1.1 Literature Review

The following section shall elaborate on the various aspects of addiction as defined and explored by authors in various published articles and peer reviewed journals. The following section shall also bring out studies that elaborate on the meaning and types of addiction, the factors responsible for such substance addiction at large and finally on the behavioral changes and modifications introduced and exaggerated by substance addiction such as drug and alcohol.

1.1.1 Substances of Addiction (Drug and Alcohol)

Literature defines addiction as the ability of one of “giving over” or “being highly devoted” to a person or activity or engaging in a behavior habitually which may uphold various negative or positive implications for the person being involved in the addictive behavior (Sussman & Sussman 2011). Though historically the term merely referred to a phenomenon defining overpowering urges; however, more recently the conceptualization of the term has widened and now it pertains to the “imbalance of central nervous system in some way and thus is defined as a concept having neurobiological underpinnings” (Sussman & Sussman 2011).

As stated above, addiction may occur to a person or activity. Thus, when an individual indulges himself in the act of compulsive and repetitive consumption of an illicit drug despite being aware of the problems that may originate from the drug, possible tolerance to the effects of drug and possible withdrawal symptoms that the drug use should be reduced or stopped altogether, then the state is defined as that of “substance dependence” (Department of social and family welfare, 2010).

Among the phenomenon of substance dependence, the most commonly observed dependence is found to be on the substances of alcohol and drugs. Among the definitions propounded for alcohol and drug dependence, a somewhat significant contribution originates from the Cognitive behavior theory which describes alcohol and drug dependence as “learned behaviors that are acquired through experience” (Kadden, 2002). Drug dependence has been further defined as containing a cluster of physiological, behavioral and cognitive phenomenon of variable intensity,
in which the use of a psychoactive drug or drugs takes on a high priority. It implies a need for repeated doses of drug to feel good or avoid feeling (United Nations Office on Drugs and Crime, 2007). Based on their intake, the problem of drug and alcohol dependence is categorized as hazardous use, harmful use, substance abuse and substance dependence. Various problems originate from the use of alcohol and other drugs which are related to intoxication, regular use and dependence. Not all the problems that originate from dependence on the substances of alcohol and drugs are related to dependence or addiction. Sometimes, these problems that originate from the substance addiction are more related to non-dependent patterns of use that pose risks to the person indulged in the dependence and the people around them. However the fact remains that alcohol is an illicit drugs which is a central nervous system depressant and its psychoactive properties contributes to changes in mood, cognition and behavior. The dependence on alcohol is even recognized as a complex syndrome with both physiological and psychological signs and symptoms with the dependence possessing key features such as narrowing of drinking repertoire, loss of control over drinking behavior, withdrawal symptoms on cessation of use, avoidance of withdrawal symptoms by drinking and rapid reoccurrence of drinking patterns after a period of abstinence (Huyghe 1971). Drug dependence on the other hand, remains a broader issue which includes the dependence on various substances such as tobacco, cannabis, cocaine, heroin and other volatile compounds which result in different types of psychological effects with dependence being the stage of acute usage of these substances. Signs of drug dependence mainly include neglecting responsibilities, participating in risky behaviors, criminal problems, relationship problems, physical tolerance, loss of control over substance use and substance use taking over the normal course of a persons’ life. The dependence further leads to the stage of substance misuse or abuse which results in various behavioral changes that then pertains various short term and long term effects on a persons’ physical health, mental health, personal relationships & work and financial situations (Australian Drug Foundation, 2005).

1.1.2 Drug and Classification of Drugs

Technically, a drug is any chemical substance that is occurring naturally or is being pharmaceutically prepared that affects the normal functioning of the body and/or brain. In other
words, any substances the intake of which generate or modify the physical or psychological changes in the person concerned are termed as drugs. Drugs are available in solid, liquid or gaseous forms across the world (Australian Drug Foundation, 2005). In medical terms, a drug taken by any living organism may modify one or more functions in the organism. Medicinal drugs are manufactured to provide temporary relief from unhealthy symptoms and sometimes the drugs are also taken with the objective of permanently supplying the body with necessary substance that the body cannot make. However, the overdose of even medicinal drugs and other forms of drugs sometimes also produce unwanted side effects. Sometimes, the intake of drugs also generates unhealthy dependencies among the living organisms that also contain physiological and behavioral roots (Narconn, 2011).

Drugs are often classified on the basis of following two grounds:

1. Their effects on the central nervous system
2. Whether they are legal or illegal (illicit)

In this research we would be classifying drugs based on their effect on Central Nervous System. Basically, three categories of drugs are recognized based on their effects on the central nervous system which are the following. These drugs are together termed as psychoactive drugs:

- **Depressants**
  Depressants refer to the drugs that basically slow down the functioning of the central nervous system by affecting the concentration and coordination functions of the brain. This results in slow down in the process of decision making and reactions by the person concerned in unexpected situations. Depressants when taken in small quantities leads to the person feeling more relaxed than he is without these depressants, however larger quantities of these depressant may produce fatal effects on the person such as vomiting, nausea, unconsciousness and even death. Various examples of depressants include alcohol, cannabis, opiates and opioids and other solvents and inhalants (Narconn, 2011).

- **Stimulants**
  Stimulants refer to a category of drugs which speed up the activity of the central nervous system. Thus, a person taking stimulant exhibits the features of being more active, awake,
alert and confident. Stimulants are themselves categorized as mild and strong stimulants where in the mild stimulant include caffeine in tea, coffee and cold drinks, nicotine in cigarettes, ephedrine used in the cases of asthma etc whereas, drugs such as cocaine, slimming tablets, khat, ecstasy and amphetamines are categorized as strong stimulants. The consistent use of stimulants include various short term and long term effects on the health of the consumer such as those experienced in terms of increase in heart rate, body temperature, blood pressure. Stimulants also produce other effects such as loss in appetite, dilated pupils, agitation and difficulty in sleeping etc. Large doses of stimulants also produce anxiety, panic, seizures etc (Australian Drug Foundation, 2005).

- **Hallucinogens**

Hallucinogens produce such effects on people which alter the ability of the consumer to see and imagine things differently than what they actually are. In other words, hallucinogen drugs affect the entire perception, emotions and mental processes. Elements such as datura, ecstasy, ketamine and cannabis etc. fall under the category of hallucinogens. Hallucinogens alters the health of the individual in the form of dilation of pupils, loss of appetite, increased activity, sweating, panic, paranoia, jaw clenching, nausea and irrational behavior (Australian Drug Foundation, 2005).

Another basis of classifying drugs across nations rests on the legal categories. Each nation recognizes various forms of drugs under these legal categories but at a global level, some commonalities exist in the classifications of drugs as legal or illegal. One way of classification of drugs adopted in the national policies of the countries across the globe in the legal categories has been on the basis of prescription. Thus, all those medicines and drugs which are either prescribed by the doctors or are available over the counter at pharmacies are together termed as legal drugs. The legalization of these drugs rests on the fact that they are taken with the objective of helping an individual to recover from the illnesses that the individual is facing. However, when these drugs are taken as an overdose and are abused for other purposes, then these drugs fall under the category of illegal drugs. Some examples of these drugs include caffeine, nicotine and alcohol when taken in limited or prescribed quantities are referred to as legal drugs (Narconn, 2011). On
the other hand, illegal drugs constitute all those categories of drugs the intake of which produces immediate effects on physical, emotional and psychological development of the consumer. These effects are found to be more pronounced in the young people (Huyghe 1971). These drugs are thus categorized as illegal as the continuous use of them not only hampers the overall health status of the individual but also becomes a substitute for the various mechanisms that otherwise occur naturally in a healthy individual. Some example of illegal drugs include cannabis, cocaine, ecstasy, heroin, hallucinogens such as LSDs, methamphetamine etc. There are various national and international laws that bars the usage of these substances altogether (Narconn, 2011).

1.1.3 Factors responsible for Drug/Alcohol Addiction

Drug and alcohol abuse and misuse is a phenomenon observed very commonly across various nations across the globe. The dependence on drugs and alcohol is found to be prevalent among all age groups and genders. In particular, this phenomenon is observed to be very common among the young population of the nations.

Maria et al. (2014) conducted a mini-review of various plausible factors for alcoholism and other substance use. The study explains that the probability of a person becoming alcoholic or drug addict is explained by a complex interaction of various components such as their biological makeup including genetics and their exposure to drugs and alcohol. In addition to this, depression, anxiety and stress are highlighted as other common causes for prevalence of alcoholism and other drug abuse.

Various studies have put forward the causes that infuse behavioral trends among the younger and other populations. For instance, Matheson and Mcgrath (2012), in their study highlight four basic reasons due to which alcohol abuse & misuse is found to be most prevalent among the young population of Colorado. The study asserts that the area of brain which is responsible for making judgments and decisions called the pre-frontal cortex develops after the mid-twenties and thus the risk taking behavior one of which is alcohol and drug addiction remains most prevalent among the young population. In addition to this, the study also highlights that the youth in various age groups indulges in such behavior to change their moods, to receive social acceptance
and rewards and further to stay at bay from negative feelings that otherwise occupy their mind. Peer pressure and curiosity remains the factors which initiates the process of substance use in the first place among the study population.

A study by (Erickson (2009) found that the major causes/factors that explain the addictive behavior towards alcohol and drugs are categorized under the heads of risk factors (aggressive behavior in childhood, lack of parental supervision, poor social skills, drug experimentation, community poverty, drug availability at schools), environmental factors (home and family, peer & school) and biological factors (early use and methods of administration).

(Douglas 2006) conducted a sociological analysis to identify the factors responsible for marijuana and alcohol abuse among the young population of Grenada. The study concludes that the trend of alcohol and drug abuse in the young people of Grenada comes from their cultural mindset and traditional beliefs wherein it is believed that drinking alcohol is an acknowledgement of one’s entry into adulthood. In particular, the legal status of the substance use and social character of their consumption are found to be the deepest influences working with such a trend become even pervasive among the younger population of the country.

A study by (Spooner & Hetherington 2004) highlight a multitude of social factors which explains the trend of alcohol and drug use and dependence among the various strata of population while at the same time identifying young people to be the most vulnerable of all age groups to fall in the trap of substance abuse in Australia. The study asserts various behavioral patterns among the prime causes of such addictions such as those of delinquent behavior, antisocial behavior, problem behavior and risk behavior. The study also correlates such behavioral trends with various mental health disorders that push people towards these elements. In addition to these, the study highlights the co-occurrence of individual and environmental factors to be the prominent explanations of drug and alcohol dependence such as the interactions in the factors of family destruction and drug availability, social deprivation and cultural norms and attitudes, personality disorder and peer culture and depression and suicidal behavior & drug policies.
1.1.4 Consequences of Drug addiction on Behavior

Since drugs are recognized as chemical substances that affect the brain, there are various behavioral modification and changes that are ultimately experienced by the person consuming and abusing drugs of various kinds. A study by National Institute of Drug Abuse, 2014 explains that long term addiction to alcohol or any other kind of drug which overwhelms the dopamine reduces the receptors signals of the brains and thus very cruelly impacts the reward circuits of the individuals brains wherein, the person’s ability to experience any kind of pleasure is permanently reduced to fairly low levels. Other long term effects on behaviors of the persons include adaptations in habits and other non conscious memory systems.

A study by RPS (2013) examines the behavioral consequences on adolescents of excessive marijuana abuse. The study claims higher instances of violent behavior among youth using marijuana in which the youth are usually found to indulge themselves in the cases of physically attacking people, destroying property and even stealing and that these incidences were found be increasing proportionately to the number of days marijuana was smoked in past year. The study also confirms impairment of concentration abilities and retaining information among the youth along with various cognitive defects that these users develop.

Wit, (2009) presents a review of controlled studies to examine the association between impulsive behavior and drug use. The study highlights that there exists a dialectical relationship between the two implying impulsivity to be both a determinant and consequence of drug abuse based on various measures present in literature to measure impulsivity with the various measures being independent of each other. The study asserts impulsive behavior to be a consequence of drug use whether acute or chronic which in turn facilitates further drug use and thus confirms alterations in performance behavior across independent measures of impulsivity.

A study by Moore & Stuart (2005) indicates the behavioral consequences of smoking marijuana and the study annuls the previous claims by various studies that smoking marijuana promotes violent behavior. In fact, the study asserts that drinking marijuana has a sedating effect on the consumer and thus is less likely to cause aggressive behavior than the consumption of other substances such as alcohol and stimulants such as amphetamines and cocaine. However, the study also claims that using marijuana causes the behavioral feelings of fear, anxiety, panic and
paranoia which may sometimes translate into aggressive behavior along with other strategic behavioral changes which includes a sense of feeling threatened and frightened along with the user experiencing withdrawal symptoms such as loss of appetite, sleep disturbance, restlessness, anxiety and sweating etc which may promote anger that may lie between the range of mild irritation to a violent rage.

Various studies also examine the direct and indirect relationship between drug and alcohol abuse and criminal and violent behaviors. (Hoaken & Stewart 2003) present a review of studies to examine the extent of interpersonal violence caused by drug abuse and dependence. The study empirically claims the evidence of alcohol and thus the aggressive behavior among the consumers which is further complicated by the interaction of pharmacological, contextual, situational and individual difference factors. The study further asserts that drugs and alcohol consumption leads to aggressive behaviors among the consumers and thus leads to violent trends among the in takers of drugs. However, the trend is not true for all the drugs and the intake of some drugs such as PCPs influence paradoxical effects in the in takers.

Another study presents a quantitative evidence to support the claim that illicit drug use influence various types of behavior modifications and it even leads to criminal behaviors. The study concludes that the sample of chronic drug users in the study were found to be 30% time more involved in crimes than the non-drug users and the results were found to be consistent among genders, age-groups and years of survey in the US. The study further finds that the crime days were 10 time more frequent for a person when he was addicted than his previous state where the characteristic of addiction was absent (UN office on drug and crime 2003). (Mulvey 2011) in their study have examined the nexus between substance use and delinquent behavior among serious adolescent offenders. The study claims that the nexus between the two has moved parallel over time suggesting a reciprocal relationship between the two behaviors. The study further claims that the patterns of this association follow different patterns such as that of reciprocal and sequential in different groups of youth. The study further asserts that the association between them remains most active among the adolescents however the association weakens and even ceases in early adulthood.