

**EFFECTS OF SUBSTANCE ABUSES ON PRISONERS' PSYCHO- SOCIAL  
ADJUSTMENT AND REHABILITATION: THE CASE OF EAST AND  
WEST HARARGE ZONES PRISONS IN OROMIA, ETHIOPIA**

**MA THESIS**

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**Effects of Substance Abuses on Prisoners' Psycho-social Adjustment and  
Rehabilitation: The Case of East and West Hararge Zones Prisons in  
Oromia, Ethiopia**

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**APPROVAL SHEET**  
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We hereby certify that we have read and evaluated this Thesis entitled with '*Effects of Substance Abuses on Prisoners' Psycho-social Adjustment and Rehabilitation*' in the East and West Hararge Zones Prisons in Oromia, Ethiopia prepared under our guidance by *Bulo Negera*. We recommend that it be submitted as fulfilling the thesis requirement.

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## **DEDICATION**

To My advisors who genuinely supported me in the journey of my research work.

## STATEMENT OF THE AUTHOR

By my signature below, I declare and affirm that this Thesis is my own work. I have followed all ethical and technical principles of scholarship in the preparation of data collection, data analysis and compilation of this Thesis. Any scholarly matter that is included in the Thesis has been given recognition through citation. This Thesis is submitted in partial fulfillment of the requirements for the degree of Master of Art at Haramaya University.

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## **BIOGRAPHICAL SKETCH**

My name is Bulo Negera Olana. I was born in September, 1986 G. C. in Mugno Kore kebele, Toke Kutaye Wereda, Western Shoa Zone, Oromia Regional State, Ethiopia. I attended my primary education at Mugno Kore Elementary School and my Secondary Education at Gedo Senior Secondary and Preparatory School. I also attended my tertiary education at Gondar University and got my bachelor of art degree in psychology in 2009. Since 2010 up to now, I have been working as a counselor and social worker in Eastern Hararghe Zone Prison institution and I have five years work experiences in the above mentioned fields that did not include the two years that I spent on my master education.

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## **ABBREVIATIONS AND ACRONYMS**

CSA	Central Statistical Agency
CSJ	Center for Social Justice
CBT	Cognitive-Behavioral Therapy
FGD	Focus Group Discussion
ICRC	International Committee of Red Cross
NIDA	National Institute on Drug Abuse
SPSS	Statistical Package for Social Sciences
UN	United Nations
WHO	World Health Organization



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### ***Abstract***

*Substance abuse is maladaptive pattern of any licit or illicit chemical substance use that adversely results in psychological, social, physical and health problem of a person. The objective of the current study was to assess the effects of substance abuse on the prisoners' psycho-social adjustment and rehabilitation in East and West Hararghe Zones Prisons. The study employed mixed method of research design. Stratified, simple random, purposive and availability sampling techniques were applied for the study. Data were collected through questionnaires, interviews and focus group discussions and analyzed using descriptive statistics (frequency and percentages) and inferential statistics (correlations, stepwise multiple and logistic regressions). Total sample of the study was 438 (M=343 and F=95). Among the major findings of the study, 386 (88.13%) were chat and cigarette abusers. The results from the transactional analysis of the five point likert scales have revealed that majority of the prisoners were responded that substance abuse was affected their psycho-social adjustment and rehabilitation in the prisons. The correlation results were revealed that there was negative relationship between ages of the prisoners ( $r = -0.317$ ,  $n=438$ ,  $p < 0.05$ , two tailed) and substance abuse proportions among them. On the other hand, the results were also showed that there was positive relationship between term of sentences ( $r = 0.263$ ,  $n=438$ ,  $p < 0.05$ , two tailed), duration of stay in prisons ( $r = 0.452$ ,  $n=438$ ,  $p < 0.05$ , two tailed), daily chat chewing ( $r= 0.789$ ,  $n= 438$ ,  $p < 0.05$ , two tailed) and daily cigarette smoking ( $r= 0.560$ ,  $n= 438$ ,  $p < 0.05$ , two tailed) and substance abuse proportions among prisoners. The stepwise multiple regression model ( $R^2=0.564$ ) have revealed that age, term of sentences, duration of stay in prisons, daily chat and cigarette utilization together predicted 56.4% of the impacts of these variables on the substance abuse variations among the prisoners which in turn predicted its effects. In logistic regression analysis, the Omnibus Test of Model Coefficient chi-square ( $\chi^2 = 84.62$ ,  $df = 5$ ,  $p < 0.05$ ) have indicated that demographic variables mainly sex, age, religion, educational status, crime types, term of sentences and duration of stay in prisons was affected the substance abuse characteristics among the prisoners which in turn predicted its effects. The availability of drugs in prisons, previous experiences of substance abuse, prison's environmental difficulties, to get relieve from imprisonment feelings, to forget memory of the families and to fight prisons' boredom life were found to be significantly associated factors to substance abuse among the prisoners. Deep rooted socio-cultural attitude toward substance use, lack of effective substance use policy implementation and controversial nature of chat and cigarette benefits and harms were found the major challenges to prevent substance abuse in the prisons. In conclusion, the high prevalence and chronic utilization of chat and cigarette in the prisons were affected the prisoners' psycho-social adjustment and rehabilitation. Serious measures were needed to be taken targeting to prevent and control of the provision, availability and utilization of chat and cigarette in the prisons, which in turn aimed to eliminate their effects.*

## 1. INTRODUCTION

The introduction part of the research has the purpose of providing the pertinent background information and clear statement of the problems with its nature and extents. The introduction also includes the basic research questions, objectives, significances, scopes, limitations and definition of the key terms of the study.

### 1.1. Background of the Study

History of substance abuse is as old as history of mankind. Human beings have been using different parts of plants as medicine for relieving from different health and stressful problems (WHO, 2009). According to WHO (2009) expert committee on substance and crime, substance abuse is persistent or sporadic substance use inconsistent with or unrelated to the acceptable medical or legal practices. It is the use of any licit or illicit chemical substances that results in physical, psychological, social, functional and health problem of a person. The study done by United Nations Office on Substance and Misconduct in Prisons (2007) has shown that substance abuse affects the prisoners' psycho-social adjustments. The study was also reflected that lack of prisoners' psycho-social adjustment due to substance abuse can directly affect rehabilitation services in prisons (UN, 2007).

Substance abuse can lead to the clinically significant psycho-social impairments as manifested by one or more of the following: substance abuse is considered as the foundation for crimes and abnormal behaviors because of its capacity to alter the normal functioning of a person's cognitive, behavioral and social well beings. Substance abuse can also create dysfunctional patterns of thinking and misinterpretations of life events which in turn can produce anti-social personality behaviors. It can results in failure to fulfill major role obligations at homes, schools, social settings or work places. Substance abuse can also affect physical and interpersonal well beings of the substance abusers (William, Alan, Caroline and Cole, 2015).

Substance abuse studies in prisons over the world have emphasized that even if there are no enough empirical findings, there is global concern about substance abuses in prison systems (UN, 2009). Therefore, substance abuse is an important risk factor for mental disorders, morbidity and social harm in prisons worldwide. Prisons are also straining under the violence that substance abuse causes in their institutions. Prisoners with substance abuse problems are

suffering from psychological and social dysfunctions and their chances of rehabilitation are slim which is manifested by lack of interest to work and participate in pro-social activities, wastage of time in consuming substances, lack of initiatives to learn and to be trained, unwillingness to actively participate in various workshops, low interest to receive counseling service, etcetera (William, Alan, Caroline and Cole, 2015).

Globally, there are a lot of substance abused prisoners in the prison settings. For example, some empirical evidences have shown that in America 10 to 15 %, in Great Britain over 20% and in Australia over 15% have been stated as prisoners who have psycho-social problems induced by persistent substance abuses in prisons. But the focus of these studies was on narcotic, illicit and injected drugs (UN, 2009). However, besides the use of illicit and injecting drugs which are commonly utilized in the Western prison systems like marijuana, inhalants, heroin, hashish and cocaine, on the other hand, the use of licit substances such as alcohol, Khat and tobacco has become one of the rising major prisoners' psychological and social problems in most part of the world especially in developing countries' prisons (Picken, 2012).

Therefore, licit substances are commonly continued to claim the lives of prisoners. Few of the recent trends have indicated that licit substance abusers have dramatically increased particularly in prisons of developing countries like Nigeria, Uganda and Kenya (UN, 2009). It is estimated that 19% of the global prison population are classified with dependence on psychoactive substance (UN, 2009). Substance abuse induced psychological and social adjustment problems of the prisoners account for a complex network to engage into offensive actions in prisons. Be it depression, anxiety, personality disorders, schizophrenia, mood disorders, anti-social behaviors and/or any one of the above or co-morbidity breed felonies in prisons (reckless actions). Moreover, prison inmates' misconduct due to substance abuse is a serious concern for rehabilitation center managers and administrators (WHO, 2009).

The prisoners' misconducts due to substance abuse disrupt the order of the institution, endangers lives of their inmates and staffs and results in considerable problems of rehabilitation works. When prisoners are persistently use substances, they will loss time for rehabilitation works and less engage in social welfares in prisons (Lovell and Jemelka, 2009). The use of psychoactive substances in African population in general and in African prison systems in particular has a short history. Because, those substances commonly utilized in Africa such as alcohol, Khat and



tobacco are licit substances which are not controlled by drug law even though they have abusing potentials. They had been introduced as mediators in different religious and cultural ceremonies in the continent. Societal opinion and beliefs towards substance abuse were also more traditional. Nowadays, very few evidences have shown that substance abuse be it illicit/licit, it is becoming one of the rising major psycho-social and health problems for African prisons (UN, 2007).

As far as the literatures review, previous studies, knowledge and searching efforts of the researcher are concerned about the effects of substance abuse on prisoners' psycho-social adjustment and rehabilitation in Ethiopian prisons, there were no empirically revealed scientific evidences that show this specific problem. The reasons behind this might be, in all regions of the country, it is obvious that both possession and utilization of psychoactive substance is prohibited in prisons. On the other hand, substance abuse in prison is considered as misconduct or a violation of the institutional rules so that, correctional officials are often reluctant to address such behaviors within their institutions. Moreover, it is usually considered as if substance abuse and its effects do not really exist in prison settings and the accessibility of data to conduct study in these environments often suspected.

However, uniquely in the Eastern and Western Hararghe Zones Prisons of Oromia Regional State in Ethiopia, both substance possession and utilization is being practiced daily in the prisons. Hence, in these study areas, prisoners can use chat and cigarette daily in the prisons, which is the different behavior from any other prisons of the country. So, there is no fear of obtaining data since substance abuse is obviously practiced in the mentioned zones. Therefore, the reason behind conducting this research was to identify the effects of substance abuse on the prisoners' psycho-social adjustment and rehabilitation in these prisons.

## **1.2. Statement of the Problem**

Global studies have revealed that substance abuse is an emerging and serious problem in the world's prisons be it illicit or licit. For example, a research conducted by Kinyanjui and Atwoli (2013) has shown that in the prison environment, substance abuse is threatening security, hurting prisoners' health, affecting the relationships between prisoners and staffs, leading to violence, resulting in bullying and mobbing of prisoners with their friends in prisons. In addition to this, prisoners with severe substance abuse have more difficulty adjusting themselves to the prison

environments when compared to the non-abused prisoners. Among the substance abused prisoners, suicide acts are prevalent, which can be a marker of poor adjustment to imprisonment and prison environments. These facts suggest that untreated substance abuse is likely to result in abnormal behaviors be it psychological, social or functional (Kinyanjui and Atwoli, 2013).

Other researchers like Immerwahr and Johnson (2010) have indicated that substance abuse is associated with psychological distress, functional impairment, physical illness, interpersonal and intrapersonal communication problems, social dysfunctions and other risk taking behaviors in the prisons. According to WHO (2006), prisoners have tremendous opportunities to acquire and reinforce negative behaviors since the presence of wide availability of substances even secretly supplied by the guards themselves. Hence, if not given attention, prisons can be “schools for crimes” rather than “rehabilitation centers.” The trend is increasing as the period goes and becoming a serious problem for both prisons and prisoners. For example, in California, it was noted that “in 2002, prisoners with severe substance abuse problems were accounted for 11% of the prison population, in 2008, it was 16%, and in 2012, it was 20%” (Picken, 2012).

The problem of substance abuse in African prison systems is also escalating rapidly. National substance studies in Nigeria showed that cannabis is predominantly used in prisons followed by cocaine and tobacco. In Zambia, 18% of the prisoners were substance abusers, and in Egypt, cannabis, glue and petroleum sniffing were found to be widely prevalence among prisoners (UN, 2009). In Kenya, lifetime substance abuse prevalence among prisoners was 66.1% and that of Uganda was 65%. Another study from South Africa also reported that substance abuse prevalence of 19.1% was found among the prisoners (Kinyanjui and Atwoli, 2013).

Substance abuse is a growing serious problem in Ethiopia in general and particularly in the eastern part of the country where this research project was conducted (Yigzaw, 2006). However, no study has been conducted so far in Ethiopian prisons that provide information on the effects of substance abuse on prisoners’ psycho-social adjustment and rehabilitation. Specifically, there is no empirical evidence that could serve as a tool to guide and aware the concerned bodies about the effects of substance abuse in prisons. On the other hand, in the current study areas, even though prison administrators were concerned about the availability and utilization of substance in their prisons, there is no visible attempt to identify the effects of substance abuse on the prisoners’ psycho-social adjustment and rehabilitation and its predisposing factors. Therefore,

lack of empirical evidences (especially local resources), little attempts to identify the effects of substance abuse and its predisposing factors among the prisoners were identified as gaps that exist on this specific research area that required scientific investigation. Accordingly, the study was aimed to contribute for the area in providing empirical evidences that could serve as a tool to guide and aware the concerned bodies through identifying the effects of substance abuses and its predisposing factors among the prisoners. Additionally, the study had intention to evoke and call up the experienced researchers and scholars in the field of social psychological problem research domain to conduct further studies for the overall improvement of the area of rehabilitation and social reintegration of criminals in the justice systems of the country.

### **1.3. Research Questions**

This specific part of the research paper was stated the questions that the research findings should answer after its completion.

#### **1.3.1. Research Questions**

The study was conducted to answer the following basic research questions.

1. What is the prevalence of substance abuse among the prisoners in East and West Hararghe Zones Prisons of Oromia regional state?
2. How do the prisoners explain their opinion towards the perceived effects of substance abuse on their psycho-social adjustment and rehabilitation in East and West Hararghe Zones Prisons of Oromia regional state?
3. How do demographic variables such as sex, age, religion, educational status, type of crimes, terms of sentences and duration of stay in prisons predict the effects of substance abuse among the prisoners in East and West Hararghe Zones Prisons of Oromia regional state?
4. What are the major associated factors toward substance abuse among the prisoners in East and West Hararghe Zones Prisons of Oromia regional state?
5. What are the major challenges in restricting substance abuse in the East and West Hararghe Zones Prisons of Oromia regional state?

## **1.4. Objective of the Study**

The objective part of the research paper was stated the general and specific objectives of the study that helped in guiding its design and outcomes.

### **1.4.1. General objective**

The overall objective of the study was to assess the effects of substance abuse on the prisoners' psycho- social adjustment and rehabilitation in the East and West Hararghe Zones prisons.

### **1.4.2. Specific objectives**

The specific objectives of the study were to:

- Assess the prevalence of substance abuse among the prisoners in the East and West Hararghe Zones Prisons of Oromia regional state.
- Investigate the prisoners' opinion towards the perceived effects of substance abuse on their psycho-social adjustment and rehabilitation in the East and West Hararghe Zones Prisons of Oromia regional state.
- Explore the role of demographic variables such as sex, age, religion, educational status, types of crimes, terms of sentences and duration of stay in prison in predicting the effects of substance abuse on the prisoners' psycho-social adjustment and rehabilitation in East and West Hararghe Zones prisons of Oromia regional state.
- Identify the major associated factors toward substance abuse among the prisoners in East and West Hararghe Zones Prisons of Oromia regional state.
- Explore the major challenges in restricting substance abuse in the East and West Hararghe Zones Prisons of Oromia regional state.

## **1.5. Significances of the Study**

One of the burning issue within social science in general and psychology in particular is how to achieve the rehabilitation and social reintegration of criminals. Accordingly, the study was designed to add new valuable knowledge to the area and creates awareness for policy makers to take measures to improve the substance abuse problems in the prisons. It also aimed to help prisoners to get awareness about the effects of substance abuse on their psycho-social well beings and rehabilitation. Moreover, the great contribution of the research is that it was aimed to

motivate other experienced researchers and intellectuals to conduct further studies on the areas that can help the future improvement of the psycho-social and rehabilitation services in the prisons. The study was also considered to help prisons to improve their security and stability when they start to manage substance availability and utilization within their campus. Another significance of the study was that, it was designed to contribute in the development of social-psychological theory and its practice in the studies of rehabilitation and social reintegration of criminals because relatively until recently prisons have been an under researched areas that need well organized theory and practice. Generally, the research was aimed to benefit prisons in improving its grand objectives of imprisonment like rehabilitation, correction and behavioral changes' services.

### **1.6. Delimitation of the Study**

The study was conducted in the Oromia Regional State Prison Administration Commission, specifically at the Eastern and Western Hararghe Zonal Prison Institutions. The east and west Hararghe zones prisons have four district level prison centers and two zonal level prison institutions. The district level prison centers under these two zones were not included in the study because when compared with the zonal level prisons, the district levels have few prisoners and the prisoners' duration of stay in prison is short as their term of sentences are short years. Therefore, the zonal prisons were preferred to be the study areas. Therefore, the Eastern and Western Hararghe Zone Prison Institutions are the two zonal level prisons of the eighteen zonal level prison institutions under the Oromia Regional State Prison commission which are found in the eastern part of Ethiopia at Harar and Chiro towns respectively.

Geographical locations of the two zones are nearby each other and they are demarcated; East-Somale Regional State, North-Dire Dawa City Administrative Council, North-West-Somale Regional State, South-Oromia Regional State Bale Zone and South-West-Afar Regional State. The stratified and simple random sampling techniques to select sample prisoners and purposive sampling technique to select staffs and prisoners' group leaders as well as availability sampling with its snow balling mechanism to select ex-prisoners were applied for the study. The two prisons were selected purposively due to their prominence of deviance and uniqueness to other prisons of the region in allowing substance use in their prisons for prisoners. Hence, in these two zones unlike to the other zonal prisons of the region, the accessibility and utilization of licit

substances such as Khat and cigarettes were allowed for the prisoners in the prison camp. Therefore, the study was aimed to assess the effects of these substance abuses on prisoners' psycho-social adjustment and rehabilitation in the prisons. The current study did not include illicit substance. The effects of other factors on the prisoners' psycho-social adjustment and rehabilitation were also not included in the current study.

The main study variables were independent and dependent variables. The independent variables were demographic variables while dependent variable is substance abuse proportions among the prisoners. The study was included both male and female prisoners population of all ages who have six months and above terms of sentences to death penalties. The study was excluded; the newly sentenced prisoners, those prisoners who have terms of sentences below six months, the prisoners who are on probation, on parole and who are waiting their court trial process with short and long term appointments. The reason behind excluding these groups of prisoners who have terms of sentences below six months was that, the noticeable effects of substance abuse might not be observed on their psycho-social adjustment and rehabilitation within this short period of time and these prisoners might leave the prisons before data collection time. Therefore, the researcher suspected to get necessary data from these groups of prisoners and excluded them.

The data collection tools are questionnaire (for prisoners), semi-structured interviews (for prison staffs, social workers and ex-prisoners) and FGD (for prisoners' group leaders) to provide holistic approach to gather data from these different groups of respondents. The collected data were analyzed by descriptive statistics such as frequency tables and percentages followed by inferential statistics such as correlation and regression analysis to see the relationship and to predict the effects of substance abuse. The SPSS version 20 was used to interpret the entered data to the computer.

### **1.7. Limitations of the study**

Lack of sufficient related literatures and previous local studies on the area were the primary challenge that confronted the work of the study. Lack of sufficient budget was another considerable problem that faced the research work. However, to accommodate these drawbacks and to make the study effective the researcher exhaustively reviewed the existing related literature and in most cases followed cost effective approach to reduce budget influences.

## 1.8. Operational Definitions of Key Terms

**Substance:** are those licit psycho-active substances specifically Khat and cigarette being utilized in the prisons and have potential to affect prisoners' psycho-social adjustment and rehabilitation.

**Substance use:** for this study it was defined as consumption of Khat and cigarette currently in the prisons by the prisoners to change their moods or behaviors.

**Substance abuse:** for this study it was defined as maladaptive pattern of Khat and cigarette use in the prisons that fulfilled the criteria of substance abuse procedure and resulting in repeated problems and adverse consequences on prisoners' psycho-social adjustment and rehabilitation.

**Psycho-social adjustment:** is both psychological and social wellbeing of a person in prisons as explained by rational thinking, patience, discipline, optimism, healthy life interpretations, readiness to learn from one's mistake, open-mindedness, managing one's emotions, healthy interpersonal communications, willingness to receive and participate in rehabilitation programs and adapting oneself to the demands of the prison environment (Gillespie, 2005).

**Rehabilitation:** is well-developed empowerment and re-integration system of programs and intervention services delivered in prisons to help prisoners to adopt peaceful ways of life and be aware about the costs of committing crime as well as to prepare them for future to turn away from illegal and anti-social behaviors after released. It can be explained by offering curriculum and prison-based educational programs, counseling services, different vocational trainings, provision of different workshops, inter-personal and communication skill development and life skill trainings as well as health services programs for the prisoners (Andrews and Bonta, 2010).

**Licit substance:** in this study they were psychoactive substances specifically Khat and cigarettes whose availability and use is prohibited in prisons in Ethiopia (Daniel, 2012). Yet, uniquely these licit substances are being practically utilized by the prisoners in East and West Hararghe Zones prisons of Oromia regional state.

## **2. REVIEW OF RELATED LITERATURE**

The literature review part of the research was analyzed the relevant existing body of knowledge on the topic. Therefore, the primary goal of this section was to review the current written literatures that guides the research work aimed to assess the effects of substance abuse on the prisoners' psycho-social adjustment and rehabilitation works to produce conceptually organized paper. It also aimed to select and summarize supportive theoretical basis for the research work. Based on these concepts, the definitions, theories, effects, factors and problems of substance abuse in the context of prison settings were discussed in this specific section.

### **2.1. Overview of Substance Abuse in Prisons, Prison Environments and Prisoners**

Prisoners are part of the community; yesterday they came from the community and tomorrow they will return to the community. So, they deserve the same level of information, protection and care as everyone outside prisons. Therefore, substance abuse problem in prisons should be considered as a general public health and security issue, not just restricted to only in prison environments. Time spent in prison also directly affects the broader community; employment opportunities are damaged; children are raised in the absence of a parent; wage earners are separated from their families; mother and child are separated; and housing opportunities are lost. A prison record often has a major destructive influence on individuals and their community. Moreover, for substance abusers, the prison environment often constitutes an even more difficulties because they are not psychologically and socially adjusted to the demands of the challenging prison environments and not ready for rehabilitation services (Jiang, 2005).

Globally, there are a lots of drug abuse prisoners in prison environments. For example, European prison studies by UN (2007) have shown that, people who use substances are over-represented in prisons. In most studies reporting about substance abuse in prisons, about 15-20% of prisoners were reported with illicit substance abuse. On the other hand, between one third or less (Hungary and Bulgaria) and three quarters (Netherlands, Norway and United Kingdom) of the prison population in 20 countries of the European Union plus Bulgaria and Norway for which data are available reported having abused an illicit or licit substances. Among the illicit substances: heroin, cocaine, cannabis, and amphetamines, while nicotine, tobacco, alcohol and Khat are among the licit substances that abused (UN, 2009).



By considering the high number of prisoners' entrances and releases, a substantial number of people who use substances go through prison systems annually. This fact inevitably affects prisoners' life in European prisons. Substances have become a central theme, a dominating factor in the relationships between prisoners and staffs. Many security measures are aimed at controlling substance abuse and its trafficking within the prison systems. Daily prison routine in many respects is dictated by substance-dependent inmates and substance-related problems such as; substance related suicide attempts, substance-induced cases of emergency, increasing in the number of people who use substances, debts, violence, conflicts and theft caused by substance misuse. Substances become the central medium and currency in prison subcultures. Many routine activities of inmates focus on the acquisition, smuggling, consumption, sale and financing of substance in prisons (Fazel, Bains and Doll, 2006).

However, the goal of rehabilitating the criminals must be pursued, but prison managers in many countries facing the rising of substance consumption among prisoners and political and economic circumstances that make solving the substance problem even more difficult and complex for the prisons. The current situation of judicial authorities is paradoxical. They have to find a solution to a problem that is not supposed to exist in prisons (Stover and Weilandt, 2007). Another study has shown that over the past several decades, the American incarceration rate has dramatically increased. This increase has in turn resulted in dramatic increase in substance abused prisoners in the prisons. According to American Journal on Substance Abuse and Control (2013), there is estimation of 46 percent of drug abused prisoners in American prisons.

Moreover, substance abuse in America is particularly problematic for Black men because it was significantly worsen their health conditions. Incarcerated black men are also more likely to be overburdened with substance-related problems such as infectious diseases like HIV creating a significant public health problem that has largely been neglected. Since substance abuse in the prison environment may intensify harms associated with substance addiction, examining the extent to which substance abuse is continued in prison is critical to assessing treatment needs of such a vulnerable population. Even though prior studies like UN (2007) have clearly indicated that substances are readily available in prisons, there is no formal reporting system to collect information on substance abuse in prisons. Since substance abuse in prison is considered misconduct, or a violation of the institutional rules, the correctional officials are often reluctant

to address such behaviors within their institutions. Thus, empirical estimates of the prevalence and predictors of substance abuse within U.S. prisons are limited (American Journal on Drug Abuse and Control, 2013).

Without having a reliable estimation of the prisoners' substance abuse in their respective institutions, it is difficult for correctional administrations to recognize potential health harms associated with drug abuse in prison environments and to effectively administer drug treatment programs. On the other hand, the use of psychoactive drugs in African population in general and in African prison systems in particular has a short and fast growing history (WHO, 2009). Because, those substance commonly utilized in Africa such as alcohol, Khat and tobacco are licit substance which are not controlled under the international drug law even though they have abusing potentials and they had been introduced as mediators in different religious and cultural ceremonies in the continent. In addition to this, societal opinion and beliefs towards substance abuse were also more traditional. However, nowadays, substance abuse becomes one of the rising major psycho-social and health problems for African prisoners (UN, 2009).

There are no existing written literatures specified to substance abuse effects in Ethiopian prisons. In most regions of the country, it is obvious that substance availability and utilization is not legally allowed in prisons. However, the unique characteristic of the East and West Hararghe zones prisons in which this research was conducted is that both substance availability and utilization was practically possible in the prisons. In these areas, prisoners are unlike to the other prison institutions of the country in that they can use substance daily in the prisons. Therefore, these two zonal prisons were selected purposively due to their prominence in allowing Khat and cigarette possession and utilization for their prisoners in their prisons.

## **2.2. General Concepts of Substance Abuse**

Substance abuse also known as drug abuse or substance misuse, which mean a patterned use of a substance (s) in which the users consume the substance(s) in amounts or with methods which are harmful to themselves or others, and is a form of substance-related disorder. It is a maladaptive pattern of substance use leading to clinically significant impairment or distress which is manifested by one or more of the following: recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home (for example, repeated absences or poor

work performance related to substance use; substance-related absences, suspensions, or expulsions from school; neglecting of children or household); recurrent substance use in situations in which it is physically hazardous (driving an automobile or operating a machine when impaired); recurrent substance-related legal problems (for example, arrests for substance-related disorderly conduct); continued substance use despite persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance (arguments with spouse about risks of intoxication, physical fights and conflicts) (WHO, 2004).

### **2.3. Brief History of Substance Availability and Utilization in Prisons**

Substances have been a problem in prisons for decades worldwide. Politicians have regularly identified this and promised to change it. In 1994, Great Britain, Prime Minister, John Major MP, promised a major blitz on drugs in prisons, where prisoners are sucked into a sub-culture of substance utilization. Similarly, the 2002 Labor Manifesto stated that the government would ensure that the link between substance abuse and crime has broken and attacked the substance problem in prisons. This rhetoric was not matched by reality and substances remain a significant problem in prisons across England and Wales. As one former prison governors of England had stated, when he started working for the prison service in 1975, substances were almost non-existent in prison, the main currency was tobacco, but now substance abuse is the dominant issue in many prisons of the country (William, Alan and Caroline, Cole, 2015).

In America starting from 1980s, availability of substances in prisons had clearly recognized. Moreover, the abuse of illicit drugs in the prison systems of the country was accelerated. As few studies have indicated cocaine and heroin use has doubled in most prisons of the country. Consequently, rates of substance-related violent crimes and healthy problems as well as numbers of the prisoners in state prisons with substance-related problem histories also have increased today (Al Habori and Hoffman, 2013).

### **2.4. Theories and Contemporary Perspectives on Substance Abuse and Its Adverse Effects**

One of the early indications that a social psychological problem research domain has come of age is the quantity and quality of the theoretical explanations for it. Over the last several years interest in research on the problems of substance abuse has grown dramatically. A wide array of scientific disciplines has little explored the substance problems. Substance abuse is controversial

and complex contemporary social problem in a wide range over the world. Its complexity derives in part from the effects it has on the individual user psychologically, socially and biologically and in part from its effects on society, law, economics and politics (NIDA, 2010). Therefore, the primary intent of this specific theory analysis part in the current study was to present selective contemporary theoretical orientations and perspectives on substance abuse and its risks that guide the research works.

#### **2.4.1. An availability-proneness theory of substance abuse**

Most simply stated, the availability-proneness theory of substance abuse involves the proposition that substance abuse occurs when a prone individual is exposed to a high level of its availability and accessibility. It is argued that the availability of or ease of access to the substances varies enormously, as does proneness to use of these substance for social or psychological reasons be varies. Tendencies to use substances should vary directly with both availability and proneness, and the two should sum to create the “abusing tendency.” This suggests that both availability and proneness need not be high for all substance abusers. Where availability is excessively high, the level of proneness required among users could be lower than in situations of low availability. Where an individual’s psychological or social proneness is very high, he or she may become a substance abuser in situations in which availability is low (Stephen Maisto, et al, 2011).

Treatment of substance abusers should be successful only where large reductions are made in availability or proneness. Where relapses occur after treatment they should be in situations in which a return to earlier levels of availability or proneness is made. Continuation of substance use should occur whenever availability and proneness remain constant and acceptable to the substance user or abuser (Stephen Maisto, et al, 2011). From the implication of the theory, it is possible to generalize that in the environment where substance availability and accessibility is very high, people become more likely to be victim of substance abuse and they are more likely be affected by its negative consequences. The theory is more likely applicable in the prisons where substance availability and accessibility is very high and more probably affected by its adverse effects.

#### **2.4.2. An ego/self theory of substance abuse**

Substance abuse is tied intimately to an individual's attempt to cope with his or her internal emotional and external social and physical environment. Viewed from a contemporary psychoanalytic perspective, substance dependency can best be understood by examining how such a person's ego organization and sense of self serve the individual's attempts to cope with internal and external demands and how the specific effects of various substances facilitate or impede such attempts. Although the early psychoanalytic formulations of substance dependence emphasized the aspects of substance abuse to explain the compelling nature of addiction, the recent psychoanalytic formulations have placed greater emphasis on problems in adjustment and adaptation, lack of strong ego realities, self disturbances and related psychopathology as the principal etiological factors in substance dependence (Edward Khantzian, 1992).

According to the theory, a variety of substance abuse patterns and degrees of dependence in which everyday's problems of life are involved may be identified. Moreover, becoming and remaining addicted to substance in most instances is associated with severe and significant psychopathology. Necessarily, some of the observed pathology evident in addicts is the result of drug abuse and its attendant interpersonal involvements. However, the theory emphasized that, drug-dependent individuals are predisposed to substance use and to become dependent upon their substance mainly as a result of severe ego impairments and disturbances in the sense of self, involving difficulties with adjustment and affect self-defense, self-care and need of satisfaction (Edward Khantzian, 1992).

The theory implied that, when the internal instinctive pleasure and external environmental stress affects a person's self that is ego needs defense mechanism and start using substances which in turn more likely make a person substance abuser and victim of its adverse effects. The theory is more likely applicable in prisons where prisoners are often confused by lots of personal questions and prison environment is stressful which in turn affect their rational thinking and create tendency to abuse substance to cope with their failures.

#### **2.4.3. Perceived effects theory of substance abuse**

The theory assume that most acts are intended to benefit the actor; to promote his or her self-protection and self-enhancement; to produce gratification and to reduce frustration, boredom,

depression, anxiety, guilt and psychic distress. It is not enough simply to observe that conscious or unconscious motives often lead to behavior that is irrational and self-defeating and compulsive substance use is merely one instance of such irrationality. Although true, that statement does not clarify the genesis of compulsive substance use or help identify the mechanisms that permit such use to progress to levels of severe self-destructiveness. We must acknowledge initially substance use is not for self destruction. Indeed, recognizing the perceived effects in satisfying and self-enhancing of substance use is essential to recognize the processes of its initiation, continuation, escalation, cessation and relapse (Moor and Morris, 2011).

As the theory, primarily substance users might be initiated by perceived effects of substance use and adversely the later is more likely be problematic when it become beyond the initial purpose at its abuse and/or dependence stage because of the addictive nature of the substance.

#### **2.4.4. Personality-deficiency theory of substance abuse**

Substance abuse is generally initiated as a result of an individual's social involvement with substance-using age-mates or group conformity; the adolescent who is motivationally immature, in addition to commonly having ready access to substances and a person living in a socio-cultural milieu attitudinally tolerant of substance use, in contrast to their non addicted, motivationally mature fellows is more likely become substance abuser by being influenced with their close groups if they lack consistent personality. Accordingly, after about 10 to 14 days of multiple daily usages he/she becomes physiologically addicted and develops abstinence or withdrawal symptoms 6 to 12 hours after involuntary discontinuation of the drugs (Bongard et al., 2011). The theory inferred that, for the individuals who have personality deficiency, peer pressure and/or group conformity can influence them to become substance abusers and victims of its effects.

#### **2.4.5. Disruptive-environment theory of substance abuse**

A person can take his first shot of a substance at almost any age and place for a wide range of reasons. Moreover, disruptive-environment contributes more for the onset of substance abuses. For example, juvenile abusers who become addicts showed evidence of deep personality disturbances prior to the onset of substance use and that the vast majority of them live in the most deprived slum areas of the city and on the street. While not all juvenile addicts have been

delinquent prior to their addiction, they share with other kinds of delinquents a special orientation to life, one which consists of general pessimism, unhappiness and a sense of futility on the one hand and mistrust, negativism and deviance on the other hand (Chein, 1992).

These attitudes stem from a family life in which the parents are of low socio-economic status and have little hope of a better future for either themselves or their children; in which there is a lack of love and support for the children and no clear standards of behavior with inconsistent application of rewards and punishments and in which there is usually no male to whom the boy can relate in a warm and sustained fashion. Besides, the parents are usually distrustful of representatives of society such as teachers or social workers. The consequence of the conditions just outlined is that the boy grows up with no sense of identity, no belief in his own abilities and no faith in the future. When he is faced with the responsibilities of approaching adulthood, he finds himself unable to cope and surrounded as he is by others who use substances and he begins to experiment substance use which finally more likely makes him victim of substance abuse (Chein, 1992).

The implication of the theory is that in the difficult and stressful environment, a person is more likely to be a substance abuser because of the sense of pessimism, unhappiness, sense of futility, mistrust, negativism, loneliness and deviance that the person develops as the result of the influence of disruptive-environment.

#### **2.4.6. Self-derogation theory of substance abuse**

Substance use/abuse patterns are among alternative deviant patterns adopted in response to intense self-rejecting attitudes resulting from a history of being unable to forestall or assuage the self-devaluing implications of experiences in normative membership groups (family, school, peers, community, etc.). By virtue of association between past membership group experiences and the development of intensely distressful negative self-attitudes, the person loses motivation to conform to and becomes motivated to deviate from membership group patterns. Simultaneously, the unfulfilled self-esteem motive prompts the subject to seek alternative (deviant) response patterns which offer hope of reducing the experience of negative (and increasing the experience of positive) self-attitudes. Which of several deviant patterns is adopted

will be a function of the person's history of experiences influencing the visibility and subjective evaluation of the self-enhancing/self-devaluing pattern(s) in question (Kaplan, 1998).

Given the predisposition to adopt some form of deviance, an illicit substance abuse pattern (rather than patterns of theft, interpersonal violence, suicide, etc.) would be adopted in so far as (perhaps due to the availability of the substance) the behavior was apparent in the environment, the person did not anticipate adverse consequences (e.g. loss of control, incarceration) and did anticipate self-enhancing outcomes (e.g., acceptance by a positive reference group, anesthetization of self rejecting feelings) (Kaplan, 1998). Application of the theory implied that when prisoners come to prisons they try to forget their families and close friends from whom they separated. Consequently, when they failed to forget memories of their families and friends, they start to abuse substances to cope with this recurrently occurring idea.

#### **2.4.7. Family theory of substance abuse**

When substance use especially heavy use is continued for a prolonged period, it is helpful to view it as indicative that the user and the user's family have gotten stuck at some point in the family life cycle. They have hit a developmental milestone and cannot get past it, slipping into a repetitive behavioral pattern. In addition to the turmoil of adolescence, a variety of extra familial factors can threaten the family system and trigger a cycle of continued use in one or more members. However, without denying the importance of extra familial systems such as peers and social agencies, the family's influence should be considered the primary one in most cases of continued use and abuse since the family accentuates or attenuates the impact of these external influences (Stanton, 1990).

Substance abusers are locked on the horns of a dilemma. On the one hand, they are under great pressure to remain intensely involved in the family to keep it intact, while on the other hand, socio-cultural and psychobiological forces dictate the establishment of intimate outside relationships. Continued heavy substance abuse is the unique paradoxical solution to the dilemma of maintaining or dissolving the triadic interaction. On the systems level, the substance use cycle serves to give the appearance of dramatic movement within the family as the triad is dissolved, re-established, dissolved, and re-established again. Therefore, with family involvement cycle a person becomes substance abuser (Stanton, 1990). The theory implied that



when the families are substance abusers, the children have wide chances to become substance abusers under the influence of family involvement and life cycle (conformity influences).

### **2.5. Common Signs and Symptoms of Substance Abuse and Dependence**

Substance abused and dependent person can suffer from painful signs and symptoms which show their deteriorative substance utilizing conditions. These are manifested by neglecting once responsibilities at school, work, or home (for example, flunking classes, skipping work, neglecting once children). This is occurred because of the substance-oriented life and time wasted in persistent substance use. It also includes using substance under dangerous conditions or taking risks while high, such as driving while on substance, using dirty needles or having unprotected sex. Substance abuse is also getting the person into legal trouble, such as arrests for disorderly conduct, driving under the influence of substance, or stealing to support its habits. Substance abuse is causing problems in the person's relationships such as fights with their partners or family members and an unhappy boss or the loss of old friends (Haney, 2015).

People take substance to avoid or relieve from withdrawal symptoms. If substance abused people go too long without substances, they will experience symptoms such as nausea, restlessness, insomnia, depression, sweating, shaking, and anxiety. The substance dependent person will losses control over his/her substance uses. They often abuse it more than they planned, even though they told themselves that they wouldn't. They may want to stop using, but they feel powerless. The life of substance abused person revolves around drug use and satisfaction. They spend a lot of time using and thinking about it, figuring out how to get it and recovering from the substance's effects. They abandoned activities they used to enjoy such as jobs, education, hobbies, sports, and socializing because of their persistent substance use. They continue to use it, despite knowing it's effects. It's causing major problems in their life such as blackouts, infections, mood swings, anxiety, depression and paranoid but they continue using it anyway at any costs (WHO, 2009).

### **2.6. Effects of Substance Abuse in Prisons**

In many cases, criminals or anti-social behaviors occur when the person is under the influence of a substance and long term changes in individual's personality may occur as well. For example; Khat consumption induces mild euphoria and excitement, similar to that conferred by strong

coffee. Individuals become very talkative under the influence of the plant. The effects of oral administration of cathinone occur more rapidly than the effects of amphetamine pills; roughly 15 minutes as compared to 30 minutes in amphetamine. Khat can induce manic behaviors and hyperactivity, similar in effects to those produced by amphetamine. Withdrawal symptoms that may follow occasional use include mild depression and irritability (Al Zarouni, 2015).

Withdrawal symptoms that may follow prolonged Khat abuse include lethargy, depression, nightmares, and slight tremor. In general, the effects of Khat abuse include: immediate effects; alertness, arousal, concentration, confidence, constipation, euphoria, friendliness, hyperactivity, increased blood pressure, increased heart rate, insomnia, psychosis, suppressed appetite, talkativeness, thought disorder and verbosity. Long-term effects; depression, infrequent hallucinations, impaired inhibition (similar to alcohol), increased risk of myocardial infarction (heart attack), psychosis in extreme cases in the genetically predisposed and oral cancer. Indeterminate effects; this includes death stroke following acute coronary syndrome (clogging of the artery) (Al Zarouni, 2015). Generally, as Gillespie (2005) the possible psychological, social and functional problems that can be resulted from substance abuse are listed below.

### **2.6.1. Psychological effects of substance abuse**

One of the primary effects of substance abuse can be found within the definition of substance abuse itself in that it controls and increases intense desire to use it above all else. Substance craving can also shift a person's entire mental focus toward obtaining it. Side effects of substance abuse then include preoccupation with where to get it, how to get money to buy it, and where and when it can be used. Psychological substance abuse effects commonly include changes in mood. A person may be anxious, thinking about when they can next use the drug, or depressed due to its withdrawal symptoms (Absi, Khalil and Wittmers, 2013). The common psychological substance abuse effects include, aggressiveness, selfishness, hopelessness, lack of pleasure from previously enjoyed activities, unexplained change in personality or attitude, sudden mood swings, irritability, angry or outbursts, periods of unusual hyperactivity, agitation, or giddiness, lack of motivation, appears lethargic or “spaced out”, appears fearful, anxious, and paranoid with no tangible reason (Absi, Khalil and Wittmers, 2013).

### **2.6.2. Social effects of substance abuse**

In practice, substance abuse is not that simple and it is not just only psychological problem. It is psychological problem for which the social context in which it has both developed and expressed can be affected. Substance abusers choose it over all else that includes community, family and friends. One of the social effects of substance abuse is the loss of community, friendship and family due to the choice of dealing with it above all else. Communities, families and friends have to watch as the substance abuser pulls away and the effects of substance abuse ravage their body and mind. Moreover, another side effect of substance abuse may be bizarre, out of normal character, behavior that further separates the its abusers from their community. There have been many evidences on the negative impacts of substance consumption on family and social life. It suggests that substances can have a negative impact on family relationships and it is just likely that it is a “convenient scapegoat” for family disruption (Warfa, Klein, Bhui, Leavey, Craig and Stansfeld, 2007).

Stability of relationships environment and expectations is a powerful force in helping people manage their lives, especially prisoners in prison camps. In some prisons, problem of balancing discipline and control of prisoners’ behaviors with nurturing support to encourage their exploration, understanding of their problem and self-realization may be complicated by substance abuse problems as well as a wide range of other factors such as difficult prison environment and inappropriate treatment (Julien, Advokat and Comaty, 2008).

### **2.6.3. Effects of substance abuse on prisoners’ rehabilitation works**

Failure to tackle substance abuse in prison has also another significant effect. It makes prisoners less likely to engage constructively in their rehabilitation works; it significantly contributes towards high reoffending rates in prisons. For instance, a study by WHO (2007) has showed that more than two in five substance abused prisoners in England and Wales are reported committing offences such as theft and other coercive behaviors in order to get money to buy substance in prisons. The rehabilitation effects of substance abuse can also include decreasing performance in work or school attendances. This decreased performance may lead to disciplinary action, expulsion or dismissal, creating money problems and possibly even legal troubles. Discontinuing

participation in the sport activities and giving up hobbies are other rehabilitation effects of substance abuse in prisons (Mumola and Karberg, 2006).

The positive associations that exist between criminal behaviors and substance substances are well established (Andrews and Bonta, 2010). The logic behind prisons' rehabilitation programs is that increased empowerment and awareness levels of the prisoners will translate into reductions in criminal behaviors. Various rehabilitation programs in prisons are designed to reduce recidivism, contribute to safer in-prison environments and provide offenders with the opportunity to make positive personal and social changes that will increase their potential for success outside prison (Drake et al. 2009). Rehabilitation service is one of the central purposes of prison institutions. Therefore, prisons need to prepare therapeutic programs which seek involvement and participation of prisoners and professionals to genuinely focus on understanding of the psycho-social problems, offending acts, developing mechanisms to cope with stressful prison environment, developing alternative behaviors, managing emotions, enhancing problem solving and communication skills and developing relapse prevention plans.

Prison-based rehabilitation programs have remained unfruitful in many prisons where substance abuse is identified as one of the principal factors (Andrews and Bonta, 2010). The most noticeable evidences suggest that, the higher risk substance abused prisoners did not benefited more from rehabilitation programs. Responsibility principle refers to those internal and external factors that impede prisoners' response to rehabilitation programs, such as persistent substance using time wastage, irritability, hyperactivity, hopelessness, lack of patience, weak motivation, program content and delivery systems (Andrews and Bonta, 2010).

#### **2.6.4. Effects of substance abuse on prisons' environment**

The failure to stop prisoners from developing a substance abuse behavior in prisons has significant costs. It undermines prison security through leading to the buildup of debt and violence; it creates a dangerous prison environment and significantly reduces the chances that offenders will be successfully rehabilitated. According to CSJ, 2015, substance is a significant factor that contributes for crimes being committed by "substance-misusing offenders" every year in England and Wales' prisons. The consequences of substance abuse in prison are wider than the health issues those users face, which highlighted above. Therefore, illegal transference of

substances in prisons brings with it a catalogue of other problems such as instability, bullying, debts, violence and crimes (William, Alan and Caroline, Cole, 2015)

According to CSJ, 2015, survey report, as one England prison's ex-governor put it:

*“If you’ve got a high percentage of your population that only what they think is about when they wake up and where their next feed coming from? They totally neglect education and works. Similarly, when prisoners are using substance they’re leading chaotic lives: their life revolves around feeding their substance habit. They often cut themselves off from their friends; they don’t make the most of educational and rehabilitation activities; and then it just snowballs. Even, it is very hard for them to be rehabilitated when they leave prison.”*

In general, According to England and Wales's CSJ, 2015 study, failure to tackle substance abuse in prison has significant costs:

- It undermines prison security through leading to the buildup of debt and violence;
- It makes prisoners less likely to engage constructively in their rehabilitation works;
- It significantly contributes towards high reoffending rates both in prison and outside prison. For instance, more than two in five prisoners in England and Wales reported committing offences in order to get money to buy substance in prisons.
- There is also a financial costs; substance abuse habit affect prisoners' financial capacity to buy other necessities in their life.
- The partners of substance-abusers are more likely to suffer from domestic violence and instability.

In conclusion, even if prisoners' psycho-social well beings and rehabilitation as well as prisons' security do not end up with someone becoming only substance-free, but they must start in a substance-free environment. It is clear that imprisonment by itself is an illness if it is not properly managed. Moreover, when substance abuse effects are added to the imprisonment condition, the prisoners' psycho-social well being will become more complicated and the very objective of prison institutions to produce disciplined and productive citizens through rehabilitation works become unfruitful. Therefore, more measures need be to taken to tackle substances abuse in prisons because consequences are too serious for this problem to be silent any longer.

## **2.7. Psycho-social and Rehabilitation Treatment Procedures for Substance Abuse in Prisons**

Within prisons, substance abuse is a criminal offence and therefore, abstinence based interventions are generally viewed as compatible with the goal of prison systems to eradicate substance abuse effects in prisons. Abstinence is compatible with and reinforces the aim of custody in general and is seen to enable prisoners to lead a life without committing criminal offences in prison and after release. Prisons run a variety of rehabilitation programs for substance abusers based on different therapeutic approaches and assumptions. The programs are designed to reduce the risk of re-offending through alleviating prisoners' substance abuse problems. Regarding this, three main approaches and types of programs can be distinguished (Patel, 2010).

**1. Cognitive-behavioral therapy (CBT)** with different levels of intensity (low/medium intensity programs; gender specific and short duration). The aim is to gain social learning experiences and to understand and treat drug-related problem behaviors (Patel, 2010).

**2. 12-step programs:** The 12-step approach is based on social learning within a peer approach, with new group members given instructions on the means to a substance-free life by more established prisoners. It works on the assumption that addiction is a lifelong illness that can be controlled but not necessarily completely cured. The programs are high-intensity for highly dependent prisoners, no matter which specific substance they are dependent on (programs may last for 15–18 weeks) (Patel, 2010).

**3. Structured therapeutic community:** Therapeutic communities are based on hierarchical treatment and aim to teach new behaviors, attitudes and values reinforced through peer and therapeutic community support. It is available for adult prisoners with a medium or high risk of reconviction and level of dependence on substances (Patel, 2010).

### **2.7.1. Abstinence-oriented treatment and therapeutic communities in prisons**

Abstinence-oriented treatment for prisoners is provided predominantly in special facilities (therapeutic communities). Most of the Council of Europe countries have abstinence based programs. Therapeutic communities are intensive treatment programs for prisoners with histories of severe substance abuse and related crimes who have a minimum of 6 months of their sentence left to be released. Therapeutic communities are substance-free environments that implement an

intensive treatment approach that requires 24-hour residential care and comprehensive rehabilitation services. Residents are expected to take between three and 12 months to complete the program. In general, therapeutic community treatment models are designed as total-milieu therapy, which promotes the development of pro-social values, attitudes and behavior through positive peer pressure (Thane, et al. 2008).

Although each therapeutic community differs in terms of services provided, most programs are based on a combination of behavioral models with traditional group-based, confrontational techniques. As a high-intensity, often multi-stage program, therapeutic communities are provided in a separate unit of the prison. Many in prison therapeutic communities ensure a continuum of care by providing community based aftercare, which is closely connected to the specific therapeutic community and part of the correctional system. Little research has been done on the effectiveness of therapeutic communities and the sustainability of abstinence. The unsolved problem is that therapeutic communities are often not linked with interventions of 'safer-substance use' and prophylaxis of mortality after relapse on release. It is suggested that the treatment experiences should be followed up after release (Martin, et al 2002).

### **2.7.2. Contract treatment units and substance-free units**

Substance-free units (or wings or contract treatment units) aim to allow the prisoners to keep their distance from the prison substance scene and market and to provide a space to work on substance abuse related problems. The focus in these units is on substance-free living. Prisoners stay in these units voluntarily. They commit themselves to abstinence from substance and do not bringing in any substance and agree to regular medical and psycho-social support service. The purpose of staying in a contract treatment unit is that the inmate will remain substance-free or at least become motivated for continued treatment after imprisonment. Attempts will be made to motivate the inmates to strengthen their health and personality, to participate in work routines and to maintain and strengthen his or her social network (Marteau, Palmer and Stover, 2010).

The unit offers support in the form of close staff contact and possibly relaxed prison conditions for treatment reasons, as long as the inmate refrains from taking substance during the prison term. The contract treatment units work with group therapy and behavioral consciousness. The treatment principles for the contract treatment units reflect a fundamental concept that the

inmates can be supported in their decision to stop substance abuse by offering close personal contact and talks with psycho-social professionals. Thus, a person is attached to each inmate in a contact person scheme in the units. The contact person is responsible for the inmate's treatment and for handling general casework concerning the inmate (Marteau Palmer and Stover, 2010).

### **2.7.3. Counseling, peer support and peer-driven interventions**

Peer education and peer support can be defined as the process by which trained people carry out informal and organized educational activities with individuals or small groups in their peer group (people belonging to the same societal group, such as of the same age or prisoners). Peer education has the overall aim of facilitating improvement in health and reduction in the risk of substance abuse targeting individuals and groups that cannot effectively be reached by existing services. Peer driven interventions make systematic use of the high and authentic value of peers. Peer educators can play a vital role in educating other prisoners, since most of the behaviors that put prisoners at risk are practiced with together in prison. Peers may be the only people who can speak candidly to other prisoners about ways to reduce the risk of contracting substance abuse effects (Thane, et al., 2008).

Peer educators' input is also not likely to be viewed with the same suspicion as the information provided by the prison hierarchy. Peer educators are more likely to be able to realistically discuss the alternatives to risk behavior that are available to prisoners and can better judge which educational strategies will work within their prison and the informal power structure among prisoners (Thane, et al., 2008).

### **2.7.4. Involvement of community services**

In the past decade, approaches have developed and grown substantially to divert individuals away from prison and into treatment alternatives as well as a range of services within prisons. Specific legislation in several countries has attempted to enhance links between the criminal justice system and health services to reduce the number of substance abusers in and out prisons. Despite this development, the number of prisoners with drug dependence has continued to grow. As substance abusers often serve short sentences, they return into their communities and many return to their old substance-abusing habits. Support services need to be continued in order to



sustain successes that may be achieved while in custody. This indicates that criminal justice agencies need to link better with substance services (Connections Project, 2011).

#### **2.7.5. Working with families and maintaining family ties**

One of the inevitable consequences of imprisonment is the temporary weakening of social contacts. It is true that family ties are not broken off completely, in the sense that in most cases a visit of at least one hour per week is permitted; nevertheless the prisoners' relationships suffer enormously from the confinement. A large number of wives, husbands and children of detainees feel punished themselves to a similar extent as their convicted spouses and fathers. Besides, and worse still, in many cases the marriage is bound to fail or be ruined.' Social contacts in general also suffer as a consequence of imprisonment. In some countries such as Denmark and Switzerland, prisoners are given the opportunity to see their partners without supervision (conjugal visits). Working with families of prisoners is a central part of rehabilitation and social reintegration in many countries (Hedrich and Farrell, 2012).

In some countries (such as Scotland), special family contact development officers are employed aiming to help families keep or initiate contact with prisoners' relatives, to help to work on relatives' substance problems, to inform families about its problems in prison and outside prison and to enhance family visits (Hedrich and Farrell, 2012).

#### **2.7.6. Counseling and the involvement of community health structures**

Counseling is a direct, personalized and client-centered intervention designed to help initiate behavioral change—keeping off substances, avoiding risks or if already affected, preventing further effects to other inmates or partners and to obtain referral to additional health professional support services. Health care employees require different information than guards or surveillance staff; inmates have their own specific background, subculture and language. Mental illness prevention and treatment material from the outside cannot simply be transferred to the prison setting; the relevant target groups require prison-adapted versions. This requires input from different groups based on interviews and FGD (European Health Committee, 2011).

The initial drafts and design of the prevention and intervention programs need to be tested and approved. Both prison staff and prisoners can greatly influence any prison environment.

Therefore, both groups should participate actively in developing and applying effective preventive and treatment measures and in disseminating relevant information.

## **2.8. The Benefits of Managing Substance Abuse Problems in Prisons**

According to WHO (2009), *Health and prison environment; Managing Substance Abuse Problems in Prisons* has benefits:

- **For prisoners:** Addressing and managing the substance abuse problem in prisons will improve the health and quality of psycho-social and functional well beings of the life of both prisoners with substance abuse and of the prison population as a whole. By promoting a greater understanding of the problems faced by those with substance abused, stigma and discrimination can be reduced. Ultimately, addressing the issues of people with substance abuse improves the probability that upon leaving prison they will be able to adjust to community life, which may in turn reduce the likelihood that they will return to prison by recommitting crime.

- **For prison staffs:** Prisons are often difficult and demanding working environments for all levels of staffs. The presence of prisoners with substance abuse can further complicate and negatively affect the prison environment and place even greater demands upon the staffs. A prison that is responsive to and promotes the substance abuse prevention strategy is more likely to be a workplace that promotes the overall morale and conducive work environment for prison staff and should therefore be one of the central objectives of good prison management, psycho-social and rehabilitation services.

- **For the community:** Prisoners are part of the community they come from the community and return to the community. Therefore; Prisoners' health cannot be addressed in isolation from the health of the general population since there is a constant inter-change between the prison and the broader community be it through the guards, the administration, the health professionals and the constant admission and release of prisoners. Prison health must therefore be seen as a part of public health. Moreover, addressing and managing the substance abuse needs of prisoners can decrease incidents of reoffending, improve the peace and stability of the community as a whole after release.

## **2.9. Challenges of Substance Abuse Prevention and Intervention Strategies in Prisons**

Substance abuse in prisons is a stark reality that enormously complicates healthy and the task of rehabilitating prisoners. Therefore, existence of serious substance abuse among prisoners, points to the urgent need for effective prevention and interventions strategies (Frank Tims, 1992).

### **2.9.1. Lack of effective substance abuse treatment programs**

Developing viable and evaluable programs is not a simple task. It is a major challenge to those charged with the responsibility for treating substance abusers in prisons. The program must have continuing organizational support, a conceptual basis and clear objectives, all of which should feed into an evaluation design because an evaluation in turn, can be the basis for program improvement. It needs cooperation of all stakeholders. Evaluative research is a necessarily long-term endeavor. The politicians, administrators and treatment professionals who must advocate support for these programs are frustrated by the delay in availability of “hard data.” Lack of stable research funding in the past, together with compromises in method and program budgets occasioned by events beyond the control of treatment providers and administrators, has left the field even further behind than reason suggests it should be in developing arguments for adequate treatment(Frank Tims, 1992).

In conclusions, substance abuse treatment must be approached in a systematic and stable way. Effective programs must be developed and refined which emphasizes a systematic approach to treatment, clear need assessment, continuity of care, stability of outcomes, research support and a continuing commitment to improving treatment.

### **2.9.2. The Controversial nature of the substances’ benefits and harms**

The nature of the substances that they used as income generating mechanism and their capacity to produce temporary pleasure for the users on one side and its potentials to create dependence on the opposite side makes the nature of substances controversial. Studies have shown that where substances are daily routine and deeply integrated socio-cultural norm, they are largely hampering the psychological, social and health status of the society (Bongard et al, 2011). Another controversy is also found among the international community where, some countries did classify some drugs as illicit drugs, others did not classify these as illicit drugs uniformly.

For example, World Health Organization did not classify Khat as illicit drug while Saudi Arabia classified it as illicit drug to ban it with strictly enforced law. However, some countries like the UK, USA and some African countries; had classified the crop as illegal drugs, but they didn't take serious measure to ban them. On the other hand, their exportation and consumption is illegal to some European countries like: France and Switzerland (Rawlins, 2010).

The above realities are also applicable to Ethiopia in particular. For instance, Khat is now a controversial drug in Ethiopia. For example, by accounting 13.4 % of the export earnings, Khat is the third largest export crop next to coffee and oil seed for Ethiopia. Hence, it plays a considerable role not only in the national economy but also it is a major income source for millions of farming households and traders. Therefore, the government neither encourages nor seriously takes any action against its cultivation, trade and use. So, this silence in turn assisted for the extensive multiplication of the substance over the country. However, its adverse effects on psychological, social, functional and health well beings of the society are stated by studies (Berhanu, et al. 2014). In the prisons where Khat and cigarette are considered as sources of income and pleasure, it is inevitable to create challenges for the substance abuse prevention and intervention program in the prisons.

### **2.9. 3. Peoples' understanding about the effects of substance abuse**

At the most general level, researchers like Oakley and Charles (2004) have shown that substance abuse is a dual-edged individual health issue, as well as a social issue. It affects both the health of the individual and the health of the public. The use of substance has well-known and its severe negative consequences for health are both psychologically and socially. However, there is a wide gap between the scientific facts and public understandings about substance abuse and its effects on psychological and social well being of a person. For example, most people see substance abuse and addiction as social problems to be handled only with social solutions particularly through the criminal justice system. On the other hand, science has taught that substance abuse is a health and social problems. The consequence of this gap is a significant delay in gaining control over the substance abuse problem everywhere and time (Oakley and Charles, 2004).

Moreover, part of the lag and resultant disconnection comes from the normal delay in transferring any scientific knowledge into practice and policy implementation. However, there

are other factors unique to the substance abuse arena that compounds the problem. One major barrier is the tremendous stigmas attached to being a substance abuser (Oakley and Charles, 2004). The most beneficent public view of substance addicts is as victims of their societal situation. However, the more common view is that substance abusers are weak, bad and immoral people; they can't control their behaviors and gratifications. To the contrary, substance abuse is actually a chronic, relapsing illness, characterized by compulsive substance seeking and use at its severe stage (dependence). The gulf in implications between the "bad person" view and the "chronic illness sufferer" view is tremendous. Additionally, many people believe that addicted individuals do not even deserve treatment. This stigma and the underlying moralistic tone is a significant overlay on all decisions that relate to substance abuses (Oakley and Charles, 2004).

#### **2.9.4. Ingrained ideologies of people working on substance abuse prevention and treatment**

People who work in the fields of substance abuse prevention and treatment also hold ingrained ideologies that, although usually different in origin and form from the ideologies of the general public, can be just as problematic for substance treatment programs. For example, many substance abuse workers are themselves former substance abusers or currently using it and they have had successful treatment experiences with a particular treatment method. Therefore, they may zealously defend a program or do even in the face of contradictory scientific evidence. In fact, there are many substance abuse treatments that have been shown to be effective through clinical trials. These difficulties notwithstanding, it is believed that everyone can and must bridge this informational disconnection if he/she is going to make any real progress in controlling substance abuse and addiction in social settings. Therefore, it is time to replace ideology with science (Swann and James, 2002).

#### **2.9.5. Difficulties and stressful life of prison environment**

There are also more suggested reasons for prisoners to use substances while in prisons. Substance abused prisoners are constantly search for substances to fight boredom and the enduring difficult prison environment, to deal with the hardships of prison life or to overcome the psychological and social crisis (such as bad news, convictions and sentencing, violence, ex cetera). Prisoners are also find substances to be relaxed and not to remember the costs of crime they have

committed as well as the families they were separated from. It seems that imprisonment sometimes provides even more reasons for taking substances or continuing the habit, or causes relapse after a period of withdrawal in prisons, because of the addiction has been occurred (Swann and James, 2002). According to Patel, et al. (2010), as stated by the 'Prison Substance Rehabilitation Strategy Review Group', given the environment in which prison rehabilitation is provided, the following challenges are affecting the quality of substance rehabilitation and intervention services in prisons:

- Difficulties of prison's social climates and environmental problems.
- Lack of sufficient basic needs provisions in quantity and quality (food, water, health service, sanitation, sleeping places, etc)
- Lack of recreational facilities and alternatives
- Lack of strong rules and regulations of prison security that sustainably protect substance possession and utilization in prisons
- Lack of conducive relationship between staffs and prisoners that facilitate the effective substance prevention and intervention programs
- Lack of sanitation and hygiene (both environmental and personal)
- Lack of professionals who work on substance intervention and its psycho-social support
- Weakness of Multi-agency (inter-sectoral collaboration) working needs (Courts, Justice Bureau, Police, Social service agency, etc.)
- Many substance abusers prisoners lead chaotic lives and experience complex range of financial, educational, psycho-social and health problems that need to be addressed
- Co-existence of mental health and substance abuse problems
- High and unstable prisoners population movement with frequent entrances and releases
- Lack of operational governance, staff quality, competence and motivation in prisons
- Overcrowding, various forms of violence, enforced solitude or conversely, lack of privacy, lack of meaningful activity, isolation from social networks, insecurity about future prospects (work, relationships, etc), and inadequate health services in prisons.
- The increased risk of suicide in prisons (often related to substance abuse) is unfortunately, one common manifestation of the cumulative effects of these challenges.

- Lack of strategically classifying prisoners by their needs, ages, health status, crimes and term of sentences to facilitate the effectiveness of the substance psycho-social support services and its rehabilitation can affect substance intervention services in prisons.

Generally, the alternatives to substance use strategies have to be developed in order to favor a calm and safe prison environment and effective psycho-social support services.

## **2.10. Legal Frame Works for Substance Use in Prisons**

### **A. International laws and policy statements regarding substance use in prisons**

According to WHO (2009) Khat and cigarette are classified under narcotic substances (illegal). However, their production, use, sales and transferences are different from continent to continent and from country to country. For example, Khat is legal substance in most Eastern African countries like Ethiopia, Somalia, Djibouti, Kenyan and Uganda as well as in few Asian countries like in Yemen. But it is illegal drug in almost all European countries (like Denmark, Finland, France, Norway, Sweden, English and etcetera), North American (like Canada and USA) and Oceania countries (like Australia and New Zealand). Moreover, what makes the whole world similar is that they are being risk takers of the substance abuse to their population (WHO, 2009).

In all criminal justice system of the world, policies and regulations obliged prisons to give substance-free services for the prisoners. This is not a coincidence because the goal of staying substance-free is identical to the goal of penitentiaries to encourage living without committing criminal offences and to obtain genuine rehabilitation services within stable and adjusted prison environment. Because of this identical goal, acknowledging substance availability and utilization is impossible in prisons. Despite these realities, the overall proportion of substance abusers among prisoners has risen continuously worldwide mostly in the secret way. Nowadays, substance abuse be it illicit or licit, is one of the main problems facing prison systems in threatening security, hurting their prisoners' health, affecting the relationships between prisoners and staffs, leading to violence, bullying and mobbing for their friends among the prison community (UN, 2009).

Accordingly, international laws and policy statements regarding substance use in prisons emphasize the following points:

- Prisons should make all reasonable efforts to ensure that prisoners do not have access to any substance, from whatever source that has not been legitimately supplied for their personal medical use. It means that keeping drugs out of prison is a mandatory action.
- Prisoners should be fully assessed and those who no longer have access to their substance choice can be identified and appropriate psycho-social support should be offered.
- Information should be provided to all new prisoners about substance use in prisons and the importance of harm reduction measures.
- Prison staff should be aware that people who may not have used substances before imprisonment might start to use them whilst in prison.
- Neglecting substances problems in prisons has led to consistently fails in its core aim to establish a secure, safe, ordered and law-abiding prison environment.

**B. According to WHO (2009), policies of substance abuse services in prisons states:**

It is essential to recognize that substance abuse (whether it be opiates, cocaine, tobacco, Khat, alcohol or other drugs) is a chronic disease (not a criminal or hedonistic behavior), characterized by a long process of relapses and attempts at stabilization. It is a disorder that consequently requires a continuing care and support approach. It should be treated in the same manner as other chronic illnesses (including diagnosis, treatment plan, control of progress, monitoring, etc.).

- It is vital that any substance treatment and intervention strategies in the community and in prison are not developed in isolation, but linked to other relevant initiatives and strategies. Prison substance strategy should be part of the national substance strategy.
- Substance strategies and interventions in prisons require actions to be taken both on the level of individual behavioral change and structural level. Although targeting programs at individual prisoners or groups of prisoners is important, there is also a need for more structurally oriented measures to run concurrently to address necessary improvements in the living conditions of the prisoners and the working style of prison staff.



- Substance abused prisoners should be given a choice, an appropriate ‘menu of services’, including medical treatment, psychosocial interventions, harm reduction and broader social care that promotes resettlement and recovery.
- Interdisciplinary, multi-professional substance services should combine psycho-social and pharmacological approaches on the basis of stimulation of self-help potentials. Only a comprehensive approach is promising for tackling the problem of drug abuse.
- The different services should be interconnected with each other and should offer the possibility of a transition by the choice of the substance abusers from one module to the other (e.g. from medication assisted treatment to abstinence oriented). A balanced treatment system is vital to ensure that substance-dependent prisoners get access to the types of treatment that are appropriate to their changing needs and circumstances.
- It is vital that substance treatment and interventions are matched to individual need and appropriate to individuals at the time that they are within the criminal justice system i.e. making sure that the right people get the right intervention, at the right time.
- With regard to prevalent somatic or psychiatric co-morbidity among abusers, substance services should be linked to respective services in prisons/outside (referral links).
- In order to prevent treatment gaps on the edge of community prison and prison community, substance services should be organized in close relationship with community services (continuity of care of substance treatment within and between prisons and community services after release). Local partnerships should be established in order to develop routines and integrated care pathways (between prisons and community services that support the treatment and interventions that are most effective, targeted at the right users with abstinence-based treatment for some, medically assisted treatment for others).
- Apart from the specific substance treatment, lasting changes can only be achieved with help and support from outside the treatment system (family and friends, peer support/mutual aid networks, access to housing, and education and employment opportunities). Emphasis is also needed on developing life skills to help prevent relapse into substance use and offending, and a lot of importance placed on crisis support, peer support and daytime activities to help make the transition to a normal life.

- The needs of particular groups (women, minority ethnic groups, people with dual diagnosis (mental health and substance use problems) must be considered.
- It is vital that the service user's 'voice' is heard and their experiences are taken into account. According to health promoting strategies, active involvement of substance users, their families and local communities is pivotal. The involvement of service users should be encouraged and facilitated through regular consultation and service user satisfaction surveys. Service users should be involved in making decisions on how services are developed, designed and delivered.
- Clear and consistent standards for monitoring and evaluating substance-related services should be established to improve the quality of health care that is available. This should include standardized data collection (including gender disaggregated data) so that the measurement and quality of data within a country and between different countries is harmonized, information dissemination is improved, and quality criteria are implemented.
- The allocation of sufficient and sustained funding (in the form of both financial and human resources) is of critical importance and continued lobbying and advocacy work is crucial in helping to secure the provision of high quality substance-related services in prisons and criminal justice systems.

The goals of substance services in prisons must be, as a minimum, protecting prisoners to leave prison in a healthier state than upon arrival and as a maximum, psycho-socially stabilizing prisoners and encouraging them to continue treatment after release. Thus, the ultimate goal of all treatment of substance dependency on an individual level is to achieve abstinence from their substance-dependency either with or without medically assisted treatment. On a systemic or institutional level, reducing re-offending and improving health and rehabilitation are the overarching twin aims (the outcome could be measured with four topics, which need to take into account the situation after release): Reduced substance use, reduced re-offending, improved health and social functioning, increased employment and enhanced workforce (WHO, 2009).

### **C. Laws and Policies regarding substance use in Ethiopian Prisons**

Ethiopia is a signatory to a number of international conventions and agreements that have implications for the management and treatment of prisoners in justice systems. Typically,

international standards tend to be very general statements of universal values as they have to be accepted by countries which have extremely different practical challenges in adhering to them. Therefore, under Ethiopian constitution, the Federal Proclamation No. 365/2003 was developed specifically to regulate the task of prison administration in the Ethiopian context. Under this proclamation, article 22 provides how treatments of the prisoners should proceed in prisons. As per to the proclamation, any psychoactive substances including alcohol that affect prisoners' health are prohibited in prisons. This implies that the conventions and the standards developed by the proclamation must be achievable by any and every prison in Ethiopia regardless of the differences in places, culture, ethnicity, language, resources, et cetera. So, in Ethiopia, substance use laws and policies in prisons states that possession and utilization of substances in prisons is compounded by mandatory prevention and intervention (Daniel, 2012).

In addition to the above international and national legal statements regarding substance use in prison settings, under the Oromia Regional State Prison Administration Commission, the prisoners' governing rule and regulation, article 25(4) states that, except those drugs prescribed and recognized by health professionals, the availability and utilization of any psychoactive substance including alcohol in prison camp is strictly forbidden. Next to this, article 47(5) of this rule and regulation provides that when prisoners found using any forbidden psychoactive substance in the prisons camp, they will be punished as committing of heavy crime as per to the punishment procedure set in this governing rule (Oromia Prison Commission, 2005).

However, the reality exists in the East and West Hararghe zones prisons is different from the above laws and regulations statements in that substance availability and utilization in their prisons is possible. The accessibility and utilization of Khat and cigarette in these prisons is high. Prisoners are able to use these substances daily in these prisons. Unfortunately, there would be any convenient justification and rationale why these two zones prisons could not meet the accepted basic minimum requirements of international conventions for the treatment of the prisoners and that also outlined in the Federal Proclamation of Ethiopia stated to treat prisoners.

## **2. 11. Summary and Implications of the Review of Related Literature**

Under this specific section of the literature review; a few existing empirical studies, implications of theories, gaps of the reviewed related literature and the role of current study to fill the gap were precisely summarized. Accordingly, a few studies were done on substance abuse in prison systems worldwide. For example, prisons and drugs Julien et al. (2008) and substance abuse and dependence in prisons (Mumola and Karberg, 2006). Another study done on substance abuse in prisons had identified signs and symptoms of substance abuse Haney (2015) which focused on illicit drugs that are being utilized illegally with extreme secret in prisons (UN, 2009). A study done by WHO and ICRC (2005) in prison was focused on risks of substance abuse on humanitarian service and protection of human right.

However, nowadays, there are a lot of gaps on the substance use/abuse in prisons. Usually it is difficult to draw a clear detailed picture of substance abuse in prisons worldwide. The reason is that substance abuse in prisons often takes place in extreme secrecy. First of all, precise epidemiological data on substance abuse and related psycho-social problems in prisons have been considered as if it does not exist. Nobody understand and believe that substance abuse problems can exist in prison settings either it be illicit or licit substances. Information about substance abuse and its effects on prisoners' psycho-social and functional well beings is not centrally registered because substance availability and utilization is not legally allowed in the prison settings. Prison administrators are reluctant to reveal information regarding substance abuse in prison because it is often taken as violation of laws and policies.

The Controversial nature of the substances' benefits on one side and its harms on the other side makes the issues of substance abuse and its risks complex especially in the prison environments. Similarly, there is ambiguity and inconsistencies among countries of the world regarding the categorization of psychoactive substance as illicit and licit. For example, some part of the world categorize Khat and cigarette under illicit drugs (especially western world) while other part of the world categorize them under licit drugs (some part of eastern world) (Rawlins, 2010). The few existing studies on substance abuse and its risk in prisons were almost focused on illicit drugs while ignoring the status and effects of licit drugs. The essential functions of the prison institution such as developing prisoners' psycho-social well beings and empowering them

through effective rehabilitation works to produce disciplined and productive citizens were neglected (Swann and James, 2002).

Empirical evidences and theoretical explanation of substance abuse and its risks in prisons appears at its root of difficulties because the topic is still under researched. Despite the above listed cases, the East and West Hararghe Zones prisons of Oromia regional state is different from any other prisons of the region in that the accessibility and utilization of licit substance (Khat and cigarettes) is being practiced by the prisoners in the prisons. However, there is lack of precise epidemiological data and empirical evidences related to substance abuse and its effects on prisoners' psycho-social adjustment and rehabilitation in the prisons. Therefore, these theoretical disparities and lack of related local resources have triggered the current empirical investigation to fill the gaps that identified in the review of related literature.

### **2.12. Evaluation of Substance Abuse and its Risks in Ethiopian Prison Context**

There are no existing written literatures and empirical evidences that directly specified to substance abuse and its effects on prisoners' psycho-social adjustment and rehabilitation in Ethiopian prisons. The reasons behind the absence of written literatures and empirical evidences are more likely might be; as per to the existing trends in prison environments, both possession and utilization of psychoactive substances is not allowed. Laws and policies of the country prohibit the availability and utilization of any psychoactive substances in the prison camps. In many cases, even if the availability and utilization of psychoactive substances were suspected being happened in the prison camps, many people take it as secret phenomenon and obtaining data is impossible for their investigation.

Based on the above general tendency, researchers often conceptualize that substance availability and usage is not practiced in prisons. Therefore, little attention was given to conduct studies in this environment. However, uniquely in the East and West Hararghe zones prisons, drug abuse is acknowledged and openly practiced in the prison camp and data were available on drug abuse and its effects in these prisons. Hence, the study was conducted to assess the effects of drug abuse on prisoners' psycho-social adjustment and rehabilitation the above specified zones.

### 13. Conceptual Framework of the Effects of Substance Abuses

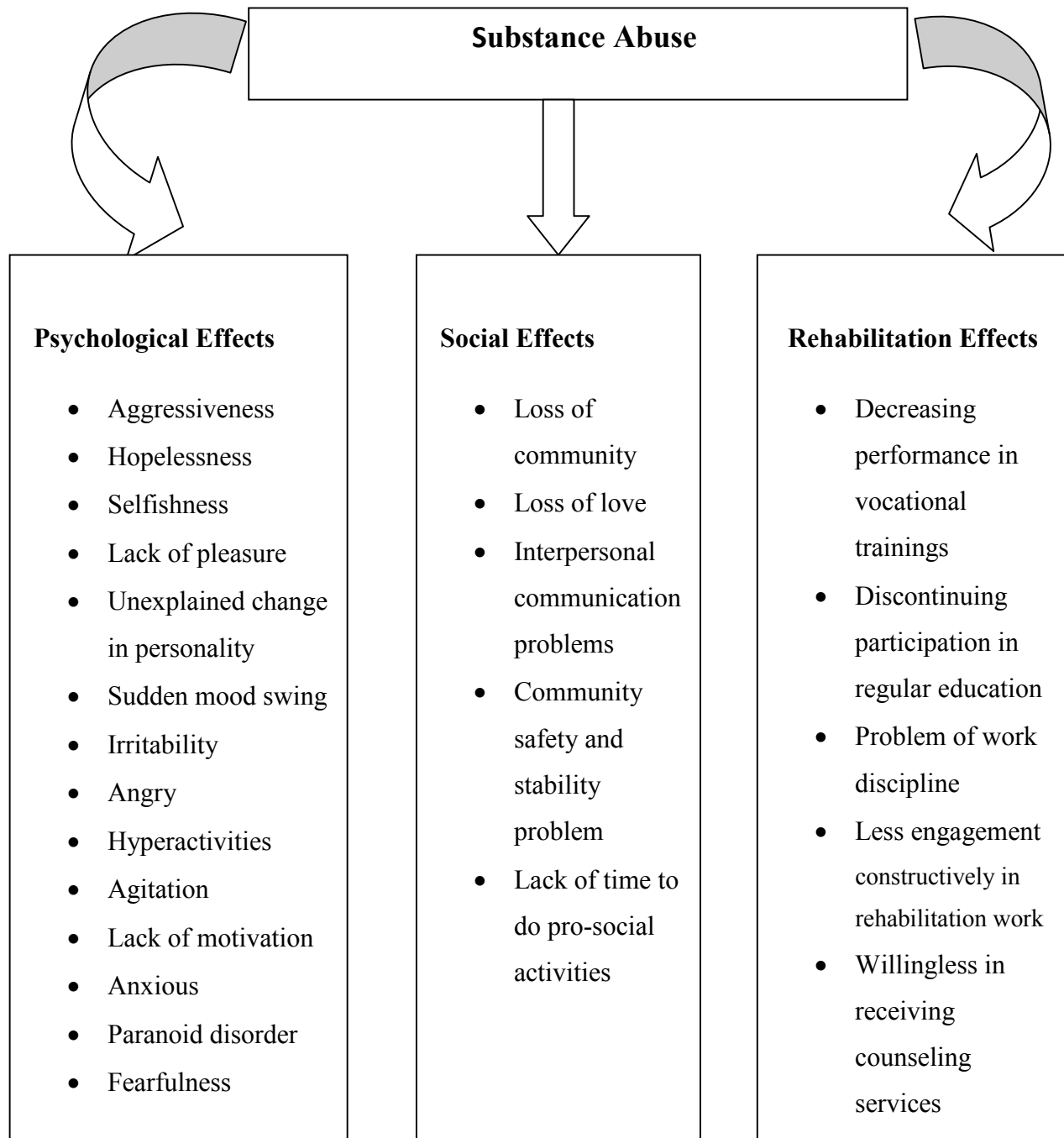


Figure: 1 Conceptual frame work of the study.

### **3. RESEARCH DESIGN AND METHODOLOGY**

The design and methodology part of the study was presented a concise description of research design and methods. It also provided description of the study area, population of the study, sample size and techniques, data collection tools and procedures, study variables and ethical considerations. The section was also identified the statistical techniques that used to analysis data and procedure that used to measure the existence of substance abuse among the prisoners.

#### **3.1. Description of the Study Areas**

The study was conducted in the eastern part of Oromia Regional State at the East and West Hararghe Zones prisons specifically at their respective towns of Harar which is located at 525 kms and Chiro located at 331 kms to the East of the capital city of Ethiopia, Addis Ababa. The two zones are geographically located nearby each other and they are bordered by; East-Somale Regional State, North-Dire Dawa City Administrative Council, North-West-Somale Regional State, South-Oromia Regional State Bale Zone and South-West-Afar Regional State. The cropping system mainly practiced in these zones is Khat and these areas are the most Khat growing areas in the region. By producing over 60% hectares of the zones' land, Khat production and consumption is prominent in these zones, where most of the Khat produced at the rural areas is transported to main town markets for consumption (CSA, 2007).

The major ethnic groups represented in these zones are Oromo (87.5%), Amhara (8.5%) and Gurage (2.4%) while others constitute (1.6%) of the population (such as Tigre, Adere and Somale). From the major religious followers of the zones, 86.4% of the populations are Muslims and 12.6 are Orthodox Christians while others constitute (1%) of the religious followers (such as Protestants and Catholics) (CSA, 2007).

#### **3.2. Research Design**

The study employed mixed survey research method with its specific type of explanatory sequential design in which collecting and analyzing quantitative data were followed by the collecting and analyzing of qualitative data. The reason behind employing the mixed research design was to provide better descriptions and explanations about the research problem through gathering data from different groups of respondents. For the purpose of selecting respondents,

stratified and simple random sampling techniques for prisoners and purposive sampling technique for prison staffs and prisoners' group leaders and availability sampling for ex-prisoners were applied for the study. The study also used both open and closed ended questionnaires, semi-structured interviews and FGD as data collection tools. For data analysis method, descriptive statistics such as frequency tables and percentages as well as correlations and regression analysis were used.

### **3.3. Sources of Data**

This specific part was stated the primary and secondary sources of data from whom the relevant information was gained for the study.

#### **3.3.1. Primary sources of data**

The primary data for this study were gathered from the sample prisoners using open and closed ended questionnaires and FGD. Primary data were also gathered from the concerned administrative staffs through semi-structured interviews.

#### **3.3.2. Secondary sources of data**

The secondary data for this study on the other hand were collected from relevant documents and recorded files related to the research problems from the study areas such as prisoners' statistical data and psychiatric case documents.

### **3.4. Population, Sample Size and Sampling Techniques**

The study population included both male and female prisoners of all ages who have six months and above terms of sentences to death penalties. These target population of the study were from the two zone prisons. Therefore, the East Hararghe Zone Prison has a total target population of 1205 prisoners (M =1150 and F=55) and the West Hararghe Zone Prison has a total population of 1320 prisoners (M =1250 and F=70). The total number of the target population of the study from the two zone prisons were 2525 prisoners (M=2400 and F=125). To get required number of sample from the total population, sample size was determined by computing the formula for proportional allocation to the size of the strata with 95% confidence level of interval and 5% degree of sampling error precision (Kothari, 2004).



Therefore, the sample size (n) of the study was calculated as follows,

$$n_i = \frac{N_i}{1 + N_i(\alpha)^2}$$

Where,  $\alpha = 0.05$

$N_i$  = total population

$n_i$  = sample size

$$\text{Male} = \frac{2400}{1 + 2400(0.05)^2}$$

$$\text{Male} = \frac{2400}{1 + 2400(0.0025)} = \frac{2400}{1 + 6} = \frac{2400}{7} = 343$$

$$\text{Female} = \frac{N_i}{1 + N_i(\alpha)^2}$$

$$\text{Female} = \frac{125}{1 + 125(0.05)^2} = \frac{125}{1 + 125(0.0025)} = \frac{125}{1 + 0.3125} = \frac{125}{1.3125} = 95$$

Therefore, the total sample size of both sexes was  $343 + 95 = 438$ , which is 18 % of the total population of the study. The stratified and simple random sampling techniques to select sample prisoners and purposive sampling technique to select staffs and prisoners' group leaders as well as availability sampling with snow balling mechanism to select ex-prisoners were applied for the study. The criteria to purposively selecting staffs and prisoners' group leaders was that they have close contact with the prisoners in their daily functions and aimed to provide important data on the research problem. Regarding the stratified sampling technique, the prisoners' population of the study was classified into six strata bearing in mind the term of sentence as a classification criterion to owe strata.

Finally, from each of the stratum the required individual prisoner (respondent) was selected by using simple random sampling technique with its lottery method in which "0" and "1" numbers were provided to all members of the stratum by the researcher and facilitators. Accordingly, during distributing the enrolled papers to the prisoners, number "1" was deliberately made to be equal with the required number of sample size from each stratum and those prisoners who were by chance picked up number "1" were taken as sample of the study while those who by chance picked up "0" were not taken as sample of the study. Further elaboration was denoted the population and sample size that proportionally allocated from each stratum outlined by the following table.

**Table 1: Population, Sample Size and Sampling Technique**

No.	Name of prisons	Term of sentence (criterion to owe strata)	Population			Sample size		
			M	F	Total population	M	F	Total sample
1.	East Hararghe Zone Prison	6 -11 months	127	14	141	17	10	27
		1-5 year	258	17	275	38	13	51
		6-10 year	246	10	256	36	7	43
		11-15 year	269	7	276	38	5	43
		16-20 year	198	4	202	28	3	31
		21 year and above	52	3	55	6	2	8
		Total	1150	55	1205	163	40	203
2.	West Hararghe Zone Prison	6 -11 months	148	25	173	20	20	40
		1-5 year	283	18	301	42	15	57
		6-10 year	270	12	282	39	10	49
		11-15 year	285	8	293	40	5	45
		16-20 year	216	5	221	33	3	36
		21 year and above	48	2	50	6	2	8
		Total	1250	70	1320	180	55	235
		Grand total	2400	125	2525	343	95	438

(Sources: The two zones' prisons statistics of the prisoners by the term of sentence, 2016)

### 3.5. Data Collection Instruments

The data collection instruments part of the study was described the nature, purpose and administration of the questionnaires, interviews and focus group discussions. This sub-section was also stated the procedures through which reliability and validity of the tools were checked by conducting pilot study and measures taken afterwards.

### 3.5.1. Questionnaire

The questionnaire has a total of 58 items which were distributed for 438 participants (203 from the east zone and 235 from the west zone prison) that were included in the study. Open and close ended self-administering questionnaires with alternatives, yes/no and five point likert scales appearances were used as the principal data collection tools in order to get extensive information from the respondents. There are three main parts of the questionnaire that designed to address the research questions. Part one; items designed to address demographic information stated as sex, age, religion, education and ethnicity. Part two; items designed to provide information on the prevalence of substance abuse and its associated factors among the prisoners with open and close ended response format. The above two parts of the questionnaire were made by the researcher. Part three; these are pretested and modified survey items designed to measure the prisoners' opinion toward the effects of substance abuse and stated as five point likert scales with response format of strongly disagree to strongly agree that adopted from WHO (2003) were used.

All questions were filled and returned back because, respondents are found in prison camp, the specific confined area that can easily possible to manage the administration of the questionnaires. The questionnaires were prepared in English and translated into Afan Oromo with the purpose of helping the respondents to state their responses clearly and freely without language barrier and finally retranslated to English. The translation was done by the researcher and two language experts were also consulted to maintain the language content accuracy (one from Afan Oromo and the other from English language).

Reliability and validity of the tools were checked through conducting pilot test and giving training for facilitators and data collectors. Accordingly, internal consistency reliability analysis was ensured through Chronbach alpha (Tavakol and Dennick, 2011) and concurrent validity was ensured through correlation coefficient (Rattray and Jones, 2007). In addition to this, completeness and fulfillment of all questions by prisoners were checked by the researcher and data collectors during collecting the questionnaire and incomplete questionnaire were refilled immediately. Moreover, pilot study was contributed lots in justifying the overall research design, validity and reliability of the research tools as well as helped in refining and improving the questionnaire and ethical issues for the actual research work. Therefore, to clearly determine the reliability of the instruments those prepared to assess the effects of substance abuse on prisoners'

psycho-social adjustment and rehabilitation, it was first administered to 40 substance abused participants randomly selected from Harari Regional State Prison Institution (among those who abused Khat and cigarette and who were also voluntary); because, in this prison, substance use in prison is possible like the prisons at which the actual research was conducted.

Sample size for this pilot study was represented 10% of the sample size calculated for the actual study. Finally, responses of the pilot study were scored and the reliability of the questions was assessed using Cronbach Alpha, which is found to be 0.86. This implied that reliability of the instruments was more than the acceptable level of reliability in this study which was stated 0.50 and above. Besides the mathematical procedure of pilot test, the possible practical problems that might have negative influences on the success of the actual full-scale research were also identified and appropriate modifications were made on the following criteria:

- i. The possible flaws in measurement and management procedures (including instructions, time limits, ethical consideration, etcetera) were detected.
- ii. Unclear or ambiguous items in a questionnaire were identified and corrected.
- iii. Non-verbal behavior of participants about any embarrassment or discomfort experiences concerning the content or wording of items in a questionnaire was explored.
- iv. Appropriateness of the content, level of sophistication of language, type and form of sequence were identified from the respondents' serious considerations.
- v. Logical, technical and format problems of the questionnaire or interview were addressed.
- vi. General practical problems with its implementation were identified.
- vii. Challenges with the logistics of distributing and collecting the survey or errors in data entry were explored and measures were taken to modify the inconveniences.

### **3.5.2. Interview**

The nature of the interview questions was semi-structured. Therefore, 6 interview questions for administrative staffs, 6 interview questions for prisons' social psychological professionals and 6 interview questions for ex-prisoners totally 18 semi-structured interview questions were conducted to gather data from these three groups of interview respondents. The administrative staffs and professionals were purposively selected for the interview based on the criteria that they

have close contact with the prisoners in their daily functions because of the nature of their work and aimed to provide important and experienced data on the research problem.

The number of interviewees included in the study was 10 staffs (5 staff respondents from the East and 5 staff respondents from the West zone prison), 4 social psychological workers (2 from the East and 2 from the West zone prison) and 10 ex-prisoners (5 ex-prisoners from the East and 5 ex-prisoners from the West zone prison). The interview for administrative staffs and professionals was conducted in their own office separately to help them respond freely and it was conducted in one day at the same time in eastern zone prison by the researcher and research assistants to avoid contamination information and another day in the western zone prison with the same procedure. The interview responses were recorded manually.

The ex-prisoners were selected using availability sampling technique with its snow balling mechanism from the surrounding areas by the indication of other people in order to get data from their lived experiences while they were in prisons. The purpose of interview was primarily to address the research questions directed to interview respondents and to obtain additional data which were considered not to be gained through questionnaire by clear face to face question and response approaches. Interview was conducted for ex-prisoners at their living/working places.

### **3.5.3. Focus group discussion**

For this study, a total of 7 FGD questions were designed to gather information which was considered not to be obtained through questionnaires and interviews. The FGD discussion was held with the purposively selected prisoners' group leaders that had two groups and six members in each of them and who were 12 in number (6 from the East zone and 6 from the West zone prison). These respondents were selected because of their daily contact with prisoners and aimed to get sufficient living and leading experiences in the prisons. The purpose of FGD was to help the investigator to get additional information about the effects of substance abuse on prisoners' psycho-social adjustment and rehabilitation because; the group leaders were aimed to provide reliable and reasonable data on the issues as they are encountering with the problem daily in the prisons. FGD was taken an hour and fifteen minutes starting from self introduction to the end.

### **3.6. Data Collection Procedures**

Data were collected from the prisoners' sample stratum through questionnaires at the same day and time within both prisons to prevent the contamination of information. This was done by research assistants and data collectors by distributing for and collecting questionnaires from the sample prisoners. Interview and FGD were offered at another day with those purposively selected staffs and prisoners' group leaders by the researcher. Regarding consent and permission, the formal letter was obtained from the University. So, the letter was taken to the prison administrations and after they gave permission for the investigator to do the research, the work was started.

The researcher was also informed the objective of the study and prisoners were kindly requested for their full consent and cooperation and their verbal consent was obtained and brief explanation on the aim of the study was provided for them at the beginning of data collection session. Participation was based on voluntary basis and accountability, confidentiality, neutrality and academic honesty was maintained throughout the study to encourage accuracy and honesty of self-disclosure. After that, the questionnaires were distributed to the sample prisoners in the preferred room and the filled questionnaires were collected immediately.

#### **3.6.1. The Procedure used to Measure Whether Substance Abuse Exists among Prisoners**

Under this specific procedure, the brief drug abuse involvement screening items that adopted from WHO (2003) was used to determine if substance abuse exists among the prisoners. The measurement instrument was developed by the World Health Organization and an international team of substance use researchers as a simple method of screening for hazardous, harmful or dependent use of psychoactive substances. Accordingly, the questionnaire that consists of 6 items was adopted aiming to identify the prisoners who may have pattern of problematic substance consumption like hazardous, harmful or dependent use of substance in the prisons. These items are listed below.

1. Do you use substances daily in the prison?
2. Have you ever felt you should cut down on your substance use?
3. Have you ever suffered from painful substance use withdrawal symptoms?

4. Have people annoyed you by criticizing your substance use condition?
5. Have you ever felt bad or guilty about your substance use?
6. Have you ever used substance as first thing in the morning to motivate yourself for working or to get rid of a hangover (as eye-opener)?

Note that; the items' responses on the questions are scored 0 for "no" and 1 for "yes" answers. The responses of the 6 items are taken as hundred (100%). The interpretation was given for total scores as per to the procedure of WHO and total scores of half and above out of 100 is considered as fulfill the criteria of substance abuse which is ( $\geq 50$ ).

### **3.7. Method of Data Analysis**

The data analysis methods were both quantitative and qualitative. The quantitative data was analyzed using descriptive statistics (frequency tables and percentages) which was followed by correlation and regression analyses to examine the association of independent and dependent variables of the study and to predict the effects of substance abuse on prisoners' psycho-social adjustment and rehabilitation respectively. The SPSS version 20 was used in the study for the purpose of analysis and presentation of the result regarding the effect of substance abuse on prisoners' psycho-social adjustment and rehabilitation. The qualitative data that gathered through interview and FGD were analyzed by grouping, categorizing and thematizing similar responses given by the groups of respondents. On the other hand, an individual response was stated uniquely. Therefore, quantitative data were analyzed first and after it was completed the qualitative data were followed.

### **3.8. Ethical Consideration**

The formal letter was written from Haramaya University Postgraduate Program Directorate to the prison institutions at where the study was conducted and permission was obtained from the prison administration. The researcher was got the prisoners by the staffs that have close contact with them. Verbal informed consent was obtained from the respondents after explaining the purpose of the study. Participants were informed that they have full right to continue, discontinue, or refuse to participate in the study. In addition to these, respondents were ensured that the responses were kept confidential and anonymous.

## 4. RESULTS AND DISCUSSIONS

This specific section of the study stated details of the results and discussions of the collected data with their analyses and interpretation. Accordingly, the background information of the respondents, prevalence of substance abuse among the prisoners, prisoners' opinion toward the effects of substance abuse on their psycho-social adjustment and rehabilitation, prediction of substance abuse effects from the prisoners' demographic variables and factors associated to abuse substances in the East and West Hararghe Zones Prisons that were responded by the prisoners, prison administrator, prisons' psycho-social professionals and ex-prisoners were organized and analyzed. A total of 58 items in the questionnaire part (for 438 prisoners), 18 basic interviews questions (for 10 staffs, 4 professionals and 10 ex-prisoners that contains six items for the three groups) and 7 FGD questions (for Prisoners' group leaders who were 12 in number, 6 from the East zone and 6 from the West zone prison) were administered as data collection tools.

All questions distributed for 438 prisoners (100%) were filled and returned back because, these respondents were found in prison camp, the specific confined area that can easily possible to manage the administration of the questionnaire during its distribution and collection. The results and discussions were done as one chapter sequentially, that the results stated first, followed by discussions. Therefore, descriptions, interpretations, synthesizing and analyzing were done in line with the major findings of the survey results. Moreover, it is a reality that one of the qualities of scientific research is crafting a holistic meaningful picture of a research finding by connecting and showing the thread off the three pillars of the study (a) basic research questions, (b) previously conducted related studies and (c) the current findings. However, lack of previous studies specified to this research problem was limited the ability to compare and contrast the current study with the previous studies to evaluate and show changes over time on the area.

### 4.1. Demographic Characteristics and Background of the Respondents

Under this sub section of the study, background information of the respondents such as sex, age, religion, educational status and ethnicity were described and analyzed using descriptive statistics (frequencies and percentages). The term of sentences, duration of stay in prisons, type of crimes and residences of the prisoners before imprisonment are also described in this specific section.



**Table 4.1.1.:** Demographic Characteristics of the Respondents

<b>Socio-demographic variables</b>	<b>Frequency (n=438)</b>	<b>Percentages (%)</b>
<b>Sex</b>		
Male	343	78.31
Female	95	21.69
Total	438	100
<b>Age group</b>		
18-25	158	36.00
26-35	196	44.80
36-45	64	14.62
46-55	16	3.66
≥ 56	4	0.92
Total	438	100
Mean age = 28.4, S.D. = 7.6		
<b>Religion</b>		
Orthodox	43	9.82
Muslim	387	88.35
Protestant	8	1.83
Catholic	0	0
Others	0	0
Total	438	100
<b>Educational status</b>		
No formal education	41	9.36
Elementary (Grade 1-4)	194	44.29
Elementary (Grade 5-8)	115	26.26
General Secondary School (Grade 9-10)	43	9.83
Preparatory School (Grade 11-12)	27	6.16
Level (I,II,III)	13	2.96
Diploma	5	1.15
Degree and above	0	0
Total	438	100
<b>Ethnic group</b>		
Oromo	426	97.26
Amhara	8	1.83
Tigre	0	0
Gurage	4	0.91
Others	0	0
Total	438	100

Source: Survey result, 2016.

As indicated in table 4.1.1, a total number of 438 respondents were involved in the study. Out of these, 343 (78.31%) were males, while the remaining 95 (21.69%) of them were females. The above finding obviously shows that males, 343 (78.31%) were more likely indulged into offensive activities and they found themselves in prisons. In addition to this survey result, the existing literatures on gender and crimes evidenced that males are more vulnerable gender in the society due to the abnormal childhood socialization, the influences of socio-cultural milieu that value male domination in the society, substance involvement and many more engagements that make them sensitive and bold enough to commit reckless crimes (Robert, 2008). Based on this empirical evidences, in every prevention and intervention program in prisons, males should be given due attention since they seem crime prone gender in the society and more vulnerable to involve in substance abuse and being its risk taker.

The same table has also shown that majority of the respondents, 196 (44.80 %) were under the age of 26-35 followed by 158 (36%) of the respondents who were under the age of 18-25 while 64 (14.62%), 16 (3.66%) and 4 (0.92%) of the respondents were under the age of 36-45, 46-55 and above 56 years respectively. Their age ranges between 18 and 65 with mean age of 28.4 years and (S.D. 7.6). It can be inferred that majority of the offenders were found at lower age groups (adolescent and early adulthood). On the other hand, a study done on 'crime and aging' in California on 1080 sample population with different age groups was revealed that at their negative stream, the lower age groups (teenagers up to mid-thirties as the study) are 'crime prone ages' while at their positive stream they are 'productive age groups' ( Carstensen, 2007).

In case of the current study, the lower age groups were the dominant one that has a huge implication for rehabilitation workers, counselors, administrators and other concerned bodies to be conscious about persons who are from such developmental stages in the prevention and intervention of substance abuse problems and supporting rehabilitation schemes within prison environment. Furthermore, this also entails that identifying 'crime prone and productive age group' helps prisons make a wise decision to embed holistic approach to these productive work forces and improve the prisoners' future life after release.

Concerning the religions, dominant number of the respondents 387 (88.87%) are Muslims. In terms of education, 194 (44.29%) of the prisoners were from grade 1- 4 followed by 115 (26.26%) of the prisoners who were from grade 5-8 and 43 (9.83%) of them who were from

grade 9-10. The rest of the prisoners 41 (9.36%) of them were those who have no formal education but they can read and write Afan Oromo Language. Therefore, it did not create problem in filling the questionnaire during the data collection session. Hence, it is fair to say that dominant numbers of the prisoners have very low educational status. Implication of the survey result seems that persons with better educational status have a least chance to commit offensive and reckless actions in the society to come to prisons and the evidences adhere vice versa.

Furthermore, the survey result has indicated that, in the crime and substance abuse prevention and intervention programs as well as in the rehabilitation scheme in prisons, concerned bodies are better to consider both prison-based and curriculum education to improve the prisoners' educational status. Regarding the ethnic groups, nearly all of the respondents 426 (97.26%) were Oromo followed by Amhara which is 8 (1.83%) and Gurage which is 4 (0.91%). The reason behind why majority of the respondents were from the Oromo ethnic group was that almost all prisoners of the Eastern and Western Hararghe Zones prisons were from the nearest districts of the two zones. On the other hand, respondents whose ethnic group was Amhara and Gurage can read, write and speak Afan Oromo Language clearly since they were dwellers of the zones for long time so that language did not created problem in filling questionnaires.

**Table 4.1.2.:** Summary of the Term of sentence, Duration of stay, Type of crimes and Residence

<b>Variables</b>	<b>Frequencies (438)</b>	<b>Percentages (%)</b>
<b>Term of sentences</b>		
6 -11 months	29	6.62
1-5 year	50	11.42
6-10 year	106	24.20
11-15 year	114	26.02
16-20 year	123	28.08
≥ 21	16	3.66
Total	438	
<b>Duration of stay in prison</b>		
6 -11 months	62	14.16
1-5 year	117	26.80
6-10 year	218	49.80
11-15 year	33	7.60
16-20 year	7	1.64
≥ 21	0	0
Total	438	
<b>Type of crime</b>		
Murder	179	40.87
Attempts of murder	68	15.52
Theft	77	17.58
Destroying property	42	9.59
Physical attack	35	7.99
Sexual assaults	24	5.48
Others	13	2.97
Total	438	
<b>Residence before imprisonment</b>		
Rural	382	87.21
Urban	56	12.79
Total	438	

Table 4.1.2, has indicated that concerning the term of sentences, greater number of the respondents, 123 (28.08%) of them had a term of sentences from 16-20 years followed by 114 (26.02%) of them who had a term of sentences from 11-15 years and 106 (24.20%) those who had term of sentences from 6-10 years. This shows that the majority of the respondents have longer term of sentences that inferred they had committed heavy crimes. Regarding the duration of stay in prison, almost half of the respondents 218 (49.80%) have stayed in prison from 6-10 years followed by 117 (26.80%) of them who had stayed in prison from 1-5 years.

These implied two main ideas; first, those prisoners who were stayed in prison above 6 years can give better lived experiences information for the effects of substance abuse on the prisoners' psycho-social adjustment and rehabilitation and secondly, those prisoners who have above 10 years term of sentences should stay above 6 years to finish their three-fourth compulsory.

Concerning the types of crimes, the table has also indicated that 179 (40.87%) of the respondents were committed murder while 77 (17.58%) and 68 (15.52%) of them were committed theft and attempts of murdering crimes respectively. This implies that the greatest number of the prisoners was committed heavy crimes that indicate lots have to be done to prevent this social ramification and it requires the concerned bodies to formulate serious prevention and intervention strategies to create awareness about seriousness of the crimes and need to develop peace education in the societies. For the place of residence before imprisonment, majority of the respondents 382 (87.21%) were came from rural areas while only 56 (12.79%) of them were from the urban areas. This might implies that urban life is nearer to information and awareness about law breaking actions as well as lower rate in committing crimes than the country side that are far from the information and awareness. Lots are needed to prioritize rural communities in creating legal awareness and informing seriousness of committing crime and its risks.

#### **4.2. Prevalence of Khat and Cigarette Abuse among the Prisoners**

Under this sub-section of the analysis part, information about Khat and cigarette abusers, its percentage distribution among prisoners' demographic factors, frequency of substance use and areas from where these substances are being supplied for the prisoners were described.

**Table: 4.2.1.** Prevalence of Khat and Cigarette Abuse among the Prisoners

Variables		Frequency (n=438)	Percentages
Khat abusers	Yes	296	67.58
	No	142	32.42
Cigarette abusers	Yes	90	20.55
	No	348	79.45
Total Abusers	Yes	386	88.13
	No	52	11.87

Based on the WHO (2003) substance abuse involvement screening survey questionnaire procedure set in the methodology part of this study, out of the total sample population, 386 (88.13%) of the respondents fulfilled the criteria of substance abuse (total responses  $\geq 50$ ). Accordingly, 296 (67.58%) were Khat abusers and 90 (20.55%) of them were cigarette abusers respectively. Therefore, the following table 4.2.2, and 4.2.3, were illustrated the distribution of Khat and cigarette abuse among the prisoners' demographic characteristics.

**Table 4.2.2.:** Distribution and Frequency of Khat and Cigarette Abuse among the Prisoners

Variables	Frequency	Percentages (%)
Current Khat abusers in the prisons		
Men (343)	238	70.00
Women (95)	58	61.05
Total (438)	296	67.56
Current cigarette abusers in the prisons		
Men (343)	83	24.20
Women (95)	7	7.36
Total (438)	90	20.55
Frequency of Khat and cigarette consumption currently in the prisons (386)		
Daily	374	96.89
2-3 days per week	12	3.11
4-5 days per week	0	0
Weekly	0	0
Occasionally	0	0
Total	386	100
From where you get these substances for use (386)		
Prisoners' micro business	320	82.90
Families and outside Communities	66	17.10
Nearby shop	0	0
Prison communities	0	0
Total	386	100

As table 4.2.2, has indicated, out of the sample prisoners 238 (70.00%) of males and 58 (61.05%) of females totally 296 (67.56%) are currently Khat abusers in the prisons. The 83 (24.20%) of males and 7 (7.36%) of females totally 90 (20.55%) of the sample population were currently cigarette abusers in the prisons. In case of current Khat and cigarette use frequency in the

prisons, nearly all substance abused respondents 374 (96.89%) are using these substance daily followed by 12(3.11%) who were consuming it 2-3 days per week. This implies that the time spent to use these substances daily in the prisons can affect the time required for rehabilitation and other pro-social activities in the prisons such as counseling, education, vocational trainings and clubs activities.

The interview responses strengthens these survey results in that;

*One staff member was replied that especially in the afternoon time, all prisoners do not need to attend their education, they reflected unwillingness when asked to go and follow their counseling services and they always miss their vocational training programs. They only need sitting and utilizing Khat and cigarette throughout the day. Even, surprisingly many prisoners do not need to go to court to hear and follow their formal court trial process for what they have accused of.*

Regarding the place from where prisoners get Khat and cigarette, 320 (82.90%) of them were responded that they were getting these substances from the prisoners' micro business enterprises that found within the prisons' camp while 66 (17.10%) of the prisoners were responded they were getting these substances from their families and outside communities when they bring it to the prisons. Therefore, it is easy for the prisoners to get Khat and cigarette in the prison environment since their availability and accessibility was very high. Hence, to make the treatment of substance abuse successful, serious measures should be taken in reducing and finally preventing the availability and accessibility of substances in the prison environment.

**Table 4.2.3.:** Distribution of Khat and Cigarette Abuse among the Prisoners' Demography

<b>Variables</b>	<b>Frequency</b>	<b>Percentages (%)</b>
<b>Current both Khat and cigarette abusers by age group (386)</b>		
18-25	148	38.35
26-35	186	48.18
36- 45	46	11.92
46-55	6	1.55
≥ 56	0	0
<b>Religion (386)</b>		
Orthodox	28	7.25
Muslim	358	92.75
<b>Educational status (386)</b>		
No formal education	39	10.11
Elementary (Grade 1-4)	186	48.18
Elementary (Grade 5-8)	108	27.98
Secondary School (Grade 9-10)	26	6.74
Preparatory School (Grade 11-12)	16	4.14
Levels (I,II,III)	9	2.33
Diploma	2	0.52
<b>Type of crime (386)</b>		
Murder	174	45.08
Attempts of murder	58	15.03
Theft	69	17.87
Destroying property	36	9.33
Physical attack	31	8.03
Sexual assaults	18	4.66
<b>Term of sentences (386)</b>		
6 -11 months	16	4.14
1-5 year	45	11.66
6-10 year	96	24.87
11-15 year	104	26.94
16-20 year	111	28.76
≥ 21	14	3.63
<b>Duration of stay in prison (386)</b>		
6 -11 months	49	12.69
1-5 year	94	24.35
6-10 year	203	52.60
11-15 year	33	8.55
16-20 year	7	1.81



As table 4.2.3, indicated 186 (48.18%) of the respondents who were both Khat and cigarette abusers were under the age of 25-35 followed by 148 (38.35%) of the respondents who were substance abusers were under the age of 18-25. Similarly, 46 (11.92%) and 6 (1.55%) of the Khat and cigarette abusers were under the age of 35-45 and 45-55 respectively. Concerning the religion of the substance abusers, 358 (92.75%) of the respondents were Muslims and 28 (7.25%) are Orthodox Christians. Regarding the educational background of the respondents who were substance abusers, 186 (48.18%) were from grade 1- 4 followed by 108 (27.98%) of them who were from grade 5-8. The next 31 (10.11%), 26 (6.74%) and 16 (4.14%) of the substance abusers were from those who have no formal education, from grade 9-10 and from grade 11-12 respectively.

From crime types of the substance abusers, 174 (45.08%) of the respondents were committed murder followed by 69 (17.87%) respondents who were committed theft. The rest 58 (15.03%) and 36 (9.33%) of the substance abusers were committed attempts of murder and destroying property respectively. Regarding the term of sentences, 111 (28.76%) of the respondents had term of sentences from 15-20 years followed by 104 (26.94%) respondents who had term of sentences from 10-15 years. The rest (24.87%) and 45 (11.66%) of the substance abused respondents had 5-10 and 1-5 years term of sentences respectively. Among the substance abusers, majority of the respondents 203 (52.60%) were stayed in prisons from 5-10 years followed by 94 (24.35%) who were stayed in prisons from 1-5 years. The rest 49 (12.69%) and 33 (8.55%) of the respondents were stayed in prisons from 6-11 months and 10-15 years respectively.

Information from prisoners' group leaders in FGD suggested that;

*One prisoner from the prisoners' group leader was suggested that, in his prison Khat and cigarettes were not only used for the chewing or smoking purpose, rather they were main sources of income for both prisoners and prisons as a tax form from the prisoners' micro business enterprises. Therefore, prison staffs by themselves were not willing to stop substance possession and utilization in the prisons. However, now days, the trouble that substance abuse being caused in the prison was affecting both prisons and prisoners and it seems that currently it is beyond the capacity of the institution to control it.*

**Table 4.2.4.:** Factors Influencing Prisoners to Abuse substances in the Prisons

	<b>Subjective experiences</b>	<b>Responses</b>	<b>Frequency (438)</b>	<b>Percentage (%)</b>
Factors that influencing prisoners to abuse substances in prisons	Availability of substance in prisons	Yes	146	33.33
		No	292	66.67
	Previous experience of using substances	Yes	119	27.17
		No	319	72.83
	Prisons' stressful life and its environmental difficulties	Yes	83	18.95
		No	355	81.05
	Peer pressure	Yes	30	6.85
		No	408	93.15
	Cultural and traditional Influences	Yes	27	6.16
		No	411	93.84
	Personal pleasure	Yes	22	5.02
		No	416	94.98
	Social acceptance	Yes	11	2.52
		No	427	97.48
	To stay awake	Yes	0	0
		No	438	100
	To get relieve from unpleasant imprisonment's feelings and tensions	Yes	138	31.51
		No	300	68.49
	To forget the memory of Families	Yes	127	28.99
		No	311	71.01
	To fight with the boredom of prison life	Yes	104	23.75
		No	334	76.25
	To pass extra time	Yes	20	4.56
		No	418	95.44
	For self relaxation	Yes	18	4.11
		No	420	95.89
	For socialization	Yes	15	3.43
		No	423	96.57
	For lack of work to do	Yes	12	2.74
		No	426	97.26
To avoid withdrawal Symptoms	Yes	4	0.91	
	No	434	99.09	

Source: Survey results, 2016

Table 4.2.4, has shown that, out of the total respondents, 146 (33.33%) of them have responded that the 'availability of Khat and cigarette in the prisons was the major factor influencing them to abuse substances in the prisons followed by 138 (31.51%) of them who replied that 'to get relieve from unpleasant imprisonment's feelings and tensions' was another factor influencing them to abuse substances in the prisons and 127 (28.99%) of the respondents were replied that 'to forget the memory of their families' as a factor influencing them to abuse substances in the prisons. The other important proportion of the respondents, 119 (27.17%), 104 (23.75%) and 83 (18.95%) were answered that the 'previous experience of using substances', 'to fight with the boredom of prison life' and 'prisons' stressful life' as the major factors influencing them to abuse substances in the prisons respectively. However, the other factors those responded as influential factors to substance abuse in prisons were not considered as such significant.

These survey results have many implications; first, prisons by themselves are facilitating opportunities for their prisoners to simply get Khat and cigarette in the prisons in a way like forming the prisoners' micro business enterprises as the means of generating incomes but, without giving due attention to the prisoners' psycho-social adjustment and effectiveness of the rehabilitation services in prisons. Secondly, prisons were allowing the prisoners' families and outside communities to bring Khat and cigarette to the prison camps. Thirdly, absence of organized and holistic approaches to improve the previous Khat and cigarette abusing habits after the prisoners entered prisons as per to the substance use policies in prisons that adheres prisons should be substance free institutions (Stover, et al., 2007).

Generally, the above descriptions have broadly implied that there were prominent imprisonment-based psycho-social problems that require continuous counseling and rehabilitation services to improve the substance abuse condition in the prisons. Moreover, what should be considered besides this implication is that substance abuse can seriously complicate psycho-social problems and rehabilitation services in the prisons. The other implication seems that it needs further investigation to make prison environment conducive for life and effective rehabilitation center. In addition to the questionnaire results, during the interview session one prison administrator was suggested to the research question directed to assess the challenges to stop substance availability and utilization in prison as follow;

“First, our prisoners have deep rooted socio-cultural attitudinal problems with related to substance use experiences outside the prison and they came to the prisons with these behaviors which were beyond our capacity to solve. Second, even if there is substance use policy in prisons that entails prisons should be substance free places, there is a weakness in the policy enforcements. For instance, the government knows the existing situation in the prisons but there is no serious action taken till now to solve the problem. Third, the prisons feared that if substance use is prohibited, the prisoners disturb the institution and they never refrain from escaping out of the prisons’ camp because of the effects of withdrawal symptoms.

During interview, one another prison administrator said that “One day we tried to stop Khat and cigarette not to enter prison and enforced prisoners to spend a day without chewing Khat or smoking cigarette but unexpectedly, majority of the prisoners were shouted, attempted to jump on the campus, started to conflict with each other and the prison became full of chaos and noise. Therefore, we stopped such kind of practice after that day because it brought a problem on the prisons’ security since there are many prisoners who are with severe substance abuse habit in the prisons.” Fourth, one staff member during interview session responded that “The controversies that Khat and cigarette provides partly as income generating mechanism and its capacity to produce temporary pleasures for the abusers was challenged the attempts to stop the availability and utilization of Khat and cigarette in the prison. Fifth, another staff suggested that almost all staffs themselves were using substances even around the prison camp. Hence, they are not willing to take serious measures to tackle its demands, supplies and consumption in the prisons.”

Therefore, substance use in prison is being taken as a managing mechanism to the prisoners since it controls their attention and concentration. However, this needs further investigation and collaboration of different concerned bodies to improve the substance abuse related problems in the prisons. On part of the existing related empirical evidences, a study done in a Kenyan prison on substance abuse among prisoners had identified common factors shown in the current study that were attributed to substance abuse in prisons. These factors were the need for relaxation (36.5%), relieve from stress and boredom of prison environment (27.5%) and for not to remember the seriousness of the costs committing crimes (14.5%) (Kinyanjui and Atwoli, 2013).

### **4.3. Measuring opinion of the Respondents toward the Perceived Effects of Substance**

#### **Abuse on Their Psycho-social Adjustment and Rehabilitation in the Prisons**

Under this sub-section of the analysis part, respondents were asked to rate degree of their agreement on the opinion toward the perceived effects of substance abuse on their psycho-social adjustment and rehabilitation in the prisons. Hence, respondents had rated the factors that they perceived as affecting their psycho-social adjustment and rehabilitation from the most preferred to the least one. Therefore, the higher mean values among the responses indicated the most important factor and the areas where substance abuse is most affected the respondents' psycho-social adjustment and rehabilitation. Responses were measured based on the transactional analysis method of the five point likert scale mean and standard deviation values of 1-1.5 = Strongly disagree; 1.5-2.5 = Disagree; 2.5-3.5 = Undecided; 3.5-4.5 = Agree and 4.5-5 = Strongly agree. This was based on the 'Scalogram Analysis Techniques' developed by Louis Guttman that specifically refers to 'Cumulative of Likert Scales Construction Procedures' (Kothari, 2004). Details of the results of these measurements scales have illustrated in the following tables.

**Table 4.3.1.:** Summary of the Items that Measure the Prisoners' Opinion toward the Effects of Substance Abuse on their Psychological Adjustment

No	Items that measure the effects of substance abuse on prisoners' psychological adjustment	Responses on degrees of agreement		
		Ni	Mean	Std. Deviation
1	Substance abuse is making you to be nervous	438	1.69	1.172
2	Substance abuse is leading you to the sudden mood swings and irritability	438	3.56	1.251
3	Substance abuse is influencing your thinking pattern to be unrealistic and inconsistent	438	2.89	1.173
4	Substance abuse is making you worry with when and how you get, buy and use it	438	4.28	1.220
5	Substance abuse is making you feel hopeless and helpless after its temporary pleasure has ceased/extinguished/	438	3.74	1.280
6	Substance abuse is making you to be hyperactive, restless and lack concentration on a specific job	438	4.67	1.256
7	Substance abuse is influencing you to misunderstand and misinterpret life events	438	3.54	1.201
8	Substance abuse ever made you feel depression when you miss it for use	438	4.55	1.124
9	Substance abuse is affecting your personal judgments	438	2.45	1.296

Table 4.3.1, has illustrated the respondents' degree of agreement up on the effects of substance abuse on their psychological adjustment in the prisons. Based on the mean and standard deviation values obtained from the transactional analysis method of the opinionnaire (attitude scales), the respondents' opinion toward the perceived effects of substance abuse on their psychological adjustment was analyzed and described. Accordingly, table 4.3.1., item 6 and 8 have shown that majority of the respondents were strongly agreed with the opinions that

indicated substance abuse was making them to be hyperactive, restless and lack concentration on a specific job in the prisons (ni=438, M= 4.67, SD = 1.25) and they became depressed when they missed these abused substances (ni = 438, M=4.55, SD =1.12). This was to mean that substance abuse was seriously affecting the prisoners' psychological adjustment in the ways that it was making them to be hyperactive, restless and affected their concentration on a specific job as well as caused them to become depressed when they missed it for utilization.

In the same table item 2, 4, 5 and 7 were shown that majority of the respondents were agreed upon the opinions that indicate; substance abuse was leading them to the sudden mood swings and irritability (ni= 438, M= 3.56, SD = 1.25), it was making them worry with when and how they get, buy and use it (ni= 438, M= 4.28, SD = 1.22), it was influencing them feel hopeless and helpless after its temporary pleasure has ceased/extinguished/ (ni= 438, M= 3.74, SD = 1.28) and substance abuse is influencing them to misunderstand and misinterpret life events (ni= 438, M= 3.54, SD=1.20). This was to mean that substance abuse was affecting the prisoners' psychological adjustment in that, it led them to the sudden mood swings and irritability, worry with when and how they get, buy and use it, it influenced them feel hopeless and helpless after temporary pleasure has ceased and it made them to misunderstand and misinterpret life events.

On the other hand, item 3 has indicated that the significant numbers of the respondents were not decided their response whether substance abuse was influencing their thinking pattern to be unrealistic and inconsistent or not (ni=438, M= 2.89, SD =1.17). The other significant numbers of the respondents as shown by item 1 and 9, were disagreed upon the opinions that indicated substance abuse is making them to be nervous (ni=438, M= 1.69, SD=1.17) and it was affecting their personal judgments (ni=438, M= 2.45, SD=1.29). This means substance abuse was not making them to be nervous and not affected their personal judgments.

Regarding the effects of substance abuse on the prisoners' psychological adjustment, interviews and FGD were conducted with the prisons' staffs, prisoners' group leaders and ex-prisoners. The survey results obtained from the interviews and FGDs were in harmony with the survey results that obtained from the questionnaire. Therefore, the interviews and FGD's respondents were suggested that substance abuse have great contribution in the prisoners' psychological adjustment problems in the prisons. Accordingly, their responses were stated below.

During the interview session, one prison staff pointed out that

*Substance abuse was uniquely playing the great role in disturbing the prisoners' psychological adjustment in our prisons. Prisoners were not effectively and timely following even their court trial processes and regular court appointments. Throughout the day many prisoners were wondering here and there in the prisons' campus to facilitate when and how they can get, buy and use Khat and cigarette. Their attention was more on the substance possession and utilization of these substances rather than doing other societal activities in the prisons.*

In addition to this, during interview one prison's counseling professional stated that

*Khat and cigarette abuse in our prison was contributing lots in undermining the prisoners' psychological adjustment. Frankly speaking, nowadays, the prison was becoming the center for Khat and cigarette practices rather than the center for rehabilitation. Prisoners became hyperactive when they overly used these substances throughout the day and inversely became depressed the day when they miss these substances for use. They always became victimized to the mood disorder and dysfunctional pattern of thinking. They were willingless and lacked concentration to receive professional services like counseling services and vocational trainings that given in the prisons. The counselor replied that during counseling session some prisoners were coming with Khat to the counseling room and said they would freely discuss after they have satisfied using their chat.*

In other words, during FGD session, the prisoners' group leaders together forwarded the following results of their discussion in that;

*The prisoners' psychological adjustment in their prison was not good. Prisoners were always on an ongoing chaos and disturbances. They suggested that, even if there were many factors that were responsible in contributing to the prisoners' psychological adjustment problems in their prisons, they stated that substance abuse would take a 'lion share' in affecting the prisoners' psychological adjustment in their prison. They suggested that prisoners were seriously affected by substance abuse.*

During the interview session, one ex-prisoner was also suggested the following ideas

*The highest demand, supply and use of Khat and cigarette in the prisons and his responses to this situation were made him not to be psycho-socially adjusted in the prisons. He used to prefer chewing Khat and smoking cigarette to other works in the prisons when he was there. He became willingless when requested to*



*participate in other activities and he felt uncomfortable when he obliged to separate from substance consumption ceremony.*

Generally, from the table 4.3.1, based on the mean and standard deviation values obtained through transactional analysis method of the five point likert scales, interviews and focus group discussions, it was possible to suggest that substance abuse was affecting the prisoners' psychological adjustment in the prisons. Moreover, majority of the respondents were positively responded to the greater numbers of the items that provided to measure their opinion toward the perceived effects of substance abuse on their psychological adjustment.

It is obvious that one of the qualities of scientific research is creating a holistic and meaningful picture of the findings of a study connecting and showing the thread off with previously conducted related studies. However, one of the great challenges of the current study was the presence of scanty studies. Even these flimsy studies available in the western world's prisons were not emphasized substance abuse and its effects in prisons rather they focused on substance abuse before imprisonment and its later effects in prisons. This was for the reason that many studies were designed to investigate the effects of substance abuse withdrawal symptoms since prisoners cannot get drugs in prisons after imprisonment. As a result, many scholars do not need to conduct their study regarding the effects substance abuse in prisons because its availability and utilization was legally forbidden in the settings. Besides, these western studies were focused on illicit drugs which were secretly entering and used in prisons (Birmingham, 2003).

Moreover, there were very few studies on substance abuse among prisoners in Africa as compared to their western counterparts. This is due to lack of empirical investigation and comprehensive literatures repeatedly showing criminal activity and psychological disorders as major outcomes of substance abuse in prison environments (UN 2009). However, there was increasing evidences which showed the effects of substance abuse on the prisoners' psychological disorders in African prisons. Some of the very few studies on this area in the continent were conducted in Uganda and Kenyan prisons that identified mood disorder, depression, restlessness, lack of genuine understanding of life events as the effects of substance abuse on prisoners' psychological adjustment (Kinyanjui and Atwoli, 2013). The importance of the related local studies was not overemphasized here in the current study as the similar studies were hardly available in all prisons of Ethiopia.

**Table 4.3.2.:** Summary of items that measure prisoners' opinion toward the effects of substance abuse on their social adjustment

No	Items that measure the effects of substance abuse on prisoners' social adjustment	Responses on degrees of agreement		
		Ni	Mean	Std. Deviation
1	Substance abuse is affecting prison community's safety and stability	438	3.82	1.113
2	Substance abuse is affecting your interpersonal relationship with prisoners and prisons' communities	438	2.30	1.228
3	Substance abuse is making you to be aggressive and show anti-social behaviors	438	4.25	1.231
4	Substance abuse making you talkative, over argumentative and denial to others' ideas	438	4.62	1.245
5	Substance abuse is influencing you by affecting your time and interest to work and participate in pro-social activities in prison	438	3.51	1.260
6	Substance abuse is influencing you to reflect inappropriate behaviors in the prisons	438	2.91	1.230
7	Substance abuse is affecting your peaceful problem solving skills in the prison	438	2.41	1.285
8	Substance abuse makes you conflict with others when you use force to get it	438	2.54	1.238
9	You ever gotten into trouble with staffs/ prisoners due to the substance abuse	438	3.65	1.267

Table 4.3.2, has illustrated that the respondents' degree of agreement up on the effects of substance abuse on their social adjustment in the prisons. From the table 4.3.2, item 4 has showed that an averages of the respondents were strongly agreed upon the opinions that indicated they become talkative, over argumentative and denial to the others' ideas when they abused substances (ni=438, M= 4.62, SD= 1.24). This means, substance abuse was seriously affected the prisoners' social adjustment in that it made them to be talkative, over argumentative and denial to others' ideas. Hence, their smooth relationship, genuine understanding of each other and culture of tolerance were more likely undermined which in turn affected their social

well beings. In the same table item 1, 3, 5 and 9 had illustrated that the greater averages of the respondents were agreed upon the opinions that indicated; substance abuse was affecting prison community's safety and stability (ni= 438, M= 3.82, SD = 1.11), substance abuse was making them to be aggressive and to show anti-social behaviors (ni= 438, M= 4.25, SD = 1.23), it was influencing them by affecting their time and interest to work and participate in pro-social activities in the prisons (ni= 438, M= 3.51, SD = 1.26) and it made them gotten into trouble with staffs and prisoners under the influences of substance abuse (ni= 438, M= 3.65, SD = 1.26). It was to mean that substance abuse was making prisoners be aggressive and show anti-social behaviors in the prisons. In the descriptive part of the survey results, greater proportions of the respondents had committed heavy crimes such as murder and attempts of murder which further implied that substance abuse might play its role to that end even when they were in the society. At all, these positive responses to the items that measure their opinion indicated the effects of substance abuse on their social well beings in the prisons.

On the other hand, item 6 and 8 have indicated that an averages of the respondents were not yet decided their response whether or not substance abuse was influencing them to reflect inappropriate behaviors in the prisons (ni=438, M= 2.91, SD=1.23) and substance abuse was making them conflict with others when they use force to get the it (ni=438, M= 2.54, SD=1.23). The reason behind why they had not been decided their responses might be fear of responsibilities for their inappropriate behaviors and costs of conflicts in the prisons. The other significant averages of the respondents as shown by item 2 and 7, were responded that substance abuse was not affecting their interpersonal relationship with prisoners and prisons' communities (ni=438, M= 2.30, SD=1.22) and it was not affecting their peaceful problem solving skills in the prison (ni=438, M= 2.41, SD=1.28).

For the data obtained from the interviews regarding the effects of substance abuse on the prisoners' social adjustment, one prison staff was pointed out that;

*Substance abuse was contributing more in the disturbances of the prisoners' social adjustment in his prison. Prisoners were also troubling with their staffs and inmates in the prison. Sometimes prisoners were conflicting with and disturbing each other to get Khat and cigarette in the prison especially when they had no money to buy it. Prisoners were also conflicting with each other in the prison*

*camp when those prisoners who borrowed money to buy Khat or cigarette were unable to return back it for the owners within the orally agreed time. Generally substance abuse was affecting prisoners' social adjustment in his prison.*

In other words, during the interviews one social work professional of the prisons stated that

*Substance abuse was imposing great influences on the prisoners' social adjustment in his prison. Prisoners become aggressive towards each other both in the over satisfaction and under satisfaction conditions. Their interpersonal relationship was not consistent and stable. They lacked patience to solve conflict calmly and peacefully as well as their communication skill was low. Prisoners showed lack of interest to participate in pro-social and other helpful societal activities in the prison rather they preferred to spend their time in utilizing substance. To these end, substance abuse was being played its own great role.*

Respondents of the FGD were also suggested the following ideas in their discussion as

*Substance abuse was tangibly affecting the prisoners' social adjustment in our prison. Even the day's Khat and cigarette abuse in turn brings disturbances in the mate rooms at the night because the substances disturb their stable sleeping patterns. Some prisoners wanted to sleep while others wanted to talk or enjoy music which again makes them to conflict each other. When problem was occurred, many of the prisoners become emotional and create additional problems rather than solving it smoothly. For them, substance abuse had great contribution to this end in the prisons.*

During the interview one ex-prisoner was suggested the following ideas

*In the prisons, the prisoners were conflicted each other on the place where they seat and sell their Khat during the works of prisoners' micro business enterprises that exists in the prisons. Theft, forceful taking of these substances, taking debt which they cannot repay and other violence are complicating the prisoners' social adjustment. Since micro business enterprises were organized in by group, even always there is a conflict among them.*

Summary of the table 4.3.2., have entails that based on the survey results obtained through transactional analysis method of the five point likert scales, interviews and focus group discussions, it was possible to support the responses that respondents were suggested about their perceived effects of substance abuse on the prisoners' social adjustment in the prisons.

Regarding the existing related studies on the effects of substance abuse in prisons, the recent study conducted in Kenya among 383 prisoners at the Eldoret prison had illustrated that; discord relationship with other prisoners, trouble with police, violent social behaviors and conflicting with each other were the major findings of the effects of drug abuse on prisoners' social adjustment in the prison that revealed by the study (Kinyanjui and Atwoli, 2013).

**Table 4.3.3.:** Summary of items that measure prisoners' opinion toward the effects of substance abuse on their rehabilitation

No	Items that measure the effects of substance abuse on prisoners' rehabilitation	Responses on degrees of agreement		
		Ni	Mean	Std. Deviation
1	Substance abuse makes you less likely to engage constructively and genuinely in rehabilitation programs	438	4.88	1.172
2	Substance abuse is influencing you to discontinue participating in vocational trainings and workshops	438	3.91	1.125
3	Substance abuse is affecting your initiation and effectiveness in your academic learning	438	3.73	1.276
4	Substance abuse is affecting your interest to follow and receive counseling services	438	3.55	1.120
5	Substance abuse is leading you to the work related-discipline problems	438	2.18	1.126
6	Substance abuse is limiting your time for recreation (like sport, reading, group discussions, etc) and other hobbies due to spending long time in its persistent use	438	4.58	1.250
7	Substance abuse is making you neglect your responsibilities and expectations	438	2.45	1.405

Table 4.3.3, has illustrated that the respondents' degree of agreement up on the effects of substance abuse on their rehabilitation services in the prisons. Accordingly, table 4.3.3., item 1 and 6 had showed that majority of the respondents are strongly agreed upon the opinions that indicated; substance abuse was making them less likely to engage constructively and genuinely

in rehabilitation programs (ni=438, M= 4.88, SD= 1.17) and it was limiting their time for recreations (like sport, reading, group discussions, etc) and other hobbies due to spending long time in persistent drug use (ni= 438, M=4.58, SD=1.25). This was to mean that substance abuse was seriously affected the prisoners' rehabilitation in the way that it had limited their constructive and genuine engagement in the rehabilitation services in the prisons.

As the same table item 2, 3 and 4 have illustrated, greater number of the respondents were agreed upon the opinions that indicated; substance abuse was influencing them to discontinue participating in vocational trainings and workshops (ni= 438, M= 3.91, SD = 1.12), it was affecting their initiation and effectiveness in their academic learning (ni= 438, M= 3.73, SD = 1.27) and substance abuse was affecting their interest to follow and receive counseling services (ni= 438, M= 3.55, SD = 1.12). This was to mean that majority of the respondents were responded that substance abuse was affected their rehabilitation in the ways it influenced them to discontinue participating in vocational trainings and workshops, it undermined their initiation and effectiveness in their academic learning, it affected their interest to follow and receive counseling services in the prisons.

On the other hand, as shown by the item 5 and 7 of the same table, averages of the respondents were disagreed upon the opinions that indicated substance abuse was leading them to the work related discipline problems (ni=438, M= 2.18, SD=1.12) and it was making them neglect their responsibilities and expectations at work (ni=438, M= 2.45, SD=1.40). This means that substance abuse was not led prisoners to the work related discipline and it was not made them neglect their responsibilities and expectations at work in the prisons.

During the staff interviews, one prison administrator was pointed out about the effects of substance abuse on the prisoners' rehabilitation in their prison as follows

*Substance abuse has great influence on the prisoners' rehabilitation in their prison. Prisoners were willingless to participate in rehabilitation programs. Even if they started to take part in a specific rehabilitation program, they soon discontinue it. To this end, substance abuse had played great role in limiting their time, disturbing their normal life patterns and diverting their attention toward the drug utilization. The daily focus of our prisoners in our prison was drug consumption.*

Additionally, during interview one of the prisons' counseling professional had stated that

*Rehabilitation program was becoming complex issue in our prison. It was almost ineffective because there were many factors affecting the program. Among these factors, substance abuse took the prominent place. Prisoners were lacking initiatives and interest to follow and receive counseling services. They often absent from the regular counseling appointment for the sake of chewing Khat especially in the afternoon time. They spend most of their time obtaining and chewing Khat.*

FGD's respondents were suggested about the effects of substance abuse on rehabilitation in that

*In their prison, substance abuse was influencing the prisoners not to benefit effectively from the rehabilitation services that given in the prison. It was limiting the prisoners' time to follow and receive different vocational trainings. It was affecting their attention and concentration not to participate effectively in the rehabilitation programs. For all, substance abusing habit was undermining the normal functioning and continuity of the vocational training and workshops.*

During the interview, one ex-prisoner was also suggested the following ideas

*In the prison when he was there, the availability, accessibility and abuse of Khat and cigarette were high. It was affecting him not to benefit well from the rehabilitation services. Its daily utilization was limiting his time to follow and receive rehabilitation services. It was affecting his attention and concentration not to participate effectively in the rehabilitation programs in the prisons. Especially in the afternoon time he and his mates did not go to class for learning and counseling rooms.*

Concerning the related studies regarding the effects of substance abuse on prisoners' rehabilitation, the recent study conducted in England among prisoners had illustrated that substance abuse and rehabilitation programs in prisons had a close relationship. It makes prisoners less likely to engage constructively and genuinely in their rehabilitation services (William, 2015). Another study conducted in Australia by Australian Institute of Criminology (2011) revealed that substance abuse makes the rehabilitation service ineffective in prisons and make the prisoners less beneficiary from the program.

In summary, from the table 4.3.1., 4.3.2., and 4.3.3., one can conclude that primarily substance users might be initiated by perceived effects of self satisfactions and enhancements.

Unfortunately, its later effect is more likely to be problematic when substance use become beyond its initial purpose and reached at its abused stage because of the reality of its addictive nature. Therefore, the mean values of the transactional analysis of the five point likert scales, interviews and focus group discussions' responses had implied that substance abuse was affecting the prisoners' psycho-social adjustment and rehabilitation services in the prisons. Therefore, a well designed and comprehensive substance abuse treatment and intervention program could greatly improve overall psycho-social adjustment and rehabilitation works in the prisons. This plays great role in contributing for peace and stability of both prisoners and prisons.

#### **4.4. Exploring Relationships and Predicting Effects of Substance Abuse among Prisoners**

Under this subsection, correlation was computed to explore the relationship between variables and stepwise multiple regression and logistic regression were computed to predict the effects of substance abuse on the prisoners' psycho-social adjustment and rehabilitation.

##### **4.4.1. Correlation analysis for determinants of substance abuse with its distribution scores among prisoners**

Correlation was applied here to explore relationships between the determinant selected variables that aimed to predict the effects of substance abuse from the distribution of substance abuse scores among the respondents. The details of the correlation results were shown below.

**Table 4.4.1**, Correlation analysis for determinants of substance abuse with its distribution scores among Prisoners

<b>Predictor Variables</b>	<b>Substance Abuses scores</b>		
	N	Pearson Correlation	Sig. (2-tailed)
Age	438	-0.317	0.029
Term of sentence	438	0.263	0.018
Duration of stay in prison	438	0.452	0.014
Current daily Khat Abuse	438	0.789	0.000
Current daily cigarette Abuse	438	0.560	0.000

Correlation is significant at 0.05 (2-tailed)



As it can be seen from the table 4.4.1, a correlation for the data revealed that the age of the respondents and substance abuse have statistically significant negative relationship ( $r = -0.317$ ,  $n=438$ ,  $p < 0.05$ , two tailed). This indicated that the older ages are associated with the lower tendency to substance abuse because of lower distribution of substance abuse scores among the older ages. The correlation result further implied that in the substance abuse treatment and intervention programs in the prisons due attention should be given to the younger ages since the older ages had shown lower tendency of substance abuse. From the same table, a correlation for the data revealed that the term of sentences and substance abuse have statistically significant positive relationship ( $r = 0.263$ ,  $n=438$ ,  $p < 0.05$ , two tailed) This indicated that, the prisoners with larger term of sentences have shown the higher tendency to abuse substances in the prisons which in turn inferred that those prisoners with larger term of sentences were victims of substance abuse effects than their counter part in terms of sentences.

As a correlation matrix for the data had revealed, duration of stay in prison and substance abuse have statistically significant positive relationship ( $r = 0.452$ ,  $n=438$ ,  $p < 0.05$ , two tailed). This implied that the longer duration of stay in prison was associated with the higher level of substance abuse. This indicated that as the prisoners stay longer in prisons, they have high probability to become higher substance abusers which in turn more likely make them victims of substance abuse effects. In the same table, correlation for the data revealed that both current daily Khat chewing ( $r= 0.789$ ,  $n= 438$ ,  $p < 0.05$ , two tailed) and current daily cigarette smoking ( $r= 0.560$ ,  $n= 438$ ,  $p < 0.05$ , two tailed) have shown the significant strong positive relationship with substance abuse. It showed that the daily Khat and cigarette utilization was more likely associated with high level of substance abuse. The study identified strong correlation between daily Khat chewing ( $r= 0.789$ ,  $n= 438$ ,  $p < 0.05$ , two tailed) and substance abuse distribution.

The implication was to mean that, as Khat chewing and cigarette smoking become a daily function of the prisoners in the prisons, it would be more likely for them to become higher level of substance abusers as well as the victims of its effects. The results of the correlation analysis in all selected determinant variables namely ages, term of sentences, duration of stay in prison, daily Khat chewing and daily cigarette smoking were significantly associated to substance abuse distribution scores in the prisons. Generally, the correlation results had inferred that if the

substance abuse treatment and intervention strategies in the prisons are designed and offered by identifying and giving due attention to these determinants of substance abuse, there would be a change in substance abuse problems on prisoners' psycho-social adjustment and rehabilitation.

#### 4.4.2. Predicting the effects of substance abuse from the demographic variables

Under this specific section of the analysis part, stepwise multiple regressions was applied to predict continuous outcomes from the continuous demographic variables and logistic regression was applied to predict the categorical outcomes from categorical and/or continuous variables.

##### 4.4.2.1. Stepwise multiple regression analysis for determinants of substance abuse in prisons

Stepwise multiple regressions were applied to estimate the unique contribution of each predictor variable to see their effects on substance abuse distributions among the prisoners. It also aimed to explore how well the selected predictor variables are able to predict the effects of substance abuse on prisoners' psycho-social adjustment and rehabilitation from the distribution of substance abuse scores among the respondents.

**Table 4.4.2,** Stepwise Multiple Regression Analysis for Determinant of Substance Abuse among the Respondents

Model			Substance Abuses				
	R	R <sup>2</sup>	Un standardized Coefficient		Standardized Coefficient	T	Sig.
			B	Std. Error	B		
1 (Constant)			49.857	1.364		38.920	.000
Age	0.695	0.564	-.256	-.018	-.163	-2.829	.001
Term of sentence	0.695	0.564	.185	.031	.075	.1268	.046
Duration of stay in Prison	0.695	0.564	-.390	-.026	.306	-6.137	.032
Current daily Khat Chewing	0.695	0.564	-.752	-.065	-.548	-12.324	.015
Current daily cigarette smoking	0.695	0.564	-.341	-.044	-.427	-8.620	.011

Regression is statistically significant at  $p < 0.05$

Multiple regression model (R) = 0.695, R square ( $R^2$ ) = 0.564

Predictor Variables: Age, Term of sentences, Duration of stay, Daily Khat and cigarette abuse

Dependent Variables: Substance abuse

As it can be seen from table 4.4.2, Model summary of the predicting table is  $R^2 = 0.564$ . This means that all the predictor variables entered in to the model jointly explains 56.4% of the variance in the dependent variable (substance abuse). On the other hand, the value of unexplained variables that could affect dependent variable is 0.436 ( $1 - R^2$ ,  $1 - 0.564$ ) which means the rest 43.6% were contributed by other unexplained variables. The stepwise multiple regression analysis has revealed that all predictor variables had statistically significant unique contribution in explaining the dependent variable (substance abuse). But the level of their contribution was different. Therefore, the largest standardized beta coefficient in the model is for current daily Khat chewing ( $B = -.548$ ,  $p = 0.015$ ). This means that this variable makes the strongest significant unique contribution in explaining the dependent variable, when the variance explained by all other variables in the model is controlled.

The next larger coefficients were for current daily cigarette smoking ( $B = -.427$ ,  $p = 0.011$ ) and for duration of stay in prisons ( $B = -.306$ ,  $p = 0.032$ ) which implied that these variables make the stronger significant unique contribution in explaining the dependent variable, when the variance explained by all other variables in the model is controlled. The standardized beta values for age ( $B = -.163$ ,  $p = 0.001$ ) and for term of sentence ( $B = -.075$ ,  $p = 0.046$ ) were slightly lower which indicated that they made less significant unique contributions in explaining the dependent variable, when the variance explained by all other variables in the model is controlled.

Generally, the regression results implied that age, term of sentences, duration of stay in prison, daily Khat and cigarette abuse were impacted on drug abuse variations among the prisoners which in turn more likely resulted in the high risk of its effects. Moreover, the result identified daily Khat chewing ( $B = -.548$ ,  $p = 0.015$ ) as the most influential factor that affect substance abuse variation and its predicted effects among the prisoners in the prisons.

#### **4.4.2.2. Logistic regression analysis for determinants of substance abuse among prisoners**

Data dichotomization (yes/no) helped to ensure separating proportion of the respondents who are under the victims of substance abuse effects from those who are not under the victims of

substance abuse effects. In the description of substance abuse prevalence among the prisoners, proportion of the respondents who abused substances were considered as victims of substance abuse effects and those who did not abused substances were taken as not under the victims of substance abuse effects. Each of the variables in the descriptive part was subjected to recoding of their original scores to ensure their suitability for the logistic regression analysis model. Therefore, in the original data 'yes' represented those who abused substances, but in the new model it had re-coded as "1" to indicate 'victims of substance abuse effects' and 'no' represented those who are not abused drugs which newly recoded as "0" to indicate those who are not under the victims of substance abuse effects' which generated the ultimate result and helped the logistic regression model in predicting the effects of substance abuse from the determinants of substance abuse among prisoners. The recoding of original data was done by recoding procedure of SPSS.

The demographic variables were considered to predict the probable effects of substance abuse among the participants. These demographic variables were sex, age, religion, education, types of crime, term of sentences and duration of stay in prisons. Logistic regression was applied to explore how well these demographic variables are able to predict effect of substance abuse from the score distribution of substance abuse among the prisoners. Therefore, logistic regression was suitable for predicting categorical outcomes since the predictor variables were both categorical and continuous or a mix of both variables in one model (Tabachnick, and Fidell, 2008).

The Omnibus Test of Model Coefficient had indicated that the model was suitable for the logistic regression analysis. Therefore, the model chi-square, 84.62 with 5 degree of freedom was statistically significant with ( $p = 0.00$ ) which showed highly significant value at  $\alpha = 0.05$ . This chi-square value have shown that all the predictor variables have been affected the substance abuse characteristics among the prisoners. The model was also accurately identified proportion of the prisoners who are under the victims of substance abuse and those who are not under the victims of drug abuse. Accordingly, proportion of the prisoners who are under the victims of substance abuse was 82.14%, while proportion of the prisoners who are not under the victims of drug abuse was 75.35% and the overall proportion had been 79.45% for the total sample population. Details of the contribution of each predictive variable to were analyzed below.

**Table 4.4.3**, Logistic Regression Analysis for Determinants of substance Abuse in the prisons

Variables	B	Wald	Sig.	Odd Ratio	95% C.I. for Odd Ratio	
					Lower	Upper
<b>Sex</b>						
Male	.812	9.410	.034 *	1.462	1.130	1.915
Female	.536	.296	.378	1.233	.884	.986
<b>Age group(year)</b>						
18-25	-1.427	36.284	.000 *	0.420	2.538	10.843
25-35	-1.865	48.709	.000 *	0.835	3.612	12.690
35- 45	-1.478	1.692	.214	2.276	.765	5.213
45-55	-.162	1.730	.530	1.281	.631	4.361
≥ 55	-.064	.544	.106	1.537	.542	3.658
<b>Religion</b>						
Orthodox	.054	.703	.257	0.955	.774	4.964
Muslim	2.218	83.490	.000 *	.384	.311	.481
<b>Educational status</b>						
No formal education	-.516	9.337	.025 *	1.794	1.346	2.788
Elementary(grade 1-4)	-.875	16.435	.019 *	3.002	2.146	2.867
Elementary(Grade 5-8)	-.749	13.226	.042 *	2.430	1.752	2.117
Secondary School-(Grade 9-10)	-.145	1.220	.624	1.135	.986	1.458
Preparatory School-(Grade 11-12)	-.113	.441	.378	.876	.765	1.210
Level (I,II,III)	-.056	.312	.452	.549	.629	.865
Diploma	-.039	.204	.290	.202	.451	.842
<b>Type of crime</b>						
Murder	-1.147	76.190	.013 *	.274	.221	.382
Attempts of murder	-.856	28.654	.044 *	.543	.451	.602
Theft	-.931	30.062	.029 *	.420	.311	.478
Destroying property	-.248	3.065	.084	.708	.593	1.045
Physical attack	-.163	.984	.069	.420	.233	.571
Sexual assaults	.074	.640	.075	.316	.206	.382
<b>Term of sentences (year)</b>						
0-1	.645	1.692	.285	1.627	.652	4.315
1-5	.728	2.730	.126	2.178	.541	3.357
5-10	.706	5.644	.042 *	1.581	1.938	5.224
10-15	.974	9.312	.036 *	2.076	1.029	2.640
15-20	1.103	12.062	.018 *	2.415	1.160	2.852
<b>Duration of stay(year)</b>						
0-1	-.743	4.302	.421	2.248	.623	3.072
1-5	.631	1.247	.019 *	1.021	.590	.433
5-10	-1.213	49.531	.028 *	.356	.268	.458
10-15	.588	.768	.147	.785	.998	3.447
15-19	.310	.523	.236	.590	.327	1.964

\* = Statistically significant at  $p < 0.05$

Table 4.4.3; have shown the details of the contribution of each predictive variable to the model (Wald), the significant level and the odd ratio for the success of the model. Therefore, results of the logistic regression analysis were found that all of the predictor variables have affected the level of substance abuse among the prisoners. Accordingly, from the gender impact on substance abuse variance among the prisoners, being male with odds ( $B = .812$ ,  $OR = 1.462$ ,  $CI_{95} = 1.130$ ,  $1.915$ ,  $P = .034$ ) had contributed to the model that predict the effects of substance abuse among the prisoners. The result has shown that male sex is significantly related to substance abuse in the prisons which in turn implied that males were more victimized gender to the effects of substance abuse than their female counter part in the prisons. In plain language, male prisoners were more affected than female prisoners by substance abuse in the prisons.

Besides, substance abuse risk was greater in male prisoners than in female prisoners and the magnitude of its risk was related to the linearity of the proportion of substance abusers. Therefore, in the substance abuse prevention and intervention program in prisons, males should be given due emphasizes since they seem to be more vulnerable gender to the effects of substance abuse. A study conducted in Kenyan prison illustrated the same result as males had a statistically significantly higher prevalence of substance abuse than females ( $p=0.039$ ) (Kinyanjui and Atwoli, 2013). In relation to age influences on the level of substance abuse among the prisoners, from 18-25 age group with odds ( $B = -1.427$ ,  $OR = .420$ ,  $CI_{95} = 2.538$ ,  $10.843$ ,  $P = .000$ ) and from 25-35 age group with odds ( $B = -1.865$ ,  $OR = .835$ ,  $CI_{95} = 3.612$ ,  $12.690$ ,  $P = .000$ ) had significantly contributed to the success of the model.

From the logistic result, it could be inferred that majority of the substance abusers proportion was from the lower age groups which implied that the risk of substance abuse effect is greater in younger prisoners than in older prisoners in the prisons. Furthermore, findings of the study entailed that the productive age groups are highly victimized to the effects of substance abuse among the prisoners which more probably put long lasting effects on their future life after released. The finding of the study has also huge implications for the rehabilitation workers, counselors, administrators and policy makers to be conscious about the persons who are from such developmental stages in the prevention and intervention programs of substance abuse problems and in supporting rehabilitation schemes within prison environment. A study

conducted in Kenyan prison was identified a similar finding with the current study in that mean age of the substance abusers was significantly the lower age groups ( $M=31.2$  years,  $p=0.02$ ) (Kinyanjui and Atwoli, 2013).

Regarding the religion, being followers of Muslim religion with odds ( $B = 2.218$ ,  $OR = .384$ ,  $CI_{95} = .311, .481$ ,  $P = .000$ ) has importantly contributed to the model that predict the effects of substance abuse among the prisoners. For example, chat chewing was traditionally confined to the Muslim communities as it was associated with the praying ceremony. Even though there was no empirical evidences regarding the effects of substance abuse among the Muslim communities in the prison environments, a number of studies done on non-prisoner communities like ‘impact of chat in Mana District’ of Jimma Zone (Berhanu, et al., 2014) and ‘effects of Khat chewing among adults in Addis Ababa City’ (Fikru, et al., 2008) were identified that effects of Khat abuse was more pronounced among Muslim communities because of the aforementioned reason. This inferred that the community seeks due emphasizes in the substance abuse prevention and intervention procedures in the prisons.

Concerning the educational status, from those who have no formal education with odds ( $B = -.516$ ,  $OR = 1.794$ ,  $CI_{95} = 1.346, 2.788$ ,  $P = .025$ ), from Grade 1 - 4 with odds ( $B = -.875$ ,  $OR = 3.002$ ,  $CI_{95} = 2.146, 2.862$ ,  $P = .019$ ) and from Grade 5-8 with odds ( $B = -.749$ ,  $OR = 2.430$ ,  $CI_{95} = 1.752, 2.117$ ,  $P = .042$ ) had significantly contributed to the success of the model. The results have indicated that the lower educational status is associated with higher level of substance abuse proportion which in turn implies that prisoners who have no formal education, from grade 1-4 and from grade 5-8 demonstrated more substance abuse tendency than their counter parts. This means prisoners from lower educational status were more affected by substance abuse than the prisoners from higher educational status in the prisons.

The reasons behind probably why prisoners from the lower educational status were tended to abuse substances might be; lack of coping skills to the prison environment, lower cognitive development, misinterpretation of life events (perceiving imprisonment as the end of the life), less interpersonal skills and low self-esteem while compared to the prisoners who were from the higher educational status that expected to possess comprehensive cognitive power as life is possible after imprisonment. In other words, prisoners from the lower academic background

were more likely expose themselves to substance abuse due to the difference in the ability to judge desirable behaviors from non-desirable behaviors when compared to their counter parts.

In the substance abuse prevention and intervention programs, this has clear implication for counselors, psychologists, social workers, health professionals, legal service providers, educators, and other concerned professionals to allow and prioritize those prisoners from the lower educational status. A study done in Kenyan prison among the prisoners regarding the substance abuse effects had generated quite different finding that claimed substance abuse was more prevalent among more educated prisoners than the less educated one (Kinyanjui and Atwoli, 2013) which was contrary to the findings of the current study that claimed substance abuse is more prevalent among less educated prisoners.

From the type of crimes, murder with odds ( $B = -1.147$ ,  $OR = .274$ ,  $CI_{95} = .221, .382$ ,  $P = .013$ ), attempts of murder with odds ( $B = -.856$ ,  $OR = .543$ ,  $CI_{95} = .451, .602$ ,  $P = .044$ ) and theft with odds ( $B = -.931$ ,  $OR = .420$ ,  $CI_{95} = .311, .478$ ,  $P = .029$ ) has importantly contributed to the success of the model. The reasons most probably exist behind why these crime types were uniquely predicted the effects of substance abuse among the prisoners might be; first, power of the crimes may induced them to substance abuse to forget the offensive feelings loaded by the trauma of the crimes; second, crimes such as murder and theft were more probably induce to severe psychological shock and guilt feelings than the rest and results of the social stigma and discrimination for these crime types than the rest may lead them to high substance abuse tendency to release themselves from such guilty feelings (Cunningham, et al., 2002).

Third, the term of sentences for these crime types were longer than the rest, hence, the longer they stay the more likely they became victims of substance abuse effects in the prisons. Therefore, in the prisons for the success of the substance abuse prevention and intervention programs, this finding entailed better sight for counselors, psychologists, social workers, health professionals, legal service providers, educators, and other concerned professionals to allow and prioritize those prisoners who were committed these types of crimes. Concerning the term of sentences, prisoners who have term of sentences from 5-10 years with odds ( $B = .706$ ,  $OR = 1.581$ ,  $CI_{95} = 1.938, 5.224$ ,  $P = .042$ ), from 10-15 years with odds ( $B = .974$ ,  $OR = 2.076$ ,  $CI_{95} =$



1.029, 2.640,  $P = .036$ ) and 15-20 years with odds ( $B = 1.103$ ,  $OR = 2.415$ ,  $CI_{95} = 1.160, 2.852$ ,  $P = .018$ ) has significantly contributed to the success of the logistic regression model.

These results have shown that prisoners who have been sentenced for longer years were conveyed significant substance abuse distribution scores. This indicated that when prisoners stay in prisons more and more the probability of becoming the victim of substance abuse effects is high. This might be due to the reason that prisoners are more likely feel they are totally detached from the external social and physical world and observe themselves as born to be imprisoned which in turn lead them to substance abuse in order to release themselves from such unpleasant feelings.

The other reasons were more likely to be, as many empirical evidences have stated, prison environment across the world has poor quality in terms of crowdedness and difficult physical setting, inhuman treatment, ridged and unfair rules and regulations as well as the broken and closed interpersonal relations between prisoners and their families might possibly escalate their vulnerability to substance dependent life style due to induced hopelessness by the above reasons.

From the duration of stay in the prisons, proportion of the prisoners who have stayed from 1-5 years with odds ( $B = -.631$ ,  $OR = 1.021$ ,  $CI_{95} = .590, .433$ ,  $P = 0.019$ ) and from 5-10 years with odds ( $B = -1.213$ ,  $OR = .356$ ,  $CI_{95} = .268, .457$ ,  $P = 0.028$ ) have significantly contributed to the success of the model that predict the level of substance abuse among the prisoners. This implied that in the prison environment where substances were freely available, the more prisoners stay in prisons the more likely they become victims of substance abuse. When prisoners stay longer in the prisons in the areas where substance availability was high, the occurrence of substance abuse and its risks among the prisoners are more likely high.

Generally, the magnitudes and distributions of substance abuse scores among the prisoners were more likely affected by the determinants of substance abuse such as sex, age, religion, educational status, types of crimes, terms of sentences and duration of stay in prisons which in turn affected the prisoners' psycho-social adjustment and rehabilitation in the prisons.

#### 4.4.3. Analysis of the associated factors toward substance abuse among the prisoners

Under this specific section, association of the determinant factors toward substance abuse among the prisoners were analyzed against with the proportions of the respondents' distribution scores under each category of these determinant factors. Accordingly, the major influential factors which were responded by the greater proportion of the respondents under the descriptive analysis were taken and analyzed using logistic regression model and their influences in the respondents' substance abuse behaviors were determined. Details of the analysis were given below.

**Table 4.4.4.,** Logistic Regression Analysis for Association of the Determinant Factors toward Substance abuse among the Prisoners

Major influential factors	Substance abuse			OR
		Crude	Adjusted	CI <sub>95</sub> Sig.
Availability of substance in prisons				
Yes	146	4.328(2.450, 8.231)	4.564(2.514, 9.365)	.007 *
No <sup>1</sup>	292	1	1	
Previous substance abuse experiences				
Yes	119	4.103(2.232, 7.986)	4.412(2.342, 8.991)	.039 *
No <sup>1</sup>	319	1	1	
Prisons' stressful life and its environmental difficulties				
Yes	83	3.405(1.618, 6.852)	2.896(1.420, 6.634)	.042 *
No <sup>1</sup>	355	1	1	
To get relieve from unpleasant imprisonment's feelings				
Yes	138	4.221(2.259, 8.031)	4.135(2.104, 7.895)	.022 *
No <sup>1</sup>	300	1	1	
To forget the memory of families				
Yes	127	3.794(1.582, 7.554)	3.725(1.331, 7.280)	.003 *
No <sup>1</sup>	311	1	1	
To fight with the boredom of prison life				
Yes	104	2.731(1.469, 5.192)	2.815(1.362, 5.958)	.016 *
No <sup>1</sup>	334	1	1	

\* = Statistically significant at  $p < 0.05$

<sup>1</sup> = Referent factors

Factors associated with substance abuse were analyzed against with the proportion of substance abusers among the prisoners which determined using logistic regression. Confounding factors were adjusted by multiple logistic regression models. After controlling for the effects of potentially confounding variables using multivariate logistic regression, variables such as availability of substances in prisons, previous substance abuse experiences, prisons' stressful life, using substances to get relieve from unpleasant imprisonment's feelings, to forget the memory of families and to fight with the boredom of prison life were found to be significantly associated with substance abuse among the prisoners.

As table 4.4.4, has indicated, prisoners who abused substances because of the availability of the substances in the prisons with (AOR, CI<sub>95</sub> 4.564, (2.514, 9.365) were 4.5 times higher as compared to those prisoners who did not abuse substances for these specific influence. This implies that availability of substances in the prisons is significantly affected the proportion of the substance abusers among the prisoners which in turn indicated in a prison where substance are available, a significant proportion of the prisoners become victims of substance abuses. Those prisoners who abused substance because of the previous substance abuse experiences with (AOR, CI<sub>95</sub> 4.412, (2.342, 9.991) and because of the prisons' stressful life and its environmental difficulties with (AOR, CI<sub>95</sub> 2.896, (1.420, 6.634) were 4.4 and 2.9 times higher respectively as compared to those prisoners who did not abuse substance for these specific influence of these factors. The findings implied that the more prisoners have previous experiences of abusing substances, the more likely they continue the same behavior in the prisons.

Additionally, prisons' stressful life and its environmental difficulties induce substance abuse behaviors among the prisoners in the manner that they tended to fight this boredom environment. Those prisoners who abused drugs to get relieve from unpleasant imprisonment's feelings with odds (AOR, 4.135 (2.104, 7.895) were 4.1 times higher as compared to those prisoners who did not abuse substances for these specific influence. To forget the memory of families (AOR, 3.725 (1.331, 7.280) and to fight with the boredom of prison life (AOR, 2.815 (1.362, 5.958) were 3.7 and 2.8 times higher respectively as compared to those prisoners who did not. Therefore, these factors are significantly influencing prisoners to start and sustain substance abuse behavior in the prisons which in turn put them at risk of its effects.

## **5. SUMMARY, CONCLUSION AND RECOMMENDATION**

### **5.1. Summary**

The aim of this study was to assess the effects of substance abuse on the prisoners' psycho-social adjustment and rehabilitation in the East and West Hararghe Zones prisons. The study employed mixed survey research design using both quantitative and qualitative data analysis methods. Stratified and simple random sampling for prisoners, purposive sampling for prison staffs and prisoners' group leaders and availability sampling techniques for ex-prisoners were applied for the study. Data were collected through questionnaire, interviews and FGD and analyzed using frequencies, percentages, correlation, and regressions. The total number of the participants of the study from the two zone prisons were 438 prisoners (M=343 and F=95). The prevalence of substance abuse among the prisoners is very high. Great majority of the respondents were found to abuse chat and cigarette in the prisons.

The transactional analysis method of the five point likert scales' had indicated that majority of the prisoners were responded that substance abuse was seriously affected their psycho-social adjustment and rehabilitation in the prisons. The correlation results for the data revealed that ages, term of sentences, duration of stay in prisons, daily Khat and cigarette abuse and its proportions among the prisoners have statistically significant relationship. Stepwise multiple regression results had also revealed that ages, term of sentences, duration of stay in prisons, daily Khat and cigarette abuse were predictors of substance abuse effects among the prisoners. Logistic regression results had revealed that demographic variables such as sex, age, religion, educational status, term of sentences, duration of stay in prison, daily Khat and cigarette abuse were predictors of substance abuse effects among the prisoners.

Availability of substances in prisons, previous experiences of substance abuse, prisons' environmental difficulties, to get relieve, to forget families' and to fight the prisons' boredom life were found to be the major associated factors of drug abuse in the prisons. Similarly, data from interviews and focus group discussions were in harmony with the data obtained from the questionnaire in supporting the above cases.

## 5.2. Conclusions

Based on the findings of the study, it was possible to conclude that Khat and cigarette abuse was a problematic issue in the East and West Hararghe Zones prisons. Regarding the prevalence of these drugs abuses among the prisoners, 386 (88.13%) were Khat and cigarette abusers. Among these Khat abusers were 296 (67.58%) and cigarette abusers were 90 (20.55). It was concluded that Khat abuse was more prevalent than cigarette abuse among the prisoners and it was more prevalent among males than females which in turn indicated that males were more affected than females. Based on the results of the transactional analysis of the five point likert scales that measured the prisoners' opinions toward the effects of substance abuse, it was possible to conclude that substance abuse was seriously affected the prisoners' psycho-social adjustment and rehabilitation in the prisons. The data obtained from interviews and focus group discussions were almost supportive to the data obtained from the questionnaire in the above case.

The correlation results have revealed that the age of the respondents ( $r = -0.317$ ,  $n=438$ ,  $p < 0.05$ , two tailed), term of sentences ( $r = 0.263$ ,  $n=438$ ,  $p < 0.05$ , two tailed), duration of stay in prisons ( $r = 0.452$ ,  $n=438$ ,  $p < 0.05$ , two tailed), daily Khat chewing ( $r= 0.789$ ,  $n= 438$ ,  $p < 0.05$ , two tailed) and daily cigarette smoking ( $r= 0.560$ ,  $n= 438$ ,  $p < 0.05$ , two tailed) have statistically significant relationship with substance abuse. The stepwise multiple regression model ( $R^2 = 0.564$ ) have identified the impacts of age, term of sentences, duration of stay in prison, daily Khat and cigarette abuse that together predicted 56.4% of the variance in substance abuse among the prisoners. The logistic regression model ( $\chi^2 = 84.62$ ,  $df = 5$ ,  $p < 0.05$ ) have indicated that demographic variables specifically sex, age, religion, educational status, types of crimes, terms of sentences and duration of stay in prisons were affected the substance abuse characteristics among the prisoners. Therefore, regression analyses were predicted the effects of substance abuse on the prisoners' psycho-social adjustment and rehabilitation in the prisons.

The availability of substances, prisoners' previous experiences, prison's environmental difficulties, to forget families and to fight prisons' boredom life were the major associated factors of substance abuse in the prisons. Deep rooted socio-cultural attitude, lack of effective policy implementation and controversial nature of the substances were found the major challenges to prevent substance abuse in the prisons. Data from the interviews and focus group discussions were in harmony with data from the questionnaire in revealing the effects of substance abuse among the prisoners.

### 5.3. Recommendations

Based on the major findings of the study the following recommendations were forwarded:

- To control substance abuse prevalence among the prisoners, prison institutions should prevent the availability and utilization of substances in the prisons since these were the primary factors of substance abuse among the prisoners.
- Prisons' psycho-social professionals should promote strategies to improve prisoners' opinion towards substance abuse that can help them make informed and healthy decisions.
- Prisons should provide substance abuse prevention and intervention strategies concerning with the characteristics of the prisoners like gender differences, age groups, religion, types of crimes, terms of sentences, length of the duration of stay in prisons and educational status because as it evidenced from the findings of the study, these factors could make differences among the prisoners in the magnitude of substance abuse and its effects in prisons.
- To tackle substance abuse problems in prisons, prisons should take actions targeting the factors associated to substance abuse among the prisoners like; availability of drugs in prisons, previous experiences of substance abuse, prison's environmental difficulties, to get relieve from ill feelings, to forget families' memory and to fight prisons' boredom life.
- To eliminate the challenges to prevent substance abuse in prisons, prisons are required to change the attitude of both prisoners and staffs toward substance abuse and policy makers are required to revise and implement strong substance use policies in prisons with clear and effective regulations as well as educating sanctions in prisoners' code of conduct in prisons.
- Prisoners are needed to be held accountable for their substance abuse consequences. Because without their responsibility, all efforts to tackle substance abuse in prison and therefore prisons' attempts to rehabilitate prisoners are likely to fail.
- This study was tried to reveal only the effects of substance abuse on prisoners' psycho-social adjustment and rehabilitation but there are various factors that affect prisoners' psycho-social well beings and rehabilitation programs in prisons. So, further studies are needed to encourage, improve, support and develop prison environments to be better for life and effective rehabilitation centers.

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**APPENDICES**

**ENGLISH VERSION OF THE DATA GATHERING TOOLS**  
**APPENDIX I**  
**HARAMAYA UNIVERSITY**  
**COLLEGE OF EDUCATION AND BEHAVIORAL SCIENCES**  
**QUESTIONNAIRE FILLED BY PRISONERS**

**Direction:** The primary purpose of this questionnaire is to assess information about substance abuse in prisons and its effects on prisoners' psycho-social adjustment and rehabilitation in the East and West Hararghe Zones of Oromia Regional State, Ethiopia. The questionnaire will be answered by 438 of you from both zones that have been randomly selected from each of your stratum and it is voluntary to take part in the study. If you think you had ever encountered with substance abuse effects, but you are not sure that it is a substance abuse effects, try to answer the following provided questions as honestly as you can. The researcher would like to assure you that your response will be used only for research purposes and will be kept confidential.

The success and quality of this study depends on the validity and reliability of the information that you provide to the researcher; therefore, you are kindly requested to supply your genuine and thoughtful response to each item of the questionnaire. Accordingly, carefully read each statement and answer every question. If you do not find an answer that fits exactly what you think, indicate the one that comes closest.

No need to write your name or any other information that identifies you.

Thank you for your willingness, cooperation and contribution to the success of the study!!!

**Part I: Specific Information the Respondents' Background**

Please indicate your response by circling the letter of your choice or writing on the blank space provided to you.

1. **Sex:** A. Male B. Female
2. **Age:** \_\_\_\_\_ (in years).
3. **Religion:** A. Orthodox B. Muslim C. Protestant D. Catholic E. Others \_\_\_\_\_
4. **Educational status:** A. No formal education B. Grade 1-4 C. Grade 5-8 D. Grade 9-10

E. Grade 11-12 F. Levels (I, II, III) G. Diploma H. Degree and above

5. **Ethnic group:** A. Oromo B. Amhara C. Tigre D. Gurage E. Other specify \_\_\_\_\_
6. **Type of crime:** A. Murder B. Attempts of murdering C. Theft D. destroying property  
E. Physical attacks F. Sexual assaults G. Others specify \_\_\_\_\_
7. **Term of sentences** \_\_\_\_\_ (in years).
8. **Duration stay in prison** \_\_\_\_\_ (in years).
9. **Where was your residential place before entering prison?** A. Rural B. Urban

## **Part II: Information on Prevalence of Substance Abuse among the Prevalence**

10. **Do you currently chew Khat in the prison?** A. Yes B. No
11. **Do you currently smoke cigarettes in the prison?** A. Yes B. No
12. **If your answer for question 10 and 11 is ‘yes’ what is the frequency you use Khat and cigarette** \_\_\_\_\_ (in number of days/ weeks/ Months).
14. **Do you use both Khat and cigarette at a time?** A. yes B. No
15. **From where do you get substance for using?**
  - A. From prisoners’ micro business enterprises in prisons C. From nearby shop
  - B. From families and outside communities D. From prison communities
  - E. All F. A and B G. A and C H. B and C I. B and D J. C and D
16. **Write ‘yes’ for the factors that you think are influencing you to abuse substances and ‘no’ for those you think are not influencing you to abuse substances in the prisons.**
  - A. Prison’s stressful life and environmental difficulties I. To stay awake
  - B. Previous experience of using substances J. Personal pleasure
  - C. Cultural and traditional influences K. Social acceptance
  - D. Availability of substances in prison L. Peer pressure
  - E. To get relieve from unpleasant feelings and tension M. To relax
  - F. To avoid withdrawal symptoms. N. To pass extra time
  - G. To forget the memory of families O. For socialization
  - H. To fight the boredom and stressful life of prison P. For lack of work to do

### Part III: Information on substance Abuse and Its Effects

This questionnaire will help the researcher get information on the degree of rating to which you agree or disagree with the statement forwarded for your **perceived effects of substance abuse on your psycho-social adjustment and rehabilitation** in your prison. Therefore, for the following questions, please read each question critically and then, for each statement tick (√) mark for the answer that best applies to you in the table below.

**Note: (1-1.5) = Strongly disagree (1.5-2.5) = Disagree (2.5-3.5) = Undecided (3.5-4.5) = agree (4.5-5) = Strongly agree**

No	Items	SD	D	UD	A	SA
<b>1. Items that measure the effects of substance abuse on prisoners' psychological adjustment</b>						
1	Substance abuse is making you to be nervous					
2	Substance abuse is leading you to the sudden mood swings and irritability					
3	Substance abuse is influencing your thinking pattern to be unrealistic and inconsistent					
4	Substance abuse is making you worry with when and how you get, buy and use it					
5	Substance abuse is making you feel hopeless and helpless after its temporary pleasure has ceased/extinguished/					
6	Substance abuse is making you to be hyperactive, restless and lack concentration on a specific job					
7	Substance abuse is influencing you to misunderstand and misinterpret life events					
8	Substance abuse ever made you feel depression when you miss it for use					
9	Substance abuse is affecting your personal judgments					
<b>2. Items that measure the effects of substance abuse on prisoners' social adjustment</b>						
1	Substance abuse is affecting prison community's safety and stability					
2	Substance abuse is affecting your interpersonal relationship with prisoners and prisons' communities					
3	Substance abuse is making you to be aggressive and show anti-social behaviors					

4	Substance abuse is making you talkative, over argumentative and denial to others' ideas					
5	Substance abuse is influencing you by affecting your time and interest to work and participate in pro-social activities in prison					
6	Substance abuse is influencing you to reflect inappropriate behaviors in the prisons					
7	Substance abuse is affecting your peaceful problem solving skills in the prison					
8	Substance abuse makes you conflict with others when you use force to get it					
9	You ever gotten into trouble with staffs/ prisoners due to the Substance abuse influences					
<b>3. Items that measure the effects of substance abuse on prisoners' rehabilitation programs</b>						
1	Substance abuse makes you less likely to engage constructively and genuinely in rehabilitation programs					
2	Substance abuse is influencing you to discontinue participating in vocational trainings and workshops					
3	Substance abuse is affecting your initiation and effectiveness in your academic learning					
4	Substance abuse is affecting your interest to follow and receive counseling services					
5	Substance abuse is leading you to the work related-discipline problems					
6	Substance abuse is limiting your time for recreation (like sport, reading, group discussions, etc) and other hobbies due to spending long time in its persistent use					
7	Substance abuse is making you neglect your responsibilities and expectations at work					



## APPENDIX II

### THE INTERVIEW QUESTIONS FOR PRISON STAFFS AND EX-PRISONERS

**Direction:** This part of the survey questions is also focused on the description of the effects of substance abuse on the prisoners' psycho-social adjustment and rehabilitation as well as related issues in prison. The information you provide will be kept completely anonymous. Your name will not be written on the questionnaire form. Your information is completely confidential. Therefore, forward your idea freely based on the following leading questions.

#### **A). Interview Questions for prison Administration**

1. How do you describe the prevalence of Khat and cigarette consumption in your prison?
2. How do you perceive the effects and risks of substance abuse on prisoners' psycho-social adjustment and rehabilitation in your prison?
3. Are prison's security and stability being undermined with the trouble and violence that substance abuse is causing up in your prison?
4. Do prisoners disrupts the order of the institution, endangers the lives of both inmates and staffs due to the influences of substance abuse in your prison?
5. What do you think are factors associated to substance abuse among prisoners in your prisons?
6. What are the challenges in restricting utilization of substances in your prison?

#### **B). Interview Questions for Psycho-social Service Workers (Psychologist and Sociologist)**

1. How do describe the prevalence of substance abuse in your prison?
2. Describe the major effects of substance abuse on prisoners' psycho-social adjustment and rehabilitation that you are being encountered with daily in your prison?
3. Do you think that prisoners with substance abuse problem are being constructively and genuinely rehabilitated in your prison?
4. What do you think are factors associated to substance abuse among prisoners in your prisons?
5. What are the challenges in restricting the utilization of substances in your prison?
6. Did substance abuse affect the prisoners' active receiving of counseling services?

**C). Interview Questions for Ex-prisoners**

1. How do you describe the prevalence of Khat and cigarette abuse that had been existed in the prison when you were there?
2. How do you describe your Khat and cigarette use when you were in the prison?
3. Having spent years in the prison, how do you explain the effects of substance abuse on the prisoners' psycho-social adjustment and rehabilitation that you had been witnessed?
4. What do you think were factors associated to substance abuse among prisoners in the prisons?
5. Have you ever gotten into trouble with your inmates/staffs due to substance abuse?
6. What do think were challenges to prevent substance abuse in the prison?

### APPENDIX III

#### THE FOCUS GROUP DISCUSSIONS ITEMS FOR PRISONER'S GROUP LEADERS

**Direction:** This part of the survey questions is focused on the description of encountered experience of the effects of substance abuse on the prisoners' psycho-social adjustment and rehabilitation in your prison. The information you provide will be kept completely anonymous. Your name will not be written on the questionnaire form. Your information is completely confidential. Therefore, forward your idea freely based on the leading questions.

1. How do you describe the prevalence of Khat and cigarette consumption in your prison?
2. What are the main problems that the prisoners face due to their substance abuse in prison?
3. Discuss the major effects of substance abuse on prisoners' psycho-social adjustment and rehabilitation that you are being encountered daily in your prison?
4. Discuss how the substance abused prisoners participate in rehabilitation in your prison?
5. Explain the factors associated to substance abuse among the prisoners in your prison?
6. What do you think about the challenges to prevent substance abuse in prisons?
7. How do you describe the prisoners' misconducts and malfunctions due to the influences of substance abuse in your prisons?

**AFAN OROMO VERSION OF THE DATA GATHERING TOOLS**  
**GAAFFILEE ODEEFFANNOO KUTAA TOKKOFFAA**  
**YUUNIVEERSIITHI HARAMAAYAA**  
**KOLLEEJJI BARNOOTAA FI SAAYINSIIWWAN AMALAA**  
**KUTAA BARNOOTA XIIN-SAMMUU**

**Bar-gaaffilee Sirreeffamtoota Seeraatiin Guutaman**

**Qajeelfama:** Kaayyoo ijoon gaaffilee kanaa Itiyooophiyaa naannoo Oromiyaa keessatti godinaalee Harargee Bahaa fi Lixaatti odeeffannoo wantoota sammuu hadoochan (jimaa fi sigaaraa) garmalee fayyadamuu fi miidhaa isaan tasgabbii xiin-hawaasummaa fi haaromsa sir/seeraa irratti qaban sakatta'uufidha. Gaaffileen kun sir/seeraa baay'inni isaanii 438 ta'aniin kan guutamu yommuu ta'u isaanis godinaalee lameen irraa kan filatamanii fi qo'annoo fi qorannoo kana keessatti qooda fudhachuuf fedhii warra qabanidha. Gaaffilee armaan gaditti dhiyaatan kanneen hunda isaanii iftoominaa fi amanamummaan deebisuuf yaalaa. Deebii fi yaadni keessan marti iccitiin kan qabamu ta'uu isaa sirriittan isiniif mirkaneessa.

Milkaa'inni fi qulqullinni qorannoo kanaa sirrummaa fi haqummaa odeeffannoo isin qoratichaaf kennitan irratti waan hundaa'uuf, tokkoon tokkoon gaaffilee dhiyaataniif itti yaaddanii deebii sirrii fi quubsaa akka laattaniif kabajaan isin gaafadha. Filannoowwan dhiyaatan keessaa kan isin beektaan waliin kallatiin yoo wal isiniif simuu baate filannoo itti dhiyeenya qabu filadhaa.

Maqaa keessan barreessuun isin hin barbaachisu.

Fedhii fi deeggarsa keessaniif guddaa galatoomaa!!

**Garee 1<sup>ffaa</sup>: Odeeffannoo Seenaa Hirmaattotaa Qorannichaa**

Qubee deebii sirrii qabu itti maruun yookiin bakka duwwaa jiru irratti barreessuun deebisaa.

1. **Saala:** A. Dhiira      B. Dhalaa
2. **Umrii:** \_\_\_\_\_ ( **waggaan**).
3. **Amantaa:** A. Ortoodoksii   B. Musliima   C. Piroteestaantii   D. Katoolikii   E. kan yoo  
     Jiraate \_\_\_\_\_

4. **Sadarkaa barnootaa:** A. Hin baranne B. Kutaa 1-4 C. Kutaa 5-8 D. Kutaa 9-10  
E. Kutaa 11-12 F. Gulantaa (I, II, III) G. Diiploomaa H. Digrii fi isaa ol
5. **Gosa:** A. Oromoo B. Amhaaraa C. Tigree D. Guraagee E. kan bioo \_\_\_\_\_
6. **Gosa yakkaa:** A. Ajjeechaa B. Yaalii ajjeechaa C. Hanna D. Qabeenya balleessuu  
E. Miidhaa qaama F. Dirqisiisanii gudeeduu G. kan biro \_\_\_\_\_
7. **Hanga murtii \_\_\_\_\_ (waggaan).**
8. **Hanga mana sirreessaa keessa turte \_\_\_\_\_ (waggaa).**
9. **Osoo mana sirreessaa hin galiin dura eessa jiraata turte?** A. Baadiyaa B. Magaalaa
- Garee 2<sup>ffaa</sup> Odeeffannoo Babal'ina Wantoota Sammuu Hadoochoonii**
10. **Osoo mana sirreessaa hin galiin dura jimaa fi sigaaraa ni fayyadamta turtee?**  
A. Eeyyee B. Lakki
11. **Hamma mana sirreessaa keessatti jimaa fayyadamaa jirtaa?** A. Eeyyee B. Lakki
12. **Hamma mana sirreessaa keessatti sigaaraa fayyadamaa jirtaa?** A. Eeyyee B. Lakki
13. **Gaaffilee 10 fi 11 tiif deebiin kee 'Eeyyee' yoo ta'e wantoota kana yeroo  
Fayyadamtu \_\_\_\_\_ (Guyyuu/torbaniin/ ji'aan).**
14. **Jimaa fi Sigaaraa yeroo tokkotti walfaana ni fayyadamtaa?** A. Eeyyee B. Lakki
15. **Dhiibbaawwan mana sirreessaa keessatti wantoota sammuu hadoochan akka  
fayyadamtuuf si dirqisiisaniif (eeyyee) kan hin taaneef immoo (lakkii) jechuun deebisi**  
A. Ulfaatinaa fi dhiphina naannoo mana sirreessaa  
B. Wantootni sammuu hadoochan mana sirreessaa keessatti argamu  
C. Gammachuu dhunfaa  
D. Dhiibbaa aadaa fi barmaatilee  
E. Duraan fayyadamaa turuu  
F. Miira yaaddoo fi jibbisiisaa irraa aara galfachuuf  
G. Maatii ofii ittiin dagachuuf  
H. Yoon addaan kute miirri hin taane waan natti dhaga'muf  
I. Jireenya hawaasaatti makamuuf

- J. Jireenya mana sirreessaa dhiphisaa fi gidirsaa ta'e ittiin mo'achuuf
- K. Dhiibbaa hiriyyaa
- L. Hawaasa fayyadamu waliin jiraachuuf
- M. Of si'eessuuf
- N. Yeroo ittiin dabarsuuf
- O. Yaada irraa walaba ta'uuf
- P. Hojiin biroo yeroon itti dabarfamu waan hin jirreef

**16. Wantoota sammuu namaa hadoochan kanneen eessaa argatta?**

- A. Waldaalee maayikiroo fi xixiqqaa sir/seeraa irraa
- B. Maatii fi hawaasa alaa irraa
- C. From nearby shop
- D. Hawaasa mana sirreessaa irraa
- E. hunda
- F. A fi B
- G. A fi C
- H. B fi C
- I. B fi D
- J. C fi D

**Garee 3<sup>ffaa</sup>: Odeeffannoo Miidhaa Wantoota Sammuu hadoochanii**

Gaaffileen saanduqa armaan gadii keessatti dhiyaatan sakatta'insa odeeffannoo gulantaa itti quufinsa himoota ilaalchaa fi yaadaa sir/seeraa godinaaleen lameen dhimmota akka; sadarkaa fayyadamummaan irraa jiruu, miidhaa wantootni sammuu hadoochan tasgabbii xiin-hawaasummaa fi haaromsa sir/ seeraa irratti fiduu, akkasumas hubannoo sir/seeraa miidhaa wantoota sammuu hadoochanii irratti qaban sakatta'uufidha.

Kanaafuu, hubannoon dubbisaatii deebii sirriidha jettanii amantan fuulduratti mallattoo ( $\surd$ ) ibsaa

**Hub: (1-1.5) = Tasumaa itti walii hin galu (1.5-2.5) = Itti Walii hin galu (2.5-3.5) = Yaada hin qabu (3.5-4.5) = Ittin walii gala (4.5-5) = Baay'iseen itti walii gala**

No	Gaaffilee	TW	WH	YH	W	BW
<b>1. Miidhaa wantootni sammuu hadoochan tasgabbii xii-sammuu sir/seeraa irratti qaban</b>						
1	Mana sirreessa keeyaa keessatti wantoota sammuu hadoochan garmalee fayyadamuun tasgabbii fi hojii xiin-sammuu sir/seeraa miidhaa jira					
2	Yeroo hundaa yemmuun jimaa fi sigaaraa fayyadamu miiraa keessan gala					
3	Jireenya koo mana sirreessaa keessatti jimaa fi sigaaraa fayyadamuun koo miirri hin baramne, jarjartii fi aariin akka na mo'atu gochaa jira					
4	Yeroon jimaa fi sigaaraa garmalee fayyadamu, hubannoo ani duratti waa'ee mataa koo fi addunyaa kanaa irratti qabu gara hubannoo dhugaa hin ta'iiniitti na jalaa jijjiira					
5	Yeroo hundaa haalli ani ittiin wantoota sammuu hadoochan argadhu, maallaqnii fi yeroon itti fayyadama isaa baay'ee na dhiphisa					
6	Wantoota sammuu hadoochan fayyadamee gammachuun yeroo gabaabaa erga dhume booda miirri abdi kutannoo fi deeggarsa dhabuu deebi'ee natti dhaga'ama					
7	Yeroon jimaa fi sigaaraa garmalee fayyadamu, nama baay'ee ariifata, muddamaa fi kan xiyyeffannoo hin qabnen ta'a					
8	Wantootni sammuu hadoochan haala adeemsa yaada kootii qindoomina kan hin qabne, dhugaa kan hin taanee fi hojiitti jijjiiramu kan hin dandeenye taasisee jira					
9	Jimaa fi sigaaraa yeroon dhabu miira gaddaatu natti dhaga'ma					
<b>2. Miidhaa wantootni sammuu hadoochan tasgabbii hawaasummaa sir/seeraa irratti qaban</b>						
1	Mana sirreessa keessatti wantoota sammuu hadoochan garmalee fayyadamuun nageenya, tasgabbii fi sochii hawaasummaa sir/ seeraa baay'ee miidhaa jira					
2	Mana sirreessa keessatti wantoota sammuu hadoochan garmalee fayyadamuun koo walitti dhufeenya ani hiriyoota koo fi hawaasa mana sirreessaa biroo waliin qabu miidhee jira					
3	Yeroon jimaa fi sigaaraa garmalee fayyadamu namoota birootiif yaadaa fi ilaalcha hamaa akkan qabaadhu na taasisa					
4	Yeroon jimaa fi sigaaraa garmalee fayyadamu yaadaa fi ilaalcha namoota biroo akkan mormuu fi hin fudhanne na taasisa					
5	Sababa wantoota sammuu hadoochan garmalee fayyadamu kootiin hiriyoota natty dhiyaatan hedduu dhabeen jira					

6	Wantootni sammuu hadoochan hojii tola ooltummaa fi guddina hawaasummaa sirr/seeraa keessatti hirmaachuuf fedhii fi kaka'umsa akkan hin qabaanne na taasisee jira					
7	wantoota sammuu hadoochan garmalee fayyadamuun koo dandeettii rakkoo mariin furuu fi walitti dhufeenya gaarii ani namoota waliin qabu najalaa miidhee jira					
8	Yeroo tokko tokko jimaa fi sigaaraa argachuuf humnaa fi karaa hin malleenan fayyadama, kun immoo namoota waliin walitti na buusee jira					
9	Yeroon jimaa fi sigaaraa garmalee fayyadamu namoota biroot wajjin walitti na buusa					
<b>3. Miidhaa wantootni sammuu hadoochan hojii haaromsaa sir/seeraa irratti qaban</b>						
1	Wantoota sammuu hadoochan garmalee fayyadamuun koo hojii haaromsaa sirr/seeraa keessatti qalbii fi tasgabbiin akkan hin hirmaanne na taasisee jira					
2	Sababan wantoota sammuu hadoochan garmalee fayyadamu fi xiyyeeffannoo koo isarra oolchuuf, hirmaannaa koo hojiiwwan leenjii ogummaa fi teekinikaa garaa garaa addaan kuteen jira					
3	Wantootni sammuu hadoochan kaka'umsa fi fedhii ani barnoota idileetiif qabu na jalaa miidhee jira					
4	Wantootni sammuu hadoochan kaka'umsa fi fedhii ani tajaajila gorsaa fudhacuuf qabu miidhee jira					
5	Mana sirreessaa keessatti wantoota sammuu hadoochan garmalee fayyadamuun koo rakkoo amalaatii fi naamusaatiif na saaxilee jira					
6	Wantootni sammuu hadoochan mana sirreessaa keessatti yeroo koo ani sochii bashannanaa, spoortii, dubbisuu fi hojii gaarii itti geggeessuu na jalaa miidhee jira					
7	Sababan wantoota sammuu hadoochan garmalee fayyadamuuf yeroo baay'ee gubuuf, itti gaafatamummaa koo kallattii hundaan narraa eeggamu ba'uu na dhorkeera					



## **GAAFFILEE ODEEFFANNOO KUTAA LAMMAFFAA**

### **Af-gaaffilee Hooggantoota Mana Sirreessaa fi Namoota Hidhamanii**

#### **Hiikamaniin Deebifaman**

**Qajeelfama:** Kutaa kana keessatti gaaffileen kunneen dursitootni sir/seeraa muuxxannoo mooraa isaanii keessatti guyyuu waa'ee miidhaa wantoota sammuu hadoochani argaa oolan akka irratti mari'ataniif kan dhiyaate dha.

Bu'aan yaada marii keessanii icciitiin akka qabamu isiniifan mirkaneessa

Waraqaa kana irratti maqaan keessan hin barreeffamu, kanaafuu bilisa ta'aatii mari'adhaa

Fedhii fi gumaacha keessaniif galatoomaa!!

#### **A. Af-gaaffilee Hooggantoota Mana Sirreessaatiin Deebifaman**

1. Mana sirreessaa keessan keessatti sadarkaan fayyadamummaa jimaa fi sigaaraa maal irraa jira? Akkamitti ibsitu?
2. Mana sirreessaa keessan keessatti sababa wantoota sammuu hadoochan garmalee fayyadamuutiin rakkoo fi miidhaan sir/seeraa irraa ga'ee maal fa'i?
3. Mana sirreessaa keessatti sirreeffamtootni seeraa sababa maaliif jimaa fi sigaaraa fayyadamuu akka barbadan ni beektuu?
4. Miidhaa wantoota sammuu hadoochan garmalee fayyadamuun tasgabbi xiin-hawaasummaa fi haaromsaa sir/seeraa irratti fide kan beektan kaasaa
5. Wantoota sammuu hadoochan mana sirreessaa keessa galchani sirreeffamtootni seeraa salphaatti argatani akka fayyadaman gochuun manichaaf gaarii dha jettanii yaadduu?
6. Mana sirreessaa keessan keessatti sir/seeraa wantoota sammuu hadoochan garmalee fayyadaman hojii haaromsaa keessatti bifa hiika qabeessa ta'een hirmaachaa jiruu?

## **B. Af-gaaffilee Ogeeyyii Xiin-hawaasummaa Mana Sirreessaatiin**

### **Deebifaman**

1. Mana sirreessaa keessan keessatti sadarkaan fayyadamummaa jimaa fi sigaaraa maal irraa jira? Akkamitti ibsitu?
2. Mana sirreessaa keessan keessatti sababa wantoota sammuu hadoochan garmalee fayyadamuutiin rakkoo fi miidhaan sir/seeraa irraa ga'ee maal fa'i?
3. Mana sirreessaa keessatti sirreeffamtootni seeraa sababa maaliif jimaa fi sigaaraa fayyadamuu akka barbadan ni beektuu?
4. Miidhaa wantoota sammuu hadoochan garmalee fayyadamuun tasgabbii xiin-hawaasummaa fi haaromsaa sir/seeraa irratti fide kan beektan kaasaa
5. Mana sirreessaa keessan keessatti sir/seeraa wantoota sammuu hadoochan garmalee fayyadaman hojii haaromsaa keessatti bifa hiika qabeessa ta'een hirmaachaa jiruu?
6. Wantoota sammuu hadoochan mana sirreessaa irraa dhorkuuf wantootni gufuun maali?

## **C. Af-gaaffilee Namoota Hidhamanii Hiikamaniin Deebifaman**

1. Yeroo mana sirreessaa keessaa turtan sadarkaan fayyadamummaa jimaa fi sigaaraa maal irraa ture? Akkamitti ibsitu?
2. Yeroo mana sirreessaa keessaa turtan jimaa fi sigaaraa fayyadamaa turtanii?
3. Mana sirreessaa keessatti sababoota maaliitiif jimaa fi sigaaraa fayyadamaa turtanii?
4. Yeroo mana sirreessaa keessa turtanitti miidhaan wantoota sammuu hadoochan garmalee fayyadamuun tasgabbii xiin-hawaasummaa fi haaromsaa sir/seeraa irratti fidu maal fa'i?
5. Mana sirreessaa keessan keessatti sir/seeraa wantoota sammuu hadoochan garmalee fayyadaman hojii haaromsaa keessatti bifa hiika qabeessa ta'een hirmaachaa turanii?
6. Sabboota wantoota sammuu hadoochan garmalee fayyadamaa turtaniif hiriyoota keessan yookiin hoojjettoota waajira waliin walitti buutanii beektuu?

## **GAAFFILEE ODEEFFANNOO KUTAA SADAFFAA**

### **Gaaffilee Marii Garee Dursitoota Sirr/seeraatiin Mari'ataman**

**Qajeelfama:** Kutaa kana keessatti gaaffileen kunneen dursitootni sir/seeraa muuxxannoo mooraa isaanii keessatti guyyuu waa'ee miidhaa wantoota sammuu hadoochani argaa oolan akka irratti mari'ataniif kan dhiyaate dha. Bu'aan yaada marii keessanii icciitiin akka qabamu isiniifan mirkaneessa. Waraqaa kana irratti maqaan keessan hin barreeffamu, kanaafuu bilisa ta'aatii mari'adhaa. Fedhii fi gumaacha keessaniif galatoomaa!!

1. Mana sirreessaa keessan keessatti sadarkaan fayyadamummaa jimaa fi sigaaraa maal irraa jira? Akkamitti ibsitu?
2. Mana sirreessaa keessan keessatti sababa wantoota sammuu hadoochan garmalee fayyadamuutiin rakkoo fi miidhaan sir/seeraa irraa ga'ee maal fa'i?
3. Mana sirreessaa keessatti sirreeffamtootni seeraa sababa maaliif jimaa fi sigaaraa fayyadamuu akka barbadan ni beektuu?
4. Miidhaa wantoota sammuu hadoochan garmalee fayyadamuun tasgabbi xiin-hawaasummaa fi haaromsaa sir/seeraa irratti fide kan beektan kaasaa
5. Wantoota sammuu hadoochan mana sirreessaa keessa galchani sirreeffamtootni seeraa salphaatti argatani akka fayyadaman gochuun manichaaf gaarii dha jettanii yaadduu?
6. Mana sirreessaa keessan keessatti sir/seeraa wantoota sammuu hadoochan garmalee fayyadaman hojii haaromsaa keessatti bifa hiika qabeessa ta'een hirmaachaa jiruu?
7. Sirr/seeraa sababa wantoota sammuu hadoochan garmalee fayyadamaniif gocha of miidhuu fi lubbuu ofii balleessuu