ADDIS ABABA UNIVERSITY

COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES

SCHOOL OF PSYCHOLOGY

THE RELATIONSHIP BETWEEN STRESS, COPING BEHAVIOUR AND SUBSTANCE ABUSE AMONG DEBREBERHAN UNIVERSITY STUDENTS

BY

BETELHEM BIRHANU

Advisor:- Mulu Nega (PhD)

October, 2014

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Abstract

The aim of the present study was to examine the impact of stress and coping on substance abuse among Debreberhan University students. A cross sectional survey research design using quantitative research approach was employed in this study. Stratified random sampling was used to select 364 (220 male and 144 female) participants from the target population after stratifying by colleges, department and sex. Data were gathered through self-administered questionnaire. Data obtained were analyzed using descriptive statistics, T- tests, analysis of variance (ANOVA) and regression. Results of the study showed that, lifetime prevalence rates of Tobacco was 19.6% , alcohol 62.7%, cannabis 9.8%, and Chat/Khat 25.4% while current prevalence rates for tobacco, alcohol, cannabis and chat were14.7%, 44.2%, 5.5%, and 22.3% respectively. The results of Regression analysis has shown that both stress and coping significantly predict substance abuse, with stress and disengagement coping yielding unique contribution for the dependent variable. The results of the T- test has also shown that there were significant gender differences in the mean scores of stress, coping and substance abuse among participants. From this study the magnitude of substance abuse is high. Stress and disengagement coping are the factors that have contributed to students substance abuse. Thus, there is a need to increase public awareness of the potential impacts of substance abuse, specially adolescents, and also help them identify effective and healthy coping strategies to forestall the onset of substance use.

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ABBREVIATIONS

APA	American Psychological Association
APAIC	Asia and Pacific Amphetamine type stimulants Information Centre
ASSIST	Alcohol, Smoking and Substance Involvement Screening Test
CAN	Council for Information on Alcohol and other Drugs
CESAR	Centre for Substance Abuse Treatment and Research
CSI-SF	Coping Strategies Inventory Short Form
DACA	Drug Administration and Control Authority of Ethiopia
DASS	Depression, Anxiety, Stress Scale
DBU	Debre Berhan University
DC	Disengagement Coping
DSM	Diagnostic and Statistical Manual for Mental Disorders
EC	Engagement Coping
EMCDD	European School Survey Project on Alcohol and other Drugs
ESPAD	European School Survey Project on Alcohol and other Drugs
FADAA	Florida Alcohol and Drug Abuse Association
GBD	Global Burden of Diseases
MOH	Ministry Of Health
NIDA	National Institute on Drug Abuse
SPSS	Statistical Package for Social Science
UK	United Kingdom
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization

CHAPTER ONE

1. INTRODUCTION

1.1. Background of the Study

Substance abuse is the use of illicit drugs or the abuse of prescription or over-the-counter drugs for purposes other than those for which they are intended or in a manner or in quantities other than directed (Wendy,2008). Substance/drug abuse is as old as the history of mankind. From the time of immemorial, human beings have been using different parts of plants as medicine for relieving different health problems and also as mediators in different religious and cultural ceremonies. But drug abuse was uncommon phenomenon until 1950s (Palm partners, 2013). Hundreds of thousands more of today's college students are abusing prescription drugs than was the case in the early 1990s, and the number of students using marijuana daily has more than doubled to approximately 4 percent(Drug watch, 2014).

In Ethiopia, the chewing of khat has been practiced for years and is, to a large extent, socially accepted; it is used by students to improve their academic performance, by truck drivers to keep themselves awake and by laborers to supply the extra vigor and energy they need for their work (Workineh,1985). currently, substance abuse is one of the most burning public health problems in Ethiopia with the highest extent mainly seen among the students of higher educational institutions (Wegayehu,2009). Khat (an evergreen plant with amphetamine-like properties) and alcohol are among those substances widely consumed among the youth of Ethiopia (Fekadu, Atalay,Charlotte,2007).

Today, there is an estimated 190 million drug abuser around the globe which accounts for 3.1% of the world population or 4.3% of the population aged 15 years and above (Annual conference of the Ethiopian Public Health Association, 2006). Approximately 208 million people or 4.9 % of the world's population aged 15 to 64 have used drugs at least once in the last 12 Months (World Drug Report, 2008).

From 2005-2006, use of illicit drugs in America increased from 8.5 to 10.0 percent, with young adults aged 18 to 25 reporting the highest rate of lifetime users of marijuana (28.0 percent) (Hughes, Sathe, & Spagnola ,2008).

In Nigeria, the reports of National Drug Law Enforcement Agency (NDLEA) on drug use and abuse from schools, records of patients admitted at mental health institutions for drug problems and interview of persons for drug offences, showed that youths constitute the high risk group for drug abuse and drug trafficking (Amosun, Ige & Ajala,2010).

In Ethiopia the results from a study done on substance abuse in selected urban areas showed that 82 % of street children, commercial sex workers, and street vendors as having used addictive drugs or substances. The study revealed that khat, alcohol, hashish, tobacco and solvents were the most abused substances (Syoum & Ayalew, 1995). Among some studies done in Ethiopian universities and colleges, a study in Axum University showed a lifetime prevalence of khat chewing 28.7%, alcohol drinking 34.5%, and cigarette smoking 9.5% (Gebreselassie, Feleke & Melese, 2013). Studies (for instance; Wegayehu, 2009) have also revealed that there are various factors for people to abuse substances. Of these factors, stress is the one (Klinic community health centre, 2010).

Stress frequently refers to anything that disrupts the normal person's physical or mental wellbeing that can result from the interaction between persons and their environment (quyen,2007). Stress is the process involving perception, interpretation, response and adaptation to harmful, threatening or challenging events (Lazarus and Folkman,1984). Events that induce a stress response usually produce one or more conditioned or unconditioned emotional reactions such as fear, anxiety, anger, excitement, pleasure and sadness but these reactions depend on the specific feature of the situation, an appraisal of the event and available coping resources (Rajta,2001).

Several models of addiction have proposed that stress increase risk of drug abuse and relapse and it is one of the risk factors for substance use in adolescents (Bretching & Giancola,2007). Perhaps, it is not simply the existence of stressors that contribute to drug abuse but the person's ability to cope with those stressors (Pearlin,1981).

Coping refers to the cognitive and behavioral efforts made by individuals in order to meet the requirements and overcome the difficulties created by their internal and external worlds, to keep these under control and reduce tensions (Folkman and Lazarus, 1986). Coping strategies also have an impact on one's vulnerability to abuse substances/drugs. People who have the ability to demonstrate high level of coping report less frequent patterns of substance abuse and psychological disruption. Furthermore, significant correlation was identified between lower levels of coping and substance abuse (Shek,1998).

These findings suggest that stress and coping strategies have an impact on substance abuse. However, most of the studies, done among students, so far have attempted to look at the extent of stress and substance abuse among other things, giving little attention to the impact of stress and coping in predicting substance abuse among students. Therefore, this study will extend the

existing knowledge through examining the impact of stress and coping strategies on students' substance abuse ,which have both positive and negative implication for substance abuse.

1.2 Statement of the Problem

Substance abuse is becoming a serious ongoing public health problem. It has devastating consequences for a person, a family and a community. Various health effects, ranging from minor issues like digestive problem or respiratory infections, to potentially fatal diseases, like HIV/AIDS and hepatitis C., School failure or poor academic performance , economic loss and poverty, loss of productivity, violence and aggression (Wegayehu, 2009).

The negative consequences of using psychoactive drugs can be well illustrated in terms of psychological, social and health effects. Since the use psychoactive drugs induces changes in behavior and emotional status, it could cause severe psychological problems such as, loss of attention, memory and judgment, delusions, hallucinations, anxiety, and psychosis.

The physical or health impacts also include loss of appetite, vitamin deficiencies, stomach ailments, skin problems, sleeplessness, tremor, sexual impotence, liver damage, heart and lung failure, respiratory failure, comma, and brain seizures.

Drug abuse also undermines the social fabric of the community. Road accidents, relationship problems, rape, robbery, loss of employment, academic problems, reckless driving, assault, and homicide, are among the accompanied social impacts of drug abuse.

Although nearly all of the world's future leaders, policy-makers, and healthcare providers have passed through the college system as young people, culture of substance abuse is taking its fall in adolescent population, with the highest magnitude mainly occurred among university students.

A significant proportion of university students abuse Alcohol, Chat/ Khat, Tobacco and cannabis. This culture of alcohol and other drug abuse threatens not only the present well being of university students, but also the future capacity of our nation to maintain its leadership in the fiercely competitive global economy, if this problem is left unstudied.

Even if substance use has become a common problem among university students in Ethiopia, only scant information is available about the magnitude of substance abuse. Furthermore the impact of stress and coping strategies on substance abuse was not well explored in this segment of the population. Therefore, the aim of this study is to assess the magnitude of substance abuse and explore the impact of stress and different coping strategies on substance abuse using higher level statistical techniques.

To this end, it seeks to answer the following basic questions.

1. What is the prevalence of stress and substance abuse among university students ?
2. How Does stress and coping explain/predict substance abuse ?
3. Is there any significant gender difference in stress, coping strategies and substance abuse among students?
4. Is there any significant difference on substance abuse among students for different levels of stress?

1.3 Objectives of the Study

General Objective

The purpose of this study is to assess the impact of stress and coping on substance abuse among Debreberhan University students. More specifically, the study intends to:-

- Assess the magnitude of stress and substance abuse among students.

- Explore the role of stress and coping strategies in predicting substance abuse.
- Investigate the differences in stress, coping and substance abuse between males and females.
- Examine the difference in substance abuse among students that can be attributed to levels of stress.

1.4. Significance of the Study

The results of the study will give insight to the students about the influence of stress on the risk of substance abuse, which in turn may affect their psychosocial wellbeing. It also help students to be cognizant of the possible merits of coping strategies to promote healthy adolescent adjustment. For academicians it will be useful to develop theoretical issues regarding the underlying relationship between stress, coping and substance abuse. The result can also provide base line information for the responsible bodies like counselors, governmental, non-governmental bodies and policy makers to design appropriate strategies for prevention and intervention of illegal and legal drug abuse. Furthermore, it will also be an input for mental health professionals in developing behavioral treatment that specifically target on the effects of stress on continued drug use and relapse.

1.5. Scope of the Study

This study was conducted in Debreberhan town, among Debreberhan university students, particularly among 3rd year students. Since third year students are assumed to have a lot of accomplishments during their graduate years of study, they are more likely to suffer from stress. Along with this, they may had some sort of experiences towards the use of substances during their stay in the campus. So, they were selected to be the focus of this study. The variables under this

study include socio-demographic variable (gender), predictor variables(stress and coping) and criterion variable (substance abuse).

Operational Definitions of Terms

Stress - In this study, it is defined as levels of chronic non-specific arousal which include difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient

Substance/ drug abuse: is a maladaptive pattern of substance use resulted in repeated health, social, financial, legal and relationship problems.

Coping strategies – cognitive and behavioral efforts made by an individual to deal with stress.

Substances – non medical drugs used by the study subjects I,e alcohol, tobacco, khat and cannabis.

Engagement coping - higher scores of the participants on the engagement items on the CSI- SF scale.

Disengagement coping - higher scores of the participants on the disengagement items on the CSI- SF scale.

Current users – The proportion of students who had used substances in the last three months, prior to the study.

Life time users:-The proportion of students who had ever consumed any of abused substances in their life.

CHAPTER TWO

2. Review of Related Literature

This chapter presents a review of related literature pertinent to the topic under the study. It begins with definitions and concepts of variables in this study on the section 2.1 followed by different theories that support the underling relationship between the variables in this study on section 2.2.

2.1. Conceptual Considerations

This study employs basic terms that require conceptual clarification. This section presents a brief explanation of the major terms and concepts related to this study.

2.1.1 Substance/ Drug Abuse

Drug use is becoming a major issue all over the world. Almost every day one can hardly miss news or information on drug abuse, drug trafficking, or people caught in some kind of drug business, both at national and international levels (Malima, 1995). Substance abuse can be defined as follows,

> a maladaptive pattern of substance use leading to clinically significant impairment or distress, manifested by one or more of the following symptoms with in12 months period: recurrent substance use in situations that cause physical danger to the user , recurrent substance use in the face of obvious impairment in school or work situations, recurrent legal problems, or recurrent substance use despite social or interpersonal problems (DSM-IV,2000; pp.182-183).

Many scholars define the terms 'substance abuse' and 'drug abuse' interchangeably. For instance, Fayombo (1998) defined substance abuse as the use of mood modifying substances illegally, excessively, and in a socially unacceptable manner. The drugs abused, may range from those

that should not be even be taken without medical prescription, such as cocaine amphetamine, heroin, marijuana, to the socially acceptable beverages, such as whisky ,beer and other alcoholic drinks.

According to Odejide (1997), substance abuse is the improper use or application of drugs by a person without proper knowledge of drugs or without due prescription and those drugs can be abused to an extent that it turns to addiction when the drug user is unable to stop the use of drugs despite the harmful effects on the user social, personal and economic lives. Drug abuse is defined as the use of a mood-altering drug to change the way one feels and may be abused by inhaling, sniffing, swallowing, or injecting into oneself. The drug may be used for legitimate or medical reasons which can be legal or illegal (Van, Cleve, Byrd, & Revell, 1978). Abuse of substances that are associated with psychoactive but non therapeutic drugs or chemical substances that lead to dependence syndrome and alter mental functioning can also be considered as substance abuse (WHO 2011; Health Officers Council of British Columbia, 2005).

Although the two terms can be used interchangeably to refer to the same concept, a drug or substance is considered abused if it is deliberately used or taken to induce physiological or psychological effects (or both), and for a purpose other than for therapeutic purposes and it should also be resulted in health risks, disruption of psychological functioning, adverse social consequences, or some combinations of these (Kauffaman, 1989). Benzer, (2006) also suggested that substance abuse is a maladaptive pattern of continuing substance use despite knowledge of impaired social, occupational, psychological or physical functioning caused or exacerbated by the use. Even though different scholars have given their own definition for the two terms ‘ drug abuse’ and ‘substance abuse’, the concepts are similar one another. Thus, both terms will be used interchangeably throughout this study.

2.1.2. Definition of Psychoactive Drugs and Their Classification

Psychoactive drugs are chemical substances that affect the brain functioning, causing changes in behavior, mood and consciousness. While these drugs can be used therapeutically to treat both physical and psychological disorders, they are also used recreationally to alter mood, perceptions and consciousness (Cherry, 2014).

Psychoactive drugs can be classified in different ways, such as by their psychoactive effects, by addiction liability, or by Drug Enforcement Administration schedules. The classification system used in this class is by common effect on the central nervous system which is manifested by various psychological and physiological responses. Commonly-accepted classifications include stimulants, depressants, narcotics and hallucinogens (APAIC, 2009).

Stimulants - Stimulants are agents that activate, enhance, or increase neural activity in the central nervous system (also called psycho stimulants). These drugs have numerous physiological effects such as altering heart rate, dilating pupils, elevating blood pressure, increasing perspiration, and causing nausea and vomiting. They may also induce alertness, agitation, and impaired judgment (Facts on stimulants,2011) Excessive stimulant use may cause dizziness, irritability, mood swings, headache, heart palpitations, chest pain, hallucinations, and death. The most commonly-used stimulants are nicotine, caffeine, Cocaine, Methamphetamine, Amphetamines and Khat (CESAR,2011).

Depressants (Sedative Hypnotics) - Depressants or sometimes called "downers" are agents that suppress, inhibit, or decrease central nervous system (CNS) activity (Foundation for Drug Free World, 2014). These drugs operate by affecting neurons in the CNS, which leads to symptoms such as drowsiness, relaxation, decreased inhibition, anesthesia, sleep, coma, and even death. All

depressants also have the potential to be addictive (Chery, 2014). Some of their medical uses include sedation, sleep induction, hypnosis, and general anesthesia. Examples of depressant drugs include alcohol, anesthetics, sleeping pills, and opioids drugs such as heroin, morphine, and methadone (APAIC, 2009).

Narcotics - The term "narcotics" refers to substances used to induce sleep or stupor, to dull the senses, and/or to relieve pain and become addictive with prolonged use. . In medical use, the term narcotic refers to opium; narcotic analgesics are often referred to as opioids. The tern analgesic refers to the pain-relieving effect of narcotics .Opium, morphine, heroin,codeine and Hydrocodone are the most commonly used narcotics (FADAA, 2009). Some of the common physiological responses from narcotics use include respiratory depression (slowed breathing), drowsiness, confusion, and euphoria. Excessive use of narcotics can lead to nausea, vomiting, convulsions, increased risk for sexually transmitted disease (STD's) when narcotics are injected, convulsions, coma and death (CESAR,2011).

Hallucinogens - Hallucinogens, known to alter human perception and mood, are a complex group of substances. Not all hallucinogens produce hallucinations as the name indicates. Short or long term use disturbed mental state in which a person experiences hallucinations, delusion, personality change and loss of contact with reality, flashbacks or re-experiencing of drug effects (Green Facts, 2004). Medical emergencies are rare compared to abuse of other psychoactive substances. This classification include drugs such as Peyote/mescaline, Psilocybin/psilocin, LSD, Ketamine, Ecstasy, PCP, Foxy Methoxy and AMT (Drug Facts,2009).

2.1.3. Common Features of Psychoactive Drugs

Almost all psychoactive drugs seem to have certain things in common that they are able to cross the blood/brain barrier, in order to affect consciousness, a drug must penetrate the biological filter that prevents many other substances from reaching the brain, they alter brain chemistry at the level of individual brain cells, their effects depend on dosage and are altered by prior experience with the drug , their effects depend on expectancy, they lead to risky behavior, they produce addiction, tolerance and withdrawal syndrome (Dewey,2007). They also act on the brain and produce cognitive impairment. Over the past two decades, the abuse of illegal drugs and therapeutic drugs have spread at an unprecedented rate and have penetrated every part of the globe (Lemis, et. al ,2008).

2.1.4. The Social, Economic and Health Impacts of Substance Abuse

Substance abuse has devastating social, economic, and health impacts to the user as well as to the wider nation (NIDA, 2003). It was originally conceived as the problem of a 'select few', it has extended beyond the usual characteristics of abusers being male, adult and urban based people to now include female, youngsters and rural dwellers (Ajala, 2009). Various crimes are committed under the influence of alcohol which is reported in various studies, for instance rape; road accident, quarrels among family members, friends and neighbors (Syoum & Ayalew, 1995). The use of cannabis is also associated with school failure, relationship problem, accommodation, serious criminal behavior, such as armed robbery, reckless driving, assault and homicide (Odejido,1994).

The health impacts or effects of substance abuse on its users and their families has also been well documented in different studies, for instance, Donoghoe and Wodak (1998) reported physical diseases such as hepatitis, liver cirrhosis, tuberculosis, cardiovascular problems and endocarditic, Neuropsychiatry problems such as depression, brain damage and strokes; accidents, homicides,

overdose deaths, injuries and suicide, 40 million serious illness were also identified each year from 190 million substance abusers around the globe and this trend is increasing as period goes (DACA,2005).

According to Murray and Lopez (1996), Donoghoe (1996) was the first person to estimate the global burden of death and disability as part of the Global Burden of Disease (GBD) project, he estimated that illicit drug use was responsible for 100, 000 deaths globally in 1990, the majority of which (62%) occurred in developing countries. The estimated figure from World Health Organization reported that, by the year 2020, mental and substance use disorders will surpass all physical diseases as a major cause of disability worldwide by which the Use of tobacco is regarded as one of the leading causes of premature death and is associated with approximately 5 million deaths per year (WHO, 2008). If the present trends continue, alcohol use related disorders will also be the most significant disease categories for the global burden of disease, especially for men and approximately 10 million smokers per year are projected to die in 2020 (Rehm et al., 2009).

Over the past decades, the possible associations between cannabis use and development of psychotic illness have been debated, but various studies have presented findings which support causal links between cannabis and psychotic illness. For instance , Asuni & pela (1986), indicated that percentage of cannabis-associated psychosis has been reported to be between 12 and 40% of all psychosis in African psychiatric hospitals and these findings leave no doubt that the abuse of cannabis in African conditions can contribute to the development of psychosis in susceptible individuals. As Moore and his colleagues stated, based upon cumulative evidence, that it should be considered beyond doubt that frequent cannabis use increases the risk of developing psychotic illness (Moore et al.,2007).

Heavy cannabis use also seems to be associated with deficits in cognitive functions such as attention, executive function, and memory which may negatively influence neuromaturation and cognitive development (Lundqvist, 2005; Medina et al., 2007; Fernandez- Serano, Pedres-Gartzia, & Verdejo-Garcia, 2011).

Use of other major illicit drugs, such as opioids and stimulants, are also related to similar alteration in neuropsychological domains (e.g. episodic memory, emotional processing and executive components). Specific substances seem however to affect particular neuropschycological domains more extensively than others (Fernandes-Serrano et al., 2011; Lundqvist, 2010).

Concerning the adolescent period, Potential adverse health effects of substance use are more often related to acute toxic effect and acute effect of intoxication (e.g. accidental injury and violence related to alcohol intake) in than when compared to adults. Relatively few adverse health effects from dependence and continued regular use (e.g. chronic somatic disease) will be manifested during the adolescent years (Rehm et al., 2009). However, regular use of substances at an early age has shown to have a major impact on future health and mental well-being (Volkow & Li, 2005). For example, excessive intake of alcohol at an early age may have long-term effects on brain maturation and neurocognitive functions (Spear, 2002), as well as anxiety proneness later in life (Berglund, Fahlke, Berggren, Eriksson, & Balldin, 2006).

The general health problems later in the adult life are also linked to a substantially lower level of adult physical health, higher reliance on monetary support from social services, higher rates of criminal convictions and higher premature deaths (e.g. Stenbacka & Stattin, 2007; Larm, Hodgins, Molero-Samuelsson, Larsson, & Tengström, 2008). Since it is true that the majority of adults with substance abuse problems begin to use substances during their adolescent year, it can be seen as a

risk factor or indicator of possible future health-related problems (Winters & Lee, 2008; Griffin & Botwin, 2010). As a result, further attention and focus on adolescents' health development is thus necessary in order to reduce societal costs as well as individual suffering (Gore et al., 2011).

2.1.5. Empirical Studies on The Prevalence of Substance Abuse

This part of the review literature presents the prevalence of substance abuse in terms of international , national and regional trends.

2.1.5.1. International Research

In the past two decades, drug use has spread widely at an unprecedented rate and has reached every part of the globe (WHO,1994). According to the report of World Health Organization illicit drug use in Africa is related with cannabis and other natural psychoactive plants while in the Americas, cocaine, cannabis, heroine and multiple drugs (alcohol and psychotropic drugs) are commonly utilized (WHO, 1990). Even though the most abused substance is cannabis the situation in Africa is now changing and the drugs of abuse escalating rapidly from cannabis to the more dangerous drugs such as heroin and cocaine and from limited groups of drug users to a wider range of people abusing drugs (UNODC, 1986).

There is widespread concern about adolescents' psychoactive substance use in many countries, including continental Europe, Sweden and the U.S.A by which the prevalence rate of each is presented as follows.

Among U.S adolescents, the most extensive survey of drug use have been the annual assessments of National Institute on Drug Abuse: One called Data from the latest European School Survey Project on Alcohol and other Drugs survey, conducted in 2007, reported an increase in substance use trends in 20 European countries for adolescents at an age of 16 years, From 1995 to 2007 the consumption of tobacco, alcohol and illicit drug use, was on an average, rising for the first ten

years (1995-2005), but has since then decreased or at least stabilized (ESPAD,2007). According to the European Monitoring Centre for Drugs and Drug Addiction annual report, the prevalence of illicit drug use in Europe is historically high, but data from national studies conducted in 2008 and 2009 indicate that prevalence has not increased further (EMCDDA, 2012).

In Sweden, data from the Swedish Council for Information on Alcohol and Other Drugs revealed that compared to adolescents from other European countries, who report a decrease in illicit drug use, Swedish male adolescents instead report an increase of illicit drug use which seems to be a trend in Swedish male adolescents' towards higher lifetime prevalence of illicit drugs, more frequent usage and more liberal attitudes, especially towards the use of cannabis (CAN,2012).

In United States of America, the U.S. National Surveys provide clear evidence of widespread tobacco use (62 percent lifetime prevalence in 1992) and alcohol use (nearly 90 percent) among high school seniors (Johnston et al. 1993). Substances commonly utilized include cocaine, cannabis, heroine and multiple drugs (WHO, 1990).

Studies regarding illicit drugs have also shown that 9% of lifetime cannabis users and 23 % of lifetime heroin users will meet the Diagnostic and Statistical Manual of Mental Disorders (DSM IV) criteria for substance dependence later in life (APA,2000). Similar prevalence figures are found in other western countries (Anthony, Warner & Kessler, 1994; Hall, Teesson, Lynskey & Degenhardt, 1999).

In the United kingdom, the study which is conducted among ten UK universities towards alcohol and drug use revealed that binge drinking was declared by 28% of students ,life time use of cannabis 24.4% and current prevalence of 19.8%. Experience with other illicit drugs was also reported by 33% of the sample, most commonly LSD (lysergic acid diethylamide), amphetamines,

Ecstasy (methylene dioxy methamphetamine), and amyl/butyl nitrate which had each been used by 13 -18% of students. 34% of these had used several drugs (Webb,Ashton, Kelly, & Kamali,2001).

In Africa, the favorable conditions for illicit trafficking of psychotropic drugs and other abuse able substances could be attributed to the effective air links between Asia and Africa. East African cities like Addis Ababa and Nairobi are fast becoming important transit points between Asia and West Africa, Southern Africa and Europe and North America. One of the consequences of this is that markets for these substance /drugs are developing fast in parts of Africa (Syoum & Ayalew, 1995).

As a study conducted in Nigeria, based on the survey on Ambrose Alli University, Ekpoma, in 2009 with the sample size of 414 students, indicated that alcohol was abused by (66%), marijuana (44%), valium (32.9 %), Librium (21.3%), tobacco (20%), amphetamine (17%) and cocaine (16.2 %) of the students (Oyaziwo , 2009). Another study which was also conducted among students of Olabisi Onabanjo University (OOU) found 37.6% and 18.14% life time prevalence of tobacco and cannabis respectively (Gboyega, Abikoye, Adenivi, & James,2014).

In Rwanda , it was reported that in 2009 alone 2,890.179 kilogrammes of cannabis were tracked and 1,671 people arrested. Again in 2010 in January 563,988 kilogrammes of cannabis had been seized and 999 people arrested. Drug abuse relates offences were number one. Increasing use and smuggling, weak laws and challenges in enforcement are highlighted as some of the critical issues needing attention (Kasirye, 2011).

Uganda is now known as a producer, consumer and transit country for drug trafficking. According to the 2009, Uganda annual Police crime report, there were 2,034 reported and investigated

narcotics cases, which led to 2,274 arrests compared to 2,542 in 2008. The trend has been attributed to inadequate laws and weak border controls (Kasirye, 2011).

2.1.5.2. Local Research

Several studies went so far to report the magnitude of substance abuse in Ethiopia, most of them conducted among university students. Accordingly, the research findings presented different prevalent figures across different higher institutions.

Prevalence of Substance Abuse Among Specific Substances in Ethiopia

Khat Abuse - A large survey conducted by Belew and his colleagues on 10,468 adults in rural Ethiopia reported that 55.7% of the sample had used khat at sometime in their lives, and that 50% were current users. Among current chewers 17.4% reported using on a daily basis. Khat use was correlated with Muslim religion (80% of current chewers used it to gain concentration for prayer), high educational achievement and tobacco smoking (Belew et al., 2000). A small survey (n=181) of university teachers in Ethiopia found that 21% were current users of khat, this contrasted to 13.3% that smoked cigarettes (Kebede, 2002). In the study which is done at Mekelle university , it is also found that chat is used by 14.8% of students (Kidan, 2011).

The study conducted among 400 Jimma University staff indicated that about 50.4% of the khat chewers have one or more times missed their regular work at JU because of chewing, and 54.5% of the chewers used to come late chewing khat or leave their work early to chew khat (Gelaw & Haile-Amlak , 2004).

Alcohol abuse - Alcohol is the most widely used substance among adolescents , exceeding the use of tobacco and illicit drugs (Johnston et.al. 2014; American Academy of Pediatrics ,2010)

Prevalence rates of 23% and 34% among adolescents were reported in Butajira and Addis ababa respectively (kebede.et.al, 2013). In the study conducted among high school students in Addis ababa, 43.3 % male and 26.4% female students abuse alcohol (Wegayehu, 2009).

Cigarette Abuse - Moreover, the study conducted among 479 medical and paramedical students Boarding College in North West Ethiopia by an anonymous self-administered questionnaire revealed that the prevalence of current use of cigarettes 26.3% (Zeine, 1988). A study done among Ethiopian university instructors in 2001 revealed a lifetime prevalence of 28.2% and current prevalence of 13.3% (Kebede, et al, 2013). A research finding which is done among Debre Markos Poly Technique College students also shows that 5.4% of students abuse cigarette (Tesfahun, Gebeyaw & Girmay, 2013).

Cannabis Abuse - Cannabis is an illegal drug derived from the plant cannabis sativa. The main active ingredient in cannabis is called delta-9 tetrahydo-cannabinol, commonly known as THC which is the part of the plant that gives the 'high'. Cannabis is used in three main forms: marijuana (bhang,dagga,kif) hashish (charas) and hash(cannabis) oil. Marijuana is made from dried flowers and leaves of the cannabis plant. It is the least potent of all the cannabis products and is usually smoked, in hand-rolled cigarettes (known as "joints") or in special water pipes ("bongs"). These pipes or bongs can be bought or made from things such as orange juice containers, soft drink cans or even toilet rolls (National Cannabis Prevention and Information Centre,2011).

The other form of cannabis which is made from the resin (a secreted gum) of the cannabis plant is called Hashish. It is smoked after it is dried and pressed into small blocks and it can also be added to food and eaten. Hash oil, the most potent cannabis product, is a thick oil obtained from hashish which can be smoked (Iverson,2000).

Cannabis is produced in nearly every country worldwide, and is the most widely produced illicit drug where the highest levels of cannabis herb production – approximately 25% of global production – take place in Africa (UNODC,2011).

Though little is known about the introduction and subsequent pattern of use of cannabis to Ethiopia, it is used by drug traffickers, street children and adolescents in some parts of the country (Kassaye, Sherif, Fissehaye, & Teklu, 2007). From 1987 to 1990 seventy-nine cases of cannabis sativa had been investigated and the trend of cannabis abuse by youngsters is increasing (Kebede, et al, 2013). A reviewed report from Ethiopia on cannabis abuse reveals that 1.5% prevalence rate (Fekadu, et al., 2007). The study which is conducted at Mekelle university also reveals that cannabis were abused by 8.8% of the students (Kidan,2011).

The prevalence rate for Khat, Ciggareette and Alcohol were also reported simultaneously among university students.

A study which is also conducted among 725 Harommaya university students revealed that, 53.8% having used at least one substance in their life time and the most commonly used substance was alcohol (41.7%), followed by khat (30.3%), cigarette (11.3%) and illicit drugs (3.9%) (Andualem ,2011). Thirty-one percent of students of college of medical sciences in north western Ethiopia were current alcohol users followed by 26.3 and 23.3% current cigarette smokers and khat chewers respectively (Fikadu, Atalay, & Charlotte, 2007).

A study in Addis Ababa University showed that 31.4% of the students ever drunk alcohol, 14.1% ever chewed khat, 8.7% ever smoked cigarette (Deressa and Azazah,2011). A study which was also done among the students of Jimma University indicated that the prevalence of khat chewing,

cigarette smoking, and alcohol intake to be 33.1%, 21.3%, and 36.4%, respectively (Meressa, Mossie & Gelaw,2009).

2.1.6. Stress

There are different ways to define stress across various disciplines yielding medical, environmental, and psychological models of stress (Mc Namara,2000). The medical model of stress defines the term stress as it is a state of distress in an individual in response to an environmental precipitant. This psychological response of an organism is also measured by increased heart rate, elevated blood pressure and the presence of hormones and neurotransmitters that heighten the arousal of an organism (Selye,1993).

The environmental model attributes stress to the external stimulus that includes immediate harm or aversive environmental conditions so that we can measure such stress using stress inventories. It is also related with negative outcomes such as anxiety, depression and aggression (Jasor,Langrock & Keller,2005),academic underachievement (Alva & de Los Reyes,1999), substance abuse (Chassin, Ritter, Trimer, & King , 2003) and compromised life satisfaction (Mc Knight, Huebner & Suldo, 2002).

Psychological model of stress emphasize the idea of perceived stress which refers to the organism's perception and evaluation of the potential harm posed by a stimulus. The perception of threat arises when the demands imposed upon an individual are perceived to exceed his or her felt ability to cope with those demands (Quyen,2007). This imbalance gives rise to experience stress and as a result a stress response that may be physiological and psychological in nature (Martin, Kazarian, & Breiter , 1995). Although the three models define stress from different perspectives, the concept of stress can generally be considered as "any factor, acting internally or externally, which makes adaptation to environment difficult and which induces increased effort on the part of the individual to maintain

a state of equilibrium between himself or herself and the external environment" (Humphrey, Yow, & Bowden, 2000,).

According to Lazarus & Folkman (1984), stress is a mental or physical phenomenon formed through one's cognitive appraisal of the stimulation and is a result of one's interaction with the environment and a person's response towards stress depends on whether an event is appraised as a challenge or a threat. Challenging stimulus can lead to positive outcomes such as motivation and improved task performance while threatening ones or distress can result in anxiety, depression, social dysfunction and even suicidal intention. As indicated by Prabhakar & Gowtha (2013), along with the improvements during the scientific era and the rapid development of information, competitiveness among people has become increasingly intense, as a consequence, people have become busier and, therefore, stress is a natural consequence. Even though appropriate stress is a juncture for self-growth, it is also a motivation for people to progress actively ,however, overstress causes problems and discomfort, and can have serious effects on people's thoughts, feelings and behavior as well (Wortman, Sheedy, Gluhoski, & Kessler, 1992).

The existence of stress depends on the existence of stressors which it is defined as anything that challenges an individual's adaptability or stimulates an individual's body or mentality (Holm & Holroyd, 1992). Stress can be caused by environmental factors, psychological factors, biological factors, and social factors and it can be negative or positive to an individual, depending on the strength and persistence of the stress, the individual's personality, cognitive appraisal of the stress, and social support (Feng ,1992; Volpe 2000).

2.1.6.1. Prevalence of Stress

Several studies across the world have reported different prevalent rates for stress among students**.** In cross-sectional study which was conducted to determine the prevalence and the factors associated with stress among medical students at Jizan University in Kingdom of Saudi Arabia, it was found that 71.9%, with females being more stressed (77%) than the males (64%). %, (Sani et.al 2012). A study which was designed to determine the extent of stress among undergraduate students in Kuwait University and to examine the relationship between dietary behaviors and stress also found that 40% of the students suffer from some level of stress with slightly more females (44%) than males (40.9%). When examined the severity of stress level, 28.4% of the females and 22% of the males had moderate to severe form of stress (Ahmed , Al-Radhwan , Al-Azmi, & Al-Beajan ,2014).

Another study which was conducted by Muhamad and his colleagues among Malaysian students of medical science have also found that the prevalence of 29.6% with high rates of academic related problems (Muhamad, Ahmed, & Mohd, 2010). Papazisis (2008) also reported that 71.8% of nursing students in Greece perceived stress, most of them in mild levels (31.8%). About 12.4% reported very high levels of stress.

2.1.7. Stress in Academic Institutions

Stress has become an important topic in academic circles. According to Ross and his colleagues (1999), one important factor to consider when researching stress is to explore which sources of stress are beneficial and which sources are detrimental due to the fact that some individuals are more sensitive or prone to some stressors than others. Many scholars in the field of behavioral science have carried out extensive research on stress and its outcomes concluded that the topic needed more attention (Agolla, 2009). Stress in academic institutions can have both positive and negative

consequences if not well managed (Stevenson & Harper, 2006). According to Chang & Lu (2007), one would expect the difference in symptoms, causes, and consequences of stress in academic institution than non academic institutions due to different settings.

2.1.8. Sources of Stress Among Students

Stressors can take a variety of forms, including discrete life events, minor "hassles", and chronic strain (Pearlin, 1989). Some researchers have examined the cumulative impact of daily hassles. For instance, Rowlinson and Felner (1988) assessed the ability of adolescents to adapt to daily hassles and major events and concluded that each source of stress acted independently. They also showed that daily hassles had a greater effect than life events on the way young people adapted to the expectations of family and school. In addition, Burks and his colleagues (1985) reported that daily hassles of college students were a greater risk factor than life events for the development of psychological symptoms and different problematic behaviors.

Researchers have identified the major academic stressors reported by college students as tests, grade competition, time demands, problematic professors and classroom environment, and concerns about career and future success. Among the major personal stressors identified were difficult intimate relationships, parental conflicts, and interpersonal conflicts with friends (Archer & Lamnin 1985). Jackson and Finney (2002) investigated the importance of specific university-related stressors in different areas, including achievement of educational goals, establishment of new relationships, finances, sexual relations and deviant behaviors. Among the Institutional (university) level stressors are overcrowded lecture halls (Awino & Agolla, 2008), semester system, and inadequate resources to perform academic work. Moreover, college students have a unique cluster of stressful experiences or stressors (Garret ,2001).

Among the source of stress, academic work may reflect some of the high levels of stress that students have reported (Willks,2008). Most students in higher education experience grade pressures that cause students to have problems with stress and which then can interfere with a student's preparation, concentration, and performance, when its too much .Yet, positive stress can be helpful to students by motivating them to peak performance (Schafer, 1996).

2.1.9. Stress and Substance Abuse

Vulnerability to using alcohol and other drugs increase with an increase in risk factors dominating a person's life which seems to be true for college students (Craig, 2004). Among those risk factors, Rajita (2001) suggests that stress is a well known risk factor in the development of substance use and abuse, mild stress may cause changes that are useful, however severe stress may expose individuals to harmful situations such as vulnerability to drug use (NIDA, 2002). This explanation is supported by various population based and epidemiological studies. Among these, Sher et al. (2007), clarified that under certain conditions, most individuals will drink alcohol in response to stress, though drinking in response to stress is dependent on several factors such as possible genetic determinants and usual drinking habits (Phorecky, 1991).

Concerning adolescents, joining college or university is an exciting period but is also the place where they face a number of challenges. Many students often experience for the first time in their lives, a wide range of demands on individual, interpersonal, academic, and societal levels such as living home, developing autonomy, making new friends and peer pressure which put them at risk of substance misuse (Larimer , Killmer, & Lee, 2005). This notion is supported by Unger (2001), who suggested that there is a strong correlation between stressful life events of students (such as academic, social, financial and interpersonal factors) and substance abuse. A study which is done in western Kenya among college students shows that 60.8% of students use substances to relieve

stress (Atwoli, Mungla, Ndung, Kinoti, & Ogot ,2011). The findings of Deresse, Seme & Misganaw, (2014) also has shown similar results in Ethiopia, in their study which is done among Harromaya university students showing that 7.5% of the students used substances to get relief from stress. Another study contributed information which included nine hundred participants that were all seventh and eighth grade students, indicating that stress was positively related to substance use (Wills, Sandy, Yaeger, Cleary, & Shinar, 2001), and those who consume alcohol to cope with stressful situations or escape from unpleasant emotions were more likely to be problem drinkers (Grunberg, et al., 1999).

2.1.10. Dimensions of Coping Strategies and Their Relationship with Substance Abuse

The ability to cope or yield stress, frustration, pain and discomfort determines whether an individual will become a drug abuser or not (Amosun,Ige,& Ajala, 2010).

Coping is defined as the cognitive and behavioral efforts made by individuals in order to meet the requirements and overcome the difficulties created by their internal and external worlds, to keep these under control and reduce tensions (Folkman and Lazarus, 1986). Even though there is a general agreement in the definition of coping, that it is the behavioral and cognitive response people use to manage stress, there is a lack of consensus towards the basic dimensions that characterize coping (Skinner, Edge, Altman, & Sherwood, 2003). Research endeavors that are concerned with the relationship between coping styles and substance abuse have been the identification of multiple explanatory pathways. Given the lack of consensus as to how to characterize coping, different researchers used different sets of coping by which all of these phenomenon make it difficult to develop a cohesive picture regarding the construct of coping as well as its relationship with other psychological measures (Elizabeth,2010).

For instance, Skinner and his collogues uncovered approximately 400 category names of coping in their review of 100 assessment instruments of coping. These categories include problem solving,

problem focused, avoidance, avoidant action, cognitive avoidance, decision making, blunting & self criticism. They also states that most researches in the area of classification of coping uses labels that fall in to one of two general categories : lower order (bottom up) or higher order (top-down) categories of coping. Lower order categories capture instances of coping (I,e self criticism, asking for help), while higher order categories capture the overall function of coping (I,e active, passive) (Skinner,et.al.2003).

In addition Amirkhan (1990), developed a coping strategy indicator (CSI) including 161 coping options and categorize coping in to three I,e problem solving, seeking social support and avoidance. However, these categories of coping face the same criticism like other categorization systems, in that one act of coping could fall into more than one category of coping.

The other attempt to simplify the construct of coping by classifying in to two parts is that of Lazarus & Folkman by which they differentiate the idea of the function of coping and the outcome of coping. A coping function refers to the purpose a strategy serves: the outcome refers to the effect a strategy has (Folkman & Lazarus, 1980). As indicated by Folkman & Lazarus (1980), there are two general types of coping I,e problem focused coping and emotion focused coping. The former is aimed at problem solving or doing something to alter the source of the stress while the later is aimed at reducing or managing the emotional distress that is associated with (or cued) the situation. Although most stressors elicit both types of coping, problem focused (such a planning, problem solving or seeking social support) tends to predominate when people feel that something constructive can be done where as emotion focused coping (such as avoidance, denial, wishful thinking, self criticism and social withdrawal) tends to predominate when people feel that the stressor is something that must be endured.

Based on Compas, Connor-Smith, & Jaser (2004) , coping strategies are classified in to two broad categories I,e engagement and disengagement strategies by which this dimensions can have both problem focused and emotion focused types in one of the categories which helps to more simplify the classification of coping and use it in the most ease way possible. All terms are generally used for the same concepts, with slight variations. However, his paper will center on engagement vs. disengagement dimensions as the framework for coping strategies.

Engagement and disengagement coping responses can be defined as "responses that are oriented either toward the source of stress or toward one's emotions or thoughts (e.g. problem solving or seeking social support) while disengagement coping refers to responses that are oriented away from the stressor or one's emotions or thoughts (e.g., withdrawal or denial)" (Compas et.al,2001, p. 92). Examples of disengagement coping strategies include avoidance, denial, wishful thinking, and social withdrawal (Compas et.al, 2004).

Generally, research evidences support the idea that engagement coping tends to be more adaptive in the long run than disengagement coping (McCrae & Costa, 1986, Cosway, Endler, Sadler, & Deary, 2000), though individual and situational differences should be taken into account (Lehman, Ellard, & Wortman, 1986). Regarding the relationship of coping strategies with adolescents substance abuse, Angela (2008) reviewed that categories of problem focused coping have negative significant relationship while emotion focused coping tend to have positive relationship with substance abuse. The use of engagement coping strategies has also been associated with lower level of substance use where as higher levels of substance use is associated with disengagement coping dimensions (such as avoidance and denial) strategies (Bretchting and Giancola, 2006), which affects both initiation and change in substance use pattern over time (Wills and Filer, 2001).

College students who have been diagnosed with alcoholism represent a population that demonstrate maladaptive (disengagement) coping skills such as avoidant and denial coping strategies, while positive coping mechanisms, such as engagement coping have been linked to lower levels of alcohol use (Bretching & Giancola, 2006). In sum engagement coping (problem focused) coping strategies are generally associated with more successful adolescent adjustment while disengagement (emotion focused) coping strategies are positively related to risky behavior such as substance use and symptoms of depression (Elizabeth,2010).

2.1.11. Adolescents and Substance Abuse

Adolescence represents a period of significant growth. Individually, adolescents experience rapid physical growth and changes, accompanied by shifts in cognitive and emotional capacities, at the same time, brings new cultural and societal opportunities and expectations, unlike other time in life, do so many shifts in development and social contexts occur simultaneously (Nichols,2009).

WHO has defined adolescent as a period in human growth and development that occurs after childhood and before adulthood, from ages 10 to19/20 years (WHO, 2014). It is also defined in multiple ways by different scholars. For instance, Smenta,Campione-Bar,& Metzger, (2006) defined it as an early (ages 10-13), middle (ages 14-17), and late (ages 18-20s). Adolescence is a time of "storm and stress" during which the individual was thrown about by opposites such as action versus inaction, excitement versus calm, elation versus depression, self-confidence versus doubts about self-esteem, and the need for authority versus the need to rebel against authority (Hall,1904).

Although a variety of definitions are given by different scholars, there is a strong consensus that it is a period of intense physical, psychological, behavioral and social changes (Nichols,2009). According to G. W. Lawson & Lawson's (1992), those physical, psychological, behavioral and

social changes during adolescent results in many stressors accompanying the occurring transitions. Furthermore these multitude of changes and stressors along with different reasons (such as fear of inadequacy, developmental and group dynamics such as peer pressure) during this time often contributes to the engagement in numerous high risk behaviors. Consistent with this notion WHO (2014), stated that , adolescence is a time of tremendous growth and potential, but it is also a time of considerable risky behaviors, such as drug use, during which social contexts exert powerful influences. As to Kaplan & Sadock, (2002) while adolescents seek to establish a personality and identity separated from their family unit, they may reject their parent's value, expressing their individuality through their cloths, music and rebellious behaviors by which one of the most common of these behaviors involves the abuse of substances.

2.1.12. Gender, Coping and Substance Abuse

Gender differences are observed for a wide range of the use of coping strategies and substance abuse. Gender differences might affect coping strategies. Although gender differences in coping strategies have been observed in many studies (e.g. Folkman & Lazarus, 1980; Sahin et.al. 1998), coping research reveals conflicting findings with regard to coping strategies of males and females.

The greatest consistency in research concerning coping among adolescents is that females use more disengagement (emotion focused) coping strategies, while males use more engagement (problem-focused) strategies (e.g., Folkman & Lazarus 1980; Karanc1 et.al. 1999). According to Brougham, Zail , Mendoza & Miller (2009) , sex differences have also been found in the use of coping strategies. College women reported greater use of disengagement (emotion-focused) coping strategies, college men, however, reported greater use of engagement (problem-focused) strategies.

Similarly, in a cross-cultural study of Indian, Italian, Hungarian, Swedish and Yemenite students, Olah (1995) found that in all cultures females reported more disengagement (emotion-focused) coping strategies than males, where as males reported more engagement (problem-focused) strategies compared to females.

Various explanations have also been given for the existing differences between males and females towards the use of coping strategies. For instance, Dyson & Renk (2006); Zuckerman & Gagne (2003) suggested that these differences might be due to college women's, socialization, acceptance of traditional sex roles, endorsement of feminine values and tendency for women to "tend and befriend" .

On the other hand, evidences shows that gender was an important explanatory factor in substance use and abuse. Currently, there is considerable knowledge about the differences and similarities between males' and females' patterns of drug and alcohol consumption, treatment initiation and success, and special drug-related problems (e.g., pregnancy, AIDS, and criminal involvement) (Rosenbaum 1980; Henderson & Boyd 1992). Studies indicated that there exist a substantial gender differences in substance abuse ,for instance, Karagu and Olela (1993) reported that drug use is a non-gender issue and the only difference is that males tend to use more drugs than their female counterparts and they appear to spend more money on drugs than their female counterparts.

In northern America, it has also been documented that males have the highest rate of using alcohol, tobacco and illicit substances (Frone, Cooper, & Rusell 1994). Regarding alcohol use there is a significant gender difference among high school seniors in heavy drinking, 38% of males report heavy drinking, while only 21% percent of females do (Johnston et al. 1997).

The same pattern is true for college students and young adults by which 51% of males drink binge drinking more often, i.e., have had five or more drinks on one occasion compared with females (22 %). Males' cigarette use also outpaces females. A study which is also conducted among 4580 college undergraduate students of Midwestern university found that male students were generally more likely to report drug use and abuse than their female counterparts (McCabe , Morales , Cranford , Delva , McPherson,& Boyd,2007).

Different studies have put different reasons for greater use of substances in males than females. For instance, Armeli, Carney, Tennen,Affleck & O' Neil (2000) attributed the observed differences to variations in stress among males and females, suggesting that, women may feel self critical about their roles and performances in those roles ,and were more likely to internalize stress while men tend to externalize it. Therefore exposure to stressful events may increase the chance of man using substances or exhibiting substance related problems.

In addition various socio cultural explanations had also been given for the possibility of gender differences. Henderson and Boyd (1992) focused on cultural constructs as gender socialization (i.e., the learning of and conformity to appropriate masculine and feminine traits) and stratification (e.g., unequal economic, educational, and social opportunities). They concluded that addiction was related to the individual's quest to integrate opposing gender scripts, that is, masculinity and femininity, in an attempt to achieve wholeness. For the differences in alcohol drinking patterns, McClelland and his colleagues argued that alcohol consumption both symbolizes and enhances men's greater power relative to women (McClelland et al., 1972), men drink more than women do because men are generally more willing or motivated to take risks than women are (Byrnes, Miller, & Schafer, 1999; LaGrange & Silverman, 1999; Weber, Blais, & Betz, 2002

2.2. Theoretical Issues about the Relationship between Stress, Coping and Substance Abuse

2.2.1. Tension Reduction Model

This theory which is proposed by (Conger 1956), states that people use addictive substances initially to relive stress and enhance their mood but subsequently, with repeated success they become reinforced with the putative ability of substances to relive stress/tension and those substances become conditioned reinforces because of reduction of aversive state. This idea was introduced as the tension reduction hypothesis of alcohol consumption which suggested that alcohol reduces stress and that people drink in order to feel relief from anxiety (Cooper, et al., 1992).

According to the assumption of this theory alcohol actually reduces fear that can be associated with tension or conflict and therefore reinforces consumption (Armeli, et al, 2000). Alcohol is a depressant; ingesting alcohol will result in lower levels of tension and that if someone is experiencing stress they were more likely to drink alcohol (McCreary, & Sadava, 1998). Numerous surveys have supported the idea that both social and problem drinkers expect alcohol to help with relaxation and decrease tension and anxiety. Results to one study stated that exposure to stress produced in situations of life will influence heavy drinking and supports the tension reduction theory (Cooper, et al., 1992). People who thought of alcohol as a way to cope with stress report drinking more and having an increased amount of alcohol-related problems in response to feelings of anxiety or tension (Grunberg, Moore, Anderson-Connolly, & Greenberg, 1999).

2.2.2. Marlatt's Relapse Prevention Model

This is a theory proposed by (Marlatt & Gordon,1985), based on social-cognitive psychology. The central aspect of the model is detailed classification of factors or situations that can precipitate or contribute to relapse episode after the period of abstinence from taking substances. A basic

assumption is that relapse events are immediately preceded by a high-risk situation, broadly defined as any context that confers vulnerability for engaging in the target behavior. According to Marlatt & Gordon (1985), the group of factors included I,e immediate determinants are the one which constitutes high risk situations, coping skills, outcome expectancies and the abstinence violation effect (Baker , Piper, McCarthy , Majeskie , Fiore,2004). The role of high risk situations is that, a person who has initiated a behavior change such as alcohol abstinence, should begin experiencing increased self efficacy or mastery over his or her behavior which should grow as he or she continues maintain the change (Bandura, 1997), but certain intrapersonal (such as negative emotional states I.e. anger, anxiety, depression, frustration, and boredom) and interpersonal situations (such as argument and conflict with family members) , can pose a threat to the person's sense of control and, consequently, precipitate relapse crisis (Herd,Borland,Hyland,2009).

Moreover people who have ineffective coping skills, positive expectancies over the potential benefits of using substances and attribute negative reaction (such as personal failure) to the initial use of substances after a period of abstinence are at increased risk for problematic use of addictive substances repeatedly (Goldman, Darkes , Del Boca, 1999).

2.2.3. Self- Medication Model

Being one of the theories conceptualizing the relationship between stress and substance abuse, the self medication hypothesis began appearing in medical journals in 1970s, as clinicians noticed that heroin addicts were using the drug to cope with problems such as stress and loneliness in the absence of adequate solutions and meaningful social relationships (Elizabeth,2014). The theory holds that adolescents are using substances in order to escape or reduce feelings of uneasiness and distress, thus, individuals are more prone to substance use because they are less able to handle or

cope with negative feelings (Hall & Queener, 2007). There is a considerable degree of psychopharmacologic specificity in an individual's preferred drug, individuals do not choose to become alcoholic or dependent on opiates, cocaine, or other drugs, rather, in the course of experimenting with different drugs, a person susceptible to addiction discovers that a particular drug relieves, ameliorates, or changes different painful affect (ie, feeling) states and becomes a favored drug *(* Khantzian,2003).

2.3. Summary and Implications of the Reviewed Literature

Substances abuse has become one of the rising major public health and socioeconomic problems worldwide. Prevalence of Substance abuse is high among students. Students have used drugs of one sort or another once in their life time or in the past three months. Alcohol, tobacco, Khat and cannabis are the most abused drugs reported by university students, with alcohol and khat mainly used among students of higher institutions in Ethiopia, followed by tobacco and cannabis. Substance abuse has also devastating social, economic and health impacts on the user as well as on the wider nation.

For the purpose of this study;

Stress - is defined as any factor, acting internally or externally, which makes adaptation to environment difficult and which induces increased effort on the part of the individual to maintain a state of equilibrium between himself or herself and the external environment. The prevalence of stress is high among university students. Students of higher education had different clusters of symptoms, causes and consequences of stress than non-academic institutions since they are facing with challenging demands of university life.

Students utilize adaptive (engagement) or maladaptive (disengagement) coping strategies in order to effectively deal with stress.

Engagement (maladaptive) coping are those coping strategies used by adolescents that are oriented towards the sources of stress and search for solutions for the existing stressor actively. **Disengagement (maladaptive) coping** strategies are, coping responses that are oriented towards one's emotions or thoughts in order to reduce or regulate the emotional consequences of the stressful event.

On the other hand, there exist, significant gender differences towards stress, coping and substance abuse among students. When stress level was considered, females encounter more stress than males. Females also tends to use disengagement coping strategies while males use engagement coping most of the time. Higher rates of substance abuse, however, is observed among male students than that of females.

Moreover, there is a strong theoretical and practical evidence suggesting a strong relationship among stress, coping and substance abuse . Stress predicts the vulnerability of substance abuse among students. Different kinds of coping strategies that students utilize, also have a mediating role in substance abuse. Students who demonstrate maladaptive (disengagement) coping skills such as avoidant and denial coping strategies, were the victims of substance abuse while positive coping mechanisms, such as engagement coping have been linked to lower chances of substance abuse among students.

Many of the major theories of addiction also identify an important role of stress in addiction processes. They stated the idea that people use and abuse drugs to deal with stress, to reduce tension, to self medicate, and to decrease withdrawal-related distress. These theoretical issues conceptualizing the relationship between the three variables, sometimes reflect the idea that substance use is used as a maladaptive coping mechanism to deal with stress and negative affect,

but finally, they were able to conclude that such activity, as a way of coping with stress, will lead to substance abuse problems later in life. The implications of the above literature is that substance abuse is one of the pressing issues among students and the role that stress and coping strategies play in predicting substance abuse is more important than ever, which is not yet well investigated in our country.

2.4. Conceptual Framework

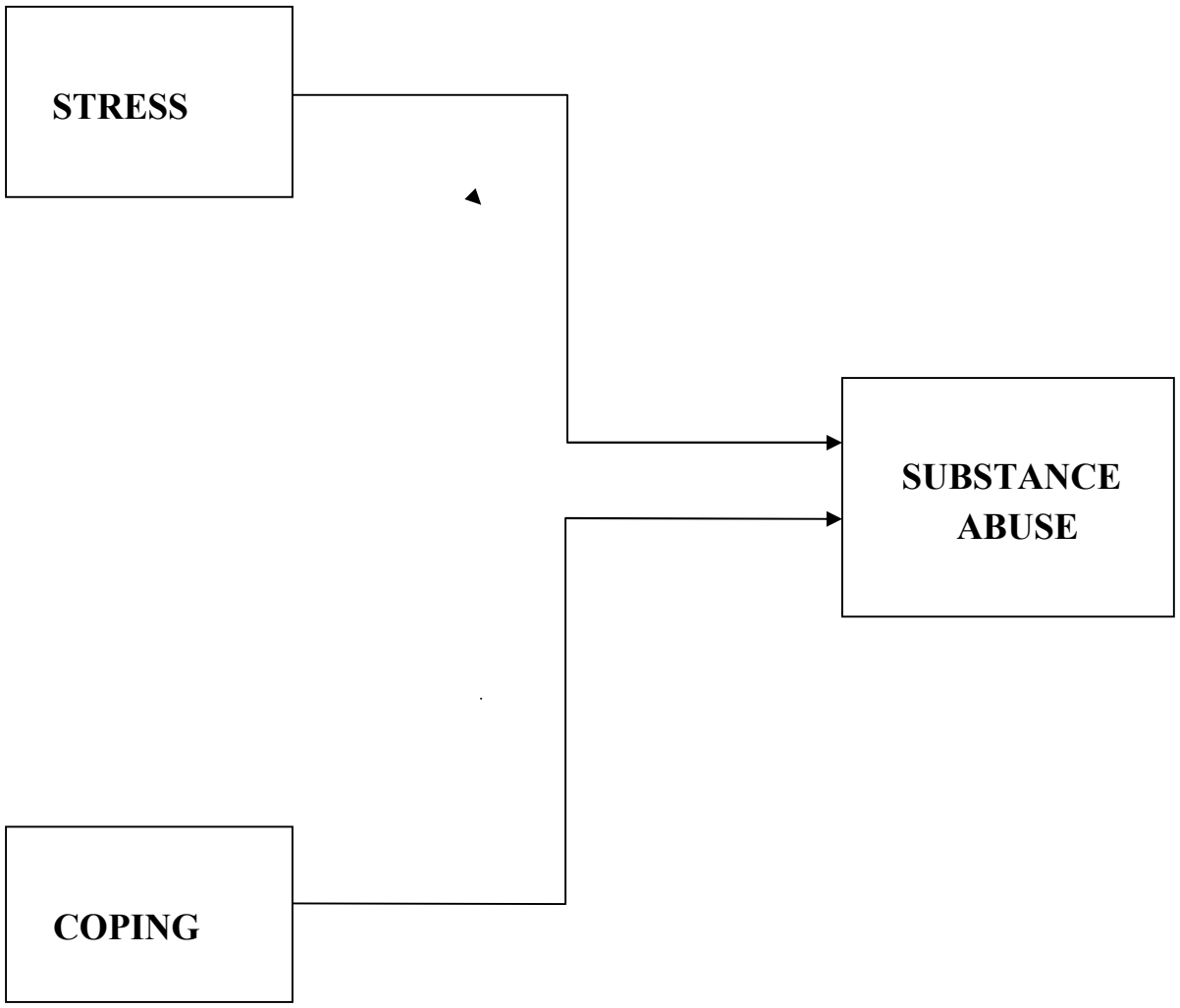

Figure 1. A Conceptual Model of the study.

The above conceptual framework shows the role of stress and coping (which include engagement and disengagement types) in predicting substance abuse. As shown in the figure stress and coping strategies used by adolescents (students in this study) can have an impact on their vulnerability to abuse substances/drugs.

CHAPTER THREE

3. Research Methods

This part of the study deals with the research design, participants, sample and sample technique , data collection instruments, procedures, and methods of data analysis.

3.1 Research Design

This study employs cross-sectional survey research design using quantitative research approach. The reason to select this research approach was that, the nature of the basic research questions were in need of some statistical procedures, there are psychological variables/constructs that should be measured quantitatively in order to report them meaningfully, that may not be obtained by other approaches, the nature of the data that were collected, were also quantifiable, which was helpful to identify and report statistical significance of findings. There exist a lot of comprehensive findings in other studies, using this approach.

3.2. Participants

3.2.1. Target population

The target population of this study includes all regular students of Debreberhan University (9983) students**.**

3.2.2. Description of the Study Site

The study was conducted in Debreberhan University which is located in the 600 years old historical town - Debre-berhan – a Town situated in Amhara Region, North Shewa Zone, which is found at the distance of 130 km, north east of Addis Ababa, the capital city of Ethiopia, in May,

2014. Its astronomical location is 11º 06' North Latitude and 39º 45' East Longitude. Debre-berhan town was founded in 1453 and is one of the reform towns in the region and has a town administration, municipality and five sub-kebelles. Debre Berhan lies between elevation of 2800 and 2845m above sea level. From the elevations it belongs to the dega climatic zone. The mean annual temperature ranges between 50 ^{0}C and 230^0 C from the available records.

Based on the 2007 national census conducted by the Central Statistical Agency of Ethiopia (CSA), this town has a total population of 65,231, of whom 31,668 are men and 33,563 women. The majority of the inhabitants practiced Ethiopian Orthodox Christianity (94.12%) while 3.32% of the population were Muslim and 2.15% were protestants.

Debre Berhan is well known for its Wool Factory, the first wool factory in Ethiopia, started production was 1 January 1965 with 120 spindles and 6 looms, having the capacity to process one metric ton of wool daily. The Derg government announced 3 February 1975 that the Debre Berhan Wool Factory was among 14 textile enterprises to be fully nationalised.

In the highland communities of northern Shewa mixed farming, i.e. crop production with animal husbandry, is the common practice. The main crops grown include barley, various types of wheat, horse beans, peas, lentils, *gerima*, *temenj* and linseed. Because of the lower mean temperatures, barley rather than teff is a chief crop. Other economic activities that earn peasants some income in the communities include sewing clothes, selling local brews (*areki* and *tella*), weaving, tanning, pottery, trading in agricultural products, ecclesiastic services in churches, selling woodwork (mainly timber stools, chairs and other artifacts) and trees, in the form of charcoal, firewood, construction poles, doors, etc. Debre Berhan is also a famed center of rug making.

The main livestock are cattle, sheep and goats, and draught animals such as donkeys, horses and mules. As the chief crop is barley the region's *tella* and *areki* are famous throughout Ethiopia. In addition to a good local market, some women transport *areki* to Addis Ababa, Debre Berhan, Sheno, Debre Sina, Ataye, and Dessie.

Ethiopian Orthodox Christianity is the only local religion in the area. People are fanatic Orthodox Christians and do not tolerate other kinds of Christianity such as Protestantism. If people convert to Protestantism, they will be given advice, by elders and godparents, "to come back to" their previous religion, Orthodoxy. If they does not agree, they will be condemned by the community and rejected from social organizations like *idir*, *mehber* and *equb*. Nobody talks to them. When members of their families die they will not be buried in the cemetery. The church does not accept them. There are many days considered Saints' days when people do not go to their fields. On average, it seems that 15 out of 30 days of the month are not working days (religious holidays). People have the strict belief that if they go to the field on those religious holidays, they will be punished by God. If they see someone working on these days, he will be admonished by elders of the community. If he insists on working on these days, he will be condemned and ostracized by the community.

The fasting rules of the church are also very much respected. People in this area have special respect for elders. They listen to all the advice the elders give and help elders economically when they need it. There are no witch finders or rainmakers in this community. People believe devotedly in God. They explain every accident or illness as a punishment from God for their sins. However, it is understood that there are some witches. The community do not want to confirm this since they think that witchcraft is not tolerated in the Orthodox religion.

Senbete and *Mehber* are voluntary associations of farmers established in the name of certain Christian saints. Although religious in form both play a great role in the economic and social life of farming households. These organizations create a sense of fraternity and cohesion.

Debreberhan University is among one of the newly established (I.e. in 1997 E.C) higher education institutions which has one campus that consists of eight colleges. Within these colleges there are 34 departments and a total number of 9983 regular undergraduate students.

3.3. Sample Size and Sampling Technique

3.3.1. Sample and Sample Size Determination

The sample was drawn from 3rd year students attending their education in the selected 10 departments of four colleges ((Business and Economics, Engineering, Natural and Computational Science and Social Science & Humanities).

The sample size for the study was determined using sample size determination formula which is stated by Krejcie and Morgan (1970) .They also put a table for determining the required sample size for a given population based on this formula, which is ready and easy reference to use.

$$S = X^2 \ NP(1- p) \div d^2 (N- 1) + X^2 P (1-p).$$

S = required sample size

X^2 = the table value of chi square for 1 degree of freedom at the desired confidence level (3.841).

N = the population size

P = the population proportion (assumed to be .50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as a proportion(margin of error) (.05)

So, the sample size was $S = \frac{3.841 \times 2233 \times .50 (1- .5)}{(.05.x.05) (2233 – 1) + 3.841 \times .50 (1-.50)}$

S = 331

Assuming non -response rate (NR), incomplete questionnaires, and lost questionnaires around 10%.

331×10% = 33

Therefore the total sample size, S = 331 + 33

S = 364

3.3.2. Sample Selection Procedures

A multi stage sampling technique was employed to select participants from all 3rd year students (2233). There were 34 departments in eight colleges. Among these colleges and departments , Four colleges and ten departments were selected by using stratified random sampling (after stratifying by department and sex). Then, the required sample study subjects were calculated using proportional to size allocation technique from each department and sex stratum by using the calculated sample (S=364) , which is presented in the table below.

The following activities were done in each of the stages.

First step - Four colleges were selected from Eight colleges

Second step - The selected four colleges were stratified into Ten departments

Third step - The selected departments were stratified by sex and the required number of samples were drawn from each department and sex stratum by using proportion.

Schematic Presentation of Sampling Procedures

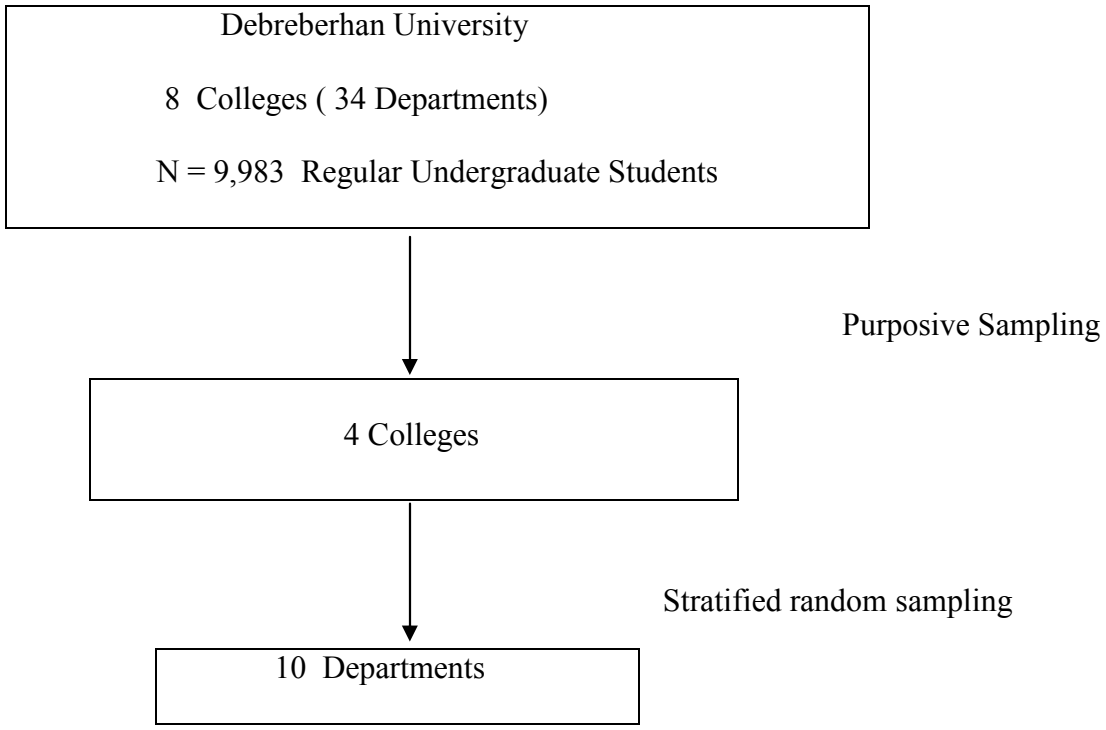

Figure. 2. Schematic Presentation of Sampling Procedure.

Table. 1. Sample Size by College and Department

		Population			Sample Size		
Name of Colleges		Male	Female	Total	Male	Female	Total
Business and Economics	Management	107	93	200 (16.6 %)	33	28	61
	Accounting	53	54	107 (8.9 %)	16	16	32
Engineering	Civil Engineering	184	147	331 (27.5 %)	56	44	100
	Electrical Engineering	146	21	167 (13.9 %)	44	7	51
Natural and Computational Science	Biology	53	59	112 (9.3 %)	16	18	34
	Chemistry	76	30	106 (8.8 %)	23	9	32
	Mathematics	40	11	51(4.2 %)	12	4	16
Social Science and Humanities	Psychology	19	18	37 (3 %)	6	5	11
	Amharic	21	23	44 (3.6%)	6	7	13
	Geography	25	20	45 (3.7 %)	8	6	14
	Total			1200 (100 %)	220	144	364

3.4. Data Collection Instruments

Questionnaire was the main date collection instrument in this study.

A Self-administered structured questionnaire was employed to collect quantitative data from the participants of the study. The questionnaire was prepared in English and was translated to Amharic and again back to English with the help of two MA teachers in AAU to check the consistency of the original meaning. The questionnaire had four parts. The first part was about demographic characteristic (sex, college and department) of the respondents, the second part consists 14 questions to get information about the level of stress that the students had experienced in the past week prior to the study. The third part contains 16 questions seeking answers about the types of coping that students use to deal with stress. The last part of the questionnaire consists 7 questions (items) that dealt with substance abuse each having substance category. Pilot test was conducted in 10% (36 students) of the sample size in AAU ,who were not part of the main study, in order to check its understandability, clarity and completeness, and then the necessary corrections were made before the use of the questionnaire in the actual study area.

Types of Measures

Stress - Stress among undergraduate university students was assessed using the self-report Depression Anxiety Stress Scales (DASS). The DASS has been validated successfully for different populations and is a popular tool for assessing the severity of the main symptoms for depression, anxiety and stress (Henry JD,2003). The DASS is a 42-item questionnaire which includes three self-report scales designed to measure the negative emotional states of depression, anxiety and stress. Each of the three scales contains 14 items. Among these items, only the 14 items subscale which measure stress was taken. The Stress scale (items) is sensitive to levels of chronic non-

specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Respondents were asked to use 4-point severity/frequency scales to rate the extent to which they have experienced each state over the past week. The 4-point scale ranges from 0, which means that the participant feels that the item "did not apply to them at all" to 3, whereby the participant feels that the item "applied to them very much, or most of the time". Individuals' stress scores were calculated by summing up all of the scores from the 14 items and then comparing those scores to the cutoff points for normal, mild, moderate, severe and extremely severe stress levels found in the DASS Manual. The reliability of the stress scales is considered adequate with Cronbach's alpha=0.93 (Brown , Chorpita , Korotitsch & Barlow 1997). The cronbach alpha reliability coefficient for the scale was also 0.87 in the pilot study which indicates good reliability index of the instrument to be used in this study.

Coping - The Coping Strategies Inventory Short Form (CSI – SF; Jackson 2001) was used to measure coping strategies which is a 16 item questionnaire constructed on a 5- point Likert Scale from 1(Never) to 5 (almost always). It is adopted from the original Coping Strategies Inventory (CSI; David, 1984) for use in the Jakson heart study (JHS) after a validation study was conducted. The CSI-SF was structured to reflect the original scale, with two primary scales dividing the coping dimensions into two I,e Engagement and Disengagement categories. Both of the categories contains 8 items each. Although each of these primary scales has two subscales, only the two primary scales were used in this study. The total scores on the CSI- SF range from 8- 40. High scores on engagement items indicates high use of engagement coping, as well, high scores on disengagement items indicates higher use of disengagement coping.

Clifton and his colleagues (2007) reported the internal consistency reliability for the scales ranges from 0.58– 0.72 and all of the fit indices used to examine the CSI-SF (I,e GFI and AGFI) provided

support for its use as an adequate measure of coping (0.95 and 0.93) for both the GFI and AGFI respectively. The pilot study was also conducted on 36 students to Develop and test adequacy of research instruments, to check understandability and clarity of the instruments, to assess the feasibility of a (full-scale) study/survey, and also to see whether the research protocol is realistic and workable. The Cronbach's alpha reliability coefficient of the scale was found to be 0.78 in the pilot study which was good reliability index in the study. The pilot study helps to estimate the time taken for completion of the questionnaire, restructure and modify minor questionnaire contents when any doubt or difficulty appeared.

Substance Abuse – There are various instruments to measure substance abuse. Of these measures ASSIST (Alcohol, Smoking and Substance Involvement Screening Test) is the brief screening questionnaire which covers all psychoactive substances including alcohol, tobacco, and illicit drugs. It helps practitioners identify people who may have hazardous, harmful or dependent use of one or more psychoactive substances. ASSIST was developed by the World Health Organization (WHO) and an international team of substance use researchers as a simple method of screening for hazardous, harmful or dependent use of psychoactive substances (WHO, 2003)

The questionnaire consists of 8 items, the first question asks about the types of substances which the participant have ever been used in his/ her life time among the given alternatives while the remaining 7 questions deals with the frequency and pattern of problematic substance use.

According to WHO (2002) , an international study was conducted during 2000 – 2002, to validate the ASSIST in a variety of primary health care and drug treatment settings with both male and female subjects. The study was carried out at seven sites in Australia, Brazil, India, Thailand, the United Kingdom, the United States of America and Zimbabwe. Participants were recruited from

both primary care and alcohol and drug treatment services to ensure that individuals with different substance use patterns were adequately represented and whether the ASSIST is equally appropriate for males and females, and was valid for cross cultural use. The strong overall results in the reliability and validity studies suggests that the ASSIST is a valid screening test for international use. Thus, the researcher decided to use the instrument as a screening questionnaire to find out people's use of psychoactive substances with some modification so as to make inclusion and adaptation to the type of drugs like evergreen plant *Khat (Catha edulis)* since it is most commonly used in Ethiopia. Moreover, one question is excluded from the instrument which deals with using injecting drugs by the participants. Since it is particularly of high risk activity associated with increased risk of dependence, blood born viruses such as HIV and hepatitis C and with high levels of drug related problems (WHO, 2002). It is assumed to be rare case for the study participants.

The specific Substance Involvement score is calculated by adding together the responses to Questions 2-7 for each of the following drug classes: Alcohol, Tobacco, Cannabis, Khat (*chat*) and 'other drugs'. Interpretation was given for total scores in accordance with the ASSIST cut off point. The score of 0-10 is considered to be law risk, 11 -26 Moderate risk and 27 and above high risk for alcohol, while the score of 0-3 is law risk, 4-26 Moderate risk and 27 and above is high risk for all other drug categories. The term ' low risk' is used to refer individuals with the ASSIST who are at lower risk of problems related to the use of substances involved. While they may use substances occasionally, they are not currently experiencing any problems related to their use and are at low risk of developing health problems related to their substance use in the future if they continue their current pattern of use.

Mid range scores between 4 (11 for alcohol) and 26 for any substance are an indication of hazardous or harmful use of that substance. Participants with scores in this range are at moderate risk of harm from their current pattern of substance use. Risk is increased for those with a past history of problems or dependence.

A score of 27 or higher for any substance suggests that the patient is at high risk of dependence on that substance and is experiencing health, social, financial, legal and relationship problems as a result of their substance abuse. The cronbach alpha reliability coefficient was 0.89 for this scale in the pilot study.

3.5. Data Collection Procedures

Before starting data collection, the researcher got permission from the study area. There were two data collectors who were contacted through the students' counselor and the necessary training was given for those students for one day. Next, the questionnaire was distributed to the selected students in their classroom and the filled questionnaires were collected immediately, with the supervision of the researcher.

3.6. Methods of Data Analysis

After the completion of data collection: editing, coding, data entry, cleaning and recoding, the cleaned data was exported to SPSS (version 20.0) for statistical analysis. Univariate , Bi-variate and Multi- variate analyses of data were applied in the study. In the Univariate analysis, the frequency distribution of participants' background information, the prevalence of stress and coping were analyzed by taking frequencies and percentage. In Bivariate analysis, mean difference in the scores of stress, coping and substance abuse between students (group comparison) was examined via Independent T-test and ANOVA. Multi -variate analysis or complex statistics like Multiple

Regression was also used to determine the effects of stress and coping on substance abuse. The assumptions of the tests have been checked, to conduct ANOVA homogeneity of variance was checked through Levene's test for homogeneity of variances, which tests whether the variance in scores is the same for each of the five groups. The significance value (Sig.) for Levene's test was greater than .07 which does not violated the assumption of homogeneity of variance (since it was >.05). For multiple regression assumptions of multicolliniarity was checked by observing the correlation coefficients of the independent variables, which it was found to be less than 0.7 for all of the variables that indicate the assumption not being violated.

3.7. Ethical Considerations

Ethical clearance was obtained from AAU, School of Psychology and a formal letter was written to all concerned authorities and permission was obtained at all level of the procedure. Verbal informed consent was also obtained from the study subjects after explaining the purpose of the study. The data collectors and supervisors informed the subjects that they have full right to continue, discontinue as well as refuse at any time and the responses will be kept confidential and anonymous.

4. RESULT AND DISCUSSION

4.1 RESULTS

4.1.1. Socio- Demographic characteristic of participants (Gender)

A total of 346 students participated in this study, of which 208 (60.1) were male students while 138 (39.8) were females. Out of the total questionnaires (364) distributed, 346 of them were properly filled and returned, which indicates 5% non-response rate.

Table.2. Descriptive Summary of Stress, Coping and Substance Abuse across Gender

A descriptive statistics (mean, median, standard deviation) was employed to summarize the data as shown in table 2 below**.**

Variables	Sex	N	Mean	SD	Median	Minimum	Maximum
Stress	Male	208	19.45	4.00	19	9	31
	Female	138	25.23	4.69	25	15	36
EC	Male	208	25.34	4.44	25	14	40
	Female	138	21.97	2.95	22	16	29
DC	Male	208	21.37	4.49	21	10	33
	Female	138	22.76	3.06	23	16	34
SA	Male	208	27.93	13.79	27	.00	89
	Female	138	21.05	9.05	21	.00	45

Note: EC= Engagement coping, DC = Disengagement coping, SA = Substance abuse

As can be seen from table 2 above, mean, standard deviation and median score of female participants is higher than males for stress. The stress score for males range from 9 to 31, whereas it is 15 to 36 for females. The mean, standard deviation and median scores of males is higher for males than females on engagement coping. Males scored the minimum of 14 and the highest score of 40 on engagement coping while it was 16 to 29 for females. The mean and median scores of females is higher in disengagement coping than males. The lowest and the highest scores of disengagement coping for females is 16 and 34, respectively, whereas it is 10 and 33 for males. The mean, standard deviation and median score is higher for males on substance abuse than females. The highest score for substance abuse is also that of males than females. This descriptive data showed that females scored high on stress and disengagement coping, and low on engagement coping and substance abuse, overall. It implies that females had more stress levels, they more likely tend to use disengagement coping and they were found to be less substance abusers, while the opposite was true for males.

4.1.2. Prevalence of Substance Abuse and Stress

4.1.2.1. Prevalence of Substance Abuse

Table.3. The prevalence of Substance abuse related to specific Substances among students

		Life time users		Current users	
		Frequency	Percent (%)	Frequency	Percent (%)
Tobacco	Yes	68	19.6	51	14.7
	No	278	80.4	295	85.3
	Total	346	100.0	346	100.0
Alcohol	Yes	217	62.7	153	44.2
	No	129	37.3	193	55.8
	Total	346	100.0	346	100.0
Cannabis	Yes	34	9.8	19	5.5
	No	312	90.2	327	94.5
	Total	346	100.0	346	100.0
Chat	Yes	88	25.4	77	22.3
	No	258	74.6	269	77.7
	Total	346	100.0	346	100.0
Others *	Yes	35	10.1	9	2.6
	No	311	89.9	337	97.4
	Total	346	100.0	346	100.0

NB: * *shisha & sleeping peels*

As indicated in table 3 above , the prevalence of substance abuse among study participants varies depending on the types and patterns of substances being used. There are lifetime and current users (i,e participants who use these substances three months prior to the data collection). Of all 346 participants 68 (19.6%) had used tobacco, 217 (62.7%) alcohol, 34 (9.8%) cannabis**,** 88 (25.4%) chat and 35(10.1%) other drugs such as '*shisha'* and sliping peels in their life time while 51(14.7%), 153(44.2%), 19(5.5%),77 (22.3%) are current users of tobacco, alcohol, cannabis and chat, respectively.

4.1.2.2.Prevalence of Stress

Table. 4. Prevalence of Stress among Male and Female Students Based on Severity

Severity	Gender	Frequency	Percentage
Normal	Male	88	77.8
	Female	25	22.1
	Total	113	32.6
Mild	Male	56	63.6
	Female	32	36.3
	Total	88	25.4
Moderate	Male	49	45.3
	Female	59	54.6
	Total	108	31.2
Severe	Male	11	44
	Female	14	56
	Total	25	7.2

Extremely severe	Male	4	33.3
	Female	8	66.6
	Total	12	3.4

As table 4 above shows, the proportion of the participants with severe and extremely severe stress were 3.4% and 7.2% respectively whereas the proportion of the participants with normal and moderate stress levels were 32.6% and 31.2% respectively.

4.1.3. The Relationship between Stress, Coping and Substance abuse

Table. 5. Correlation between Stress, Coping and Substance Abuse

Variables	SA	Stress	EC	DC
Stress	.166**			
EC	-.025	-.216**		
DC	.142**	.090	-.173**	

Note: EC= Engagement coping, DC= Disengagement coping, SA= Substance abuse

As can be seen from table 5, stress had significant positive correlation with substance abuse, had significant negative correlation with engagement coping, which means stress will decrease as the use of engagement coping strategies increases whereas it did not have any significant correlation with disengagement coping. Engagement coping did not have any significant correlation with substance abuse while it had significant negative correlation with disengagement coping though the relationship is weak. This means that when one uses increased level of engagement coping, it is

less likely to use disengagement coping. The only variable that disengagement coping does not significantly correlate with was stress.

4.1.4. Prediction of Substance Abuse from Stress and Coping

Table.6. Multiple Regression for The Impact of Stress and Coping (engagement and disengagement types) on Substance abuse

DV (SA)	Predictors (EC &DC)	R^2	Adj.R^2	R^2 change	β	t	Sig.	F	P
Model 1	Constant	.045	.036	.045		6.717		5.354	.001
	Stress				-.161	-2.966	.003		
	Engagement				-.033	-.604	.546		
	Disengagement				-.134	-2.489	.013		

Note: SA= Substance abuse, EC= Engagement coping , DC= Disengagement coping

As can be seen from the above table 6, multiple regression using stress and engagement and disengagement coping as predictors and substance abuse as criterion yielded a significant regression equation. All predictors entered in to the model jointly explains 45% of the variance in substance abuse [F (3,342) = 5.354, (P = 0.01)]. However, only stress (with a beta value -.161) and disengagement coping (with a beta value -.134) had significant unique contribution to explaining the dependent variable, when the variance explained by engagement coping in the model is controlled for. Stress was also found to made the strongest unique contribution to explain the dependent variable.

4.1.5. Gender differences in Stress, Coping and Substance Abuse

Table. 7. T-Test For Gender Differences in Stress, Coping And Substance Abuse among Students

Variables	Sex	M	SD	mean difference	t	sig.(2-tailed)
Stress	Male	19.45	4.00	-5.78	-11.87	.000
	Female	25.23	4.69			
EC	Male	25.34	4.44	3.36	6.50	.000
	Female	21.97	2.95			
DC	Male	21.37	4.49	-1.38		0.02
	Female	27.76	3.06			
SA	Male	27.93	13.79	6.88	5.60	.000
	Female	21.05	9.05			

Note : EC = engagement coping, DE= disengagement coping, SA= substance abuse

As shown in table 7, there was significant difference in mean scores of stress, engagement coping, disengagement coping and substance abuse between male and female participants. The mean score for males was higher than females in engagement coping and substance abuse, whereas the mean score for males was lower than females for stress and disengagement coping. This means that males use engagement coping and are more likely to abuse substances than their female counterparts. But females are more likely to use disengagement coping strategies and are less substance abusers.

4.1.6. Substance Abuse According to Levels of Stress

Table. 8. ANOVA for Substance Abuse According to Levels of Stress Among Students

DV (SA)	IV (Stress with different levels)	N	M	SD	F	P
	Normal	113	31.42	13.48	3.281	.013
	Mild	88	24.46	7.43		
	Moderate	108	33.8	8.56		
	Severe	25	22.84	9.38		
	Extremely Severe	12	12.74	4.23		

Note: SA= Substance Abuse

As shown in table 8 above, one way between-groups analysis of variance was conducted to explore the impact of different levels of stress on substance abuse. Participants were divided into five groups according to their stress levels as measured by the DASS scale. There was statistically significant difference in substance abuse scores for the five groups, [$F= (4,341) = 3.281, p < .05, \eta^2 = .03$]. This means the five groups significantly differ from one another on their magnitude of substance abuse. Despite reaching statistical significance, the difference in mean scores between the groups was quite small ($\eta^2 = .03$).

Post hoc comparison using the Turkey HSD test indicated that the mean score for group 1 (participants under normal level of stress), (M= 31.42, SD= 13.48) was significantly different from group 4 (participants under severe stress level) (M= 22.84, SD = 9.38) but did not differ significantly from either of other groups.

4.2. DISCUSSION

The present study provide evidence regarding the impact of stress and coping strategies of students on substance abuse. It also tries to determine the magnitude of stress and substance abuse, in relation to specific substances among students of Debreberhan University.

The Prevalence of Substance Abuse

The findings of this study revealed that 19.6% of the participants are lifetime users of tobacco. This finding is lower compared to the findings from Nigerian university, (37.6%) (Gboyega, Abikoye, Adenivi,& James,2014), and the national findings obtained from the U.S national survey among high school seniors, (62%). The variations may occur due to the differences in patterns of tobacco use across countries, the time of initiation of drug use between students across countries. 14.7% of the participants reported that they are current users of tobacco. This result is relatively closer to the findings of the study that was conducted among Harromaya university students (11.3%) (Andualem,2011). Many people may expect that students in this area are more vulnerable to use substances than students in DBU (which is more conservative and relatively free from drug use) surprisingly, the proportion of tobacco users were found to be slightly higher in this study.

A number of factors for instance, difference in the use of screening tool (measurement of substance abuse), time variation when the studies were conducted, Since the trend of substance abuse is increasing as period goes (DACA, 2005), may attributed to the differences in the findings. This is also lower than the results of the study conducted in college students of medical science in north western Ethiopia (23.3%) (Fikadu, Atalay, & Charlotte, 2007).

Alcohol was found to be the most abused substance with lifetime and current prevalence of 62.7% and 44.2% respectively, which is higher than the findings from Addis Ababa university,

(31.4) % ever users (Derressa & Azazah, 2011) and from Jimma university (36.4%) current users of alcohol (Meressa et.al. 2009). This variation may be due to the difference in the study areas where this part of the country is the most coldest area and it is the place where a lot of well known local drinks such as *Areke* and *Tej* are made.

The study further revealed that the proportion of life time chat chewers were (25.4%). The prevalence is similar with the findings of the study (26.7%) conducted in Northwest Ethiopia (Yigzaw,2001). But the result is lower than Mekelle university, (35.1%) (Kidan,2011) and Addis Ababa universities (35.6%) (Deressa & Azazah,2011). Current chat chewers were also found to be 22.3% which is lower than the results of the large survey conducted by Belew and his collegues in 2000, (i,e 50%) and Harromaya university students, (30.3%) (Andualem,2011). Such differences may be attributed to the differences in the availability and pricing of substance, different study subjects and different location and campus community. This findings are also slightly higher than the proportion of Khat chewers among secondary school (21.1%) and College students of Jazan (19.2%) (Ageely,2009). This difference may occur due to the difference in educational policies among the schools. However a similar prevalent figure was also shown for the proportion of chat chewers among university instructors (21%) (Kebede, 2002).

Unlike other substances cannabis users were lower in proportion for both life time (9.8%) and current users (5.5%). This result is lower than the findings of the study conducted in Nigeria university (18.14% life time users and 15.04% current users) (Gboyega, Abikoye, Adenivi, & James,2014). It was also lower than the findings from UK universities, (24.4% and 19.8% respectively) (Webb, Ashton, Kelly, Kamali, 1996). Such difference may occur, in part, due to the difference in the availability of the substance among countries

The Prevalence of Stress

On the other hand, the overall prevalence of stress in this study was 67.4% which was ranging from mild to extremely severe stress levels. Most of the study participants had moderate stress levels 31.2%. The findings of this study is different from the results of the study conducted in universities of Kuwait (40%) (Ahmed , Al-Radhwan , Al-Azmi and Al-Beajan ,2014), and Malaysia (29.6%) (Muhamad, Ahmad & Mohd,2010). However, relatively approximate prevalent rates was observed in the findings of the study from medical students of Jizan university, Saudi Arabia, (71.9%) (Sani et.al 2012). The difference in the prevalence of stress reported among university students in different countries may, to some extent, be due to the differences in methods used to determine stress. Moreover, some studies reported perceived stress , thus makes it difficult to compare between studies. Another important reason that may have contributed to the differences in the observed prevalence of stress is the socio-cultural characteristics of the study participants. However, it is important to recognize the fact that studies have shown that the prevalence of stress may vary according to the academic time of the year.

The Impact of Stress and Coping on Substance Abuse

In addition, the impact of stress and coping on substance abuse was examined. Regression analyses provided support for hypotheses and of particular relevance to the present study. The results revealed that both predictor variables significantly explain substance abuse. Consistent with the logic of Rajita (2008), who suggested that stress is a well known risk factor in the development of substance use and abuse problems, the results examining the impact of stress on substance abuse support that stress was significant unique predictor of substance abuse. This notion was supported by Unger (2001) stating a strong correlation between stressful life events and

substance abuse among university students. Moreover, disengagement coping strategy was also found to be a predictor of substance abuse where as engagement coping does not yield any significant predictive value to the dependent variable but, had significant negative correlation with substance abuse. According to Bretchting and Giancola (2006), engagement coping strategies has been associated with lower level of substance use where as higher levels of substance use is associated with disengagement coping dimensions.

Gender difference in Stress, Coping and Substance Abuse

In this study, when severity of stress level was considered, females were found to experience more stress than males. Of all participants (81.9 %) of females were suffering from mild to extremely severe stress levels, while (57.7 %) of males had mild to extremely severe stress. Apart from the prevalence rates, significant gender difference was also found in the study conducted in Kuwait, females (28.4%) and males (22%) (Ahmed, Al- Radhwan, Al-Azmi, Al-Beajan,2014). A finding similar to that was also observed among undergraduate students in Saudi Arabia, females (77%) and males (64%) (Sani et.al 2012). The higher level of stress among females may be attributed to the difference in college men and women appraisal of stress, and different kinds of stressors for male and female students.

Regarding coping strategies, gender differences both in engagement and disengagement coping strategies were found to be significant in this study. Males were more likely to use engagement coping while females tend to use disengagement coping. This findings of the present study lends support to earlier positions of (Folkman & Lazarus , 1980) and (Brougham, Zail , Mendoza & Miller ,2009) who presented evidence that college men were, by far, more likely than their female counterparts, to report greater use of engagement strategies while college women reported greater

use of disengagement coping strategies. Thus, greater use of disengagement strategies might be the result of college women's socialization, acceptance of traditional sex roles, endorsement of feminine values and the tendency for women to "tend and befriend" (Dyson and Renk 2006; Zuckerman and Gagne 2003).

Moreover, the results of the T-test comparing substance abuse patterns among male and female participants revealed that drug abuse was greater among males than females.

Similar findings has also been observed by Karagu and Olela (1993), indicating that drug use is a non-gender issue and the only difference is that, males tend to use more drugs females and they appear to spend more money on drugs than their female counterparts. A study which was conducted by Johnston and his colleagues ,among high school seniors, has describe this differences by showing that 38 percent of males report heavy drinking, while only 21% percent of females do. The same pattern is true for college students and young adults by which 51% of males drink binge drinking more often, i.e., have had five or more drinks on one occasion, compared with females (22 %). Males' cigarette use also outpaces females (Johnston et al. 1997). To some extent there may be biological differences for these variations.

However, the enormous body of evidences had given possible socio-cultural explanations in any given society, culture and historical era for the for those gender differences in substance abuse. For instance, Henderson and Boyd (1992) focused on cultural constructs as gender socialization (i.e., the learning of and conformity to appropriate masculine and feminine traits) and stratification (e.g., unequal economic, educational, and social opportunities). They concluded that addiction was related to the individual's quest to integrate opposing gender scripts, that is, masculinity and femininity, in an attempt to achieve wholeness.

For the differences in alcohol drinking patterns, McClelland et al., (1972) argued that alcohol consumption both symbolizes and enhances men's greater power relative to women, men drink more than women do because men are generally more willing or motivated to take risks than women are (Byrnes, Miller, & Schafer, 1999; LaGrange & Silverman, 1999; Weber, Blais, & Betz, 2002). When stress is considered as a cause for the gender differences in substance abuse, Armeli, Carney, Tennen,Affleck & O' Neil (2000) suggests that women may feel self critical about their roles and performances in those roles ,and were more likely to internalize stress, which lowers their chance of substance abuse ,while men tend to externalize it. Therefore, exposure to stressful events may increase the chance of man using substances or exhibiting substance related problems.

Difference on Substance Abuse according to Levels of Stress

Finally, difference on substance abuse among students, with different levels of stress was examined. The results of the one way ANOVA indicated that there were statistically significant difference among students on substance abuse, that can be attributed to the levels of stress, particularly between participants under normal and severe levels of stress. Substance abuse was also found to be higher for those participants who had severe stress level. This finding support the position of National Institute on Drug Abuse, stating that the vulnerability to drug abuse also increases as the level of stress becomes severe (NIDA, 2002).

The implications of all the findings are that, the magnitude of substance abuse is high among students which is comparable to other research findings. Alcohol abuse was highly prevalent in this study area when compared to other universities. Males tend to be more substance abusers than females by which this can be due to various sociolcultural influences. Levels of stress and coping

strategies that the students used also affects their vulnerability to abuse substances of one or another types.

4.3. STRENGTHS AND LIMITATIONS OF THE STUDY

This study explore the impact of stress and coping on substance abuse, therefore, this can be used to enhance current literature in Ethiopian context. The use of survey method in this study, reduces cost and controls the answers of respondents that greatly impact the ability to analyze the data.

Despite these strengths, this study did have significant limitations. Due to the cross sectional nature of the study, causal relationships may not be necessarily inferred, the use of self-administered questionnaire may not be good enough to disclose information from the participants with full honesty concerning topics related to personal issues like substance abuse, and the study was also restricted to include small sample size (only third year students) which it may affect the generalizability of findings.

5. SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1. SUMMARY OF FINDINGS

The purpose of the present study was to examine the impact of stress and coping on substance abuse among Debreberhan university students. The study was intended to answer questions regarding the magnitude of stress and substance abuse, the impact of stress and coping on substance abuse, gender difference in stress, coping and substance abuse and difference on substance abuse for different levels of stress. The study employs cross sectional survey using quantitative research approach. A total of 346 undergraduate students were participated in this study. Data were collected through self administered questionnaire and the obtained data were analyzed quantitatively, using Frequencies, Regression, T-tests and ANOVA.

Accordingly, the following findings was obtained.

The prevalence of substance abuse is high among students. A significant amount of students were found to consume one or more substances of abuse such as tobacco, alcohol, cannabis, chat and some other types such as 'shisha' and 'sleeping peels', at one or another time in their life.

Stress and coping are predictors of substance abuse. Stress and disengagement coping have significant unique contribution to substance abuse while engagement coping does not yield any significant contribution.

There is significant difference in stress, coping and substance abuse among male and female students. Female students in comparison to males report higher level of stress.

Engagement coping strategies tends to be used by males while female students reported disengagement coping strategies most of the time. There are also higher proportion of substance

abusers among male students compared to their female counterparts. There is a difference on substance abuse patterns of students that can be attributed to different stress levels. Students under severe stress levels are more likely to abuse substances than students under normal level of stress.

5.2. CONCLUSION

Based on the major findings and discussion, substances abuse is a serious problem among undergraduate students. Stress and coping strategies predict one's vulnerability to abuse substances/drugs. Thus, it should be recognized that, substance abuse is considerably rising among students. The impact of stress and different way of coping strategies, on substance abuse is also notable.

5.3. RECOMMENDATIONS

The findings of this study indicated that, students are practicing substance /drug abuse that needs due attention. Therefore; based on the conclusions the following recommendations were forwarded:

- Increase public awareness of the potential impacts of substance/ drug abuse by establishing education program against substance abuse specially, adolescents.
- Chain of controlling of abused substances should be extended up to grass root level and regulations concerning substances abuse should be set by the legislative bodies of government.
- Peer group education and school counseling programs should be improved, concerning substance abuse within the compound of universities, so that they can provide education and the necessary support in a friendly manner.
- Researchers, policy makers, and practitioners should utilize the gender lens and adopt divergent solutions for drug abuse for males and females which becomes more imperative.
- Parents, teachers, practitioners and other concerning bodies such as school administrators, should help students identify and use adaptive coping strategies when they are dealing with stressful situations in order to forestall the onset of substance use.
- Further research on substance abuse should be done on large sample, using different research design, investigating other contributing factors, in order to better address the problem.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE ENGLISH VERSION

ADDIS ABABA UNIVERSITY

COLLEGE OF EDUCATION AND BEHAVIORAL SCIENCE

SCHOOL OF PSYCHOLOGY

QUESTIONNAIRE TO BE FILLED BY STUDENTS

Introduction

Dear student,

The purpose of this questionnaire is to gather data for my study on the impact of stress and coping on substance abuse. The success of the study highly depends on your genuine response for the items in this questionnaire. Assuring you that the response you provide in this questionnaire will be kept confidential and are used only for research purpose, I kindly ask your cooperation in filling the questionnaire honestly and completely.

Part 1: General Information

1. Sex: Male ☐ Female ☐
2. College _____
3. Department _____

Part 2: Depression Anxiety Stress Scale (DASS)

Instruction : The following Items are about the level of stress you have experienced over the past week. Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you.

No.	0 - Did not apply to me at all 1- Applied to me to some degree, or some of the time 2 - Applied to me to a considerable degree, or a good part of time 3 - Applied to me very much, or most of the time	

1	I found myself getting upset by quite trivial things	0 1 2 3
2	I tended to over-react to situations	0 1 2 3
3	I found it difficult to relax	0 1 2 3
4	I found myself getting upset rather easily	0 1 2 3
5	I felt that I was using a lot of nervous energy	0 1 2 3
6	I found myself getting impatient when I was delayed in any Way (e.g, lifts, traffic lights, being kept waiting)	0 1 2 3
7	I felt that I was rather touchy	0 1 2 3
8	I found it hard to wind down	0 1 2 3
9	I found that I was very irritable	0 1 2 3
10	I found it hard to calm down after something upset me	0 1 2 3
11	I found it difficult to tolerate interruptions to what I was doing	0 1 2 3
12	I was in a state of nervous tension	0 1 2 3
13	I was intolerant of anything that kept me from getting on With I what I was doing	0 1 2 3
14	I found myself getting agitated	0 1 2 3

Part 3: Coping Inventory Short Form (CSI-SF)

Direction: The following statements are about coping strategies you use to deal with your stressful events. Please read each item below and put ९ (√) to your answer on the space provided.

No.	Items	Never (1)	seldom (2)	Sometimes (3)	Often (4)	Almost always (5)
1	I make a plan of action and follow it					
2	I tackle the problem head on					
3	I look for the silver lining or try to look on the bright side of things					
4	I step back from the situation and try to put things into perspective					
5	I try to let my emotions out					
6	I let my feelings out to reduce the stress					
7	I try to talk about it with a friend or family					
8	I ask a close friend or relative that I respect for help or advice					
9	I try to put the problem out of my mind					
10	I try not to think about the problem					
11	I hope the problem will take care of itself					
12	I hope for a miracle					
13	I tend to blame my self					
14	I tend to criticize myself					
15	I try to spend time alone					
16	I tried to keep my thoughts and feelings to myself					

Part 4: Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)

Instruction:

1. This part consists of questions about Tobacco. Alcohol, Cannabis and Khat to be filled impersonal.

2. This questions are prepared to gather information about your experience of using substances in your life or in the past three months.

3. These substances can be smoked, swallowed, Sniffed, or injected.

Instruction: After reading the following questions carefolly, please put (√) to your answer questions are about your experience of using these substances across your life time and in the past three months.

1. In your life, which of the following substances have you ever used?	NO (0)	YES (3)
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)		
b. Alcoholic beverages (beer, wine, areke, tej, etc.)		
c. Cannabis (marijuana, pot, grass, hash, etc.)		
d. Khat/ chat		
e. other – specify:		

If your answer for question no. 1 is "yes" pass to the next questions.

2. In the past three months, how often have you used the substances you mentioned?	Never (0)	Once or twice (2)	Monthly (3)	Weekly (4)	Daily or almost daily (6)
a. Tobacco products (cigaretts, chewing tobacco, cigars, etc.)					
b. Alcoholic beverages (beer, wine, areke, tej, etc.)					
c. Cannabis (marijuana, pot, grass, hash, etc.)					
d. Khat/ chat					
e. other – specify:					

If "Never" to all items in Question 2, skip to Question 6

If any substances in Question 2 were used in the previous three months, continue with Questions 3, 4 & 5 for each substance used.

3. During the past three months, how often have you had a strong desire or urge to use?	Never (0)	Once or twice (3)	Monthly (4)	Weekly (5)	Daily or almost daily(6)
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)					
b. Alcoholic beverages (beer, wine, areke, tej, etc.)					
c. Cannabis (marijuana, pot, grass, hash, etc.)					
d. Khat/ chat					
e. other – specify:					
4. During the past three months, how often has your use of substances led to health, social, legal or financial problems?	Never (0)	Once or twice(4)	Monthly (5)	Weekly (6)	Daily or almost daily (7)
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)					
b. Alcoholic beverages (beer, wine, areke, tej, etc.)					
c. Cannabis (marijuana, pot, grass, hash, etc.)					
d. Khat/ chat					
e. other – specify:					
5. During the past three months, how often have you failed to do what was normally expected of you because of your use of substances?	Never (0)	Once or twice(5)	Monthly (6)	Weekly (7)	Daily or almost daily (8)
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)					
b. Alcoholic beverages (beer, wine, areke, tej, etc.)					
c. Cannabis (marijuana, pot, grass, hash, etc.)					
d. Khat/ chat					
e. other – specify:					

6. Has a friend or relative or anyone else ever expressed concern about your use of substances?	No, never (0)	Yes, in the past 3months (6)	Yes, but not in the past three months(3)
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)			
b. Alcoholic beverages (beer, wine, areke, tej, etc.)			
c. Cannabis (marijuana, pot, grass, hash, etc.)			
d. Khat /chat			
e. other – specify:			
7. Have you ever tried and failed to control, cut down or stop using substances?			
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)			
b. Alcoholic beverages (beer, wine, areke, tej, etc.)			
c. Cannabis (marijuana, pot, grass, hash, etc.)			
d. Khat/ chat			
e. Other – specify:			

APPENDIX 2 QUESTIONNAIRE AMHARIC VERSION

አዲስ አበባ ዩኒቨርሲቲ

የትምህርትና የባህርይ ጥናት ኮሌጅ

የሳይኮሎጂ ትምህርት ቤት

በተማሪዎች የሚሞላ መጠይቅ

መግቢያ

ለተማሪዎች ፡

የዚህ መጠይቅ ዋና ዓላማ በደብረ ብርሃን ዩኒቨርሲቲ የሚገኙ ተማሪዎችን ጭንቀት፣ጭንቀት ሲያጋጥማቸዉ እነዚያን ለመቋቋም የሚጠቀሙባቸዉን መንገዶችና አነቃቂ እጾችን በመጠቀም ዙሪያ ያሉትን ግንኙነቶች መዳሰስ ነዉ፡፡ ለጥያቄዎቹ የሚሰጡት መረጃ መሉ በሙሉ ሚስጥራዊነቱ የተጠበቀና ለዚህ ምርምር ብቻ ይዉላል፡፡ስለሆነም ይህንን መጠይቅ እዉነተኛ የሆነ መረጃ በመስጠት እንድትሞሉልኝ በትህትና እጠይቃለሁ፡፡

ክፍል 1፡አጠቃላይ መረጃ

ጾታ ፤ ወንድ ☐ ሴት ☐

ኮሌጅ ----------

የትምህርት ክፍል ----------

ክፍል 2፡ ጭንቀት መለኪያ ጥያቄዎች

መመሪያ፡ የሚከተሉት ጥያቄዎች እርስዎ ከአንድ ሳምንት በፊት ያጋጠምወዎትን ጭንቀት የሚመለከቱ ናቸው፡፡ እያንዳንዳቸውን ጥያቄዎች በሚገባ ካነበቡ በኋላ ሁኔታዎቹ በምን ያህል ድግግሞ በእርስዎ ላይ እንደተከሰቱ ከተሰጡት አማራጮች መካከል 0፣1፣2፣ወይም 3 ን በማክበብ ይመልሱ፡፡

ተ.ቁ.	0 - በእኔ ላይ ምንም አልተከሰተም፣ 1- በእኔ ላይ በተመጣጣኝ ሁኔታ ተከስቷል 2 — -በእኔ ላይ በተወሰነ ጊዜ ተከስቷል ፤ አንደንዴ፣ 3 - -በእኔ ላይ ብዙ ጊዜ ተከስቱዋል	
1	በትናንሽ/በማይረቡ ነገሮች አናደዳለሁ	0 1 2 3
2	ለነገሮች ከመጠን በላይ ቦታ እሰጣለሁ	0 1 2 3
3	ፈታ/ዘና/ ለማለት እቸገራለሁ	0 1 2 3
4	በቀላሉ እከፋለሁ(አልደሰትም)	0 1 2 3
5	ሰሜታዊ ጉልበት እንደምጠቀም ይሰማኛል	0 1 2 3
6	ነገሮች ሲዘገዩ ትዕግስት አጣለሁ(ለምሳሌ፡-ሊፍት ላይ፣ትራፊክ መብራት፣ሰዉ ስጠባበቅ)	0 1 2 3
7	ቁጡ እንደሆንኩ ይሰማኛል	0 1 2 3
8	ራሴን ማቀዝቀዝ/ማረጋጋት ያቀቅተኛል	0 1 2 3
9	በጣም እናደዳለሁ	0 1 2 3
10	ከተናደድኩ በኃላ መረጋጋት ያቅተኛል	0 1 2 3
11	ኣንድ ነገር እየሰራሁ የሚያቋርጠኝ ካለ መታገስ ይከብደኛል	0 1 2 3
12	ከፍተኛ የውጥረት ስሜት ዉስጥ ነበርኩኝ	0 1 2 3
13	የምሰራው ስራ ላይ ትኩረት ኣድርጌ እንዳልቀጥል የሚያደርገኝ ነገር ካለ መታገስ ይከብደኛል	0 1 2 3
14	እረበሻለሁ	0 1 2 3

ክፍል 3: ጭንቀትን መቋቋሚያ መንገዶች መለኪያ ጥያቄ

መመሪያ ፡ ከዚህ በታች የተዘረዘሩት ጥያቄዎች እርስዎ ጭንቀትን ለመወጣት የሚጠቀሙባቸዉን መንገዶች የተመለከቱ ናቸዉ፡፡ የቀረቡትን አማራጮች በሚገባ ካነበቡ በኋላ ጭንቀትዎትን ለማስወገድ በምን ያህል መጠን እንደተጠቀሙባቸው ይግለጹ፡፡

ተ.ቁ		በጭራሽ (1)	በጣም አልፎ አልፎ(2)	አንዳንድ ግዜ (3)	ብዚጊዜ(4)	ሁልጊዜ (5)
1	እቅድ በማዉጣት ባወጣሁት እቅድ መሰረት እመራለሁ					
2	ችግሩ እንዳጋጠመኝ ለመጋፈጥ እሞክራለሁ					
3	ያጋጠመኝን ነገር በበጎ መልኩ ለመመልከት እሞክራለሁ					
4	ወደ ኋላ መለስ ብየ በማሰብ ነገሮችን በትክክለኛ መንገድ አስቀምጬ ለማየት እሞክራለሁ					
5	የሚሰማኝ ስሜት አዉጥቼ ለመግለጽ እሞክራለሁ					
6	ጭንቀቴን ለመቀነስ ስል የሚሰማኝን ስሜት እገልጻለሁ					
7	ባስጨነቀኝ ነገር ዙሪያ ከጓደኛ ወይም ከቤተሰብ ጋር ለማዉራት እሞክራለሁ					
8	የምቀርበዉን ጓደኛ ወይም ዘመድ እርዳታ /ምክር/እጠይቃለሁ					
9	የሚያስጨንቀኝን ነገር ከአእምሮየ/ከሃሳቤ ለማዉጣት እሞክራለሁ					
10	ስለሚያስጨንቀኝ ነገር ላለማሰብ እሞክራለሁ					

11	የሚያስጨንቀኝን ነገር/ችግር/የራሱ ጉዳይ ብየ እተወዋለሁ					
12	ያልተጠበቀ መፍትሄ ይኖረዋል ብየ ተስፋ አደርጋለሁ					
13	ራሴን እወቅሳለሁ					
14	ራሴን እተቻለሁ					
15	ብቻየን ለመሆን እሞክራለሁ					
16	ሃሰቤንና ስሜቴን ለራሴ አምቄ ለመያዝ እሞክራለሁ					

መመሪያ:

1. በዚህ ንዑስ ክፍል ውስጥ ያሉት ጥያቄዎች ስለአልኮል፤ ትንባሆ ፤ ካናቢሰና ጫት ላይ ያተኮሩ አጠር ያሉ በግል የሚሞሉ ጥያቄዎችን ይዘዋል፡፡
2. ጥያቄዎቹ እርስዎ በአጠቃላይ የህይወት ዘመንዎ በተለይም ባለፉት ሶስት ወራት ውስጥ እያችን በመጠቀም ዙሪያ ያለዎት ልምድ ላይ መረጃ ለመሰብሰብ የተዘጋጁ ናቸው፡፡
3. እነዚህ እያች ሊጨሱ፣ ሊዋጡ፣ ሊሸተቱ፣ በመርፌ ሊወጉዋቸው ወይም እንደ መድሀኒት በአፍ ሊወሰዱዋቸው ይችላሉ፡፡

መመሪያ: የሚከተሉትን ጥያቄዎች በጥሞና ከአነበቡ በኋላ መልስዎን የ (√) ምልክት በመጠቀም ለመመዝገቢያ በተዘጋጀው ቦታ ላይ ያስፍሩ፡፡

ተ.ቁ	ጥ.1	የመልስ አማራጮች	
	በህይወት ዘመንዎ አንድ ጊዜ ቢሆን እንኳን ከሚከተሉት ዕያች እንዲሁም በውሰጣቸው ከተዘረዘሩት የትኞቹን ነው የተጠቀሙት?	የለም (0)	አዎ (3)
1.1	የትምባሆ ምርቶችን (ሲጋራ፣ ትንባሆ ማኘክ፣ ሲጋር ፣ ወዘተ)		
1.2	የአልኮል መጠጦችን (ቢራ፣ ወይን፣ ስፕሪትስ (spirits)፣ ጠላ፣ አረቄ ፣ጠጅ፣ ወዘተ)		
1.3	ካናቢሰ (ማሪዋና		

1.4	ጫት		
1.5	ሌላ ካለ ይገለጹ_____		

ለጥያቄ ቁጥር 1 መልስሞ "አዎ" ከሆነ ወደሚቀጥሉት ጥቄዎች ይለፉ

ተ.ቁ	ጥ.2 ባለፉት ሶስት ወራት ውስጥ በምን ያህል ድግግሞሽ የጠቀሱትን እፅ/እጾች ተጠቅመዋል?	የለም በፍፁም አልተጠቀም ኩም (0)	አንድ ወይ ም ሁለት ጊዜ (2)	በወር አንድ ጊዜ (3)	በሳምን ት አንድ ጊዜ (4)	በቀን በቀን (6)
2.1	የትምባሆ ምርቶችን (ሲጋራ፣ ትንባሆ ማኘክ፣ ሲጋር ፣ ወዘተ)					
2.2	የአልኮል መጠጦችን (ቢራ፣ ወይን፣ ስፕሪትስ (spirits)፣ ጠላ፣ አረቄ ፣ጠጅ፣ ወዘተ)					
2.3	ካናቢስ (ማሪዋና					
2.4	ጫት					
2.5	ሌላ ካለ ይግለጹ _____					

በጥያቄ ቁጥር 2 ለቀረቡት ምርጫዎች መልስሞ *" አንድ ወይም ሁለት ጊዜ"፣ " በወር አንድ ጊዜ" ፣" በሳምንት አንድ ጊዜ" እና "በቀን በቀን' ከሆነ ወደ ጥያቄ ቁጥር 3፣ 4፣ እና 5 ይለፉ ነገር ግን ምርጫሞ "በፍፁም አልተጠቀምኩም" ከሆነ፣ ወደ ጥያቄ ቁጥር 6 ይለፉ*

ተ.ቁ	ጥ.3 ባለፉት ሶስት ወራት ውስጥ በምን ያህል ድግግሞሽ የጠቀሱትን እፅ/እፆች የመጠቀም ከፍተኛ ፍላጎት ነበረዎት?	የለም በፍፁም አልተጠቀም ኩም (0)	አንድ ወይ ም ሁለ ት ጊዜ (3)	በወር አንድ ጊዜ (4)	በሳምን ት አንድ ጊዜ (5)	በቀን በቀን (6)
3.1	የትምባሆ ምርቶችን (ሲጋራ፣ ትንባሆ ማኘክ፣ ሲጋር ፣ ወዘተ)					
3.2	የአልኮል መጠጦችን (ቢራ፣ ወይን፣ ስፕሪትስ (spirits)፣ ጠላ፣ አረቄ ፣ጠጅ፣ ወዘተ)					
3.3	ካናቢስ (ማሪዋና					
3.4	ጫት					

3.5	ሌላካለ ይግለጹ _____					
ተ.ቁ 4	ባለፉት ሶስት ወራት ውስጥ እፅ/እጾች በመጠቀምዎ ምክንያት በምን ያህል ድግግሞሽ የጤና፣ የማህበራዊ፣ የህግ ወይም የገንዘብ ችግር እንዲያጋጥምዎ አድርጎዎታል?	የለም በፍፁም አልተጠቀም ኩም (0)	አንድ ወይ ም ሁለ ት ጊዜ (4)	በወር አንድ ጊዜ (5)	በሳምን ት አንድ ጊዜ (6)	በቀን በቀን (7)
4.1	የትምባሆ ምርቶችን (ሲጋራ፣ ትንባሆ ማኘክ፣ ሲጋር ፣ ወዘተ)					
4.2	የአልኮል መጠጦችን (ቢራ፣ ወይን፣ ስፕሪትስ (spirits)፣ ጠላ፣ አረቄ ፣ጠጅ፣ ወዘተ)					
4.3	ካናቢስ (ማሪዋና					
4.4	ጫት					
4.5	ሌላካለ ይግለጹ _____					
ተ.ቁ	ጥ.5 ባለፉት ሶስት ወራት ውስጥ በምን ያህል ድግግሞሽ የሚጠበቅብዎትን ሃላፊነት ወይም ስራ እፅ/እጾች በመጠቀምዎ ምክንያት ሳይወጡ/ሳይሰሩ ቀርተዋል?	የለም በፍፁም (0)	አንድ ወይ ም ሁለ ት ጊዜ (5)	በወር አንድ ጊዜ (6)	በሳምን ት አንድ ጊዜ (7)	በቀን በቀን (8)
5.1	የትምባሆ ምርቶችን (ሲጋራ፣ ትንባሆ ማኘክ፣ ሲጋር ፣ ወዘተ					
5.2	የአልኮል መጠጦችን (ቢራ፣ ወይን፣ ስፕሪትስ (spirits)፣ ጠላ፣ አረቄ ፣ጠጅ፣ ወዘተ)					
5.3	ካናቢስ (ማሪዋና					
5.4	ጫት					
5.5	ሌላካለ ይግለጹ _____					

ማሳሰቢያ:
በአንደኛ ጥያቄ ላይ በመለሱት መሰረት በህይወት ዘመንዎ ተጠቅመው ለሚያውቁት እፅ/እጾች የሚመለከቱ ጥያቄዎችን በሙሉ ይመልሱ፡፡

ተ.ቁ	ጥ.6 የሚከተሉትን እፆች በመጠቀምዎ ምክንያት ስጋቱን ወይም ፍራቻውን የገለፀልዎት ጓደኛ ፣ ዘመድ ወይም ሌላ ሰው አለ?	የለም በፍፁም (0)	አዎ በአለፉት ሶስት ወራት ውስጥ (6)	አዎ ግን በአለፉት ሶስትወራት ውስጥ አይደለም (3)
6.1	የትምባሆ ምርቶችን (ሲጋራ፣ ትንባሆ ማኘክ፣ ሲጋር ፣ ወዘተ			
6.2	የአልኮል መጠጦችን (ቢራ፣ ወይን፣ ስፕሪትስ (spirits)፣ ጠላ፣ አረቄ ፣ጠጅ፣ ወዘተ)			
6.3	ካናቢስ (ማሪዋና			
6.4	ጫት			
6.5	ሌላካለ ይግለጹ _____			
ተ.ቁ	ጥ.7 የሚጠቀሙትን እፅ /እፆች መጠቀም ለማቆም ወይም ለመተው ሞክረው ሳይሳካልዎት ቀርቷል?	የለም በፍፁም (0)	አዎ በአለፉት ሶስት ወራት ውስጥ (6)	አዎ ግን በአለፉት ሶስትወራት ውስጥ አይደለም (3)
7.1	የትምባሆ ምርቶችን (ሲጋራ፣ ትንባሆ ማኘክ፣ ሲጋር ፣ ወዘተ			
7.2	የአልኮል መጠጦችን (ቢራ፣ ወይን፣ ስፕሪትስ (spirits)፣ ጠላ፣ አረቄ ፣ጠጅ፣ ወዘተ)			
7.3	ካናቢስ (ማሪዋና			
7.4	ጫት			
7.5	ሌላካለ ይግለጹ _____			

ስለ ትብብርዎ ከልብ አመሰግናለሁ!!

አስተያየት ወይም ጥያቄ ካልዎት ፡- ስልክ 09 34 15 90 56

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Appendix V: Declaration

I, the undersigned, declare that this thesis is my original work in partial fulfillment of the requirement for the Degree of Masters in Clinical Psychology and has not been presented for a degree in this or any other university. All source of materials used for this thesis have been fully acknowledged.

Name: Betelhem Birhanu

Signature: _____

Place: College of Education and Behavioral Studies, School of Psychology, AAU

Date of submission: _____

This thesis work has been submitted for examination with my approval as the university advisor

Name: Mulu Nega (PhD)

Signature: _____

Date: _____