Psychological Determinants of Drug Addiction: A Study of Kashmiri Youth

A Dissertation

Submitted to University of Kashmir in partial fulfillment of the requirements for the award of Master of Philosophy (M. Phil.) in Psychology

By

IMRAN KHAN

UNDER THE SUPERVISION OF

DR. SHAWKAT AHMED SHAH

Head and Associate Professor

Department of Psychology

University of Kashmir

DEPARTMENT OF PSYCHOLOGY

FACULTY OF SOCIAL SCIENCES

University of Kashmir

NAAC Accredited Grade "A"

(2011-2012)

DEPARTMENT OF PSYCHOLOGY
University of Kashmir
Hazratbal, Srinagar

= =

No:

Date:

CERTIFICATE

This is to certify that the dissertation entitled "**Psychological Determinants of Drug Addiction: A Study of Kashmiri youth**" by **Imran Khan** in partial fulfillment of the requirements for the award of Master of Philosophy (M. Phil.) in Psychology, is the original work carried out by him under my supervision and guidance.

Dr. Showkat Ahmed Shah
Head and Supervisor
Department of Psychology
University of Kashmir
Srinagar

DEPARTMENT OF PSYCHOLOGY
University of Kashmir
Hazratbal, Srinagar

= =

DECLARATION

I, IMRAN KHAN do here by declare that the dissertation work titled **"Psychological Determinants of Drug Addiction: A study of Kashmiri youth"** submitted in the partial fulfillment of the requirement for the degree of Master of Philosophy (M.Phil.) in Psychology, is the result of bonafide research work carried out by me under the guidance of **DR.SHAWKAT AHMED SHAH,** Head and Associate Professor, Department of Psychology, University of Kashmir.

No part of this work has been submitted in part or full, for a degree, in any other university.

Place: University of Kashmir

Date:……..

Name and Signature of Scholar

Imran Khan

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the Most Beneficent and the Most Merciful

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Dedicated to My

Beloved PARENTS

&

To my Niece and Nephew

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List of Abbreviations

APA	American Psychological Association
DSM-IV (TR)	Diagnostic and Statistical Manual of Mental Disorders, 4th edition Text Revision.
EOAs	Early onset alcoholics
GPDH	Government Psychiatric Diseases Hospital.
ICD-10	International Statistical Classification of Disease and Related Health Problems
IDUs	Injection drug users
LOAs	late onset alcoholics
NIDA	National Institute on Drug Abuse
PRP	Pleasure reward pathway.
SPSS *16.0*	Statistical Package for Social Science version *16.0*
SWB	Subjective well-being.
UNO	United Nations Organization
UNODC	The United Nations Office on Drugs and Crime.
WHO	World Health Organization

Abstract

Substance abuse has been considered as one of the alarming problem throughout the world. The United Nations Office on Drugs and Crime (UNODC) World Drug Report, 2012 estimates that between 153 million and 300 million people age 15–64 used illicit drugs at least once in the past year and attributes 1 in every 100 adult deaths annually to illicit drug use. The field of psychology has also witnessed momentum over the research on psychological perspectives of substance abuse/drug addiction during the past two decades. Several psychological factors have been found associated with substance dependence or drug addiction. The present study attempts to find out the relationship of drug addiction/ substance dependence with personality dimensions of neuroticism and extraversion; impulsiveness and subjective wellbeing. The study also attempts to predict the significant psychological factors contributing to drug addiction/Substance dependence. Drug addicts/substance dependents who join de-addiction centres were compared with those who don't join de-addiction centres on personality dimensions (extraversion, neuroticism); impulsiveness and subjective wellbeing. The study also examines the self reported reasons of drug addicts/substance dependents for joining de-addiction centres or for not joining de-addiction centres and continuing drug use. One hundred and fifty male participants were selected in the study. One group of subjects (N=50) were taken from different drug de-addiction centres. Another group of drug addicts (N=100), include those who don't join drug de-addiction centres and were taken from different areas of Srinagar. Drug addiction/substance dependence was assessed using Alcohol, Smoking and Substance Involvement Screening Test- V 3.0 (ASSIST-V 3.0); Personality (neuroticism and extraversion) were assessed using Modified version of Eysenck's Maudsley's Personality Inventory (MPI 1959- S.S Jalota and S.D Kapoor); Impulsivity was assessed using Barratt Impulsiveness Scale, Version -11 (BIS-11) & Subjective wellbeing by Subjective Wellbeing Inventory –SUBI (Nagpal and sell, 1992). Apart from these tools a self designed semi structured interview schedule was used to collect the responses of the subjects pertaining to their reasons for joining de-addiction centre or reason for not joining de-addiction and continuing drug use. The data collected was analyzed by using appropriate statistical techniques like Pearson's product moment correlation, multiple regression analysis, t-test and also content analysis for qualitative date. The results

showed significant positive correlation between drug addiction/ substance dependence and neuroticism (r=0.269, $P \leq 0.01$). However, the relationship between drug addiction/substance dependence and Extraversion was found negative but insignificant. Overall impulsiveness (r = 0.204, $p \leq 0.05$) and two of it's sub factors i;e Attentional impulsiveness (r = 0.230, $P \leq 0.01$) and non-planning impulsiveness (r = 0.183, $p \leq 0.05$) showed significant positive correlation with drug addiction/ substance dependence. However motor impulsiveness (a sub factor of impulsiveness) showed insignificant correlation with drug addiction/substance dependence. Subjective wellbeing and it's factorial dimensions showed insignificant correlation with drug addiction/ substance dependence. Neuroticism was found as the only significant predictor of drug addiction/ substance dependence. The results also showed significant difference between drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres on extraversion (t=2.574, $p \leq 0.05$). However no such difference was found between the two groups on Neuroticism. Significant difference was also found between drug addicts/ substance dependents who join de-addiction centres and drug addicts/ substance dependents who don't join de-addiction centres on motor impulsiveness (t=2.10, $p \leq 0.05$).However the difference between the two groups on overall impulsiveness and two of it's sub factors (Attentional impulsiveness and Non-planning impulsiveness) was not found statistically significant. Significant difference was found between drug addicts/substance dependents who join de-addiction centres and drug addicts who don't join de-addiction centres on general wellbeing positive affect (t=1.986, $p \leq 0.05$), confidence in coping (t = 2.240, $p \leq 0.05$), primary group concern (t= 2.486, $p \leq 0.05$), and perceived ill health (t= 2.890, $p \leq 0.01$) dimension of subjective wellbeing. However the difference between these two groups on the rest of the factorial dimensions of subjective wellbeing and overall SWB was not found statistically significant. Health concern, dignity of self and their families, and family concern /family pressure were found as the major self reported reasons for joining de-addiction centres. Denial, feeling in control, and recreational drug use were found as the major self reported reasons for not joining de-addiction centres and continuing drug use. Most of the results of the study were found in tune with the findings of the previous relevant research. The limitations of the study and the suggestions for future research have been mentioned.

Chapter 1

INTRODUCTION

Substance use is an age old phenomenon. Throughout history, psychoactive substances have been commonly used for a variety of purposes, from medicines to important components of rituals and ceremonies (Lang, 2004), and if we look at current situation, substance abuse has become a common human behaviour & has assumed alarming dimensions particularly in young generation and with so many factors contributing to this menace drug abuse or substance abuse has become an alarming public health problem all over the world. The United Nations Narcotics Bureau describes international drug abuse as one of the worst epidemics in the global history. Use of drugs is related to adverse health and social outcomes (Nutt, King, Saulsbury & Blakemore, 2007). For example cigarette smoking is a leading cause of preventable disability and death in the U.S. and around the world (World Health Organisation, 2002), increasing the risk of cancer, cardiovascular disease, respiratory and other health problems (WHO, 2002; U.S. Department of Health and Human Services, 2004). The use of other psychoactive substances, most of them illicit drugs, is also associated with massive social cost beyond the damage to the individual users, affecting health care, law enforcement, and legal systems (Nutt et al, 2007).

The picture is not good at all if the world statistics on the drugs abuse is taken into account. With a turnover of around $500 billion, it is the third largest business in the world, next to petroleum and arms trade. About 190 million people all over the world consume one drug or the other (Miller, 1993). The United Nations Office on Drugs and Crime (UNODC) World Drug Report, 2012 estimates that

between 153 million and 300 million people age 15–64 used illicit drugs at least once in the past year and attributes 1 in every 100 adult deaths annually to illicit drug use. The report further added that drug use, especially injection drug use, contributes significantly to the global burden of disease, as per the report 20 percent of injection drug users (IDUs) have HIV; 46.7 percent of IDUs have hepatitis C; and 14.6 percent of IDUs have hepatitis B, the report further mentioned that nonmedical use of prescription drugs continues to surge and is increasingly reported in polydrug use combined with illicit substances. New and emerging psychoactive substances were reported in numerous countries in all regions, but especially in Europe, North America, and Oceania.

Drug addiction causes immense human distress and the illegal production and distribution of drugs have spawned crime and violence worldwide. Today no part of the world seems free from the curse of drug trafficking and drug addiction. Millions of drug addicts, all over the world, are leading miserable lives, between life and death.

Drug abuse in India is as old as elsewhere. From the very beginning, cannabis drugs have been in use. Ancient books are replete with references to intoxicants such as Soma rasa, dev booty, madira etc. Opium became popular during the Mughal period. Until recently cocaine had many enthusiasts, especially in the red light area. (Kour & Gulati, 2007). Long ago Chopra and Chopra (1957) had written much about the use of intoxicants, particularly about cannabis (ganja) and opium in India (Kour & Gulati, 2007). Resent surveys and studies also show a very grim situation with reference to substance use in India. (Lal, 2005; National survey, 2004; Ray, 2004; Srivastava, 2003). According to a UN report, One million heroin addicts are registered in India, and unofficially there are as many as five million. (Srivastava, 2003). Cannabis, heroin, and Indian-produced pharmaceutical drugs are the most frequently abused drugs

in India. Cannabis products, often called charas, bhang, or ganja, are abused throughout the country because it has attained some amount of religious sanctity because of its association with some Hindu deities (Srivastava, 2003).

The actual status of drug abuse in Jammu & Kashmir is not clear as no comprehensive survey in J & k has been done so for and different studies report varying figures. Therefore any figure should not be treated as absolutely conclusive but an approximation. According to a study conducted by the United Nations Drug Control Programme in 2008, there are 60,000 substance abusers in the Kashmir Valley (Boga, 2010). A well known psychiatrist Dr Mushtaq Margoob's book, "Menace of Drug Abuse in Kashmir" published in 2008, states that the Valley has 2.11 lakh drug abusers. In another study done at the Government Psychiatric Diseases Hospital (GPDH) in 2002, doctors compared drug trends from 1980-88 and 2002 in patients – before the armed conflict erupted and after. The figures indicated how deep-rooted the scourge of addiction is. An alarming increase of over sixty percent was reported in the use of opioid-based preparations (9.5 per cent to 73.61 per cent), and an over twenty five percent increase in multiple substance-abuse (15.8 per cent to 41.6 per cent), from the 1980s to 2002.

Drug Addiction or Substance dependence

The concept of addiction is not easy to define and the usage of the term addiction has been considered as controversial, (Sab, 2003) however, central to its definition is the dependence on a substance or activity. (Widyanto, 2004).

The section about substance dependence in the Diagnostic and Statistical Manual of Mental Disorders (more specifically, the 2000 "text revision", the DSM-IV-TR) does not use the word addiction at all. It explains: "When an individual persists in use of alcohol or other drugs despite problems related to use of the substance, substance

dependence may be diagnosed. Compulsive and repetitive use may result in tolerance to the effect of the drug and withdrawal symptoms when use is reduced or stopped. This along with Substance abuse are considered Substance Use Disorders" (DSM-IV-TR, 2000).

Terminology has become quite complicated in the field. Pharmacologists continue to speak of addiction from a physiologic standpoint (some call this a physical dependence); psychiatrists refer to the disease state as psychological dependence; most other physicians refer to the disease as addiction. It is now believed that the field of psychiatry is now considering, as they move from DSM-IV to DSM-V, transitioning from "substance dependence" to "addiction" as terminology for the disease state (Substance dependence, 2013).

The term drug addiction in this study (and dissertation) will be used as a category which may include the same persons who, under the DSM-IV, can be given the diagnosis of substance dependence or substance abuse.

As mentioned earlier the Diagnostic and Statistical Manual of Mental Disorders - Text Revision (DSM-IV TR), (2000) uses the term substance dependence instead of addiction, and defines a person "dependent" on a psychoactive substance if the person meets three of the following criteria: 1) tolerance, 2) withdrawal, 3) the substance is often taken in larger amounts or over a longer period of time than was intended, 4) there is a persistent desire or unsuccessful efforts to cut down or control substance use, 5) a great deal of time is spent in activities necessary to obtain the substance, use the substance, or recover from its effects, 6) important social, occupational, or recreational activities are given up or reduced because of substance use, 7) the substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or

exacerbated by the substance. Dependence is further specified according to the existence of tolerance or withdrawal which are physiological states as "with physiological dependence" or "without physiological dependence" (American Psychological Association, 2000, p. 198). The diagnosis of dependence can be made without tolerance or withdrawal but these specifications help to describe a dependent person better in addition to the diagnosis according to APA.

Throughout history addiction has been evaluated in many different ways in terms of its reasons and consequences. At the beginning of addiction literature, the responsibility of an individual's addiction was given mostly to the society. The most common beliefs were that addiction was a "breakdown in moral standards" or a consequence of societal problems like inequities (Fishbein & Pease, 1996; Keller, 1976). Later addiction's responsibility was put on the individual rather than the society. Experiences, learning, and individual choice were taken into account. These theories blame an individual for addiction rather than society. The individual focus was replaced by biological paradigms which put the blame on genetics and involuntary responses of human body. With the advancement in research in the fields of biology, psychology and sociology, many theories were proposed. Today, it has become obvious that the responsibility of being an addict is like a point on a continuum from societal conditions to individual characteristics, and the person's vulnerability to effects of drug use is in relation with that point (Fishbein & Pease, 1996). Some of the perspectives regarding drug addiction or substance dependence are:

Psychodynamic Perspective

At the beginning of psychoanalytic literature, Freud (1905) labelled addiction as an "oral fixation" which is experienced because of a traumatic event in the oral stage of development corresponding to 0-18 months (Ramos, 2004). Chafetz (1959) called it an

"oral perversion". Later prospective studies showed that oral over-activity in children did not precede alcoholism in adulthood rather accompanied it (Ramos, 2004). When oral fixations occur, psychological disorders related with the mouth area are expected. For example, smoking, alcohol dependence or overeating can be because of oral fixation. On the other hand, Rado (1933) stated that it is the person's way of adaptation which is destructive to himself. Addiction is a way of aggressive acting-out behaviour. Ego psychologists argued that addiction is a defect in the ego functions. This defect is thought to be rooted in unresolved conflicts or failures to internalize parental functions in childhood (Yalisove, 1997).

Addiction as per the psychoanalytical approach can also be explained on the basis of "sublimation". Sublimation is drawing the sexual energy, libido, from the id to the ego, hence that the sexual energy is turned from inside onto an external, independent object like alcohol (Subkowski, 2006). Gurol (2004) argued that addiction is a process of gaining and losing the object of love. Hence, addiction occurs as a result of faulty object relations. The dependent person seeks the drug or alcohol. He is relieved for a short period of time after consuming it. Subsequently, the drug's effect diminishes. The dependent person feels insecure and ambivalent when the relief is lost. This kind of relation with the drug is experienced as a result of severe infantile trauma according to the psychoanalysts. As a child, the dependent person may have come face to face with an uncontrollable external object (probably an inadequate care-taker). The child can not internalize the mother's love. Accordingly child decides to externalize his mother's love which is defined as "externalization of idealized object". The child starts to fantasize that someone loves him/her her but she/he is not there at that moment. Since the inadequate mother takes care of the child from time to time, the child tries to internalize his mother's love. However he cannot because the care of the mother is not

permanent. This type of relation with the mother is unsatisfying for the child's love needs. It is similar to the dependent's relation with the drug in terms of the vicious circle going around losing and gaining the object of love. Another characteristic observed in dependent individuals is that their mothers are either extremely empathetic or lacking empathy totally (Gürol, 2004). Winnicott (1960) calls it "good enough mother" for the woman who is empathetic enough and not in an extreme way. While the mother satisfies the needs of her child, the only tool in her hand is her empathy because the baby can not express his feelings or needs verbally. If she is overly empathetic, the child can not learn how to satisfy his needs by himself. If the mother is not empathetic at all, repetitive traumatic experiences may occur for the child. Self-care capacity of a person is a determinant in addiction because if the person did not learn how to do it in his/her childhood, she/he starts seeking external ways to do it in adulthood. Ramos (2004) argued that the mother's incapability to satisfy the baby to an optimum degree leads to problems about narcissistic gratification in the baby which goes on to the baby's adulthood. However studies about the mothers of alcoholics did not show an extreme rate of problems between alcoholic patients in therapy and their mothers retrospectively, rather a rate of problems similar to other patient populations was found. In alcohol dependence, it was found in most of the studies on the etiology of addiction that a father figure was missing which was thought be causing a weak and fragile ego in alcoholics (Ramos, 2004). As a result, many psychodynamic theories converge in some points. These points are related with a dysfunctional ego and problems in gratification of desires.

Behavioural Perspective

Use of alcohol and other drugs can be explained on the basis of two basic learning mechanisms. The first one is classical (respondent/ Pavlovian) conditioning. In this

type of conditioning, by pairing an unconditional stimulus with a conditional stimulus the reflexive respondent behaviour is learned. For example, the environment may be the conditioned stimulus for the positive effects of alcohol like inhibition of introversion. The dependent person thinks he/she can socialize or feel euphoric only in the place that she/he is used to drink. The person forgets how to socialize without alcohol, or during occasions that no one drinks alcohol. Consequently, social skills are impaired. The second type of conditioning is operant conditioning theory which was established by Skinner. In operant conditioning, the behaviour is voluntary. The behaviour is learnt by reinforcement or punishment occurring subsequently to it. Reinforcements are any event that occurs after the behaviour and which increases the likelihood that the behaviour will be repeated in future. Punishment in contrary to reinforcement decreases the rate of the behaviour (Thombs, 2006). For example, the positive consequences of drinking alcohol like euphoria or increasing sociability are positive reinforcements. There are also negative reinforcements which again increase the rate of the behaviour but by the disappearance of a negative event supplying "relief". For example, an individual tends to continue drug use in order to get relief from the withdrawal symptoms, hence it is negatively reinforcing. If the person quits drinking alcohol for a long period like one month, the body is detoxified. When the person starts to drink again, the body can not process large amounts of alcohol that it did previously to quitting. Therefore alcohol intoxication occurs. In terms of punishment, the negative events occurring after alcohol intake like intoxication, getting sick in the stomach or being bullied by friends decrease the probability of drinking one more time. Relapse could be explained by operant conditioning too (Thombs, 2006).When the reinforcement is removed from the environment, the behaviour's rate of occurrence declines. When the behaviour totally ceases, it is called extinction.

Relapse is starting alcohol intake after the behaviour had ceased because of treatment and it could mean that the problem behaviour did not successfully and totally become extinct.

Apart from classical and operant conditioning mechanisms modelling or observational learning also plays an important role in determining risk of substance abuse problems. Parents who model inappropriate or excessive drinking or use of illicit drugs may set the stage for maladaptive drug use in their children (Kirisci, Vanyukov, & Tarter, 2005). Evidence shows that adolescents who have a parent who smokes face a substantially higher risk of smoking than do their peers in families where neither parent smokes (Peterson et al., 2006). Other investigators find that having friends who smoke influences adolescents to begin smoking (Bricker et al., 2006).

Cognitive Perspectives

There is considerable evidence supporting the role of cognitive factors in substance abuse and dependence, especially the role of expectancies. An individual's expectancies about the perceived benefits of using alcohol or other drugs and smoking cigarettes clearly influence the decision to use these substances (Cable & Sacker, 2006) Beliefs of their peers strongly influence the Outcome expectancies in teens. Thus an important factor regarding alcohol use in adolescents is the degree to which their friends hold positive attitudes toward alcohol use (Wood et al., 2001).Alcohol or other drug use may also boost personal expectancies we hold about our ability to successfully perform tasks, called self-efficacy expectations. If we believe we need a drink or two (or more) to "get out of our shell" and relate socially to others, we may come to depend on alcohol in social situations.

Expectancies may account for the "one-drink effect"—the tendency of chronic alcohol abusers to binge once they have a drink. Psychologist G. Alan Marlatt

(1978) explained the one-drink effect as a type of self-fulfilling prophecy. If people with alcohol-related problems believe that just one drink will cause a loss of control, they may perceive the outcome as predetermined when they drink. Having even one drink may thus escalate into a binge. This type of expectation is an example of what Aaron Beck calls absolutist thinking.

Socio-cultural Perspectives

Drug abuse is partly determined by various socio-cultural factors, i.e, by where we live, whom we worship with, and the social or cultural norms that regulate our behaviour. Culture tends to play an important role in our behaviour. Cultural attitudes can encourage or discourage drinking and drug abuse. Rates of alcohol abuse, as can be seen, vary across ethnic and religious groups. Religious and spiritual activities help an individual to abstain drug use and drinking. Perhaps people who are more willing to engage in culturally sanctioned activities, such as attending masque , are also more likely to adopt culturally sanctioned prohibitions against drinking and drug use. Rates of alcohol use also vary across cultures. Peer pressure and exposure to a drug subculture are important influences in determining substance use among adolescents and young adults (Dishion & Owen, 2002; Hu, Davies, &. Kandel, 2006). Kids who start drinking before age 15 stand a fivefold higher risk of developing alcohol dependence in adulthood than do teens who began drinking at a later age (Kluger, 2001). Yet studies of Hispanic and African American adolescents show that support from family members can reduce the negative influence of drug-using peers on the adolescent's use of tobacco and other drugs (Frauenglass et al., 1997).

Biological perspective

Biological theories consider biological and genetic factors as important contributors of substance use. Biological theories recognise substance abuse as a disease requiring

medical treatment. So as disease, substance abuse has symptoms and may be acute, chronic or progressive (Canadian Centre on Substance Abuse, 2007). According to these theorists, genetic make up of an individual predisposes him or her to substance abuse (Alloy et al., 1996; Berk, 2007; Butcher et al., 2004; Carson et al., 2000; Davison, et al., 2004; Meyer & Salmon, 1988; Oldman, Skodol & Bender, 2005).

Furthermore, people with family members who abuse drugs are more likely to follow suit (Alloy et al., 1996; Nolen-Hoeksema, 1998) and it seems substance abuse runs in families (Baucum & Smith, 2004; Butcher et al., 2004; United Nations Office on Drugs and Crime, 2008). Members of a family with history of drug abuse and dependence are at increased risk of such problems (Conger, 1991; Davison et al., 2004; Liddle & Rowe, 2006).

Research has shown that certain people, such as the children of alcoholics, have a high risk of developing problems with alcohol because of an inherent motivation to drink or sensitivity to the drug (Butcher et al., 2004). Children of alcoholic or drug abuser parents are vulnerable to developing substance abuse and related problems themselves (Carson et al., 2000; Liddle & Rowe, 2006; Papalia et al., 2004).

However, children who are exposed to drinking by their parents do not necessarily grow up to be problem drinkers. Having a genetic predisposition or biological vulnerability to alcohol abuse, is of course not a sufficient cause of the disorder (Butcher et al., 2004). The person must be exposed to the substance to a sufficient degree for the addictive behaviour to appear (Butcher et al., 2004; Carson et al., 2000; Rice & Dolgin, 2008). It seems the family environment plays a role in both promoting and protecting children from substance abuse and dependence.

The ability to tolerate substances may be what is inherited as a diathesis for alcohol abuse or dependence (Goodwin, 1979, cited in Davison et al., 2004). To

become an alcoholic, a person first has to be able to drink a lot; in other words, the person must be able to tolerate large quantities of alcohol (Davison et al., 2004). It is interesting to note that some ethnic groups, such as Asians, may have a low rate of alcohol abuse because of physiological intolerance, which is caused by an inherited deficiency in an enzyme that metabolizes alcohol (Davison et al., 2004). Noxious effects of the substance may also protect a person from alcohol abuse (Davison et al., 2004).

Personality

Hippocrates, in 400 BC, claimed that different personality types are the result of balance of bodily fluids. The terms he developed are popular even today. Phlegmatic (or calm) people were thought to have a higher concentration of phlegm; sanguine (or optimistic) people had more blood; melancholic (or depressed) people had high levels of black bile; and irritable people had high levels of yellow bile. Hippocrates' views about the biological basis of personality are echoed in contemporary theories that link the presence of brain chemicals such as nor-adrenaline and serotonin to mood and behaviour.

As a human being each one of us shows certain specific patterns of thinking, feeling and acting. They represent who we are and provide the basis of our interaction with other individuals. When one talks about someone's personality, what do you really mean? In everyday life we often find people who are called "aggressive", "jolly", "happy" and so on. These are impressions of people which we carry with us and use while interacting with them. It is in this sense that we frequently employ the word 'personality'. But how do we define 'personality'?

Two classic definitions which are often used within psychology are: "Personality is the dynamic organization within the individual of those psychophysical

systems that determine his characteristic behavior and thought" (Allport, 1961). "More or less stable, internal factors . . . make one person's behaviour consistent from one time to another, and different from the behaviour other people would manifest in comparable situations".(Child, 1968).

Both these definitions of personality emphasize that personality is an internal process that guides behaviour. Gordon Allport (1961) makes the point that personality is psychophysical, which means both physical and psychological. Recent research has shown that biological and genetic phenomena do have an impact on personality. Child (1968) makes the point that personality is stable – or at least relatively stable. We do not change dramatically from week to week, we can predict how our friends will behave, and we expect them to behave in a recognizably similar way from one day to the next. Child (1968) includes consistency (within an individual) and difference (between individuals) in his definition, and Allport (1961) refers to characteristic patterns of behaviour within an individual. These are also important considerations. So personality is what makes our actions, thoughts and feelings consistent (or relatively consistent), and it is also what makes us different from one another.

Brief description of different approaches is presented for understanding the concept of personality:

Biological approach

Psychologists agree that environmental factors interact with genetic factors to form personality. Biological approaches suggest that biological factors are responsible for personality. From ancient times theories that emphasize the genetic or biological influences on personality have been proposed. For example in A.D. 170 ancient Roman physician Galen wrote that personality or character was influenced by biology. Another ancient theory about biological basis of behaviour is Bodily fluid theory: the ancient

idea that the individual differences in personality were the result of varying amounts of four fluids (phlegm, blood, yellow bile, and black bile) present in the body.

One of the best known biological theorists was Hans Eysenck, who linked aspects of personality to biological processes. For example, Eysenck argued that introverts had high cortical arousal, leading them to avoid stimulation. On the other hand, Eysenck believed extroverts had low cortical arousal, causing them to seek out stimulating experiences.

Two kinds of studies i.e, studies of children's temperaments and heritability studies, provide empirical evidence for genetic contributions to personality. Temperament refers to innate personality features or dispositions. Babies show particular temperaments soon after birth. Researchers have studied children from infancy to adolescence and found that temperaments remain fairly stable over time. However, temperaments can also be modified over time by environmental factors.

Evidence for genetic contributions to personality also comes from heritability studies. Heritability is a mathematical estimate that indicates how much of a trait's variation in a population can be attributed to genes. Twin studies help researchers to determine heritability. Researchers have shown that identical twins raised together are more similar than fraternal twins raised together in traits such as positive emotionality, negative emotionality, and constraint. Identical twins separated early in life and raised apart are more similar in these traits than are fraternal twins raised together. Both of these research findings suggest the existence of a genetic component to personality.

Behavioural geneticists have shown, after doing studies in many different, countries that the heritability of personality traits is around .5, which means that 50 percent of the variation in personality traits in a group of people can be attributed to

genetic differences among those people. Studies have also shown that traumatic brain injury can lead to large changes in personality (Tateno, 2003).

Psychodynamic approach

The psychodynamic theories of personality are mainly composed of famous theorists such as Sigmund Freud, Erik Erikson and Alfred Adler. Freud's theory places central importance on dynamic, unconscious psychological conflicts. Freud divides human personality into three significant components: the ego, superego, and id (Carver & Scheier, 2004). The id acts according to the pleasure principle, demanding immediate gratification of its needs regardless of external environment; the ego then must emerge in order to realistically meet the wishes and demands of the id in accordance with the outside world, adhering to the reality principle. Finally, the superego inculcates moral judgment and societal rules upon the ego, thus forcing the demands of the id to be met not only realistically but morally. The superego is the last function of the personality to develop, and is the embodiment of parental/social ideals established during childhood. According to Freud, personality is based on the dynamic interactions of these three components. Apart from giving the structural model of personality Freud also talked about five stages of personality development.

Alfred Adler talked about inferiority complex , and birth order as important components of personality, as per his theory all of us are born with a sense of inferiority and inferiority is a crucial part of our personality, in the sense that it is the driving force that pushes us to strive in order to become superior. Adler also considers birth order as a major factor in the development of our personality (Gregory, 1987).

Erikson believed that personality progressed through a series of stages, with certain conflicts arising at each stage. Success in any stage depended upon successfully overcoming these conflicts.

Behaviourist approach

The school of behaviourism emerged in the 1910s, led by John B. Watson. Behaviourists explanations of personality focus on learning. They explain personality in terms of the effects external stimuli have on behaviour. It was a radical shift away from Freudian philosophy. The unconscious is not part of behaviourist personality theory. Behaviourists tend to focus on observable behaviour. For them our behaviours are reflections of our personality. Some behaviourists are also skeptical about the existence of traits. The early behaviourists-John Watson and B.F. Skinner, and their modern descendants, the social learning theorists- Julian Rotter, Walter Mischel, and Albert Bandura share some views on personality theory (SparkNotes Editors, 2005). They all would agree that there is no such thing as a simple trait of "honesty." For them, the only possible answer to the question, "Are you basically honest?" is, "In what situations?" They believed that rather than developing "a personality," you merely learn how to behave in a variety of situations. They don't agree, however, on the role of thinking and knowing in shaping a person's behaviour. Skinner and Watson believed that thinking and knowing are not proper subjects for the science of psychology. Rotter, Mischel, and Bandura on the other hand, argue that thinking and knowing are necessary to explain much of our social behaviour. (Sincero, 2012).

Humanistic approach

As humanistic psychologists have observed, psychoanalysis seems to paint a bleak picture of humans. And learning theorists seem to picture us as robots passively reacting to environmental stimuli we don't control. Humanistic psychologists do not subscribe to either of the statements. They instead value our human "growth potential,"

or striving for self-betterment. That shift in emphasis led to substantial growth in both the popularity and impact of self-growth theories of personality.

Carl Rogers and Abraham Maslow assume that we cannot understand a person by examining his or her environment or actions within it. Rather, we must analyze how the person perceives both the environment and his or her role in it. Their emphasis was on the healthy person and his or her attempts to adapt to the world as he or she perceives it. These self-growth theories really began to have an impact in the 1960s - consistent with the feel-good philosophy, which was so much a part of the current social scene at that time. Some have suggested the popularity is what generated the array of criticisms registered against self-growth theories. In the context of social learning and psychoanalytic theories, the self-growth theories are descriptive, but not analytic. They do not yield to precise prediction or test. The self-growth theories are couched in very positive assumptions about innate human goodness, even in the face of world-wide evidence suggesting substantial evil in human behaviour - from destruction of our environment to acts of violence, so much a part of today's world. Despite those criticisms, self-growth theorists have had a major impact on the modern form of psychotherapy and the assumptions upon which it is based. These theories have shortened the many years required for psychoanalysis to very short-term efforts designed to solve immediate problems. Although the major concepts are defined, the definitions tend to be abstract, and thus subject to a rich variety of interpretations. The change in approach provided by stressing the person's perspective of his or her environment is interesting intellectually. But Rogers' concepts such as the phenomenal field are difficult to measure in the laboratory; there is so much emphasis on current views of and needs from the environment. Both Carl Rogers and Abraham Maslow pay

little attention to childhood experiences or unconscious determinants of behaviour. (Nevid & Rathus, 2005).

Type approach

You may often have observed people describing each other in terms of the "types" of persons they are like "She's a typical Republican," "He's the outdoor type." This is the approach of type theories of personality. Type theories assume that people can be divided into types. Type theories are based on the idea that there are a certain number of types of people and that everyone falls into one of the type groups. According to type theories, the personalities of all the members of each group are very similar. The ancient Greeks developed a type theory over 2000 years ago. (Raygor, Erickson, Wilcox & Biederman, 2010).

The famous physician Hippocrates (Singer & Underwood, 1962), in ancient Greece, wrote that people could be divided into four types based on the four elements that made up the universe. The four elements were earth, air, fire, and water. Hippocrates believed that there were four basic bodily fluids (blood, phlegm, black bile, and yellow bile) matching these elements. He thought that a person's personality was determined by the dominance of one of these fluids. Hippocrates' theory of the four types of people is an early example of a type theory of personality. (Raygor, et al).

Trait approach

Trait theories of personality assume that instead of dividing people in "types" we can conceive that there are a number of personality traits like honesty , shyness, friendliness etc and everyone has these traits but in different amounts. Major trait theorists include Gordon Allport and R .B Cattell.

Hans Eysenck's theory of personality

Hans Eysenck (1916-1995), has conducted extensive research on the measurement of personality. According to Eysenck personality is composed of traits or factors that can be derived by factors analysis. Eysenck Further believed that all personality traits can be subsumed under three types or dimension. These personality dimensions are combination of traits or factors, which we might think of as "super factors" (Eysenck & Eysenck, 1985). The three personality dimension Eysenck proposed are as follows:

1. Extraversion versus introversion (E)
2. Neuroticism versus emotional stability (N)
3. Psychoticism versus impulse control (P)

Those people who score high on the traits of the E dimension would be classified as extraverts and those people who score low would be classified as introverts. The bulk of Eysenck's research focuses on the E and N dimensions: much of this research is devoted to the biological underpinning of these dimensions. Eysenck has found that extraverts having a lower level of arousal than introverts. Because of their cortical arousal levels are low, extraverts actively seek excitement and stimulation. By contrast, introverts shy away from excitement and stimulation because their cortical arousal levels are already high (Davis and Cowels, 1988; Geen, 1984).

However some researchers found less convincing evidence that the difference between introverts and extraverts could be attributed to variations in base level of cortical arousal (stelmack, 1990). Eysenck found that subjects high in neuroticism tended to have over reactive nervous system, which leads to instability (Eysenck & Eysenck, 1985)

Eysenck argues that people of all personality dimensions can contribute to the betterment of society, but some will adapt better than others. For example the person,

high in psychoticism, which is characterized by hostile and aggressive behaviours, either may become emotionally distributed or may channel those traits into a society acceptable enterprise, such as coaching college football. Eysenck believes that society needs the diversity provided by all types and that all of us should be afforded opportunities to make the best use of our abilities.

To Eysenck, traits and dimension are determined primarily by heredity. Although he does not rule out environmental influences on personality, such as family interaction during childhood but he argues that such effect are limited. (Eysenck, 1990).

Personality and drug addiction/Substance dependence

Although there are many different factors that can contribute to drug abuse Personality features have long been known to be associated with drug use. It is a centuries old idea that personality may be the primary or contributing cause of addiction, however the formal concept of an Alcoholic Personality found its origins in psychoanalytic explanations for addiction which considered personality inadequacies as the cause of these problems (Leeds & Morgenstern, 1996).Several studies within the past two decades, have examined personality attributes associated with drug use (Brook et al. 1983, 1986; Newcomb and Bentler 1986a). Researchers in the field have found that personality dimensions may influence an individual's liability to experiment and regularly use an illicit drug or the probability that use would lead to subsequent abuse/dependence. Several studies have found Sensation seeking as an important initial risk factor for drug use (Zuckerman, 1983; Zuckerman, 1987a; Zuckerman, 1987b). There are several clinical studies which support the relationship between elevated NS and use of marijuana, cocaine and ecstasy (Dughiero et al., 2001; Eisenman et al., 1980; Fergusson & Horwood, 2000). Also, when transitioning from adolescence to adulthood high E scores have been found to be associated with more frequent use of

illicit drugs (Guy et al., 1994; Spotts & Shontz, 1991). Additionally, high N may significantly influence the use of alcohol, cocaine and opiates (Ball et al., 1998). Blaszczynsk et al (1985), in their study using Eysenck Personality Questionnaire (EPQ) (Eysenck and Eysenck, 1975) found that personality profiles of heroin addicts tends to be different from personality profile of subjects who were not drug addicts (Nishith, 1994). Gossop and Eysenck (1980) found that the personality of poly-drug users (in which majority of them reported that they preferred heroine) can be differentiated with the personality of a normal control group. Drug addicts were found to obtain significantly high scores in Psychotism (P) and Neuroticism (N) scales but obtained significantly low scores in Extraversion (E) and Lie Scales (L).

Comprehensive models of personality, such as Big Three or the Five Factor Model of personality have been utilized to succinctly characterize the personality profiles of substance abusers. In terms of Big Three models, Shanmugam (1979) found that drug abusers to be more extraverted while Ebile and Pela (1981) found that drug abusers to be more introverted. It had been consistently found that substance abusers scored higher than non-substance abusers on Neuroticism, but they usually do not differ on Extraversion scale of personality (Barnes, 1983; Eysenck & Eysenck, 1976). Findings revealed that the substance abusers scored higher on both the Neuroticism and Extraversion scales (Kannappan & Cherian, 1989). Heavy users appear to score high on measures of Psychoticism and Neuroticism (Sher, Bartholow, & Wood, 2000). The findings concerning the third dimension, Extraversion, had been found to be somewhat discrepant , as Rankin, Stockwell, and Hodgson (1982) observed low extraversion in heavy users, while Jackson and Matthews(1988) observed high scores for heavy users on extraversion and its subcomponents , sociability and impulsivity. Similarly in terms of the Five Factor Model of personality, one of the more prominent models in

contemporary psychology, individuals prone to abuse intoxicating substances have been characterized by low extraversion (Trull & Sher,1994), agreeableness (Flory, Lynam, Milich, Leukefeld, & Clayton, 2002; Martin & Sher, 1994), and conscientiousness (Flory et al., 2002; Martin & Sher, 1994), as well as high neuroticism (Sher et al., 2000; Trull & Sher, 1994) and openness (Flory et al., 2002; Sher et al., 2000).Taken as a whole , the findings of these studies suggested that the drug or alcohol users are subjectively distressed and are inclined to be socially nonconforming and impulsive . In terms of the Big Five Personality model, these individuals would be low on emotional stability, agreeableness and conscientiousness. (Dubey, Arora, Gupta, & Kumar, 2010).

While understanding the link between drug addiction and personality can be useful, it is dangerous to assume that having an addictive personality means that someone is destined to develop a problem with drugs or alcohol.

Impulsivity

For the reason that nothing better characterizes the dilemmas of human existence than the difficulty of balancing long term goals against immediate impulses, Impulsivity rightly is one of the most frequently examined constructs in psychology. No other species appears capable of planning explicitly for a distant future, whereas humans routinely adapt their behaviour to goals that will not be obtained for weeks, months, or even years. Humans, therefore, are uniquely vulnerable to impulses that disrupt their plans .When human functioning goes wrong, impulsivity is often at the heart of dysfunction. It is also worth mentioning that no symptom, other than subjective distress, appears more often than impulsivity as a diagnostic criterion in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (Whiteside & Lynam, 2001).

For a trait so important, impulsivity exhibits surprisingly little consistency or coherence in definition and measurement, within psychology. Many authors have noted the heterogeneity that exists in descriptions of impulsivity as a trait (Evenden, 1999; Parker, Bagby, & Webster, 1993; Whiteside & Lynam, 2001; Zuckerman, 2005).

However impulsiveness or impulsivity has long been viewed as a complex construct, (Barratt & Patton, 1983), which clearly gets reflected in many popular definitions of impulsiveness like this one ‘‘as a predisposition toward rapid, unplanned reactions to internal or external stimuli without regard to the negative consequences of these reactions to the impulsive individuals or to others” (Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001).

The question of whether a person is capable of modulating their cognition and behaviour to fit the demands of a given environment is imperative in almost any conceivable situation. Because of this there is wide spread interest in understanding the role of impulsiveness among healthy populations in activities ranging from employment behaviours (Everton, Mastrangelo, & Jolton, 2005) to educational performance (Diamantopoulou, Rydell, Thorell, & Bohlin, 2007). Generally though, impulsive behaviour is viewed as counterproductive by society, and individual differences in impulsivity have been found to be related to a number of socially deviant behaviours like aggression (Houston, Stanford, Villemarette-Pittman, Conklin, & Helfritz, 2003) and substance abuse (Swann, Dougherty, Pazzaglia, Pham, & Moeller, 2004). Further, as has been mentioned earlier impulsivity is also a symptom of several disorders including attention-deficit/ hyperactivity disorder, borderline personality disorder, and antisocial personality disorder (American Psychiatric Association, 2000), as well as the basis for a separate section in the DSM-IV-TR entitled Impulsive Control

Disorders not elsewhere Classified (which includes intermittent explosive disorder, kleptomania, pyromania, and pathological gambling; A P A, 2000).

Impulsivity and drug addiction/ Substance dependence

Impulsivity has been of interest to researchers for many years. It is a major criterion used to diagnose a variety of clinical disorders including bulimia nervosa, attention deficit disorder, pathological gambling (Alessi & Petry, 2003), substance abuse, pyromania, kleptomania, obsessive compulsive disorder and other psychopathological diagnosis as well as several personality disorders (e.g., antisocial personality disorder, borderline personality disorder). Impulsivity is thus considered a central aspect of drug abuse. Several studies have shown that impulsivity appears to be linked to all stages of substance abuse. (De Wit, 2008; Perry, Jennifer & Carroll, 2008), The DSM-IV (American Psychiatric Association, 1994) diagnostic criteria for substance dependence also include impulsive behaviour (Evenden, 1999). Some studies have also suggested that impulsivity not only increases the risk of substance abuse but also the occurrence of negative life events (Hayaki et al., 2005).Many recent studies on impulsivity have emerged from the field of drug and alcohol research. In general, substance abusers have been found to have higher levels of impulsivity as compared with control subjects (Sher et al., 2000; Sher & Trull, 1994). It has been demonstrated within clinical populations that drug users score higher than controls on self-reports measures of impulsivity (Allen et al., 1998; Petry, 2001). Furthermore, impulsivity has shown to be linked to the severity of drug abuse and poor treatment retention (Moeller et al., 2001; Patkar et al., 2004). Impulsivity is also strongly related to substance abuse in children and adolescents. Longitudinal studies have identified impulsivity in children as a high-risk factor for early substance use and later substance abuse (Dawe, 2004). Some studies also show higher levels of impulsiveness to be associated with substance use and abuse

in college students (Jaffe & Archer, 1987). Individuals with a history of drug dependence also show greater impulsivity than those with no such history (Allen et al., 1998). Among substance abusers, impulsivity appears to be associated with greater substance use severity. Thus, individuals who are polydrug users report greater trait impulsivity than those who are dependent on a single drug (Butler & Montgomery, 2004). In addition, negative affect and impulsivity have been associated with earlier age of substance abuse onset, more substance-related negative consequences, and higher rates of substance abuse among relatives (Henderson et al., 1998). Dependence on nicotine has been found to be associated with high levels of impulsivity (Mitchell, 1999). Studies using self-report measures of impulsivity or behavioural tasks (e.g. delay-discounting) have consistently indicated higher levels of impulsiveness in smokers than in non-smoking subjects (Baker et al., 2003; Bickel et al., 1999; Dinn et al., 2004). Recently, Skinner and colleagues (2004) found smoking alcoholics to have higher levels of impulsivity than non-smoking alcoholics. An increase in impulsive behaviour has also been associated with alcohol use (Poulos et al., 1995). High levels of impulsive traits have also been found within alcohol-dependent patients (Patton et al., 1995). More specifically, not only do alcohol dependent subjects show greater levels of impulsivity but also this personality feature is often present prior to the manifestation of alcohol related problems (Caspi et al., 1997). Recently, Dom, Hulstijnb, and Sabbec (2006), in a study examined early onset alcoholics (EOAs) and late onset alcoholics (LOAs) and their personality traits of impulsivity and sensation seeking. The results showed that the EOAs had higher levels of impulsivity than the LOAs. In addition, age of onset correlated inversely with impulsivity. It is important to note that this last finding has also been recently reported for cocaine dependent subjects (Moller et al., 2001). In fact, compared with the LOAs, the EOAs were characterized

by a higher severity of alcohol dependence and related problems and had longer substance-abusing trajectories. They also had more frequently a current or a lifetime history of polydrug use. This finding suggests that impulsivity does influence the person's initial use of alcohol and also possibly the development of dependence. Among cocaine-dependent individuals, a significant association between impulsivity and severity of drug use has also been documented (Moeller et al., 2001). High scores on impulsivity have also been associated with worse treatment outcomes in cocaine-dependent individuals (e.g., negative correlation with number of days in treatment and positive correlation with dropout rate) (Patkar, 2004).

Similarly, studies on MDMA (ecstasy) users have found that users of this illicit drug have higher levels of impulsivity as compared to control subjects (Butler & Montgomery, 2004).

Subjective Wellbeing

Subjective well-being (SWB) is one of the most attractive fields in modern psychology. With the establishment of positive psychology as a scientific discipline, and recognizing the significance of SWB on an individual and the society as a whole (Diener & Seligman, 2004; Veenhoven, 2004), subjective wellbeing has become a hot topic of study in the last 10 years. (Seligman & Csikszentmihalyi, 2000; Snyder & Lopez, 2002)

Subjective well-being is a construct that reflects an understanding of an individual's appraisal of her life. These appraisals may be primarily cognitive (e.g. life satisfaction) as well as affective, consisting of pleasant or unpleasant emotions that individuals experience (e.g. happiness and depression). The notion of subjective well-being incorporates positive factors and not just the absence of negative factors (Park, 2004). A hallmark of subjective well-being is that it centres on the individual's

personal judgements and not upon some criterion judged by the researcher as important (Diener, 1984).The following discussion takes a closer look at how prominent researchers have defined subjective well-being.

Snyder and Lopez (2002) defined subjective well-being as "A person's cognitive and affective evaluations of his or her life. These evaluations include emotional reactions to events as well as cognitive judgements of satisfaction and fulfilment". Carr (2004, p. 12) in agreement with Snyder and Lopez's view of subjective well-being, defines subjective well-being as "A positive psychological state characterized by a high level of satisfaction with life, a high level of positive affect and a low level of negative affect" (Basson, 2008).

From the above mentioned definitions it can be concluded that cognitive and emotional aspects form the core of subjective well-being and that the cognitive and emotional aspects are fully intertwined. The cognitive component refers to life satisfaction and the emotional component divided into positive and negative affect (Bradburn, 1969; Diener, 1998).

Subjective wellbeing and drug addiction/substance dependence

Research on the relationship between indicators of subjective wellbeing and substance use has produced conflicting results. While on one hand there are considerable studies showing that drug addicts tend to experience a feeling of subjective wellbeing and relaxation after consuming the drugs (Fischman & Foltin 1991; Jasinski 1991; Kouri , Pope , Yurgelun-todd D , & Gruber , 1995) but on other hand there are also good no of studies showing that drug addicts tend to have poor subjective well being(Bhojak,1997; Looby & Earleywine,2007; Murphy et al ., 2005 & Zullig et al., 2001) and also some studies indicate that individuals with high subjective wellbeing are less likely to

consume drugs (Farmer & Hanratty, 2012; Phillips-Howard ,2010). More over there are considerable studies showing no association between SWB and substance dependence. (Bakker & VandeBerg, 1974; Konu, Lintonen & Rimpela ,2002; Schulz, Költringer, Norden, & Tüchler, 1985)

It is widely assumed that the acute subjective, or mood-altering, effects of a drug play an important role in whether it will be abused or not. This relationship has been well established in comparisons across drugs and across drug classes: there is a good correspondence between drugs that produce euphoria and feelings of well-being and those that are abused (Fischman & Foltin 1991). The relationship is so well established that subjective responses to drugs are often used to screen new agents for abuse liability (Jasinski, 1991). The relationship between subjective response to drugs and their abuse liability may also apply to individual differences in vulnerability to abuse drugs. It is known that individuals vary in their subjective and behavioural responses to acute administration of drugs, and these differences may be related to differences in the likelihood of repeated use, or risk for excessive drug use. For example, individuals who experience feelings of euphoria and well-being from a particular drug are more likely to repeat their use of that drug than individuals who do not experience these effects, or who experience unpleasant effects (Haertzen et al. 1983).

There are many drugs which effect on us to produce a feeling of euphoria or subjective well being after being used, for example MDMA(Ecstasy) has become a popular drug(in U.S.A), in part because of the positive effects that a person may experience within an hour or so after taking a single dose. Those effects include feelings of mental stimulation, emotional warmth, empathy toward others, a general sense of well being, and decreased anxiety(National Institute on Drug Abuse (NIDA),

2006).Studies have also found that cannabis users also report higher levels of life satisfaction(a sense of wellbeing) after using it (Kouri et al .,1995), it was found that Compared to occasional smokers, heavy smokers in one study reported lower motivation(amotivational syndrome) but also higher levels of life satisfaction (Kouri, et al.,1995) – a primary component of subjective wellbeing (Diener , Emmons , Larsen , & Griffin, 1985).

One reason for the drug abusers to report feeling of wellbeing by using the drugs may because of the effect drugs have on our biological mechanism. Drugs effect on our biological mechanism to produce rewarding effect or a feeling of wellbeing. The rush (euphoria, a feeling of self confidence or wellbeing) derived from the abuse of psychotropic drugs is neuro-chemically due to the drugs' stimulation of the brain's pleasure reward pathway (PRP), which consists of the ventral tegmental area, the nucleus accumbens and the prefrontal cortex (Lowinson, 1997; Niesink, 1999) At the center of this pathway is the neurotransmitter dopamine, which aids in the production and regulation of pleasure. Although each psychotropic substance has a different effect on the PRP, they all act to stimulate it; and when the PRP is stimulated, the release of dopamine is spontaneously increased (Spanagel & Weiss, 1999). The result of this increased dopamine concentration is an instantaneous, though unearned, psychological reward manifested in that rushing sensation of self-gratification, indulgence and inflated ego. Consequently, once the psychological reward is experienced, the brain is wired in such a way that it wants to pursue that reward again.

For example one such drug which produces a sense of wellbeing (short term) after use by acting on our biological mechanism is methamphetamine. Methamphetamine is highly psychologically addictive and induces a strong feeling of euphoria. Methamphetamine is a potent central nervous system stimulant that affects

the brain by acting on the mechanisms responsible for regulating a class of neurotransmitters known as the biogenic amines or monoamine neurotransmitters. This broad class of neurotransmitters is generally responsible for regulating heart rate, body temperature, blood pressure, appetite, attention, mood and responses associated with alertness or alarm conditions. The person who ingests meth will experience an increased focus and mental alertness and the elimination of the subjective effects of fatigue as well as a decrease in appetite. Many of these effects are broadly interpreted as euphoria or a sense of wellbeing, intelligence and power (Harrison, 2007; Looby & Earleywine, 2007; Logan, 2002; Mack, 2005)

A particularly well-understood example of drug pharmacology is the case of opiates (heroin, morphine, and their synthetic analogs). These drugs are related chemically to endorphins, a group of polypeptides (short proteins) that serve as neurotransmitters in reward centres of the brain stem. Normally, the centres are activated only when a human or animal has done something right-it is physically active, having sex, caring for young. The endorphins act as internal rewards, inducing feelings ranging from well-being to euphoria. But it is sometimes hard work to earn their rewards - the runner's endorphin high requires at least half an hour of strenuous exercise. The major addictive drugs in effect hijack these ancient biological systems, bypassing them to provide the reward without the necessity to do the work .Furthermore, the reward, being concentrated in chemical form far beyond what nature can provide endogenously, can be overwhelming in its intensity.

But such a feelings of subjective wellbeing experienced by drug addicts seems to transitory (Looby & Earleywine,2007) and such a high subjective wellbeing experience by drug addicts seems to be present in drug addicts only in their initial stages of drug abuse when they don't show dependence on drug abuse and when drug

addiction has not led to health , social and occupational impairment in them, and importantly such subjective wellbeing seems to be present in people who moderately use drugs or alcohol. More recently, an Australian survey (Cummins, 2008) finds that, in general, drinking a small amount of alcohol each day is associated with high well-being. (Massin and Kopp, 2011)

There are considerable studies however suggesting that substance dependents /drug addicts tend to have impaired or poor subjective wellbeing (Bhojak, 1997; Looby & Earleywine, 2007). For example Bhoja et al (1997) in a study investigated emotional life and subjective well-being in drug addicts and non-addicts. A sample of 30 addicts and non-addicts were selected. They were administered the KSP, psychopathic deviate scale of MMPI. Quality of life scale and two scales of well-being. It was found that drug addicts appear to have disturbed emotional life, more psychopathic traits and poorer subjective well-being as compared to normal controls. Finally Zullig et al. (2001) and Murphy et al. (2005) explore the relationship between perceived life satisfaction and substance use among young people (high school and college students) in the US. Zullig et al. (2001) find that lifetime alcohol use, alcohol use in the past 30 days, as well as binge drinking in the past 30 days are significantly associated with reduced life satisfaction.

Need and Purpose of the present study

Psychological research in the drug field has witnessed important developments over the past 20 years. Several psychological factors like personality traits, subjective wellbeing and impulsiveness have been shown to have an association with substance dependence or drug addiction. Several studies within the past two decades, have examined personality attributes associated with drug use (Brook et al. 1983, 1986; Newcomb and Bentler 1986*a*). Recent research studies have also shown that personality traits often

precede the onset drug use, indicating that, at least for some classes of drugs, personality features may have a predictive value, acting as a predisposing factor for substance dependence or drug addiction. (Negreiros, 2006).

Considerable amount of research studies have confirmed a strong association between impulsivity and drug addiction and indicating that a high level of impulsivity may predict substance abuse (Grau & Ortet 1999) and also suggesting that impulsivity is a key construct not only in initiating drug abuse but also in abstinence, relapse, and treatment. Thus an understanding of the role impulsivity plays in drug addiction/substance dependence may prove to be very useful for not only developing treatment strategies but also in formulating prevention plans.

Research on the relationship between indicators of subjective wellbeing and substance use has produced conflicting results. While on one hand there are considerable studies showing that drug addicts tend to experience a feeling of subjective wellbeing and relaxation after consuming the drugs (Fischman and Foltin 1991; Jasinski 1991; Kouri et al., 1995) and on other hand there are also good number of studies showing that drug addicts tend to have poor subjective well being (Bhojak, 1997; Looby & Earleywine, 2007) and also some studies indicate that individuals with high subjective wellbeing are less likely to consume drugs (Farmer & Hanratty, 2012; Phillips-Howard ,2010). Thus an understanding of subjective wellbeing in drug addicts can help us to have a better understanding of them and help to frame effective policies to deal with such a menace.

The topic of drug addiction and the psychological variables related to it has been extensively studied at global level but little is known about the drug addiction of youth in the politically disturbed Kashmiri population. To date, very few studies have been published about drug addiction in Kashmir, also the political unrest has led to

many problems in Kashmir particularly increase in drug abuse (Margoob, 2008). Due to lack of research on drug addiction in Kashmir province of J&K the intervention programmes & planning to deal with this social menace has not been too much successful instead the menace is increasing day by day. Thus the investigator was interested to study the problem of drug addiction in Kashmir with the hope that this study may contribute to the literature on drug addiction and also be used as a source of information in future for researchers. This study may also help health care professionals, counselors, and social workers to frame planes and policies for intervention programmes.

Objectives of the study

The present study was aimed to study psychological determinants (personality dimensions (extraversion, neuroticism), impulsiveness and subjective well-being) of drug addicts of Kashmiri youth. For this purpose the following objectives have been formulated:

Primary objectives:

1. To study personality dimensions (extraversion and neuroticism), impulsiveness and subjective wellbeing among Kashmiri youth involved in drug addiction/substance dependence.
2. To study relationship of drug addiction/Substance dependence with personality dimensions (extraversion and neuroticism), impulsiveness and subjective wellbeing.
3. To predict the significant psychological factors contributing to drug addiction/Substance dependence.

4. To identify the type of substances/ drugs used by drug addicts/substance dependents and the intensity of those substances/drugs used by drug addicts/substance dependents.

Apart from the above primary objectives some Secondary objectives have also been formulated:

1. To identify the reasons/factors for joining de-addiction /treatment centres as stated by drug addicts/substance dependents.
2. To identify the reasons/factors for not joining de-addiction/ treatment centres and continuing drug use.
3. To compare the drug addicts/substance dependents who join de-addiction/treatment centres with those who don't join de-addiction/treatment centres on extraversion & neuroticism dimensions of personality, impulsiveness and subjective wellbeing.

Hypotheses

On the basis of the above objectives the following hypotheses have been formulated.

$H0_1$: Drug addiction/substance dependence has no significant relationship with extraversion.

$H0_2$: Drug addiction/substance dependence has no significant relationship with neuroticism.

$H0_3$: Drug addiction/substance dependence has no significant relationship with impulsiveness.

$H0_4$: Drug addiction/substance dependence has no significant relationship with subjective wellbeing.

$H0_5$: Psychological factors don't contribute significantly to drug addiction/substance dependence.

$H0_6$: There is no significant difference in extraversion between those drug addicts/substance dependents who join de-addiction centres and those drug addicts/substance dependents who don't join de-addiction centres.

$H0_7$: There is no significant difference in neuroticism between those drug addicts/substance dependents who join de-addiction centres and those drug addicts/substance dependents who don't join de-addiction centres.

$H0_8$: There is no significant difference in impulsiveness between those drug addicts/substance dependents who join de-addiction centres and those drug addicts/substance dependents who don't join de-addiction centres.

$H0_9$: There is no significant difference in subjective wellbeing between those drug addicts/substance dependents who join de-addiction centres and those drug addicts/substance dependents who don't join de-addiction centres.

CHAPTER – 2

Review of Literature

A literature review should not be conceived as an annotated bibliography in which the researcher summarizes briefly each article that he/she has reviewed. Although a summary of what one has read is contained within the literature review, it goes well beyond merely summarizing professional literature. Literature review focuses on specific topic of interest to researcher and includes a critical analysis of the relationship among different works, and relating this research to your work. It may be written as a stand-alone paper or to provide a theoretical framework and rationale for a research study.

A literature review can also be conceived as a body of text that aims to review the critical points of current knowledge including substantive findings as well as theoretical and methodological contributions to a particular topic. Literature reviews are secondary sources, and as such, do not report any new or original experimental work.

A literature review is most often associated with academic-oriented literature, such as a thesis, and usually precedes a research proposal and results section. Its ultimate goal is to bring the reader up to date with current literature on a topic and forms the basis for another goal, such as future research that may be needed in the area.

This review below provides a summary of the literature concerning the psychological factors (with particular reference to personality dimensions, subjective wellbeing and impulsivity) related to substance dependence/drug addiction. It is

pertinent to mention here that both theoretical and empirical studies pertaining to these variables have been reviewed so that a clear picture of present status of these variables can emerge. However due to paucity of time and space it is not possible for the investigator to incorporate all those research studies. Caution has been taken not to ignore any important study while selecting the relevant research studies.

Studies pertaining to personality and substance dependence or drug addiction:

Gossop, M. R (1978) conducted a study in which he investigated the personality differences between oral and intravenous drug addicts. 59 subjects attending a London clinic were given the Eysenck Personality Questionnaire. Results showed both groups scored highly on the neuroticism and psychoticism dimensions, though oral users were found to have significantly higher scores on both of these scales. High P scorers have been found to be cold, unfriendly, hostile, etc., and it was suggested that the lower P scores of the intravenous users may be partly due to possible hostility-reducing effects of the narcotics used by this group.

Gossop, M. R. and Eysenck, S. B. G. (1980) conducted a study to compare the personality profiles of heroine addicts with those who were not drug addicts. Eysenck Personality Questionnaire was administered to 221 addicts at three London treatment centres, and to 310 normal subjects. The results showed that the personality of polydrug users (in which majority of them reported that they preferred heroine) can be differentiated with the personality of a normal control group. Drug addicts were found to obtain significantly high scores in Psychoticism (P) and Neuroticism (N) scales but obtained significantly low scores in Extraversion (E) and Lie scales (L).

Brook,et al (1983) conducted a study in which they administered written questionnaires that consisted of personality measures, family measures, peer measures,

and measures of drug use to 403 Black and 529 White 1st- and 2nd-yr high school students. Results indicated that (a) domains of personality, peer, and family are important in differentiating among the stages of drug use; (b) drug use by family and peers interacts with the socialization techniques of family and peers and with the personality attributes of the adolescents; and (c) family and peer positive and negative reinforcement are differentially effective, depending on the adolescents' personality attributes.

Blaszczynski, A. P., Buhrich, N & McConaghy, N. (1985) conducted a study in which a 32 item Addiction Scale derived from the Eysenck Personality Questionnaire was administered to 60 pathological gamblers, 25 male and 26 female heroin addicts and 27 male and 25 female controls. The purpose of their study was to replicate Gossop and Eysenck's (1980) finding that the scale differentiated drug addicts from controls and to test the hypothesis that pathological gambling is an addictive disorder and that pathological gamblers would show a profile similar to substance addicts. Results showed that male addicts and gamblers had significantly higher Addiction, Neuroticism and Psychoticism scale scores than controls. Female addicts scored significantly higher on the Addiction and Psychoticism scales than their female counterparts

Craig, R. J., Verinis, J. S & Wexler, S (1985) conducted a study to examine the Personality Characteristics of Drug Addicts and Alcoholics on the Millon Clinical Multiaxial Inventory . Millon Clinical Multiaxial Inventory (MCMI) was administered to 106 alcoholics and 100 addicts in separate VA inpatient rehabilitation treatment programs. Results showed that alcoholics scored higher on the personality style scales of Avoidant, Passive-Aggressive, Schizotypal, Borderline and Paranoid, while the opiate addicts scored higher on the Narcissistic personality disorder scale.

Forsyth, G & Hundleby, J. D (1987) in a study investigated the interaction between certain personality traits (Neuroticism-Anxiety, Depression, Sensation Seeking, and Extraversion) and desire to drink alcohol in different situations (Boring, Stressful, Convivial, Ceremonial, and Neutral) using a sample of 171 students and questionnaire methodology. Results showed that the desire to drink was greater in both Stressful and Convivial situations for those who scored higher on Neuroticism, Convivial Situations for those higher on Depression (Beck), and Boring situations for those higher on Sensation Seeking.

Stein, J. A., Newcomb, M. D., & Bentler, P.M (1987) in a study examined the reciprocal influence of personality on drug use and drug use on personality from late adolescence to young adulthood using a structural modelling approach. Participants (*n* = 654) in this longitudinal study completed questionnaires which assessed multiple indicators for latent constructs of alcohol, cannabis, and hard drug use and also for the personality constructs of conscientiousness, extraversion, self-esteem, and social conformity. A series of cross-lagged latent-variable structural models were used to examine the across-time relationships between each pair of drug use and personality constructs separately by sex. They found in their study more evidence for an impact of early personality traits affecting later substance use, rather than for the reverse. Particularly strong effects were noted between early social conformity and less alcohol and hard drug use in young adulthood.

Cloninger, C. R., Sigvardsson , S & Bohman, M (1988) conducted a prospective longitudinal study to investigate the role of heritable personality traits in susceptibility to alcohol abuse.431 children (233 boys, 198 girls) born in Stockholm, Sweden, had a detailed behavioural assessment at 11 years of age, including a detailed interview with their school teachers, and at age 27 years were re-evaluated to identify alcoholism or

alcohol abuse. Three dimensions of childhood personality variation were identified and rated without knowledge of adult outcome. They found that these three dimensions (novelty-seeking, harm avoidance, and reward dependence) were largely uncorrelated with one another, and each was predictive of later alcohol abuse. Absolute deviations from the mean of each of the three personality dimensions were found associated with an exponential increase in the risk of later alcohol abuse. High novelty-seeking and low harm avoidance were found most strongly predictive of early-onset alcohol abuse.

Block and Colleagues (1988) conducted a study in which drug usage in early adolescence (age 14) was related to concurrent and preschool personality characteristics for a sample of 54 girls and 51 boys. Results showed that the personality concomitants and antecedents of drug use differed somewhat as a function of gender and the drug used. It was found that at age 14, for both sexes, the use of marijuana was related to ego under-control, while the use of harder drugs reflected an absence of ego-resiliency, with under-control also a contributing factor. At ages 3/4, subsequent adolescent drug usage in girls was found related to both under-control and lower ego-resiliency. In boys, adolescent drug usage was found related strongly, during their nursery school years, to under-control and with resiliency having no long-term implications. Early family environment was found related to adolescent drug usage in girls but not in boys.

Stacy et al (199l) in their longitudinal study of adolescent alcohol and other drug use, have shown that adolescent personality factors are good predictors of excessive alcohol use in young adulthood and are strong predictors of serious complications from drinking (driving and work-related problems). Key personality dimensions in their longitudinal model included social conformity (e.g., law abidance), sensation seeking and hostility, all of which had both direct and indirect effects on consumption patterns and drinking problems.

Martin and Sher (1994) in a study examined NEO-FFI correlates of risk for alcoholism, alcohol use disorders and alcoholism sub-typing dimensions in a mixed-gender sample of 468 young adults (mean age = 21.3) presumed to be at high risk (n = 239) or low risk (n = 229) for alcoholism on the basis of a family history of paternal alcoholism. They found that familial risk for alcoholism was positively associated with openness and negatively associated with agreeableness and conscientiousness. Alcohol use disorders were positively associated with neuroticism and negatively associated with agreeableness and conscientiousness. With the exceptions of alcoholism sub-typed by comorbid antisocial personality disorder and by familial alcoholism, all of the alcoholic subtypes examined were related to at least one of the five dimensions.

De Wit, H & Bodker, B (1994) in a study examined the relationship between drug preferences as measured in a laboratory-based choice procedure and measures of personality and attitudes toward drugs. Healthy volunteers participated in laboratory-based double-blind studies measuring preference for ethanol or diazepam vs placebo. Frequency of drug choice was examined in relation to subjects' scores on personality questionnaires. Results showed Drug choice was not related to any of the personality measures examined. Personality scores were, however, related to both gender and habitual drug use. The data from their study suggested that personality does not strongly influence responses to single doses of drugs as assessed under controlled conditions. Personality may, nevertheless, affect drug use in natural settings via other mechanisms.

Nishith , P., Mueser, K. T & Gupta, P(1994) conducted a study in which Eysenck Personality Questionnaire - Addiction Scale (EPQ-AS) was administered to 40 Indian college males with a history of hallucinogen abuse and 40 male controls, matched on age, level of education, socioeconomic status, and place of residence. The hallucinogen

abusers were found to have significantly higher scores on the Neuroticism (N), Psychoticism (P), and Lie (L) scales, and were non-significantly higher on the Extraversion (E) scale. The findings for N and P were consistent with studies on other drug classes and from other cultures. The results on L were consistent with findings on other drug categories studied in the Indian culture, but not other cultures. The results on E differ from findings on heroin addicts in both India and other cultures, suggesting E is sensitive to the drug category under investigation

Vukov et al (1995) in a study conducted a survey of 80 opiate addicts included in a detoxification program at the Institute on Addictions in Belgrade. In addition to a dependence diagnosis and mental disorders based on DSM-III-R, they applied a Tri-dimensional Personality Questionnaire (TPQ) that measures the 3 major personality dimensions: novelty-seeking (NS), harm avoidance (HA) and reward dependence (RD). When compared with a control group (a sample of Yugoslav undergraduate students), the opiate addicts demonstrate significantly high NS dimension as well as significant divergences of HA and RD subscales. The surveyed opiate addicts demonstrate a high percentage of personality disorders specifically in cluster B. The personality dimensions of opiate addicts showed certain temperament traits, such as: impulsiveness, shyness with strangers, fear of uncertainty and dependence.

Brook et al (1995) examined the childhood and adolescent personality determinants of young adult drug use. Data were obtained on children when they were approximately 5.5 (time 1; T_1), 14 (T_2), 16 (T_3), and 22 (T_4) years of age. T_2-T_4 interviews of subjects and their mothers assessed child personality and behaviour. At T_1, 976 mothers were interviewed. The analysis was based on 734 subjects. Results showed that males scored higher on measures of unconventionality, whereas females scored higher on measures of intrapersonal distress, such as depression, anxiety, and obsessiveness. Gender was

related to personality risk factors during late adolescence/young adulthood, which in turn were related to adult drug use.

Palme, G & Palme, J (1999) conducted a study in which the personality traits of 134 female patients, seeking treatment for obesity, bulimia nervosa and alcoholism in Stockholm were assessed with the KSP personality inventory. The results indicate that the personality traits of women seeking treatment for alcoholic problems, obese, and bulimic are very similar. Compared to the population average, they were more anti-social, more psychasthenic and were also more anxiety prone .So this study shows that the personality profile of drug addicts differed from the control group .This supports the conclusion that different types of eating and drinking disorders are associated with similar personality traits.

McGue, M., Slutske, W & Jacono, G. W (1999) investigated the relationship between personality and substance use disorders in a community based sample of 638 individuals who were alcoholic and/or had a drug use disorder, and 1,530 individuals who did not have a substance use disorder. Personality was assessed by the Multidimensional Personality Questionnaire, Substance use diagnosis were based on standard criteria as assessed by interview .Data were analyzed using a 3- factor (Gende x Alcoholism x Drug use disorder) multivariate analysis of variance. The significant alcoholism main effect was associated primarily with negative emotionality, whereas the significant drug use disorder main effect was associated primarily with constraint. No significant interaction with gender was observed.

Stewart, S. H & Devine, H (2000) conducted a study with the purpose to place drinking motives within the context of the Five-Factor Model of personality. A sample of 256 university student drinkers (*M* age =21.3 years) completed the NEO-PI-R and DMQ-R. In bivariate correlations, the two negative reinforcement motives (Coping and

Conformity) were positively correlated with Neuroticism and negatively correlated with Extraversion. The two positive reinforcement motives (Enhancement and Social) were positively correlated with Extraversion and negatively correlated with Conscientiousness. Multiple regression analyses revealed that personality domain scores predicted two of the four drinking motives (i.e. the internal drinking motives of Coping and Enhancement), after controlling for the influences of alternative drinking motives. Enhancement Motives were predicted by high Extraversion and low Conscientiousness, and Coping Motives by high Neuroticism. Supplementary correlational analyses involving certain personality facet scores revealed that the depression and self-consciousness facets of the Neuroticism domain were positively correlated with residual Coping and Conformity Motives, respectively, and that the excitement-seeking and gregariousness facets of the Extraversion domain were positively correlated with residual Enhancement and Social Motives, respectively.

Conway et al (2002) investigated the association between drug abuse, drug of choice, co-morbidity and several personality traits, in particular behavioural disinhibition .Findings demonstrated that individuals with substance abuse/dependence scored higher on disinhibition, compared to those without, after controlling for socio-demographic variables and co-morbid psychiatric disorders. Importantly, the relation between disinhibition and drug of choice "remained after adjusting for antisocial personality disorder". The authors interpret this finding as indicating that personality traits "serve as pre-existing factors that guide individual's choice of substances".

Flory and colleagues (2002) in their study explored the substance abuse-personality relationship also taking into consideration symptoms of co-morbid psychopathology. The results have shown moderate relations between alcohol and marijuana abuse and antisocial personality disorders. However, "personality remained significantly related

to symptoms of substance abuse even after they controlled for its overlap with antisocial symptoms"

Vollrath, M and Torgersen, S (2002) studied risky health behaviour among the eight personality types. Sample included 683 university students. Smoking, consumption of alcohol and drugs, and risky sexual behaviour were examined among eight personality types. Findings showed that several types deviated significantly from the average with respect to risky health behaviours. Types with a configuration of low conscientiousness and either high extraversion (Impulsives, Hedonists) or high neuroticism (Insecures) were particularly inclined to engage in multiple, risky health behaviours. Conversely, types combining high conscientiousness with low extraversion (Sceptics, Brooders) abstained from risky behaviours.

Cohen, E. S and Fromme, K (2002) conducted a study in which they evaluated how personality traits, self-efficacy, and outcome expectancies differentially relate to young adult substance use and high-risk sex. Experiments I (*N*= 481) and 2 (*N*= 73) report the development of a new questionnaire to assess self-efficacy for substance use and sexual behaviour. Experiment 3 (*N*= 375) tested self-efficacy, outcome expectancies, and trait measures of social conformity and sensation seeking as correlates of substance use and high-risk sex. Using structural equation modelling, cross-sectional analyses revealed that positive outcome expectancies had the largest association with substance use, whereas self-efficacy had the largest association with sexual behaviour. Further, personality traits were related to substance use and sexual behaviour indirectly through outcome expectancies, with social conformity also having a direct effect on behaviour. When examined longitudinally, past alcohol and drug use served as the final pathway by which expectancies and personality impacted substance use, whereas past behaviour, self-efficacy, and social conformity all contributed to high-risk sex.

Ruiz, Pincus, and Dickinson (2003) investigated the relationships between Five-Factor model domains and facets and substance-related behaviour and found that neuroticism and conscientiousness were linked to substance-related behaviour, but facets of extraversion and agreeableness, but not these domains, were associated with addictive behaviour.

Sáiz et al (2003) conducted a study with the aim to describe the prevalence of cocaine and other drug use in secondary school students in Oviedo (Asturias, Northern Spain) and determine the personality features and levels of sensation seeking in cocaine users. 2,862 secondary school students (mean age ± SD = 15.87 ± 1.48 years; 50.6% males) were interviewed during the 1998–1999 academic year. For evaluation, the World Health Organization questionnaire for drug consumption, the Eysenck Personality Questionnaire (EPQ) for adults and the Zuckerman Sensation Seeking Scale were used. The results showed that the prevalence of lifetime, previous year and previous month cocaine use among secondary school students was 6.1, 4.9 and 2.7%, respectively. Apart from that it was also found that students who had used cocaine at some point during their lifetime scored significantly higher on the EPQ psychoticism subscale and reported higher levels of sensation seeking.

Bon, O. L (2004) conducted a study in which they compared three groups: 42 patients with heroin dependence (mean age: 31.2; standard deviation (SD): 5.5; 10 females), 37 patients with alcohol dependence (mean age 44.2; SD: 9.1; 9 females) and 83 subjects from a random population sample (mean age: 38.8; SD: 6.9; 20 females). Personality was measured by Cloninger's Temperament and Character Inventory (TCI). Post-hoc tests showed heroin patients to score higher in Novelty-Seeking and Self-Directedness than alcohol patients. Sub-dimensions Exploratory Excitability, Fear of the Uncertain, Responsibility, Congruent Second Nature and Transpersonal Identification were also

significantly different in the two patient samples. Logistic regression showed Exploratory Excitability to segregate up to 76% of heroin patients from alcohol patients. In conclusion, personality profiles were linked to some preferential choice of drug and personality screening might be tested in preventive strategies.

Agrawal et al (2004) conducted a study with the goal to estimate the extent of genetic and environmental overlap between three dimensions of personality (N, E and NS) and illicit psychoactive substance use and abuse/dependence. Using data from adult male and female twins from the Mid-Atlantic Twin Registry, they used the structural equation modeling package Mx to perform bivariate Cholesky decompositions for personality measures of N, E and NS, individually with cannabis, cocaine, sedatives, stimulants and hallucinogens. The phenotypic relationship between personality and use and abuse/dependence of illicit drugs were moderate and most of the covariance was explained by genetic factors. Sexes could be equated for N and E but not for NS. For NS, use and abuse/dependence of illicit drugs showed greater phenotypic and genetic overlap in males than females. Of the personality measures, NS and illicit drug use and abuse/dependence were most closely related. NS was most closely related to cannabis use while N showed significant genetic overlap with sedative use. NS in males appears to be a good indicator of risk for cannabis use. This result may be useful for candidate gene studies.

Bowden-Jones and colleagues (2004) conducted a very comprehensive assessment of personality disorders in drug and alcohol treatment populations in the United Kingdom. They found an overall prevalence of personality disorders in drug abuse services of 37% and of 53% in alcohol abuse treatment services. In drug treatment populations, among those with a disorder, cluster B disorders were most common (emotionally unstable - borderline and impulsive -histrionic and dissocial). In alcohol service

population, cluster C disorders (anxious, dependent and anankastic personality disorders) were most common.

Kashdan, T. B., Vetter, C. J & Collins. R. L (2004) conducted a study in which they examined the role of personality characteristics in substance use. The sample included 421 individuals, 222 women (52.7 percent) and 199 men (47.3 percent). Results showed Conscientiousness (e.g., discipline, self-control, dependability, and orderliness) was negatively related to substance use, meaning that as conscientiousness increased, substance use tended to decrease. Negative affectivity (e.g., neuroticism, depression) was related to greater use of illegal substances, but was not related to alcohol use or smoking. Conscientiousness was related to less alcohol use and smoking, and this in turn helped to explain the relationships between conscientiousness and less use of marijuana and other illegal drugs. Gender appeared to be an important factor in the relationship between personality and substance use. For women, greater conscientiousness was associated with less alcohol use and smoking, compared to men. For men, alcohol use (e.g., typical weekly intake of beer, wine, or liquor) and smoking were more likely to lead to marijuana use, compared to women.

Kashdan, T. B., Vetter, C. J., & Collins, R. L (2005) examined the relationships among personality (i.e., negative affectivity and conscientiousness), and use of licit and illicit substances in a sample of 421 college-aged social drinkers (52.7% women, 47.3% men). Results indicated significant relationships between personality and substance use as well as gender differences. Negative affectivity (Neuroticism) was related to greater illicit substance use, but not alcohol use or smoking. Conscientiousness was related to less alcohol use and smoking, which fully mediated relationships between conscientiousness and with less use of marijuana and other illicit substances. For women, conscientiousness was associated with less alcohol and smoking, compared to

men. For men, alcohol use and smoking were more likely to lead to marijuana use, compared to women.

Anderson and colleagues (2005) examined the relationship between personality and drug and alcohol related expectancies. They found that extraversion significantly predicted alcohol expectancies in fifth grade students thus indicating that extraverted adolescents "had more positive expectancies for drinking, despite having not yet initiated regular alcohol use"

Kuntsche et al (2006) in their study "a review of socio-demographic, personality, and contextual issues behind the drinking motives in young people" reviewed the empirical research carried out on the characteristics of young people (10- to 25-year olds) who have specific motives for drinking. In a computer-assisted search of relevant literature, 82 studies were identified. Concerning demographic factors, a developmental trend was found - from general, undifferentiated drinking motives in late childhood and early adolescence to more gender-specific drinking motives in subsequent years. With regard to personality factors, two specific patterns can be distinguished: extraversion and sensation-seeking correlate with enhancement motives, while neuroticism and anxiety correlate most strongly with coping motives. For contextual factors, drinking motives were found to vary across countries but not among different ethnic groups in the same culture.

Kornør, H. & **Nordvik, H. (2007) conducted a study in which they** compared FFM personality traits in 65 opioid dependent persons (mean age 27 years, 34% females) in outpatient counselling after a minimum of 5 weeks in buprenorphine replacement therapy, with those in a non-clinical, age- and sex-matched sample selected from a national database. Personality traits were assessed by a Norwegian version of the Revised NEO Personality Inventory (NEO PI-R), a 240-item self-report questionnaire.

Cohen's d effect sizes were calculated for the differences in personality trait scores. Results showed that opioid-dependent sample scored higher on Neuroticism, lower on Extraversion and lower on Conscientiousness (d = -1.7, 1.2 and 1.7, respectively) than the controls. Effects sizes were found small for the difference between the groups in Openness to experience scores and Agreeableness scores.

Terracciano et al (2008) conducted a study in which they compare the personality profile of tobacco, marijuana, cocaine, and heroin users and non-users using the wide spectrum Five-Factor Model (FFM) of personality in a diverse community sample. The sample ((N = 1,102; mean age = 57)) was drawn from a community with a wide range of socio-economic conditions. Personality traits were assessed with the Revised NEO Personality Inventory (NEO-PI-R), and psychoactive substance use was assessed with systematic interview. The results showed that Compared to never smokers, current cigarette smokers score lower on Conscientiousness and higher on Neuroticism. Similar, but more extreme, was the profile of cocaine/heroin users, which score very high on Neuroticism, especially Vulnerability, and very low on Conscientiousness, particularly Competence, Achievement-Striving, and Deliberation. By contrast, marijuana users score high on Openness to Experience, average on Neuroticism, but low on Agreeableness and Conscientiousness.

Dubey et al (2010) conducted a study in which they investigated the personality traits of substance abusers as compared with non-substance abusers by using the NEO-Five Factor Inventory. The sample consists of substance abusers (N=100) along with non-substance abusers (N=100). In terms of Five Factor model of Personality Taxonomy, the present study revealed that substance abused group scored higher on Neuroticism and Extraversion dimensions, whereas non-substance abusers significantly scored

higher on Openness and Conscientiousness dimensions of Big-Five. No significant difference was obtained on Agreeableness domain of personality.

Mezquita, L., Stewart, S. H. & Ruipérez, M. A (2010) examined the relations between personality domains, internal drinking motives, alcohol use, and alcohol related problems. Undergraduate student drinkers (***N*** =521) completed the NEO-FFI, the Modified DMQ-R, a quantity/frequency measure of alcohol use, and the RAPI .A path analysis was performed to test a theoretical model of relations between these variables which specified internal drinking motives as mediators of the relations between personality domains and alcohol use/drinking consequences. Coping depression drinking motives were predicted by Neuroticism, coping-anxiety drinking motives by Neuroticism and low Conscientiousness, and enhancement drinking motives by Extraversion and low Conscientiousness. Moreover, heavier drinking was predicted by enhancement motives, while alcohol-related problems were predicted by both coping-anxiety and coping-depression drinking motives.

Shahrazad et al (2011) conducted a study to examine the predictive relationship between personality traits and readiness to change among women drug addicts in Malaysia. The study employed survey research involving the administration of two standardized psychological tests which were the Eysenck Personality Questionnaire Revised Short Version (EPQ-RS) and the Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES). A total of 109 female drug addicts who were undergoing drug treatment in a female rehabilitation centre in Malaysia participated in this study. Results showed that there were significant correlations between the traits of extraversion, neuroticism and psychoticism with all the three stages of readiness to change. The study also demonstrated that high extraversion and neuroticism traits significantly predicted the recognition subscale.

Fridberg et al (2011) conducted a study with the purpose to investigate the relations between normal personality, schizotypy, and cannabis use. Sixty-two chronic cannabis users and 45 cannabis-naïve controls completed a measure of normal personality, the NEO-Five Factor Inventory (NEO-FFI), and two measures of schizotypy, the Schizotypal Personality Questionnaire (SPQ) and Perceptual Aberration Scale (PAS). Substance use was assessed using the SCID I alcohol/drug module and a locally developed drug use questionnaire. Their results showed that on the NEO-FFI, users scored higher than controls on Openness, but lower on Agreeableness and Conscientiousness, and endorsed greater schizotypy on the SPQ and PAS. Higher Neuroticism predicted greater schizotypy in both groups, and, higher Extraversion predicted lower negative-syndrome schizotypy among users. Finally, duration of cannabis use was positively correlated with scores on the SPQ and PAS among users, suggesting a relation between overall cannabis use chronicity and schizotypy. The data from their study showed that cannabis users differ from non-users on dimensions of normal personality and schizotypy, and provide further evidence that cannabis use is associated with increased levels of psychosis-related personality traits.

A complete catchment area sample of 61 consecutively admitted patients with SUDs, with no previous history of specialized treatment (addiction clinics, psychiatry) were studied by **Langas, A., Malt, U. F., & Opjordsmoen, S(2012),** addressing PDs and associated clinical and demographic variables. They found that forty-six percent of the SUD patients had at least one PD (16% antisocial [males only]; 13% borderline; and 8% paranoid, avoidant, and obsessive-compulsive, respectively). Cluster C disorders were found as prevalent as Cluster B disorders. SUD patients with PDs were younger at the onset of their first SUD and at admission; used more illicit drugs; had more anxiety

disorders, particularly social phobia; had more severe depressive symptoms; were more distressed; and less often attended work or school.

From the above mentioned studies pertaining to personality and substance dependence/drug addiction, it is evident that several studies within the past two decades, have examined personality attributes associated with drug use (Brook et al. 1983, 1986; Newcomb and Bentler 1986*a*). Also recent research studies have shown that personality traits often precede the onset drug use, indicating that, at least for some classes of drugs, personality features may have a predictive value, acting as a predisposing factor for substance abuse (Negreiros, 2006).

Studies pertaining to impulsiveness and substance dependence or drug addiction:

Lipkus et al (1994) conducted a study in which MMPI data collected from a sample of college men and women during 1964-1967 were used to predict smoking initiation and cessation over a 20-year follow-up period. Results showed that people who subsequently began smoking were more rebellious, impulsive, sensation seeking, and hostile; were less likely to present a positive self-image; and were socially extraverted while in college. People who continued to smoke 20 years later were more hostile and sensation seeking. The personality variables that predicted smoking initiation and cessation were the same for men and women.

Waldeck, T. L & Miller, L .S (1997) conducted a study in which they studied gender and impulsivity differences in licit substance use. In a large sample of young adults (N=332), self-report data were collected on licit substance use and impulsivity/nonconformity. Results showed, among men, significant differences were found between higher and lower impulsivity groups for alcohol and caffeine use but not for nicotine use. Among women, significant differences were found between higher and

lower impulsivity groups for alcohol and nicotine use but not for caffeine use. The data in their study suggested the importance of recognizing gender differences in the relationship between personality factors and licit substance use.

Madden et al (1997) conducted a study in which delay discounting was investigated in opioid-dependent and non-drug-using control participants. The latter participants were matched to the former on age, gender, education, and IQ. Participants in both groups chose between hypothetical monetary rewards available either immediately or after a delay. Delayed rewards were $1,000, and the immediate-reward amount was adjusted until choices reflected indifference. This procedure was repeated at each of 7 delays (1 week to 25 years). Opioid-dependent participants were given a second series of choices between immediate and delayed heroin, using the same procedures (i.e., the amount of delayed heroin was that which could be purchased with $1,000). Results showed that opioid-dependent participants discounted delayed monetary rewards significantly more than did non-drug-using participants. Furthermore opioid-dependent participants discounted delayed heroin significantly more than delayed money.

Allen et al (1998) conducted a study in which impulsivity was contrasted between 32 subjects with a history of drug-dependence (DRUG+) and 26 subjects with no drug use history (DRUG−) using both behavioural and self-report measures. Results showed that subjects in the DRUG+ group self-reported more of a tendency toward impulsivity than the DRUG− group in the situations posed in questionnaires. In the behavioural paradigm involving a choice between a smaller intermediate reward and a larger but delayed reward, DRUG+ subjects selected the impulsive option more often, but these differences were not significant. The DRUG+ and DRUG− groups did differ on the mean delay interval for the larger reward, indicating less ability to tolerate longer delays for the larger reward. A frequency distribution of delay intervals for the larger

reward indicated that DRUG+ subjects were more likely to maintain very short intervals and less likely to maintain longer intervals.

Brady, K. T., Myrick, H and McElroy, S. (1998) in a study examined the relationship between substance use disorders; impulse controls disorders (ICDs), and pathological aggression. Phenomenological evidence, neurobiological evidence, and comorbidity data, as well as evidence from the pharmacotherapy of aggression and impulse control and substance use disorders, suggested links between substance use, impulsivity, and pathologic aggression.

Frank et al (1998) in a study tested whether problem gambling and substance use in adolescents are related and whether they could have a common link with impulsivity. A community sample of 765 adolescents participated. Gambling and substance use were assessed when adolescents were 17 yrs old. Impulsivity and impulsivity-related behaviours were assessed when adolescents were 12, 13, and 14 yrs old. Groups of gamblers and groups of substance users were formed a comorbid group was also formed. Results indicated that problem gamblers were more at risk of also being problem substance users and vice versa than non problem participants. In addition, comorbid participants were more impulsive than problem gamblers only or problem substance users only.

The relationship between personality traits and alcohol consumption was studied in a sample of 149 non-alcoholic women using the Karolinska Scales of Personality (KSP) and the Eysenck PersonalityQuestionnaire-Revised (EPQ-R) by **Grau, E & Ortet ,G (1999).** The results showed positive correlations between alcohol consumption and disinhibitory personality traits (sensation seeking, impulsivity, psychopathy, nonconformity) and dimensions (psychoticism and extraversion). Sensation seeking combined with impulsivity were the strongest predictors of alcohol consumption.

Anxiety-related traits and neuroticism were not related to alcohol frequency/amount of alcohol use.

Impulsivity is implicated in drug dependence. Recent studies showed problems with alcohol and opioid dependence are associated with rapid discounting of the value of delayed outcomes**. Bickel, W. K., Odum, A. L. & Madden, G. J. (1999)** in a study determined if these findings could be extended to the behaviour of cigarette smokers. In particular, they compared the discounting of hypothetical monetary outcomes by current, never, and ex-smokers of cigarettes. They also examined discounting of delayed hypothetical cigarettes by current smokers. Current cigarette smokers (n=23), never-smokers (n=22) and ex-smokers (n=21) indicated preference for immediate versus delayed money in a titration procedure that determined indifference points at various delays. The titration procedure was repeated with cigarettes for smokers. The degree to which the delayed outcomes were discounted was estimated with two non-linear decay models: an exponential model and a hyperbolic model. They found that current smokers discounted the value of delayed money more than did the comparison groups. Never- and ex-smokers did not differ in their discounting of money. For current smokers, delayed cigarettes lost subjective value more rapidly than delayed money. The hyperbolic equation provided better fits to the data than did the exponential equation for 74 out of 89 comparisons.

Mitchell, S.H (1999) conducted a study in which he examined whether regular smokers are more impulsive than never smokers using personality and behavioural measures of impulsivity. Twenty regular smokers (>/=15 cigarettes/day) and 20 never smokers were recruited. Participants completed five personality questionnaires to assess impulsivity: Adjective Checklist, Barratt's Impulsivity Scale, the Tridimensional Personality Questionnaire, Eysenck's Personality Questionnaire, and the Sensation-

Seeking Scale. Participants also performed three behavioural choice tasks designed to assess impulsivity. Results showed that on the personality questionnaires, smokers had statistically higher impulsivity scores on most scales. On the behavioural choice tasks, smokers chose small, immediate money over large, delayed money more frequently, signifying greater levels of impulsivity. There were no differences between the groups' choices on the other tasks. Together, these results indicated that the smokers were more impulsive than never smokers.

Impulsiveness and compulsiveness questionnaires were completed by recovering alcoholics (n = 54) and by a community sample (n = 351) in a study conducted by **Ketzenberger, K. E. & Forrest, L. (2000)** .No relationship was found, indicating these traits are independent, distinct constructs. Alcoholics scored significantly higher on impulsiveness than non-alcoholics, and impulsiveness was negatively associated with age for both groups. Interestingly, the significant difference between the two groups on impulsiveness was maintained across age groups. Alcoholic and non-alcoholic compulsiveness scores showed no difference; however, compulsiveness was negatively related to age in non-alcoholics, but not alcoholics.

Moeller et al (2001) conducted a study to determine whether impulsivity was related to severity of drug use and treatment outcome. 50 cocaine dependent subjects underwent baseline measures of severity of current cocaine use and the Barratt Impulsiveness Scale (BIS-11). Results showed significant correlation between BIS-11 total scores and self-reported average daily cocaine use as well as cocaine withdrawal symptoms. Also a subset of 35 patients underwent a 12-week double-blind placebo controlled trial of buspirone and group therapy. Subjects with high baseline impulsivity remained in the study a significantly shorter period than did subjects with lower baseline impulsivity. This study shows that impulsivity is a significant predictor of cocaine use and treatment

retention, and suggests the need for targeting impulsivity in cocaine dependence treatment.

Petry, (2001) in a study evaluated behavioural and self-report indices of impulsiveness in pathological gambling substance abusers (*n*=27), non-pathological gambling substance abusers (*n*=63), and non-pathological gambling/non-substance abusing controls (*n*=21). The Bechara card task was used to measure preferences for decks of cards that ranged in magnitude and probability of delayed and immediate rewards and punishers. The Stanford Time Perception Inventory (STPI) assessed orientation to the future, the Zuckerman Sensation Seeking Scale evaluated sensation seeking, and the Eysenck and Barratt scales measured impulsivity. A Principal Components analysis revealed that these personality measures comprised three distinct measures of impulsivity: impulse control, novelty seeking and time orientation. Linear contrast analyses revealed that substance abuse and pathological gambling resulted in additive effects on the impulse control and time orientation factors, but not on the novelty-seeking scale. Performance on the card task did not correlate with any of the three factors derived from the personality scale scores, but the presence of both substance abuse and pathological gambling had an additive effect on preferences for decks containing greater immediate gains but resulting in large punishers and overall net losses. The results of the study provide further evidence of an association among substance abuse, pathological gambling, and impulsivity.

To determine whether cocaine dependent subjects show increased impulsivity independent of ASPD, the Barratt impulsiveness scale (BIS-11), a delayed reward laboratory measure of impulsivity, and the life history of aggression scale were administered to 49 cocaine dependent subjects and 25 controls in a study conducted by **Moeller et al., (2002)** . Results showed that cocaine dependent subjects with ASPD

were more impulsive and aggressive than controls, but cocaine dependent subjects without ASPD were also more impulsive compared to controls. Controlling for aggression history, cocaine dependent subjects without ASPD continued to have elevated impulsivity as measured by the BIS-11, but not the delayed reward task. This study supports the hypothesis that the increased impulsivity as measured by the BIS-11 in cocaine dependent individuals is not exclusively due to concomitant increases in aggression or ASPD.

Coffey et al ., (2003) conducted a study in which crack/cocaine-dependent (CD) and non-drug-using matched control (MC) participants were presented with hypothetical immediate and delayed rewards, with 16 delay conditions ranging from 5 min to 25 years. All participants were presented with hypothetical monetary rewards; however, the CD group was also presented with hypothetical crack/cocaine rewards. The objective value of the rewards ranged from $1 to $1,000. Hyperbolic discounting functions provided a good fit of the data. The CD group discounted monetary rewards at a higher rate than the MC group did, and the CD group discounted crack/cocaine rewards at a higher rate than it did monetary rewards. Moreover, scores on self-report measures indicated greater impulsivity in the CD group when compared with the MC group.

Tcheremissine et al (2003) conducted a study in which relationships among novelty seeking, harm avoidance, reward dependence, impulsivity and venturesomeness, and conduct disorder were examined in a group of subjects with a past diagnosis of a substance use disorder and controls. Psychometric data from 68 subjects were analyzed using Analysis of Variance and logistic regression. Results showed that individuals meeting criteria for a past substance use disorder showed lower reward dependence and greater impulsivity than controls, when controlling for the presence of conduct

disorder. A substance use disorder & conduct disorder interaction was found on the dimensions of harm avoidance and venturesomeness.

Neumann et al (2003) conducted a study in which they used latent variable structural modelling was used to examine the associations among callous/impulsive personality traits, substance abuse, and symptoms of depression in a sample of 156 adjudicated male adolescents. Assessments were conducted at baseline and 6-month follow-up. The results highlighted an unfolding of interrelationships among disturbances in personality (impulsive personality traits), substance use, and mood over time.

Using a variety of laboratory measures of impulsivity, **Bjork, et al (2004)** assessed whether detoxified alcohol-dependent patients [(ADP); n = 130] were more impulsive than control subjects [(CS); n = 41]. In comparison with CS, ADP demonstrated (1) increased rates of commission errors, but not omission errors, in a continuous performance test, (2) a more severe devaluation of delayed reward, (3) increased rates of risky responses in a new risk-taking paradigm, and (4) higher psychometric scores of impulsivity and aggression. Across all subjects, aggressiveness correlated significantly with severity of delay discounting. A post hoc analysis of data obtained for male ADP indicated that, in comparison with patients with late onset of problem drinking and no problem-drinking parent, those ADP with earlier age of problem drinking and who reported a problem-drinking father (type 2-like alcohol dependence) demonstrated faster response latencies and more responses to non-target stimuli (commission errors) in the continuous performance test, as well as higher psychometric aggression. In contrast, these subtypes of male ADP did not differ in delay discounting and risk taking. These findings collectively indicated that, in comparison with CS, ADP are more impulsive in several dimensions, with elevated impulsivity in a working memory

task as well as aggressivity characteristic of alcohol-dependent men with type 2-like features.

Kane et al (2004) in a study examined whether impulsivity was heightened in eating disordered women compared with controls, and whether women with co-morbid bulimia and alcohol use disorders showed higher impulsivity than bulimic-only women. The Impulsivity scale, BIS/BAS scales, State Anxiety Inventory, and a behavioural measure of reward responsiveness (CARROT) were administered to 22 women with bulimia, 23 women with co-morbid bulimia and alcohol abuse/dependence, and 21 control women. Results showed that eating disordered women scored higher than controls on several self-report measures of impulsivity and sorted cards faster during a financially rewarded trial on the behavioural task. It was also found that co-morbid women scored higher than bulimic women on the Impulsivity scale. These findings suggested that individual differences in impulsiveness and a tendency to approach rewarding stimuli may contribute to developing these disorders.

Swann et al (2004) conducted a study in which they first compared impulsivity as a stable trait (Barratt Impulsiveness Scale, BIS) and as state-dependent behavioural laboratory performance (Immediate Memory–Delayed Memory task, derived from the Continuous Performance Task) in interepisode bipolar and nonbipolar subjects with and without substance abuse. Secondly, they compared impulsivity in interepisode and manic bipolar subjects with and without substance abuse. They found in their study that the BIS scores were increased in interepisode bipolar disorder subjects and in subjects with histories of substance abuse, and were increased further in interepisode bipolar subjects with substance abuse. Apart from that performance impulsivity was found increased in subjects with substance abuse, regardless of whether they had bipolar

disorder. Among subjects with bipolar disorder, after correction for age, BIS scores were found increased in those with substance abuse. Also performance impulsivity was found increased in manic compared with interepisode subjects, regardless of substance abuse history, and was increased in interepisode subjects with substance abuse similarly to manic subjects without substance abuse.

Vangsness, L., Bry, B. H & LaBouvie, E. W (2005) Conducted a study in which they evaluated whether the acquired preparedness model (expectancies mediate the relationship between an impulsive personality style and alcohol use) can also be applied to marijuana use. Estimated probabilities and subjective evaluations of personally expected marijuana effects, along with impulsivity and frequency of marijuana use, were assessed in 337 college undergraduates. Tests of mediation examining positive and negative marijuana expectancies showed negative expectancies to be a significant mediator for both males and females. That is, participants who were higher on impulsivity had fewer negative expectancies and in turn used more marijuana. The study provided evidence that the acquired preparedness model may help to explain marijuana use.

Bornovalova et al (2005) in a study examined impulsivity (using the Delay Discounting Task) and risk-taking propensity (using the Balloon Analogue Risk Task) across independent groups of primary crack cocaine users with minimal heroin use (n=16) and primary heroin users with minimal crack cocaine use (n=11) in residential treatment, with all participants drug abstinent during participation. The results showed that crack cocaine users evidenced greater levels of impulsivity and risk-taking propensity, with only the difference in impulsivity persisting after controlling for age and gender.

Lejuez et al (2005) in a study utilized a sample of 123 inner-city drug users in residential treatment, comparing sexual risk behaviour (SRB) across primary users of (a) heroin and not crack/cocaine, (b) crack/cocaine and not heroin, and (c) both heroin and crack/cocaine. Additional analyses also examined impulsivity as a mediator of drug choice and SRB. Results indicated that SRB was higher in primary crack/cocaine users than in primary heroin users, with those using both drugs evidencing intermediate levels of SRB. Beyond differences in SRB, a similar pattern across drugs was found for impulsivity. Finally, impulsivity mediated the relationship between drug choice and SRB. The results in their study supported a relationship between SBR and crack/cocaine, and suggest that disinhibition processes including impulsivity may underlie this relationship.

Dom et al (2006) conducted a study to test the hypothesis that early-onset alcoholics (EOAs) can be differentiated from late-onset alcoholics (LOAs) by more severe substance-related problems and higher levels of impulsivity and aggression. The European Addiction Severity Index was used to assess substance-related problems and the Barratt Impulsiveness Scale, the Dutch version of the Zuckerman Sensation Seeking Scale and the Buss-Durkee Hostility Inventory were used to assess impulsive and aggressive traits. Impulsive decision making was assessed using a delay discounting task (DDT) with hypothetical monetary rewards. Participants in their study were EOAs (n = 42) and LOAs (n = 46) recruited from an addiction treatment centre and an unmatched, non-substance-abusing comparison group (n = 54). Results showed that the EOAs had higher levels of impulsive decision making than both the LOAs and the comparison group. The EOAs had higher scores than the LOAs on measures of impulsiveness, aggressiveness and the severity of substance-related problems.

Billieux, J., Linden, M. V.D & Ceschi, G. (2007) conducted a study with the aim to analyze which dimensions of impulsivity are related to cigarette craving. To this end, 40 undergraduate psychology students were screened using the revised Questionnaire on Smoking Urges (QSU-12) and the French adaptation of the UPPS Impulsive Behaviour Scale (UPPS). The results showed that urgency is a significant predictor of tobacco cravings, while depression and anxiety are not.

James, L. M & Taylor, J (2007) in a study examined the role of negative emotionality (NEM) and impulsivity in 617 university students with self-reported substance use problems and Cluster B personality disorder (PD) symptoms. Results indicated that NEM was significantly associated with drug and alcohol use problems, antisocial PD, borderline PD, and narcissistic PD. Impulsivity was significantly associated with drug use problems, antisocial PD, and histrionic PD. It was also found that only NEM mediated the relationship between alcohol use problems and symptoms of each of the Cluster B PDs while impulsivity mediated only the relationship between drug use problems and histrionic PD. These results suggest that NEM may be more relevant than impulsivity to our understanding of the co-occurrence between substance use problems and Cluster B PD features.

Verdejo-García et al (2007) used a multidimensional measure of impulsivity (the UPPS scale) to examine differences between 36 individuals with substance dependence (ISD) and 36 drug-free controls on the dimensions of urgency, lack of premeditation, lack of perseverance, and sensation seeking. In addition, they examined which dimensions of impulsivity better predicted addiction-related problems as measured with the addiction severity index. Results revealed that ISD show high scores on dimensions of urgency, lack of perseverance, and lack of premeditation (effect sizes ranging from 1.10 to 1.96), but not on sensation seeking. Among the

different impulsivity dimensions, urgency was found the best predictor of severity of medical, employment, alcohol, drug, family/social, legal and psychiatric problems in ISD, explaining 13–48% of the total variance of these indices. Furthermore, urgency scores alone correctly classified 83% of the participants in the ISD group.

Diergaarde et al (2008) conducted a study in which they examined whether poor impulse control represents a risk factor in the etiology of nicotine dependence. They used rats as animal subjects in their study. Results showed that impulsive action was associated with an enhanced motivation to initiate and maintain nicotine SA. In contrast, impulsive choice predicted a diminished ability to inhibit nicotine seeking during abstinence and an enhanced vulnerability to relapse upon re-exposure to nicotine cues. Impulsive action was associated with reduced dopamine release in the accumbens core and impulsive choice with reduced dopamine release in accumbens core, shell, and medial prefrontal cortex.

Rubio et al (2008) in a study conducted from September 2001 until September 2006 in Madrid, Spain examined the influence of cocaine use and the role of impulsivity in the development of DSM-IV alcohol dependence in nondependent drinkers in a 4-year follow-up study. Four hundred seventy-one (nondependent) heavy drinkers were enrolled in a prospective study. At baseline, 280 were classified as heavy drinkers (HD) and 191 as heavy drinkers who also used cocaine (HD + Co). Clinical variables related to alcohol and cocaine use were assessed at 2 years and at the end of the 4-year follow-up period. Results showed that at the 4-year follow-up assessment, 67.9% of the HD + Co group met DSM-IV criteria for alcohol dependence compared to 13.6% of the HD group. Odds ratios for alcohol dependence were 12.3 and 7.0 for male and female cocaine users, respectively. Clinical and psychological variables related to impulsivity

were associated with the development of alcohol dependence. The amount of cocaine used during follow-up was associated with a more rapid progression to alcohol dependence. This study revealed that cocaine use or an impulsive personality in heavy drinkers increased the risk of developing DSM-IV alcohol dependence by 3.8 and 12.6 times, respectively.

In order to evaluate the association between impulsivity, age of first alcohol consumption (AFD) and substance use disorders (SUD) in a non-clinical sample of adolescents. **Von Diemen, L (2008)** conducted a population-based case-control study of male adolescents between 15 and 20 years of age nested in a community survey in southern Brazil. Cases were drug or alcohol abusers/dependents defined according to DSM-IV abuse/dependence criteria (n = 63). Individuals who had experienced alcohol use but where non-abusers served as controls (n = 355). Cases and controls completed a structured face-to-face interview. The Mini International Neuropsychiatric Interview (MINI) was completed during the original survey and used to identify cases and controls. Impulsivity was measured by means of the Barratt Impulsivity Scale (BIS 11). Self-reported AFD and socio-demographic data were collected and analyzed through logistic regression according to a hierarchical model. The results showed that impulsivity and AFD were significantly associated with SUD. It was also found that both higher impulsivity [odds ratio (OR) 3.3, 95% confidence interval (CI) 1.4-7.8] and earlier AFD (OR 1.2, 95% CI 1.0-1.3) remained associated with SUD after model adjustments.

Alloy et al (2009) Conducted a study in which they tested whether high behavioural approach system (BAS) sensitivity and impulsiveness are shared personality vulnerabilities in bipolar spectrum disorders and substance use problems and their co-occurrence, in a longitudinal study of 132 individuals on the bipolar spectrum and 153

control participants. At Time 1, participants completed the Behavioural Inhibition System/BAS Scales and the Impulsive Nonconformity Scale. Substance use problems were assessed via the Michigan Alcoholism Screening Test and the Drug Abuse Screening Test at 4-month intervals for 1 year. Results showed that participants with bipolar disorder had higher rates of lifetime SUDs and substance use problems during the follow-up, relative to control participants. Apart from that it was also found that BAS total, BAS Fun Seeking, and impulsiveness mediated the association between bipolar spectrum status and prospective substance use problems, with impulsiveness as the most important mediator. High BAS sensitivity and impulsiveness may represent shared personality vulnerabilities for both disorders and may partially account for their co-occurrence.

Calvete, E & Estévez, A (2009) conducted a study to assess the association between stress, cognitive schemas, impulsivity, and substance use in adolescents. A sample of 657 adolescents (367 girls and 290 boys) completed measures of stressful life events, cognitive schemas of grandiosity and insufficient self-control, impulsive style of problem-solving and substance use. The results indicated that stressful life events and the cognitive schemas were significantly associated with substance use. In addition, the impulsive style of problem-solving moderated the relationship between stressors and substance use, this association being stronger among more impulsive adolescents. Finally, the results indicated that boys scored higher on Grandiosity and on the use of marijuana, cocaine, LSD and ecstasy, while girls scored higher on tobacco use (smoking). Despite these differences, gender did not moderate the association between schemas and substance use.

Doran et al (2009) conducted a study in which they assessed whether specific aspects of impulsivity (sensation seeking, lack of premeditation, lack of perseverance, and

urgency) were associated with cue-induced craving. Regular smokers (n= 60; 50% female) were exposed to a smoking cue and a neutral cue in a repeated measure counter-balanced design. Mixed effects regression models indicated that smokers who were high in sensation seeking reported greater increases in appetitive craving after smoking cue exposure, whereas, smokers who were high in urgency and lack of perseverance reported greater increases in negative affect craving**.**

Evren, C & Dalbudak, E (2009) conducted a study with the aim to evaluate the correlation of personality trait impulsivity with different psychopathologies and severity of alcohol-related problems among male alcohol dependent inpatients. "Impulsiveness" subscale of the Temperament and Character Inventory, State-Trait Anxiety Inventory, Beck Depression Inventory, Toronto Alexithymia Scale, Dissociative Experiences Scale, Symptom Checklist-Revised, and Michigan Alcoholism Screening Test were administered to 176 male alcohol dependent inpatients. Results showed that mean score of personality trait impulsivity was higher among those with early onset alcoholism, suicide attempt history, depression, state anxiety, trait anxiety, alexithymia, and dissociative taxon membership. Personality trait impulsivity showed mild negative correlation with age at first alcohol use, mild positive correlations with depression and dissociation scores and moderate correlations with other scales used in the present study. No significant correlations were found with age, duration of education, and duration of regular alcohol use. The severity of trait anxiety and problems related to alcohol use were the only predictors of impulsivity in regression model.

Flory, J. D. & Manuck, S. B (2009) conducted a study to evaluate the association of impulsive personality features with multiple tobacco use phenotypes including smoking status, lifetime tobacco consumption, and dependence in a sample of 1284 adults

between the ages of 30 and 54. Participants completed multiple self-report measures of impulsive personality and were interviewed regarding lifetime tobacco use. Results revealed that reward seeking and disinhibitory traits were both associated with smoking status but only disinhibition was associated with tobacco dependence, after controlling for reward seeking.

Ersche et al (2010) conducted a study in which they compared self-reported levels of impulsivity and sensation-seeking between 30 sibling pairs of stimulant-dependent individuals and their biological brothers/sisters who did not have a significant drug-taking history and 30 unrelated, nondrug-taking control volunteers. They found that Siblings of chronic stimulant users reported significantly higher levels of trait-impulsivity than control volunteers but did not differ from control volunteers with regard to sensation-seeking traits. Stimulant-dependent individuals reported significantly higher levels of impulsivity and sensation-seeking compared with both their siblings and control volunteers.

Chase, H. W. & Hogarth, L **(2011)** in a study examined the nature of relationship between impulsivity and the symptomatology of nicotine dependence, they recruited 404 daily and occasional smokers from a predominantly student population and assessed the association between impulsivity, as measured by the Barratt Impulsiveness Scale (BIS-11) and several self-reported measures of smoking rate and nicotine dependence, including the Diagnostic and Statistical Manual's (*DSM-IV*) criteria. They found in their study that, Overall, impulsivity was high throughout the entire sample but only modestly associated with nicotine dependence. Within the diagnostic criteria of nicotine dependence, two symptoms, which reflect automatized or habitual smoking, were most strongly associated with impulsivity.

Tziortzis et al (2011) conducted a study in order to determine the relationship between impulsivity and craving in 85 cocaine-dependent and 73 methamphetamine-dependent, non-treatment-seeking volunteers. Drug use was assessed with a 14-item, self-report drug and alcohol use questionnaire. Self report instruments utilized included the Barratt Impulsivity Scale (BIS) and the Visual Analog Scale (VAS).The groups were similar with respect to recent use of cocaine or methamphetamine, alcohol, nicotine, and marijuana. Analysis of variance (ANOVA) did not reveal significant differences between cocaine and methamphetamine groups for total impulsivity or total craving. Simple linear regression revealed correlations between total impulsivity and total craving in cocaine ($r(2)=0.05$, $p\leq0.03$) and methamphetamine users ($r(2)=0.09$, $p\leq0.008$). Participants were separated into high impulsivity (HIBIS) or low impulsivity (LOBIS) subgroups using a median split. ANOVA revealed significantly higher craving in the HIBIS group versus the LOBIS group in methamphetamine users ($p\leq0.02$), but not in cocaine users. For both cocaine and methamphetamine groups, level of impulsivity and craving were found to be related to some drug use variables including years of alcohol use, severity of withdrawal, and craving level following drug use. Taken together, their study shows a marginal relationship between impulsivity and craving, which may further the understanding of motivational factors contributing to ongoing drug use and addiction in psycho-stimulant users.

Solowij et al (2012) conducted a study in which the Information Sampling Test was used to assess reflection impulsivity in 175 adolescents (mean age 18.3, range 16.5-20; 55% female)-48 cannabis users (2.3 years use, 10.8 days/ month), 65 alcohol users, and 62 non-substance-using controls-recruited from a longitudinal cohort and from the general community and matched for education and IQ. Cannabis and alcohol users were matched on levels of alcohol consumption. Results showed that Cannabis users

sampled to the lowest degree of certainty before making a decision on the task. Group differences remained significant after controlling for relevant substance use and clinical confounds (e.g., anxiety, depressive symptoms, alcohol, and ecstasy use). Poor performance on multiple IST indices was associated with an earlier age of onset of regular cannabis use and greater duration of exposure to cannabis, after controlling for recent use. Alcohol users did not differ from controls on any IST measure.

Shin, S .H., Hong, H .G & Jeon, S .M (2012) Conducted a study in which they examined the influence of impulsivity traits on four patterns of alcohol use including frequency of alcohol use, alcohol-related problems, binge drinking, and alcohol use disorders (AUDs) in a community sample of young individuals (N=190). In multivariate regression analyses that controlled for peer and parental alcohol use, psychological distress, and developmental correlates (i.e., college, marriage, employment) in emerging adulthood, they found that urgency and sensation seeking were consistently related to all four constructs of alcohol use. This study suggested that distinct impulsivity traits may play different roles in escalation of alcohol use and development of AUDs during emerging adulthood.

From the above mentioned studies pertaining to impulsivity and substance dependence/drug addiction it is evident that the construct of impulsivity plays an important role in the lives of people and has been of interest to researchers for many years. It is a major criterion used to diagnose a variety of clinical disorders including bulimia nervosa, attention deficit disorder, pathological gambling (Alessi & Petry, 2003), substance abuse, pyromania, kleptomania, obsessive compulsive disorder and other psychopathological diagnosis as well as several personality disorders (e.g., antisocial personality disorder, borderline personality disorder). Impulsivity is thus a central aspect of drug abuse.

Many studies mentioned above have found that impulsivity plays an important role in the development of substance use disorder (Brady, K. T., Myrick, H and McElroy, S, 1998; Waldeck, T. L & Miller, L .S, 1997).

Studies pertaining to subjective wellbeing and substance dependence/ drug addiction:

Based on data from a comparative survey of drinking in four Scandinavian countries (Finland, Iceland, Norway and Sweden), the experiencing of positive consequences of drinking was studied in relation to alcohol consumption, intoxication frequency and the experiencing of negative consequences of drinking by **Hauge, R & Irgens-Jensen, O (1990).** In all four countries a substantial portion "both of the men and of the women" reported having experienced various positive effects of drinking during the last 12 months. The positive consequences clearly correlated with yearly alcohol consumption and even more with intoxication frequency.

Lyons, R. A., Lo, S. V and Littlepage, B. N. C. (1994) conducted a study to assess the health status of ever smokers and never smokers. The authors used a structured questionnaire to survey 1200 adults on their health status. They found that only 53.2% of respondents had ever smoked. Ever-smokers reported a significantly worse health experience; they perceived themselves to be less physically active, experienced more bodily pain, had less vitality, and considered themselves to be less healthy.

Mugford, S. K. (1994) conducted a study in which recreational, non-dependent cocaine users (n=73) were contacted in three Australian cities during 1986-7 using snowball sampling. They completed questionnaires on a variety of topics, were then interviewed about drug use. Compared with the general population, respondents were disproportionately young, well educated, unmarried, metropolitan, and non religious.

Respondents showed no pattern of pathology on health and well being indicators. They scored low on institutional integration measures (family, party, church, etc) but high on informal aspects (friends, colleagues, etc). Respondents used a wide range of licit and illicit drugs and were initiated into cocaine use later than other drugs. Cocaine was principally consumed by 'snorting' and used as a 'party' drug. Users reported controlling their use, with few problems, but acknowledged the existence of dangers and usually knew someone who had experienced problems from use.

Bhojak et al (1997) in a study investigated emotional life and subjective well-being in drug addicts and non-addicts. A sample of 30 addicts and non-addicts were selected. They were administered the KSP, psychopathic deviate scale of MMPI. Quality of life scale and two scales of well-being. By and large, drug addicts appear to have disturbed emotional life, more psychopathic traits and poorer subjective well-being as compared to normal controls.

Gronbaek et al (1999) in a study examined the association between intake of different types of alcoholic beverages and self reported subjective health. The sample in the study included 4113 men and 7926 women aged 18 to 100 years. Results showed that of the 12 039 subjects, 8680 reported their health as optimal, and 3359 reported a suboptimal health. After controlling for the covariates, the relation between total alcohol intake and the proportion reporting suboptimal health was J shaped. Heavy drinkers of any of the three types of alcoholic beverages had a higher prevalence of suboptimal health than non-drinkers. However, only light (1–2 glasses of wine yesterday) and moderate (3–5) wine drinkers had significantly lower odds ratios for suboptimal health- 0.72 (95% confidence limits; 0.56 to 0.92) and 0.65 (0.49 to 0.87), respectively-when compared with non-wine drinkers. Moderate beer or spirits drinkers

did not differ significantly from non-drinkers of these beverages with regard to prevalence of suboptimal health. Consistently, beer preference drinkers had an odds ratio of 1.50 (1.25 to 1.80) for suboptimal health compared with wine preference drinkers. The authors concluded from the study that a light to moderate wine intake is related to good self perceived health, whereas this is not the case for beer and spirits.

The association of subjective, self-rated suboptimal (average or poor) health with the intake of beer, wine, and liquor and alcohol intoxication was examined in a general population sample in Finland in 1992 by **Poikolainen, K & Vartiainen, E (1999)**. The odds ratios were adjusted for several possible confounders with the use of logistic regression analysis. Compared with subjects who drank no wine, suboptimal health was less frequent among both men and women who imbibed 1-4 drinks of wine, and more common among men who consumed >10 drinks of wine or liquor. The authors concluded from the study that moderate alcohol intake is related to a self-perception of good health.

Sakurai et al (1999) conducted a study to investigate the association between alcohol consumption and subjective health. The study subjects were 2,020 Japanese male employees, who were free from serious disease conditions. The data on subjective health and alcohol consumption were obtained by means of self-reported questionnaire. The subjects who responded "poor health" in the answer to the question about the subjective health status were considered to be in ill-health. Ethanol intake per day was calculated by multiplying the frequency of drinking by the ethanol intake per drinking occasion and summing up for each alcoholic beverage. Age, smoking status, physical activity, and sleeping hours were treated as confounding factors. The results showed that, subjects who consumed 25-36 or 49 g ethanol or more per day had a significantly lower risk of self-rated ill-health compared with those who had never drunk, and a

significantly inverse trend was found independent of age, smoking status, physical activity, and sleeping hours.

Makela, K & Mustonen, H (2000) conducted a study to assess associations between drinking behaviour, gender and age with reported experiences related to drinking. Interviews were performed in 1992 with a representative sample of the Finnish population between 15 and 69 years of age (N = 3446). Logistic regression models showed that overall intake and frequency of drunkenness were independently associated with almost all reported positive and negative consequences of drinking. Women more commonly reported that drinking had helped them to sort out interpersonal problems at home or in the work-place, to feel more optimistic about life, and to express their feelings. Men more commonly reported that drinking had helped them to be funnier and wittier and to get closer to the opposite sex.

San Jose et al (2000) compared the health of drinkers with different drinking patterns and particularly drinkers with comparable average intakes and different drinking frequency. General population survey was conducted in Eindhoven, the Netherlands (N=18,973). Chronic conditions, perceived general health, and health complaints, were the outcome measure. Drinking categories 'were constructed by taking into account the frequency and amount of alcohol consumption (up to six glasses per sitting).Results showed that drinking 3-5 days per week/3-5 glasses per occasion and drinking 6-7 days/1-2 glasses were associated with lower likelihood for reporting health complaints and for perceiving one's health as less than good compared to those drinking 1-2 days/l-2 glasses (reference). Drinking 1-2 days/6 glasses was associated with being more likely to report chronic conditions, compared to the reference group. Those drinking 1-2 days/6 glasses were significantly more likely to report >3 health complaints than those drinking 6-7 days/I-2 glasses. Although no differences were observed for any of

the other comparison groups, at high levels of consumption (18-35 units/ week), occasional drinkers (3-5 days/6 glasses) seemed to have better health outcomes compared to their counterparts (6-7 days/3-5 glasses).

Boys, A., Marsden, **J & Strang**, J. (2001) in a study used functional perspective to examine the reasons young people cite for using psychoactive substances. The study sample comprised 364 young poly-drug users recruited using snowball-sampling methods. A majority of the participants had used at least one of these six drugs (alcohol, cannabis, amphetamines, ecstasy, LSD and cocaine) to fulfil 11 of 18 measured substance use functions. The most popular functions for use were using to: relax (96.7%), become intoxicated (96.4%), keep awake at night while socializing (95.9%), enhance an activity (88.5%) and alleviate depressed mood (86.8%). Substance use functions were found to differ by age and gender.

Zullig et al (2001) conducted a study to explore the relationship between perceived global life satisfaction and selected substance use behaviours among 5032 public high school students. The 1997 South Carolina Youth Risk Behaviour Survey substance abuse and life satisfaction variables were used. Results showed that cigarette smoking, chewing tobacco, marijuana, cocaine, regular alcohol use, binge drinking, injection drug, and steroid use were significantly ($p < .05$) associated with reduced life satisfaction for specific race/gender groups (white males; black males; white females; and black females). In addition, age (≤13 years) of first alcohol drink, first marijuana use, first cocaine use, and first cigarette smoked were also significantly ($p < .05$) associated with reduced life satisfaction.

Kim, J. Y .S & Fendrich, M (2002) examined gender differences in drug use, self-reported dependence, and perceived need for treatment in a national sample of juvenile arrestees and detainees between the ages of nine and 18 years. A sample of 4,644 boys

and girls, drawn from the Juvenile Drug Use Forecasting Survey from 1992 to 1995, was matched by sex within each of seven sites by survey year. In anonymous interviews, respondents were asked about their living arrangements, drug use, and need for drug treatment. Questions about drug use covered marijuana, cocaine, crack, heroin, crystal methamphetamine, amphetamines, and phencyclidine (PCP). Results showed that girls were significantly more likely than boys to report dependence but were no more likely to report a need for treatment. Among those who reported current, frequent drug use, girls were significantly less likely than boys to report a need for treatment. Girls who reported having more severe drug problems were more likely than their male counterparts to report dependence and a need for treatment.

Johnson, P. B & Richter, L (2002) in a study investigated the more immediate health effects of smoking and drinking among adolescents. In this secondary analyses of data from the 1997 National Household Survey on Drug Abuse were conducted to explore the relationship between subjective and objective health outcomes and the use of alcohol and tobacco among adolescents. The findings suggested that adolescents who smoke or drink actually report poorer health during adolescence than those who do not. In fact, adolescents who are frequent or heavy alcohol and tobacco users report poorer subjective overall health and a greater number of overnight hospital stays during the previous year than less frequent or intense users and than nonusers.

Gruber et al (2003) in a study examined the attributes of long-term heavy cannabis users. Using a case–control design, they obtained psychological and demographic measures on108 individuals, age 30–55, who had smoked cannabis a mean of 18 000 times and a minimum of 5000 times in their lives. They compared these heavy users to 72 age-matched control subjects who had smoked at least once, but no more than 50 times in their lives. They found no significant differences between the two groups on

reported levels of income and education in their families of origin. However, the heavy users themselves reported significantly lower educational attainment ($P<0.001$) and income ($P=0.003$) than the controls, even after adjustment for a large number of potentially confounding variables. When asked to rate the subjective effects of cannabis on their cognition, memory, career, social life, physical health and mental health, large majorities of heavy users (66–90%) reported a 'negative effect'. On several measures of quality of life, heavy users also reported significantly lower levels of satisfaction than controls.

Ellickson, P (2004) and her colleagues analyzed survey data from 5,833 California and Oregon middle school students. The participants completed the surveys six times over a 10-year period between the ages of 13 and 23. About 44 percent of them also responded to survey questions at age 29. A total of 3,185 participants identified themselves as marijuana users, while 2,648 reported they did not use the drug. The scientists categorized the marijuana users into four groups, based on the age at which they began using marijuana and their subsequent level of use. The researchers then compared responses from the marijuana users at age 29 with data from age-matched abstainers. They found that abstainers had an overall higher level of educational attainment, better health, greater life satisfaction, and a lower rate of other drug use. In contrast, those who had reported a relatively high level of marijuana use at age 13 fared significantly worse than all other groups on overall health and yearly earnings.

Millson et al (2004) conducted a study with the aim to gain an understanding of the self perceived health status of opiate users by comparing the health-related quality of life of Opiate users to chronic disease populations and to the general population. The SF-36 was administered to a non-random sample of 143 opiate users entering low-threshold methadone treatment. Two sample t-tests were performed to assess statistical

differences, at a 5% level of significance, between population scores across SF-36 dimensions. Results showed that Opiate users perceived both their mental and physical health as worse than the general population and individuals with minor and serious medical problems, but comparable to those with diagnosed psychiatric illnesses.

Murphy, J. G., Mc Devitt-Murphy, M. E & Barnett, N. P (2005) in a study examined the impact of alcohol use and alcohol-related problems on several domains of life satisfaction (LS) in a sample of 353 college students. Results showed that alcohol use was associated with lower general satisfaction and anticipated future satisfaction among women. Female abstainers reported higher general and anticipated future satisfaction than did female heavy drinkers. Female students' alcohol use was unrelated to their academic, family, dating, or social satisfaction. Drinking among men showed a positive, curvilinear relation to social satisfaction but was unrelated to other domains of LS. Alcohol-related problems were associated with decreased LS among both men and women.

A Cross-sectional Study of Alcohol Drinking and Health-related Quality of Life among Male Workers in Japan was conducted by **Saito et al (2005)**. They studied 4,521 male workers aged 25 yr and older with no history of cancer or cardiovascular disease, in 12 occupational groups in Japan. Data were from the High-risk and Population Strategy for Occupational Health Promotion Study (HIPOP-OHP). Drinking status was classified according to daily alcohol intake or frequency of drinking. They assessed the health-related quality of life (HRQOL) based on scores for five scales of the SF-36. It was found that overall; alcohol drinkers rated their health as good in comparison with non-drinkers.

Thalbourne, M.A. & Houran, J. (2005). Conducted a study in which two hundred psychology undergraduates completed the Oxford Happiness Questionnaire, an

expanded version of the Kumar–Pekala Drug-Use Scale, the Revised Transliminality Scale, and an assortment of single-item true/false statements thought to be relevant particularly to transliminality. Results showed that persons scoring high on the Revised Transliminality Scale engage in greater usage of illicit drugs, when comparing the drug use of highly transliminal participants who were happy against those who were unhappy: it was found that unhappy high transliminals reported greater use of illicit drugs than happy high transliminals.

Barnwell, S.S., Earleywine, M & Wilcox, R (2006) conducted a study to assess differences in motivation and subjective wellbeing, they used a large sample (N=487) and strict definitions of cannabis use (7 days/week) and abstinence (never). Standard statistical techniques showed no differences. Robust statistical methods controlling for heteroscedasticity, non-normality and extreme values found no differences in motivation but a small difference in subjective wellbeing. Medical users of cannabis reporting health problems tended to account for a significant portion of subjective wellbeing differences, suggesting that illness decreased wellbeing. All p-values were above $p = .05$. Thus, daily use of cannabis does not impair motivation. Its impact on subjective wellbeing is small and may actually reflect lower wellbeing due to medical symptoms rather than actual consumption of the plant.

Bogart, et al (2007) in a study investigated whether adolescent cigarette, alcohol, marijuana, and hard drug use predicts life satisfaction in young adulthood. Survey data were used from a longitudinal cohort of 2376 adolescents at ages 18 and 29, originally recruited from California and Oregon middle schools at age 13. Results of multivariate models indicated that use of cigarettes and hard drugs at age 18 was associated with lower life satisfaction at age 29, controlling for adolescent environmental, social, and behavioural factors related to lower life satisfaction, including poor mental health,

loneliness, poor social skills, and Black race. Adolescent alcohol and marijuana use were not significantly related to adult life satisfaction. Low income, poor health, and cigarette use during adulthood each independently mediated the relationship between adolescent cigarette use and adult life satisfaction, together explaining 84.58% of the effect. Adult hard drug use mediated the effect of adolescent hard drug use, explaining 54.79% of the effect. Results suggest that some forms of adolescent substance use limit socio-economic opportunities, and have a lasting effect on health, consequently decreasing life-satisfaction.

Falck et al (2007) in a cross-sectional study used data collected through face-to-face interviews to examine factors associated with perceived need for drug abuse treatment among not-in-treatment, adult, illicit stimulant drug users (n=710) in rural areas of Ohio, Kentucky, and Arkansas. More than one-quarter of the sample perceived a need for treatment. Results from a stepwise multiple regression analysis showed that white users, users with better physical and mental health status, and occasional users of methamphetamine were significantly less likely to see a need for treatment. Users with higher Addiction Severity Index composite scores for family/social problems or legal problems, and users with prior drug abuse treatment experience were significantly more likely to perceive a need for treatment.

Looby & Earleywine (2007) conducted a study to examine the impact of methamphetamine use on subjective well-being in an Internet survey. Over 6000 adults completed an Internet survey and reported on depression, apathy, satisfaction with life, happiness, and subjective well-being, in addition to measures of methamphetamine use. Methamphetamine use accounted for significant variance in depression, apathy, satisfaction with life, happiness, and subjective well-being even when alcohol and other drugs served as covariates. The study revealed that methamphetamine use may decrease

one's subjective well-being instead of enhancing it, which is contradictory to the perceptions of many users.

Lut, J. & Arokiadass, S. M. R. (2008) conducted a study to assess general life satisfaction amongst treatment-seeking people with substance dependence. The Satisfaction with Life Scale (SWLS) was administered to a sample of opioid-dependent people receiving substitute medication.105 subjects and 105 age-sex matched subjects in a comparison group completed the questionnaire. Results showed that the mean SWLS score was 7.12 (SD = 10.6; median = 6) for patients compared to 22.6 (SD = 6.8) in the comparison group. (Two sided $p < 0.0001$; Median difference = -13.5; Wilcoxon signed rank test.) .The study showed significantly higher rates of dissatisfaction with life among opioid dependent people in treatment when compared to members of the general population.

Xiao-dong, H (2008) Conducted a study to explore the difference of subjective well-being between heroin addicts and normal controls and the gender difference of these patients.60 heroin addicts and 60 normal controls were collected and their subjective well-being were evaluated with General Well-Being Schedule(GWB). Results showed that the total score and factors score of GWB in heroin addicts were significantly lower than those in normal controls (P0.05). The scores of positive emotion, negative emotion and general subjective well-being in female patients were significantly higher than those in male patients (P0.05).The authors concluded that Heroin addicts have lower subjective well-being levels than normal. The female patients have higher score than the males in both well-being and emotion.

Brajevic-Gizdic, et al (2009) conducted a study with the aim to compare investigators' perception of three most important etiological factors for drug addiction and drug abuse with the self-perception of heroin addicts and drug abusers who used cannabis products

and/or ecstasy. The study included 207 heroin addicts (mean age, 26.7 +/- 5.8 years) and 238 drug abusers (mean age, 19.3 +/- 1.9 years). Heroin addicts most often selected hedonism as the first (n = 97 [46.9%]) and the second (n = 87 [42.0%]) most important factor for starting using drugs, whereas family reasons were most often selected as the third most important factor (n = 58 [28.0%]). Cannabis and ecstasy abusers most frequently selected hedonism as the first (n = 149 [62.6%]), second (n = 128 [53.8%]), and third (n = 76 [31.9%]) most important factor for starting using drugs. According to investigators' perception, family reasons were the first most important etiologic factor in both heroin addicts (n = 93 [44.9%]) and drug abusers (n = 144 [60.5%]). Psychological reasons were significantly more often selected as the first most important factor for heroin addiction than for cannabis or ecstasy abuse by both participants and investigators ($P < 0.001$ for both). Also, according to investigators' perception, the lack of knowledge was significantly more frequent as the second most important factor in heroin addicts than in cannabis or ecstasy abusers (55 [26.6%] vs 19 [8.0%], respectively; $P < 0.001$). Drug addicts and drug abusers considered hedonism the most important reason for starting drug use, whereas investigators considered family reasons to be the primary reason.

A literature search of the PubMed and PsycINFO databases for articles published from 1985 till 2008 was carried out to review studies that examined self-reported reasons for cannabis use and self-reported effects of cannabis use in patients with psychotic disorders by **Dekker, N., Linszen, D.H & Haan, L. D. (2009)**. Results showed that only a few studies were found that specifically assessed reasons for and effects of cannabis use. Despite the heterogeneity in the study samples and methodology, they found that patients commonly reported that their reasons for cannabis use were enhancement of positive affect, relief of dysphoria and social enhancement. Fewer

patients reported reasons related to relief of psychotic symptoms or relief of side effects of medication. Frequently reported positive effects of cannabis were positive changes in affect and relaxation. A large proportion of patients reported that cannabis negatively affected positive symptoms.

Molnar, et al (2009) conducted a longitudinal study of alcohol use and subjective well-being in an undergraduate sample. In their study at the end of their first term at university (Time 1), 627 students (15% of all first-year students) completed a paper-and-pencil questionnaire in small group settings. Near the end of their third year (Time 2), 467 of the Time 1 respondents (75% follow-up rate) completed a subsequent survey on-line. The average (SD) longitudinal respondent was 18.83 (0.86) years old at Time 1, and 360 participants were female. In cross-sectional and longitudinal structural equation models, adverse alcohol-related consequences predicted lower subjective well-being (lower life satisfaction, less frequent positive affect, more frequent negative affect). Independent of this effect, greater alcohol use (greater quantity/frequency, more frequent intoxication, heavy episodic drinking) predicted higher subjective well-being, both concurrently and prospectively. The authors concluded that among these university students, alcohol use was uniquely associated with a more positive sense of well-being.

Okoza et al (2009) conducted a study in which they examined the types of drugs students in Ambrose Alli University abuse. The participants were 414 university students drawn from four faculties of Ambrose Alli University. The instrument used in this study was a modification of the student's drug use questionnaire published by the World Health Organisation. The analyses yielded the following results: students in the University abuse drugs such as alcohol, kolanut, tobacco, marijuana, librium, valium, dexamphetamine, mandrax, Chinese capsule and cocaine; students use drugs mostly

once a week; students use drugs to feel good, to keep awake, to sleep, or to enhance sex.

Dietze et al (2010) examined the self-reported personal wellbeing in a cross-sectional survey of 881 Australian injecting drug users (IDU) using a standardized instrument and determine the key correlates of variations in self-reported personal wellbeing. The results showed that injecting drug users scored significantly lower than the general Australian population on the Personal Wellbeing Index (PWI) and all subscales. Lower PWI scores were associated with a range of socio-demographic, drug use and other health and social characteristics. Across all PWI subscales, lower personal wellbeing scores were associated with unemployment, past 6-month mental health problems and more frequent injecting (all $P < 0.05$).

A cross-sectional survey using self-completed questionnaires was conducted among 3,641 school children aged 11-14 years in 15 high schools in North West England by **Phillips-Howard et al (2010)**. Bivariate and multivariate analyses were conducted to examine the relationship between wellbeing and alcohol use, and wellbeing and sexual activity. Results showed that a third of 11 year olds, rising to two-thirds of 14 year olds, had drunk alcohol. Children with positive school wellbeing had lower odds of ever drinking alcohol, drinking often, engaging in any sexual activity, and of having sex. General wellbeing had a smaller effect. The strength of the association between alcohol use and the prevalence of sexual activity in 13-14 year olds, increased incrementally with the higher frequency of alcohol use. Children drinking once a week or more had 12-fold higher odds of any sexual activity, and 10-fold higher odds of having sex. Rare and occasional drinkers had a significantly higher odds compared with non-drinkers.

Molinero et al (2011) conducted a study with aim to analyze substance abuse and health self perception in children and adolescents from the province of Cádiz (Spain). Participants were 738 students, 50.9 boys and 49.1% girls, from elementary school to high school (1st to 12^{th} grade, mean age 12.2. years), who responded a Spanish adaptation of the Health Behavior in School-aged Children Inventory. Results showed that no difference was observed in percentage of boys and girls reporting to smoke or drink alcohol. Smoking and drinking habits increased with age, being higher in 11th and 12th grade students. Significant differences were observed among the percentage of smokers and non smokers recognizing to have parents, older brothers or friends who smoke. Rates of drug abuse were generally low, being cannabis the most frequently consumed illicit drug. Results also showed that most respondents had a perception of excellent or good health, with no significant gender differences.

Schwartz, S. J., et al (2011) in a study investigated the associations of well-being with engagement in illicit drug use, sexual risk taking, and impaired driving in a sample of 9,515 students from 30 U.S. colleges and universities. Participants completed measures of subjective wellbeing, psychological well-being, and eudaimonic well-being, and indicated how many times in the past 30 days that they had engaged in several illicit drug uses, sexual risk, and impaired driving behaviours. Findings indicated that well-being was negatively associated with incidence of illicit drug use and some sexual risk behaviours, but not with incidence of drunk-drugged driving or riding with an impaired driver. Associations of well-being were strongest for more dangerous types of drug use and sexual behaviour and for riding with an impaired driver.

Farmer, S & Hanratty, B (2012) conducted a study with the aim to explore the associations between subjective wellbeing, living in a low-income household and substance use by schoolchildren. Data were analysed from a nationally representative

cross-sectional survey of school children in England (Tellus4, 2009). Participants were 3903 children aged 10 and 15 years from two local authorities in the North West. Multiple logistic regression was conducted with the main outcome measure, a composite indicator of self-reported regular substance use. Results showed that more boys than girls had experimented with drugs or alcohol, but in the fourth year of secondary education, girls were significantly more likely than boys to have been drunk ($P \leq 0.001$). In the multivariate analysis, older age was the most important factor associated with the consumption of substances. Living in a low-income household was associated with substance use, adjusting for age and subjective wellbeing (adj. OR = 1.78, 95% CI = 1.36-2.34). Respondents who reported being happy (adj. OR = 0.67, 95% CI = 0.52-0.86) or able to communicate with their family (adj. OR = 0.51, 95% CI= 0.39-0.65), were less likely to be regular users.

Research on the relationship between indicators of subjective wellbeing and substance use has produced conflicting results. On one hand there are considerable studies showing that drug addicts tend to experience a feeling of subjective wellbeing and relaxation after consuming the drugs (Fischman and Foltin 1991; Jasinski 1991; Kouri E., Pope H.G., Yurgelun-todd D ,Gruber S. 1995) but on other hand there are also good no of studies showing that drug addicts tend to have poor subjective well being (Looby & Earleywine, 2007, Bhojak ,1997) and also some studies indicate that individuals with high subjective wellbeing are less likely to consume drugs (Farmer & Hanratty, 2012; Phillips-Howard, 2010).

CHAPTER – 3

Methodology

Research is a systematized effort to find out the solution of the problem. These efforts require certain techniques to be followed properly. Research methodology may be defined as a way to systematically solve the research problem. Methodology may also be conceived as the logic of scientific investigation, it ensures the scientificity and systematization of a study. It describes the exact steps that had been undertaken to address the hypotheses of the study or research questions along with the logic behind them. The goal of this chapter is to provide a clear and complete description of the specific steps that were followed.

Sample

A sample is a small proportion of the population selected for observation and analysis. Sampling is concerned with the selection of a subset of individuals from within a population to estimate characteristics of the whole population. Researchers rarely survey the entire population because the cost of such an effort is too high. The three main advantages of sampling are that the cost is lower, data collection is faster, and since the data set is smaller it is possible to ensure homogeneity and to improve the accuracy and quality of the data.

Drug use in Kashmir is not an acceptable behavior, and thus the sample is not easily accessible. Though there are some studies showing a large no of people involved in drug use (Margoob, 2008), but such a behavior is not displayed openly, and people do not acknowledge drug use openly, making it very difficult to get a good estimate of the no. of people involved in such a menace and the nature of such population.

For the present study 150 drug addict/substance dependent males were taken from District Srinagar. These 150 subjects consist of two groups. One group of subjects (N=50) were taken from different drug de-addiction centres viz. Drug De-addiction Centre Police Control Room Srinagar & Raahat Rehabilitation Centre Srinagar. Another group of drug addicts (N=100), include those drug addicts who were taken from different areas of District Srinagar. This group of drug addicts/substance dependents comprises of those who have not joined the de-addiction centres. Below table shows a detailed description of the sample group.

Table 3.1

Description of sample Group

Demographic variable	Groups	Frequency	Percentage	Total
Age (in years)	16 to 20	54	36 %	150
	21 to 25	52	34.66 %	
	26 to 30	30	20 %	
	31 to 35	14	9.33 %	
Occupation	Government employee	20	13.3 %	150
	Private Employee	19	12.7 %	
	Business	43	28.7 %	
	Student	48	32.0 %	
	Other	20	13.3 %	
Education	5^{th} to 10^{th}	60	40.0 %	150
	11^{th} to Graduation	88	58.7 %	
	Above graduation	2	1.3%	
Residential area	Rural	50	33.3 %	150
	Urban	100	66.7 %	

Table 3.1 Continued

Marital Status	Married	30	20.0 %	150
	Unmarried	120	80.0 %	
Family	Nuclear family	79	52.7 %	150
	Joint family	71	47.3 %	
Father's occupation	Government employee	37	24.7 %	150
	Private employee	11	7.3 %	
	Business	52	34.7 %	
	Farmer	5	3.3%	
	Other	45	30.0 %	
Father's Education	Illiterate	57	38.0 %	150
	$\leq 10^{th}$	56	37.3 %	
	$11^{th}$to Graduation	33	22.0 %	
	Above Graduation	4	2.7 %	
Mother's Occupation	Government employee	13	8.7 %	150
	Housewife	126	84.0 %	
	Other	11	7.3 %	
Mother's Education	Illiterate	101	67.3 %	150
	$\leq 10^{th}$	31	20.7 %	
	11^{th} to Graduation	17	11.3 %	
	Above graduation	1	0.7 %	

Tools Used:

Tools or measuring instruments are an important part of research and clinical practice in the social sciences. Different tools are used to collect different types of data. The use of a particular research tool depends upon the type of research proposal. The researcher may use one or more of the tools in combination for this purpose. Such tools or methods of data collection include tests, interviews, questionnaire, observation, scales, Checklists etc. Keeping in view the nature of the present study, the following tools have been administered for gathering information/responses from the sample group.

I. **Alcohol, Smoking and Substance Involvement Screening Test- V 3.0 (ASSIST, 2010):** Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) is a brief screening questionnaire to find out about people's use of psychoactive substances involvement and dependence. It was developed by the World Health Organization (WHO) and an international team of substance use researchers as a simple method of screening for hazardous, harmful and dependent use of alcohol, tobacco and other psychoactive substances. The questionnaire covers: tobacco, alcohol, cannabis, cocaine, amphetamine type stimulants, sedatives, hallucinogens, inhalants, opioids, and other drugs.

The ASSIST contains total 8 questions, each question on the ASSIST has a set of responses to choose from, and each response has a numerical score. The interviewer simply circles the numerical score that corresponds to the person's response for each question. At the end of the interview these scores are added together to produce a substance involvement score and dependence score for each substance.

Reliability and Validity of ASSIST- 2010

The reliability and validating the ASSIST scale is marked by two phases Phase I and Phase II. Phase I of the WHO ASSIST project was conducted in 1997 and 1998. Test - retest reliability of the items on the ASSIST was measured in the Phase I study. Test - retest Kappa coefficients of agreement (K-values) were calculated for each question stem and drug category. K-levels ranged from 0.58 to 0.90 for question stems and from 0.61 (sedatives) to 0.78 (opioids) for substance categories. K-levels greater than 0.4 are considered moderate, while levels above 0.6 are considered substantial. Test - retest reliability of the ASSIST scale is, therefore, substantial. The validity of the revised ASSIST was assessed in the Phase II study which involved 1,047 participants. The results of the Phase II study suggest that the ASSIST provides a valid measure of substance related risk both for individual substances and total substance involvement. Scores on the ASSIST were significantly correlated with other measures of problematic substance use including the MINI-Plus ($r=0.76$, $p<0.01$) and the Addiction Severity Index ($r=0.84$, $p<0.01$). Discriminative analysis found that the ASSIST could distinguish between three main groups of people:

- Those who were low risk substance users or abstainers,
- Those whose patterns of substance use put them at risk of problems, or had already developed problems related to their substance use, or were at risk of developing dependence.
- Those who were dependent on a substance.

The study was conducted with both males and females and in seven different culture to ensure that the ASSIST was equally appropriate for both males and females

and is valid for cross-cultural use. The strong overall results in the reliability and validity studies suggest that the ASSIST is a valid screening test for international use.

II. Modified version of Eysenck's Maudsley's Personality Inventory (MPI 1959):

MPI has been modified by S.S.Jalota and S.D.Kapoor. MPI is a brief but standard as well as easily administered inventory which is designed for assessing two dimensions of personality viz Neuroticism and Extroversion. It can be used for both normal and abnormal adults, and also for adolescents. It consists of 48 items, and the respondent is asked to choose one among the three options (yes, undecided, no) for each item. The 48 items of the test booklet are distributed among two personality dimensions (Extraversion and neuroticism).

Reliability and Validity:

The reliability and validity has been ascertained by the authors. Srivastava (1970), and Kapoor (1973) have established the reliability for the extraversion and neuroticism as 0.71 and 0.42 respectively.

III. Barratt Impulsiveness Scale, Version 11 (BIS-11):

The BIS, currently in its11th revision (Patton, Stanford, & Barratt, 1995), is a 30 item self-report instrument designed to assess general impulsiveness taking into account the multi-factorial nature of the construct. The scale required the respondents to choose between 'Rarely/Never', 'Occasionally', 'Often' and 'Almost Always'. Items .The items are scored on a four point scale (Rarely/Never [1], occasionally [2], Often [3], Almost Always/Always [4]), but there are certain items were the reverse scoring is done. The scores are summed up to yield a total score for impulsiveness. The total scores range from 30 to 120, with higher scores indicating more impulsiveness. BIS-11

total scores between 52 and 71 should be thought of as within normal limits for impulsiveness. A total score of 72 or above should be used to classify an individual as highly impulsive. Scores lower than 52 usually are representative of an individual that is either extremely over-controlled (Knyazev & Slobodskaya, 2006) or who has not honestly completed the questionnaire (Helfritz et al., 2006).

Validity and Reliability of BIS-11.

Patton et al. (1995) report internal consistency coefficients for the BIS-11 total score that range from 0.79 to 0.83 for separate populations of under-graduates, substance-abuse patients, general psychiatric patients, and prison inmates.

Stanford et al. (2009) have ascertained the test–retest reliability of BIS-11 (Spearman's rho= 0.83).

IV. The Subjective Wellbeing Inventory – SUBI (Nagpal and sell, 1992):

The subjective well-being inventory has been developed by Nagpal, R. and Sell, H. (1992) and is designed to measure feelings of well being or ill-being as experienced by an individual or a group of individuals in various day-to-day life concerns. The SWBI consists of 40 items. The inventory measures 11 factorial dimensions which are as:

The 40 items represent the following 11 factors or dimensions of well-being or quality of life.

1. **Subjective Well-Being** - Positive Affect :This consists of feelings of well-being arising out of an overall perception of life as functioning smoothly and joyfully.
2. **Expectation** - Achievement Congruence :This refers to the feelings of well-being generated by achieving what one aspires or expects.

3. **Confidence in Coping**: This means the subjective perception of one's coping potential.
4. **Transcendence**: It refers to the feelings of subjective well- being derived from spiritual life and the sharing of values.
5. **Family Group Support**: It includes the positive feelings derived from the perception of the larger family as supportive, cohesive and emotionally attached.
6. **Social Support**: It measures the perception of the social environment as supportive in general, and in times of potential or existing crisis.
7. **Primary Group Concern**: It includes the happiness or worry about the relationship with spouse and children.
8. **Inadequate Mental Mastery**: This is measured by the extent of feelings of reduced well-being from a sense of insufficient control or inability to deal efficiently with life phenomena that are capable of disturbing the mental equilibrium.
9. **Perceived ill Health**: It measures the worry over or suffering from physical complaints.
10. **Deficiency in Social Contacts**: It is assessed by measuring worries over missing friends or being disliked, or over an inadequate social network.
11. **General Well-Being Negative Affect**: This refers to the negative feelings about, and outlook upon, life as a whole.

The SWBI can be scored by attributing the values 3, 2, 1, to response categories of positive items and 1, 2, 3, to response categories of negative items. The total scores can be interpreted summarily in the light of three broad score ranges: 40-60, 61-80, and 81- 120 to have an overall picture of the well-being status.

Reliability and Validity of SWBI

The SWBI has a good test - retest reliability and stability over time of the feelings measured. Studies have also established the usefulness of this instrument as a clinical tool. The result of the SWBI provides only a profile of well-being, i.e., a set of scores, each representing use of the identified factors. The subjective wellbeing scale has high inter-rater reliability, inter-scores reliability, and test-retest reliability. The scale has been found to be highly significant and satisfactory in validity.

Self Designed Semi-Structure Interview Schedule: A semi-structured interview schedule was prepared to collect the responses of the subjects pertaining to their reasons for joining de-addiction centre or for not joining de-addiction centres and continuing using drugs/ substances.

Demographic Data Sheet: The researcher constructed a demographic data sheet keeping in view the sample of the study on variables: Age, Gender, Educational Qualification, Occupation, Monthly Income, Marital Status, Residential Status, Type of Family, Father's Occupation, Father's Education, Mother's Occupation, Mother's Education, No. of Brothers , No. of Sisters, Position in the Family.

All the above mentioned tools were translated into Urdu language with the help of experts after taking all the precautionary measures into consideration necessary for translation of tools.

Procedure of Data Collection:

In the present study purposive sampling method was used. The subjects were contacted personally at Drug De-addiction Centre Police Control Room Srinagar, Raahat Rehabilitation Centre and at different localities and colleges in Srinagar. They participated voluntarily in the study and gave written consent before participating. They were requested to be open and sincere in their responses. It was assured to the

respondents that their responses and other information will be kept strictly confidential and will be used for research purpose only. They were guided to follow the instructions given in the scales wherever needed.

Analysis

The information/responses collected from the respondents were subjected to various statistical treatments. Quantitative data was analysed by using Statistical Package for Social Science version 16.0 (SPSS 16.0). Statistical techniques used for analysing data were: frequencies, percentages, correlation, Regression analysis and t-test. Apart from quantitative data analysis techniques, qualitative data analysis technique like content analysis was also used to analyse the self reported responses of the drug addicts to open ended question. Frequencies and percentages were calculated to describe the types of drug use/Substance use and the level of substance involvement and dependence of the sample group and also to show the percentage and frequency distribution of sample group on personality dimensions of extraversion and neuroticism, subjective well being and it's dimension and impulsivity (and it's sub factors). Pearson product correlation was used to study correlation of drug addiction/substance dependence with extraversion and neuroticism dimensions of personality, impulsiveness and subjective wellbeing. Regression analysis was used to predict significant psychological factors of drug addiction. t-test was used to study the difference between drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres on extraversion and neuroticism dimensions of personality, impulsiveness , and subjective wellbeing.

CHAPTER – 4

Results and Discussion

Results & their interpretation is the core chapter of any research. Its purpose is to present the responses/data collected from the sample group in a systematic manner so that those responses can be understood in an objective and collective manner. For the present study results have been obtained by using various statistical procedures with the help of SPSS computer programme. Besides, qualitative analysis was used by applying content analysis procedure. The results obtained are presented below.

Table 4.1

Showing frequency and percentage of sample group with respect to substance involvement and dependence for different substances.

Levels of substance involvement and dependence						
Type of drugs/ substances	Low substance involvement [a]		Average substance involvement/ harmful substance use [b]		High substance involvement and dependence [c]	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Tobacco products	6	4%	27	18 %	117	78 %
Alcohol beverages	23	15.3 %	14	9.3 %	113	75.3 %
Cannabis	56	37.3 %	7	4.7 %	87	58.0 %
Cocaine	149	99.3 %	1	0.7 %	0	0%

Amphetamine Type stimulants	148	98.66 %	2	1.34 %	0	0%
Inhalants	132	88 %	9	6 %	9	6 %
Sedatives or sleeping pills	85	56.7 %	15	10 %	50	33.3 %
Hallucinogens	149	99.3%	1	0.7 %	0	0%
Opioids	125	83.3%	12	8 %	13	8.7%

Note. [a] Individuals in the "Low substance involvement" category are those possessing substance involvement score ranging from 0-10 (for Alcohol) and 0-3 (for All Other Substances), and were low risk substance users or abstainers.

[b] Individuals in the "Average substance involvement" category are those possessing substance involvement score ranging from 11-26 (for Alcohol) and 4-26 (for All Other Substances) and are those whose patterns of substance use put them at risk of problems, or had already developed problems related to their substance use, or were at risk of developing dependence.

[c] Individuals in the "high substance involvement" category are those having substance involvement score of 27 or above and are considered as substance dependent (for the particular substance).(ASSIST,2010).

Table 4.1 reveals that 4% of the sample show low substance involvement of tobacco products, 18% show average level of substance involvement and 78% show high substance involvement(dependence) for tobacco products, i.e. 78% of the sample group show tobacco dependence.

The table shows that 15.3% of the sample group show low substance involvement score for alcohol beverages, 9.3% show average substance involvement and 75.3% show high substance involvement (dependence) score for alcohol beverages i.e, 75.3% of the sample group show alcohol dependence.

Regarding cannabis 37.3% show low substance involvement score, 4.7%show average substance involvement score and 58% show high substance involvement (dependence) score for cannabis, i.e, 58 % of the sample group show cannabis dependence.

Similarly 99.3 % show low substance involvement score for cocaine and 0.7%show average substance involvement score for cocaine, no individual in the sample was found having high substance involvement (dependence) score for cocaine i.e. no individual in the sample group was found cocaine dependent.

The table further reveals that 98.66% of the sample show low substance involvement score for amphetamine type stimulants and 34 % show average substance involvement score for amphetamine type stimulants, but no individual in the sample was found having high substance involvement (dependence) score for amphetamine type stimulants i.e, no individual in the sample group was found amphetamine type stimulants dependent.

Regarding inhalants 88% showed low substance involvement score, 6% fall in average substance involvement category and 6 % show high substance involvement (dependence) score for inhalants i'e 6% of the sample group were found inhalant dependent.

Regarding sedatives or sleeping pills 56% of the sample fall in low substance involvement score, 10 % show average substance involvement score and 33.3% fall in high substance involvement (dependence) score category i.e, 33.3% of the sample group were found inhalant dependent.

The table also depicts that 99.3% show low substance involvement score for hallucinogens, 0.7% show average substance involvement score and no individual in the sample was found having high substance involvement (dependence) score for hallucinogens i.e, no individual in the sample group was found hallucinogen dependent.

Regarding opioids 83.3% of the sample group fall in low substance involvement score, 8% fall in average substance involvement score and 8.7 % fall in high substance involvement (dependence) score category i.e. 8.7% of the sample group were found opioid dependent. All these results have been presented diagramically in figure 4.1.

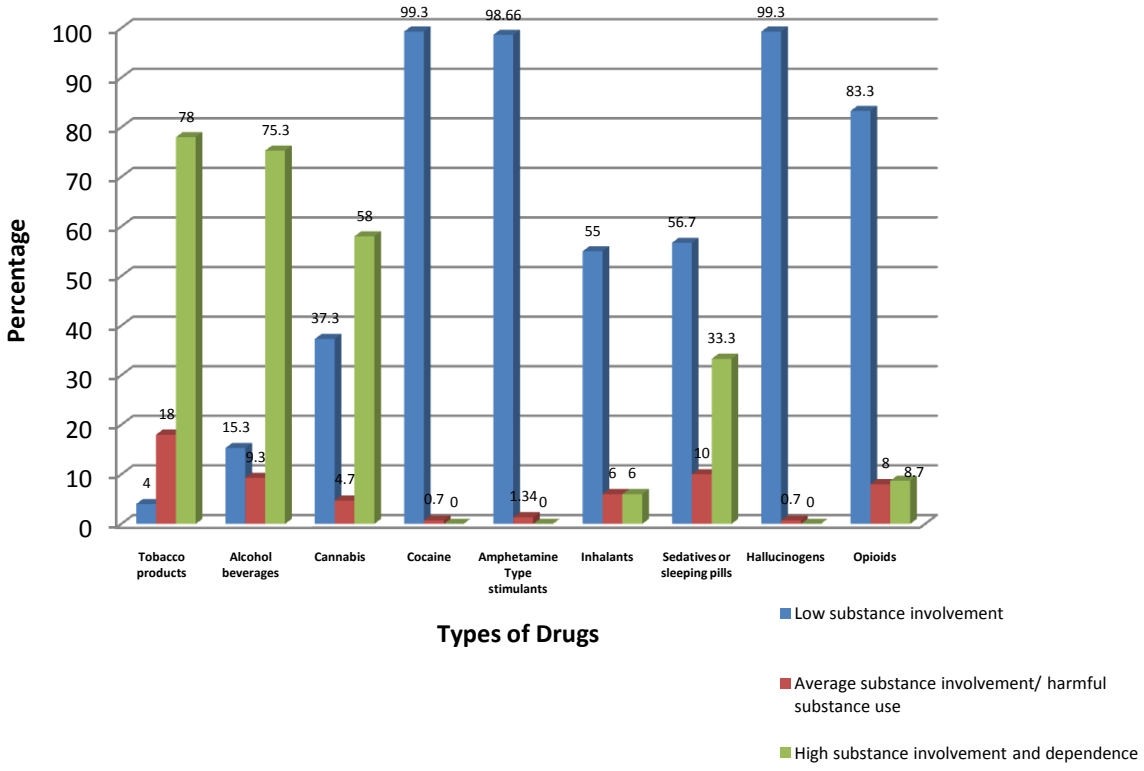

Figure 4.1 Percentage of sample group with respect to substance involvement and dependence for different substances

Table 4.2

Showing Frequency and percentage of sample group in various levels with respect to the Extraversion and Neuroticism dimensions of personality

Personality dimension	Drug addicts /substance dependents									
	Very Low		Low		Average		High		Very High	
	Frequency	%age	Frequency	%age	Frequency	%age	Frequency	%age	Frequency	%age
Extraversion	0	0 %	11	7.3 %	105	70.0%	29	19.3 %	5	3.3%
Neuroticism	0	0%	0	0%	64	42.7%	76	50.7 %	10	6.7 %

Table 4.2 reveals that no drug addict / substance dependent falls in very low category on extraversion dimension of personality, where as 7.3% of the drug addicts /substance dependents are low, 70.0% are average 19.3%are high and 3.3 % are high on extraversion trait of personality.

The table further reveals that no drug addict / substance dependent shows very low neuroticism trait of personality ,similarly no drug addict / substance dependent falls in low category on neuroticism trait of personality, where as 42.7 % falls in average, 50.7 % falls in high and 6.7% falls in very high category on neuroticism trait of personality. These results have been presented diagramically in Fig. 4.2

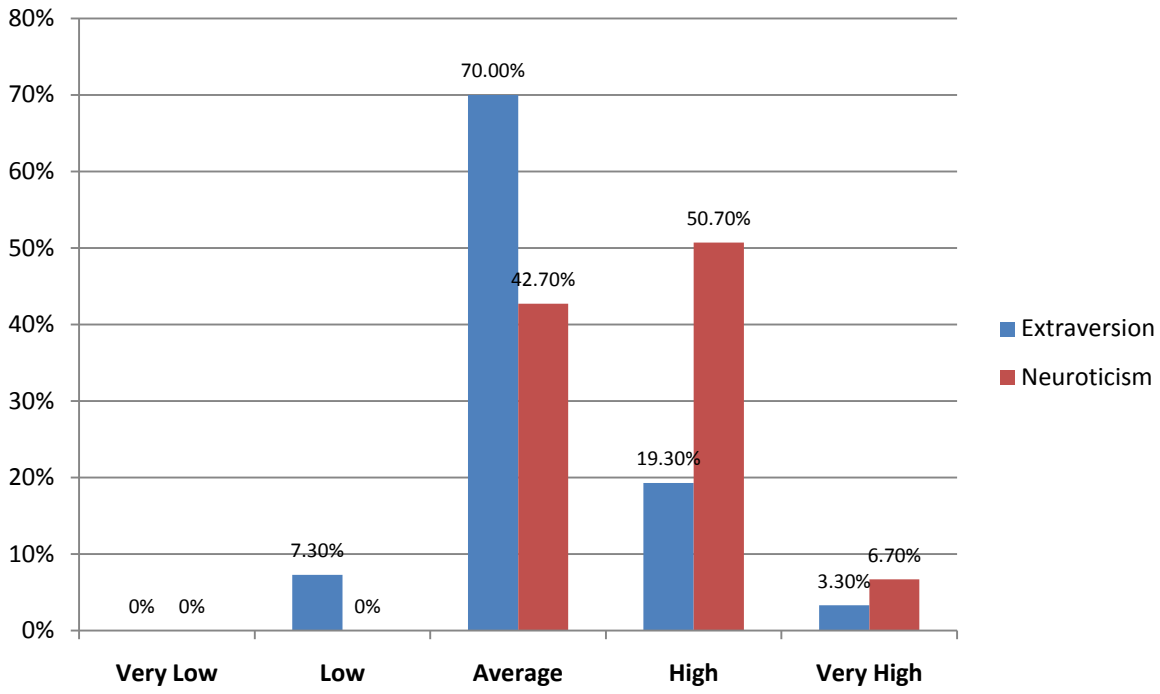

Figure 4.2 Percentage of sample group in various levels with respect to the Extraversion and Neuroticism dimensions of personality

Table 4.3

Showing frequency and percentage of sample group in three levels with respect to impulsiveness

Levels of impulsiveness among drug addicts/substance dependents						
	Low		Average		High	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Impulsiveness	0	0%	31	20.7%	119	79.3 %

Table 4.3 reveals that no drug addict was found low on impulsiveness, but 20.7 % show average level of impulsiveness and 79.3% of drug addicts were found high on impulsiveness

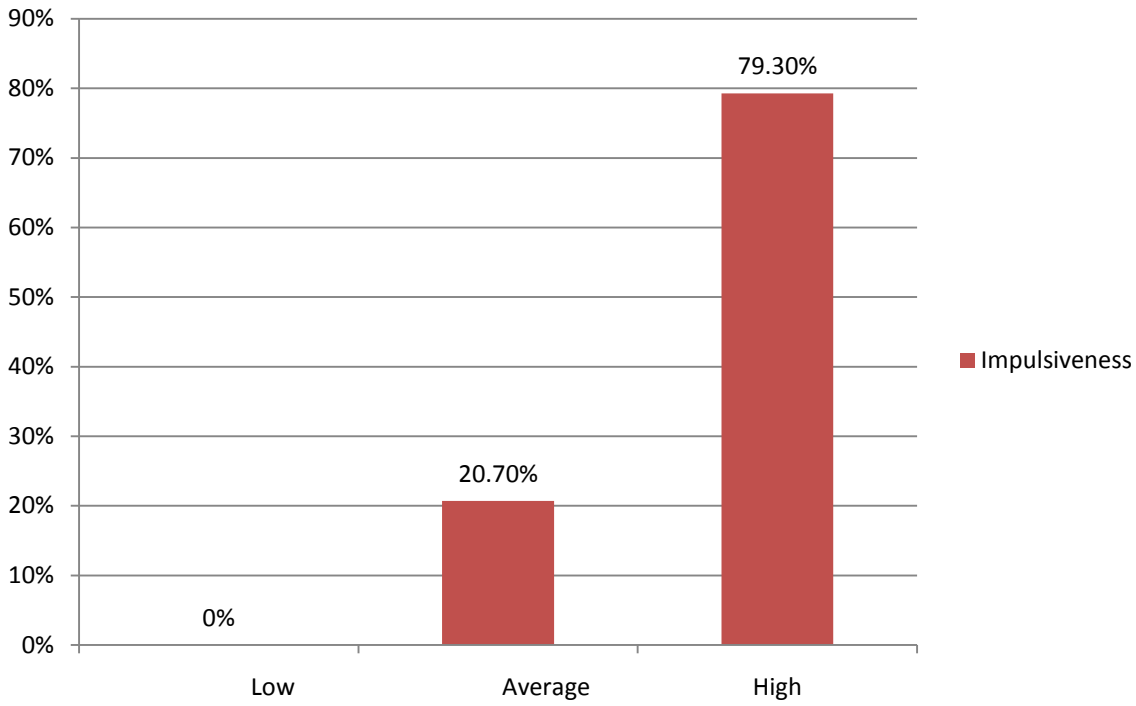

Figure 4.3. Percentage of sample group in three levels with respect to impulsiveness

Table 4.4

Showing frequency and percentage of sample group in three levels with respect to subjective wellbeing (Dimensions and composite score)

Subjective wellbeing factors	Levels of subjective wellbeing among drug addicts /substance dependents					
	Low		Average		High	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
General wellbeing positive affect	78	52.0%	26	17.3%	46	30.7%
Expectation-Achievement Congruence	91	60.7%	31	20.7%	28	18.7%
Confidence in coping	25	16.7%	28	18.7%	97	64.7%
Transcendence	115	76.7%	15	10.0%	20	13.3%
Family group support	3	2.0%	5	3.3%	142	94.7%
Social support	58	38.7%	31	20.7%	61	40.7%

Primary group concern	133	88.7%	2	1.3%	15	10.0%
Inadequate mental mastery	64	42.7%	14	9.3%	72	48.0%
Perceived Ill-health	36	24%	15	10.0%	99	66.0%
Deficiency in social contacts	66	44%	36	24%	48	32.0%
General wellbeing Negative affect	51	34.0 %	26	17.3 %	73	48.7 %
Overall subjective wellbeing	9	6.0 %	84	56.0 %	57	38.0 %

Table 4.4 reveals that 52% of drug addicts/substance dependents are low in general wellbeing positive affect, 17.3% are average and 30.7% are high in general wellbeing positive affect dimension of subjective wellbeing. The table shows that 60.7% of the drug addicts/substance dependents are low, 20.7% are average and 18.7 % ale high in Expectation Achievement congruence dimension of subjective wellbeing. 16.7 % of the drug addicts/substance dependents show low, 18.7 % show average and 64.7% show high confidence in coping (dimension of subjective wellbeing).

On transcendence dimension of subjective wellbeing the table reveals that 76.7% of drug addicts/ substance dependents are in low category, 10 % are in average category and 13.3 % are in high category. 2 % of the drug addicts/ substance dependents show low, 3.3 % show average and 94.7% show high Family group support (dimension of subjective wellbeing).Referring to social support dimension of subjective wellbeing 38.7% of the drug addicts/ substance dependents score low, 20.7% average and 40.7% score high on this dimension of subjective wellbeing.

The table depicts that 88.7% of the drug addicts/ substance dependents are low, 1.3% are average and 10% are high in primary group concern dimension of subjective wellbeing. On Inadequate mental mastery dimension of subjective wellbeing the table reveals that 42.7% of drug addicts/ substance dependents fall in low category, 9.3 % fall in average category and 48% fall in high category. On perceived ill-health dimension of subjective wellbeing 24% of drug addicts/ substance dependents fall in low, 10% fall in average and 66% fall in high level with respect to this dimension. 44% of the drug addicts/ substance dependents show low, 24% show average and 32% show high on deficiency in social contacts dimension of subjective wellbeing.

The table further reveals that 34% of the drug addicts/substance dependents showed low, 17.3% average and 48.7% showed high on general wellbeing negative affect dimension of subjective wellbeing.

On overall subjective wellbeing 6% of the drug addicts/substance dependents scored low, 56% scored average and 38% show high.

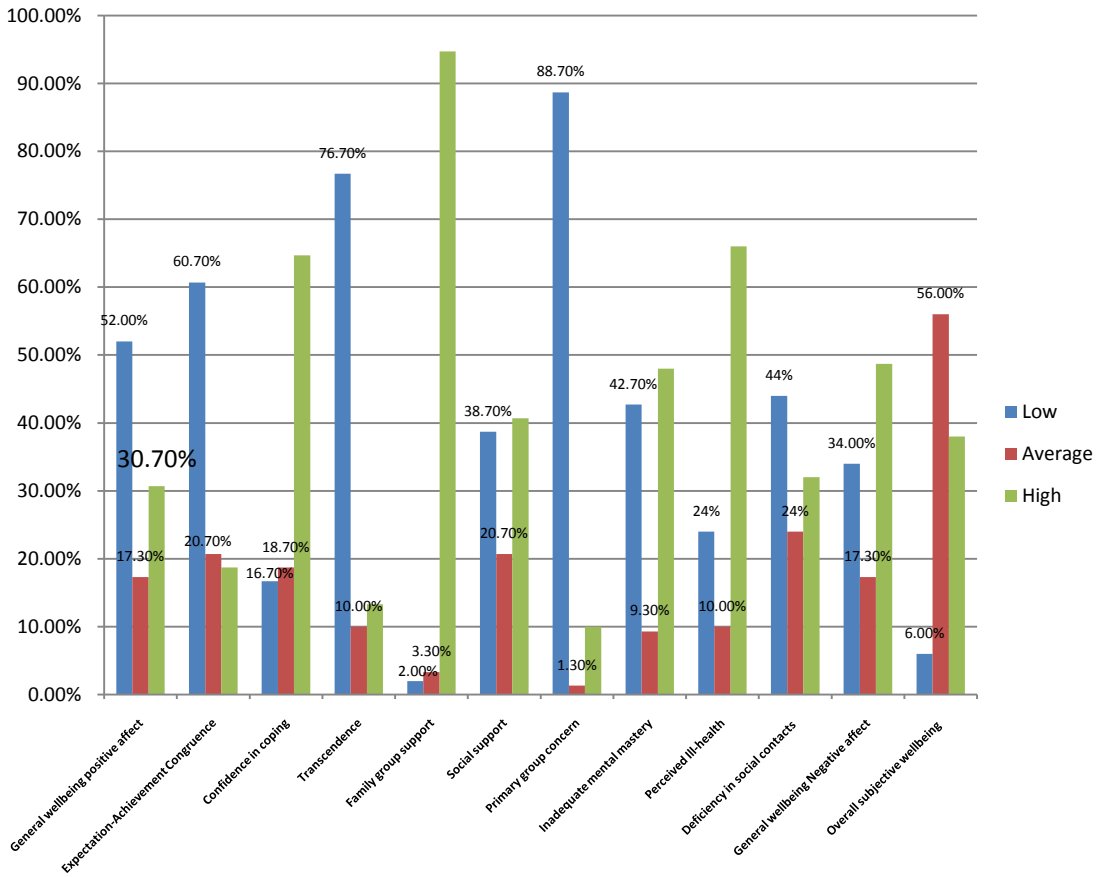

Figure 4.4 Percentage of sample group in three levels with respect to subjective wellbeing (Dimensions and composite score)

Table 4.5

Showing Pearson's Correlation Coefficient Values between drug addiction/ substance dependence and personality traits (Extraversion and Neuroticism) of sample group

	Personality dimensions	
	Extraversion	Neuroticism
Drug addiction / Substance dependence	$r = -0.056^{NS}$ N=150	$r = 0.269^{**}$ N=150

NS = insignificant, **.$P \leq 0.01$ Level of significance

Table 4.5 presents an overview of the correlation coefficient values of the Personality traits (Extraversion and Neuroticism) and drug addiction/substance dependence among sample group. It is evident from the table that there is significant positive correlation between drug addiction / substance dependence and neuroticism beyond $P \leq 0.01$ level of significance. However no significant correlation was found between substance dependence/drug addiction and extraversion.

Thus our hypotheses H_{O1} which states that, "*Drug addiction/substance dependence has no significant relationship with extraversion."* is accepted, and Ho_2 which states that, "*Drug addiction/substance dependence has no significant relationship with neuroticism"* stands rejected.

Table 4.6

Showing Pearson's Correlation Coefficient Values between drug addiction/ substance dependence and impulsiveness (both factors wise and overall) among sample group

	Factors of Impulsiveness			Overall/total Impulsiveness
Drug addiction / substance dependence	Attention impulsiveness	Motor impulsiveness	Non-planning impulsiveness	
	$r = 0.230^{**}$	$r = 0.068^{NS}$	$r = 0.183^{*}$	$r = 0.204^{*}$
	N=150	N=150	N=150	N=150

NS = insignificant, **.$P \leq 0.01$ Level of significance, *.$p \leq 0.05$ level of significance.

Table 4.6 presents an overview of the correlation coefficients between impulsiveness, it's factors and drug addiction/ substance dependence of sample group. It is evident from the table that drug addiction/substance dependence shows positive correlation with two factors of impulsiveness viz. Attentional impulsiveness and non-planning impulsiveness as well as with overall impulsiveness. However drug addiction/ substance dependence failed to show significant correlation with motor impulsiveness as the $r = 0.068$ is insignificant even at $p \leq 0.05$ level of significance.

Thus our null hypothesis H_{O3} which states that," *Drug addiction/substance dependence has no significant relationship with impulsiveness"* stands rejected.

Table 4.7

Showing Pearson's Correlation Coefficient Values between drug addiction / substance dependence and subjective wellbeing (dimensions wise & overall) of sample group

	Subjective wellbeing factors					
	General wellbeing Positive Affect	Expectation Achievement Congruence	Confidence in Coping	Transcendence	Family Group Support	Social Support
Drug addiction /substance dependence	r = 0.028^{NS} N=150	r = 0.022^{NS} N=150	r= -0.145^{NS} N=150	r=-0.096^{NS} N=150	r=-0.069^{NS} N=150	r=0.089^{NS} N=150

Table 4.7: Continued

	Subjective wellbeing factors					
	Primary Group Concern	Inadequate mental mastery	Perceived ill Health	Deficiency in Social Contacts	General Well-Being negative affect	Over all subjective wellbeing
Drug addiction/ substance dependence	r =-0.139^{NS} N=150	r =-0.075^{NS} N=150	r =-0.141^{NS} N=150	r =-0.046^{NS} N=150	r =-0.107^{NS} N=150	r =-0.139^{NS} N=150

NS = insignificant,

Table 4.7 presents an overview of the correlation coefficients between Subjective wellbeing (both dimension wise and overall) and drug addiction/substance dependence in sample group. It is evident from the table that all the factorial dimensions of

subjective wellbeing and overall subjective wellbeing showed no significant correlation with drug addiction/substance dependence.

Thus our null hypothesis H_{O4} which states that, "*Drug addiction/substance dependence has no significant relationship with subjective well being"* is accepted.

Table 4.8-A

Showing Multiple Regression Analysis (*ANOVA Summary)*

	Sum of Squares	df	Mean of Squares	F
Regression	13206.141	7	1886.592	
Residual	87322.952	142	614.950	3.068**
Total	100529.093	149		

a. Predictors: (Constant), extraversion, neuroticism, attentional impulsiveness, motor impulsiveness, non-planning impulsiveness, Overall impulsiveness, SWB
b. Dependent Variable: drug addiction /substance dependence.

R square = 0.131

Table 4.8-B

Showing Multiple Regression Analysis (*Summary of predictor Variables)*

Model	Un standardized Coefficients		Standardized Coefficients	t-value
	B	Std. Error	Beta	
(Constant)	7.940	34.363		0.231NS
Extraversion	.535	.439	.114	1.218NS
Neuroticism	.918	.352	.271	2.604**
Overall/ total SWB	-.059	.234	-.023	-.253NS
Attentional impulsiveness	4.154	2.448	.518	1.697NS
Motor impulsiveness	3.307	2.557	.407	1.293NS
Non-planning impulsiveness	4.529	2.477	.636	1.828NS
Overall impulsiveness	-3.478	2.425	-.989	-1.434NS

a. Dependent Variable: Drug addiction / substance dependence.

Table 4.8-A and 4.8-B presents regression analysis of drug addiction/substance dependence and various psychological factors, personality dimensions (neuroticism & extraversion) subjective wellbeing and impulsiveness. The significance of F-value (F = 3.068) indicates that certainly there are some psychological factors which emerge as significant predictors of drug addiction (substance dependence). The R^2 value =0.131 indicates that 13% of the variation in drug addiction can be explained by these psychological factors.

Further analysis (table 4.8-B) shows the significance of predictors of drug addiction / substance dependence. As is evident from the table that only the t-value of neuroticism (t=2.604) is significant which means that neuroticism emerged as the only significant predictor of drug addiction (substance dependence). The t-values of all other predictors are found insignificant even at $p \leq 0.05$ level.

Thus our null hypothesis H_{O5} which states that, "*Psychological factors don't contribute significantly to drug addiction/substance dependence"* stands rejected.

Table 4.9

Comparison of Mean Scores of drug addicts who join de-addiction centres and drug addicts who don't join de-addiction centres with reference to Extraversion and Neuroticism dimensions of personality.

Personality dimensions	Groups	N	Mean	Std. Deviation	t-value
Extraversion	A	50	28.700	5.863	2.574*
	B	100	31.130	5.233	
Neuroticism	A	50	35.200	7.439	1.811^{NS}
	B	100	32.810	7.703	

NS = insignificant, *$p \leq 0.05$ level of significance

A = Drug addicts/substance dependents who join de-addiction centres

B= Drug addicts/substance dependents who don't join de-addiction centres

Table 4.9 presents an overview of the t-values of extraversion and neuroticism personality dimensions with respect to drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres. As is evident from the table, the t-values of Extraversion dimension of personality (t= 2.574) is significant beyond .p $\leq$ 0.05 level of significance. This indicates that drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres differ significantly on extraversion dimension of personality.

The table further reveals that the t-value of neuroticism dimension of personality (t=1.811) is not significant beyond p $\leq$ 0.05 level of significance. This indicates that drug addicts/substance dependents who join de-addiction centres and drug

addicts/substance dependents who don't join de-addiction centres don't differ significantly on neuroticism dimension of personality.

Thus our hypotheses H_{O6} that, "*There is no significant difference in extraversion between those drug addicts/substance dependents who join de-addiction centres and those drug addicts/substance dependents who don't join de-addiction centres"* is rejected, & $H0_7$ that, *"There is no significant difference in neuroticism between those drug addicts/substance dependents who join de-addiction centres and those drug addicts/substance dependents who don't join de-addiction centres"* is accepted.

Table 4.10

Comparison of Mean Scores of drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres with reference to impulsiveness (both factor wise and overall)

Factors of impulsiveness	Groups	N	Mean	Std. Deviation	t-value
Attentional impulsiveness	A	50	19.68	3.484	0.267^{NS}
	B	100	19.53	3.121	
Motor impulsiveness	A	50	26.960	3.036	2.100*
	B	100	28.110	3.222	
Non-planning impulsiveness	A	50	28.480	3.871	0.743^{NS}
	B	100	28.950	3.540	
Total/overall impulsiveness	A	50	74.920	7.989	1.308^{NS}
	B	100	76.590	7.042	

NS = insignificant, *.$p \leq 0.05$ level of significance

A = Drug addicts/substance dependents who join de-addiction centres

B = Drug addicts/substance dependents who don't join de-addiction centres

Table 4.10 presents an overview of the t-values of impulsiveness (both factor wise and overall) between drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres. As is evident from table, the t-value of motor impulsiveness (t= 2.100) is significant beyond $p \leq 0.05$ level of

significance. This indicates that drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres differ significantly on motor impulsiveness

The table further indicates that the t-values of overall/total impulsiveness (t=1.308), attentional impulsiveness (t=0.267) and non-planning impulsiveness are not significant even at $p \leq 0.05$ level of significance. This indicates that those drug addicts/substance dependents who join de-addiction centres and those drug addicts/substance dependents who don't join de-addiction centres don't differ significantly on attentional impulsiveness, non-planning impulsiveness and overall impulsiveness

Thus our hypothesis H_{O8} that, "*There is no significant difference in impulsiveness between those drug addicts/substance dependents who join de-addiction centres and those drug addicts/Substance dependents who don't join de-addiction centres"* stands rejected.

Table 4.11

Comparison of Mean Scores of drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de addiction centres with reference to subjective wellbeing (both factor wise and overall)

Subjective wellbeing factors	Groups	N	Mean	Std. Deviation	t-value
General well being positive affect	A	50	5.060	1.434	1.986*
	B	100	5.600	1.632	
Expectation achievement congruence	A	50	5.220	1.717	0.936^{NS}
	B	100	4.960	1.543	
Confidence in coping	A	50	6.680	1.609	2.240*
	B	100	7.300	1.592	
Transcendence	A	50	4.340	1.479	0.904^{NS}
	B	100	4.580	1.558	
Family group support	A	50	8.460	1.164	0.338^{NS}
	B	100	8.520	0.947	
Social support	A	50	5.600	2.364	1.587^{NS}
	B	100	6.240	2.309	
Primary group concern	A	50	1.960	3.238	2.486*
	B	100	0.800	2.378	
Inadequate mental mastery	A	50	13.780	3.442	0.452^{NS}
	B	100	14.030	3.063	
Perceived ill health	A	50	12.500	2.793	2.890**
	B	100	13.830	2.586	
Deficiency in social contacts	A	50	6.060	1.284	1.686^{NS}
	B	100	5.680	1.309	
General well being negative affect	A	50	6.040	1.725	1.532^{NS}
	B	100	6.530	1.904	
Total subjective wellbeing	A	50	75.700	10.692	1.338^{NS}
	B	100	78.070	9.982	

NS = insignificant, **.P ≤ 0.01 Level of significance, *.p ≤ 0.05 level of significance

A= Drug addicts/substance dependents who join de-addiction centres.

B = Drug addicts/substance dependents who don't join de-addiction centres.

Table 4.11 presents an overview of the t-values of the subjective wellbeing (both factor wise and overall) of drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres. As indicated in the table, the t-values of the factors of the subjective wellbeing i;e General well being positive affect(t=1.986 ; $p \leq 0.05$) Confidence in coping (t= 2.240; $p \leq 0.05$) and Primary group concern (t= 2.486 $p \leq 0.05$;) and perceived ill health (t=2.890; $P \leq 0.01$) are significant. This indicates that drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres differ significantly in General wellbeing positive effect, confidence in coping, primary group concern and perceived ill health dimensions of subjective wellbeing.

However the t-values of the factors like, Expectation achievement congruence (t=0.936), Transcendence (t=0.904), Family group support (t=0.338), social support (t=1.587), Inadequate mental mastery (t=0.452), Deficiency in social contacts (t=1.686) general wellbeing negative affect (t=1.532) and overall subjective wellbeing (t=1.338) are insignificant even at 0.05 level of significance. This indicates that drug addicts/substance dependents who join de addiction centres and drug addicts/substance dependents who don't join de- addiction centres don't differ significantly in, Expectation achievement congruence, Transcendence, Family group support , social support, Inadequate mental mastery ,Deficiency in social contacts and general wellbeing negative affect - dimensions of subjective wellbeing, besides these two groups also do not differ significantly on overall subjective wellbeing.

Thus our hypothesis H_{O9} that, "*There is no significant difference in subjective wellbeing between those drug addicts/substance dependents who join de-addiction centres and those drug addicts/Substance dependents who don't join de-addiction centres"* stands rejected.

Table 4.12

Showing frequency and percentage of various self reported reasons for joining de-addiction/ treatment centres as given by drug addicts/substance dependents

Reasons for joining de-addiction	Frequency	Percentage
Health concern	39	78.0 %
Dignity/honour of self and Family	22	44.0 %
Family /parental concern or Pressure	21	42.0 %
Future life concern	13	26.0 %
Conscience	8	16.0 %
Social consequences/Pressure	8	16.0 %
Occupational Impairment/Concern	7	14.0 %
Economic adversity /Economic Reason	5	10.0 %
Fear of losing control	3	6.0 %
Revival of normal functioning	2	4.0%
Positive peer influence	1	2.0 %

The analysis of the self reported reasons for seeking treatment and joining de-addiction centres as given by drug addicts/substance dependents, revealed that majority of drug addicts i;e 78.0 % joined de-addiction centres to quit drug use because of “Health concern”. 44% reported that they joined drug de-addiction centres for the “dignity of self and family”. 42 % of the drug addicts reported that they joined drug de-addiction centres because of “family concern or because of family pressure”. 26 % of the drug addicts reported “Future life concern” as a reason for joining de-addiction centres and quitting drug use.16 % reported quitting drug use and joining de-addiction centres

because of the calling from their conscience and same percentage 16 % reported “social consequences or social pressure” as their reason for joining de-addiction centres and quitting drug use.14 % of the drug addicts reported “occupational impairment” as their reason for joining de-addiction centres.10 % of the drug addicts provided economic adversity because of drug use as their reason for joining de-addiction centres. 6 % of the drug addicts reported joining de-addiction centres and quitting drug use because of the fear of losing control (fear of going crazy or the fear of committing some crime in drugged state). 4 % of the drug addicts reported that they joined drug de-addiction centres for revival of normal functioning which was impaired because of drug use. Only 2 % of the drug addicts provided “positive peer influence” as the reason for joining de-addiction centres.

Table 4.13

Showing frequency and percentage of various self reported reasons for not joining de-addiction/ treatment centres and continuing drug use as given by drug addicts/substance dependents

Reasons for not joining de-addiction and continuing drug use.	Frequency	Percentage
Denial (denial of problem and denial of being addict)	64	64.0 %
Feeling in control	23	23.0 %
Recreational use (Enjoy drug use/use drugs for fun)	20	20.0 %
Relieve tension/ Tension reduction	16	16.0 %
Ignorance / unawareness of treatment options	13	13.0 %
Stigma	13	13.0 %
Inability to control drug use	10	10.0 %
Hope the problem will solve on its own	7	7.0 %
Other.	6	6.0 %
Treatment would not help/ Lack of trust on treatment.	5	5.0 %
Peer pressure	3	3.0 %
Stress	3	3.0 %
Not able to afford treatment	2	2.0 %

The content analysis of the self reported reasons for continuing drug use and not seeking treatment (not joining de-addiction centres) as given by drug addicts/substance

dependents brought many reasons to surface which the drug addicts provide for continuing drug use and not seeking treatment .It was found that 64 % of the drug addicts deny as being a drug addict and deny the presence of any problem as a result of drug use ,so the majority of drug addicts use “Denial” for continuing drug use and not seeking treatment from de-addiction centres. After denial “feeling in control” emerged as the second most reported reason for not joining de-addiction centres and continuing drug use, 20 % reported “Recreational drug use” (i;e they reasoned using drugs for enjoyment and fun), as the reason for not seeking treatment from de-addiction centres. 16 % reported relieving tension or tension reduction as the reason for not joining de-addiction centres. Only 13% of the drug addicts reported “unawareness about de-addiction process (treatment)” as the reason for not joining de-addiction centres. 13 % of the drug addicts reported stigma as a reason for continuing drug use and not seeking treatment.10% reported inability to stop drug use and feeling dependent on drug use, 7 % reported “hope that the problem will solve on its own” and 5 % reported that treatment would not help (lack of trust on treatment). Stress and peer pressure were equally (i;e 3%)reported as reasons for not joining de-addiction centres & continuing drug use. Interestingly only 2% of the drug addicts/ substance dependents reported that they are not able to afford treatment. 6 % of drug addicts gave reasons other than those mentioned above for continuing drug use and not seeking treatment.

Discussion

The aim of the present endeavour was to study psychological factors, personality (like neuroticism, extraversion), impulsiveness and subjective wellbeing of substance dependents/drug addicts and the relation of these variables with the substance dependence/drug addiction. The study also focused on predicting significant psychological factors of substance dependence/drug addiction. The comparison between drug addicts/substance dependents who join de-addiction centres /treatment process & drug addicts/substance dependents who don't join de-addiction centres/ treatment process on personality dimensions (extraversion and neuroticism); impulsiveness; and subjective wellbeing has also been examined. The study also focus on the self reported reasons given by drug addicts/substance dependents for joining de-addiction centres /treatment process or for not joining de-addiction centres/ treatment process and continuing drug use. The type of substances used by drug addicts/substance dependents was also studied.

The results of the present study revealed that tobacco, alcohol, cannabis, sedatives and opium (and its derivatives) respectively were the major drugs of abuse in the sample group. Similar results have been found by National Survey, (2004) conducted in India for the first time by the Ministry of Social Justice and Empowerment, Government of India (MSJE,GOI) and the United Nations International Drug Control Programme, Regional Office for South Asia (UNIDCP, ROSA). Alcohol (21.4%) was the primary substance used (apart from tobacco) followed by cannabis (3.0%) and opioids (0.7%) (Lal, 2005; Ray, 2004). Rapid situation assessments (RSA) by the UNODC in 2002 also showed somewhat similar results, that cannabis (40%), alcohol (33%) and opioids (15%) were the major substances used. (Kumar, 2002) .

The results in this study also showed that there is significant positive correlation between drug addiction /substance dependence and neuroticism, but drug addiction/ substance dependence showed negative insignificant correlation with extraversion.

There are several studies which are in line with the above results. Research studies have shown that neuroticism has clear association with substance use, with neurotic individuals being more likely to smoke cigarettes in greater quantity (Malouff et al., 2006; Mroczek, Spiro, & Turiano, 2009; Munafo, Zetteler, & Clark, 2007; Rausch, Nichinson, Lamke, & Matloff, 1990). Those higher in neuroticism are also more likely to abuse alcohol (Grekin, Sher, & Wood, 2006; Larkins & Sher, 2006; Malouff et al., 2007; Terracciano et al., 2008).

Similarly Martin and Sher (1994) in a study examined that familial risk for alcoholism was positively associated with openness and negatively associated with agreeableness and conscientiousness. Alcohol use disorders were positively associated with neuroticism and negatively associated with agreeableness and conscientiousness.

Studies conducted by Gossop, M. R (1978) and Blaszczynski, Buhrich, & McConaghy, (1985) while administering Eysenck Personality Questionnaire found that both oral and intravenous drug addicts scored highly on the neuroticism and psychoticism dimensions of personality.

Ruiz, Pincus, and Dickinson (2003) investigated the relationships between Five Factor model facets and substance-related behavior and found that neuroticism and conscientiousness were linked to substance-related behavior, but facets like extraversion and agreeableness were not associated with addictive behavior.

As mentioned above the results of the present study also show that drug addiction/ substance dependence shows negative insignificant correlation with extraversion. This is again in consistent with some earlier work. There is evidence that

illicit drug use and dependence on alcohol or drugs may show a negative relationship with extraversion. Alcoholics have been reported to show lower extraversion scores than social drinkers (Tarnai & Young, 1983). Heroin addicts also show lower extraversion scores than controls, but higher levels of neuroticism and psychoticism (Lodhi and Thakur, 1993; Gossop and Eysenck, 1983). Also a review of literature by Gilbert (1995) concluded that studies provided weaker support for a link between smoking and extraversion.

Gossop and Eysenck (1980) found that the personality of polydrug users (in which majority of them reported that they preferred heroine) can be differentiated with the personality of a normal control group. Drug addicts were found to obtain significantly high scores in Psychotism (P) and Neuroticism (N) scales but obtained significantly low scores in Extraversion (E) and Lie scales (L). The same findings were obtained by other researchers like Blaszczynski, et al. (1985) and Gossop and Eysenck (1980).

The results of the present study showed that there is significant positive correlation of substance dependence/drug addiction, with overall impulsiveness and its two facets viz. Attentional impulsiveness and Non-planning impulsiveness indicating that impulsiveness plays an important role in drug addiction/ substance dependence.

Several studies support these findings. Moeller et al (2001) conducted a study to determine whether impulsivity was related to severity of drug use and treatment outcome. Results showed significant correlation between impulsivity scores and self-reported average daily cocaine use as well as cocaine withdrawal symptoms. James & Taylor (2007) in a study found impulsivity as significantly associated with drug use problems. Similarly Von Diemen (2008) showed that impulsivity and age of first alcohol consumption (AFD) were significantly associated with substance use disorders.

Further dependence on nicotine has been found to be associated with high levels of impulsivity (Mitchell, 1999). Studies using self-report measures of impulsivity or behavioural tasks (e.g. delay-discounting) have consistently indicated higher levels of impulsiveness in smokers than in non-smoking subjects (Baker et al., 2003; Bickel et al., 1999; Dinn et al., 2004). Skinner and colleagues (2004) found smoking alcoholics to have higher levels of impulsivity than non-smoking alcoholics. Furthermore, impulsivity has shown to be linked to the severity of drug abuse and poor treatment retention (Moeller et al., 2001; Patkar et al., 2004). Some studies in children and adolescents have also found similar results (Dawe, et al., 2004; Jaffe & Archer, 1987).

Harriet, (2008) have explained the positive correlation between impulsivity and drug abuse on the basis of the potential role that instant gratification provided by the substance may offset the larger future benefits of abstaining from the substance, and because people with impaired inhibitory control may not be able to overcome motivating environmental cues, such as peer pressure . Similarly, individuals that discount the value of delayed reinforcers begin to abuse alcohol, marijuana, and cigarettes early in life, while also abusing a wider array of illicit drugs compared to those who discounted delayed reinforcers less. (Kollins, 2002).

While it is important to note the effect of impulsivity on substance abuse, the other possible explanation could be reciprocating effect of substance abuse on impulsivity, whereby substance abuse can increase impulsivity which has also been researched and documented. (Perry & Carroll ,2008).

Subjective wellbeing and most of its factorial dimensions showed negative insignificant correlation with drug addiction/substance dependence. However some factorial dimensions of SWB showed insignificant positive correlation with substance

dependence/drug addiction. So taken together no significant correlation between SWB and drug addiction/ substance dependence was found.

The earlier researches on subjective wellbeing and drug addiction/Substance dependence have shown mixed results. Among these studies some support these findings. Konu, Lintonen & Rimpela (2002) in a study that aimed at exploring factors associated with school children's general subjective wellbeing, found (apart from other findings) that drug use had no association with either boy's or girl's subjective wellbeing. Daily nicotine use in their study was found not significantly related with wellbeing among boys. Alcohol use per se was found not related to subjective wellbeing.

There are also several studies which show no significant relationship between alcohol consumption and life satisfaction- a component of subjective wellbeing (Bakker & VandeBerg, 1974; Schulz, Költringer, Norden, & Tuchler, 1985).

Likewise one study which showed negative correlation between SWB and drug use was conducted by Schwartz, S. J., et al. (2011). They in a study investigated the associations of well-being with engagement in illicit drug use, sexual risk taking, and impaired driving in a sample of 9,515 students. Findings indicated that well-being was negatively associated with incidence of illicit drug use.

There are also some studies which are in disagreement with our findings. For example based on data from a comparative survey of drinking in four Scandinavian countries (Finland, Iceland, Norway and Sweden), the experiencing of positive consequences of drinking was studied in relation to alcohol consumption, intoxication frequency and the experiencing of negative consequences of drinking by Hauge & Irgens-Jensen (1990). In all four countries a substantial portion "both of the men and of the women" reported having experienced various positive effects of drinking during

the last 12 months. The positive consequences clearly correlated with yearly alcohol consumption and even more with intoxication frequency.

While using regression analysis, neuroticism personality trait was found significant predictor of drug addiction (substance dependence) in this study. This is again consistent with the previous literature. Longitudinal studies in Europe also suggest that high scores on Neuroticism and Extraversion during adolescence increase the likelihood of being a smoker later in life (Munafo & Black ,2007; Harakeh., Scholte. , de Vries & Engels, 2006). Similarly a prospective investigation found that high neuroticism and high novelty seeking at age 17 significantly predicted new onsets of AUDs, SUDs, and tobacco use disorders by age 20 (Elkins et al. 2006). In another longitudinal study, participants with high novelty seeking scores in early adolescence or high neuroticism scores in young adulthood had higher risk for drug dependence or comorbid alcohol–drug dependence in later adulthood (Chassin et al., 2004). Longitudinally, findings from the Hawaii Personality and Health cohort provide evidence that children rated lower in emotional stability (high neuroticism) predicted greater alcohol use some 40 years later in middle age (Hampson et al., 2006). Prisciandaro, McRae-Clark , Moran-Santa Maria, Hartwell & Brady (2011) in a study investigated the cross-sectional and prospective relationships between personality dimensions (i.e., impulsivity, neuroticism) and problematic cocaine use. The results showed that cocaine-dependent individuals with elevated psychoticism used significantly more cocaine over the follow-up period ($p<0.05$), whereas individuals with elevated neuroticism trended towards using cocaine more frequently over the follow-up ($p=0.07$). Similarly Turiano, Whiteman, Hampson, Roberts & Mroczek, (2012) in a study found that higher levels of neuroticism, extraversion, openness, and lower levels of conscientiousness and agreeableness predicted longitudinal substance

use. Increases in neuroticism and openness predicted increased substance use while increases in conscientiousness and agreeableness predicted decreased substance use.

On comparing the drug addicts/substance dependents who join de-addiction centres and drug addicts who don't join for de-addiction centres on extraversion and neuroticism (factors of personality), significant difference was found between drug addicts/ substance dependents who join for de-addiction and drug addicts/substance dependents who don't join for de-addiction on extraversion (trait/factor of personality), the mean score of the drug addicts who don't go for de-addiction was found high as compared to drug addicts who go for de-addiction. However no significant difference was found between drug addicts/ substance dependents who go for de-addiction and drug addicts/substance dependents who don't go for de-addiction on neuroticism.

Regarding the above findings hardly there is any study available in the literature which has directly focused on comparison between drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres on extraversion and neuroticism traits/factors of personality. However, there are studies comparing drug addicts with other groups, like recovering addicts, normal group, or addicts across drug classes, on personality traits/dimensions.

Mohamed, M. N. (2005) in a study compared the self-esteem and personality profile of recovering drug addicts and residents who are still in treatment. It was found that the level of self-esteem among the recovering drug addicts who had been drug free for more than 2 years differ significantly than those who were still in the program. However, there was no significant difference found, in the personality factors between the two groups.

Similarly, Dubey et al. (2010) in a study found that substance abused group scored higher on Neuroticism and Extraversion dimensions, whereas non-substance

abusers significantly scored higher on Openness and Conscientiousness dimensions of Big-Five.

Terracciano et al (2008) conducted a study in which they compare the personality profile of tobacco, marijuana, cocaine, and heroin users and non-users .The results showed that Compared to never smokers, current cigarette smokers score lower on Conscientiousness and higher on Neuroticism. Similar, but more extreme, was the profile of cocaine/heroin users, which score very high on Neuroticism, especially Vulnerability, and very low on Conscientiousness, particularly Competence, Achievement-Striving, and Deliberation. By contrast, marijuana users score high on Openness to Experience, average on Neuroticism, but low on Agreeableness and Conscientiousness.

The high score on extraversion might explain the continuing drug use and not joining de-addiction of those drug addicts/substance dependents who don't join de-addiction. As we know that extraverts tend to enjoy human interactions and to be enthusiastic, talkative, assertive, and gregarious, so such individuals might be enjoying the drug use with their friends, and might be assertive about their lives so may not be considering de-addiction as necessary. Extroverts take pleasure in activities that involve large social gatherings, such as parties, get together, picnics, and on such occasions drug taking is quite usual. An extraverted person is likely to enjoy time spent with people and find less reward in time spent alone, so as drug addicts who continue drug use and don't go for de-addiction might be constantly in company of other addicts and might be continuing drug use in such company. Extroverts tend to be energized when around other people, and they are more prone to boredom when they are by themselves, so they might be deriving energy and pleasure by being in the company of other drug addicts and continuing drug use.

The results of the present study further reveal that there is no significant difference between drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres on overall impulsiveness and two of it's sub factors (like Attentional impulsiveness and non-planning impulsiveness).

However significant difference was found between drug addicts/Substance dependents who join de-addiction centres and drug addicts/Substance dependents who don't join de-addiction centres on motor impulsiveness.

There is dearth in research studies pertaining to comparison of drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres on impulsiveness and it's sub factors.

Cognitive Impulsiveness involves making quick decisions, and Non-Planning Impulsiveness involved a lack of ''futuring" or forethought. Both the groups scored high on these sub factors of impulsiveness and overall impulsiveness as well, which may explain their drug involvement. Motor Impulsiveness on the other hand involves acting without thinking. That means individuals scoring high on this facet may engage themselves in some behaviour/ activity without forethought.

This might explain the difference between those drug addicts/substance dependents who join de-addiction centres and those drug addicts who don't join de-addiction centres on motor impulsiveness. Drug addicts/substance dependents who don't join de-addiction centres were found scoring high on this facet, which indicates that such individuals might be engaging themselves in drug use behaviour without forethought, or without considering the negative consequences of drug use, and thus continuing drug use & not joining de-addiction centres .(as this factor is related to acting out without forethought).

Flores, P & Zaldívar, F. in a study regarding the use of addictive substances by young university students and the manifestation of impulsive behaviour in the same group of people, on a cognitive and psychomotor level, found that regular consumers of cannabis and alcohol are more impulsive than non-users. (Andalucía Innova, 2009).

The results of the above study also helps us to understand our results as the drug addicts/ substance dependents who don't join de-addiction centres were also found high on motor impulsiveness, which may explain their drug use and not joining de-addiction.

While comparing the drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres on subjective wellbeing (and it's factorial dimensions), the findings of the study showed significant difference between drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres on general wellbeing positive affect, confidence in coping, primary group concern, and perceived ill health dimension of subjective wellbeing. The differences on other dimensions of subjective wellbeing and overall subjective wellbeing between drug addicts who join de-addiction centres and drug addicts who don't de-addiction centres were found insignificant.

Drug addicts who don't join de-addiction centres were found high on general wellbeing positive affect dimension as compared to drug addicts who join de-addiction centres. This indicates that drug addicts who don't join de-addiction centres possess more feelings of well- being arising out of an overall perception of life as functioning smoothly and joyfully as compared to drug addicts who go for de-addiction. It can be assumed that this group of drug addicts/ substance dependents do not join de-addiction because of the reason that they don't perceive functional

impairment in their lives and thus continue drug use whereas the drug addicts who join de-addiction might be perceiving functional impairment which may facilitate them to join de-addiction centre.

Similarly drug addicts who don't join de-addiction centres were found high on confidence in coping dimension of subjective wellbeing as compared to drug addicts who join de-addiction centres, this indicates that drug addicts who don't join de-addiction centres feel more confident in coping with the life circumstances and problems, and thus it helps us to understand their not joining de-addiction /treatment, as compared to those drug addicts who join de-addiction centres.

Drug addicts/substance dependents who join de-addiction centres were found high on primary group concern dimension of subjective wellbeing as compare to drug addicts/substance dependents who don't join de-addiction centres, i.e, they are more concerned about their primary group (spouse ,children,) or were more worried about the relationship with spouse and children, than drug addicts who don't go for de addiction and that might be the reason for their joining de-addiction.

Similarly drug addicts who don't join de-addiction were found perceiving themselves well (healthy) and didn't perceive themselves as ill as compared to drug addicts who join de-addiction centres. So their perception of wellbeing on this dimension might be the reason that they don't join de-addiction centres.

While reviewing the literature about subjective wellbeing and drug addiction the investigator failed to find any study directly focusing on comparison of drug addicts/substance dependents who join de-addiction with drug addicts/substance dependents who don't join de-addiction centres on subjective wellbeing. However, the comparisons of drug addicts/substance dependents with other groups on subjective wellbeing have been studied by some researchers. For example Bhojak et al (1997) in a

study investigated emotional life and subjective well-being in drug addicts and non-addicts. The findings revealed that by and large, drug addicts appear to have disturbed emotional life, more psychopathic traits and poorer subjective well-being as compared to normal controls. Similarly Millson et al (2004) in a study found that opiate users perceived both their mental and physical health as worse than the general population and individuals with minor and serious medical problems, but comparable to those with diagnosed psychiatric illnesses.

The present study also attempted to investigate the self reported reasons of drug addicts/ substance dependents for joining or not joining de-addiction centres /treatment process.

While using content analysis, the self reported reasons for joining de-addiction and seeking treatment majority of drug addicts/substance dependents (78%) who had joined de-addiction centres pointed out "health concern" as the main reason for joining de-addiction centres. Since continued substance use tends to have very negative effect on the health of the user, so deterioration of health because of drug use might compel a person to seek treatment and join de-addiction centre. This is consistent with a study conducted by Johnston, L. D (1998).

Johnston, L. D (1998) in a study investigated the self reported reasons for abstention and quitting of drug use. He found that two most commonly mentioned reasons for abstainers are concerns that they might damage themselves psychologically and/or physically.

The second major reason for joining de-addiction /treatment by drug addicts was "dignity of self and their families" (44%). Since drug use is not an acceptable behaviour at all in the target population because of cultural and religious sensitivity of the region so if a person is found using drugs, people tend to have a very negative

image of him/her, he/she is perceived as a criminal, and people tend to dishonour him/her. Moreover the drug addicts/substance dependents tend to have very negative effects on the dignity and honour of his/her family, the rest of the family may feel embarrassed or ashamed at this behaviour. The daily experiences of drug addicts about what others think, and how they perceive his family may help force him seek treatment of the addiction.

The third significant reason for joining de-addiction /treatment given by drug addicts was "family/parental concern or pressure". Drug use tends to have negative effect not only on the individual but also on his family. It may hamper marriage/relationships, home/family life, education, employment etc. It is also quite natural that the family might be concerned about the health and future life of their ward as well. So an addict may seek treatment either because of the family concern or sometimes the family may pressurise a person to seek treatment.

While analysing the self reported reasons of drug addicts/ substance dependents who don't join de-addiction, majority of drug addicts (64%) reported "Denial" (denial of being drug addict and denial of having any problem) as the main reason followed by "feeling in control" for not joining de-addiction centres. "Enjoying drug use (recreational drug use)" was the third major reason for not joining the de-addiction centre. And very low percentage (2%) of drug addicts mentioned "Not being able to afford treatment" as the reason for not joining de-addiction centre.

Reasons like Denial of being an addict and Denial of having any problem because of drug use, by the drug addict for not joining de-addiction centre is well understood as such individuals seems not acknowledging their problem and thus not doing anything against it and hence continuing drug use.

The second major reason of drug addicts/substance dependents for continuing drug use and not joining treatment was “feeling in control” (on situation, life and use of drug). Drug addicts who feel that things are in their control and not out of control, they tend to continue it and do not realise the need of professional help.

“Enjoying drug use” emerged as the third major reason of drug addicts/ substance dependents for continuing drug use and not seeking treatment. If a person enjoys any behaviour, it is most likely that the individual may continue such behaviour and will not stop it. So some drug addicts seem to continue drug use because they enjoy it.

There are some research evidences pertaining to self reported reasons as given by drug addicts to find out the causes of continuing drug use by drug addicts. In a study by Johnston & O’Malley (1986) the reasons which drug addicts gave for using drugs were “to have a good time with friends” , “to get high” ,“to get through the day,” “to relieve boredom,” “to deal with anger and frustration,” etc.

Similarly Johnston, L. D (1998) in a study found that the reasons given by the sample for using drugs were , To experiment; To feel good and get high; To have a good time with friends; To relax or relieve tension; To get away from my problems; To seek insight; and To deal with anger or frustration.

Limitations of the study

Research is a continuous process and is never completely perfect due to certain unavoidable circumstances researchers face during the process and especially when we talk about social science research. Every research carries certain flaws that give insights for new research. Keeping in view the above facts the present piece of work is also subject to certain limitations which the investigator has realized/understood during the research process. These limitations are:

a) The sampling technique used to collect data in this study is purposive sampling, which brings element of deliberate selection in the selection of sample and weakens the generalization of results of this study.
b) Due to certain constrains only males were included in this study hence the results obtained are gender biased.
c) The sample was selected only from district Srinagar (from different drug de-addiction centres located in Srinagar city and different localities of Srinagar), and not from all districts of Jammu and Kashmir.
d) Due to paucity of drug de-addiction centres in the district Srinagar the sample size of the group who join de-addiction centres was very small.
e) The tools used for collecting responses from the sample were translated into Urdu language. No doubt the translation was performed strictly as per scientific procedures but still the translated version of scales need to be applied on large population to ascertain their reliability and validity.

Suggestions

Further research need to be carried out on the basis of present study in Kashmir with certain considerations to improve authenticity of the results for policy makers and other concerned authorities for preparing action plans for the eradication of such type of menace in the society. Some of the suggestions that investigator has realized are listed here:

a) There is much scope to conduct further research on psychological variables related to drug addiction/ substance dependence with an adequate sample size taken from all the districts of Jammu and Kashmir in order to generalise the results.
b) Such type of research need to be carried on female sample group.

c) There is also need to use random sampling method to select sample from different sections of the population with adequate proportions, in order to eliminate judgmental bias in selection of sample.

d) There is also need to compare users of different drugs / substances with each other on psychological variables.

e) Tools used for such type of studies should be developed/adopted taking into consideration socio-culture aspects of the target population.

CHAPTER – 5

Conclusion

The present study focuses on some of the significant psychological factors (personality dimensions, impulsiveness, and subjective wellbeing), that previous research has shown to be related to drug addiction (substance dependence). The sample chosen for the study was drug addict/ substance dependent youths taken from district Srinagar.

After analysing the data, the main findings obtained from the study are:

- A very high percentage (78 %) of sample group (drug addicts) showed tobacco dependence (high tobacco involvement).
- Alcohol dependents comprises the second highest percentage among the sample group as 75.3 % show alcohol dependence.(high alcohol involvement)
- Almost equal no of sample group fall in low and high category of cannabis dependence, and comprises the third highest percentage (58%) among the sample group.
- Sedative dependents comprise the fourth highest percentage of the sample group as 33.3 % of the sample group showed sedative dependence. (High sedative involvement score).
- Very low percentage of the sample group showed opioid dependence (8.7 %) & inhalant dependence (6%).
- Very low percentage of sample group (0.7%, 1.34% and 0.7%) showed average cocaine involvement score, amphetamine type stimulants involvement score and

hallucinogens involvement score respectively and no individual in the sample group was found cocaine dependent, amphetamine type stimulant dependent and hallucinogen dependent.

- Majority of the sample group (70%) scored average on extraversion dimension of personality and low percentage of the sample was found deviating from average (in both the directions) on this dimension.
- Majority of the sample group (50.7 %) scored high on neuroticism dimension of personality, but no individual (0%) was found in low or very low category with regard to this dimension.
- On impulsiveness, majority of the sample group (79.3%) scored high whereas no individual (0%) was found having low impulsiveness.
- Majority of the sample group was found low on general wellbeing positive effect (52%) , expectation achievement congruence (60.7%), transcendence (76.7%) & primary group concern (88.7%) dimension of subjective wellbeing and less percentage (30 %) scored high on general wellbeing positive effect dimension ; only (18.7%) scored high on expectation achievement congruence dimension & Very low percentage of sample group (only 13.3%) scored high on transcendence dimension of subjective wellbeing
- A significant portion of the sample group (64.7% & 66%) scored high on the confidence in coping & perceived ill health dimensions of subjective wellbeing respectively.
- Very high percentage (94.7%) of the sample group scored high on family group support dimension of subjective wellbeing i.e, majority of the sample group possess positive feelings derived from the perception of the larger family as supportive, cohesive and emotionally attached.

- Almost half of the sample group (48%) scored high on inadequate mental mastery dimension of subjective wellbeing i.e, they do not possess feelings of reduced well-being from a sense of insufficient control or inability to deal efficiently with life phenomena and perceive subjective wellbeing with respect to this dimension. Also (42.7%) of the sample group scored low on this dimension i.e, considerable portion of sample group possess feelings of reduced well-being from a sense of insufficient control or inability to deal efficiently with life phenomena.
- On deficiency of social contact dimension of SWB (44%) of the sample group scored low which means that a significant portion of sample group possess worries over missing friends or being disliked.
- On general well-being negative affect dimension of subjective wellbeing majority of the sample group (48.7 %) scored high i.e, majority of the sample group do not possess negative feelings about, and outlook upon, life as a whole.
- Very less percentage of the sample group (6%) scored low on overall/total subjective wellbeing and the rest percentages of the sample group scored average or high on this dimension and thus majority do not show low overall/total SWB.
- Neuroticism dimension of personality showed significant positive correlation with drug addiction (substance dependence), however extraversion dimension of personality shows no significant correlation with drug addiction (substance dependence).
- Subjective wellbeing and all it's factors showed insignificant correlation with drug addiction (substance dependence).

- Attentional impulsiveness, non-planning impulsiveness, and overall impulsiveness showed significant positive correlation with drug addiction (substance dependence).
- The regression analysis showed psychological factors (neuroticism and extraversion personality dimensions, impulsiveness and subjective wellbeing) contributing significantly to drug addiction, and among the psychological factors neuroticism emerged as the only significant predictor of drug addiction (substance dependence).
- While analysing the self reported reasons for joining de-addiction and seeking treatment majority of drug addicts/substance dependents (78%) who had joined de-addiction centres talked about "health concern" as their reason for joining de-addiction centres,44 % said that the reason for joining de-addiction centres was "dignity of self and their families" , and 42 % of the drug addicts/substance dependents gave family concern /family pressure as the reason for joining de-addiction centres.
- While analysing the self reported reasons for not joining de-addiction and continuing drug use (of those drug addicts/substance dependents who don't join de-addiction), majority of drug addicts/substance dependents (64 %) denied being drug addict and denied having any problem, 23 % gave the reason of "feeling in control" for not joining de-addiction centres and 20 % said they enjoy drug use (recreational drug use) and don't want to join de-addiction.
- While comparing the drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres on neuroticism and extraversion dimensions of personality, the findings of the study showed significant difference between drug addicts/substance dependents

who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres. Drug addicts/substance dependents who don't join de-addiction centres were found high on extraversion as compared to drug addicts/substance dependents who join de-addiction centres. However no such difference was found between drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres on neuroticism dimension of personality. The differences on other dimensions of subjective wellbeing and overall/total subjective wellbeing between drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres were found insignificant.

- While comparing the drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres on impulsivity and it's sub factors (Attentional impulsiveness , motor impulsiveness and non-planning impulsiveness), significant difference was found between drug addicts/ substance dependents who join de-addiction centres and drug addicts/ substance dependents who don't join de-addiction centres on motor impulsiveness .Drug addicts/substance dependents who don't join de-addiction centres were found high on motor impulsiveness as compared to drug addicts who join de-addiction centres. However no significant difference was found between drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres on overall impulsiveness and the rest of it's sub factors.
- While comparing the drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who don't join de-addiction centres

on subjective wellbeing (and it's factorial dimensions), the findings of the study showed significant difference between drug addicts/substance dependents who join de-addiction centres and drug addicts/substance dependents who do not join de-addiction centres on general wellbeing positive affect, confidence in coping, primary group concern, and perceived ill health dimension of subjective wellbeing.

- Drug addicts/substance dependents who don't join de-addiction centres were found high on general wellbeing positive affect dimension as compared to drug addicts/substance dependents who join de-addiction centres indicating that drug addicts/substance dependents who don't join de-addiction centres possess more feelings of well- being arising out of an overall perception of life as functioning smoothly and joyfully as compared to drug addicts/substance dependents who join de-addiction centres.
- Similarly drug addicts/substance dependents who don't join de-addiction centres were found high on confidence in coping dimension of subjective wellbeing as compared to drug addicts/substance dependents who join de-addiction centres, indicating that drug addicts/substance dependents who don't join de-addiction centres possess high subjective perception of their coping potential as compared drug addicts/substance dependents who join de-addiction centres.
- Drug addicts/substance dependents who join de-addiction centres were found high on primary group concern dimension of subjective wellbeing as compare to drug addicts/substance dependents who don't join de-addiction centres, i.e, drug addicts/substance dependents who join de-addiction centres were more concerned about their primary group (spouse ,children,) or were more worried about the relationship with spouse and children, than drug addicts/substance dependents who don't join de addiction.

- Similarly drug addicts/substance dependents who don't join de-addiction centres were found perceiving themselves well (healthy) and didn't perceive themselves as ill as compared to drug addicts/substance dependents who join de-addiction centres.

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Appendix

Appendix-A

Consent Form (for Participants)

I, Mr,…… have accepted to participate in the research of Mr. Imran Khan. He explained me all about the study and I am participating in this study on voluntary basis and I have freedom to discontinue at any time.

Name and signature of Participant:

Name……..

Signature……

Dated…….

Place……

Appendix-B

Alcohol Smoking and Substance Involvement Screening Test –V3.0 (ASSIST V3.0)

Interviewer ID | Country | Clinic

Client ID | Date

INTRODUCTION (Please read to patient)

Thank you for agreeing to take part in this brief interview about alcohol, tobacco products and other drugs. I am going to ask you some questions about your experience of using these substances across your lifetime and in the past three months. These substances can be smoked, swallowed, snorted, inhaled, injected or taken in the form of pills (show drug card).

Some of the substances listed may be prescribed by a doctor (like amphetamines, sedatives, pain medications). For this interview, we will not record medications that are used as prescribed by your doctor. However, if you have taken such medications for reasons other than prescription, or taken them more frequently or at higher doses than prescribed, please let me know. While we are also interested in knowing about your use of various illicit drugs, please be assured that information on such use will be treated as strictly confidential.

Question 1

(If completing follow up please cross check the patients answers with the answers given for Q1 at baseline. Any differences on this question should be queried)

In your life, which of the following substances have you ever used? (Non medical use only)		No	Yes
a.	Tobacco products (cigarettes, chewing tobacco, cigars, etc)	0	3
b.	Alcoholic beverages (beer, wine, spirits, etc)	0	3
c.	Cannabis (marijauana, pot, grass, hash, etc)	0	3
d.	Cocaine (coke, crack, etc)	0	3
e.	Amphetamine type stimulants (speed, diet pills, ecstasy, etc)	0	3
f.	Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	3
g.	Sedatives or sleeping pills (valium, serepax, Rohypnol, etc.)	0	3
h.	Hallucinogens (LSD, Acid, mushrooms, PCP, Special K etc.)	0	3
i.	Opioids (heroin, morphine, methadone, codeine etc.)	0	3
j.	Other – specify	0	3

Question 2

	In the past three months, how often have you used the substances you mentioned (First drug, second drug, etc)	Never	Once or twice	Monthly	Weekly	Daily almost daily
a.	Tobacco products (cigarettes, chewing tobacco, cigars, etc)	0	2	3	4	6
b.	Alcoholic beverages (beer, wine, spirits, etc)	0	2	3	4	6
c.	Cannabis (marijauana, pot, grass, hash, etc)	0	2	3	4	6
d.	Cocaine (coke, crack, etc)	0	2	3	4	6
e.	Amphetamine type stimulants (speed, diet pills, ecstasy, etc)	0	2	3	4	6
f.	Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	2	3	4	6
g.	Sedatives or sleeping pills (valium, serepax, Rohypnol, etc.)	0	2	3	4	6
h.	Hallucinogens (LSD, Acid, mushrooms, PCP, Special K etc.)	0	2	3	4	6
i.	Opioids (heroin, morphine, methadone, codeine etc.)	0	2	3	4	6
j.	Other – specify	0	2	3	4	6

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

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

Questions 3

During the past three months, how often have you had a strong desire or urge to use (First drug, second drug, etc)		Never	Once or twice	Monthly	Weekly	Daily almost daily
a.	Tobacco products (cigarettes, chewing tobacco, cigars, etc)	0	3	4	5	6
b.	Alcoholic beverages (beer, wine, spirits, etc)	0	3	4	5	6
c.	Cannabis (marijauana, pot, grass, hash, etc)	0	3	4	5	6
d.	Cocaine (coke, crack, etc)	0	3	4	5	6
e.	Amphetamine type stimulants (speed, diet pills, ecstasy, etc)	0	3	4	5	6
f.	Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	3	4	5	6
g.	Sedatives or sleeping pills (valium, serepax, Rohypnol, etc.)	0	3	4	5	6
h.	Hallucinogens (LSD, Acid, mushrooms, PCP, Special K etc.)	0	3	4	5	6
i.	Opioids (heroin, morphine, methadone, codeine etc.)	0	3	4	5	6
j.	Other – specify	0	3	4	5	6

Questions 4

During the past three months, how often have your use of (First drug, second drug, etc) led to health, social, legal or financial problems		Never	Once or twice	Monthly	Weekly	Daily almost daily
a.	Tobacco products (cigarettes, chewing tobacco, cigars, etc)	0	4	5	6	7
b.	Alcoholic beverages (beer, wine, spirits, etc)	0	4	5	6	7
c.	Cannabis (marijauana, pot, grass, hash, etc)	0	4	5	6	7
d.	Cocaine (coke, crack, etc)	0	4	5	6	7
e.	Amphetamine type stimulants (speed, diet pills, ecstasy, etc)	0	4	5	6	7
f.	Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	4	5	6	7
g.	Sedatives or sleeping pills (valium, serepax, Rohypnol, etc.)	0	4	5	6	7
h.	Hallucinogens (LSD, Acid, mushrooms, PCP, Special K etc.)	0	4	5	6	7
i.	Opioids (heroin, morphine, methadone, codeine etc.)	0	4	5	6	7
j.	Other – specify	0	4	5	6	7

Question 5

During the past three months, how often have your use of (First drug, second drug, etc) led to health, social, legal or financial problems		Never	Once or twice	Monthly	Weekly	Daily almost daily
a.	Tobacco products (cigarettes, chewing tobacco, cigars, etc)	0	5	6	7	8
b.	Alcoholic beverages (beer, wine, spirits, etc)	0	5	6	7	8
c.	Cannabis (marijauana, pot, grass, hash, etc)	0	5	6	7	8
d.	Cocaine (coke, crack, etc)	0	5	6	7	8
e.	Amphetamine type stimulants (speed, diet pills, ecstasy, etc)	0	5	6	7	8
f.	Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	5	6	7	8
g.	Sedatives or sleeping pills (valium, serepax, Rohypnol, etc.)	0	5	6	7	8
h.	Hallucinogens (LSD, Acid, mushrooms, PCP, Special K etc.)	0	5	6	7	8
i.	Opioids (heroin, morphine, methadone, codeine etc.)	0	5	6	7	8
j.	Other – specify	0	5	6	7	8

Ask Questions 6 and 7 for all substances ever used (i.e., those endorsed in Question 1)

Question 6

Has a friend or relative or anyone else ever expressed concern about use of (First drug, second drug, etc)		No, Never	Yes, in the past 3 months Once or twice	Yes, but not in the past 3 months
a.	Tobacco products (cigarettes, chewing tobacco, cigars, etc)	0	6	3
b.	Alcoholic beverages (beer, wine, spirits, etc)	0	6	3
c.	Cannabis (marijauana, pot, grass, hash, etc)	0	6	3
d.	Cocaine (coke, crack, etc)	0	6	3
e.	Amphetamine type stimulants (speed, diet pills, ecstasy, etc)	0	6	3
f.	Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	6	3
g.	Sedatives or sleeping pills (valium, serepax, Rohypnol, etc.)	0	6	3
h.	Hallucinogens (LSD, Acid, mushrooms, PCP, Special K etc.)	0	6	3
i.	Opioids (heroin, morphine, methadone, codeine etc.)	0	6	3
j.	Other – specify	0	6	3

Question 7

Have you ever tried and failed to control, cut down or stop using (First drug, second drug, etc)		No, Never	Yes, in the past 3 months Once or twice	Yes, but not in the past 3 months
a.	Tobacco products (cigarettes, chewing tobacco, cigars, etc)	0	6	3
b.	Alcoholic beverages (beer, wine, spirits, etc)	0	6	3
c.	Cannabis (marijauana, pot, grass, hash, etc)	0	6	3
d.	Cocaine (coke, crack, etc)	0	6	3
e.	Amphetamine type stimulants (speed, diet pills, ecstasy, etc)	0	6	3
f.	Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	6	3
g.	Sedatives or sleeping pills (valium, serepax, Rohypnol, etc.)	0	6	3
h.	Hallucinogens (LSD, Acid, mushrooms, PCP, Special K etc.)	0	6	3
i.	Opioids (heroin, morphine, methadone, codeine etc.)	0	6	3
j.	Other – specify	0	6	3

Question 8

	No, Never	Yes, in the past 3 months Once or twice	Yes, but not in the past 3 months
Have you ever used any drug by injection? (Non-Medical use only)	0	2	1

Appendix – C

Modified version of Eysenck's Maudsley's Personality Inventory (MPI 1959)

Here are some questions regarding the way you feel and act. There is no right or wrong answers because different people react in different manners for the same kind of experience. Therefore what you feel right is most appropriate answer for you. There are three responses for each question (Yes, ?, No). Chose the one you feel most appropriate.

Q1. Are you happiest when you get involved in some project that calls for rapid action? Yes ? No

Q2. Do you sometimes feel happy, sometimes depressed without any apparent reason? Yes ? No

Q3. Does your mind often wander while you are trying to concentrate on some topic? Yes ? No

Q4. Do you usually take the initiative in making new friends?

Yes ? No

Q5. Are you quick and sure in your actions?

Yes ? No

Q6. Are you frequently lost in thoughts even when you are conversing?

Yes ? No

Q7. Are you sometimes bubbling over with energy and sometimes very sluggish? Yes ? No

Q8. Would you rate yourself as a lively individual?

Yes ? No

Q9. Would you be unhappy if you were prevented from making social contacts?

Yes ? No

Q10. Do you have frequent ups and downs in your mood?

Yes ? No

Q11. Does your behaviour keep changing without any apparent cause?

Yes ? No

Q12. Do your prefer a action to planning for action?

Yes ? No

Q13. Are you inclined to keep in the background on social occasions?

Yes ? No

Q14. Are you inclined to ponder over your past?

Yes ? No

Q15. Do you find it difficult to mix with people even at likely party?

Yes ? No

Q16. Do you ever feel just miserable for not any good reason at all?

Yes ? No

Q17. Are you inclined to be over conscious?

Yes ? No

Q18. Do you often feel that you have made up your mind too late do something?

Yes ? No

Q19. Do you like to mix socially with people?

Yes ? No

Q20. Have you often lost sleep over your worries?

Yes ? No

Q21. Are you inclined to limit your acquaintance to a select few?

Yes ? No

Q22. Are you often troubled by feeling of sin or guilt?

Yes ? No

Q23. Do you often do your work whole heartedly (Sincerely)?

Yes ? No

Q24. Do you feel rather hurt very easily?

Yes ? No

Q25. Do you like to have many social engagements?

Yes ? No

Q26. Do you rate yourself as a tense or highly strung individual?

Yes ? No

Q27. Do you generally prefer to take the leadership in a group?

Yes ? No

Q28. Do you often experience periods of loneliness?

Yes ? No

Q29. Are you inclined to be shy in the presence of the opposite sex?

Yes ? No

Q30. Do you like to indulge in a reverie (day dreaming)?

Yes ? No

Q31. Do you always have a ready answer for remarks directed to you?

Yes ? No

Q32. Do you spend much time in thinking over good times you had in the past? Yes ? N o

Q33. Would you rate yourself as a happy go lucky individual?

Yes ? No

Q34. Have you often left restless and tried for no good reason?

Yes ? No

Q35. Are you inclined to keep quiet when out in a social groups?

Yes ? No

Q36. After critical moment is over, do you usually think of something you should have done but failed to do?

Yes ? No

Q37. Can you usually let yourself go and have a hilariously good time at a picnic?

Yes ? No

Q 38. Do ideas run in your mind that you cannot sleep?

Yes ? No

Q39. Do ideas run in your mind that you cannot sleep?

Yes ? No

Q40. Do you like work that requires considerable attention?

Yes ? No

Q41. Have you ever been bothered by useless thought repeatedly?

Yes ? No

Q42. Do you often take your work casually?

Yes ? No

Q43. Are you touchy on various subjects?

Yes ? No

Q44. Do other people regard you as a lively person?

Yes ? No

Q45. Are you often disappointed and sad?

Yes ? No

Q46. Would you rate yourself as a talkative individual?

Yes ? No

Q47. Do you ever feel restlessness that you cannot sit on a chair for a long time? Yes ? No

Q48. Do you like to play pranks on others?

Yes ? No

APPENDIX – D

Barratt Impulsiveness Scale, Version 11 (BIS-11):

DIRECTIONS: People differ in the ways they act and think in different situations. This is a test to measure some of the ways in which you act and think. Read each statement and put an X on the appropriate circle on the right side of this page. Do not spend too much time on any statement. Answer quickly and honestly.

(1) Rarely/Never (2) Occasionally (3) Often (4)Almost Always/Always

	1	2	3	4
1 I plan tasks carefully.	O	O	O	O
2 I do things without thinking.	O	O	O	O
3 I make-up my mind quickly.	O	O	O	O
4 I am happy-go-lucky.	O	O	O	O
5 I don't "pay attention."	O	O	O	O
6 I have "racing" thoughts.	O	O	O	O
7 I plan trips well ahead of time.	O	O	O	O
8 I am self controlled.	O	O	O	O
9 I concentrate easily.	O	O	O	O
10 I save regularly.	O	O	O	O
11 I "squirm" at plays or lectures.	O	O	O	O
12 I am a careful thinker.	O	O	O	O
13 I plan for job security.	O	O	O	O
14 I say things without thinking.	O	O	O	O
15 I like to think about complex problems.	O	O	O	O
16 I change jobs.	O	O	O	O
17 I act "on impulse."	O	O	O	O

18 I get easily bored when solving thought problems.	O	O	O	O
19 I act on the spur of the moment.	O	O	O	O
20 I am a steady thinker.	O	O	O	O
21 I change residences.	O	O	O	O
22 I buy things on impulse.	O	O	O	O
23 I can only think about one thing at a time.	O	O	O	O
24 I change hobbies.	O	O	O	O
25 I spend or charge more than I earn.	O	O	O	O
26 I often have extraneous thoughts when thinking.	O	O	O	O
27 I am more interested in the present than the future.	O	O	O	O
28 I am restless at the theater or lectures.	O	O	O	O
29 I like puzzles.	O	O	O	O
30 I am future oriented.	O	O	O	O

APPENDIX – E

Subjective Well-being Inventory (UBI)

Instructions

People are different. They live in a variety of situations and they do not feel the same way about life and the world around them. From a practical viewpoint, it is important to know how different persons feel with regard to their day-to-day concerns like their health or family. Such knowledge is necessary if an improvement in the quality of life of people is to be brought about.

This is a questionnaire on how you feel about some aspects of your life. Each question may be answered by any one of the given categories by putting a circle around the number which seems to represent your feeling best. For example, in the first question, if you feel that your life is very interesting, please put a circle around the response '1'. At times you may find that your feeling is not represented perfectly by any of the given response categories. In such cases, just choose the one closest to what you think.

All information given by you will be treated as confidential and will be used only for research purposes.

1. Do you feel your life is interesting?

Very much	1
To some extent	2
Not so much	3

2. Do you think you have achieved the standard of living and the social status that you had expected?

   Very much 1

   To some extent 2

   Not so much 3

3. How do you feel about the extent to which you have achieved success and are getting ahead?

   Very good 1

   Quite good 2

   Not so good 3

4. Do you normally accomplish what you want to?

   Most of the time 1

   Sometimes 2

   Hardly ever 3

5. Compared with the past, do you feel your present life is:

   Very happy 1

   Quite happy 2

   Not so happy 3

6. On the whole, how happy are you with the things you have been doing in recent years?

   Very happy 1

   Quite happy 2

   Not so happy 3

7. Do you feel you can manage situations even when they do not turn out as expected?

   Most of the time 1

Sometimes 2

Hardly ever 3

8. Do you feel confident that in the case of a crisis (anything which substantially upsets your life situation) you will be able to cope with it/face it boldly?

   Very much 1

   To some extent 2

   Not so much 3

9. The way things are going now do you feel confident in coping with the future?

   Very much 1

   To some extent 2

   Not so much 3

10. Do you sometimes feel that you and the things around you belong very much together and are integral parts of a common force?

    Very much 1

    To some extent 2

    Not so much 3

11. Do you sometimes experience moments of intense happiness almost like a kind of ecstasy or bliss?

    Quite often 1

    Sometimes 2

    Hardly ever 3

12. Do you sometimes experience a joyful feeling of being part of mankind as of one large family?

    Quite often 1

Sometimes 2

Hardly ever 3

13. Do you feel confident that relatives and/or friends will help you out if there is an emergency, e.g. if you lose what you have by fire or theft?

Very much 1

To some extent 2

Not so much 3

14. How do you feel about the relationship you and your children have?

Very good 1

Quite good 2

Not so good 3

Not applicable 4

15. Do you feel confident that relatives and/or friends will look after you if you are severely ill or meet with an accident?

Very much 1

To some extent 2

Not so much 3

16. Do you get easily upset if things don't turn out as expected?

Very much 1

To some extent 2

Not so much 3

17. Do you sometimes feel sad without reason?

Very much 1

To some extent 2

Not so much 3

18. Do you feel too easily irritated, too sensitive?

Very much	1
To some extent	2
Not so much	3

19. Do you feel disturbed by feelings of anxiety and tension?

Most of the time	1
Sometimes	2
Hardly ever	3

20. Do you consider it a problem for you that you sometimes lose your temper over minor things?

Very much	1
To some extent	2
Not so much	3

21. Do you consider your family a source of help to you in finding solutions to most of the problems you have?

Very much	1
To some extent	2
Not so much	3

22. Do you think I ht most of the members of your family feel closely attached to OUC another?

Very much	1
To some extent	2
Not so much	3

23. Do you think you would be looked after well by your family in case you were seriously ill?

Very much 1

To some extent 2

Not So much 3

24. Do you feel your life is boring/ uninteresting?

Very much 1

To some extent 2

Not so much 3

25. Do you worry about your future?

Very much 1

To some extent 2

Not so much 3

26. Do you feel your life is useless?

Very much 1

To some extent 2

Not so much 3

27. Do you sometimes worry about the relationship you and your wife/husband have?

Very much 1

To some extent 2

Not so much 3

Not applicable 4

28. Do you feel your friends/relatives would help you out if you were in need?

Very much	1
To some extent	2
Not so much	3

29. Do you sometimes worry about the relationship you and your children have?

Very much	1
To some extent	2
Not so much	3
Not applicable	4

30. Do you feel that minor things upset you more than necessary?

Very much	1
To some extent	2
Not so much	3

31. Do you get easily upset if you are criticized?

Most of the time	1
Sometimes	2
Hardly ever	3

32. Would you wish to have more friends than you actually have?

Very much	1
To some extent	2
Not so much	3

33. Do you sometimes feel that you miss a real close friend?

Very much	1
To some extent	2
Not so much	3

34. Do you sometimes worry about your health?

Very much	1
To some extent	2
Not so much	3

35. Do you suffer from pains in various parts of your body?

Most of the time	1
Sometimes	2
Hardly ever	3

36. Are you disturbed by palpitations/a thumping heart?

Most of the time	1
Sometimes	2
Hardly ever	3

37. Are you disturbed by a feeling of giddiness?

Most of the time	1
Sometimes	2
Hardly ever	3

38. Do you feel you get tired too easily?

Most of the time	1
Sometimes	2
Hardly ever	3

39. Are you troubled by disturbed sleep?

Most of the time	1
Sometimes	2
Hardly ever	3

40. Do you sometimes worry that you do not have close personal relationship with other people?

Very much	1
To some extent	2
Not so much	3

APPENDIX – F

Semi Structured Interview Schedule

Q1: Please specify in detail the reasons for joining de-addiction centre?

Q2: Please specify in detail the reasons for not joining de-addiction centre?

APPENDIX – G

Demographic Data Sheet

Please Furnish the Following Demographic Information

Gender _____

Age _____

Occupation _____

Monthly Income _____

Residence _____ Rural _____Urban_____

Marital Status _____

Nuclear Family _____ Joint Family _____

Father's Occupation _____

Mother's Occupation ___ _____

Mother's Education _____

No of Brother _____

No of Sister _____

Research Scholar

Department of Psychology

University of Kashmir