. Anecdotal evidence shows that the use of khat, alcohol and other psychoactive substances is becoming a growing practice among university students. Medical news which is a weekly print local/Amharic magazine (Alamin 2015:19), on the May first week edition reported its deepest concern about increasing trends of substance use in higher learning institutes. The report further explained that the sellers for such substances even prefer places/location near universities which indicates that the majority of substance abuse beneficiaries are adolescents from universities. However, studies around this issue are scanty. The research evidence limits the ability to develop targeted programmes to reduce the incidence of substance abuse and concomitant consequences in the universities (Alamin 2015:19).

The researcher intends to examine the extent and type of substance use, factors associated with substance use and the consequences among university students in Arbaminch and Wolayta-sodo universities. Based on the findings, the researcher will develop practical strategies to curb the problem. This will hopefully contribute to the understanding and management of alcohol and substance use related problems in other universities in Ethiopia and other parts of Africa with similar situations.

## **1.2 STATEMENT OF THE RESEARCH PROBLEM**

Literature on the subject shows that alcohol and substance use are on the increase in most institutions of higher learning in the world. Many studies (Ross & De Jong 2008:1; Arria, Calderia, Bugbee, Vincent & O'Grady 2013:2) have shown that alcohol and substance use are common among adolescent university students who for the first time have stayed away from home. Findings from a study in Ireland on alcohol consumption among adolescents indicated that there is high prevalence of alcohol consumption to an extent of hazardous level by adolescent university students than the general population (Davoren, Shiely, Byrne & Perry 2015:2; Ross & De Jong 2008:1).

Alcohol and substance abuse among adolescent and youth is becoming a major public health concern globally. Traditional ways of providing health information against alcohol and substance use are not successful in reducing or preventing it. There is a need of conducting preventive intervention research to examine wide variety of strategies used to reduce and prevent alcohol and substance abuse among adolescents and youths. This has stimulated the researcher to examine the extent and identify the major ways of deterring or stopping the problem through in-depth and context specific study (Bell & Battjes 1985:14).

In Ethiopia, very few studies have explored the use of alcohol and other substances among the youth. A study in Haromaya University, Eastern Ethiopia indicated that they use substances among adolescents is rampant. It was found that 49.5 percent of the respondents indicated that they chew chat at least 2-3 times per week and almost a third (28.2 percent) said that they chew it always (Derese, Seme & Misganaw 2014:104). These studies indicated that alcohol and substance use have significant social, behavioural and health problems. Abuse of substance and alcohol may lead to skipping of lecture hours, bad grades, and inadequate attendance in practical subjects

/discipline that needs hands on skill which in turn will affect the individual's contribution to the community after graduation. It may also cause conflict among peer groups, classmates, supervisors and family members. Some adolescents may violate the law, end up in court and remain behind bars due to serious crimes like rape, fighting while being intoxicated (Matheson & McGrath 2014).

Apart from the fact that there are few studies, those conducted only describes the problem without suggesting possible recommendations and intervention strategies. This researcher explored the contributing factors to substance abuse and based on the findings recommended possible future policy and programme interventions. The outcome of the study will contribute to the student's understanding and knowledge of substance abuse by community members and public institutions.

### **1.3 AIM OF THE STUDY**

#### **1.3.1 Purpose of this study was two folds;**

Firstly, investigate the level, type and patterns of alcohol and substance use among adolescents at Arbaminch and Wolaita Sodo universities.

Secondly, develop a practical solution and strategies for reduction and prevention of alcohol and substance use among Ethiopian university students.

#### **1.3.2 Research objectives**

The research objectives are to

- examine and describe the prevalence of alcohol and substance use among adolescents at Arbaminch and Wolaita Sodo Universities
- determine the consequences of alcohol and substance abuse among adolescents at Arbaminch and Wolaita Sodo universities
- explore and describe factors leading to alcohol and substance abuse among adolescent students at Arbaminch and Wolaita Sodo universities
- develop a strategy for that can help to curb alcohol and substance abuse among adolescent university students

## **1.4 SIGNIFICANCE OF THE STUDY**

The researcher foresees that this study could have an impact at individual, family and stakeholders levels like the MOE and MOH. The study is expected to provide systemic body of knowledge that could serve as a baseline input for policy function in the struggle to address consumption of alcohol and substance abuse among adolescents in selected universities, in Southern Ethiopia. It can also serve as a basis for future research and can be applied to other settings with similar context to Ethiopia.

## **1.5 RESEARCH QUESTIONS**

In order for the researcher to meet the objectives of the study, the researcher answered the following questions:

- What is the prevalence of alcohol and substance use among adolescent university students in Southern Ethiopia?
- What are the consequences of alcohol and substance use among adolescents?
- What are the main causative factors that lead to the use of alcohol and substance among adolescent university students in Southern Ethiopia?
- What workable strategy can be developed to curb alcohol and substance abuse among adolescents?

## **1.6 DETERMINING THE THEORETICAL GROUNDING OF THE RESEARCH**

### **1.6.1 Research paradigm**

The Theory of Planned Behaviour (TPB) Change was one of the first theories evolved in response to certain desired behaviour change. The theory was a widely recognised behavioural sciences approach which was recognised in early 1990's (Ajzen 2003:1). The theory takes into consideration that an individual is ready to act if the conditions listed below are in place:

- When the individual was aware of the pros and consequences of the behaviour.
- When the individual holds positive attitude to the desired behaviour action.

- When convinced that the significant others think they should perform the desired behaviour.
- When environmental, institutional and social factors were made supportive and enabling.

When applying the theory, programme managers should gear their efforts to understanding the magnitude of the problem, individual attitudes, their intention for use and perceived control of the desired behaviour (Ajazen 2003:2). Besides, programme and health practitioners should identify the individual belief on how significant others think that they should perform the behaviour in question. Therefore, the TPB change was employed in this study in order to serve as a framework for the development of an effective alcohol and substance abuse prevention interventions or strategies.

### **1.6.2 Theoretical framework**

The conceptual framework for this study was adapted from the Theory of Planned Behaviour Change (PBC) model. The model (Ajazen 1991:3) suggests that human behaviour is the result of individual intention to perform certain behaviour. The intention, in turn, is the function of individual's attitude towards behaviour and his/her subjective norms surrounding performance of a specific behaviour. The theory proposes a model that measures how human action is guided towards specific behaviour.

The best predictor of behaviour is intention which is further determined by the attitude towards specific behaviour. Psychological factors like aptitude, their subjective norm and perceived behavioural control plays a major role in determining the likelihood of accepting or rejecting healthy behaviour. The theory views human actions as the result of voluntary behaviour and perceived behavioural control. It proposes a model that measures how human actions are measured.

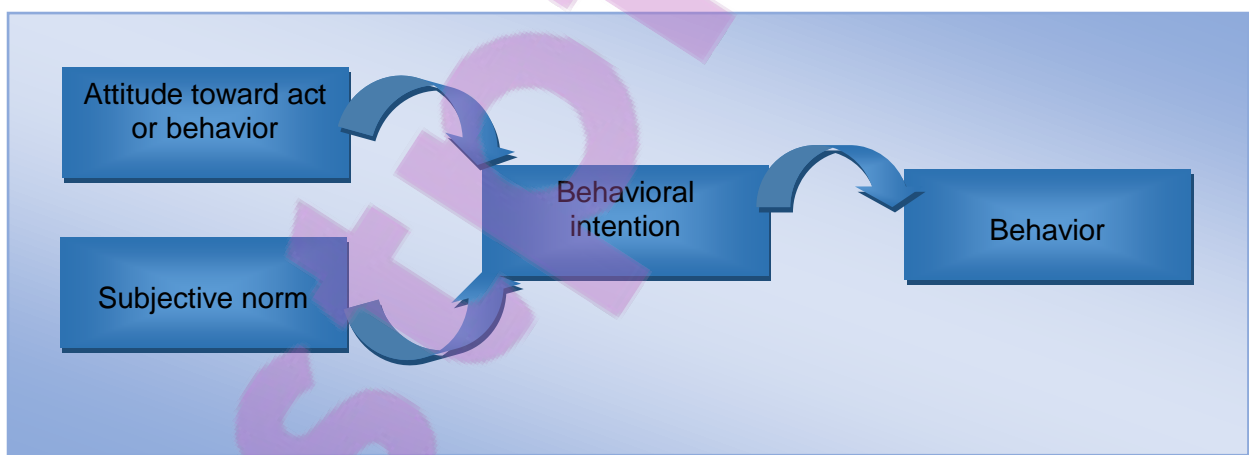
Theory of TPB change model applies whether or not someone will complete certain behaviour. Extension of the TPB change which is Theory of Reasoned Action (TRA) also stated that the two major determinants of intention are an individual attitude towards the behaviour and perceived subjective norms. Together, they determine intent to perform when an individual evaluates it as positive and when they believe and are convinced that the significant others think they should perform it. However, theorists



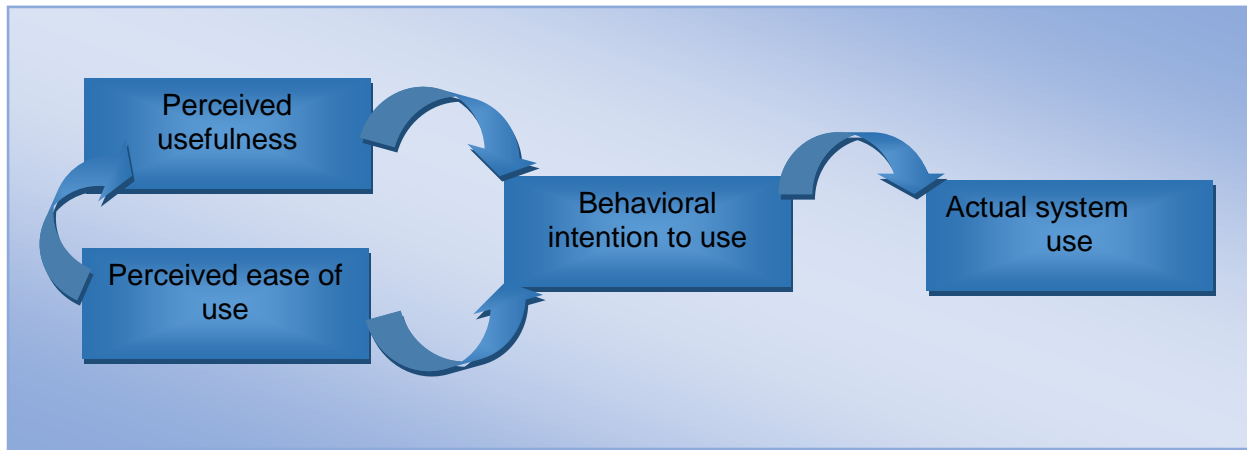
acknowledge that the relative weight vary based on intent and from person to person (Ajzen & Fishbein 2003:3).

A person's behaviour is determined by his/her own intention to perform the behaviour and this intention in turn is the function of an attitude toward the behaviour, and the individual's subjective norm. Here, the assessment performed to see the strength and credibility of the theory of PBC in explaining abuse of alcohol and substance abuse showed that the theory is able to predict the intention of performing certain behaviour which provides a strong support to apply the specific theory.

Thus, the application of Theory of Planned Behaviour (TPB) Change has provided a systematic framework to determine the various factors which influenced adolescent's decision to accomplish behaviours like the use of alcohol beverages and substances like khat, hashish and other psychoactive stimulants. At this point, the theory could be used for adolescent health promotion in preventing abuse of alcohol, drugs and other substances. Here, the theory defines cognition such as attitude and norm that predict the intention to begin using such substances (Basharian, Hirdarnia, Allahverdipour & Hajizadeh 2012:54). The figures 1.1 and 1.2 depict behaviour change model.



**Figure 1.1: Fischbein and Ajzen model of planned behaviour change**  
(Ajzen & Fishbein 1999)



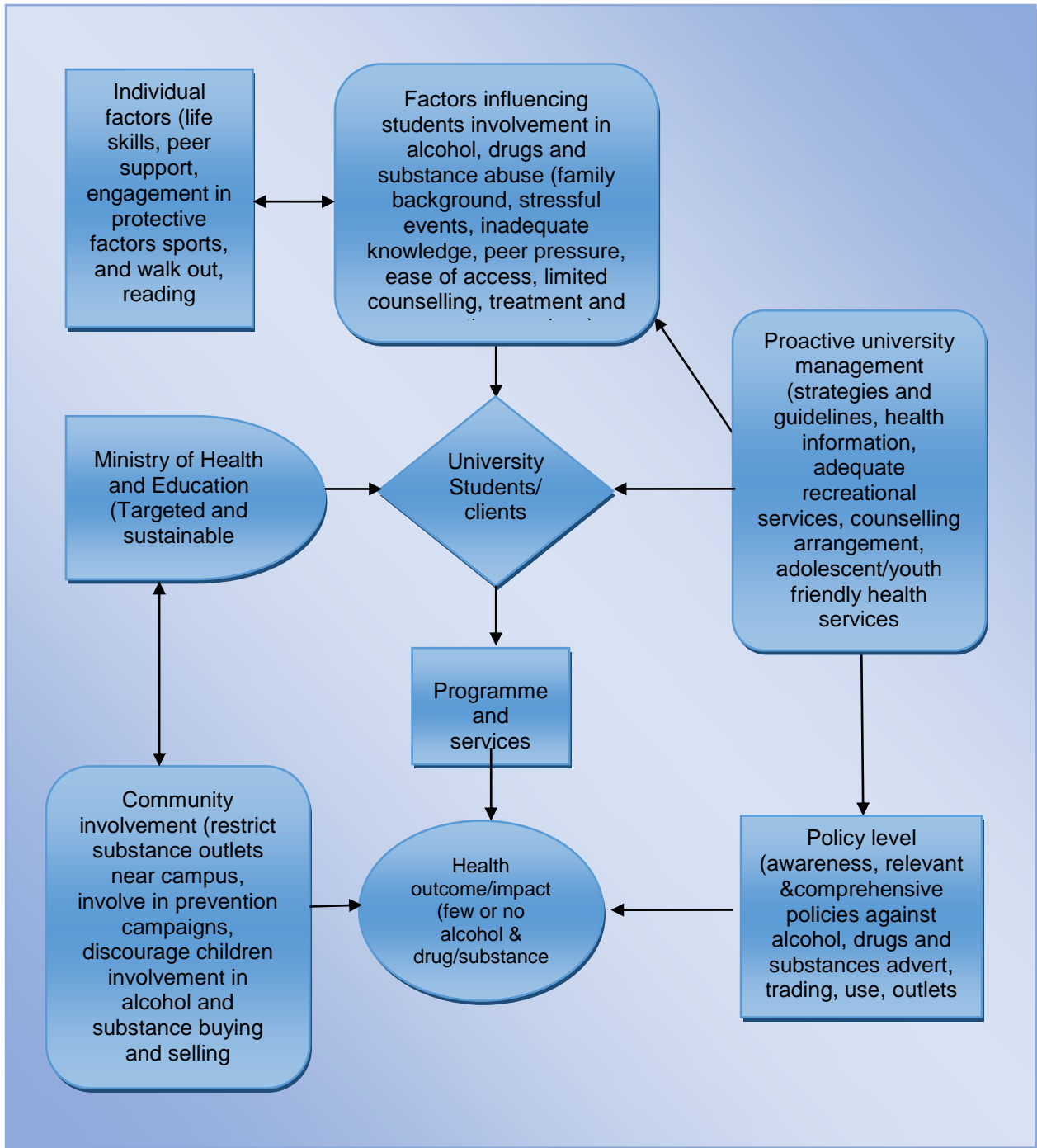
**Figure 1.2: Model of the Theory of Planned Behaviour Change (TPB)**  
(Ajazen & Fishbein 2003)

## 1.7 FOUNDATION OF THE RESEARCH STUDY AND ASSUMPTIONS

The current study was based on a series of assumptions and scenario that would expose or protect adolescents against alcohol and substance use. The sequence of assumptions taken into consideration includes:

- The primary assumption was that if parents protected their children from exposure and involvement in alcohol and substance use, adolescents may not initiate or will delay engaging.
- The second assumption was that if universities have provided adolescent and youth friendly health services, it would help to reduce stress and avert exposure to abusive substances.
- The third scenario was that if the Ministry of Health had adequate services including timely treatment, prevention as well as workable referral network with university clinics, adolescents would not face further consequences of alcohol and substance use problems and could avoid further exposure.
- Lastly, limiting alcohol and substance use advertisements and their trading close to the universities will reduce their use by school going adolescents.

Figure 1.3 portrays the scenario behind the principle of alcohol and substance abuse prevention framework.



**Figure 1.3: Framework for the prevention of alcohol and substance abuse among university students**

For the above assumptions to be realistic, various individual, environmental and institutional arrangements should be made available. To be effective, those arrangements and services at various levels should also be capacitated, operational and monitored in an ongoing basis. Availability and consistent delivery of the details of

services and arrangements as indicated in Table 1.1 below would have significant impact on exposure to alcohol and substances use among adolescents (See Table 1.1).

**Table 1.1: Strategies to curb the problem**

<b>Adolescents</b>	<b>Family</b>	<b>University management</b>	<b>Ministry of Health</b>	<b>Policy makers</b>
Creates awareness and change of mind-set	Awareness on the level of the problem, awareness on helpful strategies and support stakeholders in implementing health promotion services against alcohol and substance abuse	Awareness on the level of the problem, budgeting, placing structures for preventive services and implementing adolescent health promotion services against alcohol and substance use	Plays advocacy role that could help in adolescent health promotion, Lobbying on legislation issues that may help adolescents on prevention of alcohol and substance use	Enforce programme that targets adolescents and youth substance use and alcohol consumption prevention

**1.8 DEFINITION OF TERMS**

**1.8.1 Operational definitions**

Addiction is a chronic and relapsing disease characterised by compulsive drug seeking and use despite long lasting changes in behaviour and associated negative consequences (WHO 2010:10).

Adolescent and youth according to WHO (2010:35) is the period between the age group of 10 to 24 years. For the purpose of this study, adolescent refers to those young people age 18-24 years of age who attend university in Arbaminch and Wolaita Sodo town. This age range was chosen because the age of consent is same as 18-24 in Ethiopia.

Alcohol is a term used for members of a group of chemical compounds and in popular usage, to the specific compound ethyl alcohol or ethanol. It is a liquid, which is colourless, produced by fermentation of sugar or starch that has intoxicating agent in fermented liquids (WHO 2010b:35).

Alcohol use for this study is intake of any form of alcohol beverage including beer, 'Areke, whisky, vodka, wine and any other mixed alcohol at least once in the last 6 months.

Alcohol abuse is defined as the consumption, excessive/regular use of alcoholic drinks such as dry alcohol (local 'Areke, Tej, Tela', and industrial dry gin, wine, beer, vodka, whisky and others made either locally or industrially.

Attitude is a face valid belief regarding practice of certain behaviour.

Binge drinking is problematic drinking of five standard drink (SD) for male and four SD for female per occasion at least once in the past 30 days.

Intention is a plan or aim to perform or decline certain behaviour like the use of alcohol and substance.

Khat is also called by its scientific name 'Catha edulis Forsk. Khat refers to the leaves and young shoots of the plant species. It is a psycho-stimulant substance with its active ingredients being the equivalent of the drug amphetamine. Khat is a widely used substance among the young and is legal in East Africa and Middle East countries (WHO 2010c:44).

Life time use is the use of alcohol and/or substances at least once anytime in the past.

Perceived behaviour control is the belief that the presence of certain factors that may facilitate or impede performance of one's behaviour and power to manage it.

Psycho-active substance is any substance which, when taken by a person modifies mood, perception, cognition, behaviour or motor function.

Research is a systematic investigative process to increase or revise current knowledge by discovering new facts (Author 2010:1).

Socialisation is the process through which individuals acquire the knowledge, language, social skills and value to conform to the norms and roles required (both self and externally imposed) for integration in to a group or community (Adelman & Taylor 2007:16).

Standard drinking (SD) for this study is one can of beer at 5%, 1 glass of wine (12% alcohol and 1 shot of sprit (40% alcohol), all equivalent of 12 gram of pure alcohol.

Strategies are carefully designed plans, methods or complex of adaptations that appear to serve as an important tool for achieving a specific goal.

Substance is a particular kind of stuff, an intoxicating or narcotic drug. It is any stimulant like khat, shisha, and other psycho-stimulants that is used to bring change in mood or behaviour.

Substance use is the abusive use or miss use of any substance that includes drugs, Shisha, Hashish, Khat, and other psycho-stimulants

Substance abuse is the abusive use or missuse of substances such as drugs, khat, shisha, Hashish, cigarettes, and other psycho-stimulants. Substance abuse for this study is defined as the use of any type of substance such as Khat, Shisha, Hashish and other psycho-active substances by adolescents that fulfill the criteria of CAGE >-2. The acronym CAGE indicates respondents feeling and decision to 'Cut down, Annoyed, Guilt and Eye opener' responses. The findings could be measured, analysed and averaged against World Health Organization (WHO) standard for problematic substance use comparison.

Subjective norm is supportive, in favour or against certain behaviour with respect to intent person and groups that influence drinking and/or substance use behaviour.

Tolerance is the need for increased amount of substance to achieve the desired effect.

University is a higher learning institute accredited by the Ethiopian Ministry of Education (MOE) where degrees and diplomas are granted after a minimum of four years of university education.

## **1.9 ETHICAL CONSIDERATIONS**

### **1.9.1 Introduction**

Conducting social research is an ethical enterprise and research ethics provides researchers with the code of moral guidelines on how to conduct research without violating those principles. Researchers have an obligation that their research is conducted with principles of honesty, integrity, avoids harm, have minimal risk and ensure cultural sensitivity (Nieminen 2009:5).

### **1.9.2 Ethical principles**

Ethical principles are issues relating to moral principles or a branch of knowledge concerned with ethics. Some of the ethical principles which the researcher addressed include:

#### ***1.9.2.1 Permission to conduct the research***

A researcher has the obligation to respect the inborn rights of individuals that applies whether to participate or no in specific research. It is important to have the permission as part of the obligation to ethical principles (Author 2003a:34).

To ensure access to the university campus and study respondents, the researcher requested permission from the following institutions:

- a. ***University of South Africa (UNISA), Department of Health Studies:*** The proposal was assessed by the higher degree committee of the department of health studies and ethical clearance was given (Annexure A).
- b. ***University of South Africa, Ethiopia Regional Office, Addis Ababa:*** The approved ethical clearance certificate and registration for dissertation was

checked and support letter was written to Arbaminch and Wolaita Sodo universities (Annexure B).

- c. **University of Arbaminch:** Permission was given by means of a memo from the president of the university (Annexure C). The president's internal memo of the approved letter was submitted to the head of colleges, institutes and faculties. This was followed by respective heads permission, support and internal memo advice for departments. Following the acceptance, cooperation and support from head of departments and schools, a sample frame of the study population was received from registrar officers. Then, the required sample size was determined and set according to the department and school population figures. Lastly, actual respondents were selected, contacted through faculty members who were assigned and/or volunteered to support the researcher and appointed for orientation on data collection. See annex c attached at the appendices section.
- d. **University of Wolaita Sodo:** Permission was granted by a presidential memo of Wolaita Sodo University (Annexure D). The president checked ethical certificate received from UNISA, the higher degree committee, Department of Health Studies. He has also checked the support letter which was obtained from UNISA, Regional hub, Addis Ababa and has advised/sent memo for head of colleges, institutes, faculties and respective registrar offices to provide all the necessary support, data and/or other relevant information required. Following the president's directive, similar steps to Arbaminch University were followed to contact head of colleges, institutes faculties, registrar offices and departments as well as obtaining sample frame, determining study population from respective departments and schools. Lastly, actual respondents were selected, contacted through faculty members who were assigned and/or volunteered to support the researcher and scheduled for orientation on data collection. See annex d attached at the appendices section.
- e. **University students:** Upon sampling of respondents in various locations and venues, the researcher, faculty members and data collectors took various steps to ensure that minimum ethical standards were met. The overall purpose, objectives of the topic under study and process of data collection was explained. Also, respondents were informed about their rights to remain or withdraw at any time during data collection and the different concerns raised by the respondents were entertained accordingly. Finally, respondents were asked to sign consent form during actual data collection per units and departments. Respondents who



agreed and consented participated in the study (See Annexure E attached at the appendices section). For this specific study, permission from family or guardian was not required because all the participants were university students aged 18 years and above as students join university after 12 years of education.

### ***1.9.2.2 Informed consent***

Participation in research should be voluntary and based on informed consent (Chaleunvong 2009:18). . Before commencing data collection, it is important that the study participants understand the purpose of the study. An informed consent should be obtained from respondents before the study or interview begins (Chaleunvong 2009:18).

Respondents should be given adequate information about their participation, how they are supposed to respond and how the information will be used (Bradburn, Sudman & Wansink 2004:34). Also, respondents have the right to know of any possible or anticipated risk when they participate in a study. It is also mandatory to receive informed consent before commencing data collection. For this specific study, respondents were given free choice, with the aim either to participate or not in the study.

Each research participant was informed about the purpose of the research. The informed consent section was read and clarification was given when requested. All the questions raised by the respondents were entertained by the principal investigator. An informed consent was received before commencing data collection (Bradburn *et al* 2004:34; Chaleunvong 2009:18).

### ***1.9.2.3 Autonomy/voluntary participation***

The American Nurses Association (Niemimen 2009:5) defined autonomy as voluntary participation or an agreement to respect others right to self-determine a course of action and it supports independent decision making. People have the right whether to participate or not despite having adequate information about the study. Voluntary participation is linked to disclosure of adequate factual information to potential participants on details of the study, including the risks and benefits. It is expected that people are able to make informed decisions regarding their participation when sufficient information has been provided to them. These principles apply to both qualitative and

quantitative studies. In both methods, there is certainly anxiety, distress and a feeling of exploitation from the interviews and these calls for the researcher to allay those concerns (Nieminen 2009:5).

Respondents have the sole right to participate or not in a specific research study. The participation in this study was made fully voluntary. Respondents were selected from the universities registrar office that served as sample frame. After the respondents were gathered in a free class room and conference rooms, the objectives of the study were explained and consent forms were administered and read out. Respondents were informed that their participation in this study was on voluntary basis and their right to decline at any time was explained. Finally, respondents from both universities declared their free determination to participate in the study which was followed by consenting permission obtained from the respondents.

To ensure autonomy during this specific study, a written statement explaining the purpose of the research and standard procedures for data collection were developed. This was done to ensure consistency of information provided to all potential participants. Names of respondents and their identification (ID) number were removed to ensure confidentiality and to avoid violation of privacy so as to respect autonomy of study participants.

#### ***1.9.2.4 Non-maleficence***

According to Powell (2012:5), underlying ethical concern of the participants is protection from harm which is beneficence and the caution about not harming the subject which is non-maleficence. It means, preventing research participants from any sort of harm and allowing them to benefit from the results. Beneficence is defined as compassion, taking positive action to help others and an internal desire to do good which is the core principle of advocacy for participants' right.

Data collected have to be shared only with other researchers and should be kept anonymously where identification is not required for further follow up research. This specific study does not include field work and could not pose any serious risk. However, effort was done to avoid any stigmatisation to adolescents who have participated in the study. Separating documents such as consent forms with participants' names from the

completed questionnaire is one way of ensuring confidentiality as it was practised in this study.

According to the literature on ethical principle (Gostin 1991:194), not every human being can be competent and give consent. Some may be physically or mentally sick and medically incompetent. Others may be under age. The researcher has done his effort to make sure that all Participants are physically well, competent and aged 18 to 24 years. Besides, study participants cannot be liable for the information they have provided and damage to the questionnaires and/or any damage which could happen to the data collecting tools including tape recorders.

#### ***1.9.2.5 Confidentiality/privacy***

It is important for a researcher to understand and appreciate the mere importance of confidentiality and not to violate an individual's privacy in a research study. This is because violation of such ethical principles could have legal consequences. According to the European Union Ethical principle (Author 2010:77), Privacy is defined as protecting personal information of an individual. There should be a limit to how much access others can have to an individual's personal life and information. Even though, confidentiality is closely related to privacy, confidentiality on the other hand, is a duty of the researcher not to reveal the information gathered to anyone who does not have legal right to access or who does not hold the information indicated. To ensure confidentiality during this specific study, the respondent's names and other personal details were removed. Responses were analysed not relating to specific department or school but to the entire population (Author 2010:79).

#### ***1.9.2.6 Beneficence/non-maleficence***

Various factors influence the ethics of research design including informed consent, beneficence and other aspects of ethical obligation. However, it is the obligation of a health researcher to act in a way that a specific research was geared to benefit the health and wellbeing of respondents, the institution where the research was undertaken and all research participants that were involved directly or indirectly in a specific research study. On the other hand, Marshall (2007:13) detailed that it is the researcher's responsibility to make sure that the research study does not cause any

harm to the study participants. When the above conditions are met, the researcher would be confident that the ethical principles of beneficence and non-maleficence were met (Marshall 2007:13).

## **1.10 SCOPE OF THE STUDY**

### **1.10.1 Study setting**

According to literature, setting is the place, direction, manner and/or conditions in which something happens or exists. The setting for the current study was two universities located at the Southern region of Ethiopia, namely Arbaminch and Wolaita Sodo universities. The sites were purposely selected for this study. The sites were places where tens of thousands of students from all the corners of the country attend undergraduate and postgraduate degree programmes in the regular stream, evening and continuing education programmes. Besides, the sites were known for the production and distribution of substances, such as khat and various types of traditional alcohol beverages.

It is likely that the differences in the socioeconomic and cultural dynamics have allowed analysis of the magnitude and fueling factors for alcohol and substance abuse. The findings have provided valuable evidence on the magnitude which in turn has helped in the development of alcohol and substance abuse prevention strategies.

## **1.11 STRUCTURE OF THE DISSERTATION**

The research study was organised systematically in the following way:

### **1.11.1 Chapter 1: Orientation of the study**

This chapter outlines the research problem and overview of the entire study. It has provided the background of the study, statement of the problem, aim of the study and study objectives. This was followed by description of theoretical grounding and ethical issues, scope of the study and concluding remarks.

### **1.11.2 Chapter 2: Literature review**

The chapter covers the relevant literature related to the topic under study. The researcher reviewed various literatures related to alcohol, substance and other psycho-active drugs use and challenges. Various published and unpublished research studies were explored from global, regional and local contexts. The literature review helped the researcher to better understand on the topic understudy along with research methods, sample design, objective findings and conclusions. The literature review helped to contextualise data collected using developed tools and improve validity and precision measures.

### **1.11.3 Chapter 3: Research design and method**

The chapter deals with the research design and method employed throughout the research. It detailed the principles of research design and setting, population, methods used, sampling procedures and sample size determination. The chapter has also presented data collection, data analysis and relevant ethical principles followed at each step of the research study. The chapter provided brief description of the techniques employed to ensure validity and reliability and finally provided the chapter conclusion.

### **1.11.4 Chapter 4: Data analysis, presentation and description of the research findings**

This chapter presents the results of the study using graphs, figures, tables and related narratives. The chapter also presents discussion of the results. The discussion links the findings with literature review and compares it against similar studies while indicating any discrepancies or alignments.



### **1.11.5 Chapter 5: Strategies to curb alcohol and substance abuse among adolescent university students at the Ethiopian higher learning institutions**

As the chapter is the final outcome of the study, it offers strategies that included evidence based information from key findings and benchmarking of global experience in the fight against the growing problem of alcohol and substance abuse among adolescent university students. The strategies contain set of proposals, models, best experiences and required actions among various stakeholders. The chapter provided the details on the theory of behaviour change that guided developing the guideline which would help as a baseline for programme managers and policy makers in the response against alcohol and substance abuse. The chapter was concluded with and brief summary paragraph.

### **1.11.6 Chapter 6: Conclusions and recommendations**

The chapter presents the conclusions and various recommendations based on the analysis and key findings of the study. The chapter gives a brief description on the theoretical frame work, contributions of the current study, limitations and scope of the study and provides a set of recommendations for future practice or research.

## **1.12 CONCLUSION**

This exploratory and descriptive study was based on the public concern on the growing trend of alcohol and substance use among university students. The purpose of this study was to investigate the magnitude and explore various exposing and protective factors associated with alcohol and substance abuse among university students. The study further aimed to develop a strategy that could help reduce, prevent and avert possible consequences in the future. Based on the research objectives, the approach for this specific study employed mixed methods where quantitative and qualitative data was collected from respondents attending higher education at two selected universities.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

##### **2.1.1 Literature review presentation outline**

The chapter describes background information and reviews literature related to alcohol and substance abuse among adolescent university students. This section presents relevant literature reviewed from national and international sources. The views of various scholars, researchers and organisations were carefully scrutinised and analysed in an attempt to get a viable solution to the problem.

The literature review was organised in such a way that section 2.1 gives introduction, section 2.2 describes literature search mechanism, section 2.3 presents general demographic information about adolescents and their unique characteristics, section 2.4 details general global information about alcohol and substance use and abuse and particularly addresses alcohol and substance abuse among adolescents. Lastly, section 2.5 discusses the magnitude of alcohol and substance abuse among adolescent university students in Ethiopia and presents mitigating strategies to curb the problem.

##### **2.1.2 General overview about literature review**

Literature review is a purposeful scanning of relevant publications, an intensive reading, critical analysis of the materials and selected publications. According to Cronin, Ryan and Coughlan (2008:5) literature review is not a description of what has been written by an author or researchers but it is a critical analysis, synthesis and development of an argument in a meaningful way. It is objective and a thorough summary of available and relevant research for the specific topic under study. Literature review is a written argument that supports a thesis or dissertation evidence by building a case from credible sources or evidence from previous studies. It is an organised way to search a topic under study. In view of that, the reason of the literature review is to study the different theories related to the research topic and to demonstrate that the researcher

has a good grasp of the recent publications concerning the topic under study (Cronin et al 2008:38; Machi & McEvoy 2012:5).

## **2.2 PURPOSE OF LITERATURE REVIEW**

The purpose of the literature review is that it provides orientation on what has been known concerning the specific topic under study. It helps the researcher to have a deeper insight and understanding about the topic under study along with the method that could be applied to achieve validity and reliability. It introduces the researcher to the context of phenomenon and provides additional justification and credence for the intended study. According to Tichapondwa (2013:168), the literature review aims to provide the researcher with up-to-date information, with current literature on the topic and forms justification for future studies (Tichapondwa 2013:168).

Literature review thus elicits further information on the problem so that evidence based care can be designed and implemented. These can be materialised through law enforcement, programme designing and developing intervention strategies that could help to curb the problem under study (Tichapondwa 2013:168; Hoskins & Mariano 2004:24).

## **2.3 LITERATURE SEARCH METHODS AND MECHANISMS**

### **2.3.1 Methods of literature search**

Literature review methods have specific strengths and limitations. The authors, Cronin et al (2008:39) suggested that there are different methods of literature review that include narrative literature review which critiques, summarises and discusses literatures under the chosen topic to help acquire a body of knowledge and draw conclusion about the topic under study. This traditional way of literature review is selective with regard to the source of information searched, reviewed and included. According to Rudestom and Newton (1992:45), ultimate purpose of literature review is to provide the reader with wide-ranging background for understanding the literature in a chosen area and highlights significance of new research (Cronin et al 2008:39; Rudestom & Newton 1992:45).



Moreover, literature review helps to identify gaps in the available research and to refine the research question as appropriate. Review is useful for gathering enormous volume of literatures for analysis and detailed synthesis. The second type is systematic review where more rigorous approach is applied to review literature in a specific study area. The purpose of this kind of review is to provide the reader with complete list of a known inclusion and exclusion criteria to identify, critically evaluate and synthesise all literatures under particular topic of interest (Cronin et al 2008:39).

Different scholars (Machi & McEvoy 2012:5; Parahoo 2006:10) suggested that before someone starts literature review, it is important to establish the search term and taking into account how the information can be searched. This is followed by formulating the research questions and setting inclusion and exclusion criteria for the searched publications. This in turn, is pursued by selection and accessing of data, detailing the time frame and assessing quality of data explored. Finally, analysis and synthesis of the findings is done in order to come up with appraisal of evidence and intention of providing valuable recommendations (Machi & McEvoy 2012:5; Parahoo 2006:10).

Literature review is a continuous process from the inception of research study to the final submission of the thesis. The literature review is an aid to gathering sufficient amount of information with fundamental aim of providing comprehensive knowledge related to the topic under study. Therefore, to ensure whether the literature review has explored area of the study in a sound, inclusive and comprehensive manner, a systematic approach was undertaken to thoroughly search and explore recent literatures from different sources (Aveyard 2014:3).

Generally, the aim literature review is to outline the experiences of alcohol and substance abuse in universities and to discuss strengths and limitations of the existing approaches to curb the current practice. Henceforth, the current study employed both traditional and systematic review of available literatures to answer the research questions. In light of above, publications with content relevant to the topic under study were explored, repeatedly read and systematically analysed. Some of the techniques like scanning and skimming were used to identify relevant publications thereby quickly checking contents and retaining for further use.

### **2.3.2 How the literature review was conducted**

Key steps for undertaking literature review, according to Machi and McEvoy (2012:5) involve selecting the review topic, carrying out literature search, reading, critiquing, analysing, summarising and finally writing key findings (Machi & McEvoy 2012:5).

Generally, the steps followed for the literature review were;

- Searching and identifying publications relevant to the topic under study.
- Categorising and sequestering the publications based on the relevancy to the topic and arranging the selected articles in order of relevancy.
- Intensively reading and analysing those articles which are identified as appropriate. The researcher checked the methodology used, adequacy of the sample size, data analysis techniques and ethical issues followed for each searched publication.
- Conducting critical appraisal based on key statements and arguments described was done. Major findings are summarised with exhaustive description of the subject.
- Finally, knowledge gap in the area of alcohol and substance abuse among adolescent university students was identified and documented. This has lent the researcher a hand to develop a workable strategy in order to address the problem under study.

### **2.3.3 Source of literature, search mechanisms and criteria**

#### ***2.3.3.1 Source of publications and search tools***

In order to have an in-depth insight and gain understanding concerning alcohol and substance abuse, a detailed conceptual and practical literature review was done. Both primary and secondary sources were consulted. Research publications, books, articles and journals from online, UNISA library and other sources were explored and consulted. The consulted sources are organised chronologically in alphabetical order in the reference section. Lastly, this was followed by read and evaluation of what has been found, discussions on the findings and performing summary conclusion (Lyons 2015:2).

## **2.3.4 Article selection criteria**

### ***2.3.4.1 Inclusion criteria for searched articles***

The review considered a set of criteria for inclusion of research publications. The researcher used the following necessities as criteria:

- Literatures of recent publications that covered Publications of the past five years. However, publications of some articles beyond five years like policies, books and magazines were also exceptionally considered.
- Studies that focused on alcohol consumption and related problems.
- Studies that focused on substance abuse and related problems.
- All studies that were published in English.
- Publications from trusted sites.

### ***2.3.4.2 Exclusion criteria for searched articles***

A set of exclusion criteria was used to ignore literatures. Criteria used by the researcher for exclusion of publications included:

- Publications older than five years; studies published before 2005 were not considered.
- Publications which were not relevant for the intended research objectives.
- Research studies that were not written in English.

## **2.3.5 Searching techniques**

Literature searching technique involves specifying appropriate language for the search, brain storming, scanning and skimming to determine what data should be included for the review. This needs technique for literature search in order to get the strongest evidence and support the topic under study. To do so, a developmental and organised way was used to search the topic under study. Once hard copies or soft copy of documents accessed, scanning which is a quick look of key words through the article was done. In this specific study, scanning involved a swift look at the key words related

to alcohol and substance use and abuse. Then, skimming which is a speedy reading through the articles was done in order to get basic idea and relevancy of the literature for the topic under study. Finally, a list of references was cited and organised in alphabetical order (Machi & McEvoy 2012: 5).

### **2.3.6 Key words used for the search**

Throughout the literature review, key words used for the search included adolescents, adolescent's developmental changes, adolescent risk taking behaviour, perspectives on alcohol and substance use and abuse, available strategies to curb the problem under study, university students and Ethiopia. After identifying the review articles, appraisal was followed based on frameworks and techniques for quantitative and qualitative research publications (Silverman & Marvasti 2008:510; Talib & Tavallaei 2010:2).

## **2.4 GENERAL DEMOGRAPHIC INFORMATION ABOUT ADOLESCENTS AND THEIR UNIQUE CHARACTERISTICS**

### **2.4.1 Demographic information and social issues**

Ethiopia is located at the horn of Africa, bordering with Somalia, Djibouti in the East, Eritrea in the North, Sudan and South Sudan in the West and Kenya in the South direction. The country has a total population of over 90 million with an average population growth of 2.6 percent per annum. Its economy relies on agriculture and subsistence farming, small scale industries and export cash crops including chat, coffee and oil seeds. In recent times, Ethiopia has shown robust economic growth in construction and infrastructure. The average growth rate annually for the past five years is about 8.4 percent per capita. This has brought rapid scale up in primary, secondary and university education along with improvement in health service provision and clean water supply. However, significant proportion averaging 20 percent is very poor and lives below poverty line earning less than two dollar a day (EDHS 2012:24; World Bank 2014:22).

Administratively, Ethiopia is divided into nine regional states where each region has its own educational bureau structure and administers colleges and vocational schools. On the other hand, public universities are administered by the Federal Ministry of Education

(MOE). The country has implemented rapid expansion of higher education where more than 32 public universities were opened within less than ten years across the country. Among those, the two universities selected for this specific study, are located in South Nation, nationalities and Peoples Regional (SNNPR) state. These are Arbaminch University which is now home to more than 16000 students and Wolaita Sodo University which hosts almost equivalent students to that of Arbaminch University (MOE 2013:17).

#### **2.4.2 Higher education and adolescent health in Ethiopia**

For a given society, the educated taskforce brings growth and transformation to the economy and benefits the society in terms of general welfare and global competitiveness. To attain such goal, the capital investment by the students and families for matriculation and to join university is massive. Currently, hundreds of thousands of students are enrolled in more than 33 public universities that are administered by the Ministry of Education and hundreds of other technical and vocational training (TVET) colleges where the scale up of college education is promising. Government spending for the education sector takes significant share of 1.1 percent from total budget of which 1.4 percent was allocated for higher education. Currently, university enrolment has reached nearly 475000 excluding enrolment in technical and vocational education and training (TVET) colleges that enroll more than 310,000 students. This indicates the need to be vigilant in matters related to the campus as a huge number of productive and educated force gather there with little attention on their mental and psychological health (Alamin 2015:19; MOE 2013:17).

For students who successfully join the university, the transition from secondary school to university is accompanied by independence, intellectual growth, and freedom from family control and new environment which is never seen before. These could be accompanied by incidents like encountering of peer groups, repeated indulgence with substance use and abuse challenges. The above findings were also substantiated by various studies (Arria et al 2013:48; Penny & Hallam 2010:8) where alcohol was found to be one of the major drugs of choice among adolescents in different parts of the globe, including Ethiopia (Mwambete & Shemsika 2014:1; Penny & Hallam 2010:8).

Students from different social and academic backgrounds join universities, while everyone is supposed to compete for better grades and to pass the examinations. The

competition brings about stress for some. Besides, other factors like complete autonomy from family supervision, peer pressure, desire to experiment and test different things, opportunities, new developments and other related factors could force them to look for a way out to alleviate the stress. It is evident from different reports, however, that the Ministry of Education (MOE) has a limited capacity to anticipate, prioritise and address such stress and frustrations. Practically, there remains key issues to focus on, like availability of essential education kits, supplies, space, books, laboratories, food, water, power supply and others. Also, lack of awareness about the likely outcome of frustration and stress among adolescents compounds the situation. Resource constraints result in lack of supervision, lack of better arrangement of the required services, inadequate life skill counselling and support. That means, there remains little preparation and inadequate capacity to anticipate and handle the risks associated with college students alcohol and substance abuse (EP-nuffic 2015:6; Ephrem 2013:1; Negash 2001:1).

Some ten years back, the number of students joining university and college was very small with only two universities and few colleges operational before the year 2000. Accordingly, monitoring of students in class and their dormitories was very tight which the researcher can witness. Proctors strictly supervise the whereabouts of students through curfew hour to enter campus, surprise visit to dormitories, strict attendance and others. Also, student clinics used to provide treatment, counselling, and care and support services. Even though student clinic still exist, it is rather stretched and overwhelmed by the increased number of students seeking services. Besides, it is a deep rooted culture that stresses, depression and other kinds of mental illness are not yet given due attention because of other communicable diseases as conventional disease burden. There are few studies conducted to explore the root cause and to come up with extent of the problem and its remedy for policy direction. On the other hand, the problem of alcohol and substance abuse among university students and its related consequences has now become a growing concern among Ethiopian public (Alamin 2015:19; MOE 2013:17; MOH 2013:30).

### **2.4.3 Ethiopia's alcohol and substance use policy**

Alcoholic beverages are drinks containing ethyl alcohol which is an intoxicating ingredient. In Ethiopia, alcohol is informally and formally produced, imported, and traded

in most cultures where it is widely available across the country. It is produced both traditionally and industrially. Some brands of alcohol produced at industry level include liquors, wine, beer and others. Alcohol products like whisky, Vodka, wine, beer and others with different forms and strengths are imported from outside Ethiopia. Alcohol remains integral part of Ethiopians life specifically during holidays, events, ceremonies and other occasions. However, there is lack of reliable data regarding the type of alcohol produced, imported, sold and consumed. Besides, traditionally produced alcohol beverages lack such standardisation and clearly set product strength. This makes comparison of alcohol consumption based on recorded document difficult as it conceals the heavy drinking trend in many localities (Lee, Regu & Sileshi 2015:1; Parry 2000:1).

On the other hand, there are a number of different traditional alcohol beverages produced for home consumption or limited trading. These include different range of alcohol products made of cereals, medicinal plants and other unspecified items and consumed specifically by young people (Adelekan 2008:1). This includes 'Areke, 'Tej, and 'Tela, Shameta, Borde, Cheka and others which have different level of concentration. The fact that such illicit beverages produced traditionally are unrecorded makes it difficult to assess how much produced, its strength, how much consumed and its associated effect (Adelekan 2008:1).

Few studies (Lee et al 2015:1) conducted to determine the concentration of locally made alcohol beverages like 'Tela were estimated to have a concentration of between 2-6%. The study estimated the concentration of 'Areke to range from 30 to 70 percent and others like 'Tej did have no clearly known strength. Using traditionally made alcoholic products like 'Areke which is relatively cheap but highly toxic to the liver remains widespread among adolescents (Lee et al 2015:1). Actually, the alcohol beverage industry is providing a major employment opportunity in formal and informal sectors for significant number of labour force specifically in countries like Ethiopia where there is limited industry to absorb educated labour. This can be witnessed by the national Television broadcasting where the prime minister inaugurating beer factories (EBC1 News Broadcast 2015). Likewise, there are trends of alcohol advertisement through mass media, national television broadcasting and installation of billboards freely and everywhere with no restrictions which contradicts to the fundamental principles (Lee et al 2015:1; Negussie & Berhane 2012:1).



On the other hand, literature reviewed from different sources did not reveal any clear and specific alcohol production and trading policy in Ethiopia (Negussie & Berhane 2012:1). There was no sufficient information about legislations, standardisations, advertisement guides, age limits, designated outlets and other protocols. These hampers measurement of extent and evidence based response to handle those at risk where the problem continues unseen and unrealised. Lastly, it becomes clear that reversing the problem could have a greater cost. This indicates the need for urgent, detailed and comprehensive research to examine the level and to understand the factors that expose adolescents for alcohol and substance abuse and its untoward effect so as to come up with appropriate mitigation strategies (Lee et al 2015:1; Negussie & Berhane 2012:1).

The above argument was substantiated by the WHO (2014:106) annual survey report on alcohol consumption pattern and its associated risks indicated that per capita alcohol consumption has increased in Ethiopia to 29.0 in 2014 as compared to 6.2 in 2005. The report mentioned that prevalence of current alcohol drinker in male and female reached to 30.1 and 19.9 percent respectively. Besides, the report specified that prevalence of alcohol related disorder was recorded to be 3.7 percent. It also detailed that there is no national written alcohol policy or legally binding regulation on alcohol advertisement, placement and/or promotion. The report further directed that there was no national monitoring system and no proper government support for community action. Despite production and importing of various alcohol beverages, there was no legal health warning regulation on containers and restriction for premises of sales, specific places, events and other issues. Moreover, there are no designated and/or specialised units to manage intoxicated adolescents and others and their absence complicates alcohol and substance abuse management, prevention and healthy life promotion efforts thereby increasing adolescent's exposure for alcohol and substance abuse (WHO 2014:106).

Furthermore, the country's economy depends on the export of some substances like 'chat which remains one of the major export products with its destination in Djibouti, Somali, Yemen and other neighbouring countries. A study conducted to explore the impacts of intervention campaigns to discourage khat plantation and circulation revealed that it would be difficult to persuade producers and customers (Belwal & Teshome 2011:2). Figure 2.1 below which was adapted from Lee, Regu and Sileshi (2015:1) depicts trading and use of khat in Ethiopia.





**Figure 2.1: From left to right, a woman selling chat for young people and bundle of chat for sale**

(Adapted from Lee et al 2015:1)

Additionally, the Ethiopian health extension package (MOH 2003:17) has identified some commonly used substances. The package mentioned 'khat, Shisha and tobacco as widely available and consumed across the country. These substances are known to cause physical illnesses, psychological and social effects such as abdominal pain, loss of appetite, poor concentration, and suicidal ideation, isolation from family or friends and absence from class or duty station. Despite such consequences, the health extension package targeted households and did not take into account the wide range of exposure and vulnerability of university adolescents. The health needs of university students seem neglected and untouched by the nearby health facilities. It remains like an island with no known health care support and referral link (Belwal & Teshome 2011:2; MOH 2003:17).

Generally, there lacks a comprehensive and research supported evidence, a clear policy and direction so as to focus on and give due attention about alcohol and substance abuse problems. Unlike other countries like USA (Matheson & McGrath 2014:1), there is no clear regulation that prohibits adolescents from accessing alcohol and substances. Thus, there is need to have a study in order to support the articulation of policy and design appropriate intervention mechanism to address the varieties of alcohol and substances traded, consumed and its associated drawbacks among adolescents (Author 2015:1; Matheson & McGrath 2014:1).

## **2.5 GENERAL OVERVIEW OF ADOLESCENTS AND THEIR DEVELOPMENTAL CHANGES**

### **2.5.1 Adolescence and adolescents**

Adolescence is a unique period where transition from childhood to adulthood happens. According to WHO (2010:35), it covers the age between 10-19 years and youth 15-24 years and young people 10-24 years of age. Gortberg (2006:1) defined adolescence as the period of transition between childhood and adulthood. In Ethiopia, adolescent and youth are defined as age between 15 to 29 years (MOY 2005:4). The Ethiopian social security and development policy considers people aged 15 to 24 years old as the youth. This indicates that the age difference varies from culture to culture where there is no exact age demarcation. Likewise, in literature, the terms adolescent, youth, young people and teenagers are used interchangeably. But, it can be assumed that adolescent begins at age 12 and ends at age 25 with some kind of individual variation for most industrialised countries. For this specific study, adolescents are those young people aged between 18 to 24 years of age (MOY 2005:4; Sherri & Gortberg 2006:1).

It is understandable that, the chronological age at times may not correlate with the specific individual's physical and mental development. At that period, set of changes including physical, biological, emotional and psychological developments accompany the age of adolescents. It is characterised by dependence, acquisition of skills, strong affiliation to peer groups and experimenting of various things including sex, alcohol and other substances (Author 2015:1; Matheson & McGrath 2014:1).

At this stage, adolescents become independent from their families. They develop their own personality and make their own decision on peer groups and social interactions. Even if there are specific programmes for adolescents, they may not use them. They develop their own skills of coping with different kinds of stresses and tensions. Available literatures indicate that rapid physical changes during puberty with accompanying launch of hormonal changes intensify feelings and heighten perceptions towards self and other people of concern (Sherri & Gortberg 2006:2). Memories are deeply processed and experiences are vibrant where attitudes formed towards certain behaviour will be long lasting and at times could last forever. Such effects obviously could exert a great influence on certain behaviours. Adopting and living with those

changes may lead some adolescents to confusion, stress, tension, frustration and even emotional pain. To relieve stress, they are likely to engage in adverse behaviours. However, the response by adolescents varies at individual as well as at societal level (Sherri & Gortberg 2006:2).

In this regard, adolescence is a critical period of transition from childhood to adulthood where interventions like proper coaching, educating, supporting and preventing from adverse activities at this age will have positive outcome in their development cycle. Most developed countries have systems in place where counselling and guidance are initiated immediately upon arrival to university. However, developing countries like Ethiopia have limited capacity and lack clearly defined, research supported and functional strategy to look after this unique group which are exposed to various risks. Such systems are not well defined and functional.

### **2.5.2 Unique behaviour of adolescents and their risk taking behaviour**

Adolescents experience multiple risk-taking behaviours. Alcohol consumption, substance abuse, unsafe sex and others remain particularly high among this group. What contributes to this risky behaviour varies from place to place but some of the factors identified includes individual, parental, community factors and peer influences. Adolescent behaviour of alcohol and substance abuse risks increases during this period of transition. Adolescents could be exposed to alcohol and cigarette smoking for the first time specifically when changing schools (Volkow 2014:17).

Many scholars such as Adelman and Taylor (2007:7) and Volkow (2014:17) concur that risk-taking behaviours is natural and some risk taking behaviour is also necessary for growth. Developmental theorists argue that risk taking by majority of young people is part of environmental exploration and movement towards self-autonomy. On the contrary, some risk taking behaviours or forms may pose an immediate or long term problems and consequences to adolescents. Even though, there is no concrete research evidence in this regard, it seems clear that some risk taking behaviours are a result of external, environmental or social factors like family, school, society and peer pressure. While others believe that they are results of intrinsic factors and motivational needs like biological and psychological stages of development which makes adolescents more vulnerable to engage in a variety of risky behaviours. To avert such

consequences and risks, there is need for systems to be in place that are both age and gender sensitive (Adelman & Taylor 2007:7; Volkow 2014:17).

In this regard, several agree that competent decision making involves weighing of the positive and anticipating negative effects of certain actions. Nonetheless, research findings uncovered that individual's behaviour to take certain action usually depends upon their beliefs about consequences of certain action, their values of what is important and the state of mind like stress and mood. It also depends on the predicted opportunities, outcome perception and perceived susceptibilities. However, it is a reality that correct anticipation of risks may be difficult as many adolescents hold the unrealistic view that they are unique and invulnerable. This kind of view held by the group leads to underestimation of negative consequences of risk taking behaviour (Byrnes & Boyer 2008:39).

Similarly, existing literature indicated that adolescents and young people are at greater risk of alcohol and substance abuse because of their biological development which is associated to the parts of the brain that has a major role in decision making. Volkow (2014:18) asserted that biological maturation of the prefrontal cortex which is the section of the brain that is not fully developed in adolescent age plays a greater role in some of the choices made by adolescents (Volkow 2014:18).

This is in agreement with a study conducted in USA by Penny and Hallam (2010:8) where adolescent university students who drink alcohol even to hazardous level reported that they know the risks and consequences of alcohol consumption more than their non-drinker counterparts. More than 99 per cent of the drinkers reported that they know about the possible consequences as compared to the non-drinkers. On the other hand, more than 15 percent of university students indicated that they had casual sex after drinking and dating which shows the paradox between having the information versus engaging in risky behaviour. This specifies that adolescents in such circumstances may find themselves in danger of indulging in risky behaviours and may fail because they may not give attention and may lack skills or do not have the awareness that this risky behaviour may lead to several problems (Penny & Hallam 2010:8).

It was found that adolescents risk-taking behaviours can be emotional, contextual and adaptive. Because, neurodevelopmental origin of risk-taking justifies that the limbic system that controls emotions, social information and experiences like rewards and punishments develop earlier than the prefrontal cortex that regulates intelligence, logical thinking and weighing costs and benefits which warrants the need for close coaching and support for adolescents at this particular age (Arria et al 2013:33). The above finding confirms the relevance of the theory of planned behaviour (TPB) change model where attitudes and intentions determine the performance of certain behaviours (Ajzen & Fishbein 2003:1).

The above findings confirm that adolescents engage in different type of risky behaviours than the general population despite of having information or knowledge about the outcome of certain behaviour. Findings from developed countries showed that factors such as inadequate biological development, environmental interactions and social factors are some of the reasons outlined to consider risky behaviours like problem drinking, violence, unsafe sex and others under the influence of alcohol and substances. However, there is no concrete and exhaustive information on whether adolescents in Ethiopia are aware of such risks and consequences. Thus, there is need to quantify different aspects of their risky behaviour and put a strategy to mitigate the problems.

## **2.6 GENERAL AND GLOBAL INFORMATION ABOUT ALCOHOL AND SUBSTANCE ABUSE**

### **2.6.1 Overview of global alcohol and substance use and abuse**

Globally, millions of people consume alcohol on daily basis in different occasions and gatherings. Also, billions reported the use of cigarettes and many millions also reported that they use some kind of psycho-active substances for pleasure. World Health Organization (2014:13) defines substances as any stimulating agents which can be smoked as inhalants, ingested orally and taken as an injectable or in any other forms. It may be available either in the form of solid or liquid. The report further detailed that worldwide, alcohol use and abuse causes four percent global disease burden with estimated amount of three percent of deaths. Besides, it was knowledgeable that through intoxication and other direct effects, alcohol abuse becomes attributable for

chronic diseases like oesophageal cancer, liver diseases, cardiac disease and others which potentially become high risk for most chronic diseases (WHO 2014:13).

The list of such of substances and other psycho-active stimulants identified worldwide includes alcohol, tobacco, marijuana, cannabis, sedatives, opioids, steroids, sleeping pills and others which are also known to be abused by both adolescents and the general population. Some substances are available in the form of processed drugs and others are locally made in the form of inhalants or smoking powders that either causes dependence or abuse. Also, a substance like tobacco is a known addictive and contains stimulant nicotine in cigarettes and other forms of tobacco which is responsible for causes of lung cancer (Volkow 2014:29).

A similar study conducted in Georgia, in the United States on the use of illicit drugs also indicated that benzodiazepines which are prescribed for anxiety and related mental health disorders are frequently abused drugs in combination with other substances. Benzodiazepines are more related to psychiatric problems rating to 44 percent of admission for treatment. As a response to the problem of drug abuse, the government of Georgia drug control authority has introduced drug abuse prevention plan which included education, monitoring, proper disposal and law enforcement which indicates that substance abuse is a global concern (Strasser & Smith 2012:75).

Another survey conducted in USA on the prevention of early use of alcohol and substances highlighted the eventual effects which lead to dependence and/or addiction among adolescents. It showed that a law exists that prohibits drinking of alcohol below age 21 years in North America. However, adolescent drinking in the colleges remains one of biggest challenge where the issue had been a campaign agenda in USA 2004 election (Author 2015:2).

Similarly, a UN report in 2011 indicated that about five percent of study participants reported that they consumed cannabis, which is a herb most commonly produced and consumed globally. The same report specified that a trend in the use of such substances like cannabis that has a potential risk for severe mental illness and the problem was on the increase in different parts of Africa and Asia. However, the report did not inform the specific countries of interest and the magnitude of exposure to such substance in Africa (UN 2011:20).

Additionally, a study conducted in Brazil by Knychala, Muniz, Faria and Jorge (2015:4) to identify the relationship between high prevalence of alcohol consumption and physical health outcomes showed that there was high prevalence of alcohol consumption among adolescents with diabetes. The study further revealed that anxiety and depression were found to be the highest among adolescents who used to consume alcohol. This could obviously affect self-care practice which is crucial for diabetes management (Knychala et al 2015:4).

The studies by Knychala et al (2015:4) and Strasser and Smith (2012:75) observed a mix of participants but did not examine the unique behaviour of adolescents separately. Besides, the study did not explore other effects of substance abuse including the immediate effects and long term effects like increased hypertension. The study focused only on alcohol abuse and did not examine use of other substances such as cigarettes, hashish, illicit drugs and their cumulative effects on the adolescent's health. The studies did not come up with any recommendations or strategies to address the problem of adolescent alcohol abuse (Knychala et al 2015:4; Strasser & Smith 2012:75).

On the other hand, most substances including psycho-active drugs have an effect that changes thinking capacity and decision making. Similarly, most stimulant substances and drugs are widely available even though some are strictly controlled and their use is prohibited except for medicinal use. Besides, alcohol is a known mood generator that plays a major role for leisure activities. People drink to socialise, relax and celebrate events. This in turn, increases risk of injuries, unsafe sexual practices thereby exposing to risk of contracting certain deadly infections like hepatitis, HIV and others. These will have deadly outcome that leads to chronic illnesses and eventually ends up in loss of life. Findings indicated that alcohol abuse is found to be contributing factor for some of chronic illnesses like heart failure and liver diseases which warrants the need to reduce the burden of harm among adolescent students (NIH 2015:1).

World Health Organization (2015:45) reported that use of alcohol and variety of substances including khat can lead to different kind of problems. These include withdrawal symptoms which happen after stopping or reduction of intake and dependence or harmful use which have serious impact on the physical and mental health of an individual. Taking into account extent of the problem, scientists have

developed protocol for diagnosis of substance abuse disorder that includes set of criteria's to be present within the past one year. These criteria include recurrent use resulting in failure to fulfil major obligations at school, work or home, recurrent use in situations which are dangerous, legal problems from recurrent use and continued use despite interpersonal and social problems related to use of substance or alcohol. Substance dependence or addiction is a pathological situation that meets the criteria of abuse plus continuation of use despite problems like increase in tolerance and having withdrawal symptoms. But, while detailing the patterns and problems of alcohol and drug use, the report did not indicate the extent, associated problems and a response plan for khat abuse (Ucsjoco 2010:6; WHO 2015:45).

One of the reasons mentioned by Kilpatrick, Saunders and Smith (2008:17) for substance use is that it initially may help to relax and get pleasure among young people. Another reason is that alcohol is known to change behaviour of many people to act differently. This may lead to violence, injuries and accidents where disability and death are among the highest. Besides, adolescents who drink are likely to use substances including tobacco and other stimulant drugs that could also lead to risky sexual activity than their counter parts that do not drink. Moreover, different studies documented the relation between regular use of substance and alcohol and its effect of dependence. Studies justified that being dependent on substance and alcohol has serious implication on income, may tense family relationships and result in other serious effects. This justifies that contributing factors and the context leading to alcohol and substance abuse among adolescents need to be explored and understood so as to control the problem through long lasting interventions (Kilpatrick et al 2008:17).

## **2.6.2 Prevalence of alcohol and substance abuse among adolescent university students**

### ***2.6.2.1 Global situation of alcohol and substance abuse among adolescent university students***

The extent of alcohol and substance abuse and its associated consequence among university students was a global concern. Importance of identifying the etiology and call for urgent intervention to reduce the problem is overdue and still remains one of major public health concern. A survey conducted by WHO (2015:45) indicated the area rests



as an important area of research because of its immediate implication in academic and social life and its late effects like substance addiction, chronic health outcomes and other related problems. In this regard, several studies have looked out the prevalence of alcohol drinking, substance consumption and its correlated problems among university students while few have looked into the detail concerning predictive or protective behaviours specifically among adolescent university students (WHO 2015:45).

Study findings reviewed from several publications have substantiated the above argument. A study by O'Malley and Johnston (2002:2) and others indicated that alcohol abuse by university students is twice higher than their non-college counterparts. Similarly, it was reported that a student who never smoked cigarettes could likely start smoking, a student who never took stimulants might start taking prescription drugs, sleeping pills and those who never drink could be more likely to start binge drinks. As it is, the reasons uncovered that college students abuse stimulants in order to get into the zone and to study overnight which is a behaviour that might begin when they join the university or college. Some studies noted that college students are more likely to be engaged in risky-behaviours like heavy alcohol drinking and related problems as compared to their non-college or campus counter parts that warrants the need for special attention (O'Malley & Johnston 2002:2).

Another study reported that more than 50 percent of students who did not use alcohol and drugs do so once they join university. The study by Arria et al (2013:33) further quantified that those who used to drink alcohol and consume substances increase their rate. Also, similar literatures (NIH 2015:2) unveiled that there remains strong relationship between drug use, violent behaviour, crime and poor academic performance as well physical and mental health problems. My argument here is that drinking alcohol by itself may not be a problem but the amount, type of alcohol and the situation like drinking too much which leads to a number of consequences thereby increasing the risk for various problems. These include health problems like trauma, accidental injury, gastric erosion and mortality due to homicide, unsafe abortion and others. Likewise, alcohol and substance abuse have negative effects on social relation and academic achievement (Arria et al 2013:33; NIH 2015:2).

A comparable study conducted by Stewart and Moreno (2013:13) to examine how student's attitude, intention and behaviour towards tobacco and marijuana changes

during freshman year has scrutinised how attitudes and intentions predict the use of such substances. The study included a total 275 participants and collected data using telephone interview during and after freshman period. The report summarised that use of substances like cigarettes, tobaccos and other stimulants has become crucial part of college experience among USA freshman university students. The findings pointed out that participant's favoured attitude and intention towards use and actual use of substance was significantly increased during first year of academic life. The study revealed that use of such substances has significantly increased during freshman year where 12.2 percent and 13.5 percent of study participants had initiated tobacco and Marijuana respectively. By the end of year one, almost half of students have started using tobacco and marijuana. The researcher concluded that the initiation to use tobacco was positively associated with intention to use tobacco. The study clearly indicated that college is a favourable environment for tobacco and marijuana use. The study concluded that attitude towards, intention to use and actually use of such substances was significantly increased during freshman. Factors contributing were little adult supervision, increased availability or opportunity or sense of privacy in the new community and environment (Stewart & Moreno 2013:13).

The above study by Stewart and Moreno (2013:13) mentioned that young people's unfavourable attitude towards tobacco was justified by the anti- tobacco campaign and high cost. The study recommends a policy direction for banning tobacco and marijuana use. This suggestion may not be applicable in Ethiopian context where tobacco production is concerned as a way of getting foreign currency. As participants reported favoured attitude and intention towards substance use, it is less likely that banning trading of substances will stop its use. Besides, the study enrolled only first year students and has limited age category between 18 and 19 years. The study did not explore alcohol and other substance which limits its coverage to show the extent of substance abuse among adolescent university students (Stewart & Moreno 2013:13).

A comparable study was conducted by Penny and Hallam (2010:11) in England in order to determine the nature and perception of university student's alcohol consumption pattern. The researchers bared that final goal of the above study was to provide knowledge for policy direction and pointing out recommendation to reduce alcohol abuse. The study enrolled 724 students for online survey, 143 students enrolled for focus group discussions (FGDs) and other 29 participants as key from academic

environment including the student union took part in the interview. The finding indicated that 83 percent of first year university students reported use of alcohol. The finding from this study is in line with the study conducted in USA universities by Stewart and Moreno (2013:13). The findings detailed that a university campus is one of favourable environments for youngsters to initiate drinking and increase vulnerability of first year students. The study reported that universities have a role and accountability to provide information on hazardous effects of alcohol specifically for freshman students which is contradictory to the finding Stewart and Moreno (2013:13) where drinkers were more aware of the consequences than the non-drinkers (Penny & Hallam 2010:11; Stewart & Moreno 2013:13).

Even though the above study by Penny and Hallam (2010:11) reported valid findings that were in line with results from other scholars, it has a number of limitations. The study had only focused on alcohol use and abuse. Moreover, it did not explore the various types of substances which first year students are exposed to. Besides, it did not address the student's background which might have influenced their alcohol use. It also did not disaggregate female student's alcohol use pattern as there might be disparities among gender. The same study above revealed various effects of alcohol abuse including health effects, risky driving, poor academic performance (fourth missed classes and tenth performed less than expected) and others. But, the study did not substantiate what percent of students scored below 3.00 and how many scored below satisfactory level. Further, the study did not show findings from key informants like security officers and proctors about happening of incidents such as fighting, disciplinary measures, late coming of beyond set timeline. Besides, exploring other variables like amount of money spent per week on alcohol could have important input for low income countries as it may have serious outcomes like family dispute and bad relations. This indicates a need for diverse approach rather than providing information (Penny & Hallam 2010:11).

A study conducted by Weitzman, Nelson and Wechsler (2003:33) to examine factors such as person, social and environmental influences and binge drinking among college students in USA. The study used a twenty-page questionnaire and mailed for 1894 first year students by employing self-reported response method. The results showed that about 26 percent of students surveyed consumed alcohol. Findings from this Study also indicated that majority of students started drinking alcohol and consuming substance

after joining university or colleges. The main reasons were socialization, because young people viewed drinking as a way of making friends and fitting in. Availability and accessibility of alcohol through peers and outlets near colleges and its affordability were reported as main factors for starting binge drinking by college students than their counterpart (Weitzman et al 2003:33).

The above study suggested pre-college intervention and college intervention that includes maximising substance free dormitory and minimising easy access to alcohol. However, this study has its own limitations including the methodology used and sample groups. The study used a mailed self-report where it has disadvantages like high non response rate and misunderstanding of questions. On the other hand, the study did not mention the non-response rate and void questionnaire. Besides, the study enrolled only freshman students and those below 19 years of age which limits comparison across year of study and age group. It has also focused only on alcohol abuse which limited comprehensiveness of the findings (Weitzman et al 2003:33).

Another study conducted by Arria et al (2013:23) had focused on the academic opportunity costs of substance abuse among college students established that more than 40 percent of first year students are at greater risk of drinking. It further indicated the academic effects of substance use namely, skipping class, low motivation, laboratory activities, spending less time in academic work, inadequate study time, failure to meet deadlines to submit assignments and less sleep and cognitive problems where the number of less qualified university graduates was at increase. The report also mentioned misconceptions about the use of drugs that it may not cause any harm (Arria et al 2013:23). The same literature indicated that among the users, use of alcohol and other substances among university students is of major concern where use of substance and alcohol during college life has short term, intermediary and long term problems. It also indicated that even though alcohol related health problems is highest in adults aged 40 and above. Besides, early initiation of substance abuse and its relation between early age initiation, patterns of use and abuse at the age of adulthood makes a study on alcohol and substance abuse among adolescents to be vital (Arria et al 2013:37).

Another study conducted by Kalsi (2015:3) in Vermont of United States indicated that number of college students abusing prescription drugs have more than doubled

reaching four percent as compared of its situation in early 1990's. The report further stressed that almost half of regular students binge drink or use prescription drugs and about a fourth of college students meet the criteria for substance use related disorder or dependence. The findings were alarmingly high being three times higher than in the general population. The report indicated that the increased use of alcohol and other substances has been affirmed by other studies. The researcher concluded that alcohol and substance abuse is being major problem that needs intervention using interactive learning presentation. Here, students brain storm and present his/her experience of substance abuse and comes up with a potential solution and programmes that can help to curb the problem. However, this specific study did not indicate the methodology used to identify study participants. Besides, the study did not detail the different type of substances and alcohol consumed by university students. Also, it did not look into the different features that exposed adolescent university students for alcohol and substance abuse (Kalsi 2015:3).

Similar study was conducted by Karama, Kypride and Salamoun (2007:2) with international perspective on the topic of alcohol abuse among college students. It had reviewed 26 published articles in order to explore the prevalence of alcohol use, related problems and effectiveness of intervention methods. The survey concluded that prevalence of alcohol and substance abuse was found to be highest and indicated that findings of the extent were similar in Australia, Europe and South America. On the other hand, the above study reported that prevalence of alcohol and substance use findings in Africa were lower as compared to other regions of the world. However, the review considered findings from only two articles that were from Egypt and Nigeria. Likewise, the sample size used was very small and by chance secular countries with different cultural and religious background to East and other regions of Africa were selected. Thus, the findings may not be representative that makes the study less reliable and unrepresentative globally. Besides, the survey focused only on the use of alcohol and did not attempt to address increasing concerns of substance use among university students (Karama et al 2007:2).

Another comparative study was also conducted in South West Nigeria by Olujide, Susan, Olufunke, Frederick and Muyiwa (2015:4) focusing on alcohol and substance abuse among undergraduate university students. The researchers included a sample population of 431 participants and had administered a questionnaire on drug abuse. A

descriptive and inferential statistics analysis was done to quantify and report the findings. The researchers described that use of alcohol and other substances like heroin is widespread among university students where cigarette smoking and alcohol drinking were found to be 81 and 74 percent respectively. As well, the finding showed that students had experienced different forms of adverse effects such as academic problems, getting in to trouble, more craving and feeling high. Importantly, 45 percent reported that they feel depressed which could lead to serious mental problem including suicide ideation. As opposed to the findings from Karama et al (2007:2) the study indicated that even in Nigeria, alcohol drinking and substance use among university students was found to be enormous (Karama et al 2007:2; Olujide et al 2015:4).

Yet, the above study by Olujide et al (2015:4) had enrolled different category of participants from underage and above 18 years of age. At the end, the study concluded that parental use of alcohol and peer pressure is not significant predictor as opposed to various literatures that attributed those factors to be major contributors for adolescent's alcohol and substance abuse. Besides, the study did not look into other factors like access, cost and outlet of alcohol as contributory factors. This study did not identify different type of alcohol consumed with varying strengths and other type of substances frequently abused by adolescent university students. It also indicated the importance of legislation concerning alcohol trading but did not clarify what type of legislations could be endorsed so as to reduce alcohol abuse and it did not propose workable strategy based on vulnerability factors which signify the need for further study (Olujide et al 2015:4).

As detailed in the literature and publications reviewed, alcohol and substance abuse among adolescent university students is a growing concern. A study to investigate patterns of alcohol abuse and its related problems in tertiary education in Australia showed that 48 percent of university students enrolled reported that they drink alcohol with some even drinking to hazardous level. The same study detailed various health related problems in students who have experienced regular alcohol drink in the past six months. Hangover was one of the most frequently reported being 65 percent, followed by exhaustion, being sick, emotional outburst and other physical symptoms which could have a negative impact on daily activities accomplishment. Similarly, 12 percent of students indicated that alcohol abuse has affected their studies but did not mention their decision. The researcher concluded that alcohol consumption among tertiary students

was relatively very high and indicated a need for immediate intervention. These study findings agree with findings from Africa, Asia and other western countries. Nonetheless, the study did not come up with specific factors that contributed for high prevalence of alcohol abuse among university students which should be an entry point for further intervention. Also, it did not explore the specific interventions that need to be implemented (Reavley, Jorm, McCann & Lubman 2011:3).

Another study conducted by the Global legal research directorate (Author 2015:3) indicated that khat trading and use is legal in Ethiopia and some other African countries like Djibouti, Somalia which makes the above recommendation invalid for implementation in Ethiopia. Even though, khat is considered psycho-active substance in Western and other countries elsewhere, khat production and trading is legal in Ethiopia and is the backbone of the economy as an export product. Moreover, a number of alcohol products is largely produced, traded and consumed among the young people. It is apparent from the above research findings that college or university campus is found to be fertile environment for initiating alcohol and other substances. Many literatures looked at alcohol, substances and drugs abused but none of them as indicated above have looked into details and explored comprehensively. Many have also proposed possible solution and approaches including banning of substance use. But, this may not work in certain geographic areas or regions like Ethiopia where Khat is one of major export item that generates foreign currency (Author 2015:3; Kandari, Yadav & Thakur 2014:1).

The argument is that, most researches conducted in different parts of developed countries are lacking the context of cultural, legal and behavioural factors that leads Ethiopian adolescents vulnerable for alcohol and substance abuse. Some of traditionally produced and largely traded alcohol products and some of substances like khat which is unique to Ethiopia and other few African countries were not covered and studied in detail. Hence, there is dire need for detailed research that focuses on adolescents and specifically adolescent university students' exposure for alcohol and substance abuse and to come up with context specific strategy to address the unique nature and risk taking behaviour of adolescents (Author 2015:5).

### ***2.6.2.2 Alcohol and substance abuse among adolescent university students in developing countries***

As it is in developed countries, alcohol and substance abuse among adolescents in developing countries is also of public health concern. Prior studies indicated that there is high rate of substance abuse among adolescent university students. Abusive drinking and substance abuse at colleges have become ritual and students see it as integral part of higher education experience. Findings revealed that use and abuse at this age could lead to heavier use and abuse at a later age. This could have significant challenges to the intellectual and social lives of students in the campus where region or country specific level of risks and associated exposing factors has to be studied and flagged out for robust action against the growing problem (Diaz & Espinosa 2013:40).

One of the studies conducted in Brazil by Andrade, Duarte, Barroso, Nishmura, Alberghiesni and Oliveira (2012:297) to assess the use of alcohol and its relation with gender had supported the argument of alcohol and substance abuse problem among university campus. The findings indicated that alcohol was most widely consumed substance where more than 86 percent of participants reported life-time consumption of alcohol in the past 12 months. The prevalence of hazardous alcohol use in this study was reported to be more than 21 percent which coincides with the findings from US college students by Penny and Hallam (2010:11) where the extent of alcohol and substance abuse was found to be one of the highest. This was followed by cigarette smoking with prevalence rate of 47 percent. Similarly, about 48 percent of students reported that they have tried some kind of drug. The study also showed that adolescents have tried more substances like inhalants, marijuana and hallucinogens as compared to those aged 34 years who have frequently used analgesics, amphetamine and tranquilizers. The report observed that nearly 50 percent of students have experienced use of illicit drugs which indicates the burden of alcohol, substance and drug abuse among university students. However, the study enrolled participants of different age category where it failed disaggregating findings among the age strata to see exposure of adolescents. It also did not reveal the health effects of alcohol and substance abuse experienced by college students. Besides, the study did not look into factors that expose adolescent university students for alcohol, substance and drug abuse which limits generalisation. It also did not triangulate the findings via key



informant's interview from the school community (Andrade et al 2012:297; Penny & Hallam 2010:11).

Additional findings indicated that some people drink too much and may cause harm to themselves, to friends and others. A study conducted by Diep, Knibbe, Giang and Vries (2015:6) to assess the second hand effect of alcohol consumption among Vietnamese university students revealed that nearly half of study participants who reported consuming alcohol had either bodily or non-bodily consequences. Engaging in fighting, unprotected bodily advance and having accidents were among bodily consequences whereas property damages, being insulted, sleep and study disturbances were considered among second hand non-bodily costs. The study too detailed that alcohol related harm to others was found to be high in Vietnam. That is, non-binge drinkers living in the same campus or dormitory were three times at high risk of assault or study disturbances. However, this study did not examine the specific factors that push adolescent university students to be engaged in alcohol abuse. Besides, this study did not reveal the health effects experienced by the students and their knowledge about possible consequences. It also did not provide any information concerning student's intention and attitude towards future alcohol and substance intake (Diep et al 2015:6).

Similarly, a study conducted in Thailand by Vantamay (2009:364) to investigate factors affecting alcohol consumption among adolescent university students publicised that alcohol consumption among university students was one of the highest ranging to more than 41 percent. The result is found to be consistent with the study findings reported by Andrade et al (2012:297). Some of the factors reportedly associated with alcohol consumption included attitude towards alcohol, perceived susceptibility, perceived severity, accessibility of alcohol near university and exposure to alcohol advertisement. This discovery is in line with the theory of reasoned action (TRA) that if an individual does not feel he or she is vulnerable to the effect of certain behaviour, most likely that the behaviour will be practiced. The study recommended social and ecological approach that focuses intervention at community and social factors to address the specified problem. But, it did not praise any strategy for several individual level factors like monthly living arrangements, income and other attitude factors which have influenced abuse of alcohol. Conversely, the study did not detail the relation of alcohol consumption and other substance abuse (Andrade et al 2012:297; Vantamay 2009:364).

Another study was conducted by Francis, Grosskurth, Chagalucha, Kapiga and Weiss (2014:485) to review published literature. The study focused on the prevalence of alcohol use and abuse among young people in East Africa. The findings revealed that alcohol consumption was reported one of the highest being 82 percent among university students as compared to the general population. This gives a clue that most university students including those who have never tried substances initiate use of alcohol and substance after joining university. Conversely, the researchers (Francis et al 2014:485) uncovered that most studies reviewed did lack clear data presentation about initiation, patterns of use and persistence of alcohol consumption. Correspondingly, the researchers indicated that more than 95 percent of reviewed literature did not employ the standardised questionnaire for alcohol abuse study and found out a lot of heterogeneity among the report (Francis et al 2014:485).

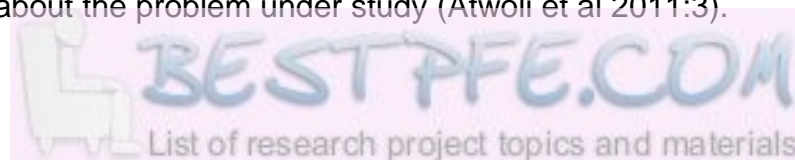
From the above findings, it was established that whatever discrepancy were there, the result acknowledged existence of the reported problem and calls for urgent intervention that targets young people at colleges and universities who are at risk of alcohol and substance abuse. It further detailed that there is a need to conduct alcohol focused study using standardised alcohol screening questionnaire which justifies the need for supplementary research. On the other hand, the researchers did not mention whether those published articles looked into substance abuse and its consequences among adolescents. The study did not recommend any interventions aimed at reducing the problem of substance abuse by adolescents.

A study conducted in Dare es Salaam University by Mwambete and Shemsika (2014:31) revealed that more than 29 percent of respondents reported using alcohol and other substances. Here, alcohol was reported to be one of mainly consumed substance accounting 70 percent and followed by use of psycho-stimulants including life style drugs. The study added that peer pressure was often mentioned as main reason for lifestyle drug consumption among university students. Peer pressure accounted 72 percent, followed by other reasons like getting rid of stresses and to improve academic performances. Yet, the study did not examine the proportion of students who have just started consuming alcohol after joining university. Besides, it did not triangulate the relationship of close family or close friend practice to the current alcohol and substance abuse by adolescents. Similarly, the study did not explore physical, psychological and

socio-economic effects of alcohol and substance abuse among university students. Moreover, it did not recommend any sort of strategy or remedy to curb abuse of substance which was experienced by more than a third students aged between 18-24 years. Thus, it is important to undertake a detailed and context specific research in order to close the gaps by exploring the factors which expose students for alcohol and substance initiation and to come up with relevant recommendations (Mwambete & Shemsika 2014:31).

Another study conducted by Atwoli, Mungla, Ndung'u, Kinoti and Ogot (2011:3) in Kenyan universities had enrolled 478 participants. Its aim was exploring the extent of alcohol abuse where 52 percent of participants reported life time alcohol use. Among those, 97 percent had a drink in the preceding week where alcohol prevalence rate was found to be 50 percent which is in line with findings from Tanzania and other locations. The study uncovered high rate of substance abuse among university students with life time consumption reported to be 69.8 percent. The study by Atwoli et al (2011:3) discovered that about 43 percent of participants reported smoking of cigarettes at least once in their life time. It was found out that life time cigarette smoking for males was higher (47.5 percent) as compared to females (37.5 percent). Besides, in this study, more than 62 percent of students reported that they had engaged in scuffles and quarrels that lead to damage of property. Above and beyond, similar percentage of participants reported that they were engaged in unprotected sex which they regretted next day. This finding alerts us that significant portion of adolescent university students are at high risk of alcohol and substance abuse that exposes them to chronic health problems like sexually transmitted infections (STIs), HIV and syphilis infection which could endanger their future life (Atwoli et al 2011:3).

However, the above study by Atwoli et al (2011:3) had mainly investigated alcohol and drug abuse and its related problems. It did not indicate level of exposure and age specific disparity among university students. Likewise, the study did not detail factors like family, friends or relatives history of alcohol intake or cigarette smoking for possible association to current substance abuse by adolescents. The study did not triangulate self-reported behaviours against findings from campus staffs and other key informants to get more incite about the problem under study (Atwoli et al 2011:3).



Generally, several studies documented that alcohol and substance abuse among university and college students is of global concern that needs due attention. As indicated in the earlier literature review, the prevalence of alcohol, substance and other psychoactive stimulants abuse among university students in developing countries like Africa and elsewhere is almost similar to that of developed countries. The exception might be abuse of variety and different type of substances and alcohol products in different parts of the globe and capacity of identifying the etiology, system for research and intervention mechanism. The situation of varied culture, diverse social, environmental and traditional practices and ways of nurturing and raising children, legislations requirements makes implementation of recommendations from other regions difficult specifically in Ethiopia. That is, the lack for exhaustive study, country and region specific recommendations and strategies to curb the problem which necessitates the need for further study.

### ***2.6.2.3 Magnitude of alcohol and substance abuse among adolescent university students in Ethiopia***

Passing exams and finally going to university or college is a very exciting period as acknowledged by researchers. A report from Ministry of Education (2013:69) indicated that every year, Ethiopian universities receive hundreds of thousands of secondary school graduates who satisfy the minimum requirement in a variety of disciplines. Overwhelmed by the increasing number of admissions, universities usually focus on academic achievements, material facilitation as well as delivering campus rules, procedures, misconducts and related issues. The healthy life of students, specifically freshman students begins with frustration as well as family, friend and home sickness. Freshman students struggle to overcome such stresses and tensions, scrap for academic achievement as well as scuffle to adapt new life that drives them to be engaged in alcohol and substances abuse. The risk of facing a number of challenges where many experience for the first time such as living alone, developing self-autonomy, acclimatising new environment and peer pressure place many more youngsters at risk of engaging in alcohol and substance abuse (MOE 2013:69; Price 2008:6).

The Ministry of Education has indicated that alcohol and substance abuse among university students in Ethiopia has become a major public concern and it remains a

point of discussion among the public which the researcher can also witness. Consequently, the issue has been seriously debated among the Ethiopian public. The issue has caught the attention of mass media where Amharic gazette named 'Medical' published the concern on its edition Volume 1, number 28. The growing concern of alcohol and substance use at Ethiopian higher learning institutions was also echoed by 'Addis Admass' and other local editions (Alamin 2015:19). Similarly, anyone who takes public transport or goes to public gathering places in Ethiopia can witness the issue of rapid expansion of universities across the country, its associated problems like of alcohol, substance and illicit drug abuse. Many started questioning of university managers and government capacity in identifying possible causes and step in before the problem worsens further more. The publication detailed that alcohol and substance abuse among university students in Ethiopia is a growing problem. Similarly, other weekly published 'Gazeta's had raised their voice concerning alcohol and substance abuse and possible risk of exposure for HIV, unwanted pregnancy, unsafe abortion and other consequences specifically among female adolescent university students. The author summarised that the problem has become major issue of debate among the public. Given the Ethiopian experience, a conservative society where a lot of problem behaviours practised in secret, public concerns do not buy mass media attention, unless a problem is widespread, shared among the majority and the problem in question remains neglected. It is something which was not given due attention by the concerned managers, organisations and other stakeholders about the causes and possible remedies. Likewise, there were no reflections broadcasted or published by concerned officials including the university administration and/or ministry of education. Despite public concern about the growing problem of alcohol and substance abuse, it seems that everyone preferred to keep silent (Alamin 2015:19).

A related research was also conducted by Tulu and Keskis (2015:8) that focused on assessment of causes, prevalence and consequences of alcohol and drug abuse among university students. This study employed purposeful sampling method where it had enrolled 200 participants from second year social science stream. The findings showed that prevalence of alcohol and substance abuse among university students was reported to be more than 30%. The study further uncovered alcohol and substance abuse related consequences such as academic, social, physical and financial problems including behavioural outcomes. Such extent of alcohol abuse reported by the above study among university students at Mekele was slightly lower than the findings reported

by Small, Abar, Maggs, Morgan and Small (2011:13) at Texas University where prevalence of alcohol use was reported to be more than 55 percent. Possible justification for such discrepancy could be the methodology employed by Tulu and Keskis (2015:8) where the study enrolled respondents from second year only. Further, the study by Tulu and Keskis (2015:8) had selected respondents from social science stream only which limited generalisation of the findings (Abar, Small, Morgan & Maggs 2011:13; Small et al 2011:13; Tulu & Keskis 2015:8).

Nonetheless, the above study by Tulu and Keskis (2015:8) did not detail why those specific groups were selected and why purposive sampling method was employed for that specific study. Such methodological issues may have resulted in biased information and make us to believe that discrepancy could be attributable to methodology employed. That is, those participants selected from a specific department might have unique cultural and/or religious life styles which brand the study less representative. Besides, the study selected variables only for alcohol, khat and cigarette smoking. The study did not explore the use of other substances like hashish, shisha and other drugs like sleeping pills. Moreover, the study did not point out any on-going intervention. Furthermore, no specific intervention was recommended to address the problem (Abar et al 2011:13; Tulu & Keskis 2015:8).

Besides, the research by Tulu and Keskis (2015:8) did not explore the number days that adolescents drink or use substances, access and cost issues have affected level of alcohol and substance abuse. Furthermore, the study did not explore any possible reasons that pushed adolescent university students to engage in alcohol and substance abuse. Additionally, the study did not look into whether factors like previous life styles, nurturing patterns, school attendance and other related factors had any association with the current alcohol use and abuse. Thus, a context specific, representative and exhaustive study needs to be conducted to understand the extent of alcohol and substance abuse among adolescent university students (Tulu & Keskis 2015:8).

Another study was conducted by Tesfaye, Derese and Hambisa (2014:4) with the aim to explore substance abuse and associated factors among university students. It had employed cross sectional survey and had enrolled 1040 respondents from different departments. Findings from this study specified that prevalence of substance abuse was reported to be one of the highest among university students. The study indicated

that more than 62 percent of participants reported use of substance at least once in their life time which is twice higher than the findings by Tulu and Keskis (2015:8). Also, prevalence of chewing khat was reported to be more than 40 percent where 31 percent of participants reported that they started chewing khat after joining university. Besides, more than 17 percent of participants reported that they use illicit drugs. However, the above study did not designate exhaustive list of substances and type of drugs used by adolescents. On the other hand, increased academic performance was cited by more than 45 percent of participants as one of major reasons for substance abuse. Also, religious purposes and seeking pleasure were among reasons mentioned for substance abuse (Tesfaye et al 2014:4; Tulu & Keskis 2015:8).

On the contrary, the above study indicated that being religious is a protective factor for substance abuse which opposes the reasons mentioned for alcohol and substance abuse by the same researcher. Moreover, the study indicated that odds of substance abuse were reported to be higher among third year students which is also contrary to the findings from other studies where substance use among first year students was reported to be one of the highest as compared to the findings among second year and above which needs to be verified. Also, the above study by Tesfaye et al (2014:4) did not triangulate the findings by employing techniques like focus group discussions (FGDs). Also, it did not substantiate the findings by enrolling key informants from university community which limits extent of the findings. Besides, the study did not look into possible factors like use of family members or close friends as exposing factor for alcohol and substance abuse. Too, it did not uncover whether ease of access, availability, outlets, costs and other related factors could have contributed for abuse of such substances. Conversely, it did not reveal whether nurturing patterns and schooling methods like being raised in urban versus rural areas have any difference in initiating alcohol and substances. These insist on the crucial need for conducting further study to explore in detail to understand the factors that could have contributed for alcohol and substance abuse among university students (Tesfaye et al 2014:4).

A comparable study that had focused on examining the extent of substance abuse and its associated factors was conducted by Aklog, Tiruneh and Tsegay (2013:6). Its aim was to determine prevalence of substance abuse and its associated factors among university students. Using a cross-sectional study design, the study had enrolled 423 participants. The result indicated that the abuse of substance among university students

was found to be conflicting where 14 percent reported in the abstract section and 61 percent was reported in the result section which needs to be cleared. Too, commonly abused substances were mentioned to be alcohol, cigarettes and khat. Some of the reasons mentioned for alcohol and substance abuse were academic dissatisfaction, family substance use, availability and personal pleasure. The researcher concluded that significant portion of university students' abuse substances which has become public health concern that needs action. The research finding was slightly lower than the report from Western Kenya by Atwoli et al (2011:3) but no justification was given. Moreover, the findings concerning association of socio-demographic variables for possible substance abuse among adolescents is not in line with the study from Kenya where the report cleared that socio demographic factors have no association with adolescent substance abuse. The study likewise reported that most of the participants (97%) were from 'Amhara ethnic group that severely limits representativeness of the study findings and generalisation or drawing conclusion (Aklog et al 2013:6; Atwoli et al 2011:3).

Further, the study by Aklog et al (2013:6) employed self-administered questionnaires as the only method of data collection. Also, the study did not comprehensively analyse the level of exposure to some substances like Hashish, cannabis and cigarette smoking. Besides, the above study did not define radius of availability, ease of access, costs, family income status and other related variables influence as a possible factor for alcohol and substance abuse. Moreover, the study did not detailed whether participants have exposure to locally produced alcohol products. The study did not explore any untoward effects of alcohol and substance abuse among the students and their knowledge, attitude and intention for future choice of use or moderation (Aklog et al 2013:6).

At this point, it has become clear that the above research findings and reports from Ethiopia are in line with findings from other locations and regions such as Western countries, Latin America, Asia, other parts of Africa or elsewhere. Those findings documented that many students engage in alcohol and substance abuse after joining campus which has become major public concern. However, many studies including UN reports (UN 2011:42) mainly depended on Western findings concerning the type of substances abused, the extent of exposure to such substances and its related factors. As it was detailed above, the research findings, associated reasons, possible factors, its consequences and others factors for alcohol and substance abuse among adolescent



university students differ from region to region. Also, the remedies proposed have a different context, culture, different life style and other factors than the situation in Africa and specifically in Ethiopia. Most importantly, alcohol, substance and other psycho-stimulants abuse, causative factors and consequences including academic performance, associated psychopathology and socio-economic effects were not studied in detail and facts were not established in Ethiopia which necessitates the need to conduct further research (UN 2011:42).

Likewise, much of the literature sources reviewed above focused on alcohol consumption and/or illicit drugs and did not include alcoholic products produced traditionally with different strengths and consumed by adolescents. Also, most research studies did not examine exposure of adolescents to khat which is a unique substance to Ethiopia. Khat which is a substance similar to amphetamine is widely produced, circulated and consumed by the adolescents and specifically university students in Ethiopia. Unlike other countries, khat is one of common substances widely consumed by adolescents in Ethiopia. It has active ingredient similar to amphetamine that causes increased alertness, physical activity and more concentration. Later on, it causes reduced appetite, rapid breathing, increased heart rate, increased blood pressure (BP) and irregular heartbeat that have significant effect of exposing for chronic illnesses such as hypertension and heart failure. Also, different type of alcohol products are traditionally produced and consumed among adolescents with their strengths yet not determined. The world health organisation report indicated that alcohol and substance abuse is attributable to millions of deaths globally and may potentially cause other serious problems among university students that qualify the need to uncover the problem (WHO 2014:14).

On the other hand, few studies conducted in Ethiopia, as indicated above, have failed to detail the extent of the problem and lacked comprehensive approach which deals with the factors and other details which lead to alcohol, substances, drugs and others hidden and away from the public, government and policy endorsement. On the other hand, use and abuse of such substances by adolescents particularly adolescent university students, according to Alamin (2015:19) was found to be of major public concern. Very few studies have reported the seriousness of the problem among adolescent university students. Yet, many publications reviewed indicated that studies were not comprehensive enough to uncover the problem in detail. Conversely, it was observed

that those studies conducted in Ethiopia have limitation in the areas including representativeness, comprehensiveness and methodological issues to address the extent, associated factors and other factors which is verified by the reviewed literatures above. These points out that there is enough reason to undertake a study in the Ethiopian context to uncover type of alcohol and substances consumed and examine its extent.

Lastly, it has become clear that most publications reviewed concerning alcohol and substance abuse did not consider the unique context of Ethiopia. Most studies conducted did not comprehensively explore the factors, associated problems and recommendations that need to be flagged out for policy interventions. Hence, there are enough reasons to conduct a study in selected universities in Ethiopia to uncover the real nature and extent of alcohol and substance abuse and associated factors. The study focused on factors that intensity its use as well as exploring attitudes and intentions held by adolescent university students helps to understand their intention for future use. Likewise, there is need for a specific study that could attempt to identify the driving factors which leads university students to alcohol and substance use and abuse as well as its associated consequences.

## **2.7 STRATEGIES TO MITIGATE ALCOHOL AND SUBSTANCE ABUSE**

### **2.7.1 Global strategies to mitigate alcohol and substance abuse among adolescent university students**

Going to university is a special moment in life and both exciting and challenging due to several factors mentioned above. Many studies, as detailed above, have documented that exposure to alcohol and substance is one of major risks encountered adolescent university students. Likewise, the extent of alcohol and substance abuse among adolescent university students remains very high and is of public concern. The campus is a known environment where many young people consume alcohol, experiment drugs and other psycho-active substances. Such behaviour is known to affect physical, academic, social and economic situation as well as the future of adolescent university students which alerts the need for developing a context specific, culture sensitive and workable strategy so as to address immediate and long lasting problems.

To address the above concerns, there remains an obligation to design a strategy, which is a carefully devised plan of action to achieve a specific goal. For this specific study, strategies to be explored include strategies for reduction of alcohol and substance abuse among adolescent university students so as to promote a healthy and positive behaviour that supports academic and social achievement. Health, on the other hand, is a state of (WHO 1948:1) complete physical, mental and social wellbeing and not merely the absence of disease or infirmity. Health is a way of life and is an on-going process. It can be influenced by our day-to-day life experiences, life style including drinking, feeding, exercise, medications and working environment which has to be modified in a way that supports better life (WHO 1948:1).

It is well-documented that the problem of alcohol and substance abuse among university students is a common problem where literature from Western and developing countries confirmed its extent and increasing public concern. Most studies came up with recommendations that need to be implemented in order to tackle the problem. As well, a study conducted indicated that binge drinking and purposeful drinking to become intoxicated is significantly increasing among university adolescents. The study concluded that substance abuse has become culture among college students where policy makers left the issue aside thinking that it would have no solution. It advocated for having substance free campus and suggested that university administrators should not avoid young students which they have received to be engaged in alcohol and substance abuse. However, the study never came out with specific strategy for implementation or policy input which could help to curb the problem (Califano 2007:3).

Another study was conducted by O'Malley and Johnston (2002:39) with the aim to determine epidemiology of alcohol and other substances abuse among American college students. The study used five different secondary data sources. The findings specified that trends of alcohol consumption had increased in college students than their non-college counter parts with current use rate being more than 70 percent. The study detailed divergence in heavy drinking since 1981 and concluded that aspects of college environment supported such behaviour than non-college environment. The study revealed that one of the reasons was increased advertisement of alcohol close to college compound which is in agreement with the study conducted by Weitzman et al (2003:33). Nevertheless, the above study did not come up with any type of specific

remedy to address the growing concern (O'Malley & Johnston 2002:39; Weitzman et al 2003:33).

It was observed that the above findings are in line with the research study conducted in Greece by Kounenou (2010:1909) to explore the relationship of drug use, alcohol drinking, entertainment activities and self-esteem among university students. Data for the study was collected using self-administered questionnaire using sample size of 247 university students attending business school. The result is in line with the finding from American colleges where 51 percent drink twice weekly. Also, significant proportion (38 percent) of university students was found to be over drinkers. Also, the study by Kounenou (2010:1909) indicated that nearly nine percent of participants reported use of cannabis and two percent of students reported that they used tranquilizers. The study further mentioned that those who abuse substances were likely to drink hard alcohol which could significantly had effect on their health including liver damages. Also, those who perform exercise were used to drink alcohol only once a month where athletics seems to have protective factor. At last, the study came up with recommendations for university services such as organising peer counselling, voluntary groups and athletics to improve bond. However, this study had only focused on students from specific unit which might have affected the findings negatively or positively. As in the case, non-drinkers and/or more religious affiliated groups may have clustered in the study unit. Besides, the study did not investigate in detail the various factors that expose for the problem under study. Besides, the researchers did not provide recommendations or some kind of response strategy for the groups who had reasons for use of alcohol, drugs and substances like getting alert for reading (9 percent), to be relaxed (25 percent) and coping with problems (0.4 percent). Further, it did not probe whether any strategies were in place or on-going interventions and challenges faced to address the problem under investigation (Kounenou 2010:1909).

Another study conducted in Vermont by Kalsi (2015:3) indicated that the number of college students abusing prescription drugs had more than doubled reaching four percent as compared to its situation in 1990s. The report further stressed that almost half of regular students binge drink or use prescription drugs and about a fourth of college students meet the criteria for substance abuse related disorders or dependence. The findings among college students were alarmingly high where the problem was found to be three times higher than the general population. Lastly, the researcher

concluded that alcohol and substance abuse among college students has become major problem which needs urgent intervention. It came up with the importance of interactive presentation where each student brain storms and presents his/her experience of substance abuse. Then, participants propose solutions and programmes areas that could help to curb the problem. Moreover, the role of school nurses intervention was indicated as a main focus area which may not applicable in low income countries like Ethiopia. Besides, the study did not detail which specific programmes or policies need to be advocated, budgeted, aligned and implemented to reduce alcohol and substance abuse among adolescent university students (Kalsi 2015:3).

Additionally, different literatures uncovered that (Califano 2007:3) harmful consequences linked to alcohol and substance abuse among adolescent university students is on the rise. Some of the effects include poor academic performance due to impairment in memory function, problem solving skills, lack of cognitive thinking and missing classes. Secondary effects due to alcohol abuse including property damages, incidents of rape, arrest, financial costs and increase in campus security are among the most frequent incidents. These findings were supported with a study from Vermont University by Kalsi (2015:10) where those students who are involved in substance abuse are at risk of failure to top in school potential. This included failure to attend classes, fail to pay attention, lack of concentration during lecture hours, unable to meet deadline for submitting assignments and inadequate participation in extra-curricular or school oriented other activities. The project aimed primarily to explore and learn problem of drug use and then conducting awareness campaign before another group joins university and enters in to drug abuse figure. The study indicated student's interest in the interactive session but did not indicate the curricula or the strategy on how to implement the interactive sessions, for how long and how to align with their academic class, laboratory and study hours (Califano 2007:3; Kalsi 2015:10).

According to a study by Mack (2010:23), student's drug abuse has presented the prevalence of lifetime alcohol and drug use in twelve countries of the Caribbean region. The findings revealed that prevalence of alcohol abuse among young people was reported to be 69 percent. In this specific study, the life time prevalence for tobacco use was reported to be 34 percent in Grenada and the lowest being 29 percent in Tobago. Also, abuse of stimulants that could lead to heart attack, seizures, paranoia and increased youth hostility. The study by Mack indicated that almost a

quarter of students in Haiti abuse tranquilizers. The study by Mack came up with certain recommendations but this study has a number of limitations. The survey has happened at different point in time and the number of sample size used differs from country to country which compromises comparison. On the other hand, different countries may have different socio-cultural backgrounds which could also affect recommendations and proposing of uniform intervention modalities (Mack 2010:23).

Another study conducted in Vietnam by Diep, Knibbe, Giang and Vries (2013:1) indicated that alcohol consumption and its related harm were found to be one of major public health problems. The participants reported that they had experienced harmful effects like loss of control, acute consequences and withdrawal effects after consuming alcohol. These harmful effects were more in males (80%) and less in women (61%). The finding specified that most students engaged in drinking after joining university taking advantage of the freedom from family control. The study further indicated that living with family was found to be a protective factor. Another study was conducted in Vietnam in 2015 by the same researchers Diep et al (2015:7) to explore the extent and predictors of second hand effects of alcohol abuse among students. The findings showed that about 78 percent had experienced bodily and non-bodily harm due to the drinking of others. The study came up with policy recommendation stressing the importance of awareness campaign. This specific study, however examined exposure to alcohol harm without examining the prevalence of alcohol abuse among college students which limits its scope. Besides, it did not examine possible reasons for alcohol consumption that could help to design remedy and strategy. Perhaps, the study did not mention any available policy and any on-going intervention so as to look for new approaches or different policy direction (Diep et al 2013:7; 2015:1).

Several studies have confirmed that the commonest causes of death globally are chronic diseases associated with substance abuse including hypertension, heart disease, cancer, lung diseases, diabetes and others. A study conducted by Hoskins & Manano (2004:1) signposted that among behavioural factors associated to such diseases are alcohol consumption, abuse of substances like cigarette smoking, tobacco and other psycho-stimulants abuse and others. Similar studies have also shown that alcohol consumption leads to risky sexual activities like inconsistent condom use and casual sex. A Study conducted in Uganda by Choudhry, Agardh, Stafstrom and Ostergren (2014:9) indicated that students who have consumed alcohol were at high

risk of unprotected sexual activity with a new partner by almost 1.5 fold higher than those who did not consume alcohol (Choudhry et al 2014:9; Hoskins & Manano 2004:1).

The above study finding from Choudhry et al (2014:9) is in support of the the study conducted in Kenyan universities by Atwoli et al (2011:1). The study further detailed that sudden freedom from parental control increases the practice of experiencing alcohol, substance abuse and experimenting of sex. Those grown up in rural areas are more likely to be exposed for inconsistent condom use while drink and dating than their counter parts rose in towns. The study recommends importance of public health intervention including information, education and communication (IEC) to prevent alcohol use and risky sexual behaviour (Atwoli et al 2011:1; Choudhry et al 2014:9).

However, the study by Atwoli et al (2011:1) had focused only on alcohol abuse and its related risky sexual behaviour. It did not address other factors such as mood changes associated with use of substance and its relation with risky sexual behaviour. Also, this specific study did not examine other effects and possible consequences of alcohol consumption like social relations with family and friends, engagement in crime, effects on academic performance, on health and others. Besides, the study enrolled participants from one university that only runs science programme. Moreover, non-response rate was reported to be more than 20 percent which may have changed the findings like life time alcohol consumption, the disparity between urban versus rural origin for increased exposure to alcohol and other risky sexual behaviour (Derese et al 2014:5). Moreover, it did not highlight what policies and interventions are on the ground which necessitates further study to address knowledge gap (Choudhry et al 2014:9; Derese et al 2014:5).

Similar studies indicated that early use of drugs and substance increases the risk addiction and related problems. A study conducted by Volkow (2014:11) marked that early use of substance leads to substance abuse and dependence. There could be demand for patient admission and intervention where countries like Ethiopia may not afford due to the high burden of communicable diseases, poor infrastructure, inadequate health facilities and high level poverty. As one third of its people are living below poverty line, many developing countries like Ethiopia may not be able to prioritise such kind of intervention for substance addiction or withdrawal problems. Accordingly, many agree that early intervention will go long where it could help to prevent changes in

brain as a result of effects of drug and alcohol. It means that if we are able to prevent experimenting of alcohol and drugs by adolescents, we can prevent addiction and related untoward effects of alcohol and substance abuse. Thus, there is need to explore the extent for possible early prevention (Volkow 2014:11; World Bank 2014:30).

This has been proved by different scholars where research findings have uncovered factors of alcohol and substance abuse specifically in developed countries and came up with some recommendations. Recognising the high prevalence and related consequences of alcohol and substance abuse among adolescent university students, many countries put an effort for effective prevention strategies. Universal efforts like drug education, targeted youth education of adolescents and their families are some of the recommendations. But, findings revealed that these approaches do not address the problem. This indicates that there is a need to conduct detailed and context specific study and to come up with unique strategy (Reno, Holder, Marcus & Leary 2000:11).

Findings indicated that use of abusive substances disrupts brain function that leads to family and social problems. Many scholars looked at why some people or certain group of people are at high risk of addiction or abuse and others not so as to identify possible causes and to provide relevant remedy. Based on the research findings, different modalities of approach developed including health education which targets on vulnerability of behaviour. The study by Volkow (2014:19) suggested that strategies developed based on comprehensive research findings and prevention programmes properly implemented have shown to decrease abuse of alcohol, substance and other drugs among young people. However, the extent of use, availability of type of alcohol and substances, social and cultural contexts differ from region to region, country to country and even within the same country which limits endorsement and implementation of such universally prepared strategies. Besides, vulnerability differs from individual to individual which makes approaches difficult (Volkow 2014:19).

A study conducted on alcohol and substance abuse among adolescent students in Vermont College revealed highest rate of alcohol consumption and came up with a need for public health intervention using interactive learning sessions where more students were interested to attend such kind of learning and demanded more. The study suggests that group intervention could have significant change to prevent alcohol and substance abuse. However, the aim and strategies of the study focused only on drug



abuse and did not comprehensively attempt to address the use of alcohol, substance and other psycho-stimulant drugs which limits the scope of the recommendations (Kalsi 2015:10).

Literature review conducted to understand contributing factors for engaging in alcohol and substance abuse and came up with relevant strategies and recommendation. Some agree that access has role for adolescents to engage in alcohol and substance abuse. A study by Bandy and Moor (2008:1) suggests that conducting awareness campaign and raising the knowledge of health consequences could help adolescents stop or reduce alcohol or substance abuse. But, this specific study did not explore how many adolescents have the said knowledge gaps (Bandy & Moor 2008:1).

A study by Marline, Jagger and Schulenburg (2009:5) indicated that children raised in places where families abuse substances are at a greater risk to engage in substance use. They take it as a normal. The researcher acknowledged adolescents risk taking behaviour and concluded that many predictors for alcohol abuse are known to retain as a predictive value in later age. At this specific point, the researcher also witness that 'an adolescent university student from 'Adama said, "chewing chat is not a problem as such, I do not see it as very bad practice because I come from a khat chewing family and we have no problems". The statement confirms the influence of parents on adolescents' attitudes, beliefs and behaviours. The researchers Marlene, Jagger & Schulenburg (2008:5) did not come-up with interventions for adolescents and or their families. Lastly, the above study did not point out any remedy for those predictive variables that push adolescents to engage in alcohol abuse and also known to have later influence (Marline et al 2009:32).

A study conducted in US by Gittens, Gordon, Khoury and Xiao (2013:8) justified that parent and child relationship has significant role in gearing the behaviour of adolescents. Depending on the type of relationship and support provided during this crucial stage of development, parents may serve as protective or safe haven for initiation of different type of alcohol or substance use. The specific study explored the dynamic role of parental influences in preventing adolescent smoking initiation revealed that parents have irreplaceable role in preventing smoking initiation. It recommended that parents can protect adolescents from mixing with peers who smoke which is a known risk factor. However, But, this study did not take in to consideration that peer

relationship is an important part of adolescent's life as they share views and desires of each other. Hence, it is reality that mixing of peers cannot be avoided. On the other hand, this recommendation may not be feasible specifically for adolescents assigned in universities that are located hundreds or at times thousands kilometres away from their home town (Gittens et al 2013:8).

Also, an article by Volkow (2014:14) suggested that children's early interaction with their family, friends and the environment is crucial to their healthy development. The researcher pointed out that environmental factors increase the risk where children from parents or family members who abuse alcohol and drug are at higher at risk of experiencing it. He further mentioned the influence of friends and peer groups who use drugs and substance can easily press their team to engage in substance use. Volkow adds that personal factors like students with poor skills or academic problems can also be easily engaged in substance abuse. However, the study did not suggest how students with poor academic skills as a factor for alcohol and substance abuse can be supported and prevented from engaging in alcohol and substance abuse. Besides, the researcher did not suggest what kind of intervention that needs to target families (Volkow 2014:14).

A study conducted by Small, Morgan, Abar and Maggs (2012:17) to address the risk drinking focused on parental influence to reduce adolescent university student's exposure for alcohol and substance abuse. The study recommends direct and indirect communication with specifically first year students by using text messaging and a call of reminder not to drink alcohol. But, the study did not specify what key messages should be texted and the frequency of messaging. Besides, such kind of intervention may not be feasible in countries like Ethiopia where communication methods poor, network very bad and costly. Another research by Fedardi, Azad and Nematı (2010:4) had explored factors like motivation and resilience as a main predictor for substance use. It indicated that people with resilient behaviour are more likely to resist stress and commit to their goals. Nevertheless, the findings did not come up with any recommendations on ways for promoting resilient behaviour and did not indicate the enabling factors for intervention of such outcome. Also, it did not suggest how peer influence on alcohol and substance abuse can be prevented (Fedardi et al 2010:4; Small et al 2012:17).

Hubley and Cooperman (2013:16) suggested that prevention programmes for alcohol and substance abuse employ health promotion service which is a strategy that informs consequences, influences and assists positive behaviour development both individuals and organisations. The importance of health promotion was also amended by the international conference which was held in Canada (Ottawa Charter 1986:1) with the aim to enable people to gain control over and improve their health. The charter recommends five set of actions to be implemented to achieve the intended goal. These include public policy for health that places health at the center of policy agenda, supportive environment where all development activities have to mainstream healthy environment, community action through community empowerment and ownership of their health. These could help both accept for better outcome including mental and physical health. Package recommends targeting personal skills by providing information and education for health to enhance health and re-orienting of health programmes focusing greater emphasis on health promotion, primary health care and equity. In this regard, health promotion programmes for mental health seem inadequate specifically in developing countries. Taking such principles into account, there seems a need to conduct a research to explore the extent, associated factors and designing a strategy that fits in the current system. This may include lobbying for policy endorsement, developing supportive legislations and coordinating multi-sectoral effort to respond for the current problem (Author 1986:1; Hubley & Cooperman 2013:16).

Lastly, a study by Larimer, Kilmer and Lee (2005:16) acknowledged the serious problem of alcohol, drugs and other substance abuse as a major problem among first year college students. The research recommends individual level effective intervention to reduce alcohol and substance use and abuse. It added the importance of integrating campus and community level implementation among others like environment intervention to complement the response. However, the researcher did not detail what kind of campus, community and environmental interventions should be implemented. Besides, it did not give any suggestions about other factors such as family and peer group influences and possible interventions (Larimer et al 2005:16).

In summary, the above general findings showed that different scholars came out with different approaches and recommendations to curb the global problem of alcohol and substance abuse among adolescent university students. However, it was seen that there exist gaps and limitations due to difference in culture, type of substances abused,

legal versus illegal substances and others such as khat situation in Ethiopia. Hence, there is need to explore the extent and to come up with a remedy for context specific interventions.

### **2.7.2 Ethiopian strategy to reduce and control alcohol and substances abuse among adolescent university students**

The health state of an individual is largely influenced by social, economic, behavioural and other factors. These dynamics shape the circumstances which we live, grow, educate, work and age. Besides, the system which we have, in order to respond, to the emerging and developing health needs influences attainment of high standard of health. Such a system includes a comprehensive, holistic, culturally sensitive and context specific strategy implementation where individuals and communities take responsibilities for their own action. To develop and put such a strategy in action, it is important that extent of the problem, its contributing and protective factors identified and attitudes and intention of those specific groups have to be explored, available strategies sorted out and workable strategy developed that includes ratification of policies, drafting or revising legislations, developing standard operating procedures (SOPs) and monitoring of its implementation on the ground. In Ethiopia, many more guidelines, strategies and protocols have been developed but limited to address the problem of alcohol, substance abuse among adolescent university students (Kumar & Preetha 2012:3).

Thus, it is this specific study's concern that unlike the previous days, where there were low enrolments, current situation of alcohol, substances and other psycho-stimulants abuse among adolescent university students in Ethiopia has become public concern. It was universally agreed that joining university in Ethiopia is a privilege that few has. However, research findings from Ethiopia and elsewhere documented that universities have become safe haven for alcohol and substance abuse. By now, it has become a growing community concern that alcohol and substance abuse among Ethiopian university students is on the increase. Many call for officials to pay due attention (Alamin 2015:19; MOE 2013:17).

As part of the above initiative, few researchers in Ethiopia attempted to explore the extent of alcohol and substance abuse and came up with recommendations that they

think might help to address the problem but none of them comprehensively proposed a workable strategy to curb the problem. From among those few studies conducted, it became evident that adolescent university student's exposure to alcohol and substance abuse was very high. A study conducted in Mekele university of Ethiopia indicated that about 60 percent of study participants were found to be alcohol and substance abusers. This finding was in agreement with the findings by Atwoli et al (2011:8) from Kenyan universities where the extent of alcohol and substance abuse was high with life-time use reaching 70 percent. The study concluded that those adolescents who abuse substances could face greater risk of alcohol and substance abuse related problems in their later life. The study recommended for urgent need to address the far reaching consequences. It added the importance of conducting further intensive research and exploring the factors associated with the increasing trend of alcohol and substance abuse among university students in Ethiopia. However, it did not indicate any strategy or remedy that could immediately put into action so as to address the imminent danger of alcohol and substance abuse among adolescent university students (Atwoli et al 2011:8; Tulu & Keskis 2015:55).

Another study conducted by Tesfaye et al (2014:4) using cross sectional survey with the aim to explore substance use and associated factors among university students enrolled 1040 participants. Findings from the study indicated that substance abuse is very high among university students. The study indicated that more than 62 percent of participants reported use of substance at least once in their life time which is twice higher than the findings by Tulu and Keskis (2015:8). Also, prevalence of chewing khat was reported to be more than 40 percent where 31 percent of them have started chewing after joining university. Besides, more than 17 percent of participants reported that they use illicit drugs (Tefaye et al 2014:4; Tulu & Keskis 2015:8).

The above study findings by Tesfaye et al (2014:8) were also confirmed by the Ethiopian drug administration and control authority (DACA 2005:1) where it conducted a research to assess students' exposure to tobacco and other substances and came up that exposure among adolescents was one of the highest. DACA recommended designing of school based education curricula, designing, enforcing regulations and cascade of awareness campaign. However, the study conducted by DACA did not inform which regulations were in place, what kind of regulations need to be endorsed

and the channel to be used for the intended campaign (Author 2005:1; Tesfaye et al 2014:8).

Furthermore, most studies conducted in Ethiopian universities did not look into the recommendations from drug administration and control authority (DACA) whether it was in place, its strengths and limitations to address the problem of alcohol and substance abuse. The study by Tesfaye et al (2014:8) recommended the need to have a strategy to address the growing problem and suggested establishment of a counselling unit in the universities as area of intervention. However, it did not indicate whether any interventions are available and ongoing. Further, it did not detail any type of relevant policy input to address the problem. The study did not look into the aspects of psychotropic drugs prescription and regulation rules of the country and its monitoring mechanism if any. Moreover, the study did not look into the factors on how students access and abuse drugs. This indicates the need to conduct further study to explore and to come up with relevant strategy to address the gaps (Tefaye et al 2014:8).

In Ethiopian context, many strategies targeting diverse age groups were developed to address different health and social problems and entered in to action. Ethiopia has a unique health promotion and disease prevention programme which was implemented since 2004. However, this programme did not target adolescents in universities. In 2007, adolescent and youth reproductive health (AYRH) strategy was developed and implemented, but had many limitations. For instance, the strategy's main focus was for youth in rural and urban Kebele's which is equivalent to the next level of district. Also, the package focuses on reproductive and sexual health. However, there was no specific strategy developed or designed to address the problem of alcohol and substance abuse among adolescent university students. Besides, due attention was not given for the problem despite families, campus community and significant others concern that indicated it as a current problem that needs intervention (Alamin 2015:19; MOH 2011:3).

In Ethiopian health care system, individual and mass health education is part of routine primary health care unit (PHCU). Health and health related risks used to be identified by the respective health service provider and health education session arranged accordingly. Ideally, universities under the catchment of PHCU should be observed by the health unit, problems visible should be identified and health education session

should be arranged. But, universities are like islands and did not catch health ministry attention. Besides, many scholars agree that providing occasional health information could not bring behaviour change specifically for such behavior. This includes attitude, intention, significant others and enabling factors. It was well understood that due to conventional disease burden, government may not have prioritised such interventions where adolescents' university students continued to be exposed with limited intervention (Elias 2013:8; MOH 2010:7).

Generally, the notion of adolescence poses a great challenge to health promotion initiatives to resource-limited countries like Ethiopia. Increased trend of alcohol and substance use among adolescent university students could be a big blow for a country struggling to control conventional burden of communicable diseases. Unless contained, the facility, economic and human resource needed for the treatment of addicted adolescents will pose serious challenge in several aspects. On top of the above, world health organisation (WHO 2010c:2) assessment on the atlas of substance use disorders report acknowledged existence of substance use disorders. The country profile report added that Ethiopia lacks epidemiological data, policy, known strategy, programme and budget line for monitoring mechanism to respond for the growing concern of alcohol, substance and drug abuse. That means, health promotion attempts may not result in behaviour change unless other determinants and factors for alcohol and substance experimentation were addressed. So, precursors for accepting alcohol and substance experimentation should be identified and addressed first (WHO 2010c:2).

Henceforth, the extent of the problem was not well understood and shared among different stake holders which this study aims to address. After exploring magnitude of the problem, its predisposing and other associated factors, this study aims to come up with workable strategy that may target individual level interventions, group dynamics and community dialogues with context specific and cultural sensitive intervention modalities. The study will also serve as a baseline for lobbying policy makers for law enforcement and support, policy development, budget allocation for intervention including creation of favourable institutional arrangements to curb abuse of alcohol and substance among adolescent university students.



Thus, lack of set of health promotion activities that include consistent and targeted health information and education, advocacy and health service improvement based on need and gap assessment which was not in place necessitates my study.

## **2.8 CONCLUSION**

The literature review is an explicit perusal of published materials relevant to the research topic. As evidenced from literature, inappropriate alcohol consumption among adolescent university students remains a major challenge. The type and extent of alcohol and substance abuse differs from society to society. Also, some of the substances used may be unique to specific countries like chat for Ethiopia. Most adolescents start alcohol and substance abuse after joining university.

As it was reported and from the summarised publications above, the untoward effects of alcohol and substance abuse among adolescent university students are enormous. Some of the major consequences of alcohol and substance abuse reported by adolescent university students included problem in academic achievement, crime and unwanted violence, social conflict with family and friends, psychological problems including depression and suicidal ideation, financial cost and medical problems including chronic consequences like late addiction and chronic illnesses.

It is well documented that the extent of alcohol and substance abuse among adolescent university students is one of the highest and has become a global concern. The problem continued affecting different aspects of their life including their families, dormitory/classmates and campus management. Different literature reviewed above came up with many recommendations to reduce the problem. However, a detailed study concerning the extent of alcohol and substance abuse, exhaustive list of substances abused, contributing factors were not detailed very well. Also, recommendations have different context such as banning use of substances while some of substances like 'khat and cigarette are legal and main source of revenue for the government which makes implementation not feasible. Besides, context-specific and existing strategies to address the problems were not available and/or were not well documented and communicated. The level of intervention, its applicability across diverse cultures, its pros and cons were not clearly investigated.



In view of this, an extensive body of knowledge that supports implementation of health promotion programme on the prevention and reduction of alcohol and substance abuse needs to be prioritised. A research by Frisher, Crome, Macleod, Bloor and Hickman (2007:13) has supported that some of behavioural and attitudinal factors that exposes adolescents to alcohol and substances are easier to be modified and changed. This includes early onset of alcohol, cigarette, drug and other substance use, law breaking, educational disturbances and others. The study recommends the importance of conducting a detailed analysis on exposure and risks as well as outcome factors such as type and level of exposure. Perhaps, this can be realised by examining the extent, identifying the commonly abused drugs and substances, determining the contributing factors and designing a workable strategy (Frisher et al 2007:17).

The above findings prompted the researcher to undertake this study to uncover the extent of substance abuse, contributing factors for alcohol, drugs and substance abuse among university students so as to come up with possible strategy to address the problem. In this regard, the researcher could attempt to describe the crater between the current findings and what the parents, schools and communities are doing. This study takes into account that health promotion programmes targeting adolescent university students needs a coordinated effort and action of many sectors to improve their wellbeing. This will help the researcher to come up with what can be done to prevent and reduce the problem.

## **CHAPTER 3**

### **RESEARCH DESIGN AND METHOD**

#### **3.1 INTRODUCTION**

##### **3.1.1 Overview**

The chapter presents a detailed description of the research design and research methods used in the study. The first section provides overview of research design and research methodology. The next section defines the concept of research and provides details on research design, types and application setups. The third section describes research methods, types, sampling approach, sampling population and related details. The fourth section discusses validity and reliability of the study that covered procedures used to ensure both internal and external Validity of the Study. Conclusion of this chapter is also presented.

##### **3.1.2 Purpose of the research design and method**

The purpose of this chapter was to provide a comprehensive summary of the methodology in-order to achieve the objectives of the study and to answer the research questions. It gives a clear explanation of the research on the processes followed, sampling method and population, data collection tools and other related details.

#### **3.2 RESEARCH DESIGN**

A research design is a general approach that consists of a philosophy and principle which guides the researcher on how to go about studying a specific event or phenomenon. According to Tichapondwa (2013:41) a research design is defined as a strategy or a plan of action that links methods used for data collection to the outcome of the research study. On the other hand, method is a detailed procedure of data collection, data analysis, writing and presentation (Tichapondwa 2013:41).

Tshuma (2007:116) described a research design as a plan or strategy that is developed to seek answers for research questions. It is a process that moves from philosophical assumptions to specifying selection of study participants, data collection techniques and data analysis which is to be followed. A research design is a logical structure of inquiry in conducting a specific study (Tshuma 2007:116).

Likewise, Kumar (2012:94), defined research design as a plan, a structure and a strategy of investigation which is designed to obtain answers to research questions or problems. That means, a research design covers method of sample selection, sample structure and the plan for analysing and interpreting the study outcome (Kumar 2012:94).

A clear understanding and formulation of the research design is important as it gives an idea of what information will be collected to answer the research questions. It also gives the direction on how to collect this information. Thus, the research methodology ensures in identifying the variables, deciding on type of study, data collection and sampling techniques, plan for data collection and analysis, ethical consideration at each step of data collection as well as piloting and pre-testing.

### **3.2.1 Type of research design**

#### ***3.2.1.1 Research design in case of exploratory research studies***

Explanatory research studies are expressive in nature. It is used with the purpose to express or formulate certain problems for precise and detailed investigation and understanding. Such kind of research design helps to explore ideas and insights of participants concerning certain problems (Tshuma 2007:118).

#### ***3.2.1.2 Research design in case of descriptive and diagnostic research studies***

This study involves exploratory, comparative and descriptive study design which is designated as an ideal approach to collect original information in-order to describe certain opinions, perceptions, attitudes and intentions that are held by a specific population group (Tshuma 2007:116).

### ***3.2.1.3 Research design in case of hypothesis testing research studies***

A research study that aims to test hypothesis employs an experimental research design where cause and relationship of certain problem can be studied and established through hypothesis testing. The experimental design involves experimenting of certain facts by using various procedures. It allows drawing of inferences to the total population as it reduces bias and also increases reliability of the findings (Kothari 2007:11).

It is important that the researcher selects the type of sample design before data collection based on appropriateness and reliability for the proposed research study. Steps that need to be considered includes study objectives, sampling unit, sampling frame, available budget, sample size, sampling procedure and other parameter of interests. Taking into account the objectives set in the introduction section, sample size and other set of principles, the researcher has selected and employed non experimental research design that has helped to explore and describe the magnitude of alcohol and substance use among adolescents (Kothari 2007:14).

### ***3.2.1.4 Research design in case of qualitative approach***

In designing qualitative research, the researcher makes sure that the questions and designs would be broad to collect detailed information in the area of the intended study. According to Creswell (2007:37), a qualitative research design provides respondents to have authority in constructing a meaning for the open-ended questions they interact with. This gives the researcher more opportunity to listen to people and interact with so as to gather adequate amount of information (Creswell 2007:37).

Yin (2011:27) indicated that qualitative research is diverse in that it could be applied in various disciplines including health, psychological and behavioural studies. It helps the researcher to conduct an in-depth study by employing interviews, observations and discussions. This specific research employed a mixed research design where qualitative was included to enrich the data findings from quantitative methods. In this regards, five questionnaire items for discussion and 16 questionnaire items for key informant interview (Yin 2011:27).

### ***3.2.1.5 Research design in case of mixed method study***

Mixed method approach involves triangulation of quantitative and qualitative approaches. To enrich the data collected with quantitative method, the researcher included qualitative data collection from both focus group discussants (FGDs) and interviews.

According to Johnson and Christen (2014:5) mixed methods approach is a class of research where the researcher combines qualitative and quantitative techniques, methods and approaches in a single study. The authors argued that although there is a distinction between qualitative and quantitative research, the two methods share many similarities. That is, combination of these two methods has both complementary strengths and non-overlapping weaknesses. In the case of mixed research that was multiple methods research, the investigator used a combination of both qualitative and quantitative methods of data collection in a single study. This has helped the researcher to understand the depth, complexity and differences of events in a holistic and accurate way so as to comprehend the phenomena under study (Johnson & Christen 2014:5; Ponterotto 2013:6).

The approach helped to develop a true statement that assisted to explain the situation of concern by posing questions which could help to explore the relationship among variables. Henceforth, institutional based cross sectional approach was primarily employed for this specific study. As the current study aims to explore the magnitude of alcohol and substance abuse, to design appropriate prevention strategy, the study involved a research design of exploratory sequential approach. Such approach provides space to employ the use of both qualitative and quantitative method. Likewise, the quantitative research approach involved collection and analysis of numerical data whereas qualitative research involved narrative data analysis to understand the real experiences of study respondents. This has helped the researcher to comprehend the magnitude, type, frequently abused substances, predisposing factors and other behavioural variables affecting alcohol and drug/substance use (Creswell 2012:14).

### **3.2.2 Selecting research design for a specific study**

A research design which is employed for a specific study can be categorised as exploratory, descriptive and hypothesis testing research design. The different types of research design can be employed based on the purpose of the problem under study (Kothari 2007:14).

A specific research may be experimental or non-experimental. Selecting certain research design also depends on the type of research as well as factors like cost, ways of obtaining information, availability of skill, ease of practicality and time. As it was detailed in the introduction section, the research design for current study was a conceptual framework within which the research study is conducted. It employs a specific study design to answer the research objectives.

To develop the intended strategy that would help to address alcohol and substance abuse problems, an explorative and descriptive study design was employed. In this regard, the current study design involved a cross-sectional, explorative and descriptive study design which is contextual in nature (Tshuma 2007:116).

### **3.2.3 Respondents selection criteria**

For the inclusion and exclusion of respondents in the planned study, a clear criteria were set and employed.

#### ***3.2.3.1 Inclusion criteria***

An inclusion criterion is set of unique principles employed to enroll respondents for specific research study. The criteria used for inclusion of respondents were:

- Students pursuing higher education in Arbaminch and Wolaita Sodo universities.
- Students attending regular stream in the undergraduate degree programme.
- Students who are physically and mentally healthy during the data collection period as reported by the students themselves.
- University students aged between 18-24 years.

- Key informants which provide service for students.
- Respondents who are willing to participate in the specific study.

### **3.2.3.2 Exclusion criteria**

Exclusion criteria are a set of principles and measurements employed to omit a respondent from participating in a specific research. The criteria for exclusion were:

- Students aged below 18 years and those aged above 24 years.
- Students pursuing postgraduate programme.
- Undergraduate students in the weekend, distance and extension programmes.
- University staff who have no direct contact with students and their dormitory, staff who have no supervisory or service providing role.
- Service providers living far away from university campus where students do not have access to services including alcohol beverage and substance use.
- Participants who are seriously ill during the data collection period.
- Respondents who are not willing to participate in the specific study.

**Table 3.1 Phase of the research design process, inclusion and exclusion criteria**

Methods	Sampling unit	Sampling technique	Inclusion criteria	Exclusion criteria	Data collection techniques	Data collection tools
Mixed method, quantitative	University students	Stratified random sampling method	<ul style="list-style-type: none"> <li>University students aged between 18-24 years were included,</li> <li>Students in the regular stream</li> </ul>	<ul style="list-style-type: none"> <li>Students aged below 18 years and those aged above 25 years.</li> <li>Postgraduate students. students in the weekend and extension programmes</li> </ul>	Interview, In-depth interview	Close ended and open-ended, Semi-structured questionnaire
FGDs, Qualitative	University students	Purposive sampling	<ul style="list-style-type: none"> <li>University students aged between 18-24 years were included,</li> <li>Students in the regular stream</li> </ul>	<ul style="list-style-type: none"> <li>Students aged below 18 and those aged above 25 years.</li> <li>Postgraduate students. students in the weekend and extension programme</li> </ul>	FGDs	Semi-structured and open ended questions
Key informants Interview, Qualitative	Security guards, proctors, student dean, student council, cleaners, ,health staffs from student clinic, informants from nearby alcohol and substance outlets	Purposive sampling	University staffs who have direct contacts with students, environment, their dormitory, staffs who have supervisory role, service providers	University staffs who have no direct contact with students and their dormitory, staffs who have no supervisory or service providing role,	In-depth interview	Semi-structured and open ended questions for FGD guide



### **3.3 RESEARCH METHOD**

A clearly detailed research method provides the researcher with an outline of where to collect data, when to collect data, how and who collects the required data which are also crucial for the success of a specific research study. It helps the researcher to reduce the ambiguity of research findings that can provide evidence consistent to answer the research questions. The research method is a key step as it provides the detailed plan of action on how to collect and analyse information that helps to answer the research questions (Ellis & Standing 2010:21).

#### **3.3.1 Sampling and population**

##### ***3.3.1.1 Sampling method***

Sampling describes the procedures to be followed during identification of respondents. The understanding is that each method has its own strengths and weaknesses and brings out different dimensions of a single phenomenon. Therefore, the use of mixed method that includes quantitative and qualitative method brings about complementarity effect for the intended study variables (Brown 2011:4; Halcomb 2014:41; Johnson & Christen 2014:5).

Studies by Brown (2011:4) indicated that quantitative research is about deduction of numbers and measurements that support explaining the phenomena by employing numerical data collection techniques. Quantitative method is employed when a researcher is interested on impacts and outcomes as well as generalisability of a study phenomenon. In the quantitative research approach, there is greater emphasis on reliability and validity. According to Park (2012:20), quantitative methods are used for fast data collection, analysis and a more credible result on the basis of precise numerical data. Generally, quantitative approach relies on the people's experiences, perceptions, values and beliefs (Brown 2011:4; Colton et al 2007:32; Park 2012:20).

On the other hand, qualitative methods search for meaning from induction that helps to identify problems with accuracy posing "why" and "how" questions. Park (2012:4) explained that the use of qualitative method helps to answer research questions concerning people's attitudes, experiences and opinions to determine certain behaviour.

The method also acknowledges the complex processes and actions that influence people's lives in order to understand and explore certain constructs. However, it is important to understand that qualitative research places emphasis on understanding the context and setting. It emphasises the voice of participants and provides details through individual information gathering. This involves in-depth information analysis in order to produce generalisability (Johnson & Christen 2014:10; Park 2012:20).

According to Creswell (2012:30) the use of mixed method employs many methods for collecting and analysing data rather than prescribing to only one that is either qualitative or quantitative. The method thus helps the researcher to look into different views and assumptions. Here, the intention of using mixed method of research is to frame the investigation by integrating the strengths of both methods. The use of multiple approaches, sources of data and/ or information enables triangulation and validation of information for vigorous and reliable conclusion (Author 2015:17; Creswell 2012:6; Tichapondwa 2013:41).

Designing a strategy to respond to alcohol and substance abuse prevention needs a detailed assessment, exploration and generation of information. Accordingly, a mixed method that included quantitative and qualitative approach was employed to explore variables in a sequential manner. Such kind of study design seeks to generate data by reconstructing opinions expressed by the respondents regarding the type, level, frequency and main reasons for alcohol and substance abuse. That is, the use of multiple methods in this specific study is known to provide comprehensive information by examining both practices and outcomes using standardised, open-ended and closed-ended questionnaires (Johnson & Christen 2014:29; Kumar 2012:94).

### ***3.3.1.2 Setting and the study population***

A population for a particular research is the entire group of individuals, objects or items that have at least one characteristic in common and it is from this group that samples are taken for measurement. A population consists of everything or everyone being studied in an inference procedure. Although, population is what we wish to study, a representative sample has to be taken from a specific population. For the current study, the researcher chose university going adolescents to help answer the research questions (Singleton & Straits 2010:18).

This study has aimed at developing appropriate strategy to address alcohol and substance abuse problems among university students. The universities are located in the South Western part of Ethiopia, some 390 and 505 kilometres respectively from the capital of Ethiopia, Addis Ababa. The target population considered for this study was all the regular students attending undergraduate programme in two selected universities. For the purpose of this study, the population used was those adolescent students attending regular programme in Arbaminch and Wolaita Sodo universities. Study participants were selected from different units, departments, institutes and colleges of respective universities using a multi-stage sampling method.

### ***3.3.1.3 Sampling and sampling procedures***

Sampling involves deciding on the number and characteristics of respondents that are supposed to participate in a specific study. This is because; a research study requires a sample which is a proportion or subset of a target population. In research design and sampling theory, the sample population identified is considered to be representative of the whole population in the area under study. A research scholars (Elder 2009:20), indicated that sampling procedures should be carefully designed to select sample size for a specific study that can result in generalisation of findings and drawing conclusions to similar settings and populations. In this regard, sampling requires a sampling plan that specifies how the sample can be collected, the intended sample size and inclusion and exclusion criteria's (Elder 2009:20; Westfall 2009:1).

Conversely, purposive sampling procedure involved selection of participants based on the researcher's personal judgement rather than the use of randomisation. Elder (2009:22) has explained that purposive sampling method is recommended to enrol respondents for qualitative studies that involved focus group discussions (FGDs) and key informants for in-depth interviews. This was found to be relevant for this study (Teddlie & Yu 2007:80), of exploring additional information to triangulate the findings from individual response as it allows flexibility in determining appropriate participants for the phenomenon under investigation. Hence, to materialise the goal of quantitative and qualitative data collection, participants were selected based on their age, year of education, representation in the student council and other criteria (Elder 2009:22; Teddlie & Yu 2007:80).

For this study, respondents were randomly selected from Wolaita Sodo and Arbaminch Universities using a systematic random sampling technique. A Stratified sampling method was used to identify and enroll respondents from each group that included departments, schools, colleges and/or institutes to represent in the sample. Besides, participants for the key informant interview were selected taking in to account their direct role in service provision, monitoring students class attendance, communicating grade reports, and security assistance in-order to answer selected study questions.

#### ***3.3.1.4 Sampling and sample size determination***

Sampling and sample size determination is one of crucial steps in undertaking any kind research where many factors determine the sampling procedure and sample size. Researchers face a lot of challenges and difficulties in determining sample size. Among all, accuracy is one detrimental factor while cost, time, logistic, available technical speciality, urgency of information needed and many others determine the amount of sample size used in a specific study. It is the researcher's responsibility to take various factors in to account and determine the amount of sample size needed (Vaus 2002:102).

In this regard, scientific standard for sample size calculation was employed to select sample size that helped to examine the prevalence of substance abuse, exploring frequently consumed substances and major reasons behind to engage in. At this point, principles of sample size determination (Degu 2006:57) were considered to determine the actual sample size so as to study alcohol and substance abuse and its related problems. Respondents' selection for this study employed searching for rosters and getting students' identification (ID) number from both university registrars. The sample population of adolescent aged 18 to 24 years was identified using a sampling frame. Participants were selected for the research study using random sampling method (Degu 2006:57).

In view of that, the sample size was calculated by taking into consideration 5 percent proportion of alcohol and substance abuse among university students, anticipating 5 percent margin of error at 95 percent confidence level. Sample size for this specific study had included consideration of additional ten percent to cover non-response rate.

The standard formula used for the sample size calculation was

$$n = \frac{Z_{\alpha}^2 * p * (1 - p)}{d^2} * design\ effect$$

n = required sample size  $Z_{\alpha}$  = standard normal value at  $(1 - \alpha/2)$  % level of confidence, P = anticipated prevalence which was taken to be 50% and d = precision value which was considered to be 5%. Design effect for this research was taken to be two (Vaus 2002:100). .

The final sample size based on the assumptions, justified scientific formula and ten percent non response was calculated to be 384 plus 38 to compensate non-response rate which totals the sample size to 422. A design effect of two percent was added as the sampling method employed multi-stage sampling. Hence, a total sample size of 844 participants were selected and participated in the specific study. Accordingly, 422 adolescents from each university were selected, enrolled and studied (Degu 2006:57).

### ***3.3.1.5 Ethical issues related to sampling***

As part of ensuring the application of ethical principles, a researcher has to ensure fair selection of participants during sampling procedures and participant selection. The researcher was always aware not to be biased in the selection of the sample to prevent bias during sampling. Scientific methods were followed in sample size calculation as well as selection of study participants. The sample frame obtained from registrar offices of each institution was used to filter and select respondent based on the objectives of the study. Besides, strict inclusion and exclusion criteria's were set and followed to avoid bias (Author 2003:45).

### **3.3.2 Data collection**

#### ***3.3.2.1 Data collection approach, techniques and procedures***

Information may be collected from various sources using variety of data collection techniques. Employing such techniques, according to Chaleunvong (2009:3) helps to systematically collect information about our object of study, person and about the setting in which it happens. As for the timing, research findings indicated that both quantitative and qualitative data collection techniques can be applied with a focus on time orientation. A research scientists (Johnson & Christen 2014:434), clarified that by employing concurrent data collection techniques, information can be collected using the two methods at the same point in time or in a sequence where data can be collected at different point in times (Chaleunvong 2009:3; Johnson & Christen 2014:434).

Different data collection techniques can be used to generate information. These techniques may include interviews, observations, focus group discussions and other techniques as applicable to the intended research project. Various techniques can be used to collect data through interview. These include personal or telephone interview, using structured or semi-structured questions that should be clear and focused. A technique that employs administering questionnaire can be used to collect quantitative data which may require assigning numerical values that make analysis easier (Author 2016:2).

Similarly, data collection technique employed was in-depth interviews to generate data from key informants that included house keepers, student deans, security officers, cleaners, proctors and other related sources that helped to explore different incidents, administrative measures, information about class attendance, situation of dormitories, nearby environmental observations and other information. This data collection technique, according to Brown (2011:7), supports the researcher to get additional information thereby helping the investigator to develop a rapport with respondents and obtaining comprehensive information (Brown 2011:7).

Data collection instrument employed for this current study were an in-depth interview, environment scanning, and discussion among study respondents, aged 18 to 24 years

of age and pursuing regular education at two selected universities. Data collection involved collecting data using a semi-structured questionnaire. To enrich and triangulate information, data were also collected from selected respondents using focus group discussions (FGDs) and from selected key informants using open-ended questionnaire (Ajazen & Fishbein 1999:21; Chadwick, Stewart & Treasure 2008:291).

Ten data collectors were selected and trained on data collection procedures, data collection materials and data handling for three days. Preventing occurrence of bias and techniques on ensuring ethical principles application at each stage were included in the training for data collectors. Each day, meeting was held by the principal investigator to check data collection procedures and challenges and to give feedback as necessary.

### ***3.3.2.2 Data collection tool development and testing***

Data collection tool is an instrument used to gather and record information for surveys, understanding phenomena or measuring certain behaviour. The outcome of any research study depends on the type of data collected. Much effort has to be invested in the development of data collection tool, standardising the questionnaire so as it fits in to gather the required information. Questionnaires may be developed from standard survey instruments and/or developed based on expert opinion. However, the researcher has to make sure the questionnaires were able to answer the research questions (Colton & Covert 2007:26).

Data collection tools for this study included semi-structured closed-ended questions extracted from expert opinion and WHO substance abuse study guide. Also, open-ended questions for focus group discussions (FGDs) and an open-ended interview guide questions were used to extract information from key informants (Annexure H). For this specific study, data collection tool was prepared to assess the real extent and magnitude of alcohol and substance abuse. The aim was to explore major reasons, possible triggering factors for consuming substances and available remedial strategies.

The researcher used descriptive research methods to collect both quantitative and qualitative data sets. Also, a semi-structured interview guide was developed, employed and data collected from selected key informants using in-depth interview and guided discussions from other FGD groups. For this reason, two FGDs were organised at each

university that included five boys and five girls per FGDs. This has helped the researcher to enrich and triangulate the self-reported data obtained from individual participants.

The questionnaire was pilot tested at Arbaminch University evening students using 10 percent (n=42) respondents from departments which were not selected for the actual study. Based on findings and clarity and consistency sections were edited and final questionnaire were printed out for the actual study. Findings from the pilot study were included, minor corrections and editing was done. Finally, study respondents were selected from the sample using systematic stratified random sampling method. Selected respondents were notified by each university registrars and heads of department. Then, study respondents were gathered and divided into six groups. They were informed about the objectives of the study and their right whether to participate or not.

Data were collected from 25 January to 03 March, 2016 using semi-structured questionnaires. Both qualitative and quantitative data were collected through interviewing, using focus group discussions (FGDs) and interview guides for selected key informants.

### ***3.3.2.3 Characteristics of the data collection instrument***

Behavioural scholars Colton and Covert (2007:37) explained that selecting a data collection instrument depends on the purpose of the study and type of research design chosen. The data collection tool was coherently and logically presented based on the expert knowledge and combining standard WHO questionnaire for alcohol, drug and substance abuse (Colton & Covert 2007:37).

As the current study employed mixed research approach, the data collection instrument included questionnaire items for both quantitative and qualitative data collection. It included semi-structured questionnaire for quantitative data collection that starts from biographic data to behavioural intention and practice questions. Open ended questionnaire items were used for the focus group discussions (FGD) and key informants interview that included information collection from dynamic groups (Bradley & Harrell 2009:14). However, data collected from the respondents and its summary



findings represents their own perception, attitudes and practices regarding alcohol and substance abuse that remain a public concern among the general community.

### **3.3.3 Data collection and process**

The process of data collection should be better planned with regard to human resource and logistics. Failure to plan data collection properly would result in unintended outcome such as data collection methods producing inaccurate results. Thus, effort was made to carefully select and train research staff (Streiner & Sidani 2010:20).

Ten data collectors, facilitators and supervisors were trained for three days on data collection methods, data handling, quality assurance and on abiding with ethical principles. Similarly, training and monitoring was done to ensure quality data handling and storing until data was delivered for the researcher. Each questionnaire was given a unique number to prevent any copies of completed questionnaire. Data were packed in a bag and kept properly. Tape recorders were used to record information from FGD participants. Data collected were regularly checked for completeness before leaving the university premises.

### **3.3.4 Ethical consideration related to data collection**

As a prime responsibility, the researcher put all his effort to ensure that basic ethical principles were followed at each step of the research. Data collectors were provided adequate refreshment training every day before data collection. Every day after data collection, the researcher discussed with data collectors the challenges and ethical issues raised to make sure that individual privacy was not violated. The researcher ensured application of the ethical principles during data collection.

#### ***3.3.4.1 Permission to conduct the research***

A researcher has the obligation to respect the rights of individuals that applies whether to participate or not to in specific research. It is important to have the permission as part of obligation to ethical principles (Author 2003:34). Permission and ethical principles adhered to were discussed in chapter 1, section 1.10.

### **3.3.5 Data processing and analysis**

Analysis involved different processes. It involves inductive and deductive process of analysis using research data that allows valuable inferences in order to have new insight, new knowledge, representation of facts and a practical guide for action. According to Denscombe (2007:120), the use of mixed method is helpful to enrich study findings where one method informs the other. During analysis, data from different sources help to move the analysis forward through gathering further data, which would shed light on the initial findings (Denscombe 2007:120).

Likewise, Caruth (2013:3) explained that inductive and deductive data analysis is applied when the structure of analysis is done on the basis of previous knowledge. In this regard, the researcher used a mixed method for this study as it is complementary, developmental and builds questions from one method. This type of approach has assisted the researcher to materialise and compare the findings with previous methods so as to expand and evaluate credibility of inferences gained from other methods (Caruth 2013:3).

Data analysis started immediately after data collection; data were entered and cleaned using EP-info data software, version 6.0. Quantitative data was imported to SPSS data analysis software, version 20.0. Different approaches (Elo 2008:119) of data analysis were followed both for the qualitative and quantitative data that included inductive and deductive data analysis techniques to address the research objectives. Finally, data was tabulated, presented, compared and summary analysis was written (Elo 2008:119).

Also, qualitative data from FGD were analysed by listening to audio recorded information for several times that included jotting of key findings. This was followed by transcribing information and comparing it with self-reported response. Detailed notes were taken from the interviews and then data were categorised in specific thematic areas. Then, data were tabulated, discussed and presented. Finally, descriptive statistics and logistic regression was performed to explore the extent and predictors of alcohol and substance use and abuse among adolescent university students (Meurer 2007:1068).

### **3.4 INTERNAL AND EXTERNAL VALIDITY OF THE STUDY**

A study finding should be valid and credible. Validity refers to the extent to which a measurement procedure measures what it is supposed to measure. Test bias occurs when certain measures are not equally valid for everyone who participates in certain study. The reality of research is that no matter how careful a researcher is, an error could occur. The goal of any research should be to reduce errors to an acceptable level.

To do so, the researcher has to implement quality assurance throughout the research process. This includes care in data collection, data handling, data encoding and analysis. In this specific study, the researcher was interested to make sure that the degree of a test predicts alcohol and substance abuse behaviour (Leary 2001:65).

#### **3.4.1 Internal validity measures**

The internal validity of the study was measured through establishment of cause and effect relationship among different factors. Johnson and Christen (2014:200), outlined that quantitative researches provides cause and relationship of certain behaviour understudy. It can be collected by designing and employing a specific data collection tool, we can collect numerical data that would explain certain phenomenon and a study that demands quantitative answer and numerical figures like magnitudes of certain problems (Author 2010:6; Johnson & Christen 2014:200). This specific study involved quantitative data collection item that has helped in collecting quite a huge amount of data to measure cause and relationship of various factors with regard to alcohol and substance abuse among adolescents.

#### **3.4.2 External validity measures**

To ensure external validity for this specific study, the researcher included sufficient sample size from two universities. For this specific study, use of mixed method was employed where data collected and analysed from one source was used to triangulate information from other qualitative sources. In doing so, the researcher has ensured the consistency of validity measures (Johnson & Christen 2014:200).



### **3.5 CONCLUSION**

A study needs a design before commencing data collection and analysis so as to ensure standard and reduce bias at each stage that potentially affects data quality. A research design according to Denscombe (2007:22) is not actually a work plan but it is a logical structure of inquiry which was designed to gather evidence that would answer research question or test a theory. Research design is a crucial instrument that helps the researcher to answer initial questions from the evidence obtained during data collection. This included clearly setting the sampling population, identifying and enrolling adequate sample size and ensuring quality data collection within a known time frame (Denscombe 2007:22).

The current study employed an exploratory and descriptive study design. Using the right techniques ensured that data collected were in scientific and standardised way. The researcher also adhered to the public health law of the country as well as universal ethical principles that included respect for person's autonomy and prevention from violating privacy (Author 2013:12).

This has helped the researcher to explore adequate information concerning alcohol and drug/ substance abuse among adolescents in two selected universities at Southern Ethiopia. The findings in turn, which is of high quality provided credible results that helped the researcher to develop a strategies to curb the problem in question.

## **CHAPTER 4**

### **DATA ANALYSIS, PRESENTATION AND DESCRIPTION OF THE FINDINGS**

#### **4.1 INTRODUCTION**

##### **4.1.1 Outline of the presentation**

This chapter presents and discusses the major findings of the study. Quantitative data were obtained from first degree students attending in twenty two (22) departments at two different universities. Qualitative data was generated from focus group discussions and guided interviews with key informants selected from student peer group's, lecturers, managers and selected community members. The chapter begins with the presentation of the quantitative data which was collected by semi-structured interview. The chapter will also present qualitative data findings from categories or thematic areas (Creswell 2009:189). The section also discusses sample characteristics, quantitative data results of the structured questionnaire, face to face interviews and findings of focus group discussions (Creswell 2009:189).

The layout for this chapter includes a brief introduction about the study that presents alcohol and substance use among university students. It covered both the extent of alcohol & substance use and the social aspects of alcohol and substance use such as physical consequences, social problems, familial disputes, and financial difficulties. The next section takes a more detailed look at data management and analysis. The third section focuses on the quantitative data presentation, statistical analysis and discussion of research findings.

Presentation of the research result covers several components:

- Baseline data presentation using narratives, tables and graphs.
- Description of the magnitude of alcohol and substance use and abuse.

- Quantitative and concerning causative factors, respondents' attitudes and experiences related to alcohol and substance use and abuse.
- Detailed description of future intentions and perceived control of alcohol and substance use and abuse among respondents.
- The fourth section presents the results and its discussions of quantitative data.

At the end of this chapter, summary of the findings will be discussed.

#### **4.1.2 Aim of the study**

The aim of this study was in two folds:

- To investigate the extent of alcohol and substance use and abuse among adolescents in two selected universities, namely Arbaminch and Wolaita Sodo University.
- To develop strategies for educating adolescents on the reduction and prevention of alcohol and substance use among Ethiopian university students.

#### **4.1.3 Research objectives**

The research objectives were to

- examine and describe prevalence of alcohol and substance use among adolescents at Arbaminch and Wolaita Sodo Universities
- determine the consequences related to alcohol and substance use and abuse among adolescent and youths at Arbaminch and Wolaita Sodo universities
- explore the facts leading for alcohol and substance abuse among adolescent students at Arbaminch and Wolaita Sodo universities
- develop a workable strategy for policy input that would help to curb alcohol and substance abuse among adolescent university students

#### **4.1.4 Adapting conceptual framework**

The conceptual framework for this study was influenced by the theory of planned behaviour change (PBC) model. The theory guided the researcher in investigating alcohol and substance use related attitudes, practices, intentions for future use, significant others support and perceived control. The theory purports that Psychological factors like aptitude, their subjective norm and perceived behavioural control plays a major role in determining the likelihood of accepting or rejecting healthy behaviour. The theory views human actions as being the result of voluntary behaviour and perceived behavioural control (Ajazen & Fischbein 2003:3).

## **4.2 DATA MANAGEMENT AND ANALYSIS**

Data collected from seven hundred thirty eight (N=738) respondents was checked for completeness, consistency and validity. Then, each questionnaire was given a code and a university identification number. While packaging data for transportation, maximum effort was made to prevent data from being damaged with liquids, inflammable substances and wetness. Double packaging and labelling of the packaging materials with the necessary information was done to prevent items mix-up and/or loss during collection of bags at Airports. After ensuring that questionnaires were properly packed, the cartons and bags were loaded on trucks and transported to its final destination which was the researcher's duty station.

Data analysis started immediately after data collection. Data analysis was initiated by encoding each data into SPSS 20.0 software for later data analysis. Various variables from the questionnaire were created in the variables view section. Then, data was entered successfully in to data view section where variables from fourteen pages were successfully encoded in to the SPSS software. This was followed by data editing of each row on the data file as SPSS allows us to create and edit all variables of data file. Finally data was checked, filtered and polished before data analysis (Brian 2008:8).

This was followed by data presentation and analysis which incorporated data tabulation with isolated variables, frequency tables, simple graphs and charts. Also, combination of some variables and cross tabulation was made deliberately to reduce the number of tables and graphs for series of variables under study. In each section, a supple

description comes before each table and graph was depicted. Finally, different set of tests including the chi-square, standard deviation and p-value measurements were done. Lastly, major findings and results were compared with similar studies both at home, regionally and globally.

Following data analysis, results from quantitative and qualitative data were interpreted in relation to the problem statement and research questions. Findings of the study were systematically organised with the aim to construct and provide useful information and credible evidence concerning the constructs and factors considered for this specific study. Above all, cross tabulations, figures of standard measurements, set of tests and comparisons were highlighted which then allowed better analysis and thus valid conclusions are drawn.

Furthermore, results were looked into based on the correlation of different set of variables where findings were interpreted and compared with findings from previous studies and existing scientific evidences. Lastly, main findings were summarised and generalisation were made based on the scope of the study and research objectives coined at the beginning of the research work.

### **4.3 RESEARCH RESULTS**

The first section will discuss the demographic findings followed by findings objective-by-objective.

#### **4.3.1 Sociodemographic findings**

A total of seven hundred thirty eight (N=738) respondents participated in this study from eight hundred forty expected sample size partaken, corresponding to a percentage of 87.9 participation rate. Further, the number of respondents from the two selected universities, Arbaminch and Wolaita Sodo at South Region of Ethiopia, was found to be 50.1% (n=368) and 49.9% (n=370) respectively. That is, the total participation rate from each university was found to be nearly equal.



#### ***4.3.1.1 Age and year of education***

As detailed in the introduction section, adolescents were the target population. In view of that, age of respondents was restricted within the limit of 18 and 24 years. In this regard, the composition of respondents which is distribution in to various groupings mainly by age and sex was done. Participation among different age groups, that is age group of 18-21 and age group of 22-24 years, was represented almost equally being 49 and 50 percent respectively.

A cross tabulation among variables of age group and academic year of study showed that more than eleven percent of respondents aged 21 and above were pursuing year one education. With respect to year of study, vast majority of respondents were from second year study. As per year of participation, first year students constituted 21.8% (n=161), second year students 26.4% (n=195), third year students 24.4% (n=180), fourth year 11.2% (n=83) and fifth year 16.1% (n=191). It was observed that the lowest participation rate was seen among fourth and fifth year students.

However, it was appreciated that there was even distribution of respondents among year one to year three students. On the other hand, participation of students attending sixth year was zero as they were not selected due to a matter of chance during selection of sampling unit. The findings indicated that many mature individuals were delayed in completing secondary and preparatory education. The below table 4.1 shows that respondents aged 22-24 were more than those aged 18-21 year blackout.

**Table 4.1: Total number of respondents by age and year of study (N=738)**

Age	Count	Year of study					Total
		Year one	Year two	Year three	Year four	Year five	
18-21	Count	118	127	76	20	23	364
	% within Age	32.4%	34.9%	20.9%	5.5%	6.3%	100.0%
	% within Year of study	73.3%	65.1%	42.2%	24.1%	19.3%	49.3%
22-24	Count	43	68	104	63	96	374
	% within Age	11.5%	18.2%	27.8%	16.8%	25.7%	100.0%
	% within Year of study	26.7%	34.9%	57.8%	75.9%	80.7%	50.7%
<b>Total</b>	<b>Count</b>	<b>161</b>	<b>195</b>	<b>180</b>	<b>83</b>	<b>119</b>	<b>738</b>
	<b>% within Age</b>	<b>21.8%</b>	<b>26.4%</b>	<b>24.4%</b>	<b>11.2%</b>	<b>16.1%</b>	<b>100.0%</b>
	<b>% within Year of study</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

#### **4.3.1.2 Gender, religion and ethnicity**

The total numbers of male respondents were found to be slightly higher than that of females with overall participation rate being 60.3% (n=445) and 39.7% (n=293) respectively. Education specifically tertiary education is generally low among Ethiopian men and women in Ethiopia. As it was mirrored in the above table, females in Ethiopia are more disadvantaged than men and this has significantly affected women's empowerment and access to different opportunities including job opportunities (DHS 2011:59).

With regard to religion, all respondents indicated that they belong to various religions. Orthodox Christianity was reported to be the most prevalent where more than half (n=392) respondents reported that they belong to. It is well known in Ethiopia that Christianity is the dominant religion which is followed by Muslim 21.5% (n=159), protestant 18% (n=133). However, 2.8% (n=21) respondents indicated that they belong to other types of religions including traditional beliefs. With regard to ethnic background of the respondents, 24.7% (n=182) reported that they belong to Oromo ethnic group. This was followed by Amhara 22.9% (n=169) and the rest 52.4% (n=387) indicated that

they belong to various other small ethnic groups such as Somali, Tigre, Sidama, Gamo, Wolaita, Gurage and many others.

#### 4.3.1.3 Respondents residence, secondary school attendance and department

With reference to the participant's distribution among various departments, fifty percent (n=21) departments from various colleges, institutions and schools were selected from a total of forty two departments. Participation rate of each department constituted one to six percent. In this regard, respondents from civil engineering department topped the list being 16.3% (n=120). Then, it was followed by 13.3% (n=98) electrical engineering, 10.4% (n=77) mechanical engineering, 7.7% (n=57) construction technology management (COTM) department. The lowest participation rate was seen in Amharic, literature and hotel management being 0.5 percent each, which was followed by radiology and anesthesia being 0.1 percent participation rate. The below figure 4.1 depicts respondents distribution with regard to different departments.

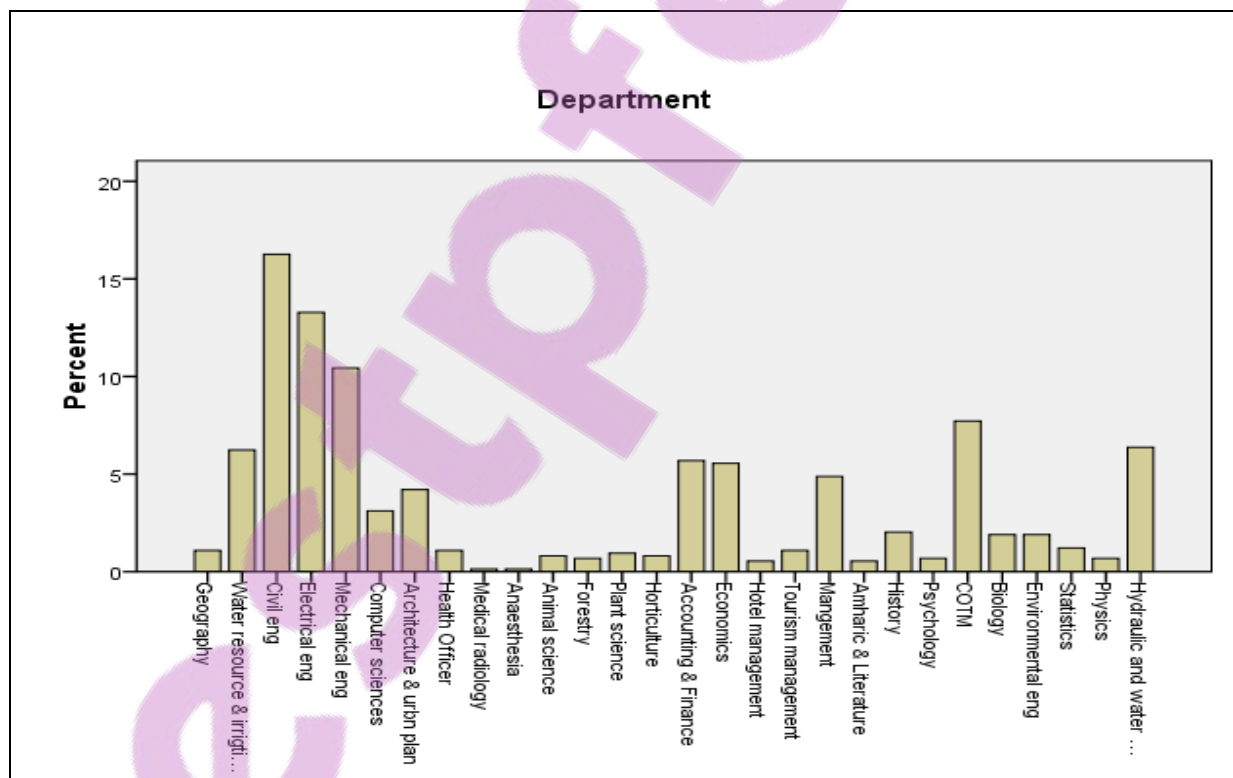


Figure 4.1: Distribution of respondents by their stream/departments (N=738)

The majority of respondents, 70.2% (n=518) indicated that they have attended at government schools and this was followed by 20.6% (n=152) who reported having

attended at private schools. However, nine percent (n=64) respondents specified that they have attended faith-based schools and the rest mentioned that they attended either private or faith based schools and later on switched to government schools specifically to complete preparatory courses of 11<sup>th</sup> and 12<sup>th</sup> grades.

Questions on housing arrangements showed that most of the respondents, 74.5% (n=550) are living in university campus. However, 15.9% (n=117) indicated that they are living alone outside university campus and about 8.8% (n=65) respondents mentioned that they live outside university campus with their family and/or guardian and the rest indicated mixed type of arrangement.

#### ***4.3.1.4 Respondents monthly average income and spending habit***

Respondents were also asked about their average income in order to illicit the patterns of spending. More than a third, 33.2% (n=245) respondents indicated that they receive a monthly pocket money of 401 to 500 birr (US \$20-25). This was followed by 23.4% (n=173) respondents that indicated average pocket money ranging between 201-400 birr (US \$10-20). However, five percent (n=36) partakers indicated that they receive about 1000 birr (US \$50) and more on average. For the sake of universal understanding, monthly income was converted in to a dollar exchange rate and the amount of pocket money received by respondents on monthly basis ranged between 9.57 to 47.62 USD.

The five hundred birr (US \$23.08) average pocket money which was received by the majority of participants, 33.2% (n=245) on monthly basis is inadequate to cover the various unintended costs. These included photocopying lecture notes and other school related works such as printing and laminating assignments, laboratory attachment reports, field practice reports including community based training programme (CBTP) and team training programme (TTP) which is very costly for students.

On the other hand, respondents were asked about their weekly spending habit so as to compare and measure any potential discrepancies between average monthly pocket money received and their expenditure. When asked about their weekly expenditure on alcohol, 39.9% (n=169) respondents reported that they spend between 201 to 400 birr (US \$9.8 to 20) per week to buy alcohol beverages. Similarly, 24.5% (n=104)

respondents reported that they spend between 401 to 600 birr (US \$ 20 to 30) per week where the cumulative amount of expenditure per month falls in between 1200 to 2400 birr (US \$ 60 to 120) per month to buy alcohol beverages.

A total of 37.0% (n=181) respondents reported they have weekly expenditure of 101-300 birr (US \$5-10) per week which totals US \$20-40) per month. However, 20.4% (n=100) respondents indicated average weekly expenditure of 500 birr (US \$23.8) for buying substances like khat alone. This was followed by a response from 18.3% (n=31) respondents that indicated the highest weekly expenditure rate of 600 birr and above (US \$20) on average.

As detailed above, majority of respondents, 33.2% (n=245) reported that they have a monthly income of 401-600 birr (US \$20 to 30) per month. On the contrary, a response from more than 18.3% (n=76) respondents indicated a weekly expenditure rate of 950.50 birr (US \$45.3) on average. The source for extra expenditure among respondents could be loan from friends or shop owners that could pose pressure on the parents who were supporting their university education.

Analysis was done to compare means using independent t-test by grouping current alcohol and substance use against monthly income. The result indicated that respondents behaviour of substance use and monthly income do not have any association with p-value <0.05. The below tables 4.2 to 4.5 indicate average monthly pocket money of respondents.

**Table 4.2: Response indicating average monthly pocket money of respondents (N=738)**

Count	Frequency	Percent	Valid percent	Cumulative percent
Less than 200	122	16.5	16.5	16.5
201-400 birr	173	23.4	23.4	40.0
401-600 birr	245	33.2	33.2	73.2
601-800 birr	107	14.5	14.5	87.7
801-1000 birr	55	7.5	7.5	95.1
1000 birr and above	36	4.9	4.9	100.0
<b>Total</b>	<b>738</b>	<b>100.0</b>	<b>100.0</b>	

**Table 4.3: Average cost per week to purchase alcohol beverages (n=424)**

Cost/month to buy alcohol beverages	Frequency	Percent	Cumulative percent
Less than 200 birr	78	18.4	18.4
201-400 birr	169	39.9	58.3
401-600 birr	104	24.5	82.8
601-800 birr	42	9.9	92.7
801 birr and above	31	7.3	100
<b>Total</b>	<b>424</b>	<b>100</b>	

**Table 4.4: Average cost per week to purchase substances like khat (n=409)**

Cost/month to buy substances	Frequency	Percent	Cumulative percent
Less than 100 birr	83	20.3	20.3
101-300 birr	181	44.3	64.5
301-600 birr	100	24.4	89.0
601 birr and above	45	11.0	100.0
<b>Total</b>	<b>409</b>	<b>100</b>	

**Table 4.5: Independent samples test for monthly income vs alcohol and substance use (n=424)**

		Levene's test for equality of variances		t-test for Equality of means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% Confidence interval of the difference	
									Lower	Upper
Currently drinking alcohol in the past 28 days	Equal variances assumed	.120	.730	-.172	182	.864	-.01234	.07169	-.15379	.12911
	Equal variances not assumed			-.172	166.650	.863	-.01234	.07162	-.15374	.12907
Currently consuming substances in the past 28 days	Equal variances assumed	5.340	.022	1.199	182	.232	.08200	.06840	-.05295	.21695
	Equal variances not assumed			1.185	158.443	.238	.08200	.06921	-.05470	.21870

#### 4.3.1.5 Marriage and education status of respondents' parents or guardians

For the questions raised to know marital status of their parents, 76.4% (n=543) respondents pointed out that both their parents were alive and living together. On the other hand, 10.8% (n=80) respondents reported that their parents were divorced and the remaining 9.5% (n=70) reported staying with single parents. However, six percent (n=45) respondents revealed that they were experiencing limited support as they have lost either one or both their parents which was defined as father, mother and/or guardian. Figure 4.2 depicts respondents' distribution by parents' marriage status.

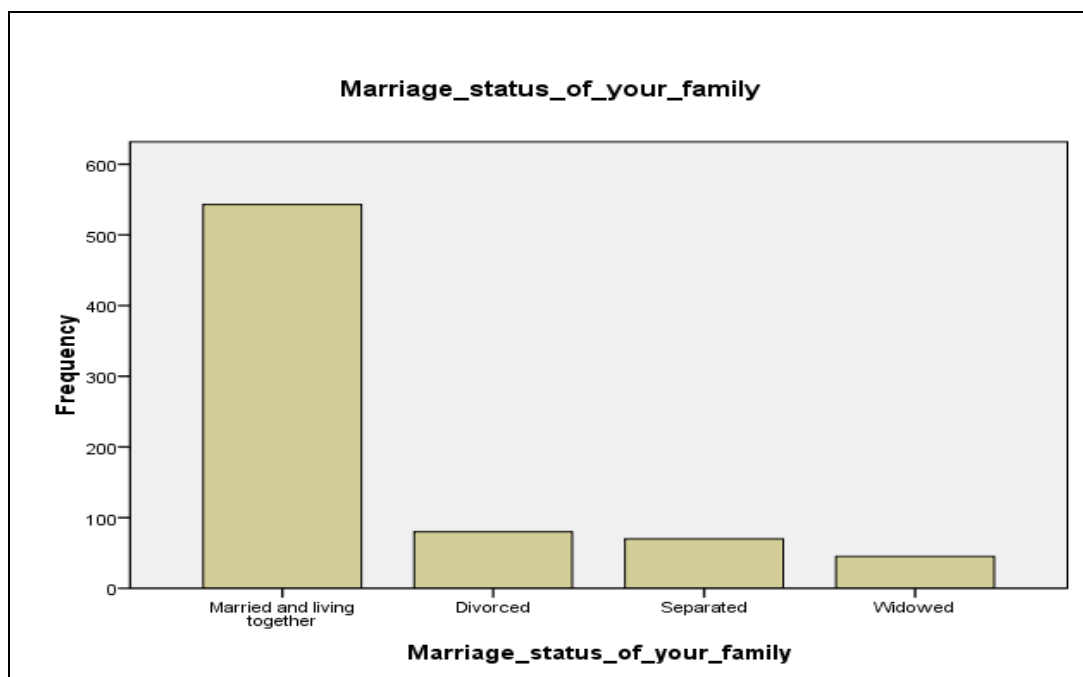


Figure 4.2: Distribution of respondents parents by marriage status (N=738)

In addition, majority of respondents declared that they came from educated family members. In this regard, respondents mentioned that at least one of their parents have a three year tertiary diploma or above, being 38.6% (n=285) and 21.7% (n=160) respectively. On the other hand, 16.7% (n=123) indicated that their father had no formal education whereas 26.4% (n=195) pointed out that they came from a family where their mother did not attend any formal education.



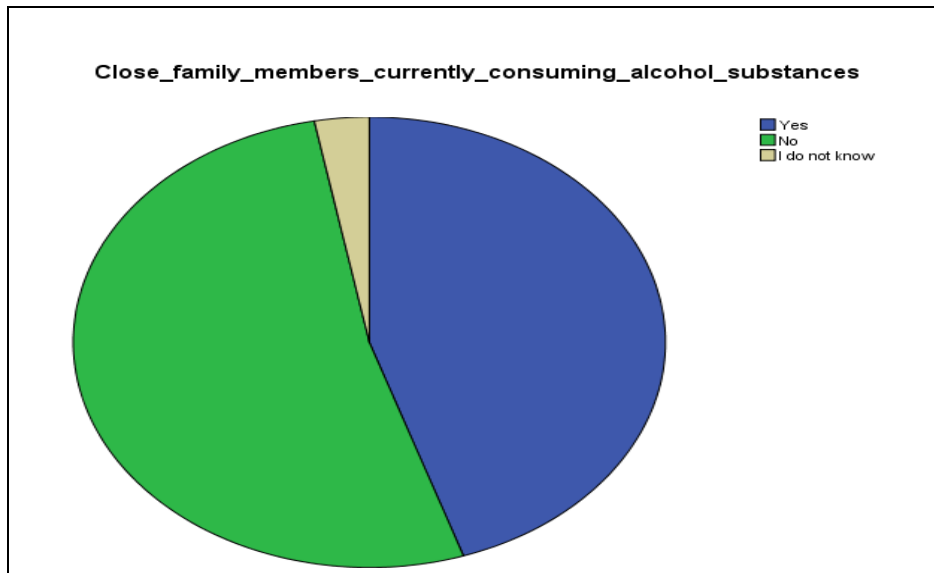
## **4.3.2 Prevalence of alcohol and substance abuse among adolescent students**

### ***4.3.2.1 Family members alcohol drinking and substance use habit***

Respondents were asked about their awareness on whether close family members ever consumed alcohol beverages and/or substances. The majority of respondents, 58.4% (n=431) indicated that their parents had life time history of using alcohol beverages and/or substances. When asked about whether close family members were currently drinking any alcohol beverages and/or consuming substances including khat and shisha. In this regard, 44.9% (n=332) respondents indicated that their close family members were currently drinking different type of alcohol beverages and/or consuming different kind of substances like khat, Shisha and others.

On the pattern of alcohol use, 21% (n=89) respondents reported that their parents and guardians drink alcohol beverages to the extent of intoxication especially during celebration and festivities. Yet, about seven percent (n=31) respondents indicated that their close family members were currently stopped drinking alcohol or using substances like Khat due to different reasons that included medical advice and ageing. On the other hand, 2.1% (n=9) respondents pointed out that they have not seen their father, mother and/or guardian while drinking alcohol beverages and/or using substances.

The Levene's Test to measure Equality of Variances was done if alcohol and substance use among close family members had an effect on children's engagement in using alcohol and substances. The result showed that there was a known association between respondents substance use and children being raised with parents using alcohol beverages and substances with p-value <0.05. The finding indicated that children rose with parents who were using alcohol beverages and substances like khat were more likely to practice it. The below figure 4.3 depicts parents current history of using alcohol and substance. This was followed by table 4.6 that indicates Independent Samples Test of life time alcohol drinking VS family alcohol drinking experiences.



**Figure 4.3: Close families' current history of alcohol and substance use (N=738)**

**Table 4.6: Independent samples test of life time alcohol drinking VS family alcohol drinking experiences (n=424)**

Independent samples test		Levene's test for equality of variances		t-test for equality of means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% Confidence interval of the difference	
									Lower	Upper
Ever drunk alcohol beverages in life time	Equal variances assumed	16.667	.000	-2.778	718	.006	-.10392	.03740	-.17735	-.03049
	Equal variances not assumed			-2.762	605.214	.006	-.10392	.03762	-.17780	-.03003

#### **4.3.2.2 Prevalence of alcohol and substance by close friends**

Questions on whether close friends use alcohol and substances, the respondents reported that 60.4% (n=446) of close friends who have either tasted alcohol beverages and/or consumed different kinds of substances in their life time. Also, 52% (n=384) respondents indicated that their close friends are currently drinking alcohol beverages. Respondents further pointed out that some of their close friends drink on daily basis and they drink to the level of intoxication on frequent occasions. Moreover, nearly equal but slightly higher number of respondents 53.3% (n=393) mentioned that their close friends

are currently actively engaged in using different type of substances like Khat, Shisha, Hashish and other substances.

A multivariate analysis was done to compare history of alcohol drinking among respondents versus close friends life-time alcohol and substance use experiences. The test of homogeneity of variance analysis indicated that there is significant relation among two variables with p-value <0.05. Analysis based on mean & trimmed mean indicated that respondents who have close friends drinking alcohol and consuming substances were more likely to engage in alcohol and substance use. The below table 4.7 and 4.8 depict history of current alcohol and substance use among close friends.

**Table 4.7: History of current alcohol and substance use among close friend's (N=738)**

Close friend's current history of alcohol and substance use	Frequency	Percent	Valid percent	Cumulative percent
Yes	446	60.4	60.4	60.4
No	292	39.6	39.6	100.0
<b>Total</b>	<b>738</b>	<b>100.0</b>	<b>100.0</b>	

**Table 4.8: Test of homogeneity of variance**

Ever drunk alcohol beverages in lifetime	Levene statistic	df1	df2	Sig.
Based on mean	22.244	1	736	.000
Based on median	6.946	1	736	.009
Based on median and with adjusted df	6.946	1	733.915	.009
Based on trimmed mean	22.244	1	736	.000

#### **4.3.3 Alcohol and substance use related awareness and exposure**

In this section, sets of items including experience of participating in buying any type of alcohol beverages and/or substances like khat, cigarettes and tobacco, history of being exposed to health information campaigns, awareness regarding short and long term effects of alcohol and substance abuse.

For the related questions whether respondents have ever participated in buying and selling alcohol beverages or substances, 54.7% (n=404) respondents reported that they have participated in buying or selling alcohol and/or different type of substances for someone who they know closely. Alcohol beverages and substances where respondents frequently exposed in buying included beer, wine, liquors (Areke, Gin, whisky & others) and substances such as khat and ingredients for smoking Shisha or Hashish. This exposes and makes them familiar for selecting, buying and negotiating and engaging easily in alcohol and substance purchase and use. The below figure 4.4 depicts respondents participation in buying alcohol and/or substances.

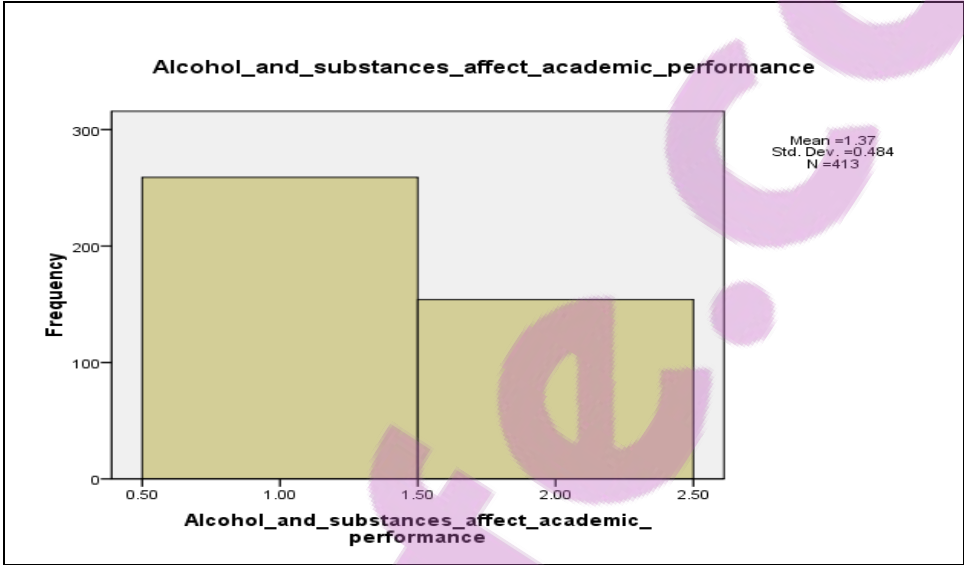


**Figure 4.4: Respondents ever participated in buying alcohol and/or substances (N=738)**

For the questions asked whether respondents were aware of short term effects, 56.1% (n=414) respondents indicated that they were aware of short term effects of alcohol and/or substance use and abuse. When respondents were further asked to mention major short term effects of alcohol and substance use and abuse, 43% (n=428) respondents specified that it affects sleeping pattern. This was followed by 40.9% (n=302) responses that indicated effect of reducing appetite and exposing for malnutrition and dental related problems.

Moreover, 35.6% (n=263) respondents indicated that it results in unfriendly interpersonal life and 26.6% (n=194) mentioned that it has other kinds of short term

effects such as confrontation with university security, fight and damage to equipment and others. For the study questions posed to establish the effects of alcohol and substances use on academic performances, 35.1% (n=259) of respondents indicated that substance use and abuse results in low academic performance. Table 4.10 that indicated respondent's awareness about short term effects of alcohol and substance use and abuse. Figure 4.5 and 4.6 shows the respondents' awareness about short term effects of alcohol and substances.



**Figure 4.5: Alcohol and substance use affects academic performance (N=738)**



**Figure 4.6: Alcohol and substance use affects sleeping pattern (N=738)**

For the questions relating to long term effects of alcohol & substance use and abuse, 48% (n=354) respondents indicated that they were aware of long terms effects of alcohol and substance use and abuse. When asked to list some of the most prevalent long term effects of alcohol and substance use and abuse, more than 62% (n=459) respondents mentioned destruction of families. This was followed by 47.7% (n=351) respondents that reported negative effect on mental health and 32% (n=337) respondents indicated that it would cause various type of adverse effects on physical health like gastritis, liver problem and others.

Similarly, 29.9% (n=221) respondents cited use and abuse of substances do affect academic performance and future career achievement. However, 52.0% (n=384) respondents indicated that they were not aware of either short and/or long term effects of alcohol and substances use and abuse. Table 4.9 and figures 4.7 to 4.10 shows respondents' awareness and chi-square analysis concerning long term effects of alcohol and substances.

**Table 4.9: Case processing, summary concerning respondents awareness about long-term effects of alcohol and substances (N=738)**

Knowledge about long-term effects of alcohol and substances	Cases					
	Yes		No		Total	
	No.	Percent	No.	Percent	Total	Percent
Knows long-term effects of alcohol and substances *Alcohol and substances affect carrier achievement	355	48.1	383	51.9	738	100.0
Knows long-term effects of alcohol and substances *Alcohol and substances affect mental health	355	48.1	383	51.9	738	100.0
Knows long-term effects of alcohol and substances *Alcohol and substances affect family relationship	355	48.1	383	51.9	738	100.0

**Table 4.10: Chi-square tests**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson chi-square	.416 <sup>a</sup>	1	.519		
Continuity correction <sup>b</sup>	.000	1	1.000		
Likelihood ratio	.379	1	.538		
Fisher's exact test				.501	.501
Linear-by-linear association	.415	1	.519		
N of valid cases <sup>b</sup>	355				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .59.

b. Computed only for a 2x2 table

Further questions were posed to explore whether respondents have access to health education sessions concerning substance use and abuse. Majority of respondents 62.3% (n=460) indicated that they never received or attended any health education session that conveys targeted health information about alcohol and substance use and abuse. However, only 37.7% (n=278) respondents indicated that they received health education targeting alcohol and substance abuse which might be linked to their participation in anti-alcohol and anti-substance clubs. Table 4.11 gives a comparison of respondents' awareness of short-term effects of alcohol and substances and the respondent's exposure to targeted health education session.

**Table 4.11: Analysis on awareness about short-term effects of alcohol and substance use versus exposure to health education (N=738)**

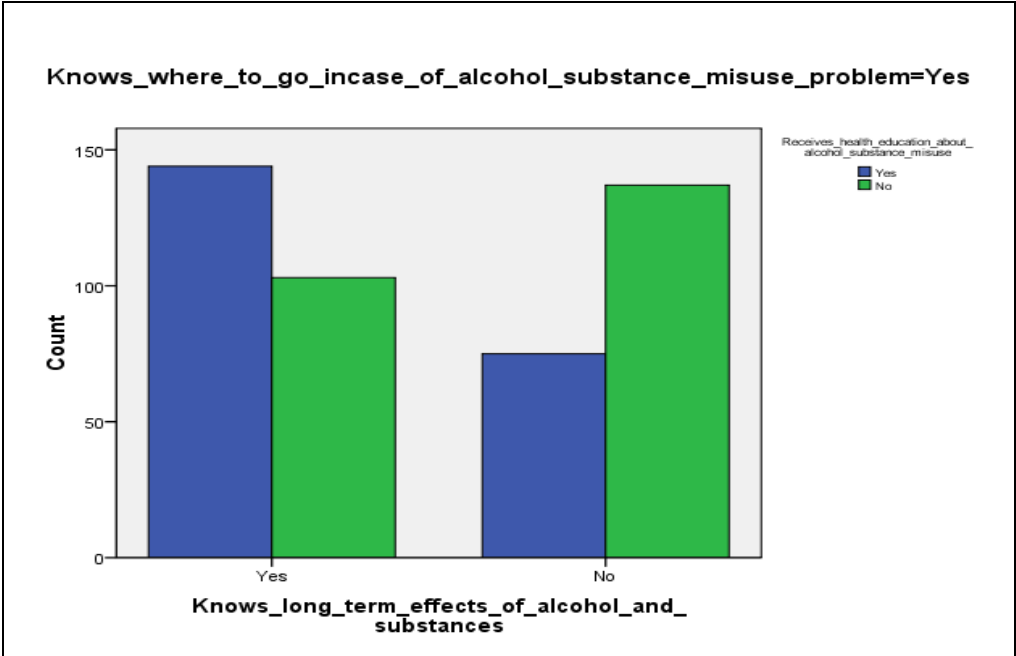
Count		Receives health education about alcohol substance abuse		
		Yes	No	Total
Knows short term effects of alcohol and substances	Yes	169	245	414
	No	109	215	324
<b>Total</b>		<b>278</b>	<b>460</b>	<b>738</b>

More than 60% (n=459) respondents indicated that they know where to go for help in case someone develops alcohol and/or substance abuse related problem. However, only 35.5% (n=262) respondents indicated that they will visit hospitals. The others

27.2% (n=201) mentioned that they visit either holy places or seek traditional medicine. But, the rest, 37.3% (n=275) indicated that they have no idea of where to go in case of alcohol and/or substance related problems. This indicated that there was a known delay in seeking scientific treatment and causes in chronicity of the mental illness. Table 4.12 and figures 4.7 to 4.8 shows the respondents' awareness regarding where to go in case of alcohol and substance abuse related problems.

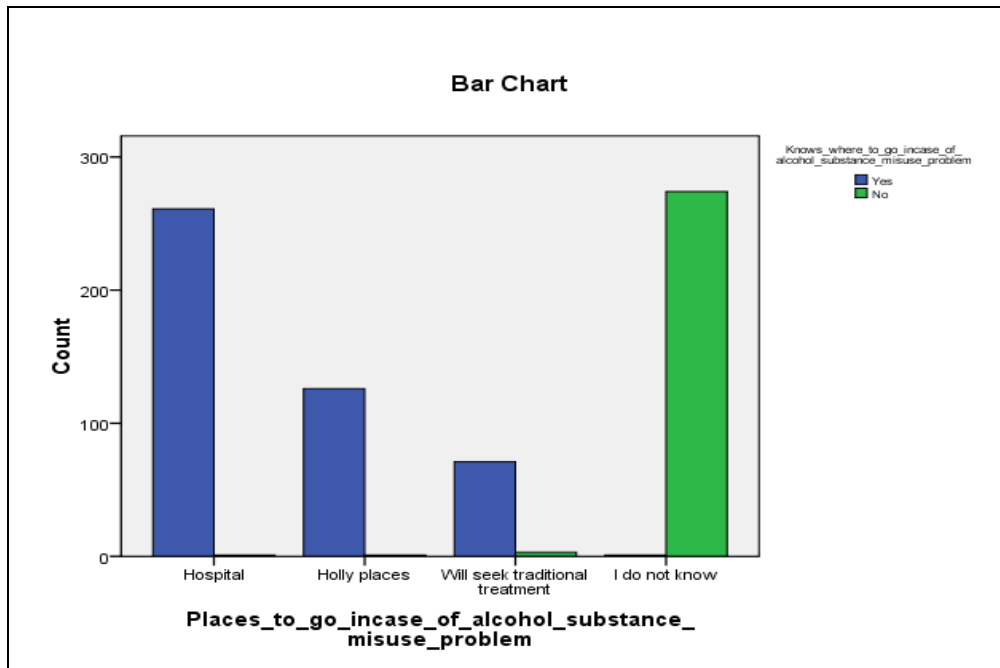
**Table 4.12: Cross tab, analysis about awareness about where to go and places to be visited in case of alcohol and/or substances related problem (N=738)**

Preferred places to visit	Knows where to go in case of alcohol substance abuse problems		
	Yes	No	Total
Hospitals	261	1	262
Holly places	126	1	127
Will seek traditional treatment	71	3	74
I do not know	1	274	275
<b>Total</b>	<b>459</b>	<b>279</b>	<b>738</b>



**Figure 4.7: Knows where to go**





**Figure 4.8: Places to go in case of alcohol and substance abuse related problem**

#### **4.3.4 Factors leading to alcohol and substance abuse among adolescents**

##### ***4.3.4.1 Life time alcohol and substance use***

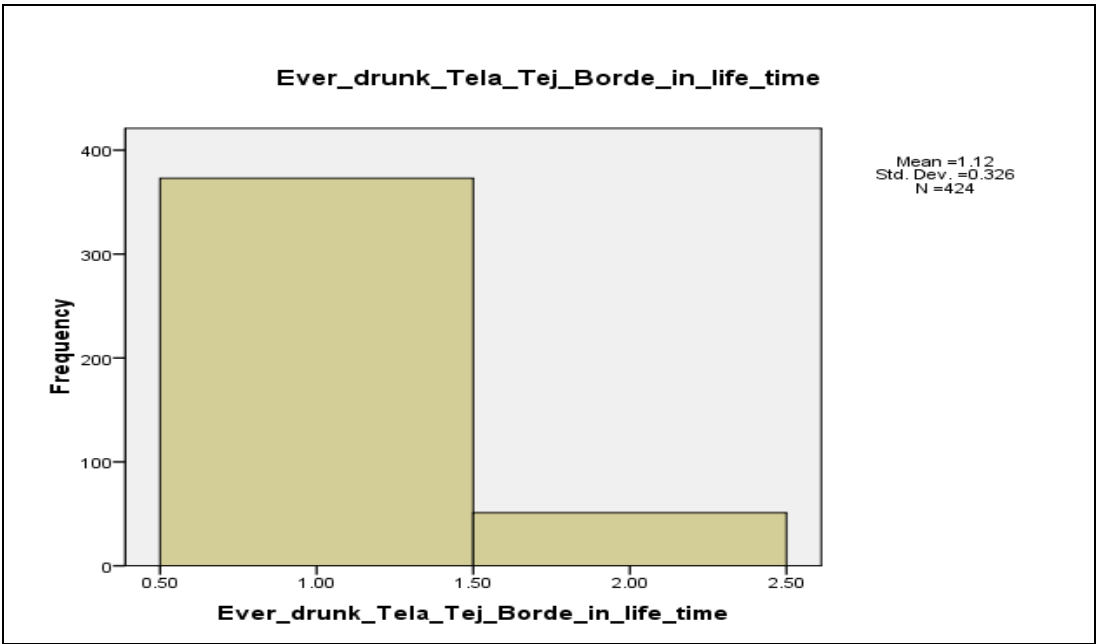
In this section, items were measured that aimed to answer the research objectives such as magnitude of alcohol and substance use, gender differences, extent of problem level drinking, parent’s support and related questions. These included lifetime and current abuse of alcohol and substances, frequency of alcohol and substance use and history of exposure to any incidents due to alcohol and substance use and other related experiences. Prevalence of alcohol drinking and substance use was found to be nearly equal which indicated respondent’s experience of dual use. In this regard, more than half which was 424 respondents declared that they have history of alcohol beverage drinking at some point in their life time. This showed the prevalence of ever alcohol beverage drinking to be 57.5 percent. The below table 4.13 depicts prevalence of lifetime alcohol drinking among respondents.

**Table 4.13: Prevalence of ever alcohol beverage drinking among respondents (N=738)**

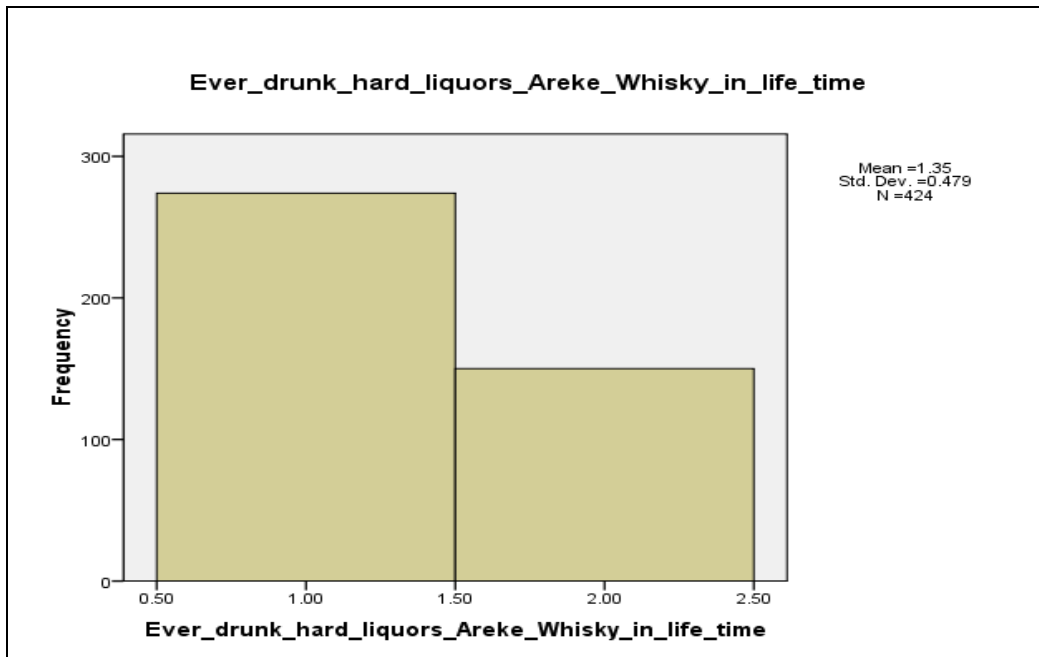
Count	Frequency	Percent	Valid percent	Cumulative percent
Yes	424	57.5	57.5	57.5
No	314	42.5	42.5	100.0
<b>Total</b>	<b>738</b>	<b>100.0</b>	<b>100.0</b>	

In this study, it was found that locally made alcohol beverages were most frequently used items with prevalence rate of 50.3% (n=373). These local made alcohol beverages included ‘Tela, Tej, Borde, Cheka and other locally made alcohol beverages. This was followed by 43% (n=317) respondents who reported drinking beer and draught beer where as 38.3% (n=283) respondents indicated ever drinking of wine.

On the other hand, 36.3% (n=154) respondents indicated that they are used to drinking hard liquors like local ‘Areke, whisky, Vodka, Gin and many other mixtures of drinks. The extent of different type of alcohol drinking pattern had the highest SD of 0.326 and mean value of 1.12. Figures 4.9 and 4.10 indicate trends of life time history of drinking local alcohol beverages, hard liquors and other mixed drinks.



**Figure 4.9: Prevalence of drinking local alcohol beverages (N=738)**



**Figure 4.10: History of life time use of hard liquors (N=738)**

Statistical analysis was done to measure respondent's parents and guardian's marital relationship status versus patterns of alcohol and substance use to see if there were differences in patterns of use in among those raised in families where parents live together as shown in Tables 4.14 and 4.15. The analysis was done to compare any difference in alcohol and substance use pattern among respondents who came from families married and living together and those who came from divorced and/or separated family members. As it was indicated in the below tables, there was no significant difference among respondents who came from parents with various marital relationship in alcohol and substance use with  $p\text{-value} > 0.05$ .

**Table 4.14: Group statistics of marriage status vs alcohol and substance use**

Measures		Levene's test for equality of variances		t-test for equality of means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% confidence interval of the difference	
									Lower	Upper
Ever drunk alcohol beverages in life time	Equal variances assumed	.000	.989	.007	621	.994	.00041	.05930	-.11604	.11687
	Equal variances not assumed			.007	103.394	.994	.00041	.05953	-.11765	.11848
History of consuming any substance in lifetime	Equal variances assumed	.185	.667	.199	621	.843	.01186	.05965	-.10528	.12899
	Equal variances not assumed			.198	103.528	.843	.01186	.05976	-.10666	.13037

**Table 4.15: Group statistics of marriage status vs alcohol and substance use**

Count	Marriage status of parents and guardians	N	Mean	Std. Deviation	Std. Error Mean
Ever drunk alcohol beverages in lifetime	Married and living together	543	1.4254	.49486	.02124
	Divorced	80	1.4250	.49746	.05562
History of consuming any substance in lifetime	Married and living together	543	1.4494	.49789	.02137
	Divorced	80	1.4375	.49921	.05581

For the questions posed to understand extent of substance use and abuse among respondents, more than half (n=409) reported that they had history of testing some kind of substance in their life time which indicated prevalence of substance use to be 55.4 percent. The mean distribution of life time substance use was found to be 1.45 with SD being 0.497.

Among respondents who reported substance use, Khat was found to be the most widely consumed substance. Concerning the frequency of life-time substance use, 388 respondents cited that they chew khat frequently which showed the prevalence rate of 94.9 percent among substance users. This was followed by those who smoke shisha 55% (n=225). The other significant number of respondents, 46.0% (n=188) indicated that they had life time history of using different type of other substances like Hashish. Similarly, 56.7% (n=232) respondents reported that they had history of ever smoking cigarettes and tobacco products. The below table 4.16 depicts the magnitude of lifetime substance use among respondents.

**Table 4.16: Life-time use of substances such as Khat, Shisha, Hashish and Cigarettes**

Substance	Frequency	Percent	Mean	S.D
Khat	388	94.9	1.05	0.221
Shisha	255	55.0	1.45	0.498
Cigarettes	232	56.7	1.43	0.496
Other substances like Hashish	188	46.0	1.54	0.499

Descriptive analysis was done to see if there were differences between male and female respondents in the use of alcohol and substances. The study found out that more male than female groups reported life time alcohol drinking with prevalence rate of 60.6% (n=257) and 39.4% (n=167) respectively. A two tailed chi-square test analysis showed that there was no significant difference among male and female in drinking alcohol with p-value >0.05. It means that statistically there was no difference of alcohol drinking among different gender groups. Tables 4.17 and 4.18 and figure 4.11 show comparison of alcohol drinking among male and female respondents.

**Table 4.17: Crosstab ever alcohol drinking vs gender difference (N=738)**

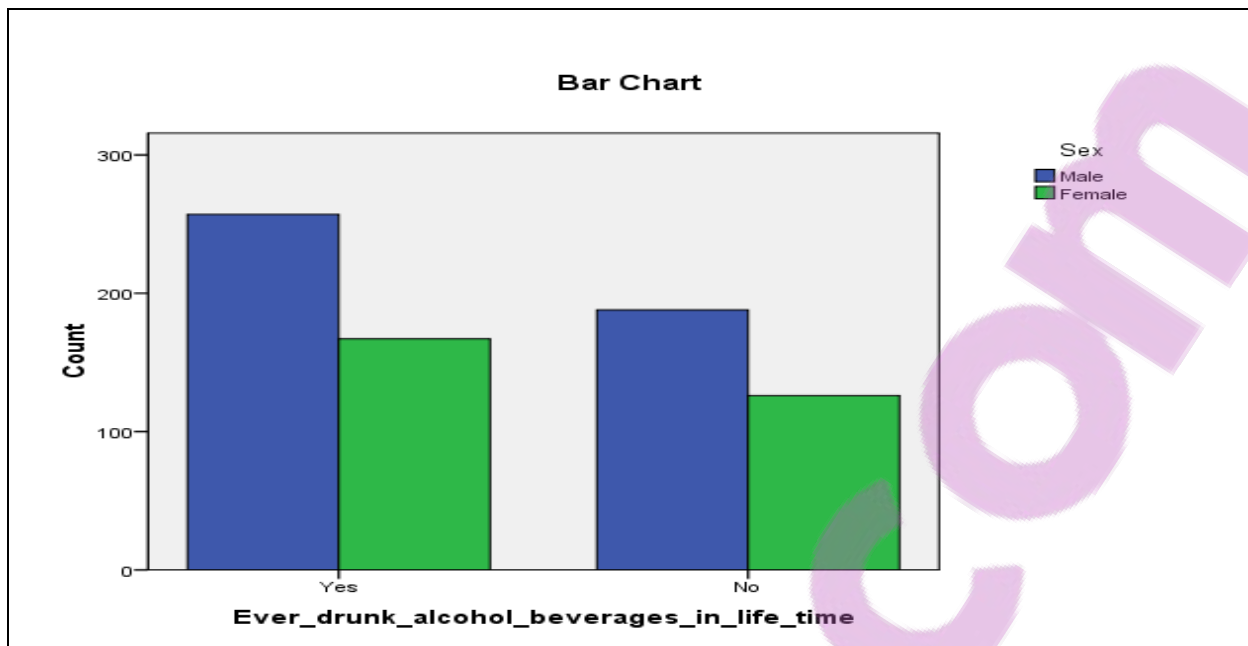
Count		Sex		Total
		Male	Female	
Ever drunk alcohol beverage in lifetime	Yes	257	167	424
	No	188	126	314
<b>Total</b>		445	293	738

**Table 4.18: Chi-square tests for ever alcohol drinking vs gender**

Measures	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson chi-square	.041 <sup>a</sup>	1	.839		
Continuity correction	.016	1	.899		
Likelihood ratio	.041	1	.839		
Fisher's Exact Test				.879	.449
Linear-by-linear Association	.041	1	.839		
N of valid cases	738				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 124.66.

b. Computed only for a 2x2 table



**Figure 4.11: Bar graph of life time alcohol drinking experiences versus gender structure (n=424)**

Likewise, descriptive analysis was done to see whether history of substance abuse differs between male and female gender groups. The study found that more males 58.9% (n=250) and 36.8% (n=156) female respondents reported use of substances. However, statistical analysis using chi-square showed that gender distribution among male and female substance users was found to be statistically insignificant with p-value >0.05. It means that statistically, there was no difference between males and females on the use of substances. Tables 4.19 and 4.20 depict bar chart indicating history of using substances versus gender differences.

**Table 4.19: Crosstab of life time substance use vs gender composition (N=738)**

Count		Sex		Total
		Male	Female	
History of using any substance in lifetime	Yes	250	159	409
	No	195	134	329
	<b>Total</b>	<b>445</b>	<b>293</b>	<b>738</b>

**Table 4.20: Chi-square tests, life time substance use vs gender disparity (N=738)**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson chi-square	.262 <sup>a</sup>	1	.609		
Continuity correction <sup>b</sup>	.190	1	.663		
Likelihood ratio	.262	1	.609		
Fisher's Exact Test				.650	.331
Linear-by-linear association	.261	1	.609		
N of valid cases <sup>b</sup>	738				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 130.62.

b. Computed only for a 2x2 table

#### ***4.3.4.2 Alcohol and substance use behaviour in the past twelve months***

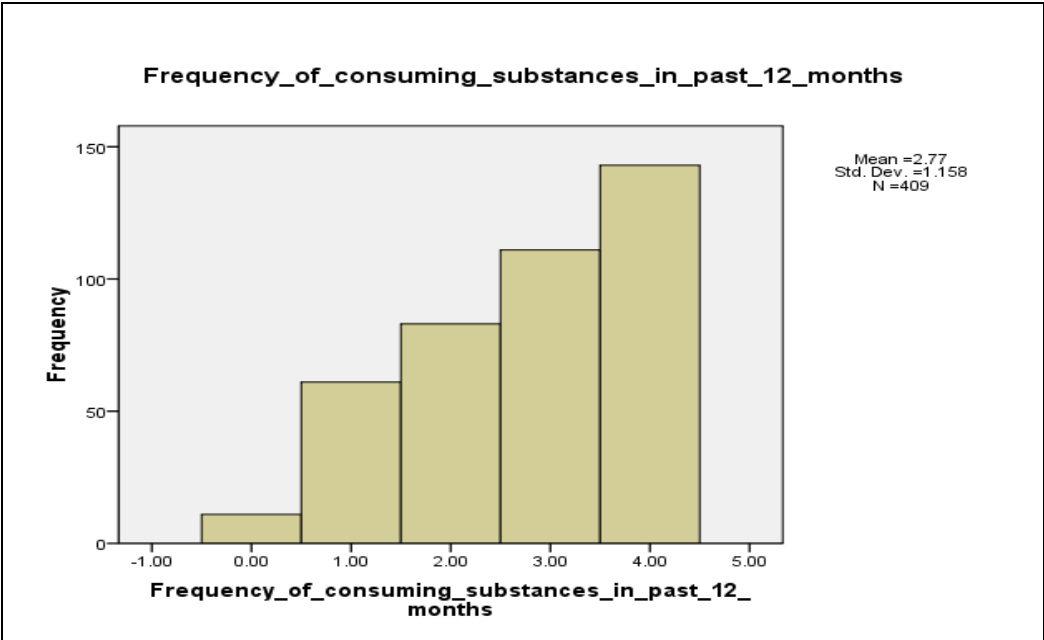
To measure the respondent's behaviour of alcohol and substance use in the past year, questionnaire items that explored frequency of drinks, quantity used, status of respondents after being drunk and other related questions were asked. More than a third, 34.8% (n=143) respondents reported that they have used different type of substances in the past 12-month period with frequency of almost on daily basis. Besides, 27.2% (n=111) respondents indicated that they use substances on two to three occasions within a specific week.

On the other hand, about 34.8% (n=143) indicated that they used alcohol and other substances with frequency of four or more times in a specific week within the past 12 months which ranges to level of daily use. However, only 2.7% (n=11) respondents mentioned that they stopped using substances in the past 12 months period. Below is table 4.21 and figure 4.12 that shows frequency of substance use among respondents in the past 12 months.



**Table 4.21: Frequency of substance use in the past 12 months (n=409)**

Frequency of substance use in the past 12 months	Frequency	Valid percent	Cumulative percent
Never	11	2.7	2.7
Monthly or more	61	15.0	17.6
2-4 times a month	83	20.3	38.0
2-3 times a week	111	27.2	65.2
4 or more times a week	143	34.8	100.0
<b>Total</b>	<b>409</b>	<b>100.0</b>	



**Figure 4.12: Trends of substance use in the past 12 months**

Respondents were also asked whether they had history of drinking more than five drinks on one occasion, and this meant heavy drinking behaviour. Among those who have reported a life-time alcohol drinking practice, 18.2% (n=77) respondents reported history of heavy drinking habit on monthly basis in different and planned occasion and 38.4% (n=163) mentioned that they used more than five drinks in one occasion on weekly basis. On the other hand, 26.4% (n=112) respondents reported a daily drinking habit of more than five drinks in one occasion.

However, 5.7% (n=24) respondents among alcohol drinkers reported that they never had a drink that amounts five or more in one occasion. The above findings revealed that

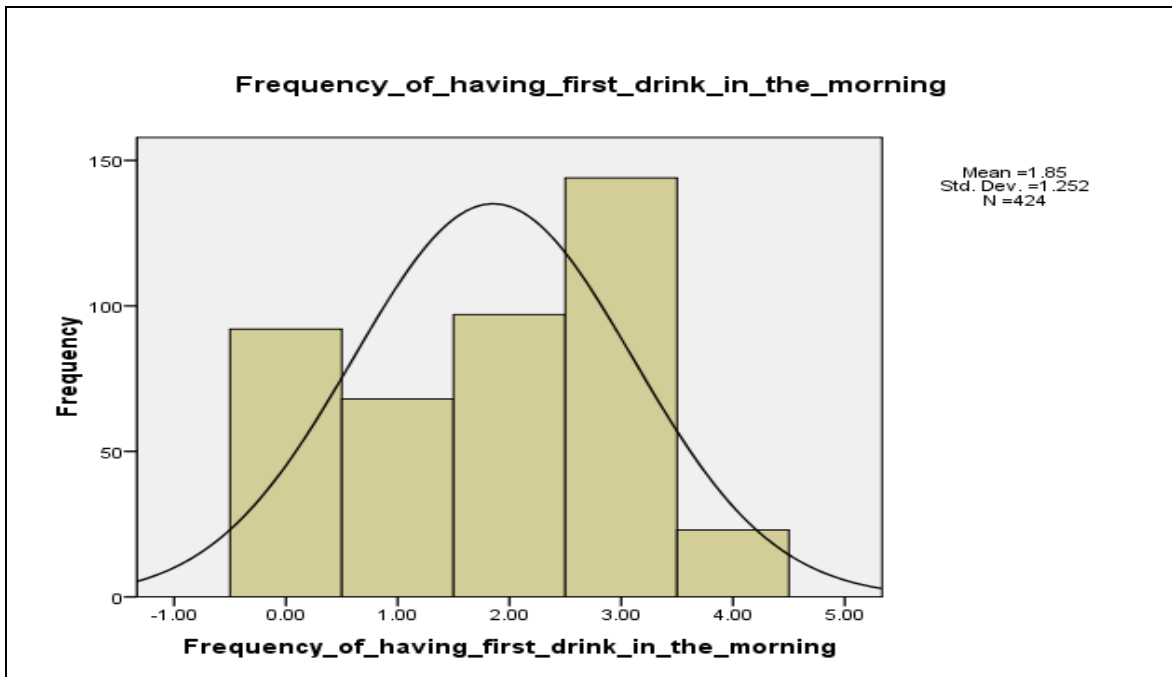
heavy drinking has become usual practice among young university students that warrants the need for immediate intervention. Table 4.22 shows the frequency of alcohol intake in one occasion.

**Table 4.22: History of having more than five drinks in one occasion (n=424)**

	<b>Frequency</b>	<b>Percent</b>	<b>Valid percent</b>	<b>Cumulative percent</b>
Never	24	3.3	5.7	5.7
More than monthly	48	6.5	11.3	17.0
Monthly	77	10.4	18.2	35.1
Weekly	163	22.1	38.4	73.6
Almost daily	112	15.2	26.4	100.0
<b>Total</b>	<b>424</b>	<b>57.5</b>	<b>100.0</b>	

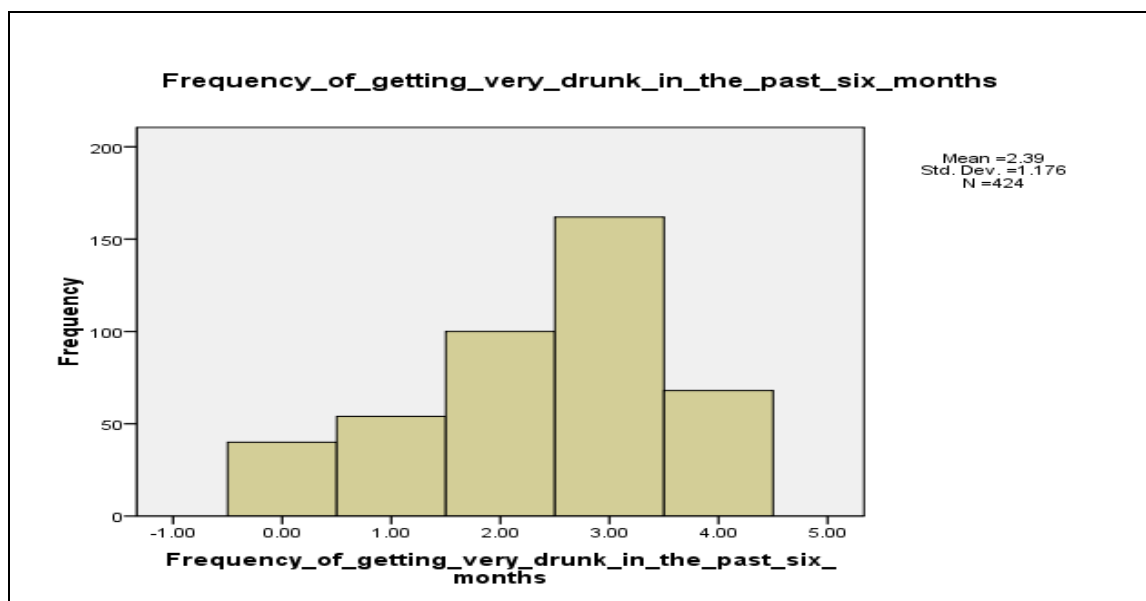
Also, 79% (n=335) respondents mentioned that they have got very drunk on at least one occasion without having prior plan to drink at occasions such as birth day parties and festivities. Further, respondents pointed out that in such events, they drunk to the level of intoxication. However, 20% (n=85) respondents indicated that they had no experience of being very drunk without having a prior plan.

Out of the 424 respondents who reported drinking various type of alcohol beverages, 33.9% (n=144) mentioned that they usually have their first drink in the morning. Moreover, 5.4% (n=23) of respondents reported that it's a norm to have a drink first thing in the morning which uncovered the risk of having alcohol use dependence. The reasons mentioned for drinking alcohol in the morning were in the intention to overcome hangover or withdrawal effects. The figure of those who drank alcohol in the morning was worrisome. Figure 4.13 shows the frequency of having first drink in the morning.

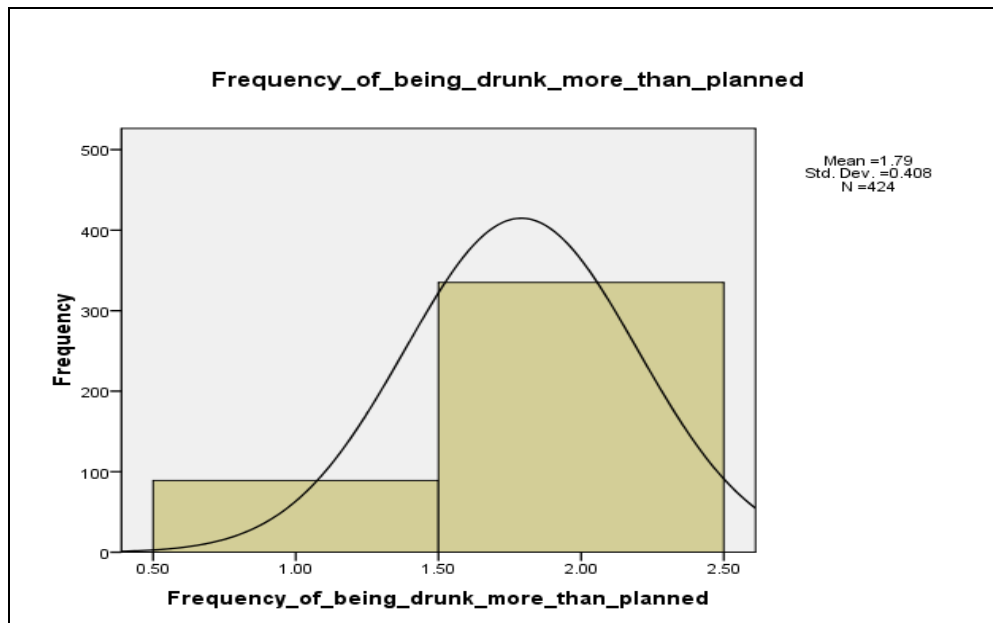


**Figure 4.13: Trends of having first drink in the morning**

When respondents were asked to indicate frequency of being very drunk in the past six months, 38.2% (n=162) reported that they got very drunk on a weekly basis with mean distribution of 2.39. On the other hand, a quarter (n=84) respondents indicated that they have got very drunk and intoxicated on monthly basis in the past six months. Sadly, 16.3% (n=69) respondents reported that they have got very drunk on daily basis. Figures 4.14 and 4.15 depict trend of alcohol drinking and anticipated prior plan to get very drunk.



**Figure 4.14: Frequency of getting very drunk in the past six months**



**Figure 4.15: Frequency of being drunk more than planned**

#### **4.3.4.3 Current alcohol drinking and substance abuse behaviour**

Various data collection questions were used to measure respondents' current alcohol drinking behaviour that covers a one month period. Of those who have reported life time history of alcohol drinking, 78.7% (n=332) respondents indicated that they are currently drinking different type of alcohol beverages. For the questions posed to know specific type of alcohol beverages drunk by the respondents, 50.5% (n=373) indicated that they drink beer including draught and locally made beer 'Tela. However, the remaining 37.1% (n=274) reported that they were currently drinking various type of mixed drinks including locally made once like 'Areke, Tej, as well as industrial products like wine, Gin, whisky and other type of hard liquors. Table 4.23 shows the Prevalence of current alcohol drinking among respondents.

**Table 4.23: Prevalence of current alcohol drinking among respondents (n=424)**

<b>Currently drinking alcohol in the past 28 days</b>	<b>Frequency</b>	<b>Valid percent</b>	<b>Cumulative percent</b>
Yes	332	78.7	78.7
No	92	21.3	100.0
<b>Total</b>	<b>424</b>	<b>100.0</b>	

In addition, questions were posed to know the frequency of alcohol beverage drinking among respondents in the past 28 days. More than a quarter, 27.6% (n=117) respondents indicated that they are currently drinking alcohol beverages with frequency of more than four times a week. Correspondingly, 25.7% (n=109) respondents described their current alcohol drinking behaviour being 2-3 times a week. On the other hand, 21.0% (n=89) respondents reported that they have stopped and did not drink any alcohol beverages in the past twenty-eight days. When asked to mention specific reasons to reach for such decision, 75% (n=69) of respondents pointed out that they fear adverse effects and were scared of getting used to alcohol and substances.

However, 26.1 (n=24) respondents mentioned that they were attempting to stop in fear of family members. About 47.8% (n=44) respondents mentioned that various reasons like medical illnesses, financial difficulties and fear of other consequences such as fear of being caught by proctors were main reasons for halting substance use. Table 4.24 indicates frequency of alcohol drinking behaviour in the past 28 days.

**Table 4.24: Frequency of drinking alcohol in the past 28 days (n=424)**

Frequency of drinking alcohol in the past 28 days	Frequency	Percent	Valid percent	Cumulative percent
Never	89	14.6	21.0	21.0
Monthly or more	45	6.1	10.6	31.6
2-3 times a month	64	8.7	15.1	46.7
2-3 times a week	109	14.8	25.7	72.4
4 or more times a week	117	15.9	27.6	100.0
<b>Total</b>	<b>424</b>	<b>60.0</b>	<b>100.0</b>	

Of those respondents who reported life-time use of substances, it was found out that 85.1% (n=348) respondents were currently using different type of substances. As it was indicated in the history of life time substance use, chewing khat was reported to be the most frequently used substance currently being 82.9% (n=339). For the questions posed to know frequency of using substances, 41.7% (n=145) reported that they chew Khat and use other substances on daily basis. Also, 29.6% (n=103) mentioned that they use different type substances in three or more occasions within a week. For the specific questions posed to know respondents behaviour of smoking cigarettes and/or tobaccos,

about 203 respondents indicated that they are currently active smokers which showed prevalence of cigarette smoking to be 27.5 percent.

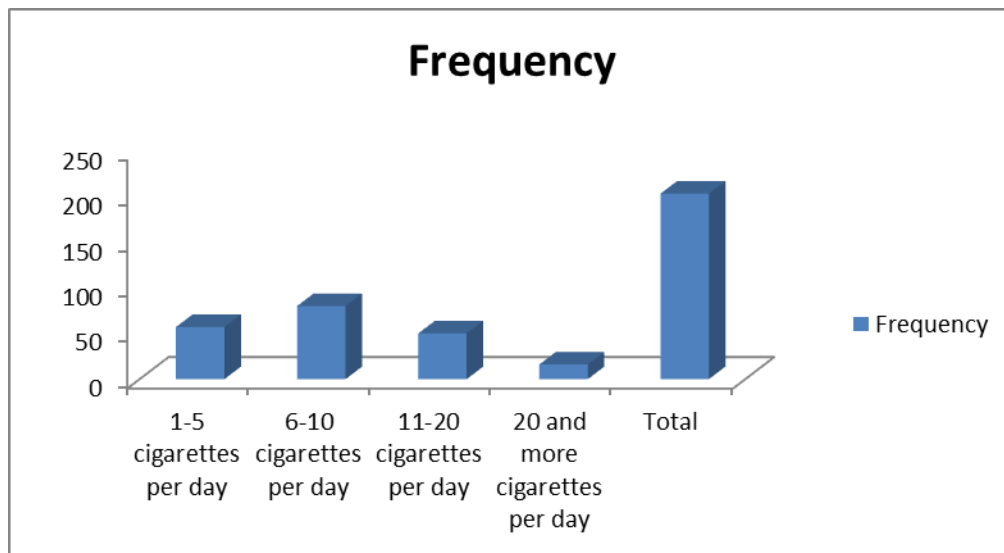
In this regard, the seriousness of smoking was found to be more than 50% (n=174) among current substance users. This signifies that about a quarter of respondents are on the verge of cigarette dependence. That is, number of tobacco smokers continues to increase despite its associated danger of dependence and health risk such as lung cancer. Clinical literatures clearly indicated that cigarette smoking was found to be dominant factor for lung cancer which is currently undeniable (Harrison’s Online 2012 89). Tables 4.25 to 4.26 and figure 4.16 shows current history of substance use and peer capita smoke per day.

**Table 4.25: Current history of substance use (n=409)**

History of current substance use	Frequency	Valid percent	Cumulative percent
Yes	348	85.1	85.1
No	61	14.9	100.0
<b>Total</b>	<b>409</b>	<b>100.0</b>	

**Table 4.26: Frequency of using substances like khat in the past 28 days (n=348)**

Count	Frequency	Percent	Cumulative percent
Once a month	10	2.9	2.9
2-3 times a month	31	8.9	11.8
Once a week	59	17.0	28.7
3 or more times a week	103	29.6	58.3
Almost daily	145	41.7	10.0
<b>Total</b>	<b>348</b>	<b>100.0</b>	



**Figure 4.16: Number of cigarettes smoked per day per capita**

#### **4.3.5 Major reasons and contributing factors for exposure to alcohol and substances use**

Respondents were asked about the major reasons for alcohol and substance use related exposure. For the questions posed to know major reasons of alcohol drinking, 43.9% (n=334) there was an indication that they drank alcohol beverages for personal pleasure, 38.2% (n=282) mentioned that they usually drink due to peer pressure to as option of recreation. Also, 33.7% (n=249) reported that they intended to improve sexual pleasure while drinking mint and other strong alcohol.

However, 41.6% (n=307) respondents indicated that they used to drink in order to overcome effects of substances. Also, vast majority, 38.9% (n=283) mentioned that drinking alcohol improved their social relation while 67.7% (n=287) indicated that it helps them to get rid of stresses. Tables 4.27 to 4.29 depict analysis of alcohol drinking versus substance abuse.

**Table 4.27: Chi-Square Tests to measure alcohol drinking vs substance use (n=424)**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson chi-square	12.236 <sup>a</sup>	1	.000		
Continuity correction <sup>b</sup>	11.324	1	.001		
Likelihood ratio	11.536	1	.001		
Fisher's exact test				.001	.001
Linear-by-linear association	12.207	1	.000		
N of valid cases <sup>b</sup>	424				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 24.83.

b. Computed only for a 2x2 table

**Table 4.28: Cross tab analysis of the relation between alcohol drinking vs substance use (n=424)**

Counts		Ever drunk alcohol beverages in lifetime	Total
		Yes	
To overcome the effects of substances is my reason for drinking	Yes	307	307
	No	117	117
<b>Total</b>		<b>424</b>	<b>424</b>

**Table 4.29 Mantel-Haenszel common odds ratio estimate**

<b>Estimate</b>			1.159
Ln (estimate)			.148
Std. error of ln (estimate)			.228
Asymp. Sig. (2-sided)			.517
Asymp. 95% confidence interval	Common odds ratio	Lower bound	.741
		Upper bound	1.812
	Ln (common odds ratio)	Lower bound	-.299
		Upper bound	.595

The Mantel-Haenszel common odds ratio estimate is asymptotically normally distributed under the common odds ratio of 1.000 assumptions. So is the natural log of the estimate.



Concerning the main reasons for adolescents' exposure to substances, 48.8% (n=360) respondents indicated that they use substances with intention to be alert. This was followed by 41.3% (n=305) respondents that they wanted to test different type of substances which goes in line with reasons for alcohol drinking. Also, 36% (n=265) mentioned that lack of adequate information about possible consequences of substance use and 34% (n=251) mentioned that they were using substances to get rid of worries and stresses as main reasons for substance use. However, similar portion of respondents, 68.2% (n=279) specified that they frequently use substances due to peer pressure. Table 4.30 depicts major reasons for substance use and abuse.

**Table 4.30: Major reasons of substance use**

Reasons for substance use	Frequency	Percent	Mean	SD
To be alert	360	88.0	1.33	0.470
To test how it feels	305	74.6	1.27	0.444
Personal pleasure	299	73.1	1.39	0.487
Peer pressure	275	67.2	1.12	0.325
Getting rid of worries	251	61.4	1.25	0.436
Seeking other effects	169	41.3	1.59	0.493

Respondents were asked about other contributing factors such as alcohol advertisements near universities, timing of alcohol advertisement, alcohol sponsorship of sporting events, pricing, government control of alcohol outlets, importance of legislation for age restriction and related issues whether impacted on alcohol drinking behaviour. The majority of respondents reported in the affirmative to the questions that the above factors have contributed for the adolescent's exposure to alcohol and substances use and abuse.

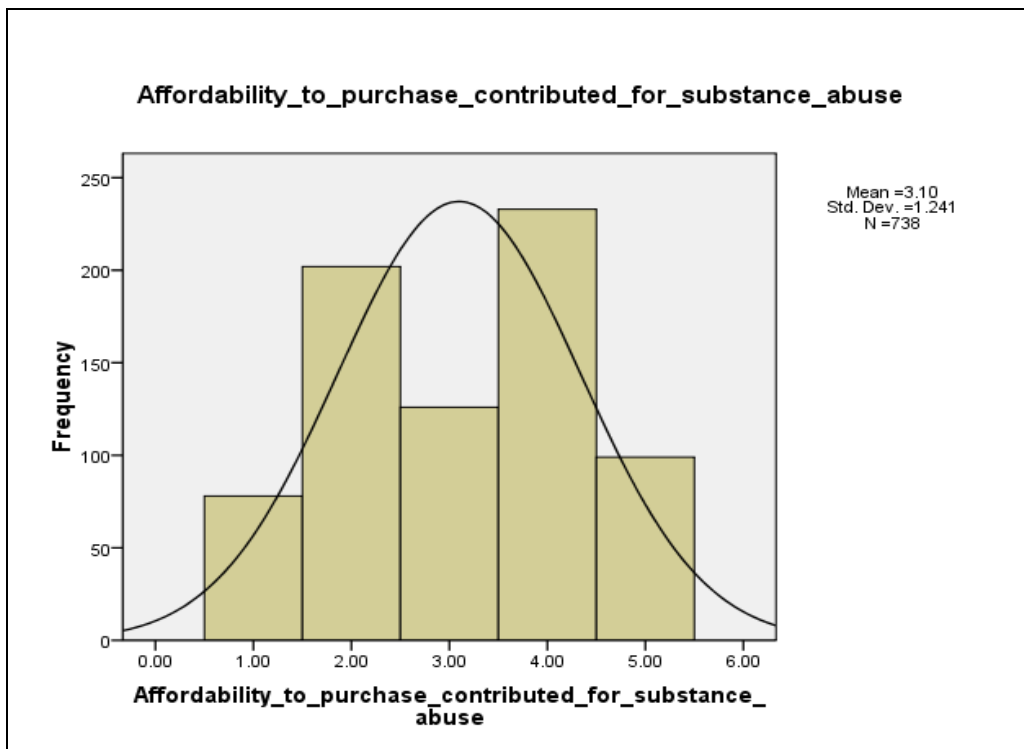
About 29.3% (n=216) respondents agreed that unregulated advertisements were one of the major causes for alcohol and substances use exposure. Eight percent (n=59) respondents strongly agreed about the contribution of unregulated alcohol advertisements. However, among respondents, 42% (n=310) opposed alcohol advertisements as major causes for adolescents alcohol use and abuse. Table 4.31 depicts respondents' feelings that unregulated advertisement has contributed for alcohol abuse.

**Table 4.31: Response indicating unregulated advertisements as a contributing factor for alcohol and substance abuse (N=738)**

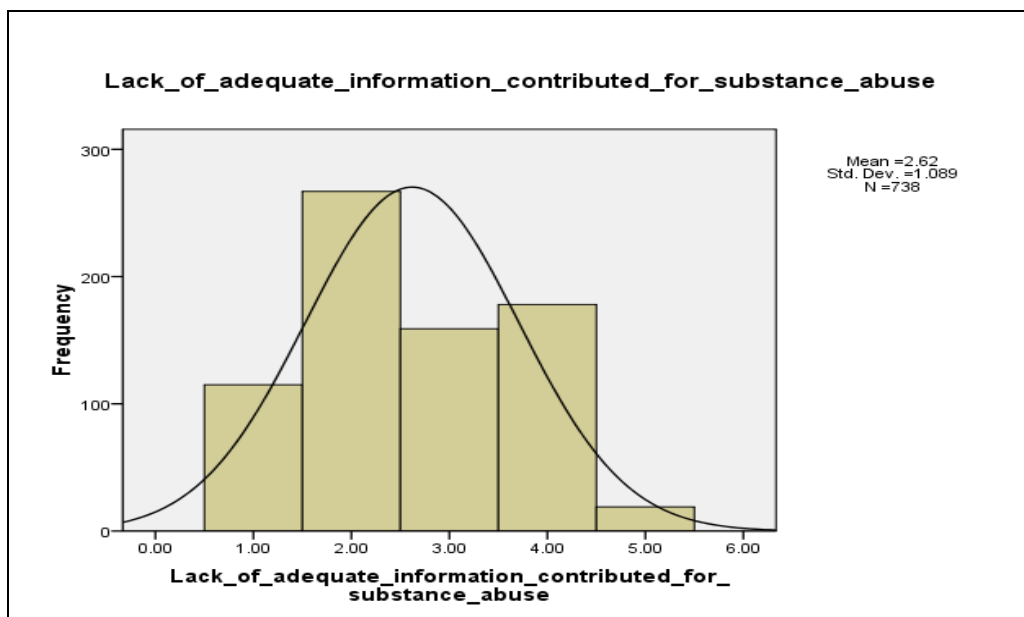
<b>Count</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid percent</b>	<b>Cumulative percent</b>
Strongly agree	59	8.0	8.0	8.0
Agree	216	29.3	29.3	37.3
Indecisive	153	20.7	20.7	58.0
Disagree	235	31.8	31.8	89.8
Strongly disagree	75	10.2	10.2	100.0
<b>Total</b>	<b>738</b>	<b>100.0</b>	<b>100.0</b>	

Similarly, 51.7% (n=382) respondents agreed that lack of adequate information, 37.7% (n=278) respondents mentioned ease of access to alcohol and substances, 37.9% (n=280) indicated affordability to purchase as main fueling factor. Also, 58.1% (n=429) respondents indicated that lack of other recreational services were some of major factors that have contributed to abuse of alcohol and substances specifically among university students.

However, a significant number of respondents 30.2% (n=223) and 42.3% (n=312) disagree that ease of access and affordability to purchase made any contribution to alcohol and substance abuse. About one third, 28.5% (n=210) respondents agreed that other factors such as university environment, academic curriculum design and class arrangements have contributed for alcohol and substance use and abuse. Figures 4.17 to 4.18 depict major factors for exposure of substance use and abuse.



**Figure 4.17: Lack of adequate information contributed for substance abuse**

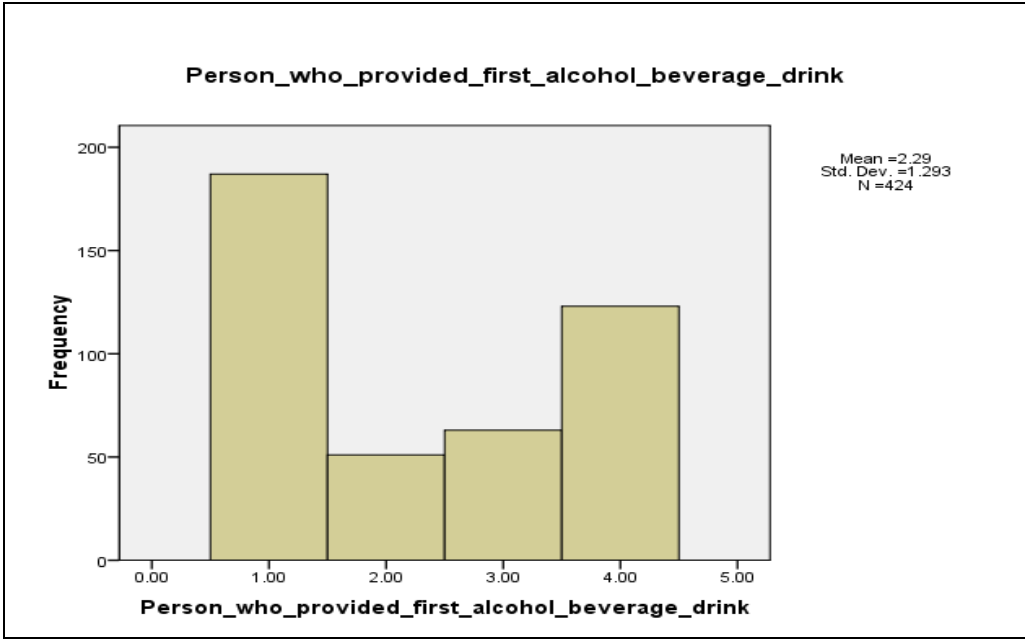


**Figure 4.18: Lack of other recreational activities contributed for substance abuse**

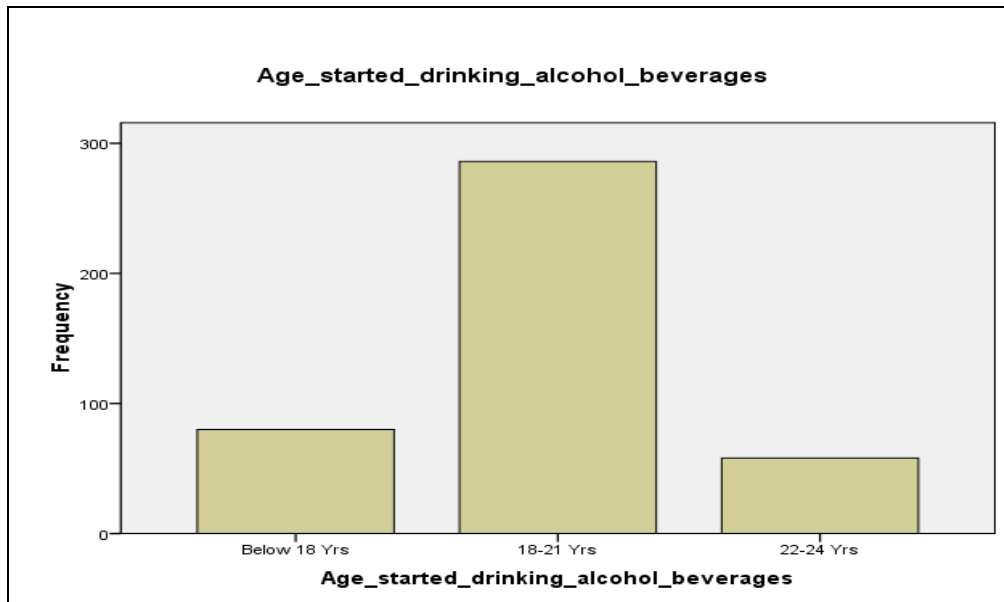
To measure respondents' first time exposure, a questionnaire was administered. It included questions about the person who provided the first alcohol beverage drink and age started alcohol drinking. Above a quarter, 25.3% (n=187) respondents indicated

that they purchased the said alcohol by themselves. However, 24.5% (n=181) indicated that university colleagues have provided them the first alcohol beverage whereas 6.1% (n=51) mentioned that their close family members had invited them different type of alcohol beverages. This signified that peer pressure has significant role for adolescent's exposure to alcohol and substance use.

Some participants, 67.4% (n=286) indicated that they started drinking alcoholic beverages between the age 18 to 21 years. However, 10.8% (n=80) respondents indicated that they started drinking alcohol beverages at the of age below 18 years which is of course much worrisome where more minors are being engaged in alcohol beverages. It was also observed that small number of students, 18.9% (n=80) began alcohol drinking after elapsing two to three years in a campus environment which indicated a need for further attention. Figures 4.19 and 4.20 indicating person who provided them the first alcohol beverage and age started alcohol drinking.



**Figure 4.19: Person who provided them the first alcohol beverage**



**Figure 4.20: Age started alcohol drinking**

Respondents were also asked about their substance use related experiences such as person provided the first substance and age started using substance. For the questions posed to know who provided them the first substance, 6.2% (n=46) respondents indicated that their close family member provided them. Some respondents who came from families using substances reported that they were socialized at an early age to purchase and use substances. Also, about 26.2% (n=193) respondents reported that they procured their first substance by themselves. However, more than 20% (n=169) respondents indicated that their close friends and/or university colleagues have provided them the first substance.

On the other hand, 67.7% (n=234) respondents mentioned that they started using substances at the age of 18 years and above which might be associated with initiation of substance use after joining university. However, significant number of respondents 31.3% (n=128) indicated that they started using substances while underage. Sadly, about six percent (n=24) respondents indicated that they started using substances like chewing khat at the age below 15 years which risks future consequences.

On the other hand, 72% (n=531) indicated that alcoholic beverages and substances are freely available near university campuses. Also, a quarter (n=182) respondents indicated that substances are available within 300 to 400 meter distance near university campuses where they are pursuing education. Figure 4.21 shows availability of alcohol and substances and its location from university campus. The below figures 4.21 and

4.22 depicting alcohol and substances availability near university campus and distance outlets located.

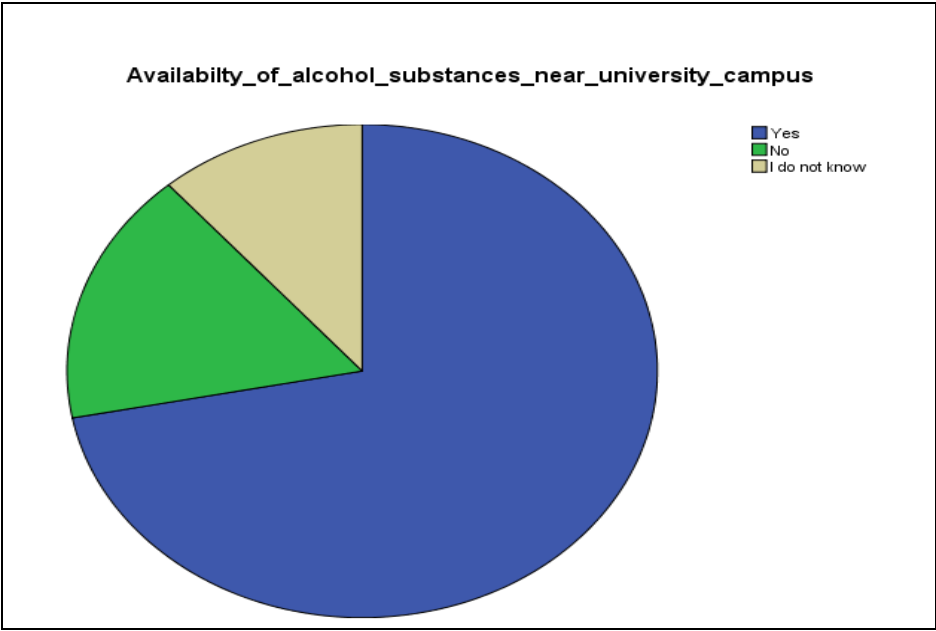


Figure 4.21: Awareness about availability of alcohol

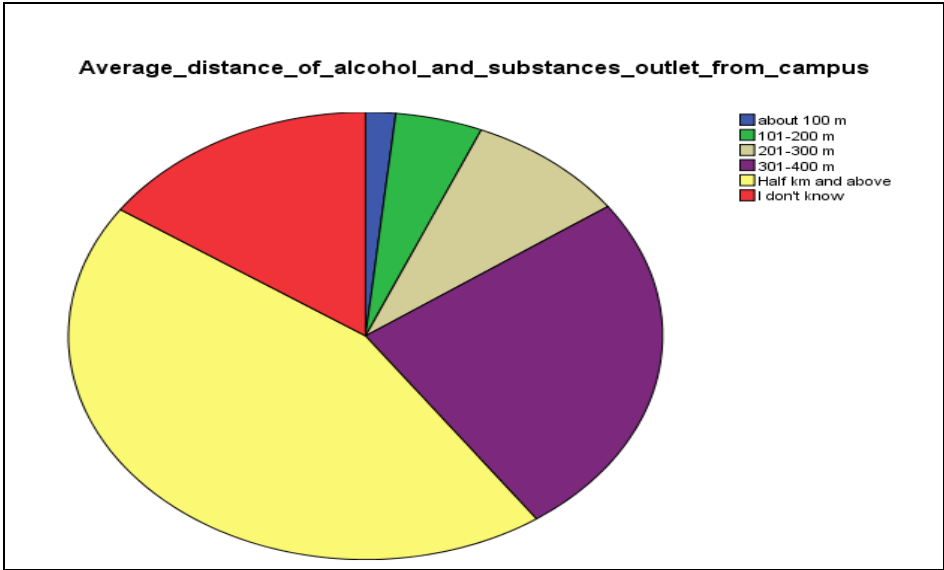
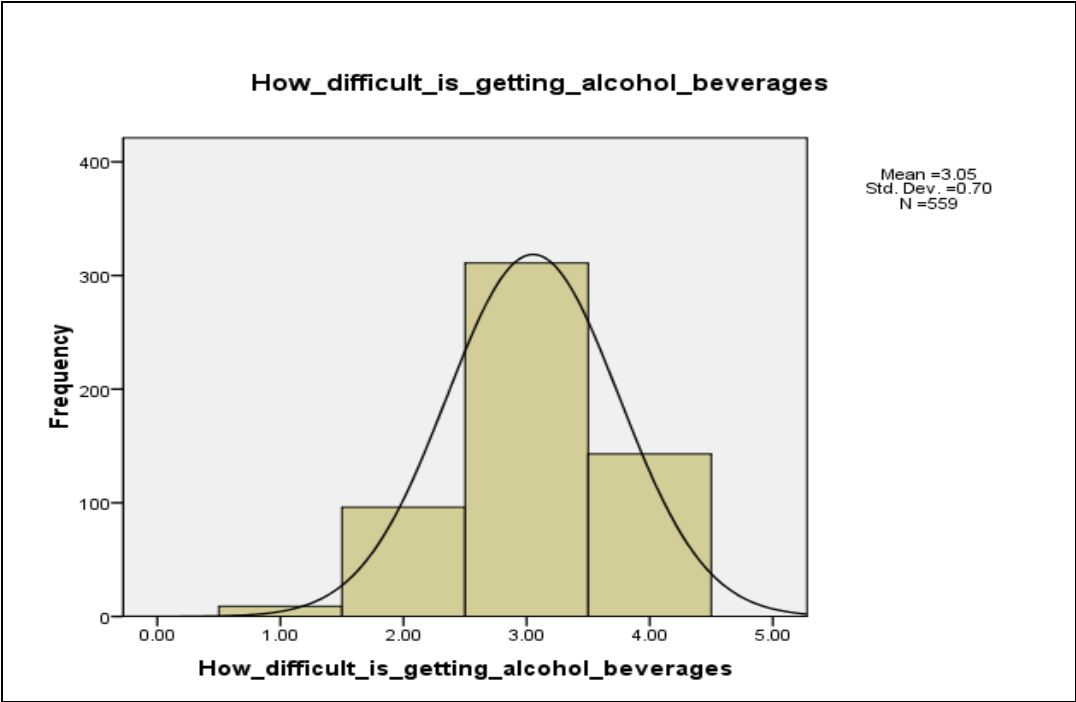


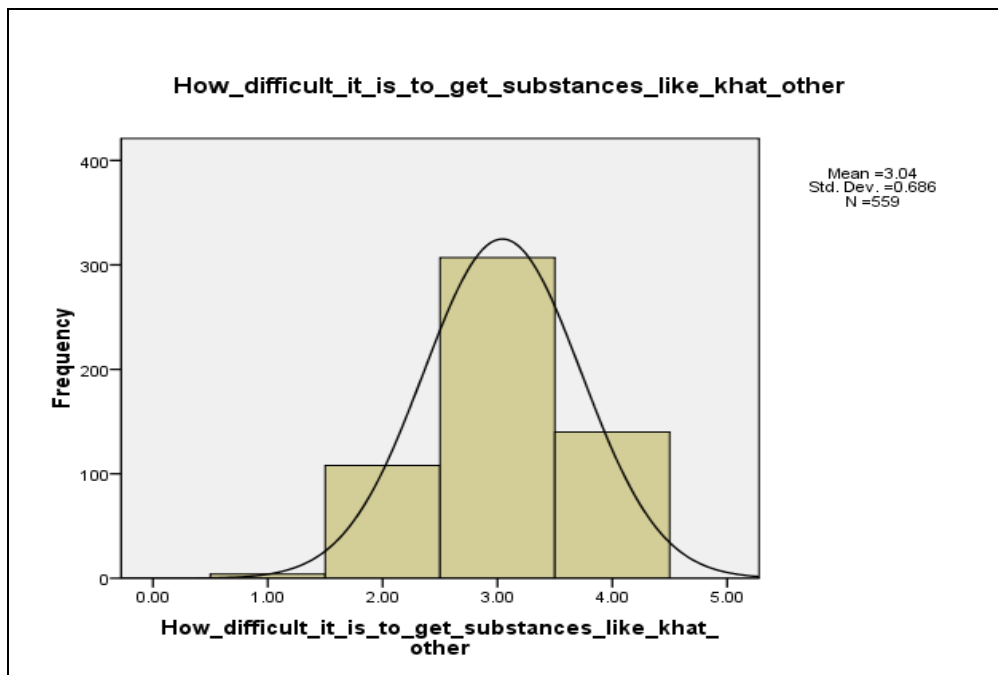
Figure 4.22: Average distance of alcohol and substance outlet

Concerning specific questions posed to know whether accessing or getting alcohol beverages and/or substances easier or difficult, majority of respondents is indicated that it was easy getting alcohol or substances. In this regard, 42.1% (n=311) respondents reported that they have easy access to alcohol beverages. However, locally made alcohol beverages and beer are the most widely available near university campus on 24/7 basis.

Similarly, 25% (n=140) indicated that getting substances had been very easy for them. In some campuses, specifically Chamo campus of Arbaminch University mentioned that khat is widely available and easily accessible on walking distance. However, 14.6% (n=108) respondents indicated that getting substances including khat and shisha is actually difficult near university campus. Figures 4.23 to 4.24 indicate ease of access for alcohol and substances.



**Figure 4.23: Awareness about accessing alcohol**



**Figure 4.24: Awareness about accessing substances like Khat**

#### **4.3.6 Physical and social consequences of alcohol and substance abuse**

Respondents were asked to report if they had any physical, social, academic and/or economic consequences following alcohol and substance use and abuse. For the questions posed to know any adverse effects experienced as a result of alcohol drinking among alcohol and substance users, 32% (n=139) respondents mentioned that they were unable to perform any daily routine activities. These included workup on academic matters, personal care practices, performing minor sporting activities and related others with frequency on weekly basis.

Nearly, 6% (n=24) respondents indicated that they were unable to do routine activities on daily basis due to alcohol. The academic effects mentioned included missing classes, laboratory demonstrations and field practices which could limit hands on skill after graduation. These situation could have further negative consequences on their career achievement causing incompetency in required skills that may led to joblessness and further engagement in alcohol and substance use practices.

Nearly 30% (n=215) respondents indicated that they experienced injury and some of them had been admitted to hospital and others had spent the night under police custody, which echoes the above scenario from World Health Organization (WHO).



Also, 29% (n=213) indicated that they have experienced different kind of incidents including risky sexual behaviour and practices that contribute to risky sexual act and could lead to HIV, syphilis infection and other related problems.

Concerning questions posed to explore the incidents after having alcohol and substance use, 29.7% (n=213) respondents mentioned their unpleasant experiences with family. A total of 26.6% (n=196) reported that they engaged in serious conflict and problem with university security while attempting to get in after being drunk or when smuggling substances into university campus. Besides, 26.8% (n=198) respondents reported financial difficulty, 27.0% (n=199) mentioned history of having risky sexual practice after being intoxicated which could pose imminent danger to their future life including deadly sexual transmitted infections like HIV.

Also, 25.1% (n=185) respondents indicated that alcohol and substance use affected their academic performance that included skipping of classes, field visits and laboratory hours which finally result in poor academic performance among the majority of users. However, about 4.2% (n=17) substance users specifically those who reported chewing khat mentioned that substances help them to get alert and did not affect academic performances. Figures 4.25 to 4.28 depict the consequences of substance use experience among respondents.

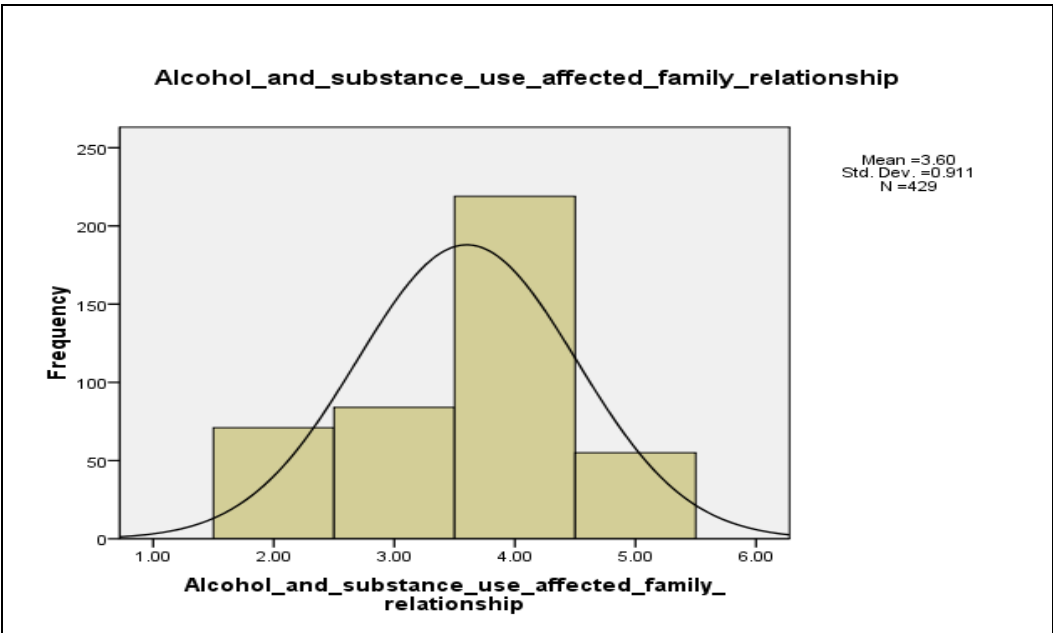
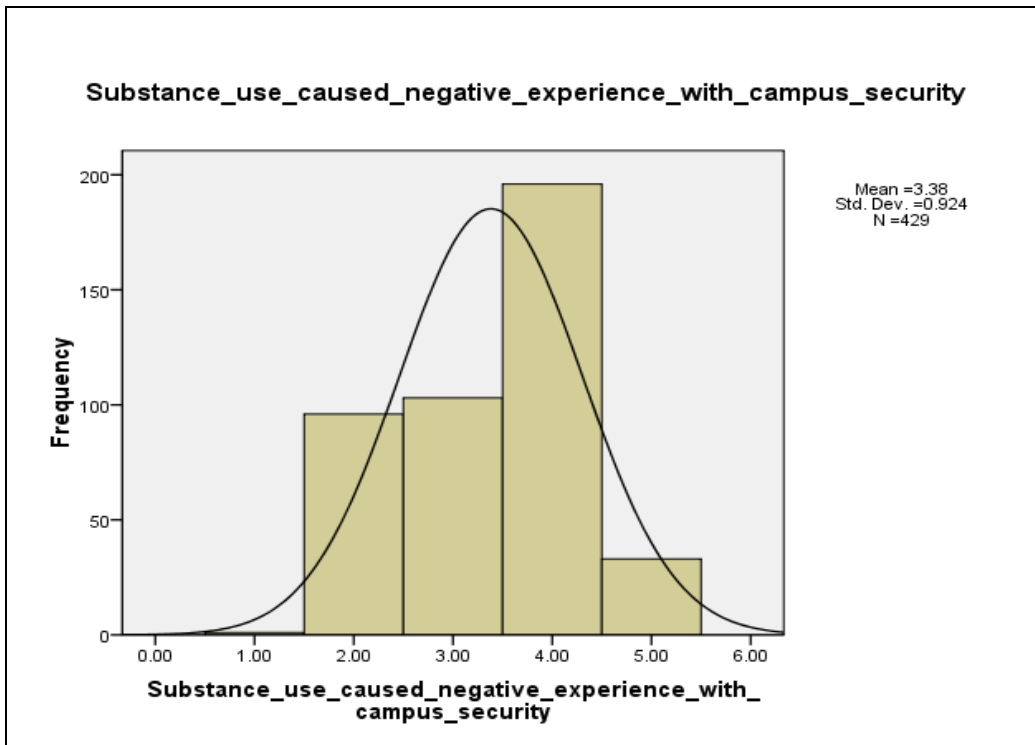
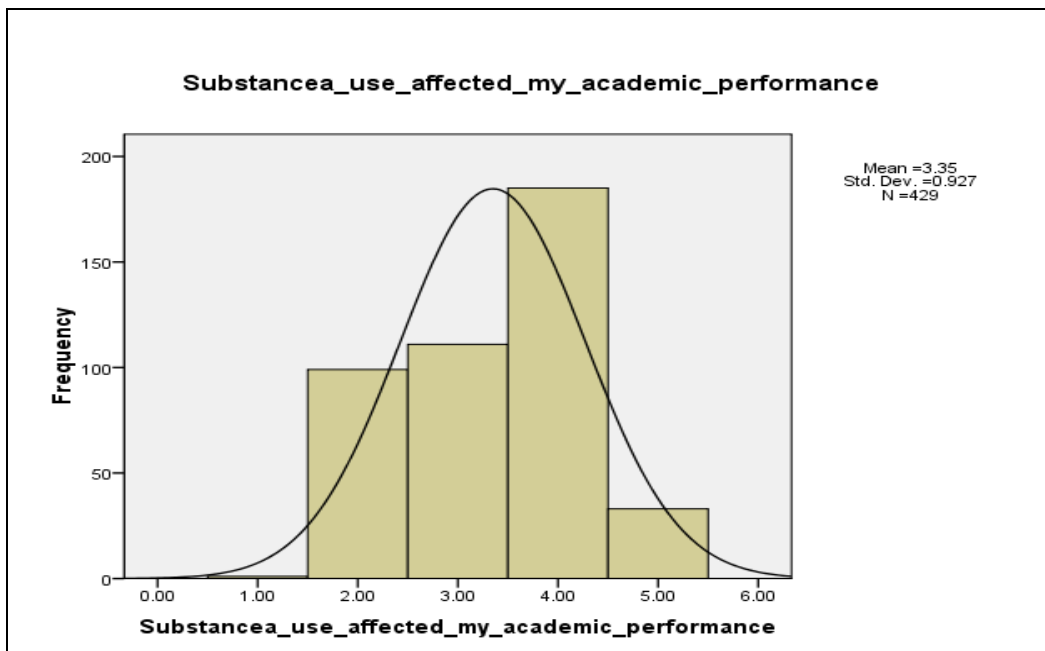


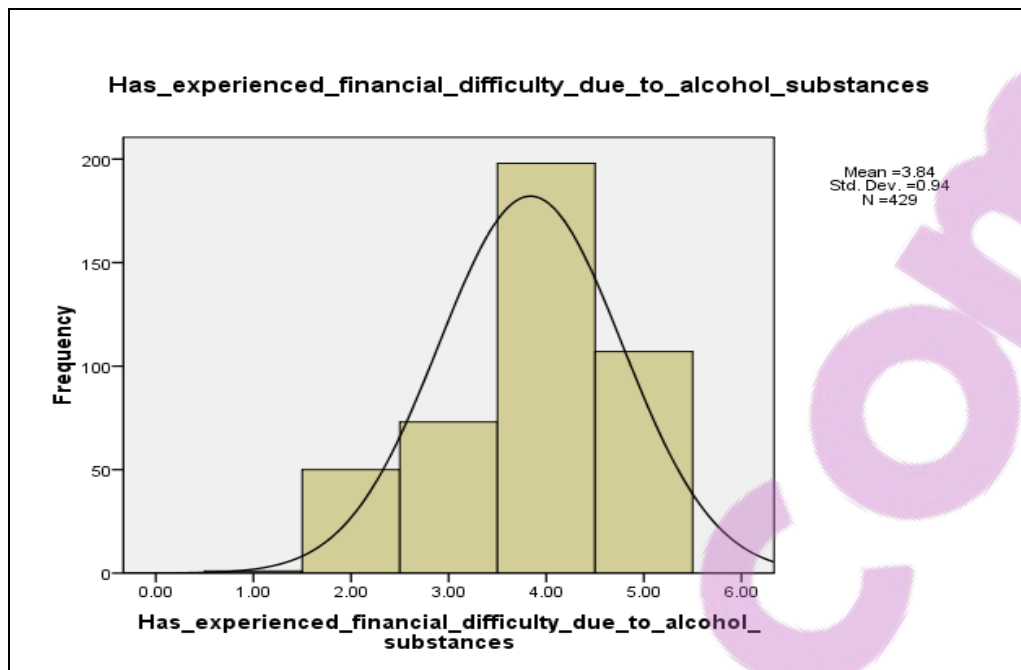
Figure 4.25: Alcohol and substance use affected family relationship



**Figure 4.26: Alcohol and substances have caused negative experience with campus security**



**Figure 4.27: Substance use affected academic performance**



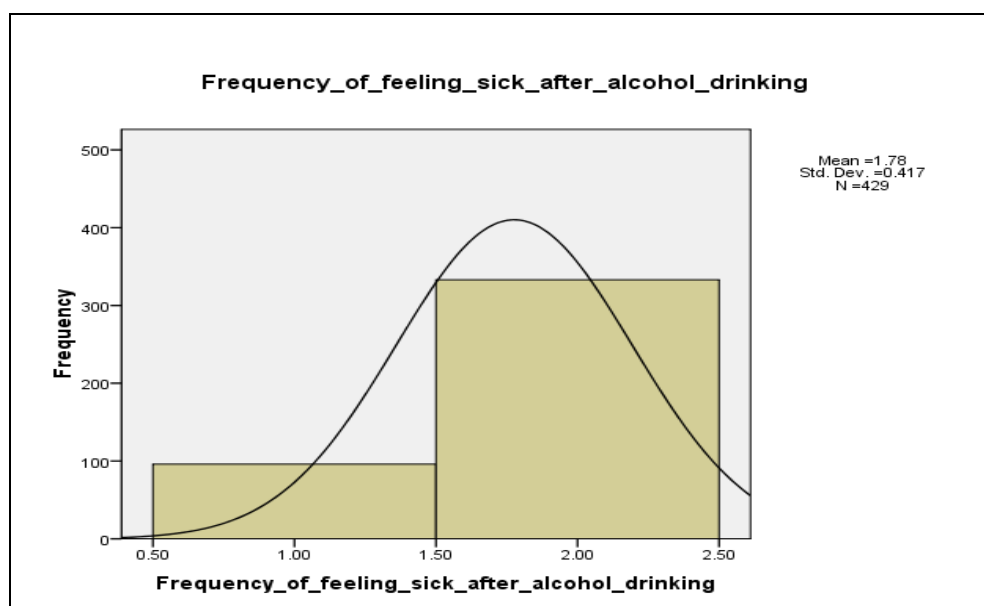
**Figure 4.28: Substance use resulted in financial difficulty**

Respondents were also asked about their physical health experiences of alcohol and/or substance use. About 45.1% (n=333) respondents mentioned that they have experienced history of being sick frequently. Also, 43.1% (n=318) respondents stated that they had symptoms of gastritis, epigastric burning sensation and indigestion specifically the next morning after alcohol party.

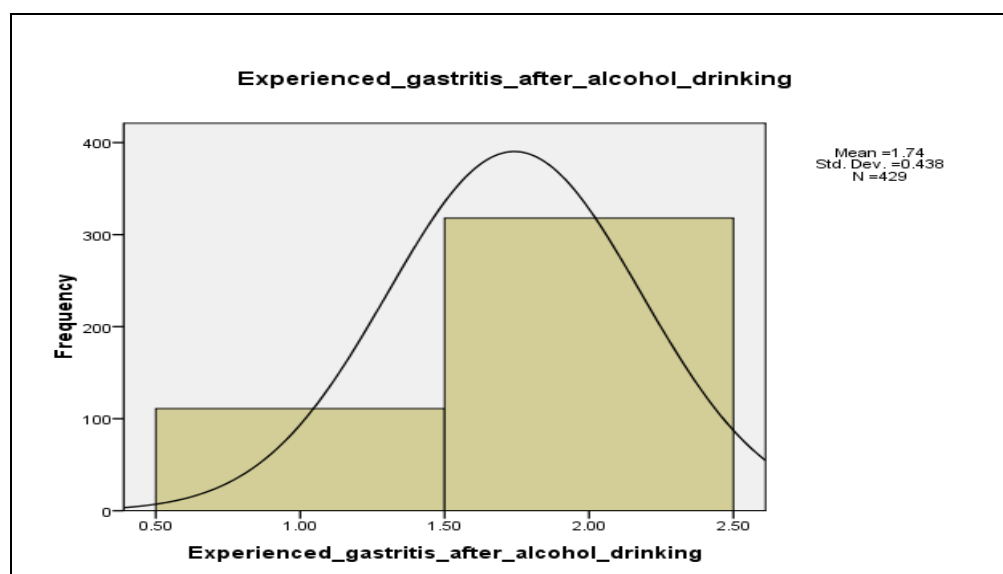
Despite the catabolic effect following substance abuse specifically khat chewing, many reported that they skip dinner or breakfast and 22.2% (n=164) respondents indicated that they had nutritional problems. Similarly, 29.1% (n=215) respondents mentioned that they experienced some kind of accident and injury in the last year. Nearly 15% (n=103) respondents reported a sustained serious injury in the previous year due to alcohol and substance use related intoxication. Table 4.32 and figures 4.29 to 4.30 depict respondents' experience of alcohol drinking, and intoxication versus physical injury.

**Table 4.32: History of having sustained injury after alcohol drinking**

History of incident	Frequency	Percent	Valid percent	Cumulative percent
Yes but not in the last year	103	14.0	24.3	24.3
Yes in the last year	215	29.1	50.7	75.0
No	106	14.4	25.0	100.0
<b>Total</b>	<b>424</b>	<b>57.5</b>	<b>100.0</b>	



**Figure 4.29: Post alcohol physical health experiences**



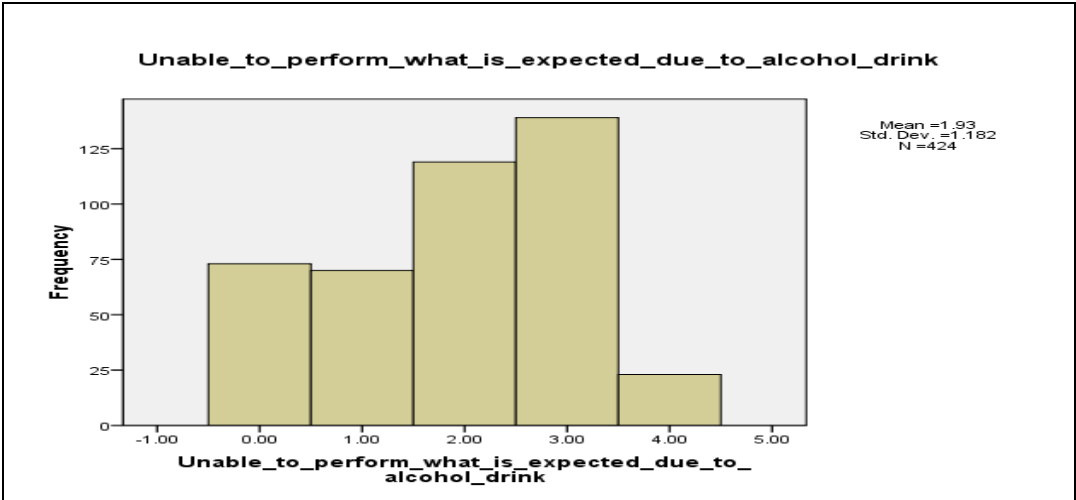
**Figure 4.30: Frequency of experiencing illnesses like gastritis**

Likewise, four percent (n=27) respondents mentioned that they were unable to remember what happened in the previous night after being drunk and intoxicated on daily basis and 21.8% (n=161) reported that similar incidents of not remembering what happened the night before on weekly basis. Besides, 28.9% (n=213) respondents voiced their feelings that either of their parents, family members or close friends were concerned about their drinking pattern. The below table 4.33 shows close family, friends and/or others concern about respondents drinking pattern.

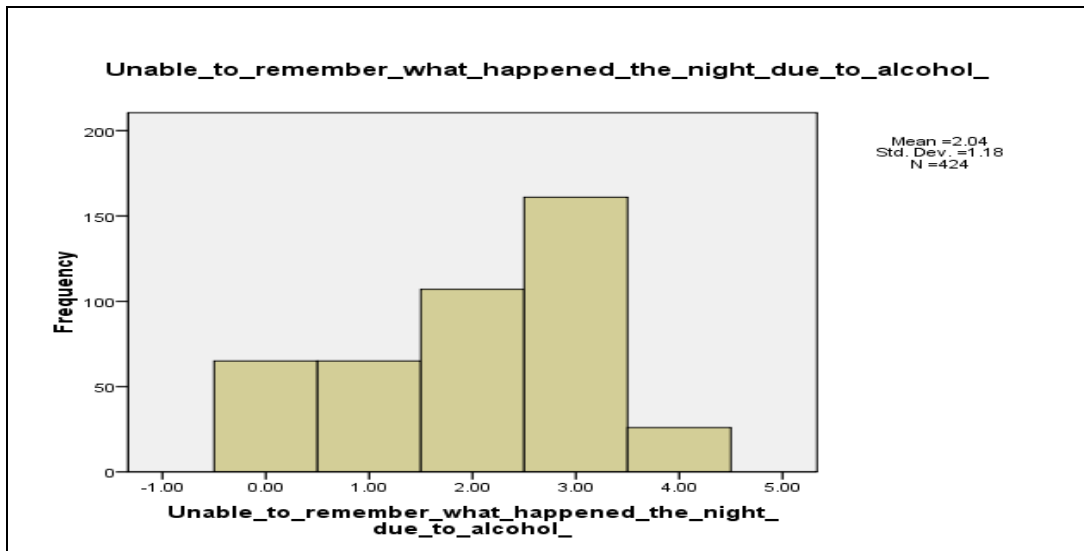
**Table 4.33: Family friend or others concerns about drinking pattern**

Counts	Frequency	Percent	Valid percent	Cumulative percent
Yes, but not in the last year	109	14.8	25.7	25.7
Yes, in the last year	212	28.7	50.0	75.7
No	103	14.0	24.3	100.0
<b>Total</b>	<b>424</b>	<b>57.5</b>	<b>100.0</b>	

Also, 5.1% (n=38) respondents mentioned that they feel guilty with the previous night experiences of being very drunk on daily basis and 16.4% (n=121) revealed that they feel embarrassed on weekly basis for being intoxicated and have decided not to return back but were unable to materialise. Figures 4.31 to 4.32 indicate respondents' awareness of the incidents in the night before of being heavily drunk.

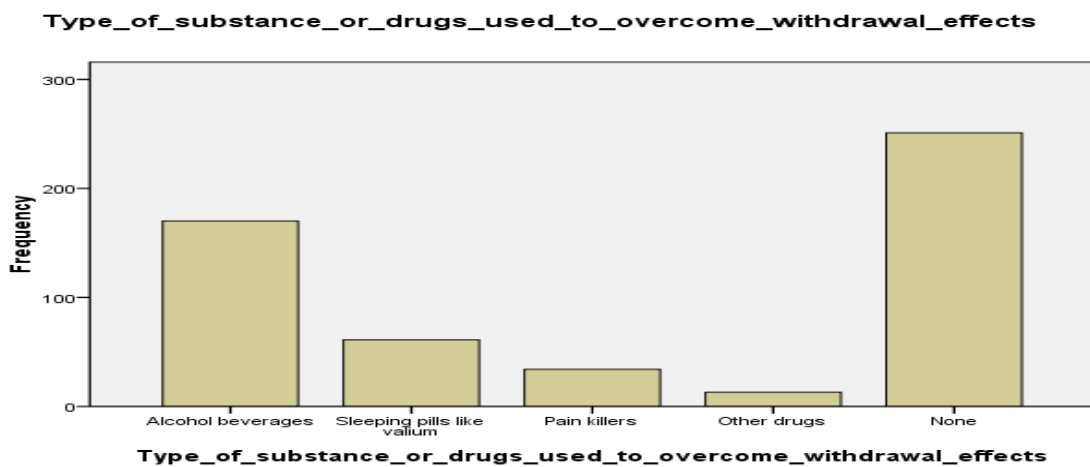


**Figure 4.31: Frequency of being unable to perform what is expected**



**Figure 4.32: Frequency of being unable to remember what happened the night before**

Respondents were also asked if they had experienced withdrawal effects of alcohol drinking, about 20% (n=170) respondents indicated that they experienced some kind of withdrawal effect. Majority of respondents detailed that they had feelings of weakness, tearing, headaches and yawning. Out of them, 34.7% (n=147) mentioned that they drink alcohol to get rid of those feelings. However, about six percent (n=24) respondents mentioned that they used to take sleeping pills with the aim to overcome alcohol and substance use related withdrawal effects. Figure 4.33 depicts type of substances and drugs used to overcome alcohol and substances use related sign and symptoms.



**Figure 4.33: Type of substances and drugs used to overcome substances use related sign and symptoms**

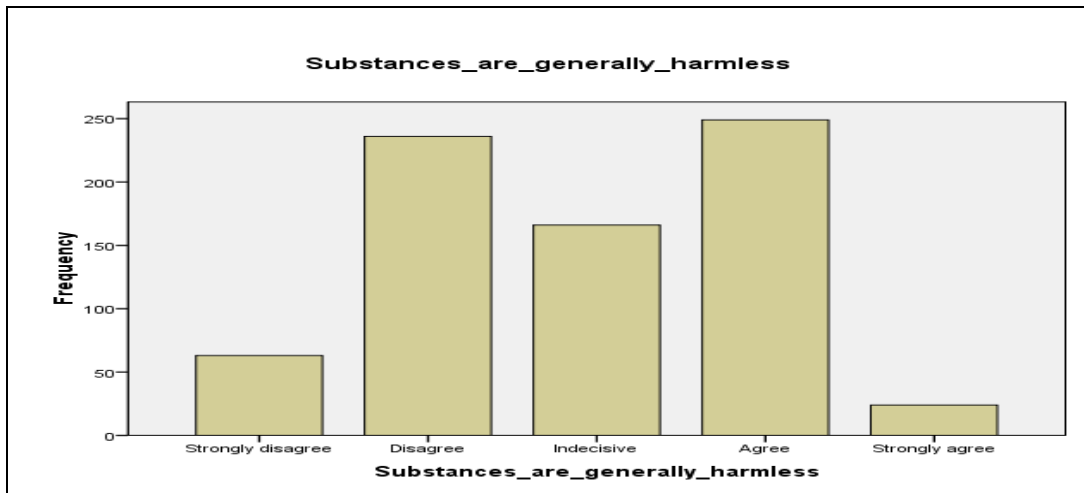
**4.3.7 Respondents attitudes about alcohol beverages, substances and its use**

When respondents were asked about their attitude concerning alcohol drinks, 33.9% (n=251) indicated that they understand problems associated with the abuse of substances and alcoholic beverages (Positive attitude) while 5.6% (n=41) indicated that they are very much aware of the consequences of abusing alcoholic beverages and other substances (Extremely positive attitude). However, 24.3% (n=179) respondents indicated that they have bad attitude about alcohol drinks. The other majority, 28.3% (n=209) were unable to say good or bad about alcohol drinks which indicated the possibility that some of them may be vulnerable to start alcohol and substances at some point in time. This showed that significant portion of respondents have favorable attitude about alcohol drinks. Table 4.34 describes respondents’ attitude about alcohol drinking.

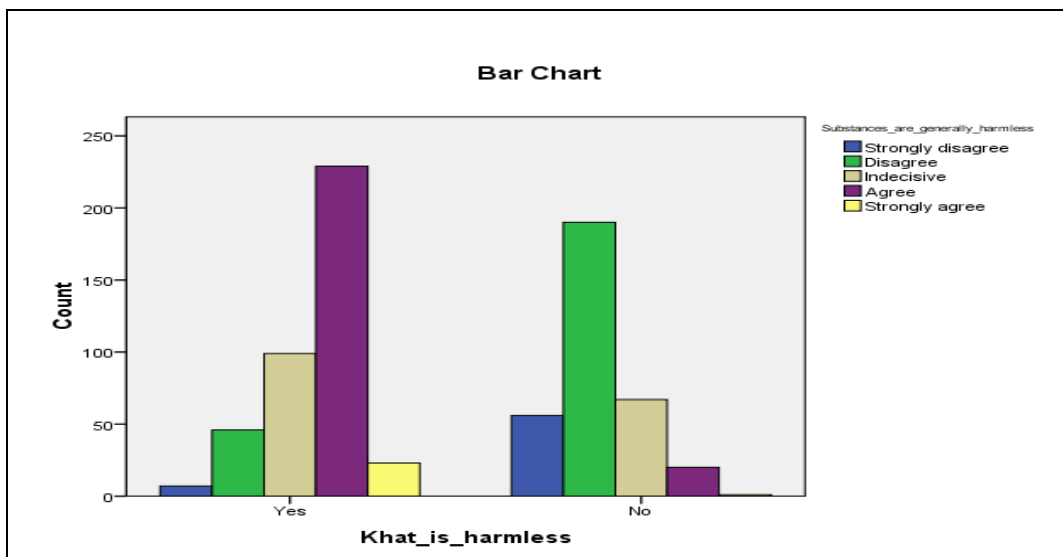
**Table 4.34: Family friend or others concerns about drinking pattern**

<b>Attitude of alcohol drinks</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid percent</b>	<b>Cumulative percent</b>
Very bad	59	8.0	8.0	8.0
Bad	179	24.3	24.3	32.2
Indecisive	209	28.3	28.3	60.6
Good	250	33.9	33.9	94.4
Very good	41	5.6	5.6	100.0
<b>Total</b>	<b>738</b>	<b>100.0</b>	<b>100.0</b>	

Questions were also posed to know attitudes of respondents concerning use of substances like khat, Shisha, Hashish and others. Nearly a third, 33.3% (n=249) respondents indicated that substances are generally harmless and of which 54.9% (n=405) indicated that khat is harmless. Also, more than half, 52.4% (n=387) respondents described that shisha is harmless. More than half of respondents indicated that Shisha smoking does not bear any adverse effect as compared to 45.1% (n=333) respondents that indicated khat and other substances could result in some kind of unintended consequences. The above finding indicated that khat was the most favourite substance among respondents perceived to be less harmful. Figures 4.34 and 4.35 illustrate respondents’ attitude about substances.



**Figure 4.34: Respondents response indicating substances as harmless**



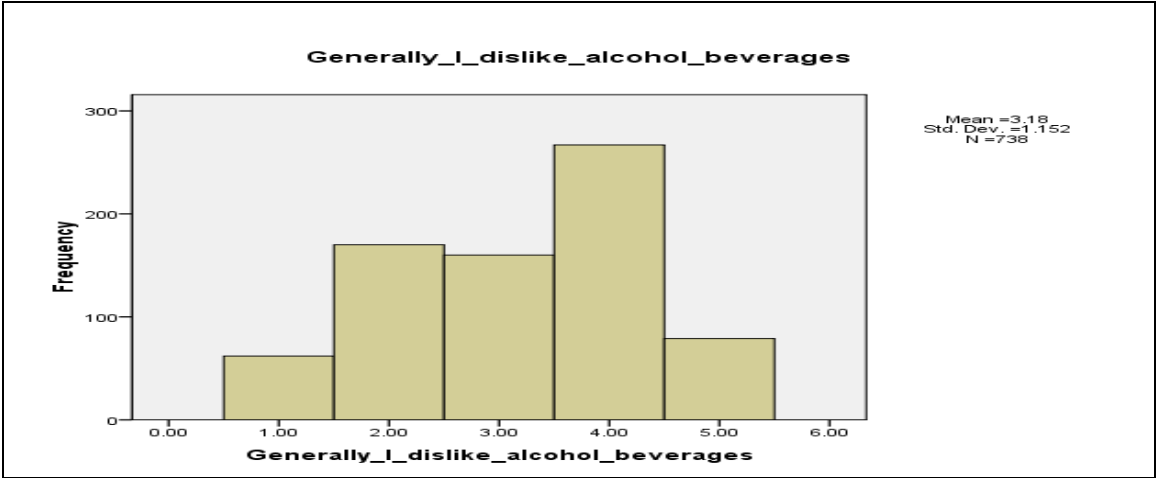
**Figure 4.35: Respondent's response indicating that use of khat is harmless**

Besides, respondents were asked about their personal feelings whether they like or dislike use of alcohol and substances. In this regard, 36.2% (n=267) respondents agreed that they enjoyed the fantasy and emotional change after using alcohol and substances. However, 23% (n=170) respondents mentioned that they do not like alcohol beverages and its effect.

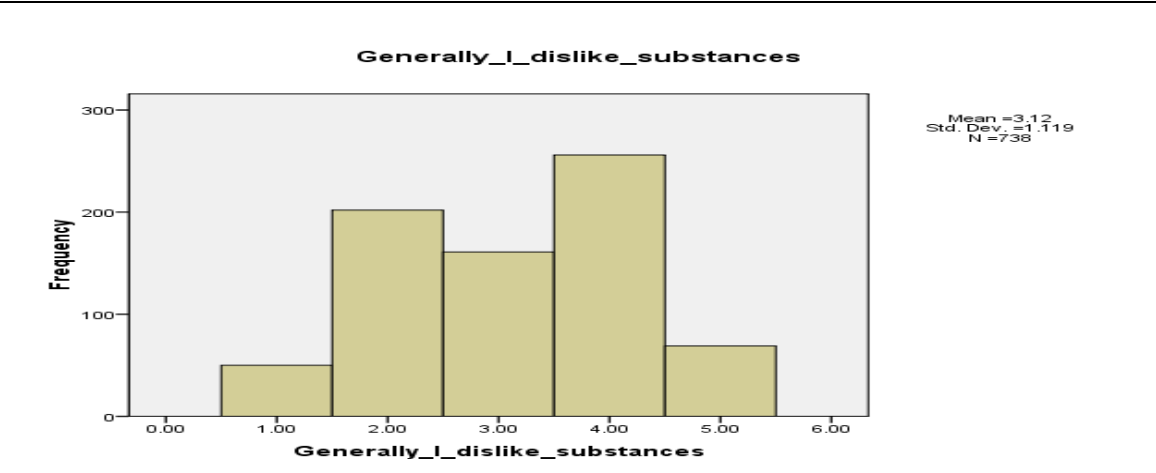
Likewise, 34.7% (n=256) respondents agree that they are in favour of substances, its use and post effect. On the other hand, 27.4% (202) respondents disagree on the questions posed to know whether they like substances and their use. The findings



clearly indicated that those in favor of alcohol and substance use were more than those against, and that calls for intervention. Figures 4.36 and 4.37 indicate respondents feeling about alcohol and substances.



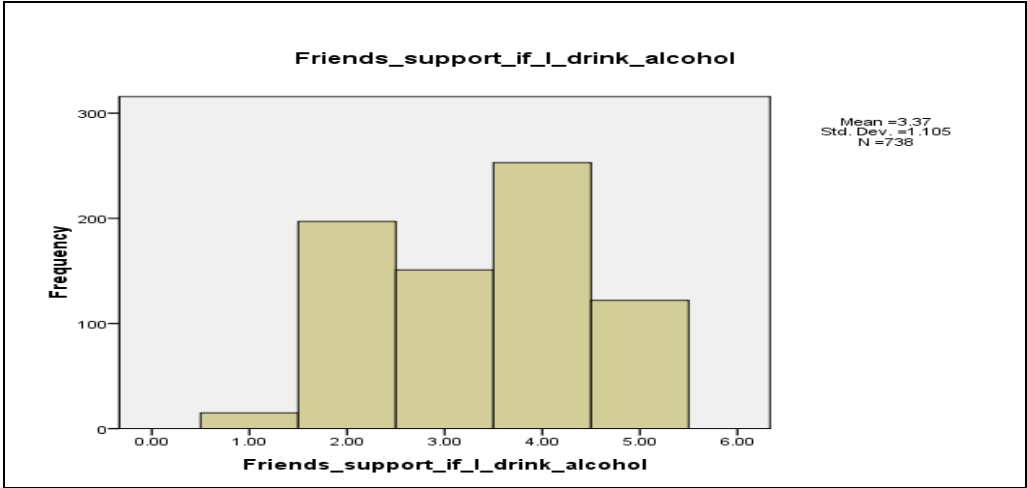
**Figure 4.36: Respondents feeling about alcohol drinking**



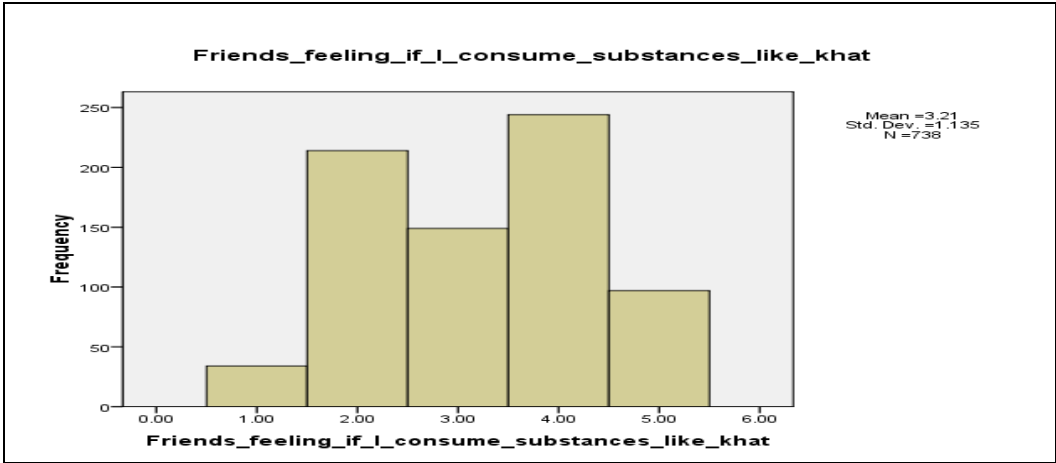
**Figure 4.37: Respondents feeling about substance use**

Concerning support by significant, 50.8% (n=375) respondents mentioned that their close friends are supportive if they could drink alcohol beverages. From the findings, only a quarter, 26.7% (n=197) respondents reported that their close friends were unsupportive of alcohol drinks while 20.5% (n=151) were indecisive and not aware of their close friends support concerning halting or continuing alcohol drinks. On the other hand, 33.1% (n=244) respondents reported that their close friends and significant others were supportive if they use any kind of substances.

However, 29.1% (n=215) respondents indicated that they were not happy to see their close friends engaged in using substances. But, 20.5% (n=151) respondents did not decide whether they were supportive or against their close friends who use substances. Likewise, 36% (n=266) alcohol and substance users reported that they support their close friends who use substances and indicated that they would invite non users to join them. Figures 4.38 and 4.39 specify friends and significant others support for those using drinking alcohol.



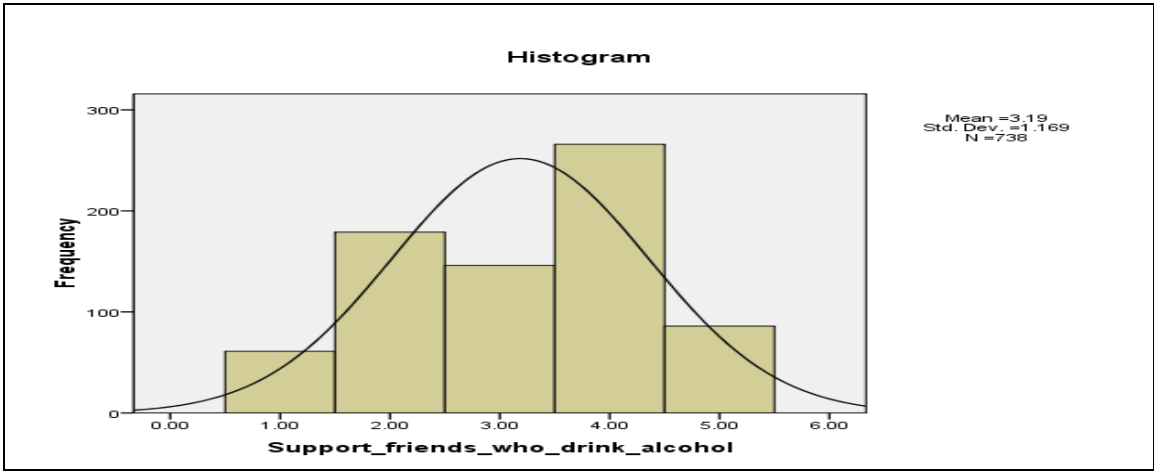
**Figure 4.38: Friends support for those using drinking alcohol**



**Figure 4.39: Friends support for those using substances**

Also, 36.0% (n=266) respondents mentioned that they would support their close friends and colleagues who drink alcohol and use substances like khat and shisha. However, about 20% (n=146) respondents were not sure whether they are okay and provide their support for friends and colleagues who drink alcohol and/or use substances. The mean distribution for respondents support for friends who use alcohol and substances was

found to be 3.19 and a standard deviation of 1.169. Below is figure that indicates respondents' Support of friends who drink alcohol. The below figure 4.40 signposts respondents support of friends who drink alcohol.



**Figure 4.40: Respondents position of friends who used to drink alcohol**

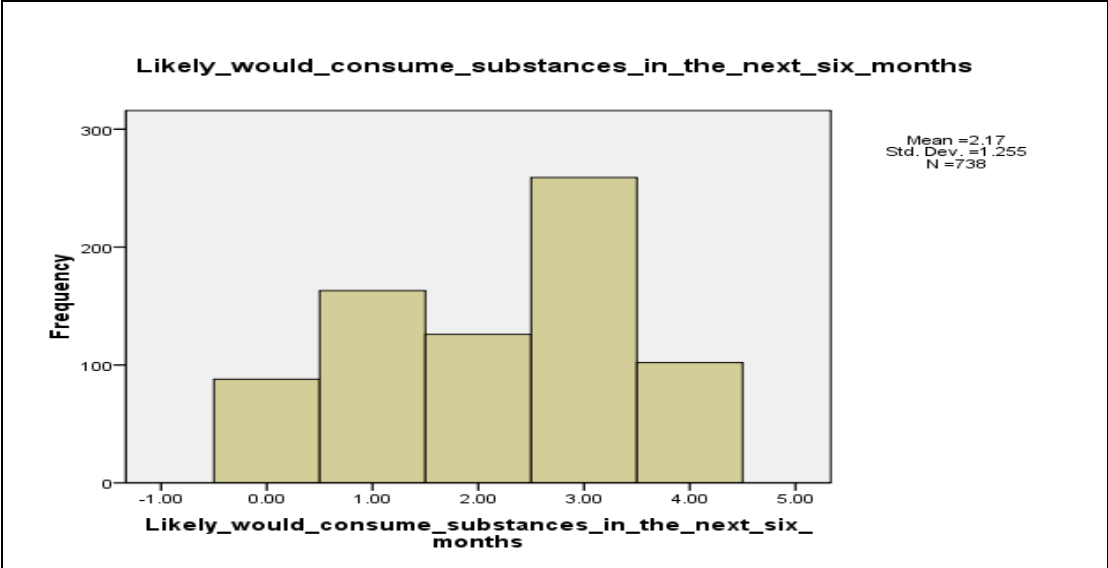
**4.3.8 Intention of using alcohol and substances**

Set of data collection items were used to explore respondent's intention of drinking alcohol and/or using substances in the next six months. For the questions posed to uncover whether respondents have any intention of drinking alcohol in the next six months, 41.2% (n=305) indicated that they would probably start drinking and/or continue drinking alcohol beverages specifically if they are invited by spouses or close friends. But, 14.9% (n=110) respondents were quite sure that they would definitely drink alcohol beverages in the next six months. On the other hand, only 14.8% (n=109) indicated that they will never drink any alcohol beverage in the next six months irrespective of invitation by friends and anyone. Table 4.35 that depict intention of alcohol and substance use with SD distribution of 0.917.

**Table 4.35: Respondents intention to continue alcohol drinking in the next six months (N=738)**

Continue alcohol drinking in the next six months	Frequency	Percent	Valid percent	Cumulative percent
Never	109	14.9	14.9	14.9
Probably no	214	29.0	29.0	43.9
Probably	305	41.2	41.2	85.1
Definitely would do it	110	14.9	14.9	100.0
<b>Total</b>	<b>738</b>	<b>100.0</b>	<b>100.0</b>	

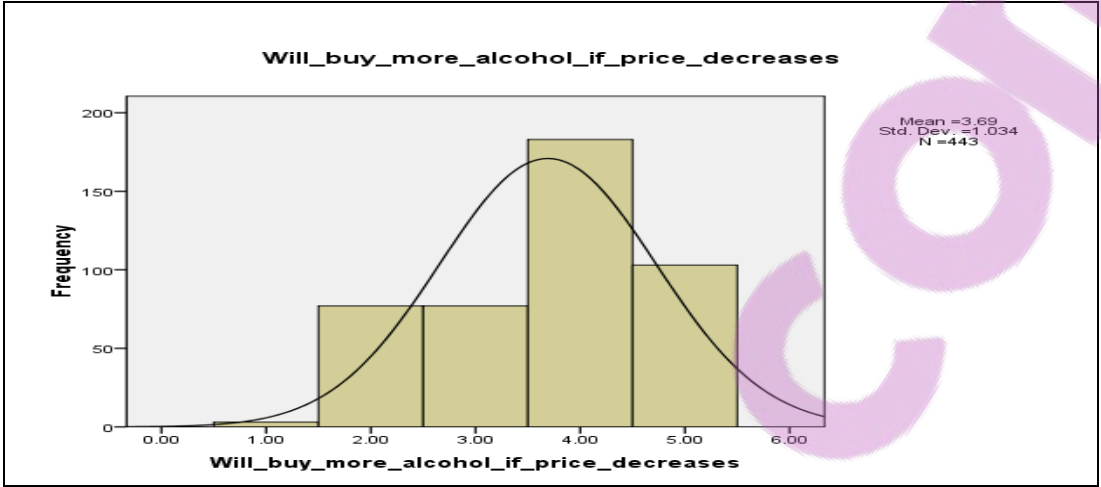
Similarly, respondents were asked about their intention of whether using substances like khat in the next six months, 35.1% (n=259) mentioned that they would do definitely do it and 13.8% (n=102) were quite sure to start and/or continue using substances like Khat. However, 14.5% (n=126) respondents were indecisive. On the other hand, only 12.1% (n=81) respondents mentioned that they would never use substances. Figure 4.41 indicates respondent’s intention of using substances in the next six months.



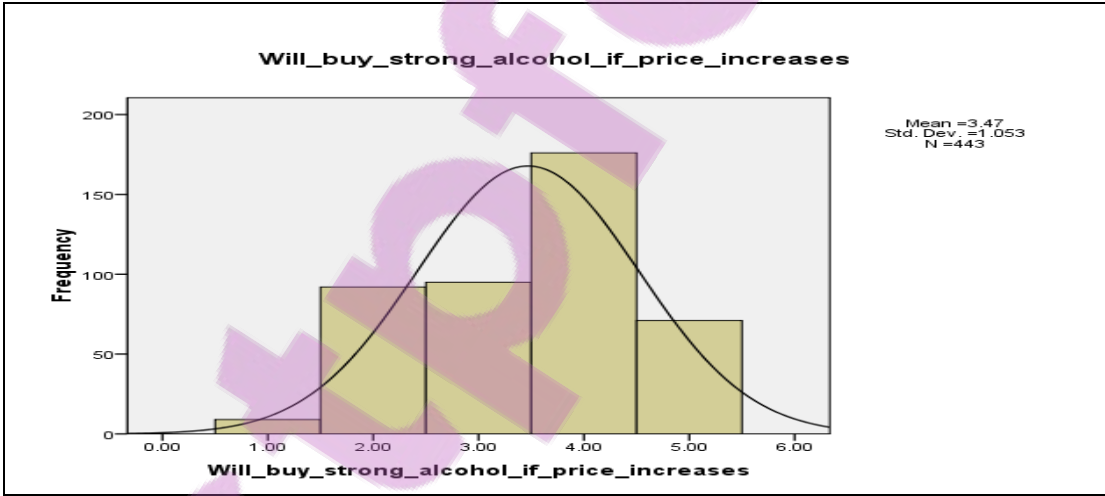
**Figure 4.41: Likelihood of using substances in the next six months**

Besides, 38.8% (n=286) respondents indicated that they would buy more alcohol if price decreases in occasions like happy hours where decrease in price of alcohol drinks is a norm as part of arrangement to signal come again message. Similarly, 33.4% (n=247)

respondents mentioned that they could buy strong alcohol beverages if price of alcohol beverage goes up. Figures 4.42 and 4.43 designate intention of respondents to buy the quantity or type of alcohol beverages if price increases and/or decreases.



**Figure 4.42: Respondents intention to buy more alcohol if price decreases**

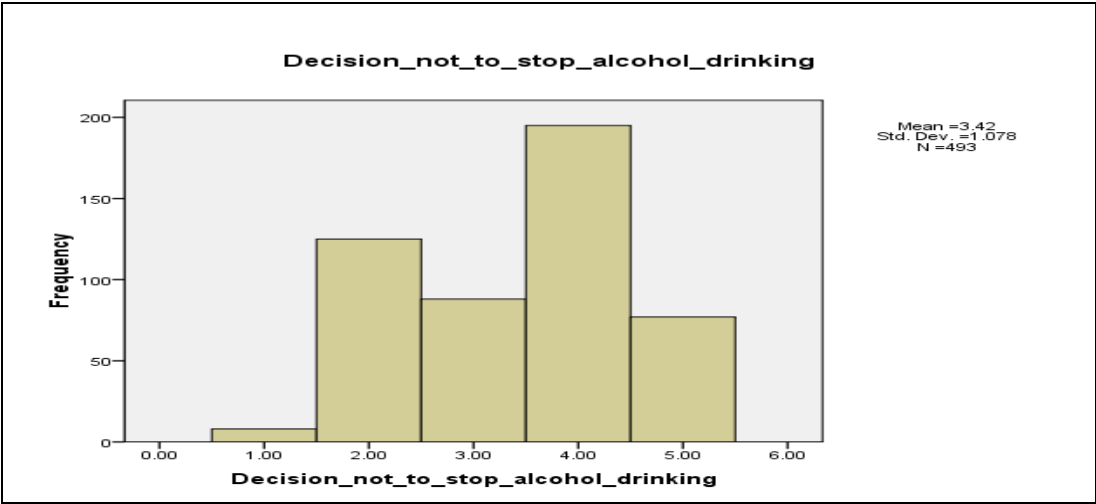


**Figure 4.43: Respondents intention to buy strong alcohol if alcohol price increases**

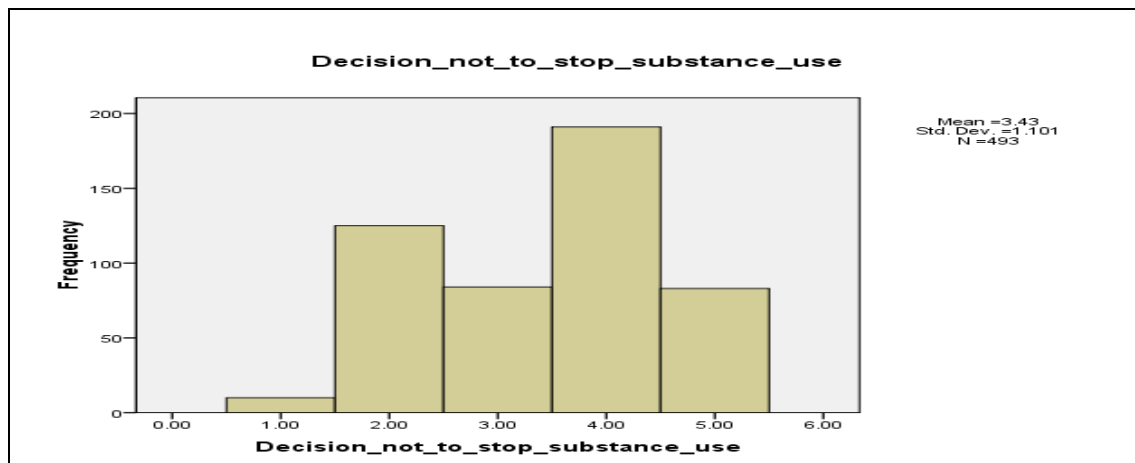
**4.3.9 Perceived control of alcohol and substance use**

When respondents were asked if they could stop abuse of alcohol and substances, 26% (n=195) respondents disagree stopping alcohol drinking. Similarly, 25.9% (n=191) respondents disagree to stop use of substances. On the other hand, majority of respondents were not quite sure on whether to stop drinking alcohol and/or using substances with a higher percentage of alcohol.

However, only 1.1% (n=8) of respondents using alcohol and 1.4% (n=10) respondents using substance have reported their plan to stop using substances. The finding indicated that majority of respondents did not have any plan to reduce or to stop alcohol and/or substance use with mean distribution of 1.42 and 1.43 respectively. The findings revealed that respondents do not have preparation or plan to reduce or stop using alcohol beverages and substances at least in the near future which was very much worrisome. Figures 4.44 and 4.45 show the respondent’s decision of continuing alcohol and substance use.



**Figure 4.44: Respondents decision of not halting alcohol drinking**



**Figure 4.45: Respondents decision to continue using substances**

#### 4.3.10 Proposed mitigating factors

Concerning the mitigating factors that could be considered, respondents mentioned: advertising alcohol, increasing tax on alcoholic beverages; restricting the age for alcohol for both drinking and buying. In this regard, 29.5% (n=218) respondents indicated that alcohol advertisement should not be allowed close to university campuses. Correspondingly, 36.6% (n=270) agreed that alcohol related advertisements should not be aired before 9 pm and 32.4% (n=239) agree that advertisement on buses and billboards should not be used for alcohol and substance advertisement. Besides, 31.7% (n=234) respondents voiced that alcohol advertisement for events like sport and holidays should not be allowed.

On the other hand, 24.8% (n=183) agree that alcohol and substance advertisement if at all should be banned and 24.3% (n=179) agree prohibiting substances sale and trading near university campus. Besides, 19.6% (n=145) indicated imposing high tax, 26.0% (N=192) mentioned the importance of setting minimum pricing and 24.7% (n=182) indicated the importance of wide range government control of alcohol and substance selling outlets.

Nevertheless, 32.6% (n=253) respondents opposed the importance of government control. Besides, 31.0% (n=229) voiced out their disagreement of prohibiting sale and trading of alcohol and substances near campus. Also, 32.7% (n=241) respondents disagree the importance of setting minimum pricing and 46.9% (n=336) respondents including those who were not currently drinking alcohol beverages disagree prohibiting

of alcohol trading and advertisement near universities. On the other hand, 31.7% (n=234) respondents strongly opposed banning of alcohol industries sponsoring sporting events.

Further, 44.7% (n=330) respondents mentioned the importance of setting minimum age for alcohol and substance purchase while the majority 61.7% (n=455) indicated that purchasing of alcohol and substance should be allowed to that age 18 and above. However, 24.7% (n=182) respondents opposed the importance of setting minimum age cutoff and voiced out that any age group should be allowed to purchase alcohol and substances. Figures 4.46 to 4.47 specify different type of proposed mitigating measures.

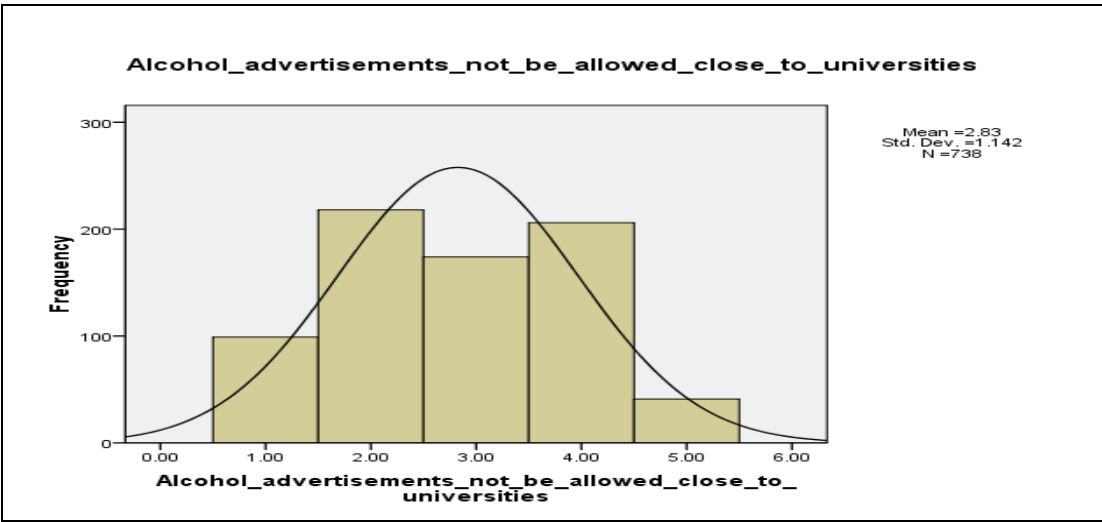


Figure 4.46: Respondents proposal about settings for alcohol advertisement

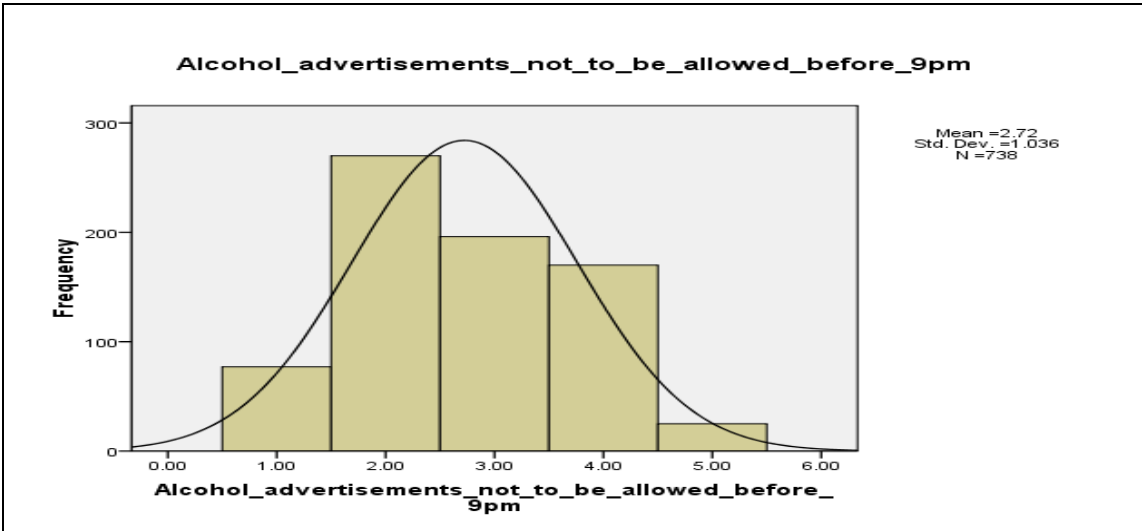


Figure 4.47: Respondents proposal about timing of alcohol advertisement



## **4.4 QULITATIVE DATA PRESENTATION, ANALYSIS AND INTEREPREATION**

### **4.4.1 Introduction**

Qualitative approach is used in social and behavioural sciences in which data are obtained from relatively small group of respondents and are not analysed using statistical techniques. Qualitative data collection involves mainly one or more focus group discussions (FGDs) having eight to twelve respondents in each group and an in-depth interview of key informants using a structured, open and/or close ended questionnaire. Analysis of qualitative data, thus involved a detailed and verbal description of findings (Chaleunvong 2009:9).

For the current study, respondents for each FGD involved 8 to 12 participants. Set of known criteria such as age, sex, religious affiliation, membership to student union, minority groups, person with specific needs and others were considered to enroll participants for the FGD. For the key informant's interview, respondents were selected based on the research objectives. Inclusion of FGDs and key informants in the data collection has helped the researcher to substantiate the quantitative findings through exploring in greater depth the problem of alcohol and substance use and its possible causes.

### **4.4.2 Principles of qualitative data analysis and presentation**

While quantitative data analysis involves standardisation, mathematical modeling and consistency, qualitative data analysis focuses more with the number of sample size and generation of data. Thus, flexibility in qualitative data collection is reflected in its ability to generate new insights, views and relevant data generation that helps to complement quantitative findings. The findings can also help to make cross validation (Johnson & Christensen 2014:239).

Information collected should be valid and reliable to help policy makers and programme managers to make appropriate decision. According to Paroo (2006:232), data collected for research should address the purpose and research objectives which reflect validity of data collection tools. On the other hand, data collection tool should be consistent and understandable by all respondents that defines reliability of data collection tool.

Accordingly, validity and reliability of the data collection item was checked, data collection tools were piloted using selected students that were not in the sample roster. Finally, minor adjustments were made before the actual data collection.

#### **4.4.3 Qualitative data collection tools**

As explained in the methodology section, qualitative methods were used to enrich data collected through quantitative methods. A set of questions that included life story events of alcohol and substance users were used to probe detailed responses. For the FGD participants (Annexure G), set of questions like alcohol and substances availability near university campus, awareness about extent of alcohol and substance use, consequences and incidents, campus management response and possible mitigating measures were agenda items. At each stage, various control mechanisms, field notes were maintained and data collection procedures were monitored to avoid bias and ensure quality (Annexure I).

Similarly, set of questions were developed for the key informants interview that included respondents biographic information, awareness concerning alcohol and substance access, use, major reasons for alcohol and substance use, specific occasions and incidents. Also, additional items like availability of terms of references (TORs), guides for preventive interventions, service availability at student clinic, and others were proposed as mitigating solutions were included in the open ended question items. A focus group guide was used to facilitate discussion among selected groups. Data were collected, synthesised and analysed manually. See appendix B attached.

#### **4.4.4 Selection of respondents and data collection methods**

This study involved two focus group discussants (FGDs) per university with an average of ten respondents per FGD. In this regard, the FGD involved one male and one female group of participants from each university. Respondents for the FGD were selected from student association, student clubs. Also, respondents with history of alcohol and substance use related incidents that were identified using snow ball method through student association members were enrolled for the structured discussion.

A total of thirty-nine potential respondents was identified, recruited and finally enrolled in the FGD based on specific but relevant criteria. Set of questionnaire items covering availability of different type of alcohol and substances, its use, networking, gender, specific occasions for use, associated incidents and other related variable were discussed.

For the key informant’s interview, sixteen respondents were identified and set of items described above were administered with the aim to explore campus students alcohol and substance use related questions such as availability, access, experiences incidents and respondents view concerning mitigating solutions. Respondents included security guards, proctors, cleaners, lecturers, alcohol and/or substance shop owners, staffs from student’s clinics and others.

Respondents were included in the key informant’s interview based on their proximity to students, class and laboratory contacts, access to dormitories and other service delivery point’s like membership status in disciplinary procedures, engagement in student service provision including cleaning, health service and other type of service provision. The below table 4.36 represents respondents involved in the FGDs and key informants interview.

**Table 4.36: Participants involved in the FGDs and key informants interview**

University	Data collection methods	FGD/key informant Sample size	Area
Arbaminch	Focus Group Discussions (FGDs)	20	Arbaminch University
	Key Informants Interview	8	Arbaminch University
Wolaita Sodo	Focus Group Discussion (FGDs)	19	Wolaita Sodo University
	Key Informants Interview	8	Wolaita Sodo University
<b>Total</b>		<b>55</b>	

After recruiting the study participants, objectives of the research were explained. Participants were given chance to raise any concerns or clarity question. Permission for data collection was granted from participants and questionnaire items were administered for the respondents. To ensure collection of accurate information from the

qualitative source, data collectors have closely monitored data collection approaches, procedures, administration and completion of questionnaires..

#### **4.4.5 Key qualitative data findings, analysis and discussion**

As opposed to quantitative data that involves patterns, trends, percentages, the qualitative data were analysed differently through application of coding, categorising and presenting key issues. Both opinion questions and statements made commonly by the respondents were captured and analysed.

##### ***4.4.5.1 Awareness about the magnitude, type and frequency of alcohol and substances abuse***

The problem of alcohol and substance use and abuse that were identified from the quantitative data was complemented by the FGD reports. Respondents indicated that majority of students were engaged in alcohol and substance abuse. While administering consecutive questions, respondents further detailed the magnitude that alcohol and substance abuse among adolescent university students was on the increase. One participant reported that one of his friend using substances was frequently absent from classes and laboratory demonstrations because of overnight use of substances. Another participant mentioned that some of the dormitories have become a safe place for chewing specifically in weekends and holidays.

When questions were raised about specific type of substances used, respondents mentioned that khat, shisha, cigarettes and at times Hashish were among the most frequently used. Khat was mentioned to be one of the most prevalent and frequently used substances which were shared among all FGD Respondents and key informants. Respondents indicated that students use different tricks to smuggle substances to campus that included carrying bag, throwing the bundle through fences to campus. One respondent indicated that bags of female students were used to pass security checks at the campus gates. Respondents pointed out that as a principle of usual practice, security checks of females as compared to their male counterpart were not so tight which made use of female student's bags to smuggle substances at ease. The finding showed the importance of availing, training and re-orienting female security guards.

Respondents from key informant interview indicated that significant number of students use their shops to chew khat during lunch time and after working hours.

Key informants further mentioned that it was a usual practice to see and collect leftover substances and empty bottles while conducting a visit to almost half of student dormitories. Respondents detailed that they used to collect khat and at times sense the smelling of Shisha but were unable to catch. Concerning the question items raised to know if there were differences within specific days of a week, respondents mentioned that the quantity of leftovers were two to three fold during weekends and holidays. Likewise, security officers mentioned that they had confrontation in number of occasions and incidents with those smuggling alcohol beverages and substances to campus. They mentioned that significant number of students were caught and were fined with dismissal for one year.

#### ***4.4.5.2 Access and availability of alcohol and substances***

Concerning availability of alcohol and other substances, most agreed that alcohol and substances were widely available near university campus. All were on the same page that alcohol beverages like beer, Areke and substances like khat and shisha were available and accessible by majority of users. Concerning the extended questions posed about the availability of alcohol beverages, respondents indicated that locally made alcohol beverages like 'Tela, Tej, Borde, Areke and Cheka were found to be widely available. It was pointed out that different tribes have experience of different type of alcohol beverages preparation. Besides, FGD respondents indicated availability of various types of alcohol products such as beer, wine, and liquors like gin, brandy, vodka, whisky and other locally made alcohol products.

For the questionnaire items raised about the pattern of use, key informants indicated various practices like selling of alcohol and other substances in “night shops”. Concerning the extent, most students chew khat and other substances during mid and final exam. But, alcohol drinking and intoxication was frequently seen during weekends and post exam.

#### ***4.4.5.3 Reasons for alcohol and substance use***

When asked to mention the major reasons for alcohol and substance use, respondents mentioned that they wanted to be alert and concentrated while studying. Apart from being alert, respondents mentioned that they witness students chewing and smoking Shisha with intention to enjoy were main reasons which were in line with data obtained using quantitative method. One respondent mentioned that friends, environment and habit are major push factors. Respondents stressed that peer pressure and coming from family background who use substances were fueling factors. Further, study respondents mentioned that there is no recreational facility in the university that worsens stress among students and exposed them for use of alcohol and substances. Some mentioned that student council should arrange support for students engaged in alcohol and substance use and abuse. University management was also blamed for not cascading rules and regulations apart from academic pass and fail activity.

Additional findings from FGDs revealed that students use substances for recreation and also for enjoyment after examination. Also, pushing factors indicated as having excess pocket money and peer pressure. Also, respondents mentioned about the presence of true life association, anti-HIV clubs and women and disability association but not active enough. Respondents indicated that there was no anti-substance, anti-alcohol and anti-drug club which were important units to cascade substance use prevention campaign.

#### ***4.4.5.4 Consequences of alcohol and substance use and abuse***

The majority of participants agreed that some students were intoxicated after alcohol drink. The situation leads to violent behaviour, fighting, damage to property and finally ends up at police custody and/or face disciplinary measures that included suspension from campus for one year.

Regarding physical health experiences, respondents pointed out that those who use substances like khat skip breakfast and lunch. As a result, they experience physical illnesses, weight loss and poor personal hygienic practices probably due to financial difficulties. Besides, some FGD respondents frankly indicated that they were admitted to hospital after having intoxicated and experiencing sustained injury. Respondents added

that they observed alcohol and substance users while experiencing bad behaviours like theft.

FGD participants further indicated that some students were not able to attend classes and lab demonstrations due to overnight chewing. One respondent added that many students were out of class, laboratory and field practices due to substance use and abuse which affects their academic achievement, adequate practical skills, competence and future career. These may lead to consequences such as scoring low grades and dismissal. However, few others indicated use of khat as positive factor for better academic achievement.

#### ***4.4.5.5 Timing of alcohol and substances abuse***

Respondents from FGD and key informants indicated that there are known occasions for majority of students to abuse alcohol beverages and substances. Preferred days were mentioned to be weekends where Friday and Saturday were mentioned to be the most preferred days for alcohol drinking and substance abuse. Also, substance use like khat and specific timing of stresses such as the weeks of mid and final examination schedules, occasions for laboratory and field reports and assignment submission dates were occasions where the degree of substance use and alcohol drinking were highest.

#### ***4.4.5.6 Summary findings on the magnitudes of alcohol and substance use, causes and its consequences***

Majority of respondents in the FGD agreed that alcohol drinking and substance use was a major problem among university students. The following key issues were mentioned by the FGDs:

- A lot of students runout after lunch and que to buy substances specifically Khat.
- A great deal of time was spent in searching, using and trying to recover from its effects.
- Most substance users show persistent craving or desire to use attempts to stop or reduce using frequency.
- Despite confrontation with security guards, proctors, friends, respondents indicated that there is persistent attempt and use of substances.
- There was unsuccessful effort to cut down or reduce alcohol and substance use.

- Need of increased quantity of substances to get similar effect.
- Alcohol and/or pills were taken to overcome the effects of substances taken.
- Traumas and injuries were common experiences as a result of intoxication.

The above findings were also echoed in key informant's interviews. Respondents stressed that the majority of campus students were engaged in using alcohol and substances. One alcohol shop owner rose that students came being excited, after having taken Khat and smoked Shisha. They usually visit at night and weekends. At times, students get drunk and tell me that they do not have money and request for credit but usually return after weeks. She pointed out that she has list of dozen of students who use substance and drink alcohol on credit. She appreciated that most of her customers bring the amount indicated on monthly basis except some who disappear and was difficult to track them. She added that despite her loss of some amount of money by graduating class students and those dismissed, she continued providing them credit drinks and substances.

Key informants mentioned some incidents and requested that they should be reported to the university administration. These are captured by the following extracts:

- *One cleaner indicated that waste bins and corridors were found full of substance/khat leftovers. She added that she did not report in fear of discipline measures including dismissal.*
- *A lecturer also pointed out that certain students were absent from classes persistently but appear on exam dates. He reported that he was aware of the growing trend of alcohol and substance use among students that needs some kind of intervention.*
- *A shop owner mentioned that some students requested me to keep their khat in refrigerator for evening use and they used to come every day around 6:00 pm to collect. They return back after 10:00 pm to drink alcohol.*
- *A respondent from student clinic reported that some students were brought to student the clinic late night with sign and symptoms of vomiting and loss of consciousness. He mentioned that students specifically request for antacid syrups, sleeping pills and at times a sick leave.*



- *Another respondent from student clinic indicated that the clinic does not have adequate rooms and beds to manage students presented with alcohol and substance related problems. The clinician also pointed out that he was not able to provide counselling services as the case load was more than 50 on daily basis.*

Respondents from both groups pointed out that due to continued and persistent use of substances, consequences such as Physical health problems due to deprivation of sleeping pattern, inadequate nutrition, withdrawal symptoms and stresses were seen among others. Discussants both from FGD and key informants strongly requested that something be done to alleviate the increasing trend of alcohol and substance use and its untoward effect upon themselves, friends, families and university community. They proposed the following series of actions to be taken urgently to address the rapidly growing trend of alcohol and substance abuse among adolescents.

#### **4.4.5.7 Proposed protective factors**

Respondents suggested implementation of immediate solution to reduce the growing concern of alcohol and substance use and abuse. Most respondents agreed that university management has to take the lion share, flag the problem to all concerned actors to have swift action to be in place. One respondent quietly indicated students must protect themselves using different ways. Respondents proposed the interventions to be implemented in order to reduce alcohol and substance abuse and related problems:

- Facilitating appropriate recreational services including mobilisation of theatrical art, movies and entertainment activities.
- Strengthening arrangement for recreational facilities and services like clinical support which was currently inadequate.
- Universities should coordinate with the public Ministry of Health (MOH) to strengthen provision of preventive and supportive care.
- Some indicated the importance of having a unit in nearby hospitals that were equipped to provide adequate mental health service for students who might be admitted.

- Strengthening interventions measures that include awareness creation about the consequences of alcohol and substance use
- Equipping and furnishing of student clinics to provide adequate counselling, care and support services for students having alcohol and substance use related Arrangements for life skill training to help acquire self-confidence and reasoning skills.
- Community engagement and family participation were also part of intervention measures proposed by the key informants.
- Having a system to administer strong punishment was discussed and argued among the respondents.

Some indicated the importance of involving drug administration and control authority (DACA) to have its strong presence to control illegal drugs and other substance distribution.

## **4.5 DISCUSSION AND INTERPRETATION OF THE RESEARCH FINDINGS**

### **4.5.1 Introduction**

The need to conduct this study came from the public concern that alcohol and substance use has become a growing issue among young students attending university education. The public were concerned about the growing use of alcohol among adolescent university students. There were no data about the magnitude of alcohol and substance abuse among the adolescents university students which prompted this research.

The research aimed to answer the following questions:

- What is the level of prevalence of alcohol and substance use among adolescent university students in Southern Ethiopia?
- What are the main causative factors that lead to the use of alcohol and substance among adolescent university students in Southern Ethiopia?

- What are adolescent and youth's real experiences regarding possible consequences and their intention of alcohol and substance use in Southern Ethiopia?
- What strategies could be developed to curb such kind of problems?

## **4.5.2 Overview of the research findings and interpretation**

### ***4.5.2.1 Magnitude of alcohol and substance use and abuse***

The study showed that magnitude of alcohol and substance use among university students was very high. It was found out that almost one in two university students have a history of life time alcohol and substance use. The current finding was in line with literature findings (Tsvetkova & Antonova 2013:4), where alcohol and substance abuse among adolescent university student has become global problem. The quantitative finding revealed that prevalence of life time alcohol use was found to be 57.5 percent. Similarly, prevalence of substance use among university students was identified 55.4 percent. The above finding from this specific study was slightly higher than the findings from Mekele University where the prevalence rate of alcohol use was found to be 37.3 percent. It means that the highest prevalence indicates the growing trend of alcohol and substance use among university students in Ethiopia. The above findings of alcohol and substance use from Southern Ethiopia were very worrisome when the situation was compared with similar research findings among Sudanese students where the prevalence was found to be 31 percent (Tsvetkova & Antonova 2013:4; Tulu & Keskis 2015:9).

Key informants raised their concern that there were definitive indications and observations that the increasing magnitude of university student's involvement in using alcohol and substances. Proctors and cleaners mentioned that waste collection boxes were filled over night with left overs of khat. Also, security guards indicated that they were tired of confronting students who were attempting to smuggle of alcohol and substances to university campus. Alcohol and substances shop owners indicated their tiredness of running against those who lost after having alcohol and substances on loan basis. The overall situation warrants that substance use and alcohol drinking has become ritual among adolescents pursuing university education.

Regarding types of alcohol beverages and substances used, locally made alcoholic beverages were reported to be the most used by almost anyone who has lifetime history of alcohol drinking. It seems that users were taking into consideration the advantage of its cheap price. This was followed by use of beer and other mixed liquors. However, a stimulant substance known as Khat was the most prevalent substance used among Ethiopian university students with prevalence rate of 94.9 percent among substance users. This finding was in line with the community based survey result of Ethiopian Health and Demographic Survey (EDHS) where life time men and women alcohol drinking history was found to be fifty three percent and forty five percent respectively (EDHS, 2011:74).

Also, the above finding was corroborated by the study results from Haramaya university where two third of students had reported use of one type of substance in their life time. However, alcohol was found to be one of the most prevalent substances used among students with prevalence of more than fifty percent (Tesfaye et al 2014:1). Similar findings from Sudan showed that substances like opiates, cannabis, cocaine and heroin were among the most frequently used. In the case of the current study, use of other stimulants such as smoking Shisha and Hashish, taking tranquilizers as sleeping pills were on the increase among Ethiopian university students with prevalence rate of being 30.5 percent (Tesfaye et al 2014:1).

Concerning the frequency of alcohol and substance use, it was found that majority of students were using on frequent basis and some of them use substances on daily basis. Besides, students reported five or more alcohol drinks in one occasion that showed problem level alcohol drinking. Sadly, the current study indicated that nearly a fifth (n=82) of students use alcohol as an eye opener. However, other alcohol and substance use related studies conducted in Ethiopian universities did not explore whether such kind of problem level of drinking was experienced in other locations.

The situation and assumptions of Nigerian study corroborates the finding of this study where more than two thirds of students reported use of alcohol and substances. It was also indicated that early users will most likely continue to use alcohol and substances throughout their lives (Babalola, Ogunwale & Akinhanimi 2016:7).

#### ***4.5.2.2 Major reasons and fuelling factors for alcohol and substance abuse***

Various reasons were given for alcohol and substance use among adolescent university students. Stressful academic environment, lack of adequate recreational facilities, peer pressure, ease of access to substances near university campus, familial backgrounds, and participation in buying and selling of substances were among the most pointed out. The above finding was in line with a reach results from Greek university where alcohol and drug use was significantly related with peer alcohol and substance use. This indicates that peer groups have significant influence on their fellow colleagues and friends whether initiating or stopping alcohol and substances. The same finding from Kounenou (2010:1) indicated that alcohol and substance use was significantly related with gender where male students use more than their fellow female students. However, the research finding from Southern Ethiopia revealed that there was no gender difference among male and female in alcohol and substance use with  $P\text{-value} > 0.05$ . The finding warrants that intervention measures should target both male and female students (Kounenou 2010:1).

Lack of a standard and protocol for selling of alcohol and substances including lack of system for age restriction were some of chronic factors for young people exposure to alcohol and substances. Besides, this specific study found out that lack of adequate regulations and procedures concerning alcohol advertisements, timing of alcohol advertisement, alcohol advertising of sporting events, use of billboards and buses for alcohol advertisement, lack of government control were one of major factors for alcohol and substance exposure among young people.

The current study cleared that alcohol advertisements had some contribution for alcohol and substance abuse. Thus, there should be a known protocol for advertising and selling alcohol. A specific study to determine alcohol advertisement practices in Ethiopia disclosed that the existing practice of alcohol advertisement in Ethiopia was against public interest. The findings further indicated that the current practice contravenes with international standards such as protecting the wellbeing of children, airing prohibited substances and others (Negussie & Berhane 2012:1).

Besides, the study explored that children who participated in buying and selling alcohol and substances during the age of early child hood were more like to initiate use of

alcohol and substances. In this regard, analysis of alcohol and substance use versus children being raised with parents and guardians using alcohol and substances indicated that there is likely chance to use substances with contingency coefficient of 0.109 and  $p\text{-value} < 0.05$ .

The study further indicated that free availability of khat in small shops, at open places and shades near university campus including those sold at night at lower price were among the contributing factors for substance abuse. This specific study uncovered that alcohol and substances were easily accessible from nearby shops, hotels, pubs and bars at a distance of 300 meter and above. The finding indicated that additional factors like ease of availability, affordability to purchase, and others as main contributing factors for use and abuse of alcohol and substances. The finding warrants the need for mini level control of alcohol and substance outlets in near university campuses.

It was found that adolescents use substances in order to be alert 48.8%, to test how it feels (41.3%) and for purposes of personal pleasure (40.5%). Also, intention to overcome stresses related to academic and social environment (34%) were among major reasons to use substances. However, the most prevalent reasons for alcohol use were found to be intention of overcoming the effects of substances and to increase pleasure during sex (33.7%) were the most pressing reasons.

The above finding was corroborated by a research study from Kenya where university students consume alcohol and substances in order to get relaxed, to get rid of stress, to cope with problems, with desire to experiment and other reasons were mentioned as an excuse for use and abuse of alcohol and substances. On the other hand, the findings from Kenya indicated that having excess pocket money was one of the reasons for exposure to substances. However, the findings from this specific study at Southern Ethiopia showed that having monthly excess pocket money did not have any influence among alcohol and substance users with  $p\text{-value} < 0.05$ . The finding warrants the need to have a targeted intervention on causes of stress and a timely intervention and campaign on alcohol and substance use irrespective of gender and income status (Atwoli et al 2011:3).

#### ***4.5.2.3 Consequences of alcohol and substance abuse***

The current research uncovered that adolescents were experiencing various consequences as a result of alcohol and substance abuse. The various consequences identified were mental health problems, physical health effects, social and economic consequences. Some of the mental illnesses experienced among alcohol and substance users included depression, loneliness, risk of suicidal ideation, violent behaviour and other related psychopathy that triggers the importance of implementing anti-alcohol and drug strategies (Simbee 2012:53).

The above findings were in agreement with scientific literatures where use of alcohol and substances including sleeping pills can lead to various mental health problems. Available literatures showed that globally around ten percent suffer from mental illness where drunkenness and mental health were shown to be associated with alcohol and substance abuse and related experiences. This was verified by the respondents where they have experienced suicidal ideation and behaviour after withdrawal effects that followed substance use. Further, the current study uncovered that students experienced withdrawal effects of alcohol and substance use and abuse such as flashbacks, irritability, lack of concentration, psychological craving and feeling unease the next day (WHO/UNHCR 2014:45).

Besides, the current study uncovered other social outcomes like family relation difficulties, violence, injuries and other related problems. It was also discovered that use of alcohol and substances exposes to risky sexual behaviours that contribute to risky sexual act, which in turn leads to risk of deadly infections like HIV, Hepatitis B, syphilis and others. Similar study carried out among university students at Mekele confirmed that they experienced adverse physical, academic, economic and social effects but continued using alcohol and substance (Teferi 2011:37; Harrison's Online 2012:89).

Furthermore, this study explored alcohol and substance abuse consequences such as inability to perform routine activities, physical health disorders like gastritis, stomach upset, skipping of meals that resulted in weight loss, malnutrition, symptoms of eye and urine discoloration that warrants risk of liver problem (Harrison's Online 2012:89). The study further explored that physical health effects like hospitalization due to sustained injuries, arrest due to hostile behaviour and passed overnight under police custody were

some of the adverse effects due to problem level drinking and intoxication (Harrison's Online 2012:89).

Further, other untoward effects due to alcohol and substance use were also uncovered such as poor academic performance. These included inadequate class attendance, skipping laboratory attachments, practical demonstrations that resulted in low grade scoring and school dropout. Some faced disciplinary measures due to confrontations with security guards, damage of university assets and breaching university regulations which indicated loss to human capital and resource invested. These findings could have grave outcome for the graduates and the country at large as it could limit hands on skill after graduation thereby impacting student's competences, future career achievement and the country economy.

Besides, this study found that despite the scientific evidence that cigarette smoking was a dominant factor for lung cancer, tobacco smokers continue to increase risking the possibility of dependence and other health risks such as lung cancer. The above finding was complemented by a study conducted in USA where alcohol and substance users experience variety of physical, mental and academic loss as a result of excessive drinking that results in more skipping of classes and other academic arrangements (Arria et al 2013:7).

The above finding was substantiated by research result from Kenya where risk of bad relations with family and friends, financial difficulties, poor academic performances, engagement in unprotected sex and other consequences were experienced among university students using alcohol and substances (Atwoli et al 2011:3; WHO/UNHCR 2014:45). On the other hand, the study showed that one in two students were aware of either short-term or long-term consequences of alcohol and substance use and abuse. However, the study explored that majority of students did not have exposure to alcohol and substance use related health education session that showed lack of adequate information and knowledge as major gap that needs to be prioritised.

#### **4.5.2.4 Perceived control and intention of alcohol and substance use**

The studies found out that majority of students were continued using substances and walkout to alcohol shops and get drunk. The study uncovered that 36 percent of



respondents want their friends to join them. The study revealed that a quarter of students were quite sure of using alcohol and substances in the next six months. This specific study discovered that university students have definitive intention of using alcohol and substances. They pointed out that they would definitely purchase more alcohol if price was reduced and would decide to pick out strong alcohol beverage if price of beer or wine goes up or if their pocket went dried. It was discovered that a quarter of students were yet not ready to reduce or to stop using alcohol and substances.

The above findings outlined that significant numbers of students were in favour of alcohol and substances. The study revealed that a third of close friends and significant others were supportive of those using alcohol and substances. The theory of PBC suggests that the belief of others feeling about certain behaviour could significantly influence the intended behaviour change (Venkatesh et al 2003:3).

#### ***4.5.2.5 Proposed mitigating solutions***

From the research, it was shown that various factors have contributed to exposure of alcohol and substances to school-going adolescents. Some of the mitigating solutions indicated were government control of alcohol and substances outlets near university campus, legislation on alcohol advertisements, monitoring mechanisms to prevent underage use and exposure. Besides, back grounds of close family members or guardians providing or budgeting for alcohol and substances for their children contributed to the current use.

Parents should closely monitor their children for any alcohol and substance use and not involve their children in the buying or selling of alcohol and substances as this would affect their future life. The above finding was supported by a study conducted in Sudan where families were found to be one of the sources of providing substances. Thus, the role of parents would have significant influence in reducing the use of alcohol and substances among school-going adolescents (Stewart & Moreno 2013:13).

The current study uncovered that majority of respondents were in favour of alcohol and substance use despite experiencing various problems. This was in line with planned behaviour theory which purports that use of alcohol and substances can be influenced

by the peer groups and enabling environment which necessitates a timely and comprehensive intervention. The above findings revealed that students were likely to continue using alcohol and substances despite bad experiences including physical health and academic problems. The result was in line with the principle planned behaviour change theory where behavioural achievement was the outcome of motivation and the person's actual control over the behaviour (BUMC 2003).

#### **4.6 CONCLUSION**

The study has provided clear evidence from the quantitative findings that alcohol and substance abuse among adolescent university students is a reality and a serious concern. Findings were enriched by the qualitative findings where the magnitude of alcohol and substance abuse among adolescent university students would have serious consequences for the future.

The concern for the university is to afford the student the best education. The university's priority areas were on availability of books, teachers, meals and other school facilities. In doing so, the exposure to alcohol and substance use was not a priority area for universities. Stakeholders such as parents and policy makers were also not aware of the contributing factors to alcohol and substance abuse by adolescents attending universities hence no intervention were planned.

Finally, the current study uncovered that there was no protocol or strategy to respond for alcohol and substance related problems among students. That is, one of the critical gaps identified was lack of a known strategy that could help policy makers, managers and other stakeholders to use it as baseline to initiate intervention measures and take actions against alcohol and substance abuse. The researcher learned that developing a comprehensive strategy that could help to address the various factors contributing for alcohol and substance use need to be developed and implemented by all concerned parties and stakeholders.

## CHAPTER 5

### PROPOSED STRATEGIES TO CURB ALCOHOL AND SUBSTANCE ABUSE AMONG ADOLESCENT UNIVERSITY STUDENTS

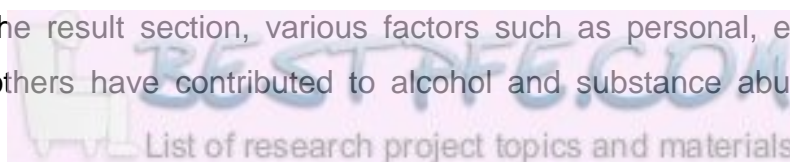
#### 5.1 INTRODUCTION TO THE PROPOSED STRATEGY

This chapter is the final outcome of the study. The development of alcohol and substance use prevention strategy was part of achieving the research objective namely, to address the growing trend of alcohol and/or substance use among students. A strategy is a careful plan of action designed to achieve a particular goal, usually over a long period of time. It is also defined as a complex of adaptation that appears to serve important functions like behaviour change scheme (Author 2010:1).

The strategy is a proposal or a response guideline that was based on key findings from the research which has investigated alcohol and substance use and abuse among adolescent university students at Southern Ethiopia. As it was detailed in the literature review section of chapter two, alcohol and substance use among university students has become global public health concern.

The target of this strategy was students pursuing education at Ethiopian higher learning institutions where the current study has identified high prevalence and fertile environment that exposed them to alcohol and substance use and abuse. It was found out that students at Ethiopian higher learning institutions were facing pressing consequences where majority of students were struggling with challenges of achieving academic assignments versus coping with new and stressful university environment. To overcome that stress, students engaged in alcohol and substances use and abuse and struggle with its adverse effects where the university management and Ministry of Education (MOE) in charge of administering public universities as well as other stakeholders had to step in.

As discussed in the result section, various factors such as personal, environmental, behavioural and others have contributed to alcohol and substance abuse. However,



behavioural sciences have uncovered that alcohol and substance use factors have one thing in common. All are largely preventable. That is, behaviours that expose to alcohol and substance abuse were found to be responsive to preventive intervention. Thus, the current study proposes implementation of health promotion strategy for comprehensive alcohol and substance use prevention.

## **5.2 GUIDELINES, PROTOCOLS AND FINDINGS THAT CONTRIBUTED FOR THE STRATEGY**

Development of the strategy has taken into account the key findings and challenges that included respondents and key informants opinions on how to mitigate the growing problem of alcohol and substance abuse which they were involved in. In this regard, employing the concepts of planned behaviour change helped to predict and understand the growing concern of alcohol and substance abuse. The theory then has helped the researcher to identify how, and where to target strategies for changing the problem behaviour in question. Besides, principles of behaviour change, recommendations and intervention approaches were considered as part of theories and guiding principles on behaviour change (Calvo 1998:2).

Development of the strategy involved a comprehensive response plan with various recommendations that consider cascading implementation measures, coordination among all, workout scenarios, vertical programme arrangements and commitments to respond for alcohol and substance abuse related problems. The strategy presents an all-inclusive guide that would help to curb alcohol and substance use and abuse among adolescents pursuing education at higher learning institutions.

This strategy comprises ratification of policy directions, introduction of legislations, strengthening of services to facilitate enabling environment, resource allocation, availing necessary inputs, re-visiting and re-vitalising of available structures in a way to respond to the growing concern of alcohol and substances use and abuse. The guideline included findings from literatures such as best practices, programme management approaches, lessons learned while implementing alcohol and substance abuse prevention intervention from Africa and elsewhere (Croyle 2005:5).

The ultimate goal of the proposed strategy as detailed below in table 5.1 thus emphasises the role and responsibilities of various stakeholders. The table further details the importance of engaging various stakeholders including policy makers and different line of ministries. To attain a timely but durable solution for this complicated crisis, the strategy proposes a high degree of coordination and accountability along with resource mobilisation among various stakeholders which would help to address the problem comprehensively. Table 5.1 depicts key findings, alcohol and substance abuse related impacts and acceptable standards to be followed in order to achieve an intended behaviour.

**Table 5.1: Key findings on the magnitude, major reasons, predisposing factors, attitudes, perceived control, and future intentions of alcohol and substance use**

<b>Key findings</b>	<b>Contributing factors and or possible impacts</b>	<b>Standards and comments</b>
Alcohol and substance use highly prevalent	Almost one in two students engaged in alcohol and/or substance use. One in three reported problem level alcohol drinking with more than five drinks in one occasion.	The findings were in line with findings from other literatures reviews.
Various type of alcohol beverages and substances were experimented	<p>Khat with its scientific name ‘Catha edulis Forsk was the most prevalent substance used, followed by Shisha and others.</p> <p>Beer and other locally made alcohol beverages were the most frequently used, followed by wine and other mixed liquors.</p> <p>‘Areke which is locally made liquor was the most prevalent drink used by substance users due its advantage of low cost, availability in small shops and higher alcoholic content.</p> <p>A fifth of students engaged in using sleeping pills, tranquilizers and other sedatives.</p>	Khat was the most commonly used substance in East Africa and parts of middle East like Yemen. However, use and abuse was most widely practiced in Ethiopia. Its adverse effects were found to be similar to amphetamine as explored by WHO expert committee.
Major reasons explored concerning alcohol and substance use	<p>To get alert for academic purposes indicating stressful academic environment. However, peer pressure ranks the top for alcohol and substance use.</p> <p>Alcohol drinks were found to be a response measure among majority to bring down excitation after use of substances like Khat and Hashish.</p>	Similar findings from Zambia (Monica, Ali & Mbona 2011:5) indicated that sadness and get rid of substances including drugs were major reason for problem level alcohol drinking.

Key findings	Contributing factors and or possible impacts	Standards and comments
	Other reasons like improving sexual performance and social relations were among the most reasons identified.	
Major fueling factors that expose for alcohol and substance use	<p>Lack of other recreational and interventional activities to address stressful events and factors.</p> <p>Unregulated advertisement, ease of access near university campus.</p> <p>Lack of government control on alcohol and substance sell outlets.</p> <p>Family or friends background or engagement in alcohol and substance use.</p> <p>Background of exposure for alcohol and substance like, buying and selling.</p> <p>Alcohol and substance related advertisements and promotion.</p> <p>Ease of access nearby campus and cost affordability.</p> <p>Lack of adequate support from family and university management.</p>	It was universally shared that in situations of continued stressful events, people may look for a way out whether the outcome has short or long duration. As confirmed by Negussie and Berhane (2012:227), other factors like alcohol and substance advertisement, ease of access and cost may also contribute for adolescent exposure. The findings indicated that some of alcohol advertising practices breach universal standards. Lack of adequate preparedness and response may also take the situation to chronicity (Negussie & Berhane 2012:227).
Consequences experienced	<p>Physical health effects like gastritis, exposure to deadly sexual transmitted infections (STIs) and inadequate nutrition.</p> <p>Psychological effect like depression, excitement, flashback symptoms that lead to mental health problems.</p> <p>Inadequate academic performance including absenteeism from classes and practical sessions, low grade performances, dropouts and skill incompetence.</p> <p>Social blackouts like family and friend destruction, confrontation with proctors and</p>	

<b>Key findings</b>	<b>Contributing factors and or possible impacts</b>	<b>Standards and comments</b>
	<p>security guards.</p> <p>Financial difficulties that lead to credit requests use and disagreements with substance shop owners and alcohol outlets.</p>	
Awareness of alcohol and substance use impacts	<p>More than half of respondents were found unaware of alcohol and substance related short and long term effects.</p> <p>Unaware of counseling and guidance services for alcohol and substance use problems.</p>	
Alcohol and substance related attitudes	<p>A third of respondents were in favor of alcohol and substances and its use.</p> <p>Alcohol and substance users reported that they want their fellow colleagues and others to join them.</p>	
Perceived behaviour control and future intentions	<p>Despite attempts, significant numbers of respondents were unable to reduce and/or stop use and abuse.</p> <p>Findings indicated respondent's definite plan to continue use of alcohol and substances in the next six months.</p> <p>Intending to buy and use more alcohol or substances if price goes down. Showed plan to buy strongest liquors if alcohol and substance price goes up.</p>	
Service arrangements	<p>Lack of adequate youth friendly health services.</p> <p>Lack of adequate referral links and treatment services including rehabilitation programmes.</p> <p>Inadequate support, guidance and counseling services.</p> <p>Inadequate recreational services and inadequate institutional arrangements.</p>	

Hence, the above information would help policy, programme and health managers to provide key health promotion services and campaigns by identifying different factors that contribute to alcohol and substance related risk behaviour (Author 2006:2).

### **5.3 PURPOSE AND SCOPE OF THE STRATEGY**

The purpose of developing this strategy was to provide information and guidance using evidence based best practices and intervention approaches that would help policy makers and managers to take action on the growing problem of alcohol and substance use among university students. It could also serve as an input for professional organisations, Non-governmental organisations (NGOs) and other relevant parties working on charity programmes to lobby and to bring alcohol and substance use related problems to the desk of policy makers and programme managers.

The strategy was also expected to contribute for the prevention initiatives and to support the efforts of various stakeholders to prioritise alcohol and substance abuse and its consequences. Some of the initiatives might include setting standards, protocols and procedures that would help them handle alcohol and substance trading, use and abuse related matters. The strategy would further aim to ensure that whether prevention services were available and accessible, whether adequate rehabilitation services were provided 24/7 basis in university campuses and nearby hospitals without any pause.

In summary, this strategy was to sensitise and support initiatives aimed at reducing the growing trend of alcohol and substance use and abuse among students attending education in public universities. However, the extent of alcohol and substance use and its related problems were expected to be at comparable rate or even the worst. Therefore, this strategy can also be used beyond public universities so as to initiate response efforts, to strengthen and cascade preventive and treatment measures that would help to curb alcohol and substance use among students pursuing their education at private universities, private colleges and public technical, vocational, education and training (TVET) institutes.



## 5.4 GUIDING PRINCIPLES

- The growing use of alcohol and substance abuse among university students should be the center of focus.
- Multi-sectoral coordination and collaboration at various levels was required to ensure that alcohol and substance abuse prevention programmes were implemented as planned.
- Universities should not be considered as an island within a town and rather should be part of the health extension programme (HEP).
- The Ethiopian HEP should be modified in a way that it would address the specific needs of college and university students to ensure healthy learning and teaching environment.
- Ministry of Health (MOH) has to play a bigger to ensure vital events registration, age documentation, expand treatment and rehabilitative services for alcohol and substance abuse and related problems.
- Universities have to put in place a partner approach with students, families, the community, NGOs and other stake holders to enhance substance abuse preventive intervention, health promotive services, information sharing and replicating of best experiences.
- Alcohol and substance traders should be made accountable to ensure that under age children do not have access to alcohol and abusive stimulants including khat.
- Ministry of Education (MOE) should strengthen system, services and recreational activities including facilitation of missions like 'Clown without border, drama show team as part of stress management.
- A clear policy and legislations should be ratified to regulate alcohol, substance and drug trading, its use, advertisements and to strengthen monitoring mechanisms.
- University students should be made part of planning and intervention of the strategies to ensure long lasting solution.

## **5.5 IMPLEMENTATION OF HEALTH PROMOTION STRATEGY FOR ALCOHOL AND SUBSTANCE ABUSE PREVENTION**

Health promotion exercise was one of public health measures employed to address health risks among the public. Health promotion is the science and art of helping people to change their life style to achieve optimal health. The strategy's objective is to improve health wellbeing through impacting four domains of health that includes physical, social, psychological and personal factors. The health promotion strategy baselines findings from the study like level of exposure, knowledge gap, attitude of respondents, perceiving fear or danger, perceived behaviour control and future intention to practice contribute to the domains impacting alcohol and substance use behaviour (Seth & Rick 2005:285).

Thus, health promotion aims at informing, influencing and assisting both individuals and organisations to accept responsibility for their actions that potentially pose consequences including negative physical and mental health outcome. In this regard, the theory of PBC better adopts cognitive approach as certain behaviour centers on individual attitude and beliefs (Jake, Mariella, Norman & Liz 2012:5). According to Pinder and Rootman (1978:235), the Lalonde recommendation of health promotion which was revolutionary at the time embraces health education that also includes complementary political and social actions to support behaviour change initiatives. Those complementary actions can facilitate organisational, economic and environmental support for the conversion of individual actions to achieve certain behavioural health outcome (Pinder & Rootman 1978:235; Jake et al 2012:5; Green & Kreuter 1999:12).

In this regard, the expansion of pioneering approaches, increased number of technical specialists, improved skill has made health promotion a primary tool to respond for public health concerns. Based on the specific strategy selected, employing health promotion requires a proper planning for exploring specific issues, whom to target and understanding the level of focus for effective intervention. Programme management guide recommends developing of a SMART action plan and ensuring effective communication. Literatures, (Polymerou 2007:1) disclosed evidence that employing public health promotion strategy including awareness campaigns, providing directing health education, interventions targeting social norms, school extracurricular activities

and motivational interviews to prevent alcohol and substance use were found effective. Employing health promotion helps to put programme objectives into practice to curb alcohol and substance abuse (Polymerou 2007:1).

The strategy would lead managers to consider any additional contributing factors that are amenable for prevention intervention. With regard to alcohol and substance use prevention, the strategy targets knowledge gaps, attitudes and people's belief concerning the behaviour of interest. Besides, the strategy would focus on factors like physical environments, social and economic factors, gaps related to policies, legislations, guidelines and procedures and access to preventive and rehabilitative services.

Further, literature suggests that implementing health promotion as a programme aims at targeting specific group and focuses on how to respond to organisational environment, identifying key stakeholders, funding mechanism to sustain programme intervention. The health promotion strategy against alcohol and substance use would help to develop personal skills, through strengthening of community action, creating supportive environment, building helpful public policy, re-orienting health services to be adolescent and youth friendly (King 1994:29).

### **5.5.1 Health promotion strategy goal**

The ultimate goal of health promotion strategy was to help reduce and prevent alcohol and substance abuse among adolescent university students.

#### ***5.5.1.1 Aims of health promotion strategy***

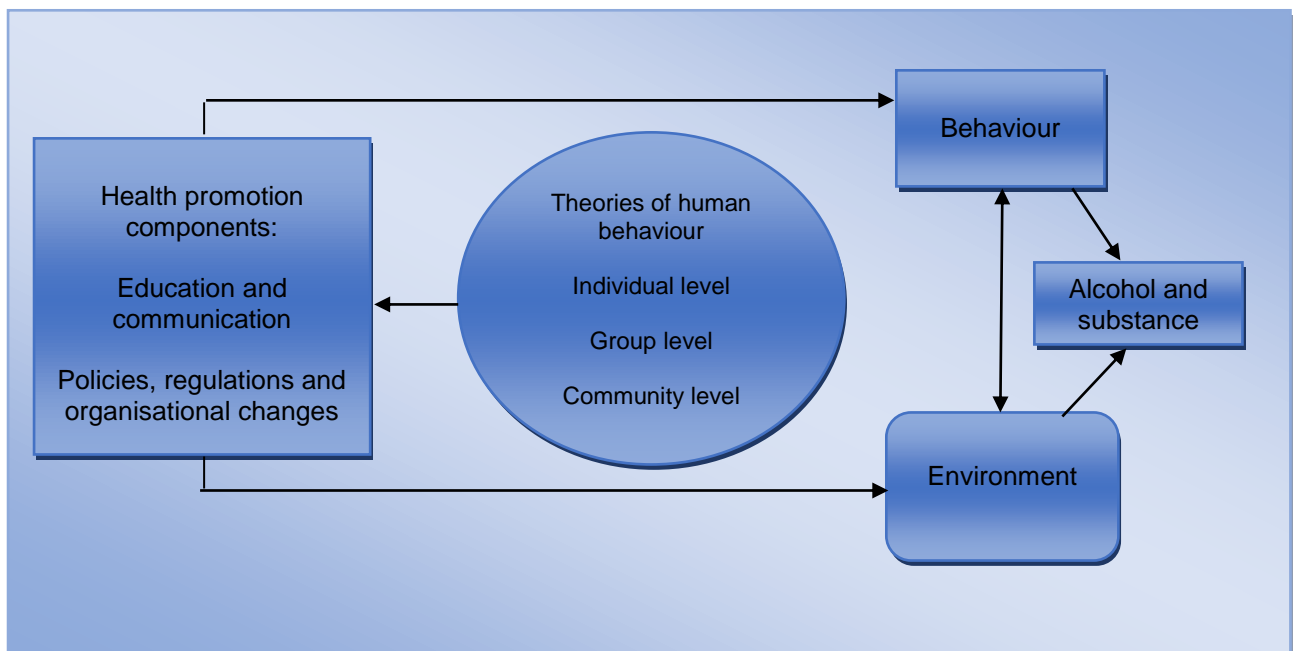
The strategy aims re-orienting public health services in a way that it would help to reduce negative impact of various health determinants (WHO 2001:35). The approaches take into account:

- Strengthen healthy practices facilitating and availing enablers.
- Shifting resource allocation towards prevention programmes.
- Paying attention to the determinants of health beyond physical including mental, social and environmental factors.

- Re-visiting top-down initiatives while Promoting community development, involvement and communication as key and effective strategy.

In summary, the guiding principles of health promotion strategy are individual empowerment and participation that encompasses introduction of wide range activities. The overall health promotion practices which are measured at the performance indicator level would contribute to the behaviour change initiatives aimed to improve health as ultimate goal (WHO 2001:42).

The below figure 5.1 depicts 'Health promotion framework for alcohol and substance abuse prevention':



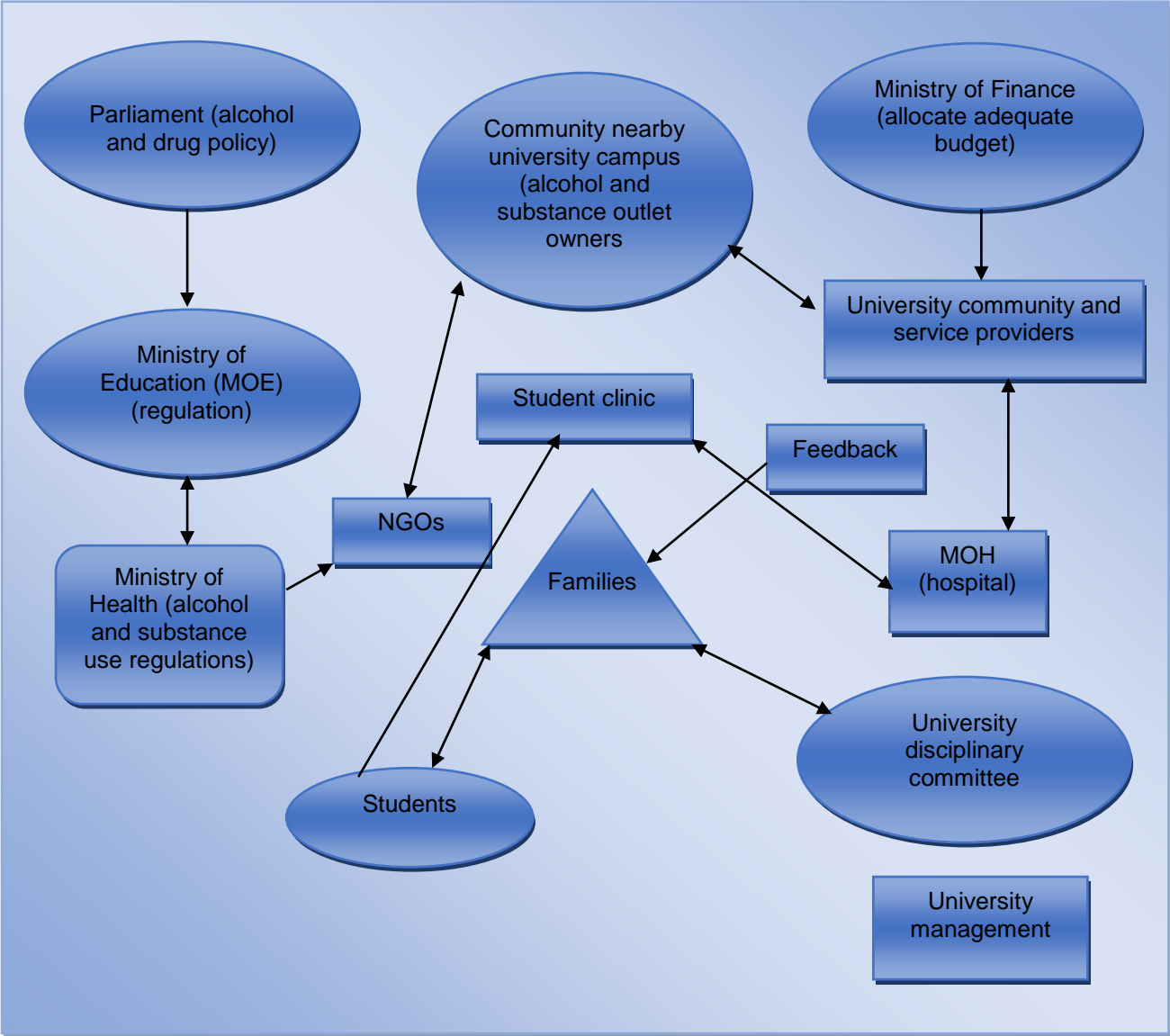
**Figure 5.1: Health promotion framework for alcohol and substance use prevention**

(Adapted from Green & Kreuter 1999)

## 5.6 PROPOSED STRATEGY

The proposed strategy was based on extensive review of literature and expert opinion. The study came with the model below aimed to respond to alcohol and substance abuse prevention. The model takes into account the involvement of individuals, the family, and community members. The model to be effective for the prevention of alcohol

and substance abuse problems among adolescents, strong coordination among partners and various stakeholders is crucial.



**Figure 5.2: Multi-sector interventions model for alcohol and substance use and abuse prevention model**

**5.6.1 Health promotion behaviour change intervention model**

Behavioural scientists Glanz, Lewis and Rimers (1999:19) suggested that designing behaviour change is best done by understanding behaviour change theories and the ability to practice them. The idea of health promotion in this regard is based on the belief that social, cultural and environmental factors determine the roles so as to act in a specific way (Glanz et al 1999:19).



Thus, behavioural scholars suggest that intervention efforts may need to focus on identifying a set of roles for use in certain theory and its implementation to achieve a desired behavioural change (WHO 2001:94). The roles identified by the scholars include:

- Identifying the determinants of a behaviour to help understand what to focus on.
- Creating casual model of the problem with detailed components for what could be targeted for change.
- Selecting, designing and implementing workable intervention methods

## **5.6.2 Level of intervention**

### ***5.6.2.1 Intrapersonal level interventions***

The individual characteristics and factors that influence behaviour would be the sole target of intrapersonal level intervention. Behaviour psychologist Jessor, (2011:241) suggests that formulating an individual level account is an important element to achieve a certain desired behaviour change. Individual accounts such as belief on internal versus external control coupled with emotional estrangement constitutes personal belief structure. Attitudinal deviances on the other hand constitute individuals personal control that was comparable to the social control structure. Thus, behaviour change interventions at this level rely on personal beliefs rather than normative environmental and social structure (Jessor 2011:241).

The theory of planned behaviour predicts that attitudes and beliefs would strongly influence alcohol and substance abuse prevention measures including health education and environmental modification efforts. The findings of this study would be used to inform the proposed strategy. The researcher suggests that interventions should target individuals focusing on the following factors:

- Alcohol and substance use related knowledge gaps.
- Attitude factors that include favorable and positive attitudes concerning alcohol and substance and its use despite negative experiences.

- Beliefs that included intention to continue using alcohol and substances, intention to buy more alcohol if price was down, beliefs to procure strong alcohol beverage if price goes up.
- Personality traits that expose for alcohol and substance use.

### ***Key intervention strategies***

The study suggests the following key intervention strategies:

- Intensive health information and education campaigns to raise awareness or knowledge creation on alcohol and substance use and associated consequences.
- Individual counseling and guidance to improve wrong beliefs, attitude and personal qualities.

Methods that can be used to put individual level intervention strategy in to practice:

- Direct communication, use of mass media including electronic and print media to transmit targeted messages.
- Conducting life skills training to empower adolescents.
- Employing snow ball approach to identifying students with alcohol and substance use problem.
- Treatment, counseling, regular follow-up and support.

#### ***5.6.2.2 Group level intervention***

Parents, guardians and other close family members have significant influence in providing social identity, role definition and support. Peer influence was also identified as the main domain for substance abuse and it recommended competitive academic performance as protective factor.

Key strategies that need to be implemented at this level include:

- Targeting primary group interaction
- Identifying and supporting processes that help enabling environment

**Specific implementation methods** that can be used to put group level intervention strategy in to practice include:

- **Information dissemination**

The assumption takes in to account that adolescents were engaged in alcohol and substance use due to lack of information about the possible consequences and long lasting adverse health outcomes as evidenced with the current study where 47.9 (n=354) on average were not aware of the consequences of using alcohol and substances. Arrangements like Peer-to-peer education can be employed to provide factual information as a target to achieve rational and logical decision of not using or reducing the use of alcohol and other psychoactive substances. The programme can be delivered through guest speakers, regularly scheduled class room curricula education and movies and film show that could apply fear-arousal techniques concerning alcohol and substance use negative outcomes.

- **Life skill training**

Life skill training is a general comprehensive teaching on personal, social and drug resistance skills. It is a universal skill teaching programme targeting students pursuing college or university level education at different levels. The training involves tailored curriculum that embraces increased load of health education session (about fifteen sessions) for the first year. While considering the arrangement of tapering approach for those first year and beyond with session target of five for the final year students (Nsimba & Massele 2012:2).

- **Introduction of alternatives**

This approach combines provision of facilities and services that could help adolescents engage in certain stimulating but productive activities as an alternate measure to divert



them from alcohol and substance use. It includes interventions like diversion therapy, event organising, and art show scene. At this level, universities may be approached to invite circus organisations from in-country and abroad such as Clowns without Borders (CWBs) that was based in Spain and elsewhere. Upon request, CWBs which is nonprofit organisation offers resilience performs free circus show, tricks and entertainment to alleviate stresses through laughter (Author 2015:1).

- **Affective education**

Affective education involves implementation of activities that help to improve self-esteem, inter-personal growth and an informed decision making for a specific target group. The approach relies on introducing increased activities which could help to improve self-confidence rather than factual information on alcohol and substance use and its associated consequences. The approach further considers teaming and research as a strategy of involving groups to take away from a specific behaviour which they were engaged in.

- **Presentation of real life experiences from x-substance users**

Behaviour scholars suggest that demonstration of real life experience could be more informative and convincing than providing mere facts. This approach was mainly used in the prevention of HIV pandemic where people perceive the imminent danger when they lose their close ones or when HIV positive patients provide witness. These involve use of tactics that involves inducing of fear through use of graphic images and bad experiences which are a common strategy used in behaviour change interventions. This experience can be replicated in the alcohol and substance abuse prevention interventions by involving x-users to share their challenges, how they lived in and the steps they went to achieve desired behaviour. The strategy promotes fear through communicating harmful effects of alcohol and substance use while complementing it with appropriate information and providing alternative measures to cope with would help to accept and demonstrate the desired behaviour (Rovin, Hoepf, Young & Hardee 2008:2).

### ***5.6.2.3 Community level intervention***

Community level intervention comprises a collective decision-making which is appropriate to the urgency, magnitude of the problem, cost and consequences of specific behaviour outcome that enables the community to respond. The approach at Community level involves theories and methods which basically focus on active participation, involvement and community development to enable them to better solve the problem of certain behaviour in question. As a single indicator, local alcohol production and cheap price was one of the most effective factors for alcohol use. Community effort and collective decision making including reduced sale to underage may exert significant difference (Jackson, Henderson, Frank & Haw 2012:33).

This was proved where impact monitoring conducted at community level intervention to respond for certain behaviour change effort employed among two different communities indicated a significant difference on the desired behaviour outcome in the case and control group. When it comes to alcohol and substance use prevention, the findings indicated low alcohol and substance use among intervention communities. The lesson from the above findings indicated the importance of prioritising community level intervention which would have significant contribution in the response effort to tackle alcohol and substance use related problems and future crisis (Gielen et al 2003:7).

The above findings were complemented by a survey conducted in USA by Volkow (2014:13) where community has been identified as an important domain in the alcohol and substance prevention package. The study further outlined that availability of alcohol and substances at nearby schools were a risk factor and recommended endorsement and community awareness on anti-drug policies as an important remedy. To respond to such risk factors and to avoid the problem of substance abuse, it is important to consider a comprehensive intervention that involves community actions. In the community, parents and the media would play significant role in discouraging and limiting availability of alcohol and substances. The media may play a key role in describing the negative outcomes of use versus positive impacts of alcohol and substance use prevention efforts.

To achieve the goal of community level intervention, the specific communities involvement in needs assessment and decision making processes is central.

Community level interventions may materialise through the use of institution like 'Idir which is community based nongovernmental organisation that was primarily established to provide support for their members during death and funeral. Idir which is an indigenous Ethiopian community based organisation would provide a framework of ideas, guiding principles and practices with a solution at local context which could serve as foundation to respond for various problems broad based efforts (Getinet 2015:3).

As detailed above, 'Idir can be used as an entry point to employ awareness raising campaigns on the growing trend of alcohol and substance use among university students. This approach may demand establishing a specific intervention function like community participation and involvement among service users and the community which has a key role in supporting behavioural change initiatives through community empowerment. In doing so, the community may restrict circulation of alcohol, substance and/or drugs while monitoring involvement of children in accessing alcohol and substances.

Intervention mechanisms at community level have to focus on a set of arrangements that would be able to respond to the following factors: lack of adequate protocols to monitor alcohol and substance trading; availability of rules and regulations and community awareness about alcohol and substance use consequences; inadequate structure and other arrangements on the anticipated risks on the use of alcohol and other substances by university adolescents. Other factors such as lack of adequate recreational facilities, inadequate arrangements for stress management, lack of adequate counseling, guidance and support also play a negative role.

Moreover, community factors that include social networks, alcohol and substance use norms and standards can have an influence on certain behaviours. Likewise, shop owners practice of selling substances without discrimination, lack of a known standard that helps limit alcohol and substances outlet near university campus were found to be influencing factors to test and experiment with substances. Thus, community level health promotion strategy considers the community as central to the prevention of alcohol and substance use by adolescents.

**Key strategies** to be employed at community level include:

- Strengthening community action against alcohol and substance use.
- Support communities to discuss priorities and customise interventions based on their local concerns and interests.
- Develop and present evidence based findings from research.
- Support mass media communication advocacy for raising awareness.
- Identifying potential partners needed for coordination and integration and forming a committee.

**Methods** that need to be employed at group level intervention to put strategy into practice:

- Responsible alcohol beverage services.
- Responsible alcohol and substance advertising, in terms of time and place.
- Limiting the extent of alcohol and substance access to underage children.
- Institutional arrangement and equipping of service units.
- Forming, revitalising and strengthening anti-alcohol and anti-substance use clubs.
- Strengthening institutional and community referral link.
- Ensuring parental and student involvement while dealing with issues related to alcohol and substance use.
- Campaigns to improve awareness on university rules regarding alcohol and substance including penalties while breaching the rules.
- Training and capacity building to respond for alcohol and substance use prevention and treatment.

#### ***5.6.2.4 Intervention at policy level***

Various arrangements were needed at policy level to enforce and strengthen alcohol and substance prevention initiatives. Available literatures (Gimmy 2009:307) suggest that updated Public policy factors such as local, federal legislations, laws, guidelines and procedures that regulate trading, circulation, advertisement and use of substances would help support healthy actions and practices. The findings from the above

unpublished research recommended that policy makers should ensure allocation of adequate budget that would help institutions and health facilities such as student clinics to run comprehensive services like adolescent and youth friendly health (AYRH) health services that were found to respond for the unique needs of young people.

The Ethiopian public Health Policy (GOE 2011:9) which was developed twenty five years ago did not recognise alcohol and substance abuse problems as public health concern. Also, lack of adequate protocols to monitor alcohol and substance trading, and use as well as lack of such arrangements has affected early detection and implementation of preventive and rehabilitative measures for alcohol and substance abuse problems among university students. However, the policy recommends initiatives and actions to be taken in order to address the special health problems and needs of adolescents. Thus, policy makers should review and update available policies, principles and guides in a way that it would support alcohol and substance abuse prevention efforts (Author 1993:9).

**Key strategies** to be employed at policy level include:

- Policy drafting and ratification that restricts alcohol and substance trading and sellout near university campus.
- Revise, endorse and re-enforce alcohol and substance related advertisement protocols including places, timing and events.
- Strengthen laws to re-enforce database that would be able to handle vital events and consistent age registration as compulsory for all citizens.
- Legislation that could help strengthening social support for prevention of alcohol and substance abuse.

**Specific implementation methods** that can be used to put group level include:

- Programme schedule of house of speakers to hear initiatives and implementation status of alcohol and substance abuse prevention efforts among different stakeholders.
- Task specific ministries like ministry of health to audit and present vital events registration.

- Allocate a specific date of celebration within the year to campaign anti-alcohol and substance date.
- Focus and respond on factors that enhance coordination and response among organisations.

### **Key intervention functions by line ministries**

To respond to the growing public health concern of alcohol and substance abuse among students, all relevant parties should play a direct role to strengthen and revitalise a strategic partnership to curb the problem. Different ministries were mandated to provide various services including drafting rules, protocols and guidelines as shown below:

#### ***House of speakers***

The parliament is responsible for making laws and policies and overseeing the implementation status of those policies endorsed towards public interest. The parliament may be lobbied to form a team of watch dog that can provide support in the designing and monitoring mechanisms among different sectors to ensure whether adequate coordination and partnership was established among stake holders such as the Ministry of Education (MOE), Ministry of Health (MOH), Police Commission, Food and Medicine Administration and Control Authority (FMACA), Non-governmental Organisations (NGOs), community based organisation, universities and relevant others.

#### ***Federal ministry of health (MOH)***

The ministry is responsible for the provision of minimum primary health care services to the public in general. It is also mandated to address the specific needs of the segmented section of the community that includes adolescents and youth. The ministry can be approached to prioritise and sense the growing trend of alcohol and substance use and its grave consequences. In this regard, MOH could train and capacitate health staff on the growing problem of alcohol and substances related problems and mobilise and equip hospitals nearby university campus with the necessary resources to and capacitate to provide adequate rehabilitative services (Pengpid, Peltzer, Heever & Skaal 2013:2).

### ***Ministry of Finance and Economy (MoFE)***

The ministry can mitigate the shortage of resources including human and others through allocating adequate budget. This would help improve capacity of universities in order to provide counseling, care, and support and follow up as well as preventive services to halt alcohol and substance abuse. As a tri-party signatory, the ministry can also be approached to propel NGOs to prioritise and mobilise resources towards alcohol and substance abuse prevention at universities.

### ***Food and medicine, administration and control authority (FMACA)***

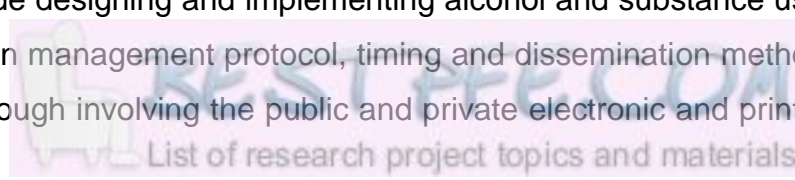
The authority is responsible for monitoring the quality, availability and circulation of substances including drugs, medicines, food and other items that have potential to affect human health. The authority may be approached to make restrictions on alcohol and other substances.

### ***Ministry of Education (MOE)***

The ministry is primarily responsible for the education at Ethiopian higher learning institutions. The ministry can be approached and sensitised about the problem of alcohol and substance abuse in institutions of higher learning. This would allow the ministry to put in place policies and administrative procedures that will make it difficult for adolescents to use alcohol and substances.

### ***Ministry of Communication (MOC)***

The ministry is the core partner for circulating and transmitting appropriate and timely information concerning issues that were government priority for the public at large. The ministry may be tasked to allocate adequate air time so as to educate the young as well as the general public on the growing problem of alcohol and substance use and its consequences, enablers for prevention and availability services for those in need. These might include designing and implementing alcohol and substance use and abuse focused information management protocol, timing and dissemination methods. It can be made practical through involving the public and private electronic and print mass media



to air key messages of consequences of alcohol and substance use and advocate for alternate recreational arrangements and skills to cope with stressful situations including academic workouts.

### ***Ministry of Industry and Trade (MOT)***

The ministry is vested with the mandate of licensing, renewing and monitoring of any business and trading firms and services including alcohol outlets and substance sellout shops. The ministry may be approached to develop a policy and guideline that requires a protocol for alcohol advertisements, trading near universities. It may collaborate with MOH and introduce a protocol that demands shop or bar owners to do compulsory ID check that restricts and limits underage access. Besides, the ministry may be approached to revise the current licensing approaches and re-locate alcohol and substance outlets away from the gates of university campus. The ministry may also be approached to institute a system that includes annual re-ward mechanism which could empower and help shop owners to comply with the policy and legislation.

### ***Key intervention functions by specific higher learning institutions***

Universities and colleges are accountable for taking care of students under their responsibility. The university management can be tasked and approached to conduct continuous assessment on major determinants of alcohol and substance use. It might also be approached to strengthen services targeting the specific needs of adolescents. These may include re-visiting and equipping student clinics including adequate manpower, supplies and equipment that would help provide youth friendly health services. It may also be coached to identify and support enabling factors that promote healthy behaviour and practice while identifying barriers and developing a contingency plan to deal with the difficult situations.

Universities may be approached to re-orient the available services to match with the adolescent's specific needs such as the alcohol and substance use challenges. Intervention efforts which may be introduced include:

- Instituting appropriate referral link between student clinics and nearby hospitals administered by the Ministry of Health (MOH).



- Forming, supporting and capacitating anti-alcohol and anti-substance clubs by allocating budget and small office space to ensure delivery of comprehensive peer-group support services across the care continuum.
- Developing stress coping mechanisms by continuously assessing and monitoring alcohol and substance use related problems, risks and impacts.
- Introducing a new management approach which is a shift from primary focus on power and administering disciplinary measures to supportive intervention and prevention measures.
- Informing and involving parents of students and student unions in decisions making process concerning students having alcohol and substance use related disciplinary breaks and associated incidents.
- Strengthening such services like treatment, rehabilitation, and counseling and for alcohol and drugs.
- Establishing regular and ongoing counseling and guidance services for students with risk of alcohol and substance related problems while establishing partnership and link with student's parents for continuous follow-up and support.
- *Introducing alcohol and drug screening* intermittently among students.

### **Intervention functions by non-governmental organisations (NGOs)**

According to Ethiopian charities and societies Law (2011:11), more than 1600 non-governmental organisations (NGOs) were registered in the country to provide different projects and programmes. NGOs have the resource capacity but focus on different programmes including HIV, maternal and child health, nutrition and other social services. NGOs can be approached and sensitised to:

- Share the public concern on the magnitude of alcohol and substance use problems.
- Prioritise the actual need of intervention.
- Come up with university focused project intervention.
- Allocate resources including financial and other supplies to support response efforts to curb alcohol and substance use problems among the future generation that would cripple their future and affect a country development.

- Support the initiative by developing protocols and key IEC messages that may help to conduct awareness raising campaigns.
- Strengthen partnership and support nearby hospitals to provide adequate treatment, care, counseling and rehabilitative services for clients with alcohol and substance use related problems.

## **5.7 POTENTIAL PARTNERS, SUPPORT FUNCTIONS AND RECOMMENDATIONS**

Recommendations and best practices were drawn from the respondents, findings from focus group discussions (FGDs) and information gathered from key informant's interview guides. The intervention guide considered recommendations from NHS (2015:7) to enrich the strategy and best practice implementation approach on students' substance abuse intervention. In this regard, the strategy aims to achieve high level of involvement among policy makers and potential partners. These may help to attain the strategic vision of sustainable behaviour change through access to reliable alcohol and substance education and health promotion programme (NHS 2015:7).

The guideline proposes a collaborative approach model between universities, line ministries, NGOs, the community, parents and other stakeholders to comprehensively respond for alcohol and substance use prevention. The development of preliminary strategy concludes this doctoral study. However, piloting, evaluation, implementation and dissemination of the proposed strategies will remain as part of post-doctoral exercise (Clark 2000:8).

## **5.8 TRAINING, CAPACITY BUILDING AND EMPOWERING THE CHANGE AGENTS**

Clinicians should be capacitated and well trained to provide alcohol and substance screening including surprise checks for blood level alcohol and drugs during class hours. Students found negative for some repeated tests should undergo graduation ceremony and should be certified to motivate other fellow colleagues to consider similar actions.

## **5.9 CHALLENGES AND OPPORTUNITES FOR COMPREHENSIVE AND INTEGRATED SERVICES**

### **5.9.1 Challenges and blockades**

In Ethiopia, substances like Khat were considered as main source of hard currency and export product. This complicates the ease of ratifying, endorsing and implementation of strict alcohol and substance use policy.

Nearly 85 percent of the population may not have adequate access to electronic and print media where the challenges of providing effective alcohol and substance prevention measures can be understandable. There would be difficulty of using audio-visual channels to pass key messages on alcohol and substance use prevention (CSA 2010:19).

As it was witnessed by the World Bank (2011:17), Africa was a unique continent that has a multiphase problem. Ethiopia being one of Sub-Saharan countries has critical challenges of providing basic needs and social services. On top of the inadequate capacity to manage and respond to conventional disease burden, the growing problem of alcohol and substance use and its consequences results in additional challenge on the very limited capacity and resources. However, the current magnitude of the problem and the growing concern warrants that maximum effort should be made to reach out and provide key messages on factors that predispose for alcohol and substance abuse (World Bank 2010:17).

### **5.9.2 Existing opportunities**

In an effort to contain the growing problem of alcohol and substance use among students, the Ministry of Education (MOE) and Ministry of Health (MOH) may need to coordinate in order to explore various opportunities and available resources. The available structure of indigenous health extension programme (HEP) package across the country could be used as a startup kit in the initiatives of alcohol and substance use prevention response. However, the HEP package was developed mainly to address the conventional disease burden and maternal-child health issues. The package has overlooked the growing public health concern of alcohol and substance use and abuse

related problems. Thus, the HEP can be revised and made to accommodate alcohol and substance use and associated problems.

On the other hand, 'Idir which is the Ethiopian community based indigenous structure that is primarily created with objectives to support grieving and funeral services may be used as an entry point to target such factors like parents, guardians and close families role for children's exposure to alcohol and substances. Idir can be efficiently used to cascade alcohol and substance use prevention campaigns.

Response approaches may include implementation of community dialogue and arrangements like participatory assessment exercise to explore views of the community and including community solutions as an input to run, cascade and implement the prevention campaign. This is based on the understanding that involving and placing the community at the center of decision making and proposed prevention strategies would help empower the community, help mobilise resources and help to strengthen sustainable outcome (WHO 1998:236; UNHCR 2014:14).

## **5.10 MONITORING AND EVALUATION**

Monitoring is an ongoing effort of tracking the implementation status of certain programmes or projects to ensure that implementation was ongoing as planned. Various sectors may be involved in the monitoring and evaluation exercise to make sure that alcohol and substance related interventions were properly implemented, resources mobilised and supplies procured.

Checklists and monitoring tools may consider the set of determinants from the principles of planned behaviour (TPB) change model that were known to influence alcohol and substance use behaviour. Hence, conducting continuous impact monitoring on the implementation status of alcohol and substance use prevention strategy would help programme managers and public health practitioners to timely respond for risk factors that influences the domain of the desired behaviour change (Vantamay 2009:355).

## 5.11 CONCLUSION

Alcohol and substance abuse is a growing concern both locally and globally. It has major impact on wellbeing of individuals, families and communities as well (Author, 2008:2). In developing countries like Ethiopia, university and college student's alcohol drinking and substance use was not studied extensively. Also, the current alcohol and substance use problem among students was not receiving adequate attention, adequate funding and intervention programming despite its growing public concern.

However, the current study has confirmed that alcohol and substance use among university students was a real problem as it was evident in most countries. Various factors that included individual, institutional, familial and policy related factors were identified as a risk factor for alcohol and substance use exposure that requires immediate action.

To address the problem of alcohol and substance use and its consequences, the current study developed 'health promotion strategy based on the theoretical grounding of planned behaviour change. The strategy takes into account that the magnitude and fueling factors for alcohol and substance use may not be addressed by the capacity of universities alone or a specific sector like health or education. It was outlined in the strategy that the response requires a collaborative effort and effective coordination among various sectors and parties.

To put this response strategy into practice, all concerned sectors and stakeholders may need to design a multi-sectoral response plan. Each government sector and other stakeholders may need to have a clear plan to agree on their role so as to contribute in the prevention efforts. The agreed response plan should be implemented on timely basis to save the future generation at risk of having the grave consequences of alcohol and substance abuse.

This health promotion strategy which was developed based on principles of TPB change model can be used as a guiding document to initiate prevention intervention focusing on the weak points amenable for change to curb alcohol and substance abuse. The strategy includes series of measures aimed at achieving long term change in attitudes that would help adolescent's university students to refrain from irresponsible

drinking and substance use behaviour. The researcher is confident that this can be achieved through implementation of health promotion strategy that has packages of activities having the core approach for better education and communication (Author, 2004:5).

There is a need for universities to conduct a further study that would explore protective mechanisms through bench-marking to uncover lessons learned and best practices from developed countries to strengthen intervention measures.

## CHAPTER 6

### CONCLUSION AND RECOMMENDATIONS

#### 6.1 INTRODUCTION

This chapter presents conclusion and recommendations based on the study findings. The first section outlines a brief introduction of the chapter followed by the conclusion and recommendations made from the study.

#### 6.2 RESEARCH DESIGN AND METHODS

A research design is a plan or strategy that is developed to seek answers for research questions. It is a process that moves from philosophical assumptions to specifying selection of study participants, data collection techniques and data analysis which is to be followed. According to Tshuma (2007:116), research design is a logical structure of inquiry to conduct a specific study. To realise the goal of qualitative data collection, participants were selected based on their age category, year of education, representation in the student council and other criteria. Besides, participants for the key informant interview were selected taking in to account their direct role in service provision, monitoring students class attendance, communicating grade reports, and security assistance in-order to answer selected study questions (Elder 2009:22; Teddlie & Yu 2007:80; Westfall 2009:1).

The current study used both the quantitative and qualitative approaches. University roster was used to select seven hundred thirty eight respondents from sampling frame. Non-response rate was maintained below ten percent being 9.4 percent which indicated enrollment of adequate number of respondents participated in the study. Lastly, data collection tools were piloted using respondents that were not included in the actual study sample. Then, findings from the pilot study were included, minor corrections and editing was done. Data were collected from January 25 January to March 3, 2016 using semi-structured questionnaires. Both qualitative and quantitative data collected through interviewing, using interview guides and FGD for selected key informants.

### 6.3 CONCLUSION

Globally, alcohol and substance abuse was found to be one of the most important crises along with other three crises that included environment, poverty and nuclear threat. Likewise, the current study confirmed the public concern that was echoed on the mass media where alcohol and substances abuse among university students remain a real threat. The extent of exposure was very high at a level of binge drinking where one drinks to be drunk. University environment has become a safe haven for abuse of alcohol and substances by young people. The increasing trend of alcohol and substance abuse among university students is worrisome and may have serious consequences. The problem of alcohol and substance use among university adolescents call for an urgent intervention from all stakeholders (Vahdat, Sharifi & Jafari 2013:69; Jackson et al 2012:1).

Substance use which is defined as ingesting any substance to get high, alert while affecting sense or functioning. The involvement of students was more than substance use but it is substance abuse which is a pattern of use that leads to a level that was involving functional impairment (Author 2010:6). Concerning the type of substances, khat was found to be among the major substances abused. However, Khat is a cash crop and source of foreign currency that makes it Ethiopian specific problem that needs policy makers to decide on. Frequent alcohol drinking was linked with primary intention to overcome effect of substances. Besides, drugs such as sleeping pills were used to treat sleeping disturbances encountered in relation to substance use. It is important to gear prevention efforts mainly targeting production and circulation of substances (Author 2010:6).

Institutional and administrative factors such as lack of appropriate recreational facilities, and inadequate care and support were among the major contributing factors. Other policy factors like lack of clear legislation for age restriction, standards for alcohol advertisement and its availability nearby university campus were known contributing factors which did not buy the attention of policy and programme managers. Societal factors like familial background of substance use, exposure to involvement in buying and selling of substances were documented as one of contributing factors. This indicated the pivotal role of parental involvement in the prevention efforts. Individual factors such as inadequate knowledge about short and long term impact of alcohol and



substance abuse and their strong intention to continue using it means that awareness which is an important tool for behaviour change is missing that needs immediate action. This can be done by initiating awareness raising intervention among policy makers, parents and the community at large. Even though drinking alcoholic beverages is inseparable human relationship as part of dietary culture, the extent of problem level drinking needs response (Lee et al 2015:1).

Students spend a great deal of time abusing alcohol and other substances. This significantly affects the student's social, financial and academic life. Literature indicated that alcohol and substance use disorders were highly associated with behavioural health problems, uneasy and stressful experiences which may lead to depression and suicide which has extent of crisis happens (Author 2014:2).

Alcohol and substance abuse have serious physical consequences. Drinking alcohol has adverse effects such as risky sexual relationships, trauma, injury, gastric upset and malnutrition among others. Psychological effects like distress, craving, flashbacks and other withdrawal symptoms are among the adverse effects. The increasing use of alcohol and substances may shorten their life spans by almost 25 years (Author 2014:10). This situation needs immediate intervention by all stake-holders

Apart from struggling to improve academic related facilities and arrangements, universities were mainly focusing on tightening legislations, disciplinary measures and security checks to discover alcohol and substance smuggling which may not result in durable solution. As it was documented in the experience of HIV prevention, active anti-alcohol and anti-substance clubs that help to provide alcohol and substance use related information were not in place. Even though universities run student clinics, the services were limited and it was not geared to the needs of the adolescents that demand a great effort to gear the services at the needs of young people. It was uncovered that the clinic services were not youth friendly. Lack of clear guide, referral link and treatment arrangements to send those having alcohol and substance abuse related problems could take the case to chronic stage that may not be easily amenable for response.

To sum-up, the findings of this study provided valuable statistical data and information concerning the magnitude of alcohol and substance abuse. The consequences of using alcohol and substances and the contributing factors were also espoused by this study.

Further, the study has explored knowledge gaps concerning the short and long term effects of alcohol and substance abuse which needs to be acted upon. However, it was found out that university managers lack a clear strategy which will guide their intervention.

For effective intervention, sources of alcohol and substances should be known and their advertisements done responsibly to avoid temptation to adolescents. Understanding alcohol and substance use and its individual and social consequences requires a framework of appreciating the social, cultural and environmental contributions. In this regard, the strategy has taken into consideration the context mentioned above (Rickwood, Magor-Blatch, Mattick, Gruenert, Zavrou & Akers 2008:4). The strategy takes into consideration the valuable and crucial importance of government commitment that may begin from appreciating the growing trend of alcohol and substance abuse and its future impact among young generation. This may be followed by allocating adequate resources and coordinating multi-sectoral response while implementing the strategy developed to support such endeavor. This in turn would help to improve the fate of the young people who are involved in alcohol, substance and drug abuse (Rickwood et al 2008:4; Vahdat et al 2013:69).

To address the growing crisis comprehensively, the current study developed a strategy that would help prevent alcohol and substance abuse. The strategy would help policy makers, managers and other stakeholders to support and respond to the alcohol and substance abuse related problems among adolescents. The researcher is confident that immediate consideration, action and implementation of the prevention strategy including the recommendations detailed would help to contain the crisis.

#### **6.4 RECOMMENDATIONS TO CURB ALCOHOL AND SUBSTANCE ABUSE AMONG ADOLESCENTS**

A study by Vahdat et al (2013:69) indicated that higher learning institutions including universities play a key role of training individuals for later life and are a pivotal for gearing development of a given society. In the Ethiopian specific context, it was found o that Ethiopian universities were not able to help attain their key responsibilities due to other commitments. Ethiopian universities should discover and appreciate alcohol and

substance abuse problems among students and consider and intervene (Vahdat et al 2013:69).

The recommendations from key findings that should be implemented at different level to bring in the desired behaviour. They target various actors, stakeholders and the federal government at large. Specifically khat has to be the main focus of intervention. To reduce risky sexual practice, HIV/AIDS prevention intervention has to target university students at large. Table 6.1 shows recommendations that need to be implemented through various stakeholders in order to respond to alcohol and substance use abuse among adolescents.

**Table 6.1: Recommendations that need to be implemented by various stakeholders**

<b>Actors/stake holders</b>	<b>Recommendations</b>	<b>Clarifications</b>
House of speakers/Ethiopian parliament	<p>Develop and endorse a policy direction to help control and restrict alcohol and substance trading, advertisement and use.</p> <p>Legalise list of substances, its use, mandatory reporting and related issues.</p> <p>Develop and endorse a back to strengthen and scale up vital events registration like birth and provide support for its strict implementation at each level.</p> <p>Ratify and enforce a policy direction that demands alcohol and drug outlets the use of passport or national ID card with age identification while procuring alcohol and substances.</p>	<p>Some substances like khat serve as a source of foreign currency that complicates legislation on substance use and abuse.</p> <p>Vital events registration is inadequate in Ethiopia where many do not have accurate date of birth on their ID card.</p>
Ministry of finance and economic Development (MoFED)	<p>Allocate adequate amount of budget to strengthen student clinics in order to address health service gaps at universities.</p> <p>Strengthen coordination with MOH to lobby NGOs and guide to work with focusing universities in the prevention of alcohol and drugs/substances abuse.</p>	<p>Student clinics were short staffed, low budget, lack medicines, supplies and equipment to provide youth friendly health services. That would cover alcohol, drugs and substance treatment and prevention.</p>
Ministry of Health (MOH)	<p>Coordinate with ministry of education and universities to strengthen treatment and rehabilitation services.</p> <p>Revise, expand and implement the indigenous health extension package (HEP) in a way that it would respond for alcohol and drugs/substance abuse.</p> <p>Strengthen school health education programme as part of extending health extension packages.</p> <p>Identify, capacitate and equip nearby hospitals to provide a standardised and</p>	<p>Unlike conventional diseases, HEPs does not cover alcohol and substances and drug abuse related problems among adolescents.</p> <p>There is a weak referral link between university clinics and nearby hospitals.</p> <p>Nearby hospitals lack the human resource, medicines and other supplies to respond</p>

Actors/stake holders	Recommendations	Clarifications
	adequate service for alcohol and substance related problems.	for alcohol and substance related health problems.
Ministry of trade and industry (MoTI)	<p>Draft regulations, circulate and monitor implementation of those regulations whether working in restricting sell out of alcohol and substances near university campus.</p> <p>Strengthen surprise checkup of shop owners to improve accountability and keep responsible to check ID to avoid alcohol and substance sell out to under age or age restricted by the parliament.</p> <p>Introduce an incentive mechanism to empower alcohol and substance outlet or shop owners and traders to deny sell out of alcohol and substances for underage children.</p>	<p>Distance for alcohol and drugs/substances sell out, shops and other outlets should be determined by law</p> <p>The current practice that alcohol or substance outlets do not consider age and sell out for anyone who has money. In USA, minimum age to purchase substance was set to be 21 years and above.</p>
Food and Medicine Administration and Control authority (FMACA).	<p>System should be established to control chain of abusive substances including alcohol, drugs and khat.</p> <p>The authority has to come up with a protocol to address the conflicting interest of growing and trading khat as economic value versus its abusive impact.</p> <p>The authority may also propose a way of monitoring to respond its effects as stimulant substance.</p>	Khat was the most abusive stimulant substance in Ethiopia. However, there is no clear guide developed by the authority about its use, dosage, circulation and other related issues.
Ministry of Justice (MoJ)	<p>Monitor implementation of alcohol and drug related policies.</p> <p>Develop guidelines and protocol concerning alcohol and substances trading, importing, advertisements, use of billboards.</p>	MOJ may conduct awareness campaign to raise to raise public awareness on key legal issues and consequences of beaching legislations.
Ministry of Education (MOE)	<p>Coordinate with MOH to strengthen prevention and health promotion services against alcohol, drugs and substance use and at all universities.</p> <p>Support universities by developing guidelines, protocols that help maximise the</p>	MOE should take pause of expanding further university construction and should stream line adequate support to address gaps in the existing universities.

Actors/stake holders	Recommendations	Clarifications
	interest of young people.	
Non-governmental organisations (NGOs)	<p>Design and implement alcohol and substance use and abuse interventions.</p> <p>Lobby and mobilise resources for adolescent focused services at universities.</p>	NGOS have adequate resources that would help to avail the need services.
Universities and university managers	<p>Recognise the dire need for immediate intervention that targets and benefits almost half of students involved in alcohol and substance/drug abuse related problems which documents. Prioritise interventions on human aspect. apart from attempts to fulfil academic requirements, tools and facilities.</p> <p>Arrange and provide regular recreational facilities.</p> <p>Revise and devise academic curriculum to be friendly.</p> <p>Revisit and re-organise Students' clinics to provide youth friendly health services.</p> <p>Focus on causes of stress and stress management services.</p> <p>Provide geared health education, information and promotion sessions.</p> <p>An ongoing monitoring of students social life, stressful events, fueling factors for alcohol and substance use should be surveyed, identified and implemented.</p> <p>Attempts should be made to avail enabling factors that help students to avoid use of alcohol and substances.</p> <p>Design a special intervention arrangement including part time job to support first year students who were much liable to stress that might lead to alcohol and substances.</p> <p>Strengthen peer education, revitalise, capacitate and equip anti-alcohol and</p>	<p>Universities run different clubs like anti-HIV club, gender, science club, nature and tourism and others.</p> <p>But, clubs like anti-substance were less prioritised as it does not call the attention of NGOs or funding agencies. Besides, universities do not allocate resources including office and stationary which would enable students to run basic awareness Creation activities.</p> <p>There used to be poor referral link between university clinics and nearby hospitals for treatment, counselling and follow up care.</p>

<b>Actors/stake holders</b>	<b>Recommendations</b>	<b>Clarifications</b>
	<p>anti-substance clubs. Sign MOU Strengthen, coordinate, and referral link with nearby hospitals.</p> <p>Identify and engage families of alcohol and substance users while intervening alcohol and substance use related problems.</p>	
Parents, guardians, close families	<p>Should take responsibility not to expose children for alcohol and substances Parents may avoid budgeting for substances like Khat.</p> <p>Avoid using alcohol and substances in front or in the presence of children.</p> <p>Side-step not to involve children in buying or selling alcohol and substances.</p> <p>Support and help to get out those children who were engaged in using alcohol and substances.</p> <p>Parents may break the silence, yelling on adolescents involved in alcohol and drug/substance use by assuming intimacy and discussion culture among parents and children.</p>	<p>Parents contribute for alcohol and substance abuse through budgeting, involving children in buying and selling alcohol and drugs/substances.</p> <p>As traditional society, there lacks discussion between children and their family which would impair knowledge about alcohol and substance abuse.</p>
The larger community, Bar, Shop owners and/or drug/substance outlet owners	<p>Community involvement in the response would be crucial as those traders and sellers were part of the community.</p> <p>The community may assume responsibility of restricting and screening underage access while selling out alcohol and substances.</p> <p>The community policing system in place may be used to control selling out alcohol, substances and drugs which were prohibited by the law.</p> <p>The community may introduce mechanism of penalty for those involved in</p>	<p>The best experience that community involvement has resulted in fruitful results where they prohibited churches and elderly to refrain from approving marriage without HIV test result and otherwise setting scale of punishment.</p> <p>The experience can be replicated in alcohol, drugs and substance prevention effort.</p>

<b>Actors/stake holders</b>	<b>Recommendations</b>	<b>Clarifications</b>
	illegal trading, contraband circulation of drugs and substances.	
Fellow students and significant others	<p>Utmost support should be provided for alcohol and substance users to help them move at each stage of behaviour change.</p> <p>Fellow colleagues may help in the stage of behaviour change by refraining from discrimination, cursing and blacklisting of those using alcohol and substances/drugs.</p> <p>They may attend those with alcohol, substance and drug abuse problem to service centers, recreational facilities and other diverse activities.</p>	Friends and classmates can support colleagues while encouraging diversional activities, linking with counselors and refraining from such behaviours like cursing or discriminating alcohol and drug/substance users.
Adolescents university students	<p>Seek help concerning stressful situations that lead to alcohol and substance related issues.</p> <p>Engage in stress reduction events that include walk out sessions, participating in sporting and gymnastic activities to reduce and get rid of alcohol and substance use.</p> <p>Attend diversional therapies and recreational arrangements like reading books, watching movies, theatre as arranged by the university.</p> <p>Attend guidance and counselling services, stick with follow up appointments and prescribed medication.</p>	Most respondents pointed out that they do not believe that counselling services may help them take out of such situation.



## **6.5 CONTRIBUTION OF THE CURRENT STUDY**

There are many contributions made by this study. The most important ones include:

### **6.5.1 Development of the strategy**

Even though alcohol, substances and/or drug abuse was a real problem among university students, universities lack clear guideline or a strategy that warrants the need for such to assist with immediate intervention. To assist in such effort, this specific study developed a strategy which can serve as a preliminary guide to the intervention.

### **6.5.2 Policy awareness**

The study provided important mitigation measures as proposed by the adolescents, key informants and FGD respondents which could help policy makers, line ministries and university managers to consider such interventions like drafting, ratification and endorsing of policies and legislations as counter measure to the predisposing factors of alcohol and substance use and abuse.

### **6.5.3 Education**

The findings can be used in various higher learning institutions to cascade health information and education in the prevention effort against alcohol and substance abuse problems.

### **6.5.4 Body of knowledge in public health science**

The study offers important baseline information concerning the magnitude, major reasons for use, predisposing factors, awareness and experiences of alcohol and substance abuse among university students. Thus, the study has relevance to and serves as basis for future research.

## **6.6 SCOPE OF THE STUDY AND FUTURE RESEARCH**

As mentioned above, this study showed the magnitude, predisposing factors and has measured various variables at the same time. However, the findings have provided a cursory view of respondent's behaviour and may not be conclusive.

Form the study findings the researcher recommends the following:

- Full scale research that covers thirty three public universities, two private universities and various colleges across the country that are under the Regional Technical, Vocational and Educational Training (TVET) Bureaus to provide better geographic coverage.
- Longitudinal research that enables to track changes over time has to be conducted to determine sequences of events so as to suggest definite cause and effect relationship of alcohol and substance use behaviour.
- A specific research that targets alcohol and substance users and their background to generate broader information so as to strengthen response effort.
- A further study to examine the impact of the developed strategy as well as verification of various contributing factors.

## **6.7 LIMITATIONS OF THE STUDY**

This study was conducted in two universities in Southern Ethiopia namely Arbaminch and Wolaita Sodo. Besides, the study was restricted to respondents pursuing their education on regular stream and undergraduate degree programme. The study did not include respondents from postgraduate programme, evening and continuing education departments. The implication is that students in the postgraduate programme and those above the set age could have been excluded.

Besides, the current study has employed a mixed cross sectional study design with the aim to generate adequate information. The use of such method, establishing temporal relationship between cause and effect may not be necessarily inferred.

## 6.8 CONCLUDING REMARKS

The present study has aimed at developing strategies to curb the current problem by exploring the prevalence and identifying associated factors of alcohol and drugs/substance abuse among adolescent university students. The current study confirmed that abuse of various substances including alcohol and drugs was real and is a cause for concern among adolescent university students. Thus, as part of attaining study objectives, the study has designed and developed a strategy that could address the various factors through programme and policy arrangements so as to help curb alcohol and substance abuse. This study would serve as a baseline in the intervention effort geared to respond to alcohol, drugs and/or substances abuse problems.

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# **ANNEXURES**

**ANNEXURE A: ETHICAL CLEARANCE CERTIFICATE FROM THE DEPARTMENT OF HEALTH STUDIES, UNISA**



**UNIVERSITY OF SOUTH AFRICA  
Health Studies Higher Degrees Committee  
College of Human Sciences  
ETHICAL CLEARANCE CERTIFICATE**

**REC-012714-039**

**HS HDC/430/2015**

Date: 15 July 2015 Student No: 5764-803-4  
Project Title: Strategies for the reduction of alcohol and substance abuse among adolescents at two selected universities in Southern Ethiopia.  
Researcher: Alemayehu Nigatu Gebremichael  
Degree: D Litt et PHI Code: DPCH504  
Supervisor: Prof G Thupayagale-Tshweneagae  
Qualification: D Tech  
Joint Supervisor: -

**DECISION OF COMMITTEE**

Approved

Conditionally Approved

**Prof L Roets  
CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE**

**Prof MM Moleki  
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES**

**PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES**

**ANNEXURE B: ARBAMINCH UNIVERSITY SUPPORT LETTER FROM UNISA  
REGIONAL OFFICE, ADDIS ABABA**



04 DECEMBER, 2015

UNISA-ET/KA/ST/29/04-12-15

ARBAMINCH UNIVERSITY

ARBAMINCH

Dears Madam/Sir,

The University of South Africa (UNISA) extends warm greetings to you and the members of your esteemed University. By this letter, we want to certify that Mr. Alemayehu Nigatu GebreMichael (student number 57648034) is a PhD student in the field of Health Studies at the University of South Africa (UNISA). Currently, he is at the stage of data collection on his Doctoral thesis entitled "***Strategies for the reduction of alcohol and substance abuse among adolescents at two selected universities in Southern Ethiopia.***"

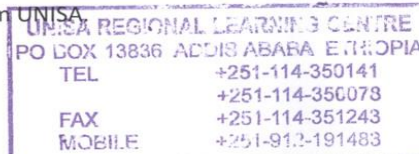
This is therefore to kindly request your cooperation in providing the student access to data sources from your University. Attached, please find the ethical clearance certificate that the student secured from UNISA

Sincerely,

Tsige GebreMeskel Aberra

Deputy Director – Academic and ICT Support

UNISA – ETHIOPIA Centre for Graduate Studies



University of South Africa  
Regional Learning Center  
P.O. Box: 13836, Addis Ababa, Ethiopia  
Telephone: +251 11 435 2244 / +251 11 435 0078  
Facsimile: +251 11 435 1242/ 43/ 44  
Mobile: +251 912 19 1483  
[www.unisa.ac.za](http://www.unisa.ac.za)

**ANNEXURE B: WOLAITA SODO UNIVERSITY SUPPORT LETTER FROM UNISA  
REGIONAL OFFICE, ADDIS ABABA**



04 DECEMBER, 2015

UNISA-ET/KA/ST/29/04-12-15

WOLAITA SODO UNIVERSITY

WOLAITA SODO

Dears Madam/Sir,

The University of South Africa (UNISA) extends warm greetings to you and the members of your esteemed University. By this letter, we want to certify that Mr. Alemayehu Nigatu GebreMichael (student number 57648034) is a PhD student in the field of Health Studies at the University of South Africa (UNISA). Currently, he is at the stage of data collection on his Doctoral thesis entitled "*Strategies for the reduction of alcohol and substance abuse among adolescents at two selected universities in Southern Ethiopia.*"

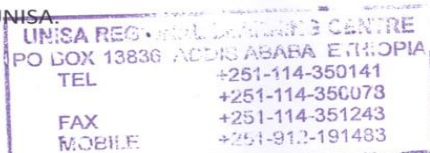
This is therefore to kindly request your cooperation in providing the student access to data sources from your University. Attached, please find the ethical clearance certificate that the student secured from UNISA.

Sincerely,

Tsige GebreMeskel Aberra

Deputy Director – Academic and ICT Support

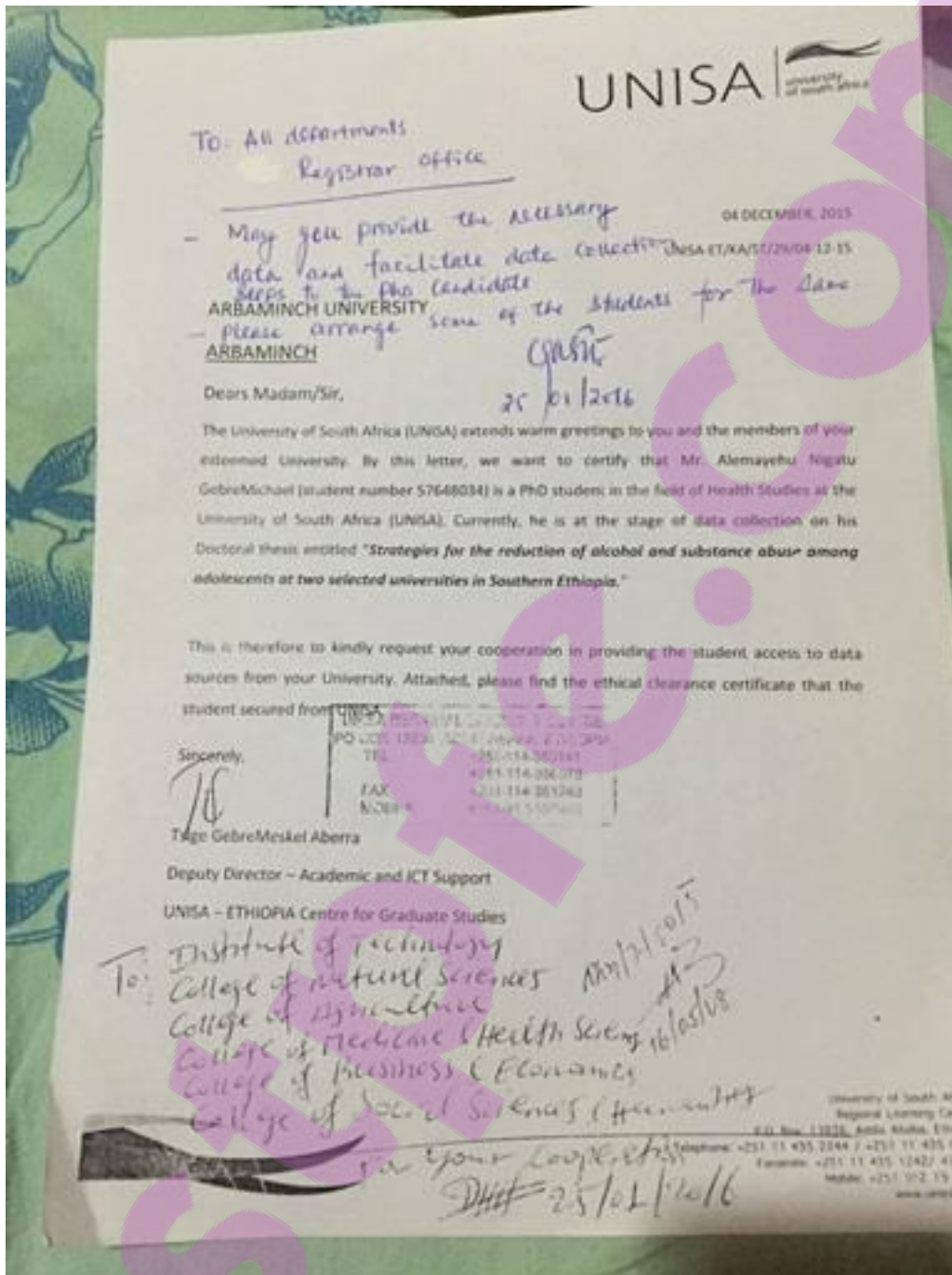
UNISA – ETHIOPIA Centre for Graduate Studies



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**ANNEXURE C: ARBAMINCH UNIVERSITY APPROVAL LETTER**





## ANNEXURE D: WOLAITA SODO UNIVERSITY APPROVAL LETTER



04 DECEMBER, 2015

UNISA-ET/KA/ST/29/04-12-15

WOLAITA SODO UNIVERSITY

WOLAITA SODO

Dears Madam/Sir,

The University of South Africa (UNISA) extends warm greetings to you and the members of your esteemed University. By this letter, we want to certify that Mr. Alemayehu Nigatu GebreMichael (student number 57648034) is a PhD student in the field of Health Studies at the University of South Africa (UNISA). Currently, he is at the stage of data collection on his Doctoral thesis entitled "*Strategies for the reduction of alcohol and substance abuse among adolescents at two selected universities in Southern Ethiopia.*"

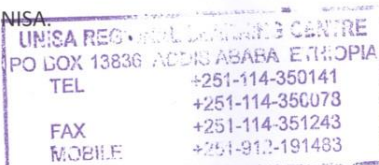
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Sincerely,

Tsige GebreMeskel Aberra

Deputy Director – Academic and ICT Support

UNISA – ETHIOPIA Centre for Graduate Studies



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## **ANNEXURE E: INFORMATION LEAFLET AND CONSENT**

**Title of the research:** STRATEGIES FOR THE REDUCTION OF ALCOHOL AND SUBSTANCE ABUSE AMONG ADOLESCENTS AT TWO SELECTED UNIVERSITIES IN SOUTHERN ETHIOPIA

**Principal investigator:** Alemayehu Nigatu Gebremichael (student number-5764-803-4), PhD in health studies student, University of South Africa.

**Supervisor:** Professor Gloria Thupayagale-Tshweneagae

**Introduction and purpose of the study:** This information sheet is prepared for adolescents who will participate in the study entitled strategies for the reduction of alcohol and substance abuse among adolescents at two selected universities in Southern Ethiopia.

The aim of preparing this information sheet is to clarify any ambiguities by the research participants who are asked to join the research.

**Purpose:** The purpose of this study is to investigate the magnitude, behavioral issues and other contributing factors for alcohol and substance abuse in order to develop practical solutions for the reduction of alcohol and substance abuse among Ethiopian university students.

**Procedure:** I will distribute to you some questionnaire that you have to answer as much as you can. If you do not understand any aspects of the interview please let me know and I will clarify them to you.

**Risk and/or discomfort:** By participating in this research you will sacrifice the specified minimum amount of your time otherwise, no risk in participating in this research. Sacrificing the specified amount of time is not too much as you are one of the responsible adolescents who would have contribute to the strategies that would be used to reduce substance and alcohol use.



**Benefits:** by taking part in this study, there is no immediate and direct benefit for you. You will not receive any payment for taking part in the study. However, the results of this research will have both direct and indirect benefit to you and the other adolescents in your community. It is hoped that the research results will show the gaps and lead to the development of an appropriate strategy.

**Right to refuse or withdraw from the study:** At any time, you may refuse to answer any questions, or if you choose, you may withdraw from the study at any stage during the interview. You are not obliged to give a reason for no longer continuing in the study. If you withdraw from the study, I assure you in any way it will never affect your ways of getting health services.

**Confidentiality:** Confidentiality of the information you give will be maintained at all stages of the research process. As part of maintaining the confidentiality, you will be identified only by a specific code assigned to the interview. You will not be asked your names or any other personal identifiers during the interview process. The information you give will be used for only the research purpose. The security of information you provide will be kept in a computer and only accessed by a password known to the researcher alone and hard copies will be kept in locked cabinets. Names and personal identifiers would not be used in any presentation or publication of the research results. The information will not be revealed to anyone except the principal investigator.

**Person to contact:** If you have any question you can contact the principal investigator using the following address:

Mr Alemayehu Nigatu GebreMichael :

Cell phone- +251 921568104

Email- anigatu2005@yahoo.com/57648034@mylife.unisa.ac.za

## Consent

**Research title:** Strategies for the reduction of alcohol and substance abuse among adolescents at two selected universities in Southern Ethiopia

**Investigator:** Mr Alemayehu Nigatu Gebremichael

Good morning / afternoon, sir / madam. My name is Alemayehu Nigatu Gebremichael and I am a PhD student with the University of South Africa. I hope you have read and understood the purpose of the study.

If you agree to participate in the study, please indicate your willingness by signing below, but if you are not comfortable to do so, thank you for your time.

Participants signature -----

Date -----

Researcher's signature -----

Date -----

## ANNEXURE F: QUESTIONNAIRE

Ser. no.	Measurement Items	Response
<b>A. Background information</b>		
1	What is your sex? 1. Male 2. Female	1 2
2	How old are you?	Age in years: -----
3	What is your place of origin? 1. Urban 2. Rural	1 2
4	Which ethnic group do you belong to? 1. Oromo 2. Amhara 3. Tigre 4. Somali 5. Other (specify)	1 2 3 4 5
5	What is your religion? 1. Orthodox 2. Muslim 3. Protestant 4. Catholic 5. Other (specify)	1 2 3 4 5
6	What is your year of study? 1. Year one 2. Year two 3. Year three 4. Year four 5. Year five 6. Year six	1 2 3 4 5 6
7	What is your department?	-----
8	What is your housing situation? 1. Living in university campus with family 2. Living outside campus 3. Lives alone, outside campus 4. Other (please specify)	1 2 3 4
9	Where did you attend secondary school? 1. Government school 2. Private school 3. Faith based 4. Other (specify)	1 2 3 4
10	What is your average monthly income? 1. Less than 200 birr 2. 201-400 birr 3. 401-600 birr 4. 601-800 birr 5. 800-1000 birr 6. 1001 birr & above	1 2 3 4 5 6
11	What is the status of your family (Mother & Father)? 1. Married & living together 2. Divorced 3. Separated 4. Widowed	1 2 3 4
12	What is the highest educational level of your father? 1. Diploma & above 2. Secondary school 3. Primary school 4. No formal education	1 2 3 4
13	What is the highest educational level of your mother? 1. Diploma & above 2. Secondary school 3. Primary school 4. No formal education	1 2 3 4
<b>B. Alcohol &amp; Substance use related information of participants family members and/or friends</b>		
14	Do your father; mother or guardian consumed any alcohol beverage or substances in their life time? 1. Yes 2. No 3. I don't know	1 2 3
15	If yes, do your parent/s (father, mother or guardian) currently drink alcohol or consume substances? 1. Yes 2. No 3. I don't know	1 2 3
16.0	If any, indicate alcohol beverages and/or substances consumed by your father, mother and/or guardian); 1. Yes 2. No	000
16	Local 'Tela', Tej, drought beer or Beer	1 2
17	Wine	1 2
18	Hard liquors (Local 'Areke, Gin, whisky or other alcohol drinks)	1 2
19	Khat	1 2
20	Cigarette/ tobacco	1 2
21	Shisha	1 2
22	Other psycho-active substances (please specify)	1 2
23	Do your close family member/s (brother, sister, uncle, aunt) consume	1 2 3

	any alcohol beverage or substance in their life time? 1. Yes 2. No 3. I don't know	
24	If yes, do your close family member/s currently consume any alcohol beverage or use substance? 1. Yes 2. No 3. I don't know	1 2 3
25	If any, mention alcohol beverages which your close family members consume currently?	-----
26	Mention substances which your close family member/s consume currently?	-----
27	Does anyone of your close friends drink alcohol beverages or consume substances? 1. Yes 2. No	1 2
28	If yes, do your close friends currently drink alcohol beverages or consume substances? 1. Yes 2. No	1 2
29	If any, mention type of alcohol beverages which your close friends consume currently;	-----
30	Mention type of substances which your close friends consume currently;	-----
31	Have you ever engaged or participated in buying alcohol beverages or substances for your family, friends and/or others? 1. Yes 2. No	1 2
<b>C. Knowledge</b>		
32	Are alcohol beverages available close to university campus? 1. Yes 2. No	1 2
33.0	If yes, indicate type of alcohol beverages available close to university campus? 1. Yes 2. No	000
33	Local drinks ('Tela, Borde, 'Tej, 'Areke, beer, wine and/or others)	1 2
34	Liquors (Brandy, Gin, whisky, Vodka and other hard drinks)	1 2
35	Are substances available close to university campus? 1. Yes 2. No	1 2
36.0	If any, indicate type of substances available close to university campus; 1. Yes 2. No	000
36	Khat	1 2
37	Cigarettes/ tobacco	1 2
38	Shisha	1 2
39	Other psycho-active substances (please specify)	1 2
40.0	Distance where alcohol or substances selling shops located from the campus gate? 1. About 100 m 2. 101-200 m 3. 201-300 m 4. 301-400 m 5. Half a km & above	000
40	Any Alcohol beverage outlets (Bars, Hotels, pubs & others)	1 2 3 4 5
41	Any substance outlets (khat, cigarette or others)	1 2 3 4 5
42	Do you know short term effects of alcohol and substance use? 1. Yes 2. No	1 2
43.0	If yes, what are the short term effects? 1. No 2. Yes	000
43	Affects sleeping pattern	1 2
44	Reduces appetite	1 2
45	Affects academic performance	1 2
46	Affects mental health	1 2
47	Affects interpersonal life	1 2
48	Other short term effects (please specify)	1 2
49	Do you know the long term effects of alcohol and substance abuse? 1. Yes 2. No	1 2

50.0	If yes, what are the long term effects?	1. No	2. Yes	000
50	Physical Health problems			1 2
51	Mental health problems			1 2
52	Effect on carrier achievement			1 2
53	Affects family relationship like marriage,			1 2
54	Affects social relations			1 2
55	Other long term effects (please specify)			1 2
56	Do you receive any health education about the effects of alcohol and substance abuse?			1 2
57	If any, please mention the organisation/s;			-----
58	Do you know where to go if someone has alcohol or substance abuse related problem?			1 2
59	If any, mention places or health facilities to visit if someone has alcohol or substance abuse related problem/s;			-----
<b>D</b>	<b>Attitude questions</b>			
60	Have you ever drunk any alcohol beverage/s in your life time? Yes	1. No	2.	1 2
61.0	If yes, describe type of alcohol beverage/s you have ever drunk; No	1. Yes	2.	000
61	Local drinks ('Tela', Borde, Tej, or other local alcohol			1 2
62	Beer, Drought			1 2
63	Wine			1 2
64	Hard liquors ( 'Areke, Gin, whisky, Vodka or mixed alcohol)			1 2
65	Other type of alcohol beverages (please specify)			1 2
66	At what age did you start drinking alcohol beverages?			Age in years -----
67	Who provided you the 1 <sup>st</sup> alcohol drink? 1. Myself 2. Family 3. Close friend 4. University colleague 5. Other (please specify)			1 2 3 4 5
68	How often do you have at least one bottle or a glass of wine or shot of liquor in the past 12 months? 0. Never 1. Monthly or less 2. About 2-4 times a month 3. 2-3 times a week 4. 4 or more times a week			0 1 2 3 4
69	How often do you have more than five or more drinks on one occasion? ? 0. Never 1. Less than monthly 2. Monthly 3. Weekly 4. Almost daily			0 1 2 3 4
70	How drunk you were in your last drink? 1. No different feeling 2. Moderately intoxicated 3. Severely intoxicated 4. Heavily intoxicated			1 2 3 4
71	How many times did you get very drunk in the past 6 months? 0. Never 1. Less than monthly 2. Monthly 3. Weekly 4. Almost daily			0 1 2 3 4
72	How often during the last year have you been unable to remember what happened the night before because of alcohol drinking? 0. Never 1. Less than monthly 2. Monthly 3. Weekly 4. Almost daily			0 1 2 3 4
73	How often during the last year have you need a first drink in the morning to get yourself going after heavy drinking session? 0. Never 1. Less than monthly 2. Monthly 3. Weekly 4. Almost daily			0 1 2 3 4
74	How often during the last year you have had a feeling of guilt after drinking? 0. Never 1. Less than monthly 2. Monthly 3. Weekly 4. Almost daily			0 1 2 3 4
75	How often during the last year have you failed to do what was normally expected of you because of drinking?			0 1 2 3 4

	0. Never 1. Less than monthly 2. Monthly 3. Weekly 4. Almost daily				
76	Have you or someone else injured because of your drinking? 1. No 2. Yes, but not in the last year 3. Yes, in the last year	1	2	3	
77	Has a family, relative, friend or other concerned of your drinking? 1. No. 2. Yes, but not in the last year 3. Yes, in the last year	1	2	3	
78	How many times did you drink more than you planned? 1. Never 2. At least once	1	2		
79.0	Your opinion about major reasons for drinking alcohol; 1. Yes 2. No	000			
79	To test how it feels	1	2		
80	Peer pressure/my friends do it	1	2		
81	For personal pleasure	1	2		
82	Get rid of stresses & worries	1	2		
83	To increase pleasure during sex	1	2		
84	Improve social relation	1	2		
85	To overcome the effect of substances	1	2		
86	Other reasons (please mention)	1	2		
87	Did alcohol consumption affect your life? 1. Yes 2. No	1	2		
	Your own attitude about alcohol drinks; 0. Very bad 2. Bad 3. Indecisive 4. Good 4. Very good	1	2	3	4 5
88.0	How do you evaluate your experience of alcohol drinking? 1. Strongly disagree 2. Disagree 3. Indecisive 4. Agree 5. Strongly agree	000			
88	Alcohol abuse has exposed me to physical fight or injury	1	2	3	4 5
89	Alcohol use affected my relation with my family and/or friends;	1	2	3	4 5
90	Alcohol abuse affected my relation with friends	1	2	3	4 5
91	Alcohol abuse affected my relation with university security;	1	2	3	4 5
92	Alcohol abuse affected my academic performance	1	2	3	4 5
93	Alcohol abuse has often put me in financial difficulty	1	2	3	4 5
94	Alcohol abuse has exposed me for risky sexual activity	1	2	3	4 5
95	Other effects (please specify)	1	2	3	4 5
96.0	How do you express your physical health experience/s associated with alcohol drinking in the last 12 months? 1. Very good 2. Good 3. Indecisive 4. Bad 5. Very bad	1	2	3	4 5
96	How many times did you feel sick after drinking alcohol? 1. Never 2. At least once	1	2		
97.0	Indicate major health problems that you have experienced in relation to alcohol drinking? 1. No 2. Yes	000			
97	Gastritis	1	2		
98	Liver problem	1	2		
99	psychological/ depression, low mood	1	2		
100	Nutritional problems	1	2		
101	Other health problems (please specify)	1	2		
102.0	What is your own opinion about the main factors which contribute adolescent university student's alcohol abuse? 1. Strongly agree 2. Agree 3. Indecisive 4. Disagree 5. Strongly disagree	000			
102	Unregulated alcohol advertisements	1	2	3	4 5
103	Lack of adequate information about adverse effects	1	2	3	4 5
104	Ease of access	1	2	3	4 5
105	Affordability (availability at low cost	1	2	3	4 5
106	Lack of government regulation	1	2	3	4 5
107	Lack of other recreational activities	1	2	3	4 5
108	Lack of support for stressful situations	1	2	3	4 5
109	Other factors (please specify)	1	2	3	4 5
110.0	Your own opinion about alcohol advertising, trading; 1. Strongly agree 2. Agree 3. Indecisive 4. Disagree 5. Strongly disagree	000			

110	Alcohol advertisement should be limited to certain situations;	1	2	3	4	5
111	Alcohol advertisement should not to be allowed close to universities;	1	2	3	4	5
112	Alcohol advertisement on TV & radio should not be allowed before 9:00 pm	1	2	3	4	5
113	Alcohol advertisement should not be allowed on billboards and bus stops	1	2	3	4	5
114	Alcohol sponsorship of events like music & sporting should not be allowed	1	2	3	4	5
115	If at all alcohol advertising not to be allowed;	1	2	3	4	5
116	Alcohol trading should not be allowed close to university	1	2	3	4	5
117	Government has to impose high tax rate on alcohol beverages;	1	2	3	4	5
118	There has to be minimum pricing below which alcohol cannot be sold	1	2	3	4	5
119	Government has to control alcohol trading by limiting alcohol outlets;	1	2	3	4	5
120	There has to be minimum age cut-off below which alcohol cannot be sold;	1	2	3	4	5
121	Indicate the appropriate age cut off to allow purchase of alcohol?	Age in years -----				
122	Have you ever consumed <b>any substance</b> in your life time? 1. Yes 2. No	1	2			
123.0	If yes, indicate type of substances that you have ever consumed; 1. Yes 2. No	000				
123	Khat	1	2			
124	Cigarettes/tobacco	1	2			
125	Shisha	1	2			
126	Other psycho-active substances (please specify)	1	2			
127	Have you ever consumed drugs other than medical prescription?	1	2			
128	If any, mention drugs that you have ever used in your life time;	-----				
129	What is your age to start any one of such substances (khat, cigarette, Shisha or other substances) for the 1 <sup>st</sup> time?	Age in years.....				
130	Who provided you the first substance (khat, cigarette, shisha, drug or any other substance)? 1. Myself 2. Family 3. Friends 4. University colleague 5. Others ( specify)	1	2	3	4	5
131	How often do you have consumed at least one of substances like khat or sleeping pills or others in the past 12 months? 0. Never 1. Monthly or less 2. About 2-4 times a month 3. 2-3 times a week 4. 4 or more times a week	0	1	2	3	4
132	How often during the last year you have had a feeling of guilt because of substance use? 0. Never 1. Less than monthly 2. Monthly 3. Weekly 4. Almost daily	0	1	2	3	4
133	How often during the last year have you failed to do what was normally expected of you because of substance use? 0. Never 1. Less than monthly 2. Monthly 3. Weekly 4. Almost daily	0	1	2	3	4
134	Has anyone annoyed you by criticizing your status of substance use? 1. Yes, in the last year 2. Yes, but not in the last year 3. No	1	2	3		
135	Has a family, relative, friend or other concerned of your substance use? 1. Yes, in the last year 2. Yes, but not in the last year 3. No	1	2	3		
136.0	Your opinion about main reasons for substance use; 1. Yes 2. No	000				
136	Peer pressure/my friends do it	1	2			
137	For personal pleasure/enjoy life	1	2			
138	Get rid of stress & worries	1	2			
139	For academic achievement, to stay alert	1	2			
140	To test how it feels	1	2			
141	Other reasons (please specify)	1	2			



142	Did substance use affect your life? 1. Yes 2. No	1 2
143.0	How often did you experience the following incidents in the past 6 months? 1. None 2. 1-3 times 3. 4-6 times 4. 7-9 times 5. 10 times & above	000
143	Financial difficulty	1 2 3 4 5
144	Serious problem with dormitory mates/friends	1 2 3 4 5
145	Serious problem with family	1 2 3 4 5
146	Trouble with university security/police	1 2 3 4 5
147	Engaged in casual sex without condom	1 2 3 4 5
148	Disciplinary measures	1 2 3 4 5
149	Other incidents (please specify)	1 2 3 4 5
150	Did substance use affect your physical health? 1. Yes 2. No	1 2
151.0	Describe major health problems that you have experienced because of substance use; 1. Yes 2. No	000
151	Gastritis	1 2
152	Dental problems	1 2
153	Nutritional problems	1 2
154	Psychological problems like low mood	1 2
155	Other health problems (please specify)	1 2
156	How do you evaluate your experience of substance use? Substance use generally affected my life; 1. Strongly disagree 2. Disagree 3. Indecisive 4. Agree 5. Strongly agree	1 2 3 4 5
157	Your own opinion about substances; Substances are generally harmless; 1. Strongly disagree 2. Disagree 3. Indecisive 4. Agree 5. Strongly agree	1 2 3 4 5
158.0	If you agree that substances are harmless, indicate which; 1. Yes 2. No	000
158	Khat	1 2
159	Cigarette/tobacco	1 2
160	Shisha	1 2
161	Other psycho-active substances (please specify)	1 2
162	Did you experience withdrawal effects of substance use in the past six months? 1. Yes 2. No	1 2
163.0	Indicate withdrawal symptoms that you have experienced; 1. Yes 2. No	000
163	Headache	1 2
164	Loss of interest in performing daily activities	1 2
165	Irritability	1 2
166	Difficulty of sleeping	1 2
167	Tearing and yawning	1 2
168	Other signs and symptoms (please specify)	1 2
169	Do you take substance like sleeping pills, pain killers or other drugs to get rid of withdrawal symptoms or hangover? 1. Yes 2. No	1 2
170	Mention pills or drugs which you used to take to get rid of withdrawal symptoms;	-----
171	Did substance use affect your academic performance? 1. Yes 2. No	1 2
172.0	How did it affect your academic performance? 1. Yes 2. No	000
172	Often missing classes, seminars	1 2
173	Often missing exams/quizzes	1 2
174	Often missing laboratory practices/field visits, demonstrations	1 2
175	Other effects (please specify)	1 2

176	Which of the following best describes your average grade in the last term/semester? 1. Highest (3.5 & above or >=85%) 2. Medium (2.75 & above or between 60-84%) 3. Lowest (below 2.75 or below 60%)	1 2 3
177	Your own experience of substance use; 1. Very bad 2. Bad 3. Indecisive 4. Good 5. Very good	1 2 3 4 5
178	Generally, what is your own attitude of substances use? 1. Very negative 2. Negative 3. Neutral 4. Positive 5. Very positive	1 2 3 4 5
179	Your own attitude about setting minimum age cut-off which substances like cigarette, khat and others can't be purchased; 1. Strongly agree 2. Agree 3. Indecisive 4. Disagree 5. Strongly disagree	1 2 3 4 5
180	Mention appropriate age cut-off to allow substance purchase;	Age in years---
181.0	Prohibiting substances trading, selling, imposing taxation 1. Strongly agree 2. Agree 3. Indecisive 4. Disagree 5. Strongly disagree	000
181	Your own opinion about imposing high tax rate on substances;	1 2 3 4 5
182	Your opinion about Setting minimum pricing below which substances can't be sold;	1 2 3 4 5
183	Your own attitude about prohibiting marketing/selling of substances close to university campus;	1 2 3 4 5
184.0	If you agree, trading of which substances should be prohibited close to university campus? 1. Yes 2. No	000
184	Khat	1 2
185	Cigarette/ tobacco	1 2
186	Shisha	1 2
187	Other psycho-active substances (please specify)	1 2
188	Your opinion that government has to do more to address alcohol & substance related problems among university students; 1. Strongly disagree 2. Disagree 3. Indecisive 4. Agree 5. Strongly agree	1 2 3 4 5
<b>E.</b>	<b>Subjective norms</b>	
189	If I drink alcohol, my friends will be ..... 1. Very unsupportive 2. Unsupportive 3. Indecisive 4. Supportive 5. Very supportive	1 2 3 4 5
190	If I don't drink alcohol, my friends will be ..... 1. Very supportive 2. Supportive 3. Indecisive 4. Unsupportive 5. Very unsupportive	1 2 3 4 5
191	How do your parents, friends, older brother and sister feel about kids drinking alcohol? 1. Very bad idea 2. Bad idea 3. Indecisive 4. Good idea 4. Very good idea	1 2 3 4 5
192	If I consume substances like Khat, my friends will be ..... 1. Very unsupportive 2. Unsupportive 3. Indecisive 4. Supportive 5. Very supportive	1 2 3 4 5
193	If I don't use substances, my friends will be ..... 1. Very supportive 2. Supportive 3. Indecisive 4. Unsupportive 5. Very unsupportive	1 2 3 4 5
194	How do your parents, friends, older brothers and sisters feel about kids your age of substance use? 1. Very bad idea 2. Bad idea 3. Indecisive 4. Good idea 5. Very good idea	1 2 3 4 5
195	Generally, I dislike alcohol beverages; 1. Strongly agree 2. Agree 3. Indecisive 4. Disagree 5. Strongly disagree	
196	I dislike substances; 1. Strongly agree 2. Agree 3. Indecisive 4. Disagree 5. Strongly disagree	

F	Perceived behaviour control	
197	It is .....to drink alcohol when I am stressed. 1. Much more difficult 2. Difficult 3. Indecisive 4. Easier 5. Much more easier	1 2 3 4 5
198	The likelihood that I will be stressed within the next three months is ... 1. Most unlikely 2. Unlikely 3. Indecisive 4. Likely 5. Most likely	1 2 3 4 5
199	Your decision concerning alcohol drinking; I can't stop drinking any alcohol beverage; 1. Strongly disagree 2. Disagree 3. Indecisive 4. Agree 5. Strongly agree	1 2 3 4 5
200	Your decision concerning substance use; I can't stop using substances; 1. Strongly disagree 2. Disagree 3. Indecisive 4. Agree 5. Strongly agree	1 2 3 4 5
201.0	Your own feeling about your friend's alcohol drinking experience; 1. Strongly disagree 2. Disagree 3. Indecisive 4. Agree 5. Strongly agree	000
201	I support my friends who drink alcohol;	1 2 3 4 5
202	If my friends gives me alcohol, I will accept ;	1 2 3 4 5
203	Is getting an alcohol beverage difficult? 1. Yes 2. No	1 2
204	How difficult would it be for you to get alcohol drinks? 0. Impossible 1. Very difficult 2. Difficult 3. Easy 4. Very easy	0 1 2 3 4
205	How much birr on average per week does it cost you to buy alcohol beverage? 1. Less than 200 birr 2. 201-400 birr 3. 401-600 birr 4. 601-800 birr 5. 801 birr & above	0 1 2 3 4
206	How difficult would it be for you to get substances like 'khat'? 0. Impossible 1. Very difficult 2. Difficult 3. Easy 4. Very easy	0 1 2 3 4
207	How much birr on average does it cost per week for Khat? 1. Less than 100 birr 2. 101-300 3. 301-600 4. 601 birr & above	1 2 3 4
208	How difficult would it be for you to get cigarette/tobacco? 0. Impossible 1. Very difficult 2. Difficult 3. Easy 4. Very easy	0 1 2 3 4
209	How much birr on average did it cost per week for cigarettes? 1. Less than 20 birr 2. 21-40 3. 41-60 4. 61 birr & above	1 2 3 4
210	How much birr on average does it cost per week for other substances? 1. Less than 200 birr 2. 201-400 birr 3. 401-600 birr 4. 601 birr & above	1 2 3 4
<b>G.</b>	<b>Intention to consume alcohol and other substances</b>	
211	If you had a chance to drink some alcohol (beer, wine, others) in the next 6 months, would you do it? 0. No 1. Probably no 2. Probably 3. Definitely would drink it	0 1 2 3
212	If a friend offered you a drink of alcohol (beer, wine, other), would you drink it? 0. No 1. Probably no 2. Probably 3. Definitely would drink it	0 1 2 3
213.0	Your intention of alcohol purchase, drinking, substance use; 1. Strongly disagree 2. Disagree 3. Indecisive 4. Agree 5. Strongly agree	000
213	If price of alcohol decreases, I will buy more alcohol;	1 2 3 4 5
214	If price of alcohol increases, I will switch and buy a stronger alcohol beverage to get equivalent effect;	1 2 3 4 5
215	Alcohol drinking intention; I didn't feel cutting down alcohol drinking pattern.	1 2 3 4 5
216	Substance use intention: I didn't feel cutting down substance use pattern;	1 2 3 4 5
217.0	How likely would you drink the following alcohol beverage/s in the next 6 months? 0. Not at all 1. Unlikely 2. Indecisive 3. Likely 4. Very likely	000
217	Local 'Tela, Borde, Tej and others	0 1 2 3 4

218	Wine	0 1 2 3 4
219	Beer, drought beer	0 1 2 3 4
220	Hard liquors ( Local 'Areke, Gin, whisky, or other alcohol drinks,	0 1 2 3 4
221.0	How likely would you consume the following substance/s in the next 6 months? 0. Not at all 1. Unlikely 2. Indecisive 3. Likely 4. Very likely	000
221	Khat	0 1 2 3 4
222	Cigarette/tobacco	0 1 2 3 4
223	Shisha	0 1 2 3 4
224	Drugs like sleeping pills, Viagra or other drugs	0 1 2 3 4
225	Other psycho-active substances(please specify)	0 1 2 3 4
H.	Drinking behaviour	
226	Are you currently drinking alcohol? In the past 28 days; 1. Yes 2.No	1 2
227	How often do <b>you</b> have a drink containing alcohol in the past 28 days? 0. Never 1. Monthly or less 2. Two-three times a month 3. Two-three times a week 4. Four or more times a week	0 1 2 3 4
228	On average, how many drinks containing alcohol do you have on a typical day when you are drinking? 1. One or two. 2. Three or four 3. Five or six 4. Seven or more	1 2 3 4
229	Are you currently consuming any substance? In the past 28 days; 1.Yes 2. No	1 2
230	If yes, how often do you consume substances in the past 28 days? 1. Once a month 2. 2-3 times a month 3. Once a week 4. 3 & more times /week 5. Daily	1 2 3 4 5
231.0	Indicate the substance/s which you consume frequently;1. Yes 2. No	000
231	Khat	1 2
232	Shisha	1 2
233	Other psycho-active substances (please specify)	1 2
234	Are you currently smoking cigarettes? 1. Yes 2. No	1 2
235	How many cigarettes did you smoke in the past 28 days? 0. Not at all 1. 1-5/day 2. 6-10/day 3.11-20/day 4. 20 & more/day	0 1 2 3 4
236	Have you ever smoke cigarettes while waking up early from bed? 1. Yes 2. No	1 2
237.0	If you are not currently consuming substances, what are your reasons for not consuming? 1. Yes 2. No	000
237	Fear of adverse effects	1 2
238	Worry of getting used to them	1 2
239	Fear of family or friends	1 2
240	Not liked it	1 2
241	Other reasons (please specify)	1 2

**I. General comments:**

242. What should be done by respective sectors and stakeholders for the adolescents to support and prevent alcohol and substance abuse?

University administration;

Ministry of Education (MOE);

Ministry of Health (MOH);

Non-governmental organisations;

The community;

Students themselves;

**ANNEXURE G: FGD INTERVIEW GUIDE**

**A study to develop strategies to curb alcohol & substance abuse among adolescent university students.**

**Student Focus Group Discussion (FGD) Guide;**

1. Let us discuss the extent of which alcohol & substances are abused by adolescent university students? (Substances include; Khat, Shisha, Hashish, Drugs and other stimulants).

.....

2. What do we know about the availability and accessibility of alcohol beverages & substances like khat, Shisha, Hashish, cigarettes and others for university students?

What are the types of alcohol beverages & substances that are consumed most frequently?

.....

Discuss the main reasons for initiating alcohol & substance use among adolescent university students? What are the push factors? What are preventive factors?

.....

3. What do we know to be the consequences of alcohol & substance abuse among adolescent university students? Physical, psychological, Academic, social, economic effects and other consequences? Discuss if there were any concerns or reports of absentees from lecture or other academic activities related to alcohol or substance use?

.....

4. Are there any incidents related to alcohol & substance abuse? (Incidents like fight, trouble with university security, disciplinary measures, property damages, theft and others)

What are the most frequent incidents that did happen due to alcohol or substance abuse?

.....  
5. How does the university manage students with alcohol & substance related problems?

Does the university provide alcohol & substance abuse prevention services like health education, recreational, counseling and guidance, clinical services and others?

.....  
6. What should be done to reduce & prevent alcohol and substance abuse among university students?

Discuss the role of students, community, university management, Ministry of education, Ministry of health, NGOs, Federal drugs administration and control authority (DACA)?

.....  
.....

**ANNEXURE H: KEY INFORMANTS INTERVIEW GUIDE**

- 1. Your functional title/responsibility.....
- 2. For how long did you function at this position? .....
- 3. Is the university administration aware of public concerns about alcohol & substance abuse among university students? If so, what is the extent & indicators of abuse among the students?  
.....  
.....
- 4. Are alcohol beverages & substances like Khat, Cigarettes, Shisha and others available and easily accessible close to university campus? Substances include Khat, Cigarettes, Shisha, hashish, drugs and others.  
What types of alcohol beverages & substances are frequently consumed by the students? From where do they get?  
.....
- 5. What are major reasons for initiating alcohol & substance use among adolescent university students? Who among those are more vulnerable? Push factors? Preventive factors?  
.....
- 6. What are the specific occasions or week days where many students engage in alcohol & substance use? Are there differences in the pattern of alcohol & substance abuse with regard to year of study, department/faculty and the like?  
.....
- 7. Are there any documented incidents like fight, trouble with university security, disciplinary measures, damage of items and others as a result of alcohol and substance abuse? What are, if any, frequent problems or incidents that did happen? What is the usual source of information and line of report with regard to alcohol and substance abuse related incidents?  
.....
- 8. Does the university have any preventive or response plan anticipating that such problem could happen? If so, what were anticipated in the plan? What were the resources committed?  
How was the plan implemented on the ground? What were the limitations in responding for the problem? What were its strengths?  
.....



9. Are there guidelines, legislations or TORs to implement such prevention programs as well as managing students with alcohol & substance abuse problems? If any, indicate those documents? What is working? What is not? Limitations? Your recommendations regarding the country's alcohol and substance trading policy?

.....

10. How and in what way does the university administration support those students with alcohol & substance abuse and related problems?

How does the university respond if a situation of alcohol & substance abuse related incident by certain student is reported?

.....

11. How does the university administration communicate with individual cases and students in general? Does the university management involve their family, student union and significant others as part of intervention?

What specific measures were taken? If so, quantify the number of cases where administrative and academic measures were taken.

.....

12. Is there a student clinic that provides health services? What types of services are provided? Like diagnosis, treatment, counselling, referral link & follow up services? Number of clinic staffs disaggregated by professional category? Health staffs (specify), psychologists and other supporting staffs working in the clinic? Head of the clinic? Working days & hours per week? Any arrangements for services during night shift, weekends & holydays?

.....

13. Is the clinic easily accessible? Does the clinic have adequate space, rooms? Ensures privacy? Number of cases registered? Properly documented for follow up? Are drugs and other supplies available? Amount of annual budget allocated? Is there system to monitor quality of services? Like suggestion boxes? Total consultation per day? Consultation per clinician per day? Consultation Per psychologist per day?

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14. Is there any agreement or MOU between the university and other health facilities as a referral destination for those with serious health problem?

Is there any collaboration between the university administration, MOH/Regional Health Bureau, local health facilities, NGOs and other stake holders to address alcohol & substance abuse problems specifically among adolescent university students?

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15. Does the university provide alcohol & substance abuse prevention services? Like health education, recreational, counseling, guidance and other services? If so, who is involved in coordinating and facilitating those services and programs? What are the arrangements? Annual budget? Office or space dedicated for such services?

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16. What should be done in order to reduce & prevent alcohol & substance abuse among adolescent university students? By the students themselves, university administration, MOE, MOH, NGOs, Federal drug administration and control authority (DACA) and the community?

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17. Your general comment concerning alcohol and substance abuse problems and possible immediate and long term remedies? -----  
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