DRUG-RELATED SELF-ESTEEM, LOCUS OF CONTROL, PERCEIVED SOCIAL SUPPORT AND PERSONALITY TRAITS: EFFICACY OF MOTIVATION ENHANCEMENT THERAPY ON SUBSTANCE USERS

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DECLARATION

I, **Ms. Samia Yasmeen,** Registration No. **54- FSS/PHDPSY/F18** student of **PhD** in the subject of Psychology, session **2018-2023**, hereby declare that the matter printed in the thesis titled**: DRUG-RELATED SELF-ESTEEM, LOCUS OF CONTROL, PERCEIVED SOCIAL SUPPORT AND PERSONALITY TRAITS: EFFICACY OF MOTIVATION ENHANCEMENT THERAPY ON SUBSTANCE USERS,** is my own work and has not been printed, published and submitted as research work, thesis or publication in any form in any University, Research Institution etc. in Pakistan or abroad.

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Abstract

The term "Substance use" is commonly used for the addiction or substance abuse. Substance use is a rapidly spreading problem all over the world and in Pakistan.

In the current study, efficacy of motivation Enhancement Therapy for the improvement in drug-related self-esteem and drug-related locus of control of substance users as compared to general counseling sessions has been investigated. For this purpose the current research was divided into four studies. By using Cross sectional research design, first three studies were carried out with the help of convenient sampling technique to collect data. For main study, Pre-test post-test Non-equivalent control Group design was carried out with the help of Combination of stratified and systematic random sampling technique to collect data from intervention (n=20) and control group (n=20). Overall age range of the sample was 15 to 55 years from different rehabilitation centers of twin cities (Rawalpindi & Islamabad) of Pakistan. Urdu version of drug-related locus of control scale (α= .87) Drug-related self-esteem scale (α= .72), Multidimensional scale for perceived social support Urdu Version (α= .98) and Big Five Personality Inventory (α= .87) were used.

Results indicated that there is a significant positive relation of drug-related self-esteem with perceived social support (r=.85 , p< .01), personality traits i.e. extroversion (r= .58, p<.01), agreeableness (r= .24, p<.01), Conscientiousness (r= .19, p<.01), Neuroticism (r= .18, p<.01)and openness to experience (r= .23, p<.01), while negative relationship with drug-related locus of control (r= -.83, p<.01). Negative correlation between DRSE and DRLOC means there is a significant relationship between drug-related self-esteem and drug-related internal locus of control among substance users. Drug-related locus of control has positive correlation with perceived social support, (r= .85 p<.01) and personality traits i.e. extroversion (r= .54, p<.01), agreeableness (r= .26, p<.01), openness to experience (r= .26, p<.01) and

Conscientiousness (r= .28, p<.01) but non-significant relationship with Neuroticism (r= .13, p=ns).

Mediation analysis showed that personality traits i.e. agreeableness, openness to experience and Conscientiousness has significant positive indirect effect on drug-related self-esteem through perceived social support, β= .85, *t*= 3.57, *p*= .000, 95% BC*a CI* [.38, 1.32]; β= .74, *t*= 3.33, *p*= .001, 95% BC*a CI* [.30, 1.17]; β= .65, *t*= 2.68, *p*= .008, 95% BC*a CI* [.17, 1.13] among substance users. The findings also suggest that perceived social support partially mediates the relationship between extroversion and drug-related self-esteem, β= 2.15, *t*= 10.13, *p*= .000, 95% BC*a CI* [1.73, 2.57].

Mediation analysis also reveals that personality traits i.e. openness to experience and Conscientiousness has significant positive indirect effect on drug-related locus of control through perceived social support, β= .22, *t*= 3.30, *p*= .001, 95% BC*a CI* [.09, .36]; β= .26, *t*= 3.59, *p*= .000, 95% BC*a CI* [.12, .41], among substance users. The findings also suggest partial mediation effect of perceived social support in relationship between extroversion, agreeableness and drug-related locus of control, β= .65, *t*= 9.95, *p*= .000, 95% BC*a CI* [.52, .78]; β= .31, *t*= 4.38, *p*= .000, 95% BC*a CI* [.17, .46].

The findings from the main study suggested the significant difference in Drug-related self-esteem (t (39) = -4.36**, p< 0.01) and locus of control (t (19) = 8.31**, p< 0.01) before and after Motivation-enhancement Therapy showing improvement in DRSE and DRLOC after intervention (MET). For instance, results also revealed significant difference in drug-related self-esteem (*t (19) = -5.24**, p<0.01*) and drug-related locus of control (*t (19) = 12.08**, p<0.01*) before and after taking intervention (bio-psycho-social) among participants from control group. While comparing the effects of both interventions (MET & Bio-psycho-social Model) before and after intervention, it was suggested that there was a significant difference of drug-related locus of control (*t (38) = -7.08**, p<0.01*) and drug-related self-esteem (*t (38)*

= 2.97**, p<0.01) after the intervention between two groups. The result shows that the MET improves drug-related internal locus of control (*M*=18.4, *SD*=2.32), Drug-related self-esteem (*M*=81.1, *SD*=8.83). Negative relationship between drug-related locus of control and drug-related self-esteem suggests that after MET substance users shown to have drug-related internal locus of control by taking their responsibility to control over their drug use and outcomes of drug-related life.

Both Motivation Enhancement therapy and Bio-psycho-social model are effective for eliciting change in the client's positive personality characteristics i.e. drug-related self-esteem, self-competence, self-confidence, self-regard and drug-related internal locus of control but MET is proved to be more effective in enhancing these characteristics than bio-psycho-social model.

Keywords: *Drug-related Self-esteem, Self-competence, Self-confidence, Self-regard, Drug-related Locus of Control, Personality Traits, Neuroticism, Openness, Extraversion, Agreeableness, Conscientiousness, Perceived Social Support, Depression, Criminal Offense, Prison, Substance Use.*

Chapter I

Introduction

Substance use is a rapidly spreading problem all over the world in this regard Pakistan is also no exception mostly because of negligence of influential authorities regarding its eradication, production and trafficking. Cannabis, opium and heroin are the most commonly abused drugs in Pakistan because of their easy availability as well as cheap rates (UNODC, World Drug Report, 2017). The term "Substance use" is commonly used for the addiction or substance abuse. International Classification of *Diseases*, eleventh edition (ICD-11) defined substance use as "A cluster of physiological, behavioral, and cognitive phenomena in which the use of a substance or a class of substances takes on a much higher priority for a given individual than other behaviors that once had greater value" (World Health Organization, 2018). The notable signs of substance use disorder are the combination of behavioral, cognitive and bodily symptoms which indicates the individual's presence of substance use (Diagnostic and Statistical Manual of Mental Health -5, 2013).

As reported by the United Nations Office on Drugs and Crime (UNODC) world drug report published in 2020, an estimated 269 million people used illegal drugs worldwide in 2018 which is 30 percent higher from the year 2009 while cannabis was the most illegally used drug in 2018 as 192 million people across the world using the cannabis. While comparing with other drugs, opioid remained the most lethal and harmful drug category with mortality rate of up to 71 percent. Adults and adolescents are reported to be the largest users of illicit drugs especially psychoactive drugs. Cocaine and methamphetamine use is also rising up in younger adults. In this regard, it is observed that 19 million people used cocaine and roughly 27 million people used amphetamines in 2018 (United Nations Office on Drugs and Crime, 2020).

The increase in substance usage around the globe is alarming. In Pakistan a study conducted in 2010 on the statistics of substance users by UNODC estimated that around

628,000 are opioid users, out of which 77 percent were heroin addicted (484,000) and remaining were other types of opiates users. Baluchistan was the province with highest prevalence of opioid use as compared to NWFP, Punjab and Sindh. However estimated 200,000 people in Punjab were opioid users with majority of the heroin users or poly drug abusers. Mostly opioid users initiate substance use with the cannabis as a first experienced drug at the approximate age of 18 years. However many of the substance users start with other drugs like tranquilizers, sedatives, opium inhalants, hypnotics and benzodiazepines. Estimated 125,000 are injecting drug users in Pakistan which was alarmingly doubled since 2000 (United Nations Office on Drugs and Crime, 2010). Number of factors involved in initiation, continuation, prevention and relapse of substance use i.e. personality traits, level of social support and personal characteristics of self-esteem, self-control, locus of control.

Self-esteem is much more important aspect of human psyche through which a person negatively or positively evaluates his self. Self-esteem is one of the influential constructs which could be affected by substance use and related activities such as criminal acts, violation of societal rules and norms, lack of productivity for professional tasks. Once an individual starts taking any type of drug, many behavioral and psychological changes arise due to the chemical reactions of that drug as well as due to the reactions coming from the society significant to that individual. This unique prospective related to the self-esteem was supported by the term specific collective state self-esteem introduced with reference to social identity theory (Hogg, 2016; Martiny & Rubin, 2016). It can be inferred that self-esteem combined with substance use leads toward the characteristic of drug-related self-esteem. Drug-related self-esteem refers to an individual's perception of their own worth or value in relation to their involvement with drugs. Understanding how drug use can impact an individual's self-esteem is crucial for exploring the complex psychological dynamics at play. According to Gecas (1982), self-esteem consists of two main dimensions i.e., competence and worth (Gekas, 1982; Gecas & Schwalbe, 1983).The competency dimension refers to individual's tendency to think about them as

efficacious and capable of doing things in their life. Second dimension of worth (worth related self-esteem) is the tendency of an individual to feel personal value or usability for their life and environment (Burke et al., 2002).

It is observed that self- esteem plays important role for under treatment substance users in achieving their drug related self- control in order to attain successful and complete abstinence. Since self- esteem is directly related to feelings of control over situations, events and circumstances. Abuse or miss use of any type of drug influences one's sense of self and self-esteem. Drug addict go through multiple psychological, mental, social and spiritual negative changes.

Therefore treatment of substance users and alcoholics depends upon the insight they have about the disease, personality patterns, behavioral patterns, thought processes and the potentials they secure to achieve complete or partial abstinence. Drug related feeling of self - control is necessary for drug addicts to get recovery from addiction. It is related to a person's thought process that include individual's recovery depends upon external feedback, luck, support or the flexibility of other's social behaviors rather than personal effort, self-control and motivation to change. Such type of thought processes will threat individual's abstinence from drug and hinder the positive behavioral change. Locus of control also refers to an individual's belief in their ability to control events and outcomes in their lives. By examining how drug-related behaviors can influence an individual's sense of control, you can gain insights into the factors that contribute to drug dependency and addiction. The person who believes in his struggle and individual efforts to remain abstinent will believe that good consequences and support from the outside will increase his self-confidence and self-esteem.

A part from drug-related self-esteem and drug related locus of control, perceived social support is also an important aspect in the life of substance users. Perceived social support can be defined as the individual's perception about surrounding social system as supportive in terms of companionship, informational, emotional and tangible resources. Therefore the

construct reflects the individual's perception of how much he or she can rely on the personal social network in need of assistance. These personal social networks may involve family, peers, friends and coworkers (Giulia et al., 2021). This concept delves into how individuals perceive the support they receive from their social networks, such as family, friends, or community. Exploring the correlation between drug use and perceived social support can shed light on how these support systems impact an individual's drug-related behaviors.

Like perceived social support, personality traits are also considered as the risk factors for substance use. On the other hand substance use can also have an impact on the manifestation or exhibition of personality traits of an individual. Personality traits encompass an individual's unique patterns of thoughts, feelings, behavior, reactions, emotional control and dealing with stressful life events. By studying how specific personality traits relate to drug use, you can gain a better understanding of the underlying psychological factors that contribute to drug-related behaviors (Diener & Lucas, 2013).

Self-Esteem

Self-esteem is a widely studied construct that is based upon three presumptions; each notion has been studied independently. First, conceptualization is that self-esteem is an "outcome" that focuses on the process through which self-esteem can be produced or inhibited (Coopersmith, 1967; Harter, 1993; Peterson & Rollins, 1987; Rosenberg, 1979). Second, is the concept of "self-motive", according to which the researcher studies the individual's predisposition to behave in a way that increase and maintain positive self-concept (Kaplan, 1975; Tesser, 1988). Third, conceptualization of self-esteem is to study as a "buffer" of self which protects the individual from negative and harmful experiences (Burke et al., 2002).

Self-esteem is person's perception of one's own value. This perception is mainly based upon individual's daily life experiences, reactions, thinking pattern about one's own actions and the idea of individual about other's perception about their thinking and actions. Person

with high level of self-esteem have insight about their qualities which develop great trust upon their decisions which ultimately increase confidence in their self-worth. On the other hand people with low self-esteem consider themselves as worthless, incompetent and unlovable. They secure negative belief system about their environment which subsequently leads them towards lack of trust upon other people, feeling that others try to humiliate them. They also secure negative beliefs about themselves being not important for others and for society which is manifested by separation from society and loneliness.

Likewise according to Gecas (1982), self-esteem consists of two main dimensions, competence and worth (Gekas, 1982; Gecas & Schwalbe, 1983).The competency dimension refers to individual's tendency to think about them as efficacious and capable of doing things in their life. Second dimension of worth (worth related self-esteem) is the tendency of an individual to feel personal value or usability for their life and environment (Burke et al., 2002).

Nayler (2010) defined six categories of self-esteem in order to clarify the concept of self-esteem. These categories included;

Global Self-esteem. A comprehensive or collective positive or negative opinion of the individual about self at any single occasion (Harter, 1993).

Domain Specific Self-esteem. Individual's perception about self in regard of specific area of functioning such as study, sports, occupation.

Trait self-esteem. Refers to one's lifelong view or perception of social acceptance or rejection (Leary et al., 1995).

State Self-esteem. Individual's perceptual changes about social acceptance in a particular setting.

Stable Self-esteem. Refers to more stable and strong emotional reactions to ego threats coming from environment.

True or Authentic Self-esteem. Refers to the more stable, positive and high self-esteem which an individual holds (Nayler, 2010).

Moreover, self-esteem hypothesis can be addressed in terms of specific collective state self-esteem (Abrams & Hogg, 1988; Martiny & Rubin, 2016; Rubin & Hewstone, 1998, 2004; Turner, 1999). Specific collective state self-esteem can be defined as "the current evaluation of a specific social identity" which can be compared with personal, global trait self-esteem referred as overall self-evaluation across extended period of time (Martiny & Rubin, 2016).

Theories of Self-Esteem

There are several theories that have conceptualized the construct of self-esteem and they mostly deal with general concept of self-esteem. James (1890) defined self-esteem with a single formula of success and pretension. If we have high potential and goals but we actually achieved low, so we will consider ourselves as failure. On the other hand if we have low expectations from ourselves but we achieved higher level of goals so this will increase our confidence as well as self-esteems (James, 1890; Nayler, 2010).

On the other hand Self-determination theory of self-esteem of Ryan and Deci (2004) focuses on the satisfaction of psychological needs as determinant of self-esteem. This theory based upon Abraham Maslow's concept of hierarchy of needs which if fulfilled or satisfied will ultimately lead the person towards feelings of self-actualization, autonomy and personal growth. When something goes wrong or uncertain, we feel dissatisfied, worthless and bad about ourselves (Nayler, 2010; Ryan & Deci, 2004).Self-determination theory is widely used theory in the field of drug addiction studies while defining about needs, mental wellbeing, self-control, self-esteem and many other constructs.

Morris Rosenberg Theory. Morris Rosenberg theory (1965) of self-esteem concludes that individual suffers from uncertainty of life during adolescence, these uncertain experiences lead towards the development of self-esteem. It is the result of the process of comparison between self and others. A person first compare himself with his siblings, peers or significant others and then evaluate themselves on the basis of values and social perceptions.

Most significant theory defining the relationship between study phenomena is Social identity theory of self-esteem to investigate self-esteem and related variables like drug-related locus of control, perceived social; and personality traits (Rosenberg, 1965).

Social identity theory of Self-esteem. Tajfel and Turner proposed the theory of social identity in 1970 which offers an explanation for why conflicts arise between different groups of people (Hogg, 2016; Tajfel & Turner, 1979; Turner, 1975). It suggests that when people identify with a particular group, their behavior is influenced by how they perceive that group and its values. This theory focuses on how individuals' identities are shaped by the groups they belong to, rather than solely on their personal behavior within those groups. Hence, in social identity theory, the emphasis is placed on understanding how social groups play a significant role in shaping an individual's thoughts and behavior, rather than solely focusing on how individuals behave within those groups. It explores how the psychological representation of a group influences individuals and their interactions with others. The social identity theory mainly propose that individuals are more motivated to enhance and protect the image of the group to protect their own self-esteem.

The social identity theory explains the construct of self-esteem on the basis of Tajfel's two "great ideas" (Turner, 1996). First idea was that when people categorize themselves into different social groups, it leads to a cognitive process where they tend to highlight similarities among those within their own group, while emphasizing differences between individuals belonging to different groups. This cognitive accentuation contributes to the transformation of

an individual's self-perception from being solely focused on their unique personal identity to identifying more strongly with the stereotypical characteristics of their social group. Essentially, it explains how people start seeing themselves as interchangeable with other members of their own group, forming a social identity. These are known as so called in-group social biases.

While the second great idea proposes that individuals gather information about the worth or value of their own group by comparing it to other groups that are noticeable or salient to them. These intergroup comparisons are made on dimensions that are relevant and significant for establishing a positive status or distinctiveness for their own group. The goal is to highlight the positive aspects of their in-group in order to enhance their group's identity and boost their sense of belonging. For instance, people share social identity with group not only to affiliate but also to protect and make their in-group stronger than out-group.

Tajafel and Turner explained the social identity theory of self-esteem as;

1. People of the same community tend to have psychological connection and sense of belongingness called social identity.
2. Individuals have a fundamental need for positive self-esteem. This need drives them to engage in behaviors that contribute to the creation, maintenance, and protection of a positive social identity.
3. One effective way to achieve this is by enhancing the social status of the group to which they belong.
4. By collectively supporting and valuing their in-group while simultaneously devaluing or derogating out-groups, known as in-group bias, the social status of the in-group can be elevated in comparison to other groups. This helps to bolster the positive perception and esteem of the social identity associated with their in-group.

5.   People are indeed motivated to exhibit in-group bias as a means to create, maintain, and protect a positive social status for their own group. By favoring their in-group and denigrating out-groups, individuals aim to enhance the reputation and standing of their group within society. This, in turn, contributes to the development of a positive social identity for themselves and fellow in-group members. The motivation behind in-group bias lies in the desire to secure a sense of belonging, pride, and self-esteem through the positive recognition of one's in-group and its social status.

These points explain well about the construct of Specific collective state self-esteem which entails that successful between group differences and discriminations enhance self-esteem while threatened or depressed self-esteem motivate inter-group discriminations (Hogg & Abrams, 1990; Martiny & Rubin, 2016).

Locus of Control

Locus of control refers to one's perception about control over life circumstances (Grantz, 1999; Khan, 2011). Rotter (1966) divided the locus of control into two forms: internal locus of control and external locus of control. Individual who are high on internal locus of control believes that future outcomes are primarily dependent upon one's own actions, will or initiative, whereas those who have external locus of control perceive things as going on because of the factors which are not under their control such as chance, fate, luck, biases (Khan, 2011). People with internal locus of control secure the ability to proactively involve in attainment of goals, social interactions, and interpersonal relationship improvement and spontaneously involved in activities leading toward achievements. Internal locus of control is also associated with good sense of wellbeing, improved performance, alertness, confident decision making and urge for information seeking. On the other side external locus of control is related to some psychological weaknesses like depression, feelings of anxiety and poor ability to handle or face stressful life events (Carton & Nowicki, 1994; Hall, 2001; Lefcourt, 1991). Individual with poor self-esteem will more likely face problems related to feelings of locus of control over drug

addiction which in turn causes some psychological issues like depression, hopelessness, feeling of incompetency and worthlessness.

Drug-related Locus of Control

Substance use commonly termed as addiction is a chronic relapsing disease or disorder in which an individual compulsively abuse any substance and feels inability to control over use. This repetitive and compulsive use is linked with the damages or disruption in brain reward pathways and brain chemical activities which control behaviors and emotions. For example an individual suffering from substance use disorder significantly feels lack of self -control, attention, reasoning or other cognitive functions and have inability to control maladaptive behaviors (Ersche et al., 2012). This sense of control over drugs and the consequences of drugs is called drug-related locus of control. Drug-related locus of control refers to an individual's belief or perception of control over their drug-related behaviors and outcomes (Hall, 2001). It focuses on understanding whether a person feels that they have internal or external control in relation to drug use and its consequences. There are three main types of locus of control: internal, external, and chance. Individuals with an internal locus of control believe that they have control over their drug-related behaviors and outcomes. They perceive their actions as having a direct influence on whether they use drugs or engage in drug-related activities. They feel responsible for their choices and are more likely to believe that their efforts can help them overcome drug-related issues. On the other hand, individuals with an external locus of control believe that external factors or forces outside of their control determine their drug-related behaviors and outcomes. They may attribute their drug use to social or environmental factors, such as peer pressure or availability of drugs. They may feel less responsible for their actions and may be more inclined to believe that it is difficult to change their behavior. Another type of external locus of control is chance locus of control. Some individuals may have a chance external locus of control, meaning they believe that luck or random events influence their drug-related behaviors and outcomes. They might view drug use as a matter of chance, without

feeling a strong sense of personal control or influence over their actions. It is important to note that an individual's locus of control can influence their motivation to change their drug-related behavior. Those with a stronger internal locus of control may be more motivated to seek help, engage in treatment, and make positive changes in their lives. However, everyone's locus of control is unique and can vary depending on the situation and individual experiences. Understanding an individual's drug-related locus of control can be helpful in tailoring interventions and treatments that address their specific beliefs and perceptions. It can also guide efforts to empower individuals to develop a greater sense of control over their choices and outcomes related to drug use.

Moreover, substance users have problem with their lack of insight regarding these biochemical activities going on in their brains and they simply consider their drug abuse resulting from some external forces like environmental biases, criticism, peer pressure, social pressure, interpersonal issues, luck and calamities. Drug addicts overlook some higher mental processes which are directly involved in controlling one's emotional regulation, motivation, self-control, taking initiative, behavioral control as well as desire regulation. As described earlier, drug addicts have myth that their choice of compulsive drug abuse is under the control of external factors therefore mostly rehabilitation centers use contingency management therapy technique to change their maladaptive behavioral patterns. They usually believe that reward for their good behaviors can solve their issues related to relapse.

Theories of Locus of Control

Many theorists have defined the notion of locus of control. But three theories are very important because of their theoretical description about the phenomena of locus of control. First theory is theory of learned helplessness that stress on the disturbed affects, motivation and disruption in learning which is followed by exposure to uncontrollable results. According to Seligman (1975), depression and other psychological issues occur when a person perceives that he or she has no control over outcomes of events or circumstances (Khan, 2011; Seligman,

1975). There are three components of definition of learned helplessness; cognition, behavior and contingency (Christopher, et al., 1993; Khan, 2011). The second theory is social learning theory introduced by Rotter (1971) that defines human behavior in terms of expectancies, social reinforcements and goals. Individual's behavior is directly associated with the goals set for life and the ways in which people or environment reinforces their goal directed behavior. These theories have valuable frame work on the construct of locus of control whereas the attribution theory is more valuable and prominent in describing about drug related locus of control.

Attribution Theory. Heider (1958) introduced the concept of attribution in order to define the individual's ways of perception about self, others and the situations around them. Heider and colleagues developed the Attribution theory which refers the person's pattern of explaining the behaviors of others and the ways in which they explain their own behaviors (self-attribution style). He defined two types of attribution styles;

Dispositional Attribution. In which events and outcomes are attributed towards internal factors and

Situational attribution. In which events and outcomes are perceived as the result of external factors (Khan, 2011; Sprinthhall & Sprinthhall 1995). Heider (1958) differentiated between internal and external attributions categories. Internal attributions consist of individual's characteristics of attitude, personality, abilities, moods and efforts he uses for behavioral responses. This can also be conceptualized as the internal locus of control. External attributions involve the factors like luck, people, situation or type of task causing specific consequences which is pointing towards the idea of external locus of control. Attribution theory of motivation is associated with locus of control because individual's explanations, projections or justifications about self or situations around them influence their motivation. We can take the idea about the drug related locus of control and addict's inability to motivate them towards gaining abstinence. This theory also incorporate the self-esteem concept and self-efficacy theory in the sense that one's attribution about self has strong influence upon the ways in which they interpret the failure or success of their struggle for abstinence and recovery. If they

perceive negative outcomes of their efforts, they feel lack of self-efficacy, lack of locus of control which leads them towards having poor self-esteem. This theory has assumption that people try to interpret their external situations in manners which help to maintain their positive self-concept (Khan, 2011; Weiner, 1992).

According to attribution theory, internal locus of control is linked with self-confidence, physical wellbeing and optimism. People having internal locus of control are likely to have more control over delaying their gratification and also can easily attribute their success towards their personal abilities and efforts. People having external locus of control while facing failure in their life ultimately develop anxiety, depression or stress (Khan, 2011).

Depression

Depression is the physical and psychological condition which can be precipitated by some events, situations, internal or external cues, failure and losses. According to the American Psychiatric Association, depression is an illness consists of medical and psychological signs which disrupt the way people feel, think and behave. It consist of persistent feelings of low mood, loss of interest or pleasure in usual activities, increased or decreased appetite, loss of weight or gaining weight, disturbed sleep or insomnia, loss of energy, feelings of worthlessness, guilt feelings, inability to concentrate leading towards difficulty memorizing things, suicidal ideation or attempt. These symptoms must persist for at least two weeks to diagnose depression (Diagnostic and Statistical Manual of Mental Disorders (DSM-5), Fifth edition, 2013).

There are several risk factors or precipitating factors for depression such as biochemical changes, genetic factors and environmental factors (exposure to abuse, neglect, violence, social criticism or poverty). Personality factors play a major role in the development of depression such as relationship between self-esteem and depression is commonly observed. People having low self-esteem can be easily stressed out, or those who have pessimistic personality trait are more likely to have depressive experience (DSM-5, 2013; Parekh, 2017).

Theories of Depression

There are several theoretical perspectives on the etiology of depression. They all focus on different conceptual framework and belong to different schools of thought including behavioral, psychodynamic, humanistic and cognitive. According to behaviorism school of thought, environment plays a significant role in developing depression in an individual. Person's interaction with environment is the key to initiation and prolongation of depression.

For instance psychodynamic theorists defined causes of depression as person's self-directed passive anger, extremely imposed demands of super ego(Freud, 1917), oral or anal personality need fixation, narcissistic demands (Chodoff, 1972), low or lack of self-esteem (Bibring, 1953; Fenichel & Bazelon, 1968) and separation anxiety during the first year of life because of deprived mother to child relationships (Kleine, 1934). The self-directed anger effects and reduces the person's self-esteem which makes the person more vulnerable to develop depression (McLeod, 2015). Current study also focused the psychodynamic perspective of causes of depression and believed that low or lack of self-esteem have significant role in initiation and prolongation of depression and its relationship with drug-related locus of control.

Personality Traits

Personality traits are the stable pattern of individual's thinking, feeling and behavior that tends to be persistent over different time across the relevant situations. The concept of personality traits may be as old as human communication styles or language itself. Aristotle (384- 322 BC) proposed that dispositional factors such as modesty, vanity and cowardice are the major determinants of morality or immorality.

While defining the personality traits, we can find two main assumptions. First defines the personality traits as a stable pattern over time but behavior can vary naturally from occasion to occasion but would maintain consistency which defines the individual's 'true nature'. On

the other hand the second assumption about personality traits argues that individual's traits influence the behavior directly. Aristotle defined in a more subtle and reciprocated hypothetical way that dispositions may develop through actions which intern influence the actions of an individual (Mathews et al., 2003).

Personality traits can also be defined as "an individual's characteristic patterns of thoughts, behavior and emotions companied with psychological mechanisms might be hidden or not behind those patterns" (Funder, 1997).

Carver and Scheier (2000) also explained that personality traits are "dynamic organization of psychophysical systems inside the person that create a person's characteristic patterns of behavior, thought and feelings". They also suggest that there are certain common features and some particular/specific features of human beings. For example we all experience stresses and ultimate increase in cortisol level along with compromised immune systems thereof. But each of us have unique inclinations and manifestations of that type of stress for example, some of us may experience anxiety during the time of exams or interview while others may feel such type of anxiety while meeting strangers or traveling by plane. On the other hand some of us may perform our best under pressure while other may do their task only under relaxed condition. These types of differences or differences in behavioral patterns make these variables or traits different from individual to individual (Carver & Scheier, 2000).

To achieve this goal, personality theorists have attempted to identify, explain, assess and predict the systematic differences and commonalities between individuals in order to look into the fundamental and general causalities of human behavior. For instance they have tried to prove personality traits as the stable and general characteristics that may explain one's tendencies to act in one way or in another. They focused on the usefulness of the concept of personality traits which will help to predict and understand human behavior and will provide the opportunity to broaden our knowledge about the individual.

Theories of Personality Traits

Traits refer to the inherent relationship between observable behavior and internal dispositional factors which precipitate a specific act. This association between internal and external dispositions indicate the individual's persistent patterns of behavior and determine the individual differences. On the other side, behavioral differences within the individual across the different situations can be conceptualized as states or situational approaches. According to Cattell (1957), biological instincts of hunger, thirst, sex and aggression should also be considered as an individual's personality because they also motivate towards a goal directed behavior. For instance traits only predict behavior and influence the person psychologically that predispose an individual to act. In a way, state and traits are two different conceptual levels to explain the personality (Cattell, 1957).

Traits may also define the individual's choices of a situation but are expressed or manifested in different behavioral patterns which constitute better predictor of general than specific behaviors. To explain more clearly, we can take the example of measuring trait anxiety that will be more accurate predictor of an individual's stress experiences during the next five years rather than during a specific exam or task. There is little change in the major personality dimensions across the life span, especially after the age of 30 years old. Behavioral genetic studies evident the stability of traits and suggested that there is significant genetic influence on personality traits.

Many theories attempted to conceptualize the broad concept of personality which include the Eysenck's Gigantic theory, biological theory of personality, Gray's personality theory, Cattell's 16 personality factors theory and the Five Factor model or big five personality theory. The current study will focus on the big five personality theory to describe and measure the construct of personality traits.

Eysenck's Gigantic Three and The Biological Basis of Personality Traits. This theory was developed by Eysenck (1947), suggested that every individual can be classified according to three major dimensions of Extraversion, Neuroticism and Psychoticism. Many different types of instruments were designed on the basis of this gigantic theory which includes original Maudsley Medical Questionnaire (MMQ), Revised Eysenck Personality Questionnaire (EPQ-R), Eysenck Personality Inventory (EPI), and Eysenck personality profile (EPP) (Eysenck et al., 1985; Jackson et al., 2000).

Theoretically, each dimension assessed by EPQ-R are independent to each other which means high scores in one dimension do not provide any information about the scores on other dimensions. One can be introverted and stable or stable and extroverted and so on. Therefore, the explanation of one's personality would not be completed unless these three personality traits are evaluated. According to the gigantic three dimension theory, no other traits or characteristics are required to describe the individual's personality.

Therefore, Eysenck also explained the three dimensions of the personality and explained the Neuroticism as an individual's level of emotionality and tendencies towards stress, sadness, mood swings, and anxiety. It is a state of intense upset and distress. Individuals with high level of Neuroticism tend to be more anxious, distressed, fearful, shy, lack confidence and pessimistic with lower level of self-esteem. On the other hand extraversion evaluates the individual's tendencies towards socialization, talkativeness, outgoing and energetic qualities. People with dominance of extraversion tend to enjoy socialization, love to express their sentiments and feelings, they are more optimistic, confident and energetic towards life circumstances.

Moreover the last dimension of the gigantic three traits of personality is psychoticism which refers to the individual's quality and level of conformity, aggressiveness and feelings for others in the society. High level of psychoticism tend to show individual's emotional cruelty, risk taking, impulsivity, pleasure and sensation seeking. People with high psychoticism

are more sociopath and psychologically unattached to other people in near surroundings. Low level of psychoticism refers to the individual's qualities of more caring, rules oriented, responsible and socially driven one.

Another important element of Eysenck's theory is explanation of personality traits and individual differences on the basis of biological functioning. He proposed that differences in level of three traits like neuroticism, extraversion and psychoticism are also caused by genetic factors which make them unchanged throughout the life span. Brain's sensitivity to stimulation and cerebral arousability are the factors which contribute the differences in temperament. Two major systems like brain-stem reticular formation is responsible for controlling corticular arousal produced by each incoming stimulus and reticulolimbic area composed of the amygdala, hippocampus, septum, cingulum and hypothalamus regulated the responses to emotional stimuli(Eysenck, 1947).

Gray's Personality Theory. Gray's personality theory is also known as the behavioral activation system or behavioral inhibition system personality theory developed by Jeffrey Gray (1934-2004). Gray's model was initially considered as the variation of the Gigantic Three theory of Eysenck but later proved to be an alternative to Eysenck's. Gray's theory of personality was also useful to understand the unique aspects of motivation and emotions because he developed the theory on the basis of experiments on animals especially on rats. He proposed that like other animals human being also may respond actively (by fighting) or passively (by flying or running away) to the threatening stimuli. These responses can be conceptualized at three biological levels which corresponds to the three structures of the brain involving amygdala, ventromedial hypothalamus and the central gray of the midbrain (Gray, 1981).

Moreover the theory mainly based upon the principles of operant conditioning (reward and punishment) and effects of that conditioning on the brain. Gray and Eysenck worked on the different explanatory levels of the same phenomena but Gray explained in very refined

manner, the neuropsychological processes responsible for individual differences in personality. Gray (1982) defined that Behavioral activation system initially makes the individual aware of the reward and motivates the individual's behavior towards reward seeking by giving signals of initiation that triggers the goal directed or reward obtaining behavior.

In the same manner Behavior Inhibition System (BIS) can be described as anxiety system that prevents or inhibits the behaviors with possibilities of potential punishment, lack of reward or negative outcomes by increasing individual's insight or awareness about the potential negative consequences of particular behavior. Gray exemplified BIS mechanism with the fear of snake which inhibits individual's behavior of touching it and prompts the act of running away. This mechanism can be expressed in terms of neurotic anxiety and depression (Gray, 1987).

Furthermore, he also discussed the connection between biological activities of the brain with reference to these two systems (behavior Inhibition System and Behavior Activation System) and explained that the two systems are related to the mechanism of arousal localized in the reticular formation known as dorsal noradrenergic bundle. Most important contribution of Gray's theory for personality traits is the distinction between two different dimensions of impulsivity and anxiety compared to Extraversion and Neuroticism respectively. Hence Gray's model is beneficial because of its work at both situational and dispositional levels.

Cattell's 16 PF and the Lexical Hypothesis. Another prominent model of personality that developed by Raymond Cattell (1905-98) believed that there are 16 major dimensions of personality. His theory was based on lexical hypothesis which assumes that every single aspect of individual's personality can be defined by listing words. According to the lexical hypothesis, there are sometimes different words to explain the same characteristic or aspect of personality that can be reduced substantially (Horn, 2001). The list of different words ranged from 4500 words and Cattell initially obtained 180 words, then reduced from 46 to 42 and eventually took 16 personality traits. Many variables that are related to everyday events happens to be related

like drug addiction and alcohol use are different but relevant or similar behaviors. Although many researchers failed to replicate these primary and secondary traits of the 16PF. Cattell also failed to replicate these personality traits.

The Five Factor Model (Big Five Personality Traits) Theory. Many researchers working in the domain of personality traits claimed that Cattell's theory is too complicated while Eysenck's theory was too limited in its scope. On the basis of these criticisms, the five factor theory of personality emerged which claimed to describe the important traits serving as building blocks of personality.

Big five factor model also known as big five personality traits was based on lexical hypothesis developed from 1980's onwards on the basis of psychological trait theory. Based on the 20 out of 30 dimensions of personality traits, Cattell and colleagues (1961) proposed that they have found five broad factors of personality traits named as; surgency, agreeableness, dependability, emotional stability and culture. Afterward Warren Norman labeled the factor of dependability as conscientiousness (Cattell et al., 1961).

Current study has also used the five factor model of personality traits to measure the stable variable of personality traits of substance users. Despite the theoretical rationale for origin of traits included in five factor model, many psychologists also seems to agree on the psychometric properties of big five classification of personality traits proposed by Costa and McCrae (1985, 1992). Five Factor classification of personality traits suggest that there are universally five major personality traits or factors abbreviated as OCEAN including Neuroticism, Extraversion, openness to experience (Costa & McCrae, 1978), Agreeableness and Conscientiousness. Five factors and related factors are explained below.

Neuroticism. The first prominent personality trait is Neuroticism which can be described as individual tendencies to experience negative emotions like anxiety, stress, depression and anger. Neuroticism has been divided into a facets of anxiety, anger, hostility, depression, impulsivity, vulnerability and self-consciousness.

Extraversion. This factor of personality refers to the characteristics of high energy and activity, tendency to experience more positive emotions, assertiveness, impulsiveness and leaning towards social behavior. Low scorers on extraversion dimension tend to have restrained, quiet and withdrawn behavioral patterns. Extraversion have warmth, gregariousness, assertiveness, activity, excitement seeking and positive emotions as a facets of this factor.

Openness to Experience. This factor was derived from the idea given by Coan (1974) that refers to the individual's predispositions to engage in intellectual activities and willingness to experience new challenges, sensations and ideas of life. It also includes the creativity, intellectual curiosity, and aesthetic sensitivity, and vivid imagination, flexibility of behavior, unconventional attitudes and culture of the individual (Goldberg, 1993). Openness to experience consists of facets of aesthetics, fantasy, ideas, actions and values. People who endorse the factor of openness to experience are poets, artists, psychologists or psychology students and they tend to be dreamy, imaginative, inventive and non-conservative in their opinions and thoughts.

Agreeableness. Fourth factor of big five factor theory is agreeableness also known as sociability which refers to the characteristics of consideration, modesty, nurturance and friendliness. Agreeableness consists of primary facets of trust, altruism, forthrightness, compliance, modesty and tender-mindedness. People with high traits of agreeableness tend to be so much caring, friendly, warm, and tolerant and have tendencies towards pro-social behavior.

Psychoticism trait proposed in Eysenck's theory would be conceptualized in terms of low agreeableness, high openness to experience and low conscientiousness in big five factor theory (Digman & Inouye, 1986; Goldberg, 1982; McCrae, 1987).

Conscientiousness. Last factor is related to dominant features of proactivity, self-discipline and responsibility in individual's personality. Primary facets of Conscientiousness

involve competence, dutifulness, order, achievement seeking, self-discipline and deliberation. Individuals having high scores on Conscientiousness are best identified for their efficiency, determination, organization and productivity (Chamorro-premuzic & Funham, 2005).

However, the five factor theory of personality traits have been criticisms regarding the theoretical explanations for the development and nature of certain personality traits like openness, agreeableness, and conscientiousness. These criticisms highlight the need for further understanding and exploration in these areas. Theorists also criticized that The Big Five factor theory of personality is unable to explain that at which point, the differences in these traits arise within the individual. Apart from many criticisms, the Five Factor Model of personality traits has shown good validity and reliability which leads most researchers and theorists to agree on the presence of five major personality traits as well as the benefits of assessing these factors with the help of NEO-PI-R (Costa & McCrae, 1985, 1992).

Perceived Social Support

Social support is one of the most studied construct with reference to mental and psychological wellbeing of the general population especially of substance users. Studies suggested that social support tend to protect the individuals against depression specifically (Billings & Moos, 1981; Brown & Harris, 1978; Surtees, 1980), against mental illnesses and psychological distress in general (Lin et al., 1979; Miller & Ingham, 1976; Williams et al., 1981).

Social support refers to the continuum of care which can be accessible to an individual through the societal bond with other individuals, groups and the community (Lin et al., 1979). With reference to this definition of social support, specifically perceived social support refers to the individual's beliefs that social support is present whenever required in the weak or negative circumstances as well as which considered necessary in daily life (Sarason et al., 1990).

Gottlieb and Bergen (2010) defined social support as any type of non-professional environmental sources present that one perceived as supportive in any ways are called perceived social support (Gottlieb & Bergen, 2010). The presence of a supportive acquaintance during the stressful time tend to lower the chances of depression from 30% to 10% (Brown & Harris, 1978). These studies point out the power, strength and potential usefulness of the social support concept.

Moreover, individual's sense of being supported and protected is also valuable for one's mental wellbeing and decisiveness. Perceived social support is how one perceives his or her friends, family and other ultimate sources available to provide psychological, material, social and overall benefits and support during required. Social support is consistently related to perceived level of love, care and support provides positive experience (Loannou et al., 2019; Siedlecki et al., 2014). High perception of social support is related to better mental and physical health outcomes (Loannou et al., 2019; Uchino et al., 2013).

The current study has also tried to explore the importance of perceived social support construct among stigmatized population of substance users and its unique tie with individual's drug-related self-esteem and drug-related internal and external locus of control. According to some studies in addiction field (Maarefvand et al., 2015; Stevenson, 2009), breaking relationships with drug user peers is extremely stressful for the substance users which requires the new and strong supportive relationships. One of the way to fill this vacuum is social support which is considered as the most influential facilitator of healthy behavior in today's circumstances of drug addicts (Massah et al., 2017).

Perceived social support can be of many types, for example, perception of material assistance, health advice, planning, decision making or emotional or moral support from spouse, friends, relatives or significant others. Not all social relationships are considered as social support, but individual considered those relationships as a social support that are perceived as available when desired or are appropriate to fulfill the individual's needs.

Perceived social support is a valuable and effective moderator in dealing, managing and coping with stressful life events. Classmates, friends, family and neighbors are perceived as the sources of social support (Streeter & Franklin, 1992). Many studies supported the notion that perceived social support plays an important role in treatment, management and prevention of lapse and relapse.

Theories of Perceived Social Support

Different theoretical perspectives define the phenomena of perceived social support i.e. attachment theory, Attribution theory, social exchange theory, social learning theory and social competence theory (Stewart, 1993; Williams et al., 2004).

One of the concept to conceptualize the social support was explained by Putnam and colleagues by giving distinction between two types of social capitals i.e. bridging social capital and bonding social capital. Bonding social capital consist of individual's interaction and socialization with people who are alike them while bridging social capital consists of socializing with people who are different i.e. interacting with other generations (Putnam et al., 1994). These two types of social capitals support individuals or groups in their actions. It is created through networks of relationships based on things like trust, reciprocity, and social norms. Social capital is something individuals can rely on when they need help or resources. It's basically built into the connections between people (Coleman, 2003; Haugan, 2021; Rostila, 2011).

Another theory to explain the perceived social support phenomena is social provisions theory by Weiss (1974) who describes social relationships in the context of six provisions or elements of conceptualization of social support i.e. attachment, social integration, opportunity for nurturance, reassurance of worth, guidance and reliable alliance. This theory mainly focuses on individual's socialization need by differentiating between primary and secondary relationships. Primary relationships consists of close, warm and frequent relationships that individual have with their family and friends. The secondary relationships consist of

professional relationships which are less emotional but of great influence. All these provisions are important for individuals to feel sufficient social support at different stages of life cycle. In adequacy in these social provisions could lead towards psychological problems i.e. loneliness, boredom, anxiety, disrupted psychological wellbeing and low self-esteem. (Haugan, 2021; Weiss, 1973, 1974). Moreover they concluded that social support interferes with health-related quality of life by affecting the dimensions of emotional support, esteem support and network support (Haugan, 2021; Weiss, 1973).

However, Lakey and Cohen (2000) presented the overview of three different theories to explain social support. First is stress and coping perspective which suggests that social support have an impact on health by protecting the individual from the devastating effects of stressful life events. Second theory is social constructionist perspective for social support which propose that social support promotes and strengthens the self-esteem and self-regulation even in the absence of any stress which in turns positively contributes to individual's health. The third perspective to define social support is the relationship perspective which debate that the impact of social support on health is closely tied to other aspects of relationships, such as companionship, intimacy, and minimal social conflict. In simpler terms, the health benefits of support cannot be fully understood without considering these interconnected relationship dynamics (Lakey & Cohen, 2000).

For instance, the more prominent theory to explain the perceived social support for conceptual relationship among study variables is stress-buffering model of perceived social support.

Stress- Buffering Model of Social Support. Cohen and Wills (1985) proposed the stress buffering model of social support. They proposed that those individuals who have strong and good quality of social support will have fewer mental and physical health related problems than others with less social support.

The stress-buffering hypothesis is an intriguing concept. It suggests that having a strong support system can help mitigate the negative impact of stress on a person's health and overall quality of life. Social support helps to reduce the impacts of negative life circumstances on individual's health status. This suggests that social resources or support act as a buffer between the stress and health issues, so the more individual have social support system, the less they are affected by the stress.

While stress can be assessed by the multiple major negative circumstances that one has experiences in his past years i.e. divorce, death or separation of loved one, severe financial issues, job related difficulties and criminal victimization. Increased and accumulated stress results in anxiety, depression and physical health-related problems while buffering resources help to reduce the connection between stress and disease (Cohen, 2004; Cohen & McKay, 1984).

Moreover, social support is one of the biggest stress- buffering agent in socialization. Social support is the moral, emotional, physical, financial or other resources provided by the others that ultimately help to deal the problem in a better way. Supportive resources play important role in the mental wellbeing of the individual by providing warmth, acceptance, and intimacy emotional confidence which have broader buffering impact on the life during stressors. Supportive resources provide guidance, support and useful advices which impact by reducing stress, depression and anxiety. Some studies suggest buffering effects of social support in reducing risk of cancer, cardiovascular diseases and mortality.

Stress-buffering model also propose that personality characteristics also contribute as a stress buffering resource. Personality characteristic of Hardiness provides the buffering effects against stressful life events. Hardiness can be defined as the personality aspect of being connectedness and commitment, control (decisiveness rather than powerlessness) and tolerance of uncertainty (see stressful life events as a challenge rather than a threat). High scorer on

hardiness exhibit less distress and illness on high stress than low scorers on hardiness because of having more resistance to stress. Stress buffering model suggests the intervention to promote the individual's positive attitude towards commitment, control and challenge and to boost coping mechanisms which can make them less vulnerable to negative events and improve psychological and physical health of the population (Cohen, 2004; Cohen & McKay, 1984).

Motivation

Motivation is the process through which an individual firstly recognize and identify the problem, exploring different ways to deal with that particular issue and then putting efforts to maintain that resolution or change (Miller, 1995). But in case of substance use, motivation is the key to initiate a single thought of being abstinence to the treatment, management and maintenance of the complete abstinence. From past many years, drug addiction rehabilitation professionals are working on the various treatment methodologies to deal with different forms of addictions i.e., alcohol, cannabis, stimulants, heroin with the help of formal treatment plan in rehabilitation centers (Miller, 1995).

Although there are different ways to motivate an individual to change, improve or initiate innovation but reinforcement by reward is one effective and speedy way to change and motivate. Social support, approval from siblings or peer group can also be considered as reinforcement other than tangible reinforcements of money, financial benefits or internal emotional change (Sjoerds et al., 2014).

Motivation is the most unavoidable and vital aspect of every individual. Motivation has been used with different meanings in different domains of life like education, personal, occupational, mental and physical health decision. Gredler and colleagues (2004) explained that motivation is an attribute that forces us to initiate some actions. On the other hand Deci and colleagues (1999) divided motivation into intrinsic and extrinsic motivation. They observed that intrinsic motivation strengthens and sustains the actions through the spontaneous pleasure inherent in effective desirable activities. This type of motivation can be manifested in

different types of productive behaviors like play, exploration and challenging tasks that individuals often do for some environmental rewards. While extrinsic motivation is governed by reinforcement contingencies. Usually scholars consider intrinsic motivation to be the most valuable and more desirable for better learning and success outcomes than extrinsic motivation (Deci et al., 1999).

However treatment motivation is essential part for successful management for substance use. Currently there is no specific definition for treatment motivation in the field. Keijsers and colleagues (1999) reported that over the past 30 years of research on conceptualization of treatment motivation have introduced 24- 36 relatively different criteria for treatment motivation. Controversies are still not resolved which led to the use of conceptual description of variables that are supposed to cause motivation itself, such as desires, consequences, outcome expectations and the related insight about the problem (Groshkova, 2010; Rosenbaum & Horowitz, 1983).

Internal and External Motivation in Substance use Treatment

According to De Leon and colleagues (2001), internal motivation refers to the internal pressure to change the decision of addiction because of acknowledgement of the negative psychosocial and physiological outcomes of drug use. While external motivation refers to the external or perceived external pressure to change or treatment compliance because of family, legal, occupational and health related consequences of drug use (De Leon et al., 2001; Groshkova, 2010).

In this regard, Joe and colleagues (1999) stressed that external pressures like legal issues had a strong positive effects on the treatment attendance but also having negative effects on the client's involvement in therapeutic process. These findings are inconsistent across inpatient drug recovery treatment programs. Legal pressure have no effects on the client's therapeutic involvement and retention across the inpatient clients (Joe et al., 1999).

For instance, self-referred substance users hold stronger intrinsic motivation, less likely to drop out early and better outcome producing compared to those who are referred by other agencies or family (Groshkova, 2010; Ryan et al, 1995). Ryan and colleagues (1995) proposed four domains of motivation including interpersonal help-seeking, internal and external perceived locus of causality and confidence in treatment by using the Treatment Motivation Questionnaire (TMQ). The results of the study suggested that domains of interpersonal help-seeking and internal motivation were positively related with the improved treatment outcome manifested by treatment continuation in out-patient alcohol treatment programmed for 8-week whereas less internal motivation was predictor of poorest outcomes (Ryan et al., 1995).

Trans-theoretical Stages of Change Model. Trans-theoretical Model of behavior change was proposed by Procheska and DiClemente in 1983 as a basis for Motivation-Enhancement Therapy. This model was based on the main idea that individual with substance use go through five stages of change during the process of change from drug abuse to recovery. They described stages of change as pre-contemplation, contemplation, preparation, action and maintenance stage which apply both to addictive behavior and to treatment (Szupszynski & Oliveira, 2008; Vilela et al., 2009). These stages of change interpreted as the stages or level of motivation and more specifically readiness to change especially in drug abusers.

For instance, during pre-contemplation stage, the individual has strong thoughts about the more benefits of drug use than to stay abstinent because of lack of information about the possible threats, lack of insight and denial regarding the psychosocial deteriorations. Decision of getting treatment during this stage results from pressure and influence of friends and family. This stage may last for many years and individual consider no need to take treatment or rehabilitation because of lack of realization about social, biological, psychological, financial and occupational spheres resulting from chemical addiction.

The second stage is known as Contemplation stage in which individuals develop the insight and associate their drug addiction with their daily life problems. They even realize and ponder the possibility of change but they still show lack of commitment to do so which regards as ambivalence. Drug addicts going through one of these two stages show significant low level of motivation to change their addictive behavior and avoid the discussions or decisions related to treatment and abstinence.

Third stage of change refers to preparation or determination that shapes ambivalence and the individual is willing and committed to initiate the behavioral change, however there is no innovative actions leading towards abstinence.

Fourth stage is more crucial and useful stage in terms of the behavioral change and is also called action stage in which individual can seriously engage in some actions and situations leading towards behavioral changes such as collecting information about rehabilitation centers providing treatment for drug use. They try to avail some outpatient services and seeking treatment and management through their own initiative. This stage also includes individual's struggles to approach the significant others to provide help regarding admission in rehabilitation centers and to support morally and emotionally for behavioral change.

The last stage referred as maintenance is characterized by the persistent successful actions and continuous initiatives for more helpful actions on the path of change. At this stage, the desire to use drug gradually decreases and goal directed activities increases with the challenges to support the abstinence. On the other hand, individual experiences several lapses or relapses and returns to earlier stages of change several times until they reach complete abstinence because of the difficulties coming on the path of change process.

However substance user have the challenge to replace maladaptive and unhealthy lifestyle with healthier and more socially acceptable while developing various new positive strategies and skills for behavioral change. Role of family becomes a predictive factor for

maintenance, behavioral change and adherence to drug addiction treatment (Ferreira et al., 2015; Szupszynski & Oliveira, 2008; Vilela et al., 2009).

Motivation to change, initiate and sustain emerges from individual's insight about the problems caused by drug abuse and when individual considers likelihood of change and improvement. According to trans-theoretical model, process of change is considered as unique and cyclical rather than linear in nature. Therefore, substance users can move multiple times through the cycle of change before the maintenance, management and state of sustained change including relapse and again starts from one of these stages not likely from first stage of pre-contemplation. Each stage of change have unique characteristic and evaluation, interpretation and judgments about pros and cons of behaviors been changed, self-change strategies and beliefs about the individual's potential qualities and strengths to change the addictive behavior. Selection of the stage specific interventions for substance users can promote desirable change and improvement in the individual related to drug-related decision making (Groshkova, 2010; Prochaska, 1994).

The trans-theoretical model suggests that individuals may go through these stages as they progress towards making a behavior change. It's important to note that individuals may move back and forth between these stages, as motivation can fluctuate. Support from others, such as healthcare providers, family, and friends, can play a crucial role in facilitating and sustaining motivation for change. Remember, motivation is a complex and dynamic process, and it's essential to support individuals throughout their journey towards behavior change.

Theories of Motivation

There are many theories of motivation which have tried to explore and explain the complex construct of motivation and considered to be partially true because they explain the certain individual's behavior at certain times. Construct of motivation can be operationally defined according to the various circumstances because of the fact that there is no single answer to what motivates individual to change themselves. So far these theories of motivation are

divided into two divergent approaches; first is content theories and the other one is process theories.

Content theories focus upon explanation of specific things or objects which motivate the individual for the completion of ongoing task. These objects or things are called individual's needs, strengths and the goals they try to achieve to get satisfy these needs. Content theories emphasis on what motive or incentive motivates. For instance, Maslow's Hierarchy of need, Herzberg's two factors theory, McClelland's theory of need and Alderfer's ERG theory are the examples of content based theories of motivation.

While process theories attempt to pinpoint the relationship between the forceful and vibrant variables which produce motivation. These type of theories are concerned with the whole process of initiation, direction, maintenance and sustainability of the specific behavioral change which is the actual process of the motivation. Process based theories of motivation include Skinner's reinforcement theory, Vroom's Expectancy theory, Adam's Equity theory and Lock's Goal Setting theory (Venugopalan, 2007).
Process based theories will be briefly introduced;

The Expectancy Theory. Vroom proposed his theory of expectancy in 1960 as an alternate to the content based theories. He explained his theory with the help of the formula; M = V x E x I (Motivation= Valence x Expectancy x Instrumentality). According to him, motivation is the creation of these three factors of valence (how much an individual wants to get a reward), expectancy (individual's estimation of probability that actions and efforts will be resulted in successful performance) and instrumentality (an individual's estimation of probability that performance will follow the reward) (Venugopalan, 2007).

The Equity Theory. The Equity theory was developed by Adams in 1963 which was also called job motivation theory. The theory proposed that the major contribution towards job and satisfaction related to job is dependent on the degree of justice or injustice that individuals perceive in their work place. Simply if the individual's input are qualification, skills, social

status, age, organizational positions and outputs are rewards such as intrinsic interest in job, pay, promotion which are truly based upon individual's perceptions and equal rules of distribution. Adams assumed that people evaluate the efforts and performance by comparing the contributions to job and benefits or outcomes they originated from the job and then comparing both with the benefits gained by another person with same job performance. While they perceive equity, fairness of distribution of rewards, they become motivated to do the job with improved performance and put their utmost efforts.

Reinforcement Theory. Reinforcement theory of motivation was based on the behaviorist's learning theories of motivation also known as organizational behavior model developed by Skinner. According to reinforcement theory, external or environmental forces/consequences are the dispositional factors of behavior rather than the internal forces such as needs of the person. This theory truly focuses on behavioristic approach of conditioning behavior through reinforcement.

The Goal-Setting Theory. In 1960's Lock proposed the Goal setting theory of motivation and suggested that goal setting is associated with performance of that individual. If one sets challenging goals and receives valid feedback in return will positively contribute to better performance. He also demonstrated the five principles of goal setting which improve probability to success such as clarity of goals, challenge, commitment, task complexity and feedback.

Some content-based theories of motivation were also presented as hallmark of the strong theoretical and conceptual framework for motivation. Such as Maslow's Hierarchy of need, Herzberg's two factors theory, McClelland's theory of need and Alderfer's ERG theory.

Maslow's Need Hierarchy Theory. Abraham Maslow was the pioneer of theories of motivation. He introduced a well-known hierarchy of need theory in 1943 which emphasis on the five basic needs as a driving force and source of motivation in human beings. These needs are arranged in hierarchical way in which an individual seeks to gratify them. These needs are

physiological needs, safety and security needs, need for belongingness, esteem needs and last and most important need is need for self-actualization which can be resultant of fulfilment of four other needs in hierarchy.

According to the Maslow's hierarchy, people tend to gratify their basic biological needs first then they give priority to security needs, belongingness, esteem and then self-actualization need. Individual mostly strive to fulfill new needs that emerge. The current study was also based upon the Maslow's hierarchy of need theory of motivation which picked up the esteem need leading to self-actualization when improved or fulfilled ultimately result into treatment completion and positive decision making.

Alderfer's ERG Theory. Alderfer reworked on Maslow's hierarchy of need theory in 1969 and defined five basic needs into three levels of core needs i.e., existence needs, relatedness needs and growth needs. According to him, existence needs comprised of physiological as well as safety needs which resemble the lower level needs of Maslow's hierarchy. On the other hand relatedness consists of love and belongingness needs. While Growth comprises of esteem need and self- actualization. ERG theory explains that both two levels, Relatedness and Growth together incorporate the higher order needs of Maslow's needs. Similar to the Maslow's concept of need gratification, ERG theory also proposed that satisfaction of lower grade needs lead the individual towards satisfaction of higher level needs but multiple needs would be operating as a motivating force at the same time which impels the person towards goal directed actions (Venugopalan, 2007).

Henberg's Two- Factor Theory. In 1959, Henberg proposed two factor theory of motivation and found that good feelings about job are associated with job content factors while bad feelings are associated with   outer or external aspects of the job or context factors/ dissatisfies/ hygiene factors of the job. Because of this explanation, two factor theory also called dual factor theory.

Hygiene Factors. Context or hygiene factors may involve the company policies, supervision, administration, working environment, conditions, security, salary, status, interpersonal relationships between coworkers. These factors are not the intrinsic part of the job but are related to the conditions under which the job is been performed. Maintenance of hygiene factors of the job will not improve the motivation but will prevent dissatisfaction from job that will ultimately increase motivation.

Motivators. Content factors are also called the motivators which are directly related to the job itself. Motivators may include recognition, achievement, work nature, advancement, growth and responsibility. Motivators are responsible for satisfaction related to job whereas the absence of these content factors will lead towards dissatisfaction and demotivation.

Herzberg's two factor theory is closely related to the Maslow's hierarchy of need theory. While comparing these two theories, we can find the content factors and context factors equivalent to Maslow's needs hierarchy whereas the content factors are more related to the higher level needs of Maslow's hierarchy.

McClelland Theory of Need. McClelland theory of need was proposed in 1960 also called three factor theory of motivation. This achievement motivation theory focused on the higher order needs of social and esteem proposed by Maslow. McClelland proposed that environmental factors and individual's needs work conjointly form three basic human motives, i.e., need for achievement, need for power and need for affiliation.

People who have high levels of achievement need tend to take responsibility for solving their problems, willing to face challenges, tend to work hard for their better results and future and also have mental capabilities and vigor to reach their ultimate goals. They also have aspiration to do something different and more efficient than before.

On the other hand, individual with high level of need for power tend to influence or impact others rather they desire to overpower others. Person with high need for power also focus on acquiring, exercising and retaining the power over others while striving to have

competitive and status or power oriented positions in their whole life. Managers, politicians, ministers and executives have a high need for power.

The last level need in the achievement motivation theory is need for affiliation which is related to the desire for attachment, affiliation, affection or establishing close or friendly relationships. People who belong to high level of affiliation need tend to take their organization as a source of developing new and satisfying relationships. They try to interact more with their colleagues in order to form healthy relationships for their self-satisfaction. They tend to drive pleasure from being closed and loved by the group of their organization. The most useful and effective mixture of these three different types of motives depends upon the situation in which the individual is dealing with the environment (Venugopalan, 2007).

Treatment Approaches for Substance Use

There are number of treatment approaches available for substance use treatment and rehabilitation purpose with strong empirical evidences include skill-based relapse prevention, Alcoholics Anonymous (AA) and narcotic Anonymous program (12-step programs), Minnesota Multimodal treatment, contingency management and cognitive behavior therapies for substance users (Wells et al., 1994; Willerick, 2011). Some of the said treatments have confrontational pattern of management that directly instill the client toward change. These confrontational type of treatment programs have proven to be efficacious with some individuals and often seen high relapse and dropout rates (Brocato & Wagner, 2008; Brown et al., 2009; Willerick, 2011).

It has been observed that these type of direct and confrontational treatment programs are more suitable for those substance users who are willing and internally motivated to change their addictive behavior while those who try to discontinue the treatment program are inexplicably those with ambivalence (Miller & Rollnick, 2002; Willerick & Matthew, 2011). For instance high level of motivation is a predictor of positive outcomes in substance use disorder treatment and management. Treatments related to Motivational change have received

significant attention from addiction professionals in the field of substance use treatment. Motivational Enhancement therapy is one of the significantly evidence based practice in addiction treatment profession (Miller & Rollnick, 2002; Willerick & Matthew, 2011).

Researchers in addiction and psychotherapy have long agreed that insight into problem severity and motivation for treatment are important client factors in successful treatment. For offenders these factors are linked to recidivism and relapse rates post-treatment. Authors in both fields agree that the combination of insight and motivation are key to positive treatment outcomes (Linn-Walton & Maschi, 2015).

Motivation Enhancement Therapy. Motivation enhancement therapy is an evidence-based client-centered treatment approach also known as motivational interviewing. Motivational Interviewing is highly effective in helping professionals transform the way individuals in recovery perceive their own thoughts and behaviors. By employing a client-centered approach, it enables individuals to reach their own conclusions and insights on their own terms.

In motivational interviewing, professionals utilize clear and self-motivational questions to specifically target the ambivalent thought processes of their clients. By addressing ambivalence towards substance use and focusing on intrinsic thoughts rather than external influences, this approach helps alleviate frustrations in the recovery process and encourages clients to make decisions that are self-directed. Over time, individuals engaged in motivational interviewing start to independently arrive at their own conclusions regarding important life decisions, the potential consequences of their actions, and their ambivalent thoughts. This allows them to take ownership of their choices and gain a deeper understanding of their motivations and goals (Zuckoff, 2013). The motivational interviewing approach is designed to address thoughts and behaviors at each stage of change. As individuals transition from the preparation to the action stage, they may express an interest in seeking treatment. In such instances, counselors using motivational interviewing techniques may ask questions like "why

do you believe going into treatment is a good idea for you?" or "who do you think will be affected by this decision?" These questions help individuals explore their motivations and consider the impact their choices have on themselves and others. One of the strengths of motivational interviewing is its versatility, as it can be applied to various substance abuse and mental illness thought processes. By targeting ambivalence, strengthening intrinsic motivation, and promoting autonomy, motivational interviewing supports individuals in making positive changes and achieving their goals regardless of gender, ethnicity, and age (Carroll et al., 2006).

Your communication style and the use of motivational interviewing techniques can seriously influence a patient's change talk and sustain talk. Motivational interviewing is a person-centered approach that aims to enhance motivation and resolve ambivalence about change. By employing active listening, empathy, and open-ended questions, you can create a safe and supportive environment for patients to express their motivations for change. Encouraging them to explore and articulate their reasons for wanting to change can strengthen their commitment and enhance their change talk. On the other hand, sustain talk represents the patient's ambivalence or resistance to change. It's essential to approach sustain talk with empathy and understanding, rather than engaging in confrontational or persuasive tactics that may increase resistance. Reflective listening and open-ended questions can help patients explore their concerns and understand the underlying reasons behind their resistance. Motivational interviewing techniques, such as affirmations, summarizing, and exploring discrepancies, can be powerful tools in supporting patients' motivation for change. By highlighting their strengths, reaffirming their values and goals, and gently exploring any inconsistencies between their current behavior and their desired outcomes, you can help move them towards change. The goal is to foster a collaborative and non-judgmental atmosphere where patients feel empowered to explore their own motivations and make informed decisions about their health behavior.

Literature Review

Self-esteem and substance use are bilaterally correlated with each other. Drug addicts sometimes abuse drugs in order to feel good about them and to escape from their external circumstances. Drug addiction does not increase their self-esteem rather it masks the feelings of being worthless, incompetent and useless. Substance use also leads an addict towards loneliness, feeling of failure, loss of internal and external locus of control feelings of insecurity, hatred, emotional callousness rather than increasing their self-esteem (Steven et al., 2011).

It has been observed that drug strongly influences person's self-esteem. For instance, Akhter (2013) conducted a research to establish the relationship between substance use and self-esteem among sample of 240 adult participants with substance use disorder from rehabilitation institute of Karachi. She found significantly strong negative relationship between self-esteem and substance use. Taking increased amount of drug would probably lead toward low self-esteem (Akhter, 2013). This study was conducted on the participants with age range from 20 to 30 which is believed to be the critical age of identity development as well as the period of competency, efficacy development. So the effects of substance use can be clearly identified during that stage.

One of the empirical study conducted by Gossop (1976) revealed the substantial deficiencies in self -esteem of substance users. Moreover, also postulated that female drug addicts have shown more deficiencies in self -esteem as compared to male drug addicts (Gossop, 1976). This suggests that individuals with poor self- image or low self -esteem when exposed to drug culture will ultimately increase the individual's chance of drug abuse and consequent relapse.

Another research study conducted by Wu, and colleagues (2014) also demonstrated a relationship between self-esteem and substance use. They aimed to investigate the multidimensionality of self-esteem relative to substance use. For this purpose, they have

selected 1223 students of both genders. They found significantly low prevalence of drug use predicted by body image self-esteem in female students whereas in male students, there was significantly high 30 days prevalence of drug use, alcohol or cigarette predicted by peer and school self-esteem (Wu et al., 2014).

Subsequently a study carried out by Lang and colleagues (1984) suggested relatively a very different idea about the relationship of drinking, hard drugs and self-esteem. They proposed that men have higher self-esteem when they were using alcohol than while recovery. On the other hand there was significantly low self-esteem of women during alcohol use. Although social circumstances and situational factors were also playing their role in level of self-esteem (Zinberg, 1984).

While self-esteem plays a significant role in the initiation of substance use. It is also observed that individuals with low self-esteem or poor self-concept are more vulnerable to the peer pressure or peer suggestions in order to confirm the group rules to become more adjusted and adaptable towards group members. They put forth personal values, or social norms holding their families because of the poor self-concept and lack of confidence upon their personal worth. Self-esteem plays a protector's role against alcohol, tobacco or cannabis use (Richardson et al., 2013).

Moreover, group of researchers (2019) conducted a valuable research to examine the role of self-esteem and resilience as a mediator in relationship between self-control and self-efficacy among substance users and found that relationship between self-control and self-esteem were partially mediated by resilience. However resilience partially mediated the relationship between self-esteem and self-efficacy. These findings also suggest that increasing level of self-control, self-esteem and resilience can increase self-efficacy among substance users (Chen et al., 2019).

Moreover, we also observed that depression is considered as the precipitant factor in initiation and relapse of substance use. Depression often co-occurs with low self-esteem which

hinders in addict's self-control, will power and decision making during the process of abstinence. Many rehabilitation centers work on patient's self-concept or self-esteem in order to strengthen the abstinence and to improve motivation level for future recovery. Low self-esteem is the responsible factor of depression which subsequently leads towards substance use disorder.

Sometimes other contributing factors or personality patterns play the important role in the person's self-concept that even threatening events or circumstances could not break one's sense of self. Vasquez and colleagues (2011) studied the relationship among depression, acculturation, self-esteem and substance use on the 164 Hispanic men. They found the significantly high level of self-esteem in the sample that bumped up into various stressful experiences such as low education, high level of depression, low acculturation and low income. Despite of these stressful life circumstances, which could have negative impact on the self-concept of participants, these participants have scored high on self-esteem scale (Vasquez et al., 2011).

Many studies demonstrated the opposite results from previously discussed study. Vulnerability model used to clarify the causal relationship between self-esteem and depression and assumed that low self-esteem causes the vulnerability to depression (Klein et al., 2011; Park & Yang, 2017). This concept was also empirically studied by many researchers with longitudinal data and cross lagged regression models and proposed that self-esteem negatively predicts the depression (Orth & Robins, 2013;Park & Yang, 2017).Self-concept is the internal force which drives one's behavioral patterns and response towards life events. Studies have confirmed that level of self-esteem determines the risky behaviors such as alcohol and drug abuse (Baumeister, 1990; Park & Yang, 2017; Rosenberg, 1965).

Likewise, Park and Yang (2017) also found that self-esteem that one possess in the young adulthood have significant impact on person's depression during middle adulthood.

They also confirmed the mediating role of alcohol and substance use on the relationship between self-esteem and depression (Park & Yang, 2017).

While diagnosing the patient with depressive disorder, clinicians also observes the poor self-concept or self-esteem as a criterion for depression but theoretically it is not necessary for the person to have poor self-esteem if he or she may have depressive disorder. Self-esteem is not only related to depression but low self-esteem can also be found in patients with learning disorder, eating disorder, antisocial behavior and suicidal ideation (Erol & Orth, 2011; Park & Yang, 2017).

For instance, there are a number of similarities between the negative outcomes of depression and self-esteem such as reckless behavioral patterns, risky sexual behavior, substance use, avoidance and socially withdrawn behavior, academic failure, anger, rage, violence and disrupted interpersonal relationships (Lauren & Steven, 2018). Self-esteem and depression are interrelated and have reciprocity in the relationship. Depression works negatively to decrease self-esteem which is important to understand in order to make treatment plan for depression and contributing factors that co-occurs such as anxiety, anger, fear or rage (Wilson, 2012).

Likewise the nature of relationship between depression and self-esteem was also examined by Sowislo and Orth (2012) in which they investigated the 77 studies on depression and self-esteem and 18 studies on relationship between anxiety and self-esteem. The data was taken from participants ranging in age from early childhood to late adulthood. The findings revealed that decreased level of self-esteem was the predictor of increased level of depression but minimal evidence was found on the support of depression severity decreasing self-esteem. They proposed that treatment plan may focus upon the effort to improve self-esteem in order to reduce depression which subsequently will have improvement in short term goal achievement as well as may give long term protection from depression for the person at risk in future (Sowislo & Orth, 2012; Wilson, 2012).

Yet another study conducted to test the two models (scar model and vulnerability model) of association between depression anxiety and self-esteem on the Italian preadolescent sample ranging from 11 years of age to 14 years of age. Age and gender were included as a covariate in the models. The finding proposed the significantly same good fit, although depression and anxiety were found to be significantly more effected by self-esteem than the effects of depression and anxiety on self-esteem (Manna et al., 2016).

Self-esteem and Drug-related Locus of Control. Negative attribution styles are one of the expression or feeling about one's locus of control and idea about self. Self-esteem is responsible for attribution evenhandedness. For instance, self-esteem is closely linked with individual's perception of control over the life circumstances and consequences of their decisions (Tennen & Herzberger, 1987).

Nevertheless, self-esteem is associated with locus of control. The individual who have good self-concept or self-evaluation will have more internal locus of control. He will focus more upon improving life and learning from new experiences in order to gain more achievements and satisfaction in life rather than blaming luck or environmental forcing about calamities of life.

To elaborate more, Papadopoulos and colleagues (2014) conducted an exploratory research on the sample of one hundred and forty eight adults from which 55 participants were visually impaired and 93 were sighted participants. They examined the correlation between psychological aspects such as self-esteem and locus of control and demographic variables such as age, gender and age of onset of visual impairment. They also examined the difference in aspects of psychopathology such as anxiety, depression, melancholia and mania between visually impaired adults and normal adults. They concluded that self-esteem has significantly negative correlation with aspects of psychopathology except mania in visually impaired participants. Self-esteem has significantly positive relationship with motivational system of the participants (Papadopoulos et al., 2014; Shirley & Nes, 2005).While low self-esteem or

negative self-concept has association with depression, isolation and poor psychological wellbeing (Justicia & Cordoba, 2006; Papadopoulos et al., 2014).

Similarly, Iranian university student sample of 370 were selected for a very helpful study in order to find the relationship between self-esteem and locus of control. Study revealed that all components of self-esteem (self-appreciation, self-confidence, competency and self-efficacy) have meaningfully positive relationship with internal locus of control but have negative correlation with external locus of control (Saadat et al., 2012).

In 1994, Wills have conducted a research on the drug (tobacco, alcohol and cannabis) related perceived control and positive or negative factors of self-esteem on the sample of 1775 adolescents who followed up after one year later. He concluded that self-esteem have significant relationship with control. On the other side internal control negatively and self-derogation is 6.3 times positively related to substance use. Self-esteem and substance use was concluded as partially associated with perceived control in previous studies (Wills, 1994).

Judge and Bono (2001) explained the results of meta- analysis revealed link of four personality factors of human functioning e.g., self-esteem, generalized self-efficacy, emotional stability and locus of control correlation with job satisfaction and performance. The results revealed the associations of job performance and job satisfaction with locus of control and self-esteem, we can presume that like job performance and satisfaction, life satisfaction and performance satisfaction related to abstinence and recovery would also be related to self-esteem and locus of control related to drugs (Judge & Bono, 2001).

Moreover, Fish and Karabenick (1971) found that individuals with high self-esteem are more likely to have more internal locus of control and self-reinforcement. They have drawn these findings from sample of 285 male undergraduate students. There was a significantly positive Correlation between self-esteem and internal locus of control (Fish & Karabenick, 1971).

We also observed that treatment plays an important role in the drug recovery and quality of life; Practitioners can improve the quality of life of substance users after getting treatment from rehabilitation centers if professionals and health care authorities attempt to work on their personality traits, internal locus of control and self-esteem (Heidari & Ghodusi, 2016). For example, a sample of 150 patients was taken to prove this perspective. These patients were referred to drug addiction treatment and rehabilitation in Borujen city of Iran for the treatment. The result indicated that 96 patients have increased in the level self-esteem within 12 days of treatment, 102 patients exhibited the internal locus of control and improved their quality of life. Relationship between locus of control and quality of live was proven to be significantly positive during different stages of treatment (Heidari & Ghodusi, 2016).

Another study conducted by Dielman and colleagues (1987) on the adolescent drug addict population in order to investigate about the vulnerability of addicts to have peer pressure, self-esteem and locus of control related to health. For this study they selected 2589 students of fifth and sixth grade to assess the level of alcohol, cannabis and cigarettes use, intent to use these types of substances and the problems related to alcohol abuse. They also attempted to check the susceptibility of the addict to peer pressure, self-esteem and health related locus of control. They proposed that self-esteem and health related internal locus of control was negatively significant correlated with substance use, abuse and intension to use. On the other hand health related external locus of control has no significant correlation with substance use, abuse and intent to use. Susceptibility to Peer pressure was proved to be highly correlated with drug use, abuse and intent to use than health related locus of control or self-esteem (Dielman et al., 1987).

While Locus of control is actually the feeling that one can predict about the upcoming event or its outcomes because he is actually controlling his or her life, on the other hand if we refer to the external locus of control, one cannot predict the outcomes of the events because of the control of external forces on the consequences. These confounded feelings can cause or

precipitate the affective issues like depression, worthlessness, anxiety, irritability, poor self-concept and negative thoughts about self, world and the future. One of the studies examined the confounded relationship between locus of control and depression among 157 students and found that the relationship between depression and external locus of control would be pseudo and might be due to the mood swings or different levels of moods rather than because of external context. The second study on same context found the significantly positive relationship between locus of control and depression (Aiken & Baucom, 1982).

Role of depression, sociopathy and locus of control in the effectiveness of alcohol treatment was assessed by Caster, and colleagues (1977). They selected 4 groups of male alcohol users who have been going through a therapeutic program. The study found that there was high depression level in those groups who performed poor in treatment results than those participants who achieved successful outcomes. They also concluded that locus of control and sociopathy were not directly affected by treatment outcomes. While external locus of control was correlated with depression in successful groups and the external locus of control by chance and sociopathy were correlated in the less successful groups (Caster et al., 1977).

Another study was conducted by Kendrick (1971) to assess the relationship of locus of control with two other constructs, depression and suicide. For this purpose he selected the four groups consisting of 12 subjects in each group from which two groups were experimental groups consisting hospitalized and non-hospitalized suicidants and two groups were control groups having hospitalized and non-hospitalized individuals with no history of suicidal behavior. The results revealed the significantly positive correlation between depression and external locus of control (Kendrick, 1975). The person who feels that his life is not under his control or the things happening beyond his control might have feelings of hopelessness and worthlessness which may lead the individual towards depression or suicidal behavior in severe form.

Different studies have explored that substance users mostly exhibit external locus of control and lake of control over their anger. Because they have external locus of control so they have more tendencies to project the causes of their relapse and maladaptive behaviors towards the people around them or the environmental proneness (Carmelo & Moja, 1997; Mujtab, et al., 2015). A study was conducted to assess a difference of anger, depression and locus of control among three types of substance users (heroin addicts, heavy smokers and cannabis users) along with the determinants of the depression among three types of addict population. 150 male adults of 18 to 36 years old age from five cities of Punjab were selected and equally divided in to three groups. They found significant correlation between state and expressive anger with the depression among three groups, however drug related locus of control, anger, and depression were associated with each other only in smokers. They also concluded that heroin addicts have high level of expressive anger and related depression than cannabis users and heavy smokers. Drug quantity, overt anger, level of smoking and drug related locus of control were the predictive factors for depression in all three groups (Mujtaba et al., 2015).

Self-esteem, Drug-related Locus of Control and Depression. Shubina (2017) conducted a study on the role of self-esteem as a mediator between locus of control and feelings of happiness and observed that internal locus of control is a contributing factor to happiness and high self-esteem. The researcher also assumed that self-esteem is a strong predictor of happiness and on the other hand plays a role of mediator in the establishment of locus of control (Shubina, 2017).

Moreover, it is also observed that anxiety, depression are the results of poor self-esteem, whereas the negative attribution style also consists thinking negative about self, environment and others which lead an individual towards depression(Tennen et al., `1987).

Another study conducted by Yu and Fan (2014) found that self-esteem has partial mediation on the influence of locus of control upon depression. They also concluded that self-esteem and depression are highly correlated with external locus of control (Yu & Fan, 2014).

In another study, locus of control, self-esteem and depression was examined in the Nigerian rural communities revealed the higher level of internal locus of control, self-esteem and lack of depression. The statistics of the study has shown that 30.1 % had external locus of control, 28.7% shown low self-esteem and 24.0% had mild depression. Only 10.4 % of the participants had shown the moderate depression (Okwaraji et al., 2018). External locus of control predict unique differences in the level of self-esteem, stress and depression however internal locus of control have no significant correlation with psychological wellbeing (Grifin, 2014; Okwaraji et al., 2018).

Another noticeable finding was presented by Sherryl and colleagues (1994) that was about the locus of control and self-esteem in diagnosed depressed, low income African-American women. Findings suggested that low self-esteem was significantly correlated with high level of external locus of control in both schizophrenic and depressed women. Correlation between external locus of control and self-esteem in stable women was not significant. The findings further emphasize the room for more standardized studies to investigate the relationship among socio-economic status, emotional disruptions, self-esteem and locus of control constructs (Sherryl et al., 1994).

Although the frequency of person's positive or negative self-statements along with locus of control and depression has great contribution in the respective levels of self-esteem. This notion was studied on volunteer college students. The researcher found the significant magnitude of the correlation between the ratio of negative self-statements and self-esteem (Philpot, et al., 1995). Negative self-talk and self-esteem are highly interrelated concepts which can predict the external locus of control and depressive symptoms.

Moreover, Wills (1994) revealed that external locus of control is predominating factor of increasing substance use which is mediated by the self-esteem not completely because of external locus of control. It is also proposed that low self-esteem, perception of external locus

of control and feelings of helplessness are the major contributing factors in production of depression and substance use in adolescents (Wills, 1994).

For instance, Sjoerds, et al., (2014) found that some internal feelings are the strongest stimulation and reinforcement for action. These internal feelings may involve happiness, pleasure, relaxation and feelings of being stimulated or aroused. These feelings force an individual to spend time with peer group, family, or having sexual activity. These findings support the notion that the substance users most probably involve in drug culture because of these internal reinforcements which are connected with the abrupt and long term effects of different types of drugs like heroin, cocaine, cannabis, ice, ecstasy etc. On the other hand the adverse effects of these substances may also diminish the value of reinforcement if the results of the action will be distressing. Drug addiction is a compulsive behavior which is hard to control except proper and systematic rehabilitation will be provided which may focus upon individual's personality traits and inducing motivation to change as per personality need (Sjoerds et al., 2014).

Substance Use Disorder and Intervention. Moshki and colleagues (2018) conducted a research to investigate the relationship between motivation, substance use, craving, locus of control and withdrawal symptoms in drug addicts. They found a significant relationship between treatment motivation, with withdrawal symptoms, craving and locus of control as well as between motivation with variables of education, occupation, gender and types of substance. Considering the role of treatment motivation in reducing the return to drugs and the more willingness to treat and relapse less in people with internal control in future plan to address the problem of addiction and pushing addicts to treatment (Moshki et al., 2018).

Another study (Ball et al., 2006) suggested the reasons for early drop outs from drug rehabilitation centers. The data was collected with the help of interviews and self-report assessments from 24 prematurely terminated outpatient clients. Findings suggested that indicators like client's substance use, level or stage of motivation and demographics were

linked with the premature termination from drug treatment. On the other hand, maladaptive personality functioning was also strong determinant of early dropping out. This study also highlighted the need for development of an instrument and intervention focused on premature termination risk factors and treatment reengagement (Ball et al., 2006).

Moreover, self-esteem related to drug addiction and self-efficacy is also very much needed to free the alcohol or substance users from the vicious cycle of the addiction trap. Self-efficacy plays a protective role against relapse. To elaborate more, Kumar, and his colleagues (2021) conducted a pretest-posttest control group design study to evaluate and   compare the effectiveness of motivation Enhancement Therapy on the self-efficacy of alcohol users. They selected 40 alcohol dependent participants from indoor and outdoor facilities of the hospital and randomly divided them into two groups. First group of 20 alcohol dependents were provided with 10 sessions of Motivation Enhancement Therapy along with treatment as usual. While the second group (control group) of 20 participants were given general treatment usually used for addiction rehabilitation purpose. Post level of self-efficacy was measured which showed the significant difference of self-efficacy between pre-treatment (56.30) and post treatment (60.75). Self-efficacy was significantly increased after taking Motivation Enhancement therapy. This study also highlights the dire need to conduct the intervention based study on substance user population using Motivation Enhancement Therapy (MET) on larger sample to assess the effectiveness of MET in other substance use disorders like cannabis and opioid (Kumar et al., 2021).

Another study was conducted by Robkin (2015) to investigate the impact of Motivational Interviewing on motivation, self-efficacy and outcome expectancies in adolescents in school settings. The researcher suggested that intervention based on motivational interviewing leads towards positive behavioral change, improvement in motivation and recovery from substance use. Motivational interviewing also increased the

participant's self-efficacy which enabled the individual to ignore the addictive agents (Kumar et al., 2021; Robkin, 2015).

Moreover, Thomas and Franz (2013) conducted an educational intervention designed study on eighth graders male and female participants to increase the self- esteem by using substance specific life skills program based on teacher-centered versus student-centered teaching method. Self- esteem was assessed three times during the study, pre- post and retention test design. The results of the study showed significant increase among different teaching methods and in both genders. Therefore, in the perspective of substance –specific life skills program, self-esteem as an important concept of physical well-being was positively influenced by many participants (Thomas & Franz, 2013). This study shows that strong positive effects can be expected from intervention-based programs on important constructs of substance user's personality characteristics which can improve the chances of abstinence from substance use.

Thus Killeen and colleagues (2013) Suggested that Future research on motivational interviewing would benefit from empirically examining when it is best to transition from the engagement to action-oriented (i.e., symptom reduction) phases of treatment. Finally, given that motivational interviewing is increasingly being incorporated into action-oriented evidence-based treatments, it would also be informative to conduct dismantling studies to determine the effective components of these integrated treatments (Killeen et al., 2014).

Likewise, Motivation Enhancement therapy is also closely linked with locus of control. One of the old study conducted by Haynes, and Ayliffe (1991) suggested that individual's personal control and feeling of personal responsibility are the important factors in the therapeutic implementation of Motivational Interviewing. The client have to believe on significant degree of control over their behavior in order to make progress. MET also works on the individual's internal locus of control through positive self-affirmations and dealing with diffusion of responsibility about decision of abstinence. Haynes and Ayliffe (1991) compared

their sample of misusers with three diverse comparable groups and found significant difference between active misusers and other sampled groups. They concluded that the high external locus of control is a good indicator of active misuse of substance and beliefs about personal control over drugs is important factor to address and needed to enhance with motivational interviewing (Haynes & Ayliffe, 1991).

Another study explaining the efficacy of Motivational Interviewing in the degree of craving was conducted by Navidian and colleagues (2016) in group setting on the substance users under methadone maintenance treatment (MMT). The study was conducted on 100 addicted men taking MMT in a drug abstinence clinic in Iran. The sample was divided into two groups of 50 participants in each group (control and treatment). The treatment group first received 5 sessions of MI counseling and then entered in the methadone maintenance treatment (MMT) process. The control group received the usual treatment of the drug abstinence clinic. Pretesting was done 2, 6 and 12 months after the abstinence to assess the degree of craving The results suggested that the degree of craving in the control group was significantly higher than those in the treatment group and the treatment retention of the participants of treatment group was also significantly higher than in the control group. This study further concluded that motivational interviewing decreases the craving for drugs and increases the chances of adherence to the long term treatment or abstinence programs. Furthermore the study also recommend the use of intensive Motivation Enhancement Therapy as a pretreatment and a complementary therapy in modifying substance user's health related behaviors (Navidian et al., 2016).

Personality Traits and Self-esteem. While personality traits and self-esteem conjointly play a vital role in initiation and relapse of substance users. Dynamic nature of personality follows a complex and difficult path during each and every period of life. During adolescence, multiple psychological and physiological transformations occurred making adolescence more vulnerable towards bad experience of drug consumption. Personality

dynamics are considered as major indicators of individual differences in possibilities of substance use reinforcement (Chen et al., 2019; Pihl & Peterson, 1995; Verdejo et al., 2006).

Personality is a dynamic pattern of a person to think, behave and respond to the external environment. Locus of control, self-esteem, self-confidence, rage, anger, positivity, stubbornness and extraversion are the patterns or some characteristics which can affect our daily living as well as our mental wellbeing. Caster and Parsons (1977) have investigated the relationship among three variables, depression, sociopathy and locus of control in order to draw the relationship of these constructs on treatment outcome in the sample of alcohol users. Researchers have selected the four groups of 98 veteran male alcohol users who have different therapeutic programs and a control group of 27 males. Males who achieved less benefit from treatment were higher on depression scores than those groups who have successful treatment results. They found that sociopathy and locus of control orientation was not directly related to therapeutic benefits. Although external locus of control was related to treatment outcomes by chance in alcoholics (Caster & Parsons, 1977).

Many previous studies were conducted to find out the relationship between substance use disorder and personality factors while using five factor model of personality (Goldberg, 1999; Chen et al., 2019). Five factor model of personality includes openness to experience, neuroticism, agreeableness, extraversion and conscientiousness. This model of personality factors was proved to be very influential for alcohol users. One of the research indicated that high neuroticism, low conscientiousness and low agreeableness were significantly correlated with alcohol use issue (Chen et al., 2019; Sher et al., 2000; Walton & Roberts, 2004).

Sadava (1978) proposed that the personality traits can be considered as predominating factors of substance use. There are six prevailing theories which suggest the strong relationship between personality traits and behavioral pathologies like substance use. One of the theories is called vulnerability theory which proposes that personality traits predispose a person towards addiction (Eysenck, 1997). On the other hand, the individual initially develops some

maladaptive or pathological personality traits before developing the addiction (Sutker & Allain, 1988).

Likewise, Fatemeh and Maryam (2011) conducted a study to investigate the link between personality traits and self-esteem among drug addicts, they found that extraversion versus introversion, conscientiousness versus lack of direction, agreeableness versus antagonism and openness versus closeness to experience traits were significantly positive predictors however, neuroticism versus emotional stability was significantly negative predictors of self-esteem (Fatemeh & Maryam, 2011).

Similarly Hopwood and his Colleagues (2011) suggested that substance users have some pathological traits, neurological decline, personality disorders and environmental influences that worsen the side effects of addiction. Most of the substance users experience the side effects of drugs which include negative emotional regulation or temperament, lack of trust, lack of self-consciousness, aggression and peculiar perceptions. The substance users also suffer from emotional and social detachment, self-infliction, and poor perception of control over the life circumstances and lack of self-esteem (Hopwood et al., 2011; Ryan et al., 2014).

Similarly Flory and her Colleagues (2002) studied the relationship of the symptoms of alcohol and marijuana abuse with Five Factor model of personality before and after controlling the internalizing psychopathology and anti-social personality symptomatology. The study concluded that alcohol abuse was associated with high Extraversion and low Conscientiousness. Moreover, low Extraversion and high Openness to experience were associated with symptoms of marijuana abuse (Flory et al., 2002).

Another study demonstrated the relationship of personality traits as a predicting factors to substance use among sexual minorities from lesbian, gay, bisexual and transgender. Livingston et al (2015) proposed that extraversion and conscientiousness were associated with substance use including other minority stress factors (Livingston et al., 2015). On the other hand Kotov and Colleagues set that previous researches tend to demonstrate week relationship

between substance use, openness to Experience and Extraversion while low level of Agreeableness is associated to substance use and drug addiction because individuals with low Agreeableness often show aggressive, selfish, mistrust, non-cooperative, cold and distant attitude in their interpersonal relationships (Flory et al., 2002; Kotov et al., 2010).

Likewise, Mitrovica and colleagues (2014) also tried to find the relationship between personality traits and global self-esteem among alcohol users and non-clinical population equally divided into two groups (alcohol users and healthy individuals). Before the data collection, the researcher first gave treatment to the alcohol users to obtain abstinence level. The results of the study found significant relationship between Neuroticism and poor global self-esteem among alcohol users. While using alcohol, the individual feels increasing self-esteem acutely and feeling of competence help them to reduce anxiety but in the long run alcohol intake cause poor self-esteem during abstinence (Mitrovica et al., 2014).

Similarly, Amirazodi and Amirazodi (2011) conducted a study to find the impact of personality traits on self-esteem and found that individuals who exhibited higher levels of extraversion, agreeableness, conscientiousness, and openness to experience tended to have significantly higher self-esteem. On the other hand, individuals with lower levels of neuroticism, indicating greater emotional stability, also showed significantly higher self-esteem (Amirazodi & Amirazodi, 2011).

Moreover, Akhondzadeh and colleagues (2014) suggest that some individuals start substance use in order to improve social interactions, confidence and to uplift their self-esteem. Drugs like alcohol, cannabis and ecstasy make them more outgoing and confident which help them towards more enjoyment in their social gathering. The study was also conducted to explore the difference in personality traits across two groups, one receiving methadone maintenance therapy (MMT) and the other receiving Narcotics Anonymous program (NA). The results suggested that individuals who attended the NA sessions regularly had significantly

lower neuroticism and higher agreeableness compared with participants who were receiving Mathadone Maintenance Therapy (Akhondzadeh et al., 2014). Likewise, Prakash and fellows (2015) conducted a study to investigate the relationship of personality disorders with emotional intelligence and locus of control of alcohol dependents and concluded that individuals with alcohol use have more comorbid negative personality traits and disorders compared to normal individuals. Moreover alcohol users were examined to be significantly deficient in all domains of intelligence and their locus of control was externally oriented (Prakash et al., 2015).

   Substance Use personality Traits, Self-esteem and Perceived Social Support. Ellis concluded that social support unavailable to the substance users strongly influences the route towards the illicit drugs and relapse after treatment. Devis and Jason also concluded that perceived social support has positive relationship with recovery from drugs. It is true that addicts' perception of social support improves psychosocial functioning of an individual during the treatment process (Ellis et al., 2004; Davis & Jason, 2005). Positive and adaptive family functioning leads towards positive interaction between family member, beneficial and strong decision making, and resolution of problems related to family members. These adaptive functions are related to the broad areas such as the ability of the family to cope with changes, unity between members, and successful enforcement of disciplinary patterns. It also include to implement the boundaries between societal members and implementing the principles of the family unit to protect the whole family from any societal or emotional disaster. These functions are more important as the familial problems can cause poor school performance, breakdown of social relationships, social isolation and alcohol or illicit drug use (Massah et al., 2017; Walker et al., 2008).

   Like personality traits, perceived social support has also link with self-esteem. For example Lee et al (2014) found the bidirectional relationship between perceived social support and self-esteem and also suggested that perceived social support   mediates the relationship

between self-esteem and depression. Social support encourages and reassures one's self worth, sense of belongingness and safety which are main components of self-esteem. Low self-esteem also promotes the idea of less social support and acceptance (Lee et al., 2014; Swann et al., 2003).

Likewise many studies have also shown the association between 'Big Five' personality factors and social support. One of the study conducted by McCrae (1985) reported the positive relationship between Extraversion and perceived social support while Openness to Experience and Neuroticism were negatively correlated with perceived social support related to family and marital relationships in older adults (Krause et al., 1990; Kelly et al., 2008).

Another important study in this regard was conducted by Farhadinasab and colleagues (2008) to examine the lifetime pattern of substance use and role of parental support, religiosity and locus of control as an important factor for prevention of substance use among users of two age groups (adolescents and young male). Findings suggested that low parental support and poor family functioning were strong predictors of adolescent's substance use and promoting adolescents relationship with parents can be beneficial for the success of comprehensive drug abuse prevention programs. The results of said study also concluded that external locus of control was a strong risk factor of initiation of substance use as estimated 51.5% participants were found to have external locus of control. The individuals with the sense of greater control over their life circumstances are more likely to protect and control themselves against substance use (Farhadinasab et al., 2008).

Moreover, Zaidi (2020) wrote an article to analyze the significance of social support, advantages and role of received or perceived social support in relapse prevention and also examined the relapse as a psychological issue. She suggested that role of social support in relapse prevention is the most ignored area of the treatment, management and prevention field of substance use (Zaidi, 2020). However, Horvath and colleagues (2019) also suggested that social support is a very powerful and supportive tool in addiction treatment and management

because it forms a sense of belongingness, security, attachment and protection for the substance users. Substance users who associate themselves with some appropriate social groups could sufficiently cope with their mental and psychological issues, can discover the purpose and meaning of their life and can live optimistically while dealing with shame and guilt produced by their first decision of becoming an addict (Horvath et al., 2019 a, b; Zaidi, 2020).

Perceived social support also plays an important role on psychological wellbeing of substance users because of its strong mediating or moderating role with other factors of individual's personality. Birtel and colleagues (2017) conducted a study to investigate the effects of perceived stigma on under treatment substance users and whether internalized shame and stigma can link social support with individual's better health and mental wellbeing (self-esteem, depression and anxiety). The study results found that perceived stigma was strongly associated with psychological wellbeing issues like lower self-esteem, poor sleep and increased level of anxiety and depression. While perceived social support has positive association with higher self-esteem, lower level of depression and anxiety (Birtel et al., 2017).

Moreover, social support like support from family, peers and friends was associated with lower shame, internalized stigma which ultimately led towards better psychological health in terms of better self-esteem and sleep, removing depression and anxiety (Birtel et al., 2017).

Rubio and Colleagues (2020) also examined the moderating role of perceived social support and substance use on large sample of 775 adolescent's substance users. They tried to evaluate the four dimensions of social support like friends, family, school and significant others and use of alcohol, marijuana and illicit drugs as a moderator in the relationship between depression and suicidal ideation. They found that social support is a strong moderator of relationship between depressive symptoms and suicidal ideation but alcohol use limits the moderating effects of social support in the area of family, significant others and school support except support from friends (Rubio et al., 2020).

Rural population of drug addicts is the most ignored and under privileged population all over the world while family history of alcohol and drug use, individual's coping strategies to deal with daily issues and social or familial support are the key predicting factors for substance use in rural population. Ayman and fellows (2007) found that perceived social support especially from family is a strong protective factor against initiation or relapse of alcohol use while using avoidance as a coping mechanism is a threat or risk factor for using alcohol among rural adolescents. They also suggested that, during the treatment and rehabilitation process, initial screening about presence of social support sources and coping strategies should be mandatory before taking treatment decisions in order to identify the adolescents at risk for relapse (Hamdan-Mansour et al., 2007).

While perceived social support has been proven to exert more significant effects on individual's mental health which ultimately relates to suicidal behavior among substance users (Prati & Pietrantoni, 2010; Deng et al., 2021). For example, higher perceived social support related to parents dimension was found to be associated with lower probability of suicide attempts in adolescents (Miller et al., 2015).

A recent study conducted by Deng and colleagues (2021) was a great contribution in the said role of perceived social support in mental as psychological wellbeing of substance users in chines drug users. The researchers found that perceived social support is mediated by self-esteem as a protective factor while depression contributes as a risk factor. This study also highlights the need to give substantial attention to self-esteem as a protective factor among drug addicts while dealing with causes of relapse and psychological issues of suicide, depression and locus of control. They also concluded that suicide attempts among drug addicts are not directly affected by perceived social support, rather, perceived social support protects the substance users via self-esteem and decreasing depression. Likewise perceived social support may reduce the possibilities of suicide attempts via increasing the self-esteem (Deng et al., 2021).

Perceived social support also has a strong relationship with personality traits. For example individuals having neurotic personality traits tend to irritate and tense easily as compared to those with low traits of neuroticism. While individuals having dominant trait of extraversion are more likely to engage themselves in more social activities, friendship building and receive high social support. Similarly individuals having traits of openness to experience indulge in more and diverse social interactions, making broad their social network which ultimately make higher number of people around them who can provide supportive exchange (Khizar & Bukhari, 2016). One of the research (Swickert, 2009) examined the relationship between big five personality traits and perceived social support and found that traits of extraversion, agreeableness and neuroticism has been strongly related to perceived availability of social support (Swickert et al., 2010).

Likewise, individuals with high trait of agreeableness tend to win more support, attention and friendliness while individual with traits of conscientiousness tend to earn respect, regard and affection from others because of their dominant characteristics of hard work and orderliness. Perception of social support availability boost and protect the individual in stressful situations while reducing the stress and anxiety. Social support depends upon person's social networks from which he or she belongs and also individual's social behavior and attitude. Khizar and Bukhari (2016) concluded that perceived social support has negative relationship with criminality while females have high perceived social support as compared to males. Findings of the study also concluded that participants from criminals sample shown high neuroticism and low extraversion, openness to experience, agreeableness and conscientiousness (Khizar & Bukhari, 2016).

Similarly, Shaheen and colleagues (2015) conducted a study on HIV/AIDS patients to investigate the role of social support as a mediator in relationship between extraversion personality traits and coping responses among substance users with HIV/AIDS. The findings suggested that the participants having extraversion personality traits tend to cope with their

disease using problem focused coping and social support plays mediating role in coping mechanisms (Shaheen et al., 2015).

Kimangao (2016) conducted a survey on recovering addicts in drug rehabilitation centers within Nairobi to explore the relationship between perceived social support and relapse proneness. The results revealed that participants mildly accept that presence of someone special near them when they need offers perceived social support. While they strongly agreed that help offered by family is a strong factor or indicator of perceived social support. They concluded that drug addicts in rehabilitation centers need social support from family, peers and relatives to protect them against relapse proneness. The results of the said study also explored that perception of less social support distort substance user's self-worthiness and self-esteem by making them at risk of high relapse proneness and less psychologically functioning (Kimangao, 2016).

Another study on women with sexual abuse also shows the similar findings suggesting that higher degree of external locus of control, perception of higher stress and insufficient social support are strongly correlated with hopelessness, depression and lower self-esteem (Asberg & Renk, 2014). Productive, encouraging, supportive and positive family functioning as well as improving social support tend to reduce individual's especially student's tendency towards illicit drug abuse. While, fragile social networks, lack of constructive communication between the individuals of family, community and society at large and stressful, unhealthy family environment are the contributing factors for students towards drug use (Massah et al., 2017).

For instance, another important finding drawn by Akdag and colleagues (2018) who examined the difference of internalized stigma in individuals with opioid use disorder on the basis of socio-demographic and clinical variables. They also examined the relationship between internalized stigma and treatment motivation, perceived social support, depression and anxiety levels and concluded that internalized stigma was positively correlated with treatment motivation, depression and anxiety levels. While negative relationship was found between

internalized stigma and perceived social support. Internalized stigma plays an important role in the treatment of heroin users which follows frequent relapses and make the treatment difficult (Akdag et al., 2018).

Rationale

On the basis of past literature, the current study was designed with the basic rationale to apply Motivation enhancement therapy on substance users to enhance the client's motivation to take positive part in the rehabilitation process by effecting drug-related self-esteem and drug-related locus of control with comparison to general rehabilitation practice (Minnesota Multimodal treatment technique). Current study was related to the first conceptualization of self-esteem according to social identity of the individual that is related to outcome of drug addiction and decision of treatment, rehabilitation and abstinence. For this purpose construction of an indigenous scale to systematically measure the drug-related self-esteem of the substance users taking treatment in drug detoxification and rehabilitation centers was an important part of the current study.

This scale helped in assessing severity of the feelings of negative self-evaluation, self-regard, feelings of self-sufficiency and competency in post addiction life. Measurement of global self-esteem with the help of general measurement scales quantifies only the overall self-esteem of a person but the main purpose may be over looked that is to know about the addict's internal feelings and frame of self-concept affected by one's negative decision of being addict.

Although there are various self-esteem assessment scales for example State self-esteem assessment scale that measures individual's feelings and thinking about self at that moment. This scale also subdivided into three components of self-esteem like person's self-esteem related to performance, social aspects and self-esteem related to personal appearances. However, this scale is not directed toward measuring the special domain (post drug addiction life) specific self-esteem among drug addicts which is very important aspect to be considered in the rehabilitation process. Another scale (Rosenberg, 1965) to measure the general feelings

of self-esteem among individuals can measure person's general feelings about self, their perception of self-worth, respect, capabilities and self-appreciation. Therefore dire need still persists to assess the changes in perception of self-regard, self-appreciation, confidence and self-competency with reference to addicted life pattern specifically in Pakistani culture.

Hence, Martiny and Rubin (2016) pointed out the need for specific collective state self-esteem scale to measure the self-esteem related to specific social identity. They also explained that many tests of self-esteem are insensitive to measure this notion as they use measures of global personal trait self-esteem rather than specific collective state self-esteem (Martiny & Rubin, 2016; Rubin & Hewstone, 1998, 2004; Turner & Reynolds, 2001). This study justifies the need to construct the indigenous scale to measure the drug-related self-esteem.

An additional need observed by the researcher was the fact that many drug professionals need to assess the domain specific (drug related) locus of control of substance users to initiate and plan the counselling and intervention during rehabilitation which could be difficult with the scale in English language. So adaptation of English version of drug-related locus of control according to our culture and then translate it into Urdu language was also the important part of the current research to make beneficial for future research and therapy practice.

Another purpose of studying this subject area specifically is that perhaps limited known studies were investigated the mediating role of perceived social support in relationship of personality factors with drug-related locus of control and drug-related self-esteem among drug addicts population. The current research represents the unique paradigm of relating five dimensions of addict's personality with the drug-related self-esteem and drug-related locus of control. Therefore the current study produced baseline investigations for drug-related self-esteem, drug-related locus of control and demographic differences like criminal record and no of relapse with reference to drug-related self-esteem and drug-related locus of control among substance users. Drug-related self-esteem and drug related locus of control are those contributing factors that are observed as sensitive to be addressed and considered to be

explored. Self-esteem and locus of control are the major contributing factors in predicting depression and related mental health issues which can subsequently affect the decision making among substance users.

Hence limited research is available in the literature and lack of awareness exist among majority of professionals working in the addiction treatment and rehabilitation organizations regarding the causal factors as well as the contributing factors in the aggravation of substance use and repeated relapse problem like motivation, domain specific self-esteem, perception of social support and drug-related locus of control.

Linn-Walton and Maschi (2015) suggested that drug addiction research and psychotherapy have highlighted the importance of insight into the problem severity and motivation of the client for successful treatment and future outcomes. So the author suggests that the combination of insight and motivation can produce positive treatment (Linn-Walton & Maschi, 2015). In the current research, Motivation Enhancement Therapy (MET) based intervention was given to enhance the client's motivation to take positive part in the rehabilitation process by effecting drug-related self-esteem and locus of control.

Drug related self-esteem consists of the perception of one's self regarding efficacy of abstinence and self-appreciation in the process of change. For instance these causal factors also play important role in offender's recidivism and relapse after many treatments.

Kumar and his colleagues (2021) conducted a pretest-posttest control group design study to evaluate and compare the effectiveness of motivation Enhancement Therapy on the self-efficacy of alcohol users. Post level of self-efficacy was measured which showed the significant difference of self-efficacy between pre-treatment (56.30) and post treatment (60.75). Self-efficacy was significantly increased after taking Motivation Enhancement therapy. This study also highlights the dire need to conduct the intervention based study on substance user population using Motivation Enhancement Therapy (MET) on larger sample to assess the effectiveness of MET in other substance use disorders like cannabis and opioid

(Kumar et al., 2021). Therefore the other part of current research focused upon the provision of therapeutic intervention of Motivation enhancement Therapy (MET) to enhance the client's motivation which led them towards positive self-affirmation, self-efficacy and recovery-related positive self-concept. MET was applied with the combination of trans-theoretical model of change which is considered as the important basis for MET. On the basis of personal and professional experience in the field of addiction treatment, deprivation of attention was noticed on the serious issue of drug-related self-esteem and individual's self-control over drug abuse.

Moreover there is less focus upon the strong contributing factor of motivation in the treatment outcomes. Intervention phase of the Current study was planned on the content based theory of motivation enhancement which help the substance user to develop insight into the basic needs of drug-related self-esteem and self-actualization which will sustain the treatment decisions and change related behaviors during the substance use management and rehabilitation program.

The current study suggests the efficacy of motivation enhancement therapy over the general counseling during the process of rehabilitation of substance users. It has been strongly observed that Evidence based practices hardly applied and evaluated in the past research studies especially in Pakistani addict population because of many limitations regarding data collection availability and cooperation issues from stake holders.

Significance of the Study

Drug-related Self-esteem is one of the basic factor which effects decision making of the drug addict related to future abstinence and relapse. The indigenous scale on drug-related self-esteem is the need of the time to assess the Specific Collective state self-esteem of the growing population of substance users which might help researcher in field and as well as will help the addiction professionals to measure the unique drug-related self-esteem for therapeutic purpose. On the other side, it is observed that some personality traits are more prone toward relapse and drug abuse. So the effects of these personality traits on person's treatment decision become

more aggravated if the person feels helpless, lack self-confidence, lack self-efficacy, negatively self-evaluate his self and have misperception about the capabilities of being recovered from addiction. The current research assessed three causal factors i.e. drug-related locus of control, personality traits and self-esteem among drug addicts together along with mediating role of perceived social support between these constructs as literature suggests that perceived social support is a valuable and effective in dealing, managing and coping with stressful life events. Classmates, fr.iends, family and neighbors are perceived as the sources of social support (Streeter & Franklin, 1992).

Furthermore the current study provided the evidence of effectiveness of Motivation Enhancement Therapy as a rehabilitation process to improve domain specific locus of control and self-esteem to strengthen the recovery of the substance user. The study initially measured the motivation for change among substance users and subsequently divided them into two groups in order to establish the differences in drug-related self-esteem and drug-related locus of control after providing MET to the intervention group and general counseling (Bio-psycho-social) to the control group. This in turn will contribute to the client's struggle for abstinence and recovery from addiction.

The current study will be proven to be more valuable and beneficial in the field of addiction sciences especially for addiction rehabilitation professionals because this study addressed four extremely important research domains like drug-related self-esteem, drug-related locus of control and intervention. Firstly it attempted to adapt and translate the scale for drug-related locus of control in Urdu that will be helpful for future researchers to use it conveniently in their studies. Second will attempt to construct an indigenous and unique tool to assess the drug related self-esteem among addicts. Additionally, the present study will be instrumental in assessing the effects of Motivation Enhancement Therapy (MET) by implementing it compared to general counseling with regards to drug-related self-esteem and drug-related locus of control among addicts. MET is considered as the most effective and

valuable intervention technique for initiation and completion of substance use treatment and abstinence. Moreover the study dealt significant and may be attractive part of substances user's rehabilitation process which is the locus of control and self-esteem relationships after the implementation of MET. The current study will be a significant contribution to the existing body of scientific knowledge by helping the professionals who are dealing with drug addicts in different rehabilitation and detoxification centers working in Pakistan. As many of the professionals dealing with the other contributing factors of substance use like familial conflicts, peer pressure, environmental stressors, triggers and relationship malpractices but overlooked the domain specific areas of drug-related self-esteem, drug-related locus of control and intervention enhancing motivation to change and these areas of substance user's characteristics.

Current study will provide good information about drug addicts drug-related self-esteem and its relationship with drug-related locus of control because psycho-educational lectures are been delivered by psychologists regarding causes of drug addiction, relapse, precipitating factors, internal and external causes as well as behavioral contributions to abstinence. Mostly the personality, locus of control and life experiences as a part of contributing factor in initiation of substance use is been ignored by the professionals. So the current study will be a good contribution in understanding the related issue of personality traits, drug-related locus of control, motivational stages and drug related self-esteem with substance use.

Statement of Problem

Substance use is an alarming phenomenon around the globe. Pakistan is also no exception and also alarmingly increased the number of Substance users from last few years. Drug related self- esteem and drug related locus of control are important variables while understanding the rehabilitation process of this group. Therefore, rehabilitation centers in Pakistan are not providing evidence-based and quality treatment/rehabilitation facilities. Motivation-Enhancement Therapy is an evidence-based intervention technique for substance

use treatment. In our study we investigated the efficacy of motivation Enhancement Therapy for the improvement in drug-related self-esteem and drug-related locus of control of substance users as compared to general counseling sessions. Mediating role of perceived social support between personality traits, drug-related locus of control and drug-related self-esteem is also the area of interest.

Objectives

The current study has following main objectives;

1. To Translate Drug-Related Locus of Control into Urdu language.

2. To determine Psychometric properties of Urdu version of DRLOC scale.

3. To construct a scale to measure drug-related self-esteem of under treatment substance users.

4. To establish discriminant validity and psychometric properties of newly developed scale.

5. To determine the relationship between personality traits, perceived social support, drug-related self-esteem and drug-related locus of control among substance users.

6. To determine the role of perceived social support as a mediator in relationship between personality traits, drug-related self-esteem (DRSE) and Drug-related Locus of Control (DRLOC) among substance users.

7. To find the differences in drug-related self-esteem and drug-related locus of control on the basis of socio demographic variables i.e. family type, number of relapse, history of imprisonment, types of criminal record.

8. To study the effectiveness of Motivation Enhancement Therapy in enhancing drug related self-esteem (DRSE) and drug-related internal locus of control among substance users.

9. To study the efficacy of MET intervention in reducing Drug-Related External Locus of Control and increasing Drug-Related Self-Esteem (DRSE), self-competence, self-

confidence and self-regard among substance users compared to Bio-psychosocial intervention.

Hypotheses

Following hypotheses were designed to achieve the objectives of current study;

1. There will be a significantly positive relationship of Personality traits (openness, agreeableness and Extroversion and conscientiousness, neuroticism) with drug-related Self-esteem and perceived social support among substance users.

    I.   There will be a significantly positive relationship of personality traits (openness, agreeableness and Extroversion and conscientiousness, neuroticism) with three sub factors of drug-related self-esteem i.e. self-competence, self-confidence and self-regard among substance users.

    II.   There will be an external locus of control among substance users with openness, agreeableness and Extroversion and conscientiousness, neuroticism personality traits.

    III. There will be a significant positive relationship of personality traits (openness, agreeableness and Extroversion and conscientiousness, neuroticism) with perceived social support among substance users.

2. There will be a significant positive relationship of perceived social support with drug-related self-esteem and drug-related locus of control among substance users.

    I.   There will be a significant positive relationship of perceived social support with self-competence, self-confidence and self-regard sub factors of drug-related self-esteem among substance users.

    II.   Substance users with high Drug-related self-esteem will have an internal locus of control.

III. There will be a significant positive relationship between drug-related self-esteem and its three sub factors i.e., self-competence, self-confidence and self-regard among substance users.

IV. Substance users with high self-competence, self-confidence and self-regard sub factors of DRSE will have internal locus of control.

3. Perceived social support is likely to mediate the relationship between personality traits (openness, agreeableness and Extroversion and conscientiousness, neuroticism) drug-related self-esteem among substance users.

4. Perceived social support is likely to mediate the relationship between personality traits (openness, agreeableness and Extroversion and conscientiousness, neuroticism) and drug-related locus of control.

5. Drug-related self-esteem, self-competence, self-confidence, and self-regard are significantly higher among substance users living in nuclear family system than joint family system.

   I. Substance users living in joint family system are more likely to have internal locus of control than those living in nuclear family system who are more likely to have external locus of control.

   II. Drug-related self-esteem, self-competence, self-confidence, self-regard are significantly higher among substance users with no history of imprisonment than the substance users who have history of imprisonment.

   III. Substance users with the history of imprisonment are more likely to have internal locus of control than substance users with no history of imprisonment.

   IV. Drug-related self-esteem, self-competence, self-confidence, self-regard are more likely to significantly higher among substance users with no history of drug dealing offense than the substance users who have history of drug dealing offense.

V. Substance users with history of drug dealing offense are more likely to have external locus of control than users with no history of drug dealing offense who are more likely to have internal locus of control.

VI. Substance users with no history of history of cheating and harassment offense are more likely to have internal locus of control than users with history of cheating and harassment offense who are more likely to have external locus of control.

VII. Drug-related self-esteem, self-competence, self-confidence, self-regard are significantly higher among substance users with no history of cheating and harassment offense than the substance users who have history of history of cheating and harassment offense.

VIII. Increased number of relapse will lower the Drug-related self-esteem, self-competence, self-confidence, self-regard and perceived social support among substance users.

IX. The substance users with multiple relapse are more likely to have internal locus of control than those are with first relapse.

6. There will be significant increase in Drug related self-esteem, self-competence, self-confidence, self-regard and drug-related internal locus of control from pretest to posttest measures among substance users of treatment group.

7. There will be significant decrease in drug-related external locus of control, self-confidence and self-regard from pretest to posttest measures among substance users of treatment group.

8. There will be significant difference in drug related self-esteem, self-competence, self-confidence, self-regard and drug-related internal locus of control across two different treatment conditions (MET & General counseling).

Figure 1

Conceptual Framework of the Present study
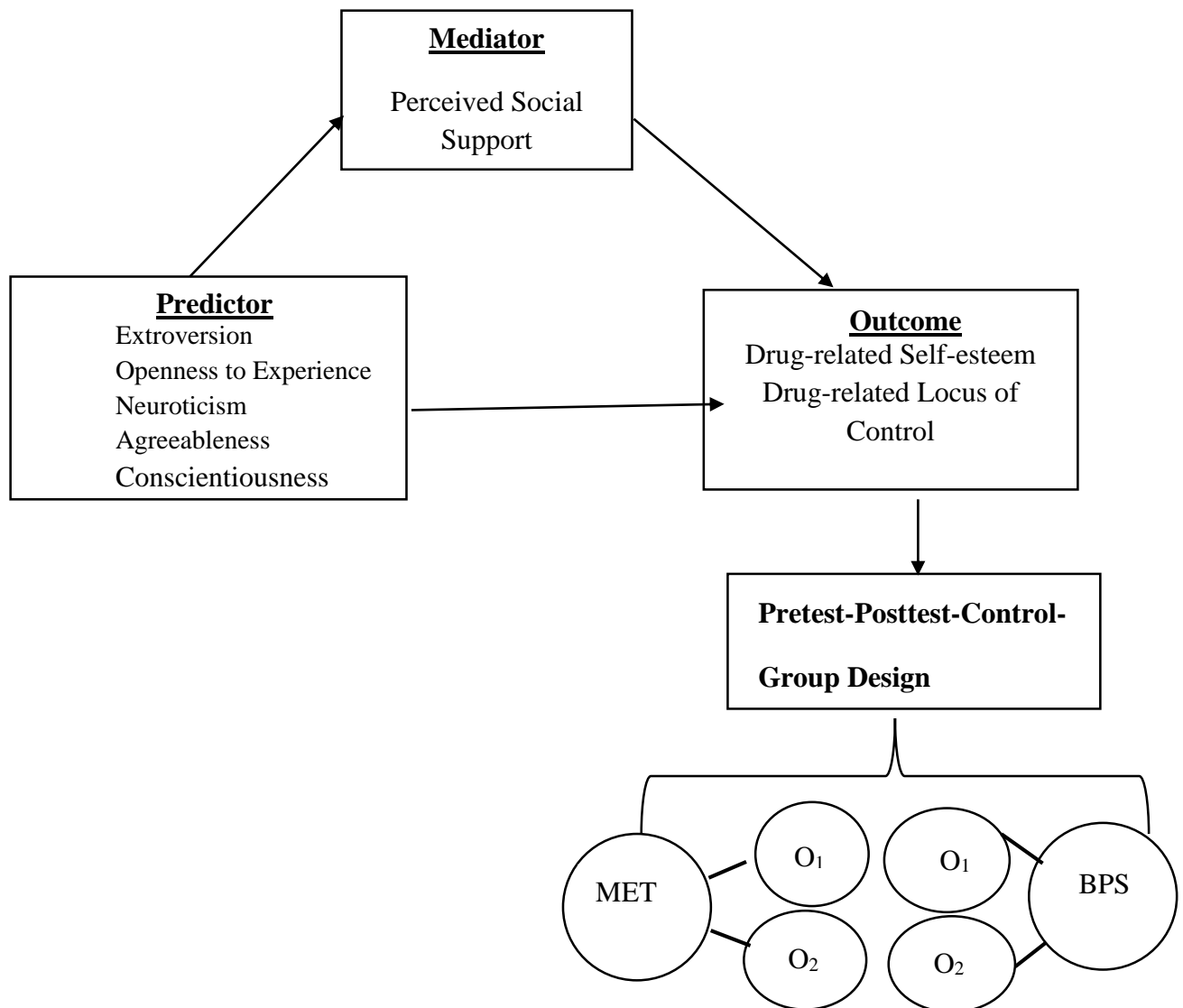
<div align="right">**Chapter 2**</div>

Method

Research Design

A Cross-sectional research design was used for the first three preliminary studies of the research. Pretest and Posttest control group with design was used in the main study. The experimental group was provided with Motivation-enhancement Therapy sessions designed in Urdu language from manual of MET by Miller (1995) while control group has been provided with general counselling based on the bio-psycho-social model of addiction treatment and rehabilitation for substance users. The aim of the intervention was to improve drug-related self-esteem, drug-related locus of control to improve the treatment adherence, remove early dropout and to elicit change behavior for abstinence.

The research was comprised of four studies. Following are the details.

Study I: Translation, Validation and determine psychometric properties of Drug-related Locus of Control scale

Study II: Development and validation of Drug-related Self-esteem Scale

Study III: Preliminary Study (Mediation Study)

Study IV: Main study (Intervention Study)

Study I: Translation, Cross language validation and psychometric properties of Drug-Related Locus of Control Scale (DRLOC)

The main study was aimed to explore the efficacy of Motivation-Enhancement Therapy in improving drug-related self-esteem and locus of control among substance users. In order to achieve the aim of the study, drug-related locus of control scale was adapted, translated and validated into Urdu language to make it more understandable to the sample population.

Objectives Study I

The objectives of the study I are as follow.

1. To Translate and validate Drug-Related Locus of Control into Urdu language.

2. To determine Psychometric properties of Urdu version of DRLOC scale.

Figure 2

Conceptual Framework study I: Translation and Adaptation Study

(Forward) Translation by the four translators (a bilingual subject experts)
↓
Committee approach for Adaptation of the DRLOC scale
↓
(Back) Translation by the four translators (a bilingual language experts)
↓
Comparison of original and back translations by the one translator (a bilingual language expert)
↓
Panel review of the modified version by 4 bilingual subject specialists
↓
Final adjustment of the translated version
↓
Pilot Testing
↓
Final Urdu version of DRLOC

Instruments

The Following research tools were used in the phase I of the current study.

Demographic Sheet. Research instruments were started from demographic sheet consisting the informed consent to participate in data collection, demographic information on age, qualification, marital status, family type (joint, nuclear), number of treatments taken, types of drugs used and duration of each of the drug used.

Drug Related Locus of Control (DRLOC). Drug related locus of control was developed by Hall (2001). DRLOC is a 15 items measure developed to investigate one's drug related self-control in a variety of situations. Each item consists of two statements and the participant has to select only one choice for each item. First statement of each item scored 1 and the second statement scored 2. Scale has also reversed scored items. Items 1,3,5,8,11,14,15 are reversed scoring items. Mean score of the scale items will determine participant's level of drug related locus of control. If the participant has scores near to 1 in each item, he will be with high internal locus of control, while participants selecting 2 scored items will have high external locus of control. Hall translated this scale into English. According to guidelines of manual, 22 will be the maximum score for drug-related internal locus of control while above 22 will be the score for drug-related external locus of control. Translated version of DRLOC scale have reliability coefficient α= .81. The split half reliability coefficient was .76.

Convergent validity was established by measuring the correlation of DRLOC scale with total Addiction Severity Index (ASI) which have positive correlation with DRLOC (r= .301, p<.00). While subscales of ASI were also significantly correlated with LOC, e.g., increased scores in psychological dysfunction scale were correlated (r= .278 for somatization, r= .268 for depression) with the more external locus of control. Hall (2001) also examined that DRLOC had significantly positive correlation with the Rosenberg self-

esteem scale. High scores in measure of self-esteem were strongly correlated (-.412) with internal locus of control.

Beck Depression Scale /Urdu version. Beck Depression Inventory (BDI) was developed by Beck, a psychiatrist, and released in 1961, to assess the severity level of depression with the help of 21 self-rated items. Each item consists of four statements with increasing intensity which assigned values from 0 to 3. The current study used the translated version of BDI. Abdul-Khaliq and Gul (2018) determined the validity and reliable of BDI Urdu version on Madaris students of Karachi Pakistan. They administered BDI Urdu version on 35 students of different grades from *Jamia tur Rasheed* Karachi. Findings show that the Cronbach alpha reliability of BDI urdu version ranges from 0.75 to 0.81 which indicates that the BDI Urdu version can be efficiently used for assessment of depression in Pakistani population (Abdul Khaliq, Gul, 2018).

Procedure

The four step procedure was followed during the scale translation process i.e. 1) Translation, 2) committee approach, 3) back translation, and 4) committee approach.

Translation. For translation step of the current study, five bilingual experts who were proficient in both English and Urdu language were approached. The rationale, variables of research were briefly introduced to all bilingual experts. One English instructor and two assistant professors in psychology from Riphah International University, Al Mizan Campus, one addiction treatment expert from Najjat trust, one Urdu literature instructor from sir Syed College wah cantt were requested to participate in the current phase of the study. They were asked to focus on the conceptual translation of the scale while keeping in mind the population of substance users and the conceptual meanings of the terminologies related to substance use. The participants were also requested not to use difficult words in Urdu which could not be understandable to the common population of substance users.

Committee Approach. In the second step of the translation, a committee approach was carried out comprising five members including supervisor of the current research, one assistant Professor from Riphah International University, Al Mizan Campus, two lecturers from International Islamic University Islamabad and the researcher herself. They were requested to review both options of the translated scale very carefully in relation with language, substance use field and relevance to original scale content. Some of the items were accepted as they were translated and some of them were selected with minor changes in selection of words which were not easily understandable to the substance user community. The committee members incorporated required minor changes in some of the selected translated items to draw a final translated version of original scale.

Back Translation. After the selection of one translated version of the DRLOC scale, two PhD scholars from National University of Science and Technology (NUST), one English instructor from sir Syed College Wah Cantt and two assistant professors from Riphah International University, Al-Mizan Campus were requested to Back translate the Urdu version of DRLOC scale into English language. Beck translation was carried out in order to validate the quality and accuracy of the translated version of the scale. Participants of beck translation team were unfamiliar with the original scale of DRLOC as they were not the part of the forward translation team.

Committee Approach. After the completion of the back translation process, same committee members involved in forward translation were again requested to participate in committee approach for back translation process. All members were requested to compare the back translated version of the scale with the original version and suggest if the adaptation of any item have been required. The committee members selected the items which were relevant and conveying the meaning closest to the original items. Therefore, committee members did not suggested adaptation for any scale items**.**

Step II: Try Out

This step of the Phase I study was consisted of the Tryout of the translated version of the DRLOC scale in order to determine the comprehension and understandability of the translated version of the scale.

Sample

For Tryout of the translated version of scale, 20 male participants were selected through convenience sampling technique from Najjat Trust Rawalpindi and Devotion Rehabilitation Center Islamabad. The age range was from 20 to 45 years (M= 32.3, SD = 7.5)

Instruments

In the current step of the research, translated version of Drug-related Locus of Control Scale (DRLOC) was used.

Procedure

Tryout sample was taken from Devotion Rehabilitation Center, Islamabad and Najjat Trust Rawalpindi. After taking permission from administration of these rehabilitation centers and after informed consent from the participants, briefly explained about the current study, purpose and confidentiality of the information provided. Participants were instructed to read the items carefully and select between two statements which they feel more appropriate bout their own feelings on substance use.

Results

According to the results of tryout study (M= 24.10, SD= 2.5), the participants have easily understood all items of the translated scale. They did not felt difficulty while understanding the concept and the wording of the statements. No item from the translated scale was considered irrelevant, difficult to attempt or humiliating with reference to their cultural and societal norms.

Step III. Cross Language Validation and Psychometric Properties

The step III of the Translation phase aimed to examine the following objectives.

1. To determine the cross language validation of translated version of DRLOC scale.

2. To determine the psychometric properties of the translated version of DRLOC scale.

Part I: Cross Language Validation of the Scale

First part of the second step of translation study was cross language validation of Drug-related locus of control scale (Urdu Version).

Objectives

1. The main objective of the part I of the pilot study was to determine the cross language validation of the drug-related Locus of control scale.

2. To find out the test-retest reliability of Urdu version of translated DRLOC scale.

Sample

A sample of 100 (N=100) inpatient substance users were selected. These were the patients who can understand both languages (English and Urdu). The age range of the participants was from 18 to 48 (M=31.29, SD= 7.0). While qualification of the participants of pilot study was from 10th standard to 16 years of education (M= 11.54, SD= 1.9). Data was collected through convenient sampling from drug addiction rehabilitation centers of twin cities (Hosla Medical center and shifa caring center). After taking informed consent from the participants, Sample was divided into two equal groups. Group I (n=50) responded on the Translated Urdu version of DRLOC scale while original English version of DRLOC scale was administered on participants of Group II (n=50). After three weeks, two groups (group I, Group II) were further subdivided into two groups consisting group 1A (n=25), 1B (n=25), group 2A (n=25) and 2B (n=25) respectively. Original English version of DRLOC scale was administered on group 1A (n=25) and group 2A (n=25) while Urdu version of the scale was distributed to group 1B (n=25) and 2B (n=25).

Procedure

Initially data collection was started after taking formal permission from the program directors of the selected drug addiction treatment and rehabilitation centers. After taking permission, the patients were approached for informed consent. The participants were explained about the purpose of research, required details and confidentiality of the information was also ensured. Instructions were given to the participants and asked them to read the statements carefully and select one of the two statements of each item that best describes about his feelings while keeping in mind the problem of substance use. The participants were also instructed to do not leave any item of the scale unanswered.

Results

To meet the objectives of the cross language validation part of the phase I, validity of DRLOC scale was calculated.

Figure 3

Sample Distribution for test-retest of the current study
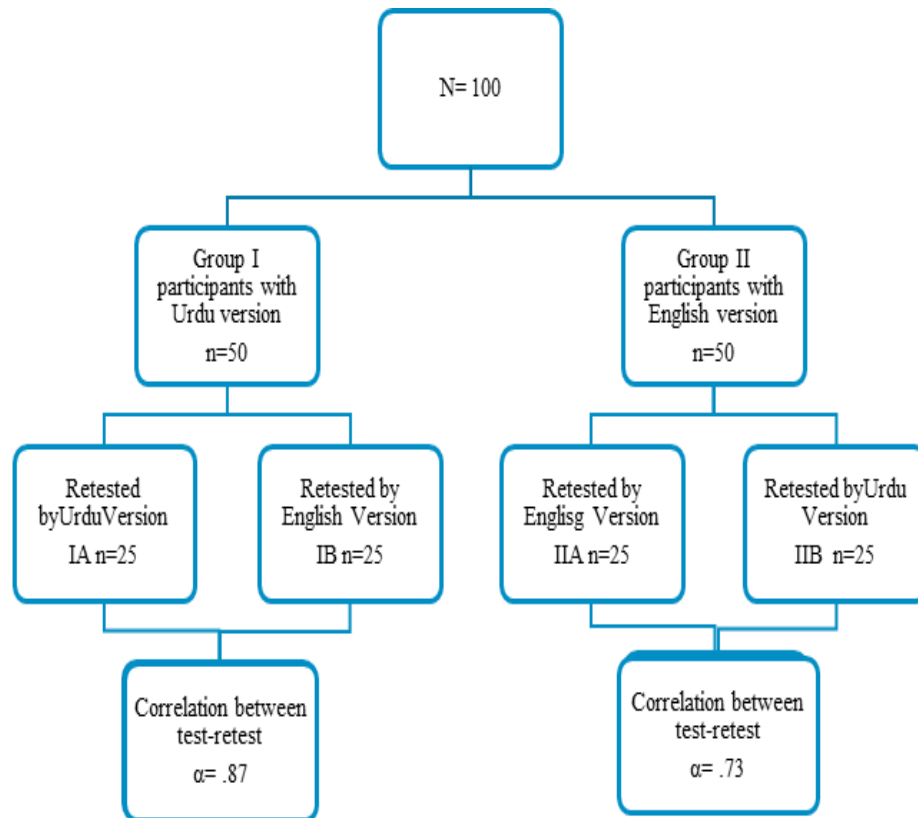
This figure reveals that the scores on Urdu and English versions have significant positive correlation for Group-I and Group-II which indicates Cross-language validity of Urdu translated version of Drug-related locus of control scale and original English version. It indicates that both original and translated version of DRLOC scale are conceptually valid tools to measure Drug-related Locus of Control.

Part II: Determination of the Psychometric Properties of the DRLOC Scale and Confirmatory Factor Analysis of Translated Scale. Psychometric properties of the translated version of DRLOC scale were determined through SPSS-21 while two factors (Drug-related Internal, External Locus of control) were confirmed through Confirmatory factor analysis by using AMOS-20.0.

Table 1

Cross Language Validation and Test-retest Reliability of DRLOC Scale (N=100)

Groups	n	Test	Retest	r
IA	25	Urdu	English	.85
IB	25	Urdu	Urdu	.90
IIA	25	English	English	.56
IIB	25	English	Urdu	.88

**$p<.01$

Table 1 shows that the correlation between Drug-related Locus of Control (DRLOC) scale (Urdu) and DRLOC scale (English) is significant ($p<.01$). The correlation value ranges from .56 (English to English) and .90 (Urdu to Urdu). The alpha value of English to English is less as compared to other forms (Urdu to Urdu). The reason may be the medium of instructions being Urdu and literacy rate of the substance users.

Figure 4

Uni-factorial structure solution of the translated Drug-related locus of Control Scale (N=230)
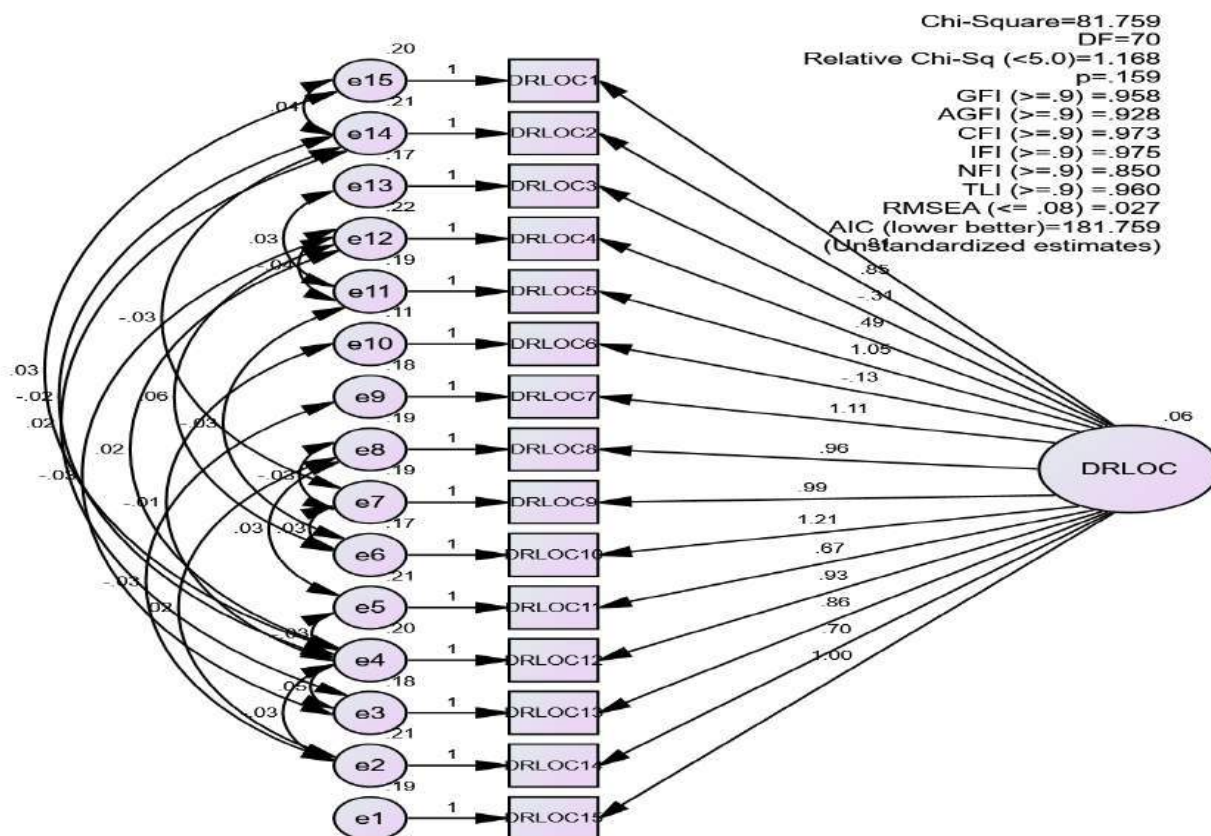
Table 2

Model fit Indices for the translated Drug-related Locus of control scale (N=230)

Fit Indices	x^2	df	CMIN/DF	RMSEA	IFI	NFI	CFI	TLI
Drug-Related Locus of Control Scale	81.75	70	1.168	.027	.97	.85	.97	.96

Note. *p=REMSEA <.01, *p= CMIN<.01*

Table 2 shows the results of confirmatory Factor analysis determining standardized model fit indices of Urdu translated versions of the Drug-related Locus of Control scale on the sample of 230 inmate substance users. The results indicate that models are reasonably fit for the following parameters of $\chi 2/df$, RMSEA, normed fit index, comparative fit index and Tucker-Lewis index. The table 2 also shows that the values of Chi-square are non-significant as the degree of freedom is greater. The values obtained by dividing the $\chi 2/df$, are acceptable for the parameters of model fit indices i.e. The Drug-related locus of Control scale 1.16 (Hu et al., 1992).

Table 3

Correlation Bivariate between Drug-Related Locus of Control and Depression (N=230)

Scale		1	2	3	4
1	Drug-Related Locus of Control Scale	-	.04	.15	.38**
2	Drug-Related Internal Locus of Control Scale	-	-	-.02	-.04
3	Drug-Related External Locus of Control Scale	-	-	-	.22*
4	Beck Depression Inventory				

**p<.01, *p<.05

The above table 3 shows the correlations between Drug-Related Locus of Control and Depression. Table shows the significantly positive correlation between Drug-related Locus of control and Depression (*r=.38, p=.01*). Drug-Related External Locus of Control also has significantly positive relationship with Depression (*r=.22, p=.05*).The above table establishes the convergent validity of translated version of Drug-related Locus of Control Scale with Beck Depression Inventory with the help of Pearson correlation bivariant. Urdu Translated version of DRLOC scale proven to be valid and reliable scale for native substance users.

Discussion

Substance use is a rapidly spreading problem all over the world especially in Pakistan because of negligence of influential authorities regarding its eradication, production and trafficking. Cannabis, opium and heroin are the most commonly abused drugs in Pakistan because of their easy availability as well as cheap rates (UNODC, World Drug Report, 2017).

While an individual decides to go for any type of narcotic or non-narcotic substance use regardless of the etiological factors, they also going through devastating changes in their characteristics like response pattern towards stressful life events, anger management, sociability, altruism, behavioral reactions, thought processes, perception about others, world and their own selves as well as in their inner state of mind.

These facts raise the attention towards the dire need to devote the positive energies and resources to address important aspects of the increasing issue of world substance use. These aspects primarily includes the prevention plans for the population at risk and availability of evidence-based treatment and rehabilitation venues for those who has initiated the substance use. For the treatment and rehabilitation purpose, experts need proper evaluation of the internal capitals of the person taking treatment. In Pakistan majority of the population can speak and understand Urdu language which promotes the need to evaluate the important characteristics of substance use population through Urdu assessment tools. Drug-related locus of control is the important aspect of the person taking rehabilitation in order to take counselling decisions and to form management plan. DRLOC scale was translated into Urdu language so that it could be understandable for all inpatient substance users so that they can be representative of the substance user population for different activities of research, therapy and psycho-education.

Drug-related locus of control scale is an indigenous scale originally developed by Hall (2001) with the purpose of measuring the substance user's feelings of self-control and

decisiveness related to drug abuse. The current study aimed to indigenize the DRLOC scale for Pakistani population with the help of Urdu translation, adaptation and validation process.

The DRLOC scale was translated by the standardized method of translation and adaptation proposed by Brislin (1986). The scale was translated in to Urdu by five bilingual experts and gone through with the committee approach, backward translated by five different bilingual experts and committee approach by same experts involved in first committee approach. A final panel meeting was held to take consensus on adjustment of the Urdu translated version of DRLOC scale.

Cross language validation of the scale was an important step of the current study which was achieved through comparison of original English version of scale with Urdu translated version of DRLOC scale. The results indicate significantly positive relationship between original version and Urdu translated version of DRLOC scale. The results also indicate that Urdu-Urdu version has significantly positive relationship than original version of DRLOC scale which shows that the Urdu translated version of the scale is more understandable and comprehendible for native sample than original (English version)DRLOC scale (see Table I).

The current study also aimed to measure the convergent validity of the Urdu version of the scale with Urdu version of Beck Depression Inventory. The results indicated that drug-related locus of control and drug-related external locus of control has significantly positive relationship with depression. Table 3 shows the convergent validity of the translated DRLOC scale and proposed that the Urdu version of DRLOC scale proven to be significantly valid tool to measure the feelings about self-control regarding substance use among Pakistani population (see Table 3).

Furthermore, Confirmatory factor analysis has also determined the standardization of model fit indices of Urdu version of DRLOC scale on the sample of 200 male inpatient substance users. The result of CFA indicated that indices were highly significant as evident by

the non-significant level of $\chi^2/df,$ RMSEA, normed fit index, comparative fit index and Tucker-Lewis index parameters of CFA. The values of Chi-square are also significant (see Table II).

Conclusion

It concluded that both versions are conceptually equivalent and relevant with the construct which was rephrased in simple and understandable native language. Statements related to internal and external locus of control were very clear and appropriately combined in a meaningful way. Confirmatory factor Analysis, Cross language and discriminant validity reflects that Urdu version of Drug-related locus of control scale appears to be reliable, valid and culturally appropriate instrument to measure the feelings of self-control related to substance use among inpatient substance users in Pakistani population.

Chapter 3

Study II: Development and Validation of Newly Developed Drug-related Self-esteem (DRSE) Scale

The major aim of study II was to construct a valid and reliable scale to systematically measure the drug-related self-esteem for drug addicts in the process of rehabilitation. Although there are a number of established scales measuring self-esteem including; Self-Esteem Scale of Rosenberg (1965), Self-Esteem Scale of Janis and Field (1959), and Heatherton and Polivy's State Self-Esteem Scale (Heatherton & Polivy, 1991; Richardson et al., 2013; Rosenberg, 1965). However, these may not specifically assess unique aspects of one's self-esteem specifically in the context of relapse of drug addiction.

Indigenous scale to measure drug-related self-esteem can assesses the changes in perception of self-regard, self-appreciation, confidence, and self-competency of drug addicts in the process of rehabilitation. This would be an effective tool in designing and restructuring rehabilitation and treatment strategies according to the special needs of addicts in order to minimize relapse.

Objectives of the Study II

The major objectives of the study II are as follow

1. To construct a scale to measure drug-related self-esteem of under treatment substance users.
2. To establish discriminant validity of newly developed scale for substance users to measure drug-related self-esteem.
3. To establish psychometric properties of Drug-related self-esteem scale.

Hypotheses

The following hypotheses were formulated in the present study.

1. The newly constructed scale of drug related self-esteem would be reliable and valid.

2. There will be negative relationship between drug-related self-esteem and depression.

3. There will be a negative relationship between drug-related self-esteem and drug related locus of control.

Figure 5

Conceptual Framework of Study II: Scale Construction & Validation

Drug-Related Self-Esteem

Step 1: Item Generation

Discusion with Addiction Professional	FocusedGroup Discussion with Drug Addicts	Literature Review	Item Pool generation, committee approach, items review (I-CVI < .77 were Removed CVI = .87)

Step2 :initial psychometrics through Pilot Testing(N=50)
Psychometric Properties ;Cronbach Alpha Reliability, Internal Consistency

Step 3: Factor Analysis factorial for DRSEl validity (N=230)

Preliminary analysis: Data screening (Normality, Correlation Check	Factor extraction	Factor rotation	convergent and divergent validity

Drug-related Self-esteem Scale
Confirmatory Factor Analysis to Confirm Factor Structure of Drug-related Self-esteem Scale

Method

The study was conducted in following two phases.

- Phase I: Development of Drug-related Self-esteem (DRSE) Scale

- Phase II: Establishing Psychometric Properties of Drug-related Self-esteem (DRSE) Scale

Phase I. Development of Drug-related Self-esteem (DRSE) Scale.
Development of Drug-related self-esteem scale was aimed to assess domain specific self-esteem category and focused on drug related self-esteem of drug addicts taking treatment in rehabilitation centers. Drug-related self-esteem is related to recovery, self-evaluation of self-competence, self-regard and self-control after drug addiction and during abstinence process. The phenomenon of DRSE was identified by reviewing the theories of self-esteem, literature, focused group discussions with substance users and interviews with the professionals working in Addiction field.

Item Generation. Items for drug-related self-esteem scale for substance users were generated after studying the relevant literature about self-esteem construct and its dimensions. Basic conception is based upon Tajfel and Turner (1975) social identity theory of self-esteem to generate scale items because this theory focuses on how individuals' identities are shaped by the groups they belong to, rather than solely on their personal behavior within those groups. Hence, in social identity theory, the emphasis is placed on understanding how social groups play a significant role in shaping an individual's thoughts and behavior, rather than solely focusing on how individuals behave within those groups. Current study focused on post addiction life of admitted drug addicts and drug related self-esteem in order to carry on drug addiction choice or to be abstinent. So for this purpose individual interviews were conducted to decide about expected item pool. Three focused groups were also conducted to find the difference between general self-esteem and a unique conception of self-esteem related to drugs in substance users. Each focus group consist of 6 participants. According to the instructions for

scale development given by DeVellis (2012), sample of scale should be closely related to the population on which the scale is going to be applied (DeVellis, 2012; Steven, 2015).

After focused group discussions, individual sessions and literature study of Rosenberg self-esteem scale, Specific collective state self-esteem concept of social identity theory, item pool was generated which was consists of 50 items. Therefore, items developed to measure drug related self-esteem of substance users were designed to assess three components (self-competency, self-confidence and self-regard) of self-esteem which were developed and observed an individual after starting life after addiction.

Second step was to determine the measurement scale. Likert- type response scale was selected to measure the responses of the participants ranging from *1=strongly disagree* to *7=strongly agree*. The item pool was first given to one of the PhD scholars to review the items. She returned the item pool with feedback regarding some terminologies which were changed with simple language. After the first review, second review was taken from the professional expert in the field of psychology research. The expert asked to review and change the double barreled statements with more specific ones.

Content validity index. The next stage of scale development was to conduct Item Content Validity Index (I-CVI) with the purpose to validate the scale empirically and to evaluate items in terms of relevance and clarity to the actual construct (Haynes, et al., 1995). The items were assessed by 9 judges who were expert in the field of clinical Psychology. The judges were asked to rate each item according to its relevance to the construct, clarity and comprehensibility of each statement on a 4-point scale where 1 was highly irrelevant and 4 was highly relevant to the construct (Davis, 1992). According to Lawshe (1975) criteria of conducting I-CVI, 41 items were finalized and 15 items were removed as their I-CVI was less than 0.77. Following the same criteria, the scale's total CVI was calculated as .81. This CVI is

acceptable according to standard criteria and shows that the content of the scale is valid (Lawshe, 1975; Ayre & Scally, 2014).

After changing suggested by the professionals involved in content validity, drug-related self-esteem scale for substance users was reduced to 41 items. This scale was administered to the sample of 20 inpatient substance users with the purpose to identify any type of confusion, difficulty or redundancy on the participant's side.

The scale was again revised and items were reduced to 30 statements. The Items on which participants felt difficulty in conceptualizing and making sense of statements was removed. These 30 items were clearly measuring the apposed phenomena of self-esteem of drug related life of substance users.

Establishing Construct validity through factor analysis. Final 30 items scale was than administered on the admitted substance users to run the factor analysis of the scale. Exploratory factor analysis (EFA) was applied to determine the construct validity of the developing scale.

Table 4

Final item pool to run Factor Analysis on Drug-related Self-esteem Scale for drug addicts

1. میں ایک اچھا شخص ہوں

2. میں نے منشیات کے استعمال سے چھٹکارا پانے کے لیے بہت جدوجہد کی ہے۔

3. منشیات کے استعمال کے باوجود، میں اب بھی ایک خاندان کے رکن کے طور پر اپنی ذمہ داریاں پوری کر رہا ہوں

4. میں ایک ایماندار فرد ہوں

5. میں منشیات کے استعمال سے پہلے کی طرح ذہین ہوں

6. میں اپنے آپ کی عزتی نہیں کرتا ہوں جیسا کہ میں ہوں۔(ر)

7. میں نشے سے نجات کی جنگ میں ناکام ہوں۔(ر)

8. میں اپنے معاشرے سے آنے والے چیلنجوں سے نہیں نمٹ سکتا۔(ر)

9. میں نشے کی تاریکی سے باعزت صحت یابی کی روشنی تک بہت کچھ ٹھیک کر چکا ہوں

10. میں منشیات کے استعمال سے پہلے کی طرح ذہین انسان نہیں رہا۔(ر)

11. میں اب پرکشش آدمی نہیں رہا۔(ر)

12. میں نے اپنے آپ کو معاف کیا جو میں نے غلط کیا ہے

13. میں اب بھی اپنے پیشے میں ماہر ہوں

14. میں اب بھی اپنے منشیات کے استعمال سے پہلے کی طرح مہارت سے کام کرنے کے قابل ہوں۔

15. میں منشیات کے استعمال کے بعد اپنے برے تاثر سے پریشان ہوں۔(ر)

16. میں ایک منشیات کے عادی کے طور پر دیکھنے سے پریشان ہوں۔(ر)

17. میری سماجی زندگی بیکار ہے۔(ر)

18. مسائل کے حوالے سے میری رائے کی کوئی پرواہ نہیں کرتا۔(ر)

19. میں منشیات کے استعمال کے بعد اپنی جسمانی شکل سے ناخوش ہوں۔(ر)

20. میں مثبت / منشیات سے پاک زندگی کے اپنے مقاصد حاصل کر سکتا ہوں

21. میں اپنی زندگی کے بارے میں مضبوطی سے فیصلے کر سکتا ہوں

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22. مجھے یقین ہے کہ میں اپنے منشیات کے استعمال کی وجہ سے پیدا ہونے والی پریشانیوں کو سنبھال سکتا ہوں

23. میں اپنے کام میں کم توانائی محسوس کرتا ہوں۔(ر)

24. میرے بہن بھائی اور رشتہ دار میرے مقابلے میں زیادہ پرکشش ہیں۔(ر)

25. مجھے لگتا ہے کہ میں اپنے معاشرے کے لیے بیکار ہوں۔(ر)

26. مجھے لگتا ہے کہ میں اپنے منشیات کے استعمال پر قابو نہیں پا سکا۔(ر)

27. جب دوسرے مجھے عادی کے طور پر بدنام کرتے ہیں تو میں حوصلہ شکنی محسوس کرتا ہوں۔(ر)

28. میں بحالی کے اپنے مقرر کردہ اہداف حاصل نہیں کر سکتا۔(ر)

29. میں منشیات کے استعمال کے خلاف اپنے نفس پر قابو پانے پر یقین رکھتا ہوں

30. سماجی تنقید کبھی بھی منشیات کی لت سے میری صحت یابی میں رکاوٹ نہیں بن سکتی

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Operational Definition of Variables

The operational definition of the study variables are presented below.

Drug-related Self-esteem. Drug-related self-esteem is operationally defined as "specific collective state self-esteem" which refers to individual's perception about self in regard of specific area of functioning and group affiliation with reference to drug addiction (Tajfel & Turner, 1979). Drug related self-esteem is one's feelings of self-worth, self-competence, self-regard and self-confidence with reference to life after drug addiction.

Drug-related Locus of control. Drug-related locus of control can be operationally defined as feelings of self-control or being control by external circumstances with reference to decisions about drug addiction and relapse (Hall, 2001). "A belief about life circumstances and their outcomes are contingent on our actions (internal control orientation) or on outside our personal control (external control orientation)"(Zimbardo, 1985).

Depression. Depression is operationally defined as "a state of excessive sadness or hopelessness, low mood and other prominent physical and psychological signs of low mood because of the poor self-esteem and feelings of lack of self-control over life decisions. World

Health Organization has given the operational definition of depression as; persistent low mood, loss of pleasure or interest, insomnia, poor self-worth, poor appetite, excessive guilt over past, fatigue and lack of concentration (World Health Status, 2018).

Sample

The present study consist of 230 male substance users. Female sample was not included in the current study because of lack of availability of female drug addicts in drug detoxification and rehabilitation centers. Because of lack of female representation of the addict population, only male participants were taken for data collection for scale construction purpose. Participants taken from Islamic Medical Centre, Najjat Trust, Hosla Clinic for drug addiction treatment and rehabilitation, Wapsi drug treatment and rehabilitation center and ANF model drug treatment center Thandapani situated in twin cities who were receiving treatment for substance use disorder. Participants were selected through convenience sampling technique after taking informed consent signed by the participants. The eligibility for the substance users to enter into the research included age range from15-45 years divided into adolescence (12-20), early adulthood (20-30) and mature adulthood (30-65), education from primary to masters belonging to nuclear or joint family system. Because of the education barrier, data was collected while using Urdu version of scales and the new instrument was also developed in Urdu language.

Instruments

The Following research instruments were used in the current study.

Demographic Sheet. Research instruments were started from informed consent and demographic sheet which was designed to obtain the demographic information on age, qualification, marital status, family type (joint, nuclear).

Beck Depression Scale/Urdu version. Beck Depression Inventory (BDI) was developed by Beck to assess the severity level of depression with the help of 21 self-rated

items. Each item consists of four statements with increasing intensity which assigned values from 0 to 3. Current study used the translated version of BDI. Khan et al (2017) determined the validity and reliable of BDI Urdu version in Pakistan. They administered Beck Depression Inventory on 250 inpatient and outpatient participants from Ayub Teaching Hospital Abbottabad in order to determine reliability. Findings show the Cronbach alpha reliability of BDI Urdu version ranges from 0.75 to 0.92. Inter-item correlations were also measured which ranged from 0.53 to 0.78. The validity of the translated version ranges from 0.77 to 0.93 which shows that the inventory has good validity and reliability and can be efficiently used for assessment of depression in Pakistani population (Khan et al., 2017).

      Drug Related Locus of Control (DRLOC). Drug related locus of control was developed by Hall (2001). DRLOC is a 15 items measure developed to investigate one's drug related self-control in a variety of situations. Each item consists of two statements and the participant has to select only one choice for each item. First statement of each item scored 1 and the second statement scored 2. Scale has also reversed scored items. Items 1,3,5,8,11,14,15 are reversed scoring items. Mean score of the scale items will determine participant's level of drug related locus of control. If the participant has scores near to 1 in each item, he will be with high internal locus of control, while participants selecting 2 scored items will have high external locus of control. Hall translated this scale into English. According to guidelines of manual, 22 will be the maximum score for drug-related internal locus of control while above 22 will be the score for drug-related external locus of control. Translated version of DRLOC scale have reliability coefficient $\alpha= .81$. The split half reliability coefficient was .76. Convergent validity was established by measuring the correlation of DRLOC scale with total Addiction Severity Index (ASI) which have positive correlation with DRLOC ($r= .301$, $p<.00$). While subscales of ASI were also significantly correlated with LOC, e.g., increased scores in psychological dysfunction scale were correlated ($r= .278$ for somatization, $r= .268$ for

depression) with the more external locus of control. Elizabeth also examined that DRLOC had significantly positive correlation with the Rosenberg self-esteem scale. High scores in measure of self-esteem were strongly correlated (-.412) with internal locus of control.

Current study used Urdu translated version of Drug Related locus of control scale with the convergent validity of *r=.38, p=.01* with Beck depression inventory. Confirmatory factor analysis has also determined the standardization of model fit indices of Urdu version of DRLOC scale on the sample of 200 male inpatient substance users. The result of CFA indicated that indices were highly significant as evident by the significant level of $\chi 2/df$, RMSEA, normed fit index, comparative fit index and Tucker-Lewis index parameters of CFA. The values of Chi-square are also non-significant.

Procedure

After taking formal permission from the administration of the selected drug rehabilitation centers, 230 male substance users were selected with the convenient sampling technique and built a satisfactory level of rapport with them. Instructions were given to the participants and asked them to give response to the presented instruments while keeping in mind the life after drugs and feelings and thinking about themselves after drug addiction. The research instrument was administered on the respondents in Urdu language because of the easy understandability of the concepts and statements of new instrument. Their demographic information was also gathered. Each participant who was voluntarily willing to participate in the study was given the detailed information about the study which includes purpose, confidentiality of the information as well as the further usage of the given information. The collected data was analyzed by using Statistical Package for Social Sciences-24 version.

Results

The current study followed the significant results of exploratory factor analysis, convergent and discriminant validity of the newly constructed Drug-related self-esteem scale. The data was analyzed using SPSS-24 version.

Exploratory Factor Analysis: Drug-Related Self-esteem Scale (DRSES)

30 selected items were processed and analyzed to generate the representative factor structure of drug-related self-esteem of drug addicts. Initially preliminary data analysis was done. For this purpose inter-item correlation and normality was checked so that data can be refined and worst offenders can be identified. During the process of preliminary data analysis, 12 items were identified as worse case offenders because of poor performance in normality check as well as because of poor inter item correlation and were removed in order to run factor analysis of remaining items.

After completing preliminary data analysis and removal of worse case offenders, 17 items were factor analyzed using Principle Axis Factoring with direct oblimin (Oblique) rotation, because all factors were interrelated. Items loaded on less than .30 values were excluded from factor loading and items which were cross loading also excluded. Eigen value and scree plot, both methods of factor extraction was considered but Eigen value method was not selected to extract factors because of the criteria of communalities which were less than .7 and sample less than 250. Therefore Scree plot suggested 4 factors but there were two items in factor four with lower loading. These two items were more conceptually linked with first factor so we fixed three numbers of factors and rerun the factor analysis. A Kaiser-Meyer-Olkin (KMO) measure for sample adequacy produced value of 0.81 indicating that the sample was adequate for factor analysis. Bartlett's test of sphericity was also significant ($\chi2(136) = 1595.10, p< .000$). Factor 1 explained 24.80% of variance, Factor 2 has an Eigen value of 3.16 and explains 18.60% of variance and Factor 3 has an Eigen value of 2.33 and explains 13.69%

of variance. All three factors comprises of 17 items explained total 57.10% variance. Details are summarized below:

Factor I: Self-Competence. First factor was comprises of 8 items that explained 24.80% of total variance. "میں منشیات کے استعمال کے بعد اپنے برے تاثر سے پریشان ہوں۔(ر)" was the highest loading item in first factor which was also reverse scored item. "میں اب بھی اپنے منشیات کے استعمال سے پہلے کی طرح مہارت سے

کام کرنے کے قابل ہوں" was also the highest factor loading item. There were also two more reverse

scoring items like "میں بحالی کے اپنے مقرر کردہ اہداف حاصل نہیں کر سکتا" was one of the reverse scored items of the

factor. All items of the first factor were consistent in explaining concept of self-competence or feeling of being capable of doing things. Because of this congruence of concept, we labeled first factor of 8 items as "Self-Competence". Higher scores in self competency factor suggest higher feelings of being competent even after drug addiction.

Factor II: Self-Confidence. The second factor comprises of four items explaining میں اپنی زندگی کے بارے میں" and "جب دوسرے مجھے عادی کے طور پر بدنام کرتے ہیں تو میں حوصلہ شکنی محسوس کرتا ہوں" 18.60% variance. (ر)

"مضبوطی سے فیصلے نہیں کر سکتا ہوں(ر)" are two examples of highest loading items of second factor. These

items give the idea about feeling and thinking about poor self-confidence while dealing with daily life challenges of drug addict after drug addiction. Because of theme explained by these items, we labeled this factor as "Self Confidence". Highest scores in this factor will indicate the individual's high level of self-confidence while dealing with different social settings.

Factor III: Self-Regard. The third and last factor of the scale was comprises of 5 items. Third factor explained 13.69% of total variance. "میں منشیات کے استعمال سے پہلے کی طرح ذہین انسان نہیں رہا" have

highest loading in third factor and also reverse scored. Therefore content of these items was

showing the critical explanation and evaluation of one's self after drug addiction that is why we labeled this factor "Self-Regard". High scores on this factor will show the high level of self-regard of the participant.

Table 5

Exploratory Factor Analysis: Factor Loadings of Drug-Related Self-esteem Scale

Items	Total items(α = .72)			*Factor Loadings*		
				FI	FII	FIII
	F1. Self-Competence (α = .82)					
Q3	منشیات کے استعمال کے باوجود، میں اب بھی ایک خاندان کے رکن کے طور پر اپنی ذمہ داریاں پوری کر رہا ہوں۔			**.66**	.27	.21
Q7	(R) میں نشے سے نجات کی جنگ میں ناکام ہوں۔			**-.66**	.26	18
Q8	(R) میں اپنے معاشرے سے آنے والے چیلنجوں سے نہیں نمٹ سکتا۔			**-.70**		.12
Q9	میں نشے کی تاریکی سے باعزت صحت یابی کی روشنی تک بہت کچھ ٹھیک کر چکا ہوں۔			**.39**		.20
Q13	میں اب بھی اپنے پیشے میں ماہر ہوں۔			**.53**		
Q14	میں اب بھی اپنے منشیات کے استعمال سے پہلے کی طرح مہارت سے کام کرنے کے قابل ہوں۔			**.78**		
Q15	(R) میں منشیات کے استعمال کے بعد اپنے برے تاثر سے پریشان ہوں۔			**-.82**	.10	.10
Q29	میں منشیات کے استعمال کے خلاف اپنے نفس پر قابو پانے پر یقین رکھتا ہوں۔			**.50**		
	F2. Self-Confidence (α = .80)					
Q17	(R) میں اپنی زندگی کے بارے میں مضبوطی سے فیصلے نہیں کر سکتا ہوں۔				**-.77**	
Q21	(R) میرے بہن بھائی اور رشتہ دار میرے مقابلے میں زیادہ پرکشش ہیں۔				**-.66**	.12
Q23	(R) مجھے لگتا ہے کہ میں اپنے منشیات کے استعمال پر قابو نہیں پا سکا۔				**-.65**	
Q25	(R) جب دوسرے مجھے عادی کے طور پر بدنام کرتے ہیں تو میں حوصلہ شکنی محسوس کرتا ہوں۔				**-.83**	
	F3. Self-Regard(α = .74)					
Q5	(R) میں منشیات کے استعمال سے پہلے کی طرح ذہین انسان نہیں رہا۔			.29		**-.71**
Q6	(R) میں اپنے آپ کی عزت نہیں کرتا ہوں جیسا کہ میں ہوں۔			.30	-.32	**-.56**
Q16	(R) میں خود کو ایک منشیات کے عادی کے طور پر دیکھنے سے پریشان ہوں۔			.10	.19	**-.73**
Q18	(R) میں منشیات کے استعمال کے بعد اپنی جسمانی شکل سے ناخوش ہوں۔			.23	.17	**-.66**
Q28	(R) میں بحالی کے اپنے مقرر کردہ اہداف حاصل نہیں کر سکتا۔					**-.51**

Note: The double loaded item values are denoted in bold in the table

Table 5 shows the factor loadings of the three factors extracted from Drug-related Self-esteem scale. Factor 1 is related to self-competence aspect of Drug-related self-esteem which consists of eight items i.e., item no 3, 7r, 8r, 9, 13, 14, 15r, 29. Factor 2 extracted to measure self-confidence aspect of Drug-related self-esteem which consists of four items i.e. item no 17r, 21r, 23r, and 25r. Factor 3 is related to self-regard aspect of Drug-related self-esteem which comprises of item no 5r, 6r, 16r, 18r, and 28r. Loadings less than .30 were removed from factors. Items "میں منشیات کے استعمال سے پہلے کی طرح ذہین انسان نہیں رہا" and "میں اپنے آپ کی عزتی نہیں کر تاہوں جیسا کہ میں ہوں" were cross loaded.

Table 6

Eigen Values and percentage Variance explained by direct oblimin Rotation of Drug-Related Self Esteem Scale (N=230)

Factor	Initial Eigen values			Extraction Sums of Squared Loadings			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4.22	24.80	24.80	3.74	21.99	21.99	3.62
2	3.16	18.60	43.41	2.68	15.76	37.75	2.61
3	2.33	13.69	57.10	1.87	11.01	48.77	2.30

Extraction Method: Principal Axis Factoring

Table 6 shows the Eigen values of extracted factors. Factor 1 has an Eigen value of 4.22 and explains 24.80% of variance; Factor 2 has an Eigen value of 3.16 and explains 18.60% of variance; Factor 3 has an Eigen value of 2.33 and explains 13.69% of variance. Table also shows the total variance explained by all three factors which is 57.10%.

Establishing Psychometric Properties of Drug-related Self-esteem Scale.

Psychometric properties of DRSE scale were established through these two steps.

- Reliability, Convergent and Discriminant Validity

- Confirmatory Factor analysis (CFA)

Reliability Analysis. Reliability analysis was done to establish the reliability of newly developed Drug-Related Self-Esteem Scale (DRSES). The scale illustrated good total scale reliability (α=.72) (see Table 7). The first factor of the scale has shown excellent internal reliability (α=.82) and second factor have ((α=.80) internal reliability that was also excellent. The third factor has (α=.74) reliability that was also good for newly developed scale. Reliability analysis indicates that the newly developed scale for Drug-Related Self Esteem (DRSES) is reliable for the sample population.

Table 7

Descriptive Statistics for Drug-related Self-Esteem, three subscales of Drug-related Self-Esteem, Drug-Related Locus of Control and Depression among Substance Users (N=230)

Scales	K	α	M(SD)	Ranges Actual	Ranges Potential	Skew	Kurt
Drug-Related Self-Esteem Scale	17	.72	58.67(12.44)	40-107	17-119	1.98	5.39
Self-Competence Subscale	8	.82	30.24(9.10)	9-53	8-56	-.24	.34
Self-Confidence Subscale	4	.80	11.77(5.22)	4-28	4-28	1.57	2.39
Self-Regard Subscale	5	.74	16.30(6.40)	6-34	5-35	1.05	.89
Drug-related Locus of Control Scale	15	.71	21.99(3.29)	15-30	15-30	-.01	-.28
Beck Depression Inventory	21	.83	21.25(9.90)	6-56	6-63	1.00	.65

Table 7 indicates the reliability of Drug-related self-esteem scale and its subscales. The overall Cronbach's alpha reliability is excellent for Drug-Related Self-Esteem Scale (α= .72) and for its subscales of Self Competence (α= .82), Self-Confidence (α= .80) and Self-Regard (α= .74) respectively. Table also measures the Cronbach's alpha reliability of Beck Depression Inventory and Drug-Related Locus of Control for study population. Beck Depression Inventory has shown excellent Cronbach's alpha reliability (α=.83) for drug addict population and Drug-Related Locus of Control Scale shown α=.71 reliability. For the reliability analysis of drug-related Locus of Control scale, composite score was taken and individual internal external dimensions of locus of control were not separately analyzed according to guidance of manual of the scale.

Convergent and Discriminant Validity Analysis of Scale. To establish convergent and discriminant validity of newly developed Drug-related Self-Esteem scale for Drug Addicts; we used already developed Drug-Related Locus of Control scale (DRLOCS) which measures patient's feelings about internal and environmental control over drugs and Beck Depression Inventory. Pearson correlation was used to find the correlation among three variables. The aim

was also to check correlation of two variables with three subscales of Drug-related Self-Esteem scale (see Table 8). The results of correlation indicate that Drug-Related Self-Esteem Scale has negatively significant correlation($r=-.17$, $p=.000$) with Beck Depression Inventory. The results also suggest significantly negative correlation($r=-.75$, $p=.000$) between Drug-related Self-Esteem scale and Drug-Related Locus of Control scale. Therefore Drug-Related locus of Control has internal locus of control and external locus of control dimensions. According to the instructions of author, increased score in DRLOC scale show external locus of control while decrease score shows the internal locus of control. Furthermore subscales of drug-Related Self-Esteem scale i.e. self-competence ($r=-.64**$, $p<.01$), Self-Confidence ($r=-.32**$, $p<.01$) and Self-Regard ($r=-.34$, $p<.01$) also have negative correlations with DRLOC scale. These findings establish the discriminant validity of newly developed Drug-related Self-Esteem scale (DRSES) with Beck Depression Inventory and Drug-Related Locus of Control Scale with the help of Pearson correlation bivariant. The new scale to measure Drug-related Self-Esteem of drug addict after initiation of addiction-related life is proven to be valid for the population of substance users.

Table 8

Correlations of Drug-Related Self-Esteem, Drug-Related Locus of Control, Depression, Competence, Self-Confidence and Self Regard among substance Users (N=230)

Scale		1	2	3	4	5	6
1	DRSE	-	.75**	.51**	.47**	-.17*	-.75**
2	Self-Competence		-	.09	-.06	-.18*	-.64**
3	Self-Confidence			-	.09	-.09	-.32**
4	Self-Regard				-	-.02	-.34**
5	Depression					-	.26**
6	DRLOC						-

**p<.01, *p<.05 Note: DRSE=Drug-Related Self-Esteem, DRLOC= Drug-Related Locus of Control

The above table 8 shows the correlations among three constructs and subscales of newly constructed Drug-related Self-Esteem scale. Table shows the significantly negative correlation between Drug-related Self-Esteem Scale and Beck Depression Inventory (*r=-.17, p<.05*). Subscales of DRSE i.e. self-competence (*r=-.18*, p<.05*) has significantly negative correlation with Beck Depression Inventory establishing convergent validity of DRSE scale but other two subscales i.e. self-confidence(*r=-.09, p=ns*) and self-regard(*r=-.02, p=ns*) has non-significant correlation with Beck Depression Inventory which establish the discriminant validity of subscales. Drug-Related Self-Esteem scale (*r=-.75**, p<.01*) and it's subscales i.e. Self-competence (*r=-.64**, p<.01*), Self-confidence(*r=-.32**, p<.01*) and self-regard (r=-.34**, *p<.01*) also has significantly negative relationship with Drug-Related Locus of Control Scale. The above table establishes the convergent and discriminant validity of newly developed Drug-related Self-Esteem Scale with Beck Depression Inventory and Drug-Related Locus of Control Scale with the help of Pearson correlation bivariant.

Confirmation of Extracted Factors of Drug-related Self-esteem Scale. As in the last phase of the study, three factors with 17 items were explored through Exploratory factor

Analysis (EFA). In the current phase, these 17 items with three factors were analyzed by using CFA through Amos 21. The aim was to confirm the dimensionality and factor structure of the measurement model of DRSE.

Sample

Convenient sampling technique under the cross sectional research design was used to select the sample. Sample consist of N=202 male substance users residing in drug addiction treatment and rehabilitation centers situated in twin cities, with the age ranged from 15-55 years. Substance users with dual diagnosis or psychiatric comorbidities were excluded from the study. Further sample details are given in the next study (see Table 10).

Instruments

Newly developed Drug-related Self-esteem (DRSE) scale was used in the current step to run confirmatory factor analysis.

Procedure

Formal permission was taken from the rehabilitation management to collect data from substance users residing in the respective rehabilitation centers. All participants also signed the consent form after assuring the use of the data for research purpose only, without breaching the identity. Data was individually collected while considering the ethical concerns.

Results

The factor structure of DRSE scale was analyzed to describe the model fit indices of the measurement model with three factors.

Figure 6

Three-Factor solution with 17 items of the Newly Constructed Drug-related Self-esteem Scale

Chi-Square= 199.57
Df= 101
Relative Chi-Square (<= 5.0)= 1.99
P= .000
GFI(>=.9)= .90
AGFI (>=.9)= .85
CFA (>=.9)= .96
IFI (>=.9)= .96
NFI (>=.9)= .93
TLI (>=.9)= .95
RMSEA(<=.08)= .07
ALC(Lower Better)= 303.58
(Unstandardized estimates)
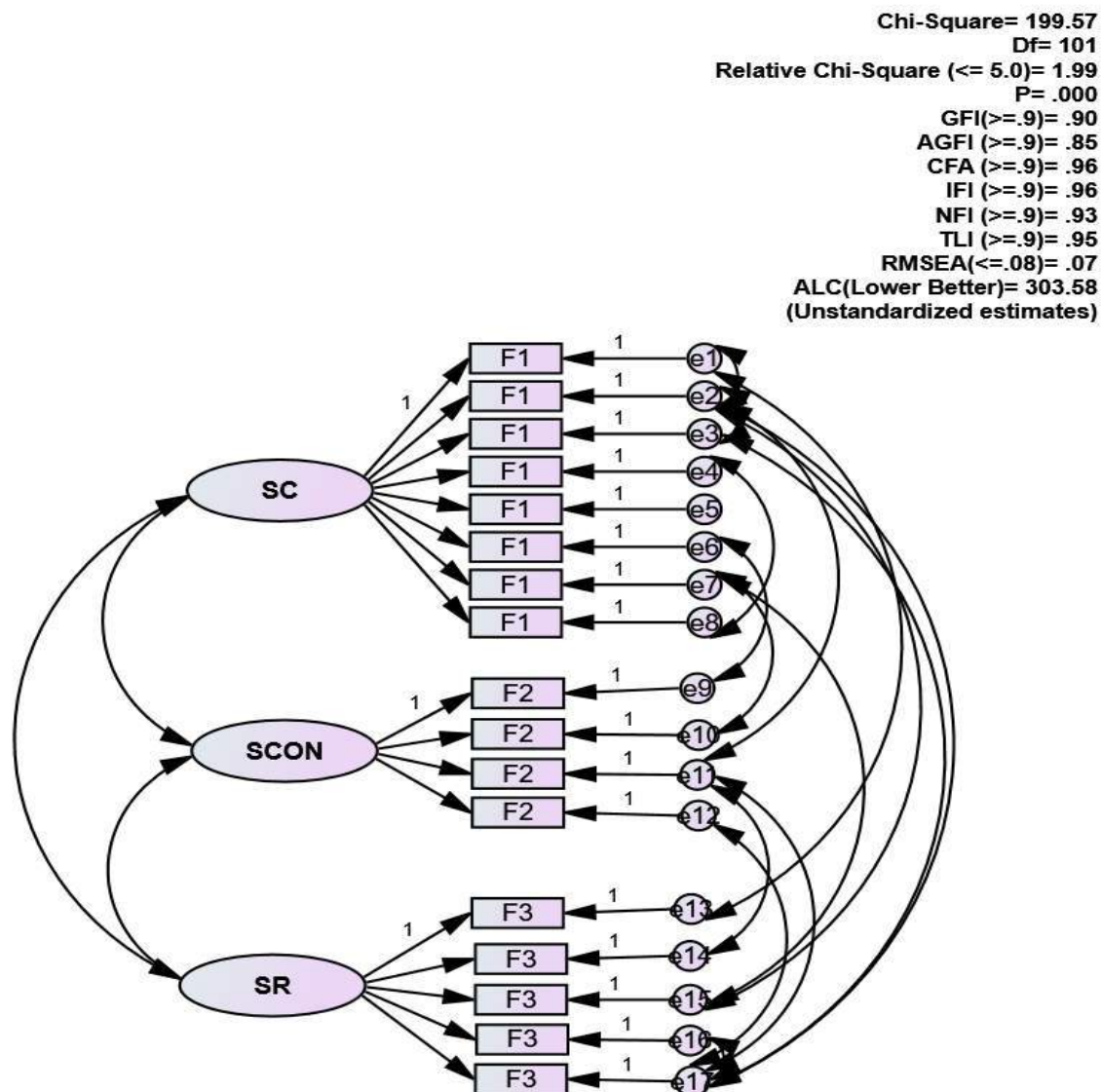
Table 9

Model fit Indices for the newly developed Drug-related Self-esteem Scale (N=202)

Fit Indices	x^2	df	CMIN/DF	RMSEA	IFI	NFI	CFI	TLI
Drug-Related Self-esteem Scale	199.57	101	1.976	.07	.96	.93	.96	.95

Note. *p=REMSEA <.08, *p= CMIN<.01

Table 9 shows the results of confirmatory Factor analysis determining standardized model fit indices of Drug-related Self-esteem scale on the sample of 202 inmate substance users. The results indicate that models are reasonably fit for the following parameters of $\chi2/df$, RMSEA, normed fit index, comparative fit index and Tucker-Lewis index. The table 9 also shows that the values of Chi-square are non-significant as the degree of freedom is greater. The values obtained by dividing the $\chi2/df$, are acceptable for the parameters of model fit indices i.e. The Drug-related Self-esteem scale 1.92 (Hu et al., 1992).

Discussion

The study II aimed to develop a scale exclusively for drug addict population going through rehabilitation process in drug addiction treatment and rehabilitation centers to investigate their self-esteem after start of their addiction related life. Guglielmo and colleagues (1985) reported adopting or choosing something for own self is determined by self-esteem, thus low self-esteem is correlated with drug use. As self-esteem is that feeling at the center of your being of self-worth, self-confidence, and self-respect and is the disposition to experience oneself as being competent to cope with the basic challenges of life and of being worthy of happiness. When it is the matter of coping and confidence we found it significant to study drug related self-esteem in order to evaluate its role in post drug struggle of drug addicts.

Feltis (1991) also reported that there is a very strong negative correlation between trend of drug use and amount of self-esteem in adolescents. Those, whose self-esteem did not grow well, are more probable to consume drugs. Ogborne and Smart (1994) reported that youths under treatment for drug abuse had lower self-esteem.

Thus due to the significance of self-esteem in drug addiction being understood by literature review, in this study, "self-esteem" was effective in reports of those with records of addiction, and had lower self-esteem than normal individuals.

More specifically, according to Branden (1969), self-esteem is confidence in our ability to think and to cope with challenges of life, then in this regard, we found that available measures of self-esteem including; self-esteem scale of Rosenberg (1965), self-esteem scale of Janis and Field (1959), Heatherton and Polivy's (1991) State Self-Esteem scale and many more were not specifically assessing drug related self-esteem. So present study was aimed to develop Indigenous scale to study self-esteem specifically in context of relapse of drug addiction, as it has a huge role in developing the efficacy to control and fight with the post drug effects.

Indigenous scale was thought to be significant as Pakistan is a country where this population is rapidly increasing. According to UNODC, more than 800,000 of population is addicted to heroin. UN report mentioned that over 7.6 million people in Pakistan are addicted to drugs with the division of 88% males and 12% females. These statistics are growing rapidly by 40,000 per year making Pakistan one of the biggest drug affected country with the disturbing fact of increased prevalence among 24 years age adolescents. These facts and figures are 1/3 of the actual figures of addicts in Pakistan (WHO, 2018).

In the current scenario, to develop drug related self-esteem scale was significant. Therefore, in this study we devised new measure to examine aspects of self-esteem in drug addicts who are struggling to develop tolerance to drugs. The findings of our research provide support for our views that studying and measuring self-esteem orientation needs to be focused in context of understanding increasing cult relapse in drug addicts.

We began this study by suggesting that assessing drug related self-esteem would be beneficial in the process of understanding relapse of drug addiction in Pakistani culture as when and individual is trying to cope up and brining control his self-esteem plays a vital role. The scale construction aimed to measure drug related self- esteem through factor analysis on a final selection of 30 items. Results suggest that self-esteem have considerable importance when seeking to understand how people in Pakistan sustain the post drug effects.

Our results support the evidence that drug related self-esteem normative is a multidimensional construct. Prominent among the processes involved are when individuals report competence, where in that low self-confidence and negative self-evaluation is maintained too. As such, a negotiation between competence low self-concept and is more congruent. This is evident from the example items from our first proposed factor that is competence, ''نشیات کے استعمال کے باوجود، میں اب بھی ایک خاندان کے رکن کے طور پر اپنی ذمہ داریاں پوری کر رہا ہوں''. This factor is dependent to assess confidence in drug abuser, whereas our later factors are more different. For

example, support for the statement that ",مجھے لگتا ہے کہ میں اپنے منشیات کے استعمال پر قابو نہیں پا سکا", does indicate low self-confidence. Self-esteem is composite of self –competence, confidence and self-concept, thus people with drug do not necessarily identify with all of the factors.

However our evidence also supports the view that drug related self-esteem scale proved reliable with its three sub dimensions. Moreover it is identified that people with high drug related self-esteem are more inclined towards control and tolerance to drugs as compared to low drug related self-esteem. Specifically those who took high scores on subscale of "Self Competence" are indicating high level of self-competence. In addition to that subscale "Self Confidence" with higher scores indicate individual's self-confidence whereas low scores are indicating less level of self-confidence. However in scale of drug related self-esteem individuals with higher scores on subscale "Self-Regard" are found to be less vulnerable to increased lack of self-regard and appreciation.

We evaluated the psychometric properties of scale and found it significant that each item correlated between $r=.60$ to .80 which indicates that singularity and multicoliniarity effects were minimized.

Moreover after the Kurtosis and skewness analysis of each item, standard deviations were calculated for final item selection. Accordingly on the basis of the Kaiser criteria which are reported in results section, we finally extracted a reliable set of 17 items out of generated item pool. The sample adequacy check was inculcated by KMO and Bartlet's test in SPSS.

While to establish discriminant validity of newly developed Drug-related Self-Esteem scale for Drug Addicts; we used already developed Drug-Related Locus of Control scale (DRLOCS) which measures patient's feelings about internal and environmental control over drugs and Beck Depression Inventory.

Correlations were calculated among three constructs and subscales of newly developed Drug-related Self-Esteem scale. It was revealed through results that when the drug related self-esteem is high, depressive tendencies become low. Drug-Related Self-Esteem scale also has significantly negative relationship with Drug-Related Locus of Control as well. Which indicates that the more an individual has drug-related self-esteem, the more he/she will have drug-related internal locus of control.

In this research we concluded that adolescence increased self-esteem is the predictor of avoidance of drugs such as Khan and Fawcett (2007) reported that lack of self-esteem can be correlated with increase in likelihood of drug abuse. Therefore regulating self-esteem enhances the competence which is essential to cope with post drug effects.

Chapter 4

Study III. Role of Personality Traits and Perceived Social Support on Drug-Related Self-Esteem and Drug-Related Locus of Control

To examine the relationship among personality traits, perceived social support, drug-related self-esteem and drug related locus of control, correlational research design was used in the current phase of the study. Perceived social support was hypothesized to mediate the relationship between Personality traits including five broad personality factors i.e. openness to experience, agreeableness, conscientiousness, neuroticism, extraversion and outcome variables i.e. drug-related self-esteem (DRSE) and drug-related locus of control (DRLOC). Drug related self-esteem is developed and validated during the second phase of the study. DRSE have three sub scales i.e. self-competence, self-confidence and self-regard. Drug-related self-esteem was also translated and validated during the first phase of the current study which has only two dimensions i.e. drug-related internal locus of control and drug-related external locus of control. According to the instructions of author, the more substance user scored in the DRLOC scale the more they would have external locus of control. While less score will show the internal locus of control. The current study has also covered the differences in DRSE and DRLOC on the basis of number of relapses, criminal record (drug dealing, theft, murder and attempt to murder, fraud, kidnaping, gambling, fight, rape/harassment and minor street crimes) and prison history among substance users.

Figure 7

Conceptual Framework of Study III
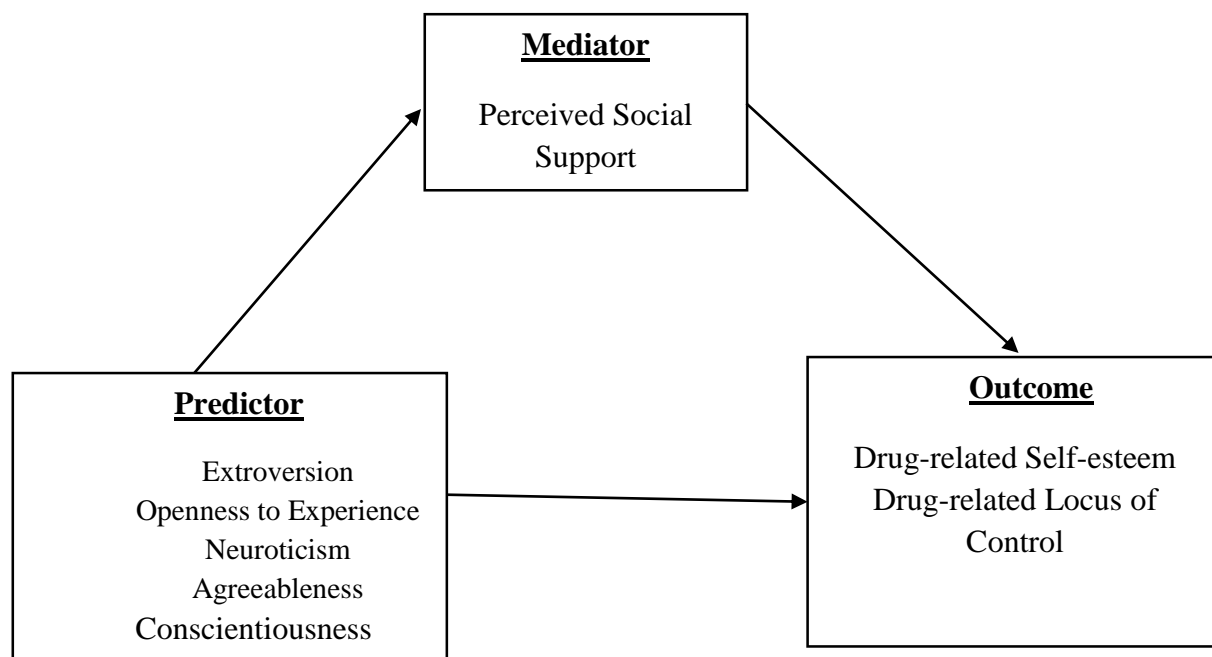
According to the instructions of author, the more substance user scored in the DRLOC scale the more they would have external locus of control. While less score will show the internal locus of control.

Objectives of Study III

The major objectives of the study III were;

1. To determine the relationship between personality traits, perceived social support, drug-related self-esteem and drug-related locus of control among substance users.

2. To test the conceptual model of perceived social support as mediator between personality traits, drug-related self-esteem and drug-related locus of control among substance users.

3. To examine the differences of drug-related self-esteem and drug-related locus of control on the basis of socio demographic variables i.e. family type, number of relapse, history of imprisonment, types of criminal record.

Hypotheses

Following hypotheses were designed to achieve the objectives of current study;

1. There will be a significantly positive relationship of Personality traits (openness, agreeableness and Extroversion and conscientiousness, neuroticism) with drug-related Self-esteem and perceived social support among substance users.

    I. There will be a significantly positive relationship of personality traits (openness, agreeableness and Extroversion and conscientiousness, neuroticism) with three sub factors of drug-related self-esteem i.e. self-competence, self-confidence and self-regard among substance users.

    II. There will be an external locus of control among substance users with openness, agreeableness and Extroversion and conscientiousness, neuroticism personality traits.

    III. There will be a significant positive relationship of personality traits (openness, agreeableness and Extroversion and conscientiousness, neuroticism) with perceived social support among substance users.

2. There will be a significant positive relationship of perceived social support with drug-related self-esteem and drug-related locus of control among substance users.

    I. There will be a significant positive relationship of perceived social support with self-competence, self-confidence and self-regard sub factors of drug-related self-esteem among substance users.

    II. Substance users with high Drug-related self-esteem will have an internal locus of control.

    III. There will be a significant positive relationship between drug-related self-esteem and its three sub factors i.e., self-competence, self-confidence and self-regard among substance users.

IV. Substance users with high self-competence, self-confidence and self-regard sub factors of DRSE will have internal locus of control.

3. Perceived social support is likely to mediate the relationship between personality traits (openness, agreeableness and Extroversion and conscientiousness, neuroticism) drug-related self-esteem among substance users.

4. Perceived social support is likely to mediate the relationship between personality traits (openness, agreeableness and Extroversion and conscientiousness, neuroticism) and drug-related locus of control.

5. Drug-related self-esteem, self-competence, self-confidence, and self-regard are significantly higher among substance users living in nuclear family system than joint family system.

   I. Substance users living in joint family system are more likely to have internal locus of control than those living in nuclear family system who are more likely to have external locus of control.

   II. Drug-related self-esteem, self-competence, self-confidence, self-regard are significantly higher among substance users with no history of imprisonment than the substance users who have history of imprisonment.

   III. Substance users with the history of imprisonment are more likely to have internal locus of control than substance users with no history of imprisonment.

   IV. Drug-related self-esteem, self-competence, self-confidence, self-regard are more likely to significantly higher among substance users with no history of drug dealing offense than the substance users who have history of drug dealing offense.

   V. Substance users with history of drug dealing offense are more likely to have external locus of control than users with no history of drug dealing offense who are more likely to have internal locus of control.

VI. Substance users with no history of history of cheating and harassment offense are more likely to have internal locus of control than users with history of cheating and harassment offense who are more likely to have external locus of control.

VII. Drug-related self-esteem, self-competence, self-confidence, self-regard are significantly higher among substance users with no history of cheating and harassment offense than the substance users who have history of history of cheating and harassment offense.

VIII. Increased number of relapse will lower the Drug-related self-esteem, self-competence, self-confidence, self-regard and perceived social support among substance users.

IX. The substance users with multiple relapse are more likely to have internal locus of control than those are with first relapse.

Sample

The sample for study III was drawn through convenience sampling technique. Sample consists of 202 male substance users from different drug addiction treatment and rehabilitation centers i.e. Wada Clinic, Shifa Caring Centre, Najjat Trust, Islamic Medical Center, Wapsi Centre, Hosla Medical Centre, Devotion Rehabilitation center and other local drug addiction treatment & rehabilitation centers of twin cities (Rawalpindi & Islamabad) with the age range of 15 to 55 years. All participants were belonged to different cities of Punjab i.e. Jehlum, Gujrat, Rawalpindi, Khyber Pakhtun Khuwa, Lahore, Haripur, Multan, Kashmir, Bahawalpur. Data was collected from drug addiction & rehabilitation centers using the study questionnaires. No financial incentive was provided to the participants. Demographic details are given in the Table 23. Urdu version of all questionnaires were used to take participant's responses. The research instruments started with informed consent to participate in the data collection for the current research and demographic sheet. The demographic information included age, education, , marital status, family system, prison history, criminal history, types of crimes i.e.

theft, cheating, drug dealing, murder, attempt to murder, gambling, harassment, kidnaping and fight was recorded after taking consent from the participants. The participants with minimum of 8th standard qualification were selected for the study. They were allowed to quit filling of the data at any stage. It was assured that data taken from them would be kept confidential and anonymous. This data would be used for research purpose only.

Inclusion Criteria. Substance users from rehabilitation centers of twin cities (Rawalpindi & Islamabad) has participated in the study. Only male substance users were part of the research. Minimum education level of participants were 8th standard. Substance users with poly drug abuse (amphetamines, methamphetamines, stimulants, hallucinogens and marijuana) and with criminal record (minor crimes and major crimes) were selected for participation in study.

Exclusion Criteria. Patient with below 15 years and above the age of 55 years of age will be excluded from study. Alcohol users who have been using alcohol as a drug of choice or main drug, clients with psychiatric comorbidities were excluded. Those who are not willing to participate in the study were also excluded.

Table 10

Sample characteristics of the study (N=202)

Variables	Categories	*F*	%
Age			
	Late Adolescence (15-19)	13	6.5
	Early Adulthood (20-25)	40	19.8
	Middle Adulthood (26-30)	32	15.8
	Late Adulthood (31-55)	117	57.9
Marital Status			
	Single	75	37.1
	Married	127	62.9
	Divorced	21	10.4
Family Structure			
	Nuclear	75	37.1
	Joint	127	62.9
Qualification			
	Middle	40	9.8
	Secondary	72	35.6
	Higher Secondary	28	13.9
	Graduation	40	19.8
	Post-Graduation	22	10.9
Number of Relapse			
	One	59	29.2
	Two to Five	77	38.1
	More than Five	66	32.7
Treatment Duration			
	One Month	48	23.8
	Two to Five Months	122	60.4
	More than Five Months	32	15.8
Prison History			
	With Prison History	74	36.6
	No Prison History	128	63.4
Crime History			

Note: f = Frequency, %= Percentage

Drug Dealing

	Attempted	61	30.2
	Not Attempted	141	69.8

Murder

	Attempted	13	6.4
	Not Attempted	189	93.6

Attempt to Murder

	Attempted	24	11.9
	Not Attempted	178	88.1

Theft

	Attempted	18	8.9
	Not Attempted	184	91.1

Gambling

	Attempted	35	17.3
	Not Attempted	167	82.7

Fight

	Attempted	108	53.5
	Not Attempted	94	46.5

Kidnaping

	Attempted	8	4.0
	Not Attempted	194	96.0

Harassment

	Attempted	22	10.9
	Not Attempted	180	89.1

Conning/Cheating

	Attempted	28	13.9
	Not Attempted	174	86.1

Others Minor Crimes

	Attempted	23	11.4
	Not Attempted	179	88.6

Operational Definition of Variables

      Drug-Related Self-Esteem. Drug-related self-esteem is operationally defined as "domain Specific self-esteem" which refers to individual's perception about self with reference to domain of life after drug addiction (Tajfel & Turner, 1979). Drug related self-esteem is one's feelings of self-worth, self-competence, self-regard and self-confidence with reference to life after drug addiction.

      Personality Traits. Personality traits are operationally defined as "substance user's personality factors of openness to change, agreeableness, neuroticism, conscientiousness, and extroversion".

      Drug-Related Locus of Control. Drug-related locus of control can be operationally defined as feelings of self-control or being control by external circumstances with reference to decisions about drug addiction and relapse (Hall, 2001). "A belief about whether the consequences of our actions are dependent upon our own actions or responses (internal control orientation) or upon some external forces which are out of our control (external control orientation)"(Zimbardo, 1985).

      Perceived Social Support. Shumaker and Brownell (1984) operationally defined Perceived social support as "one's perception of chances to exchange the resources (physical, psychological and financial) with other individuals in the social circle as a recipient to enhance the well-being of the recipient". For the current study Perceived Social support will be operationally defined as " client's perception about environment, friends and family members to be supportive socially, physically, psychologically as well as financially during treatment and recovery process" (Ekinci & Ekinci, 2003).

      Criminal Record. Criminal record is operationally defined as "Subjective evidence of one or more conviction for a major crime for which the client did not received any prison because of some major reasons or references like theft, fight, drug dealing, , harassment,

murder, attempt to murder drug dealing, gambling, cheating and other minor crimes.

Instruments

The following instruments were used in the current phase of the study.

Demographic Sheet. Demographic sheet was consist of informed consent and demographic information on age, qualification, marital status, family type (joint, nuclear), types of drugs, number of relapse, duration of treatment, Prison history, crime history including crimes i.e. drug dealing, murder, attempt to murder, theft, gambling, fight, kidnap, harassment, conning and other minor crimes.

The Big Five Personality Inventory. Urdu version of Big Five Inventory translated by Sadia in 2020 was used to assess the personality of the substance user population in the current study. This instrument of Big Five Personality Inventory was originally developed by John & Srivastava in1999. It consists of 44 items measuring five dimensions of personality: Extroversion and Neuroticism with eight items each, nine items each for Agreeableness and Consciousness, and ten items of Openness to Experience along a 5-point Likert scale. Responses items ranged from 1(Strongly Agree) to 5 (Strongly Disagree). Extroversion sub scale contains item no 1,6R, 11, 16, 21R, 26, 31R and 36. Agreeableness carries item no 2R, 7, 12R, 17, 22, 27R, 32, 37R and 42. Item no 3, 8R, 13, 18R, 23R, 28, 33, 38, 43R make the subscale of conscientiousness. Neuroticism contains item no 4, 9R, 14, 19, 24R, 29, 34R and 39. Openness to experience is made up of item no 5, 10, 15, 20, 25, 30,35R, 40, 41R and 44.

Drug-related Self-Esteem Scale. DRSE scale was developed during the second phase of the study. DRSE scale was used in the third part of the study. The scale was validated on the sample of 230 male inpatient substance user population. The scale has three factors including Self Competence (α=.82); Self-confidence (α=.81) and Self-Regard (α= .74). The newly developed scale comprised of 17 items and has adequate internal consistence (α=.72). The scale has total 119 score, with 7 point likert scale of response ranged from 1(Strongly Disagree) to 7

(Strongly Agree). Individual factors like self-competence (α = .82) has 8 items (1, 4R, 5R, 6, 7, 8, 9R, 17) with maximum 56 score, Self-Confidence (α = .80) has 4 items (11r, 13r, 14r, 15r) with maximum 28 scores and Self-Regard (α = .74) has 5 items (2r, 3r, 10r, 12r, 16r) with maximum 35 score. Drug-Related Self-Esteem Scale has negative correlation (r = -.17, p = <.001) with Beck Depression Inventory (r=-17*, p= <.05) and Drug-Related Locus of Control scale(r=-.75, p= <.001). Furthermore, subscales of Drug-Related Self-Esteem scales i.e. Self-competence (r=-.64**, p<.01), Self-confidence(r=-.32**, p<.01) and self-regard (r=-.34**, p<.01) also has significantly negative relationship with Drug-Related Locus of Control Scale. These findings demonstrate the onvergent validity of newly developed Drug-related Self-Esteem scale (DRSES) with Beck Depression Inventory and Drug-Related Locus of Control.

Drug Related Locus of Control (DRLOC). Drug related locus of control was developed by Hall (2001). DRLOC is a 15 items measure developed to investigate one's drug related self-control in a variety of situations. Each item consists of two statements and the participant has to select only one choice for each item. First statement of each item scored 1 and the second statement scored 2. Scale has also reversed scored items. Items 1,3,5,8,11,14,15 are reversed scoring items. Mean score of the scale items will determine participant's level of drug related locus of control. If the participant has scores near to 1 in each item, he will be with high internal locus of control, while participants selecting 2 scored items will have high external locus of control. Hall translated this scale into English. According to guidelines of manual, 22 will be the maximum score for drug-related internal locus of control while above 22 will be the score for drug-related external locus of control. Translated version of DRLOC scale have reliability coefficient α= .81. The split half reliability coefficient was .76. Convergent validity was established by measuring the correlation of DRLOC scale with total Addiction Severity Index (ASI) which have positive correlation with DRLOC (r= .301, p<.00). While subscales of ASI were also significantly correlated with LOC, e.g., increased scores in psychological

dysfunction scale were correlated (r= .278 for somatization, r= .268 for depression) with the more external locus of control. Elizabeth also examined that DRLOC had significantly positive correlation with the Rosenberg self-esteem scale. High scores in measure of self-esteem were strongly correlated (-.412) with internal locus of control.

Current study used Urdu translated version of Drug Related locus of control scale which was translated in first phase of the current study.

Multidimensional Scale for Perceived Social Support. The Multidimensional Scale of Perceived Social Support (MSPSS) is a brief scale to assess perceived social support originally developed by Zimet et al in 1988. The original scale was translated in to Urdu language by Akhtar, et al., in 2010. 12-item multidimensional scale for PSS using 7-point likert scale starting from very strongly agree=1 to very strongly disagree=7 assesses individual's perception of social support from three types of sources i.e. family, friends and significant others. Total score for MSPSS is 84. Items included like "میرے دوست میری مدد کرنے کی واقعی کوشش کرتے ہیں"

and "میری زندگی میں ایک خاص شخص ہے جو میرے احساسات کی پرواہ کرتا ر ہے". Higher scores depict higher perception of social support while lower score will be considered as lower perception of social support. MSPSS proved to be an excellent validity and reliability across different researches which proved that MSPSS was inversely correlated with scales measuring depression and psychiatric distress. MSPSS Urdu version was shown to have α=0.92 which indicates it's internal consistency with single factor solution accounting for 53% of the variance.

Procedure

The current phase of the study was carried out on 202 substance users admitted in drug addiction treatment and rehabilitation centers situated in Rawalpindi and Islamabad. The sample was consist of clients with poly drug abuse and heroin addiction as a main drug of choice (other drug use just to enhance the desired effects of heroin). Convenient sampling technique was used to select the participants for the study. The study instruments were start

with the demographic sheet along with informed consent including the detailed information about purpose, confidentiality of the information as well as the further usage of the given information.

Instructions were given to the participants and asked them to give response to the presented instruments while keeping in mind the life after drugs and feelings and thinking about themselves after drug addiction. Each participant was presented with the proposed scale for drug-related self-esteem, Big Five personality inventory, drug related locus of control scale and Multidimensional scale for perceived social support to respond. After data collection, the data was analyzed using the statistical procedures.

Results

The study III was conducted to determine the relationship of personality traits, drug-related self-esteem and drug-related locus of control among substance users population along with the mediating role of perceived social support. The current study was also conducted to determine the differences of perceived social support, drug-related self-esteem and drug-related locus of control on the basis of special demographic characteristics of the substance users living in residential treatment centers i.e. family system, number of relapse, prison history, and crime/offense history along with different types of crimes. Following results were obtained in order to meet the objectives and test the hypothesized relationships among variables of the current study.

Descriptive Statistics. To determine the psychometric properties of the study constructs on the study III sample, descriptive statistics used on 202 residential substance users.

Table 11

Descriptive statistics of Big Five Personality Traits, Perceived Social Support, Drug-related Self-esteem and Drug-related Locus of Control (N=202)

Variables	k	α	M (SD)	Range Potential	Actual	Skewness	Kurtosis
DRSE	17	.89	79.71(18.10)	17-119	20-115	-.36	-.05
Self-Competence	8	.92	41.22 (10.10)	8-56	9-55	-1.31	1.26
Self-Confidence	4	.82	17.60(6.03)	4-28	5-28	-.41	-.85
Self-Regard	5	.91	20.88 (8.61)	5-35	5-34	-.52	-1.04
DRLOC	15	.95	20.31(5.53)	15-30	15-29	.38	-1.49
PSS	12	.98	53.53(26.98)	12-84	12-84	-.04	-1.68
Personality Traits	44	.87					
Extroversion	8	.75	30.67(4.90)	8-40	18-39	-.21	-.85
Neuroticism	8	.75	27.06(5.61)	8-40	10-38	-.37	.15
Agreeableness	9	.69	32.50(5.21)	9-45	21-44	-.07	-.85
Openness	10	.69	36.96(5.63)	10-50	14-49	-.24	.29
Conscientiousness	9	.72	34.39(5.15)	9-45	12-44	-.95	2.57

Note: *DRSE= Drug-related Self-esteem, DRLOC= Drug-related Locus of Control, PSS= Perceived Social Support*

Table11 shows the descriptive statistics of all scales and subscales used in the mediation study along with the alpha coefficient values. All values mentioned in the table, indicates highly satisfied reliability coefficient ranging from $\alpha=.69$ to $\alpha=.98$ that is highly satisfactory values of reliability. It indicates that all scales are highly reliable for the assessment of the desired constructs. Values of mean and standard deviation, skewness and kurtosis are also mentioned in the table 11, reflecting the satisfactory direction of all variables.

Inter-Scales Correlation Analysis

Before going towards model testing, inter-scales correlations were established. To examine the direction and magnitude of the relationship between study variables, inter-scales correlation coefficients of all variables were determined.

Table 12

Correlations of Drug-related Self-esteem, its subscales, Drug-related Locus of Control, perceived social support and personality traits among Substance Users (N=202)

	Variables	1	2	3	4	5	6	7	8	9	10	11
	BFI											
1	Ext	-	.41**	.18**	.23**	.24**	.54**	.58**	.36**	.45**	.49**	.57**
2	Ag		-	.42**	.48**	.39**	.26**	.24*	.17*	.24**	.12	.29**
3	Cons			-	.39**	.35**	.28**	.19*	.11	.15*	.15*	.25**
4	Neuro				-	.31**	.13	.18*	.07	.19**	.12	.20*
5	OpE					-	.26**	.23**	.23**	.15*	.09	.23**
6	PSS						-	.85**	.59**	.62**	.67**	.85**
7	DRSE							-	.71**	.72**	.77**	-.83**
8	F I								-	.10	.31**	-.57**
9	F II									-	.56**	-.61**
10	F III										-	-.67**
11	DRLOC											-

**p<.01, *p<.05, Note: DRSE=Drug-related Self-Esteem, F I= Self-Competency, F II= Self-Confidence, F III= Self-Regard, DRLOC= Drug-Related Locus of Control, PSS= Perceived Social Support, BFI = Big Five Inventory, Ext = Extraversion; Ag = Agreeableness, Neuro = Neuroticism, Cons = Conscientiousness, OpE= Openness to Experience

Table 12 shows the significant correlation between most of the variables of the current study. Overall the pattern of correlation table indicates that Personality traits of extroversion is significantly correlated with other four factors of personality traits i.e. agreeableness, r= .41**; p<.01, Conscientiousness, r= .18**; p<.01, Neuroticism, r= .23**; p<.01and openness to experience, r= .24**; p<.01. Moreover extroversion also has significantly positive correlation, r=.54**; p<.01with perceived social support which explains that substance users with extroversion personality traits have increased perception of social support from their family, friends and significant others. Table also explains the significantly positive relationship of drug-related self-esteem, with its subscales i.e. self-competence, r= .74**; p<.01, self-

confidence r= .72**; p<.01 and self-regard, r= .77**; p<.01, perceived social support , r= .85**; p<.01, and five individual factors of personality i.e. extroversion, r= .58**; p<.01, agreeableness, r= .24**; p<.01, Conscientiousness, r= .19*; p<.01, Neuroticism, r= .18*; p<.01and openness to experience, r= .23**; p<.01. The analysis indicates that substance users with these all personality factors likely to have increased drug-related self-esteem because of increased self-competence, self-confidence and self-regard related to decisions in their life after addiction.

The results from the table 12 also reveal that there are also some negative correlations between the study variables. The table indicates that drug-related self-esteem, r= -.83**; p<.01 and its three sub factors i.e. self-competence, r= -.57**; p<.01, self-confidence r= -.61 **; p<.01 and self-regard, r= -.67**; p<.01, are inversely related with drug-related locus of control. This suggest that the substance users who have increased drug-related self-esteem, self-competence, self-confidence and self-regard will have drug-related internal locus of control. As the DRLOC scale suggest that maximum scores in DRLOC scale will show individual's external locus of control, while decreased scores will indicate the internal locus of control.

The correlation Table 12 also identified the non-significant relationships between the constructs. For instance, self-competence do not have significant correlation with conscientiousness, r= .11; p=ns and Neuroticism, r= .07; p=ns factors of personality. On the other hand self-regard do not have significant relationship with Agreeableness, r= .12; p=ns, Neuroticism, r= .12; p=ns and openness to experience, r= .09; p=ns. The table also indicates the non-significant correlation between perceived social support and neuroticism, r= -.57**; p=ns factor of personality.

Hence, most of the correlations are significant and in expected directions, these can be used for constructing the model (Joreskog & Sobbom, 1996).

Indirect effects of Personality Traits (Extroversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience) on Drug-related Self-esteem and Drug-related Locus of control through Perceived Social Support

The 3rd phase of the current study used the sample from confirmatory factor analysis part of the previous phase to broaden the analysis of the current study. This phase was conducted to determine the mediating effects of perceived social support on relationship between personality traits (Extroversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience) Drug-related self-esteem and Drug-related locus of control among substance users. The objective of the current phase is to determine the predictive association of personality traits (Extroversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience) with drug-related self-esteem (DRSE) and drug-related locus of control (DRLOC) taking perceived social support as a mediating variable. The current phase allows us to investigate the facts that whether a mediator can account for how change in the predictors (Extroversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience) lead to a change in the outcome (DRSE & DRLOC).

It was assumed that personality traits impact Drug-related self-esteem and Drug-related locus of control mediated through perceived social support among substance users.

Table 13

*Total effect, Direct Paths and Indirect path of Personality Traits (Extroversion,
Agreeableness, Conscientiousness, Neuroticism and Openness to Experience) and Drug-
related Self-esteem and Perceived Social Support as Mediating Variable (N= 202)*

	β	SE	R^2	p	95% CI LL	UL
Total Effect						
Extroversion → DRSE	2.15	.21	.33	.000	1.73	2.57
Agreeableness → DRSE	.85	.23	.05	.000	.38	1.32
Conscientiousness → DRSE	.65	.24	.03	.000	.17	1.13
Neuroticism → DRSE	.57	.22	.03	.012	.12	1.01
Openness to Experience → DRSE	.74	.22	.05	.001	.30	1.17
Direct Paths						
Extroversion → PSS	2.85	.32	.28	.000	2.22	3.48
Extroversion → DRSE	.66	.16	.74	.000	.35	.96
Agreeableness → PSS	1.32	.34	.69	.000	.65	1.99
Agreeableness → DRSE	.07	.13	.72	.57	-.19	.34
Conscientiousness → PSS	1.43	.34	.79	.000	.75	2.10
Conscientiousness → DRSE	-.20	.13	.72	.133	-.47	.06
Neuroticism → PSS	.61	.32	.17	.063	-.03	1.25
Neuroticism → DRSE	.21	.12	.72	.079	-.02	.45
Openness to Expereince → PSS	1.22	.31	.69	000	.60	1.84
Openness to Expereince → DRSE	.02	.12	.72	.89	-.22	.26
Perceived Social Support → DRSE	.59	.03	-	.000	.53	.64
Indirect Path						
Extroversion → PSS → DRSE	1.49	.19	-	-	1.13	1.88
Agreeableness → PSS → DRSE	.77	.21	-	-	.36	1.18
Conscientiousness → PSS → DRSE	.86	.20	-	-	.46	1.26
Neuroticism → PSS → DRSE	.35	.21	-	-	-.04	.78
Openness to Experience → PSS → DRSE	.72	.19	-	-	.36	1.09

Note. DRSE = Drug-related Self-esteem, PSS = Perceived Social Support, CI = Confidence Interval,

LL = Lower Limit, UL = Upper Limit; ***p<.000, **p<.01, *p<.05.

Indirect Effects of Extroversion on Drug-related self-esteem. Above table 13 indicates the mediating role of perceived social support in relationship between extroversion personality trait and drug-related self-esteem. Findings from path c (total effect) illustrate that extroversion significantly and positively predicts DRSE, β= 2.15, t= 10.13, p= .000, 95% BCa CI [1.73, 2.57], and explains 33% of variance.

The above table also reveals that extroversion also positively predicts perceived social support, β= 2.85, t= 8.98, p= .000, 95% BCa CI [2.22, 3.48], explains 28% of variance. We can infer from these results that those substance users who have extroversion personality trait will have increased perceived social support. Moreover results from path b (perceived social support to drug-related self-esteem) of the above table illustrate that whilst controlling the effects of extroversion on drug-related self-esteem, perceived social support also positively predicts drug-related self-esteem, β= .59, t= 21.89, p= .000, 95% BCa CI [.53,64]. These results prove that high perceived social support will predict high level of drug-related self-esteem among substance users.

The above table also shows the findings related to the direct effects of the predictor variable (extroversion) on the outcome variable (drug-related self-esteem) and suggest that while controlling the effects of perceived social support, extroversion has positively significant relationship with drug-related self-esteem , β= .66, t= 4.19, p= .000, 95% BCa CI [.35, .96]. When individual has extrovert personality trait, ultimately will increase drug-related self-esteem in the substance user. The R^2 tells us that both extroversion and perceived social support explains 74.45% of variance in drug-related self-esteem. The analysis suggest that the direct effects and the total effects both are significant although direct effect (c'= .66) is smaller than the total effect (c= 2.15). This suggests that partial mediation exists.

Indirect Effects of Agreeableness on Drug-related self-esteem. Above table 13 indicates the mediating role of perceived social support in relationship between agreeableness personality trait and drug-related self-esteem. Findings from path c (total effect) illustrate that agreeableness positively predicts DRSE, β= .85, t= 3.57, p= .000, 95% BCa CI [.38, 1.32], and explains 5.98% of variance.

The above table also reveals that agreeableness also positively predicts perceived social support, β= 1.32, t= $3.87, p$= .000, 95% BCa CI [.65, 1.99], explains 6.98% of variance. We can infer from these results that those substance users who have agreeableness personality trait will have increased perceived social support. Moreover results from path b (perceived social support to drug-related self-esteem) of the above able illustrate that whilst controlling the effects of agreeableness on drug-related self-esteem, perceived social support also positively predicts drug-related self-esteem, β= .59, t= $21.89, p$= .000, 95% BCa CI [.53, .69]. These results prove that high perceived social support will predict high level of drug-related self-esteem among substance users.

The above table also shows the findings related to the direct effects of the predictor variable (agreeableness) on the outcome variable (drug-related self-esteem) and suggest that while controlling the effects of perceived social support, agreeableness has non- significant relationship with drug-related self-esteem , β= .07, t= $.55, p$= .58, 95% BCa CI [-.19, .34]. When individual has agreeableness personality trait, it will not increase or decrease drug-related self-esteem of a substance user. The R^2 tells us that both agreeableness and perceived social support explains 72.24% of variance in drug-related self-esteem. The analysis suggest that the direct effects (c'= .07, p= .58) of agreeableness on drug-related self-esteem are not significant but the total effect is significant (c= .85). This suggests that perceived social support mediates the relationship between agreeableness and drug-related self-esteem (β= .77, 95% BCa CI [.36, 1.18].

Indirect Effects of Conscientiousness on Drug-related self-esteem. Above table 13 indicates the mediating role of perceived social support in relationship between Conscientiousness personality trait and drug-related self-esteem among substance users. Findings from path c (total effect) illustrate that Conscientiousness significantly and positively predicts DRSE, β= .65, t= 2.68, p= .008, 95% BCa CI [.17, 1.13], and explains 3.46% of variance.

The above table also reveals that Conscientiousness also positively predicts perceived social support, β= 1.43, t= 4.16, p= .000, 95% BCa CI [.75, 2.10], explains 7.96% of variance. We can infer from these results that those substance users who have Conscientiousness personality trait will have increased perceived social support. Moreover results from path b of the above table illustrate that whilst controlling the effects of Conscientiousness on drug-related self-esteem, perceived social support also positively predicts drug-related self-esteem, β= .59, t= 21.89, p= .000, 95% BCa CI [.53,.64]. These results prove that high perceived social support will predict high level of drug-related self-esteem among substance users.

The above table also shows the findings related to the direct effects of the predictor variable (Conscientiousness) on the outcome variable (drug-related self-esteem) and suggest that while controlling the effects of perceived social support, Conscientiousness has non-significant negative relationship with drug-related self-esteem , β= -.20, t= -1.51, p= .133, 95% BCa CI [-.47, .06]. Conscientiousness personality trait will not predict drug-related self-esteem among substance user. The R^2 tells us that both Conscientiousness and perceived social support explains 72.51% of variance in drug-related self-esteem. The analysis suggest that the direct effects (c'= .65, p= .133) of Conscientiousness on drug-related self-esteem are not significant but the total effect is significant (c= .65). This suggests that perceived social support mediates the relationship between Conscientiousness and drug-related self-esteem (β= .86, 95% BCa CI [.46, 1.26].

Indirect Effects of Neuroticism on Drug-related self-esteem. Above table 13 indicates the mediating role of perceived social support in relationship between neuroticism personality trait and drug-related self-esteem among substance users. Findings from path c (total effect) illustrate that neuroticism significantly and positively predicts DRSE, β= .57, t= 2.53, p= .012, 95% BCa CI [.12, 1.01], and explains 3.10% of variance.

The above table also reveals that neuroticism do not predicts perceived social support, β= .61, t= $1.87, p$= .06, 95% BCa CI [-.03, 1.25], explains 1.71% of variance. We can infer from these results that those substance users who have neuroticism personality trait will not have impact on their perceived social support. Moreover results from path b of the above table illustrate that whilst controlling the effects of neuroticism on drug-related self-esteem, perceived social support can positively predict drug-related self-esteem, β= .59, t= $21.89, p$= .000, 95% BCa CI [.53,.64]. These results prove that high perceived social support will predict high level of drug-related self-esteem among substance users.

The above table also shows the findings related to the direct effects of the predictor variable (neuroticism) on the outcome variable (drug-related self-esteem) and suggest that while controlling the effects of perceived social support, neuroticism has non-significant relationship with drug-related self-esteem , β= .21, t= $1.77, p$= .078 95% BCa CI [-.02, .45]. Neuroticism personality trait will not predict drug-related self-esteem among substance user. The R^2 tells us that both neuroticism and perceived social support explains 72% of variance in drug-related self-esteem. The analysis suggest that the direct effect of neuroticism on drug-related self-esteem (c'= .21, p= .078) is not significant but total effect while combining the effects of perceived social support is significantly positive (c= .57). On the other hand, indirect effects of neuroticism on drug-related self-esteem, β= .35, 95% BCa CI [-.04, .78] is not significant as the value of biased charracted confidence interval bootstrap BC a CI crosses zero.

So we can infer that perceived social support do not mediates the relationship between neuroticism and drug-related self-esteem.

Indirect Effects of Openness to Experience on Drug-related self-esteem. Above table 13 indicates the mediating role of perceived social support in relationship between openness to experience personality trait and drug-related self-esteem among substance users. Findings from path c (total effect) illustrate that openness to experience significantly and positively predicts DRSE, β= .74, *t*= 3.33, *p*= .001, 95% BC*a CI* [.30, 1.17], and explains 5.26% of variance.

The above table also reveals that openness to experience also positively predicts perceived social support, β= 1.22, *t*= *3.87, p*= .000, 95% BC*a CI* [.60, 1.84], explains 6.98% of variance. We can infer from these results that openness to experience personality trait will positively predict perceived social support. Moreover results from path b of the above table illustrate that whilst controlling the effects of openness to experience on drug-related self-esteem, perceived social support also positively predicts drug-related self-esteem, β= .59, *t*= *21.89, p*= .000, 95% BC*a CI* [.53,.64]. These results prove that high perceived social support will predict high level of drug-related self-esteem among substance users.

The above table also shows the findings related to the direct effects of the predictor variable (openness to experience) on the outcome variable (drug-related self-esteem) and suggests that while controlling the effects of perceived social support, openness to experience has non-significant positive relationship with drug-related self-esteem , β= .02, *t*= *.14, p*= .890, 95% BC*a CI* [-.22, .26]. Openness to experience personality trait will not predict drug-related self-esteem among substance user. The R^2 tells us that both openness to experience and perceived social support explains 72.20% of variance on drug-related self-esteem. The analysis suggest that the direct effects (c'= .02, p= .890) of openness to experience on drug-related self-

esteem are not significant but the total effect is significant (c= .74). This suggests that perceived social support mediates the relationship between openness to experience and drug-related self-esteem (β= .72, 95% BCa CI [.36, 1.09].

Figure 8

Mediation model of Agreeableness and Drug-related Self-esteem through Perceived Social Support among Substance Users

Indirect effect, b = 1.49, 95% BCa CI [1.13, 1.88].
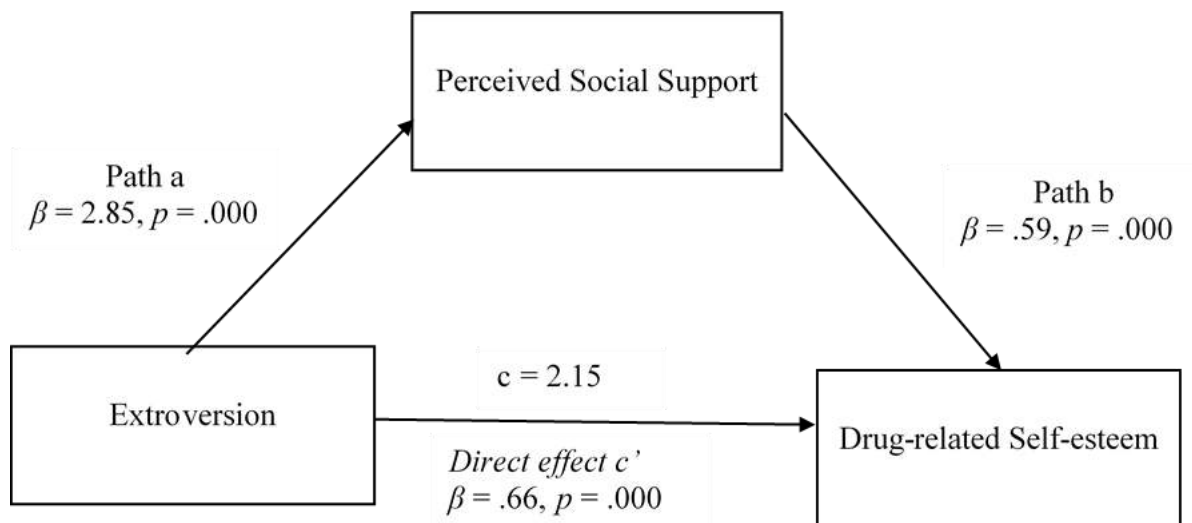
It can be observed from the Figure 8 that direct effect (path c' = .66) is smaller than the total effect (path c = 2.15), although both are significant. So partial mediation is occurring. It is obvious from the figure 8 that positive indirect effect of extroversion on drug-related self-esteem is found significant via perceived social support, b = .1.49, 95 % BCa CI [1.13, 1.88].

Direct path of extroversion and perceived social support is shown in the Table 13 (previous table). Extroversion positively predicts perceived social support, b = 2.85, t = 8.98, p = .000, 95 % BCa CI [2.22, 3.48]. While controlling for the effect of extroversion on drug-related self-esteem, perceived social support (the mediator) positively predicts drug-related self-esteem significantly, b= .59, t = 21.89, p<.000, 95% BCa Cl [.53, .64]. Direct effect suggests that, whilst controlling for the effect of perceived social support on drug-related self-esteem, the extroversion has significant positive relationship with drug-related self-esteem, b = .66, t = 4.19, p<.000, 95% BCa Cl [.35, .96]. Value of R^2 mentioned in the table indicates that both extroversion and perceived social support explain 74.45% of variance in drug-related self-esteem.

Figure 9

Mediation model of Agreeableness and Drug-related Self-esteem through Perceived Social Support among Substance Users

Indirect effect, b = 0 .77, 95% BCa CI [.36, 1.18].
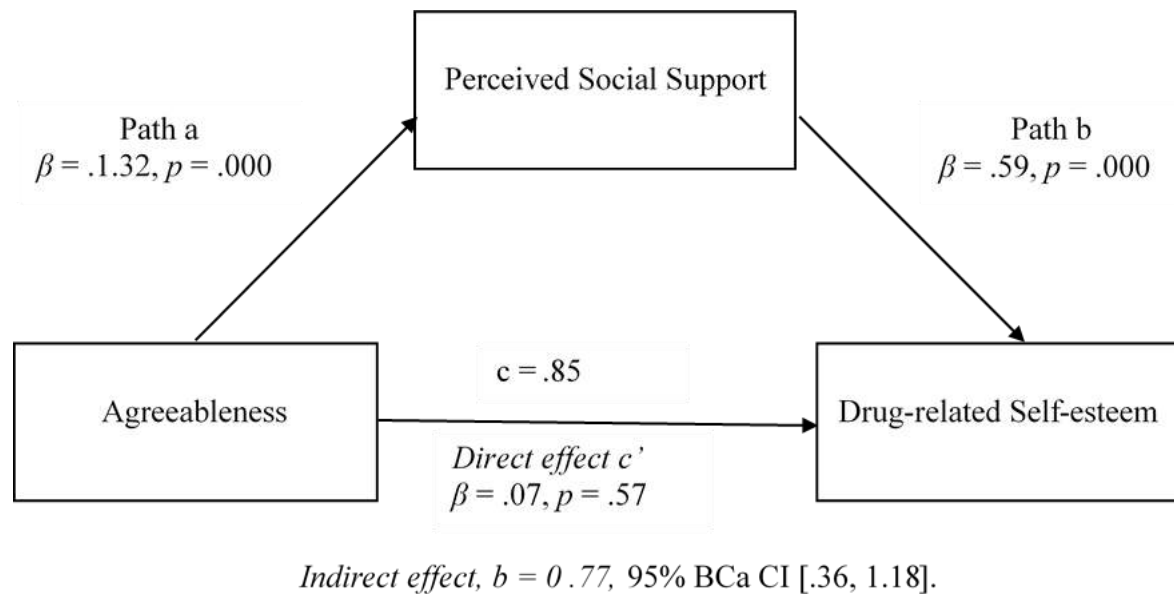
It can be observed from the Figure 9 that direct effect (path c' = .07) is smaller than the significant total effect (path c = .85) and also the direct effect is non-significant. So complete mediation is occurring. It is obvious from the figure 9 that positive indirect effect of Agreeableness on drug-related self-esteem is found significant via perceived social support, b = .77, 95 % BCa CI [.36, 1.18]. We can interpret as agreeableness indirectly predicts drug-related self-esteem via perceived social support.

Direct path of agreeableness and perceived social support is shown in the Table 13 (previous Table). Agreeableness positively predicts perceived social support, b = 1.32, t = 3.87, p = .000, 95 % BCa CI [.65, 1.99]. While controlling for the effect of Agreeableness on drug-related self-esteem, perceived social support (the mediator) positively predicts drug-related self-esteem significantly, b= .59, t = 21.89, p<.000, 95% BCa Cl [.53, .64].   Direct effect suggests that, whilst controlling for the effect of perceived social support on drug-related self-esteem, the Agreeableness has non-significant positive relationship with drug-related self-

esteem, b = .07, t = .55, p<.58, 95% BCa Cl [-.19, .34]. Value of R^2 mentioned in the table indicates that both Agreeableness and perceived social support explain 72.24% of variance in drug-related self-esteem.

Figure 10

Mediation model of Consicentiousness and Drug-related Self-esteem through Perceived Social Support among Substance Users

Path a
$\beta = 1.43, p = .000$

Perceived Social Support

Path b
$\beta = .59, p = .000$

c = .65

Conscientiousness

Direct effect c'
$\beta = -.20, p = .13$

Drug-related Self-esteem

Indirect effect, b = 0.86, 95% BCa CI [.46, 1.26]
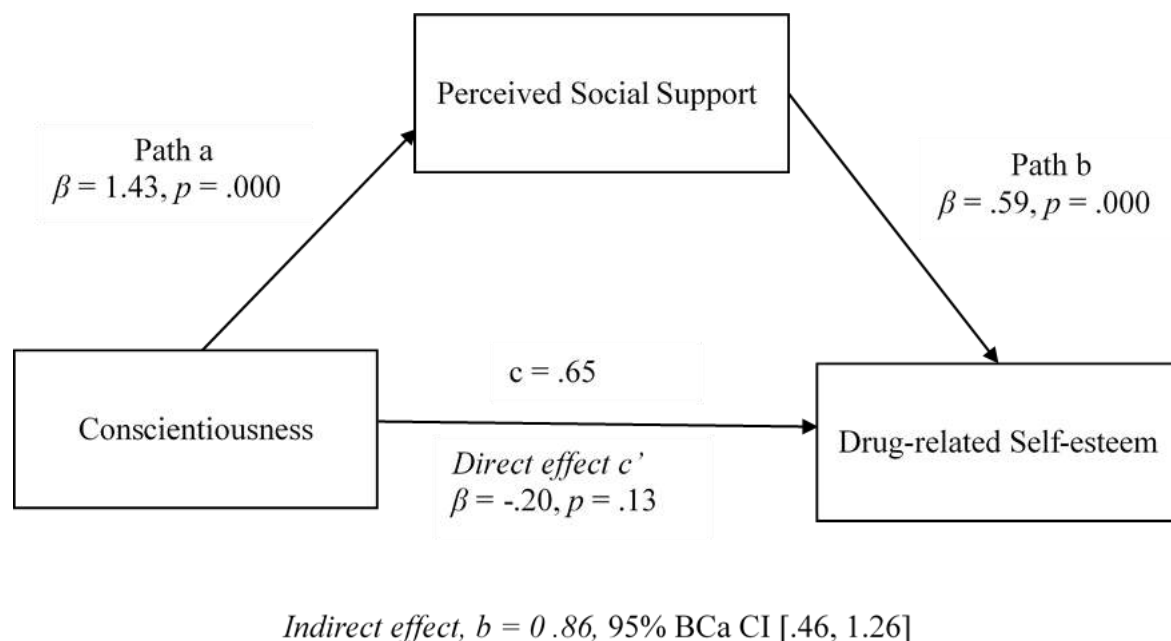
It can be observed from the Figure 10 that direct effect (path c' = -.20) is smaller than the significant total effect (path c = .65) and also the direct effect is non-significant. So complete mediation is occurring. It is obvious from the figure 10 that positive indirect effect of conscientiousness on drug-related self-esteem is found significant via perceived social support, b= .86, 95 % BCa CI [.46, 1.26]. We can interpret as conscientiousness indirectly predicts drug-related self-esteem via perceived social support.

Direct path of conscientiousness and perceived social support is shown in the Table 13 (previous Table). Conscientiousness positively predicts perceived social support, b = 1.43, t = 4.16, p = .000, 95 % BCa CI [.75, 2.10]. While controlling for the effect of conscientiousness on drug-related self-esteem, perceived social support (the mediator) positively predicts drug-related self-esteem significantly, b= .59, t = 21.89, p<.000, 95% BCa Cl [.53, .64].   Direct effect suggests that, whilst controlling for the effect of perceived social support on drug-related self-esteem, the conscientiousness has non-significant negative relationship with drug-related

self-esteem, b = -.20, t = -1.51, p<.133, 95% BCa Cl [-.47, .06]. Value of R^2 mentioned in the table indicates that both conscientiousness and perceived social support explain 72.51% of variance in drug-related self-esteem.

Figure 11

Mediation model of Neuroticism and Drug-related Self-esteem through Perceived Social Support among Substance Users
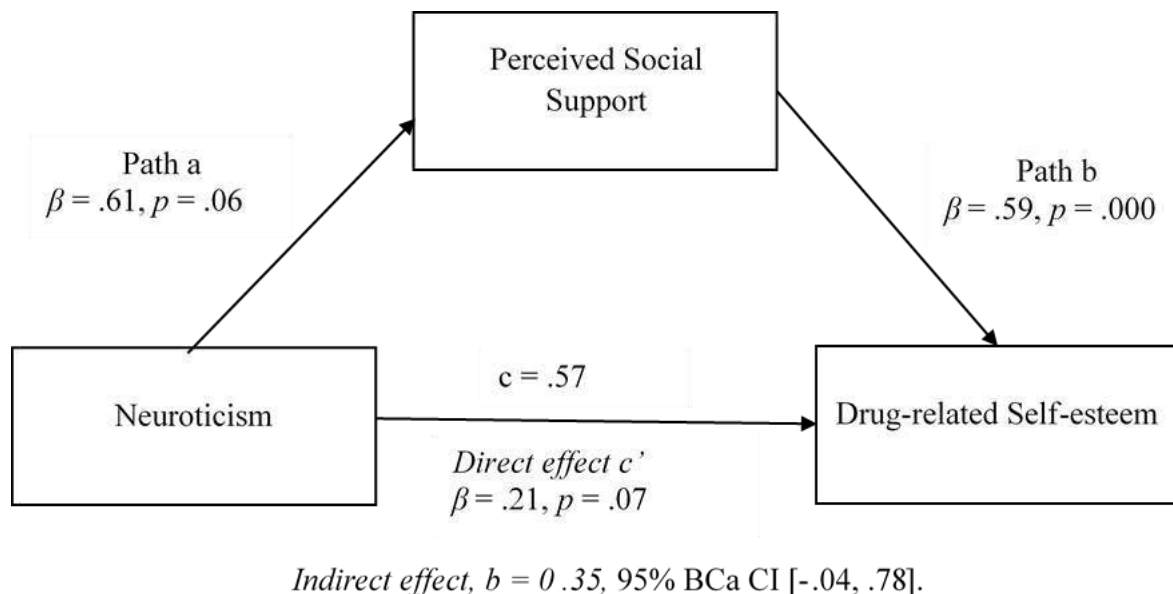
It can be observed from the Figure 11 that direct effect (path c' = .21) is smaller than the significantly positive total effect (path c = .57) and also the direct effect is non-significant. In order to find evidence for mediation, CIs are computed using bias corrected and accelerated bootstrapping method. The results suggest that there is a non-significant positive indirect effect of neuroticism on drug-related self-esteem via perceived social support, b= .35, 95% BC*a CI* [-.04, .78] biased characted confidence interval bootstrap BCa CI. These confidence intervals cross zero so we can infer no mediation effect of neuroticism through perceived social support on drug-related self-esteem.

Direct path of neuroticism and perceived social support is shown in the Table 13 (previous Table). Neuroticism non-significantly predicts perceived social support, $b = .61$, $t = 1.87$, $p = .06$, 95 % BCa CI [-.03, 1.25]. While controlling for the effects of neuroticism on drug-related self-esteem, perceived social support (the mediator) is significantly positively predictor of drug-related self-esteem, b= .59, t = 21.89, p<.000, 95% BCa Cl [.53, .64]. Direct effect suggests that, whilst controlling for the effect of perceived social support on drug-related

self-esteem, the neuroticism non-significantly predicts drug-related self-esteem, b = .21, t = 1.77, p= .078, 95% BCa Cl [-.02, .45]. Value of R^2 mentioned in the table indicates that both neuroticism and perceived social support explain 72.63% of variance in drug-related self-esteem.

Figure 12

Mediation model of Openness to Experience and Drug-related Self-esteem through Perceived Social Support among Substance Users

Indirect effect, b = 0 .72, 95% BCa CI [.36, 1.09].
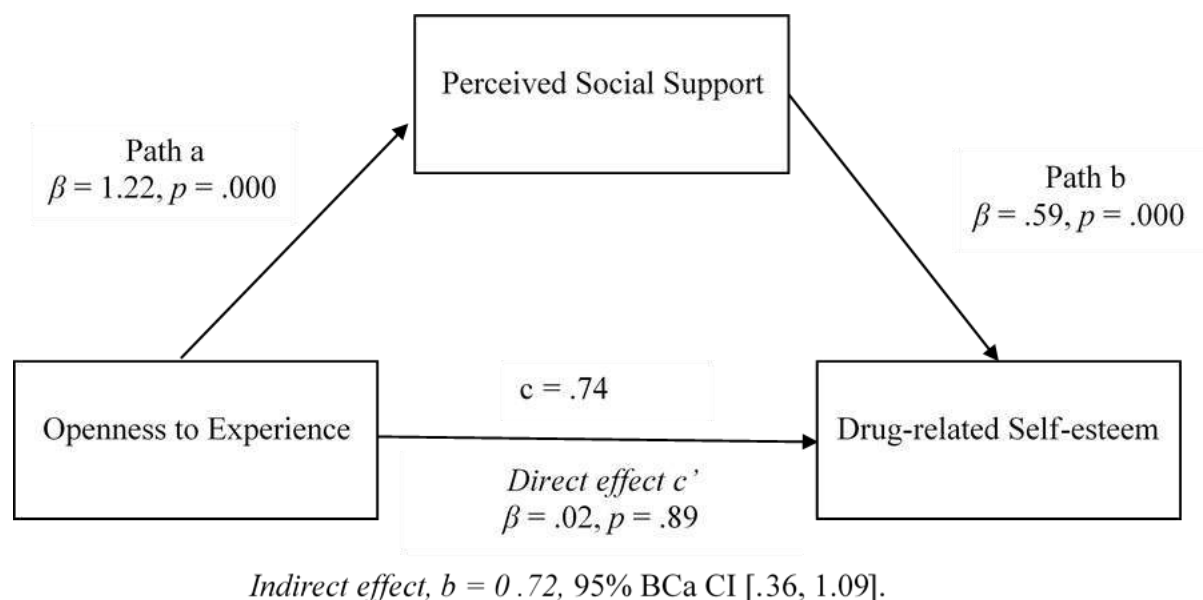
It can be observed from the Figure 12 that direct effect (path c' = .02) is smaller and non-significant than the total effect (path c = .74) which provides us the evidence that the mediation effects exist.In order to find evidence for mediation, CIs are computed using bias corrected and accelerated bootstrapping method. The results suggest that there is a significantly positive indirect effect of openness to experience on drug-related self-esteem via perceived social support, b= .72, 95% BC*a CI* [.36, 1.09] biased characted confidence interval bootstrap BCa CI. These confidence intervals do not cross zero so we can infer complete mediation effect of openness to experience through perceived social support on drug-related self-esteem.

Direct path of openness to experience and perceived social support is shown in the Table 13 (previous Table). Openness to experience positively predicts perceived social support, b = 1.22, t = 3.87, p = .000, 95 % BCa CI [.60, 1.84]. While controlling for the effect of openness to experience on drug-related self-esteem, perceived social support (the mediator) also positively predicts drug-related self-esteem significantly, b= .59, t = 21.89, p<.000, 95%

BCa Cl [.53, .64].   Direct effect suggests that, whilst controlling for the effect of perceived social support on drug-related self-esteem, the openness to experience non-significantly predicts drug-related self-esteem, b = .02, t = .14, p= 890, 95% BCa Cl [-.22, .26]. Value of R^2 mentioned in the table indicates that both openness to experience and perceived social support explain 72.20% of variance in drug-related self-esteem.

Table 14

Total effect, Direct Paths and Indirect path of Personality Traits (Extroversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience) and Drug-related Locus of Control and Perceived Social Support as Mediating Variable (N= 202)

	B	SE	R^2	p	95 % CI	
					LL	UL
Total Effect						
Extroversion ➝ DRLOC	.64	.06	.33	.000	.52	.77
Agreeableness ➝ DRLOC	.31	.07	.09	.000	.17	.46
Conscientiousness ➝ DRLOC	.26	.07	.06	.000	.12	.41
Neuroticism ➝ DRLOC	.19	.07	.04	.004	.06	.33
Openness to Experience ➝ DRLOC	.22	.07	.05	.001	.09	.36
Direct Paths						
Extroversion ➝ PSS	2.85	.32	.29	.000	2.22	-14.9
Extroversion ➝ DRLOC	.19	.05	.74	.000	.09	.28
Agreeableness ➝ PSS	1.32	.34	.07	.000	.65	1.99
Agreeableness ➝ DRLOC	.18	.01	.73	.047	.00	.16
Conscientiousness ➝ PSS	1.42	.34	.08	.000	.75	2.10
Conscientiousness ➝ DRLOC	.01	.04	.73	.000	.16	.19
Neuroticism ➝ PSS	.61	.32	.02	.06	-.03	1.25
Neuroticism ➝ DRLOC	.09	.04	.73	.013	.02	.16
Openness to Expereince ➝ PSS	1.22	.31	.07	.000	.60	1.84
Openness to Expereince ➝ DRLOC	.002	.04	.73	.95	-.07	.08
Perceived Social Support ➝ DRLOC	.18	.008	.73	.000	.16	.19
Indirect Path						
Extroversion ➝ PSS ➝ DRLOC	.46	.05	-		.36	.56
Agreeableness ➝ PSS ➝ DRLOC	.23	.06	-		.11	.36
Conscientiousness ➝ PSS ➝ DRLOC	.26	.06	-		.14	.38
Neuroticism ➝ PSS ➝ DRLOC	.11	.06			-.009	.24
Openness to Experience ➝ PSS ➝ DRLOC	.22	.05	-		.11	.33

Note. DRSE = Drug-related Locus of Control, PSS = Perceived Social Support, CI = Confidence Interval, LL = Lower Limit, UL = Upper Limit; ***p<.000, **p<.01, *p<.05.

Indirect Effects of Extroversion on Drug-related Locus of Control. Above table 14 indicates the mediating role of perceived social support in relationship between extroversion personality trait and drug-related locus of control. Findings from path c (total effect) illustrate that extroversion significantly and positively predicts drug-related external locus of control, β= .65, *t*= 9.95, *p*= .000, 95% BC*a CI* [.52, .78], and explains 33.10% of variance. According to the instructions of Drug-Related Locus of Control scale, higher scores will show individual's feelings of external locus of control and lower scores will show internal locus of control.

The above table also reveals that extroversion also positively predicts perceived social support, β= 2.85, *t*= *8.98, p*= .000, 95% BC*a CI* [2.22, 3.48], explains 28% of variance. We can infer from these results that those substance users who have extroversion personality trait will have increased perceived social support. Moreover results from path b (perceived social support to drug-related locus of control) of the above table illustrates that whilst controlling the effects of extroversion on drug-related locus of control, perceived social support also positively predicts drug-related locus of control, β= .18, *t*= *22.98, p*= .000, 95% BC*a CI* [.16,.19]. These results prove that high perceived social support will predict drug-related external locus of control among substance users.

The above table also shows the findings related to the direct effects of the predictor variable (extroversion) on the outcome variable (drug-related locus of control) and suggest that while controlling the effects of perceived social support, extroversion has positively significant relationship with drug-related locus of control, β= .19, *t*= *3.93, p*= .000, 95% BC*a CI* [.09, .28]. When individual has extrovert personality trait, it will ultimately predict drug-related external locus of control in the substance user. The R^2 tells us that both extroversion and perceived social support explains 74.57% of variance in drug-related locus of control. The analysis

suggest that the direct effects and the total effects both are significant although direct effect (c'= .19) is smaller than the total effect (c= .65). This suggests that partial mediation exists.

Indirect Effects of Agreeableness on Drug-related Locus of Control. Above table 14 indicates the mediating role of perceived social support in relationship between agreeableness personality trait and drug-related locus of control. Findings from path c (total effect) illustrate that agreeableness positively predicts locus of control, β= .31, $t=$ 4.38, $p=$ .000, 95% BCa CI [.17, .46], and explains 8.76% of variance.

The above table also reveals that agreeableness also positively predicts perceived social support,   β= 1.32, $t=$ *3.87, p=* .000, 95% BCa CI [.65, 1.99], explains 6.98% of variance. We can infer from these results that those substance users who have agreeableness personality trait will have increased perceived social support. Moreover results from path b (perceived social support to drug-related locus of control) of the above able illustrate that whilst controlling the effects of agreeableness on drug-related locus of control, perceived social support also positively predicts drug-related locus of control,   β= .18, $t=$ *22.98, p=* .000, 95% BCa CI [.16, .19]. These results prove that high perceived social support will predict drug-related external locus of control among substance users.

The above table also shows the findings related to the direct effects of the predictor variable (agreeableness) on the outcome variable (drug-related locus of control) suggest that while controlling the effects of perceived social support, agreeableness also has significantly positive relationship with drug-related locus of control, β= .08, $t=$ *1.99, p=* .047, 95% BCa CI [.00, .16]. When individual has agreeableness personality trait, it will positively predict drug-related locus of control among substance user.to elaborate more, we can infer that the substance users having agreeableness personality trait will have drug-related external locus of control. The R^2 tells us that both agreeableness and perceived social support explains 73.14% of

variance in drug-related locus of control. The analysis suggest that the direct effects and the total effects both are significant although direct effect (c'= .08) is smaller than the total effect (c= .31). This suggests that partial mediation exists.

Indirect Effects of Conscientiousness on Drug-related Locus of Control. Above table 14 indicates the mediating role of perceived social support in relationship between Conscientiousness personality trait and drug-related locus of control among substance users. Findings from path c (total effect) illustrate that Conscientiousness significantly and positively predicts locus of control, β= .26, t= 3.59, p= .000, 95% BCa CI [.12, .41], and explains 6.16% of variance.

The above table also reveals that Conscientiousness also positively predicts perceived social support, β= 1.43, t= *4.16, p*= .000, 95% BCa CI [.75, 2.10], explains 7.96% of variance. We can infer from these results that those substance users who have Conscientiousness personality trait will have increased perceived social support. Moreover results from path b of the above table illustrate that whilst controlling the effects of Conscientiousness on drug-related locus of control, perceived social support also positively predicts drug-related locus of control β= .18, t= *22.98, p*= .000, 95% BCa CI [.16, .19]. These results prove that high perceived social support will predict drug-related external locus of control among substance users.

The above table also shows the findings related to the direct effects of the predictor variable (Conscientiousness) on the outcome variable (drug-related locus of control) and suggest that while controlling the effects of perceived social support, Conscientiousness has non-significant relationship with drug-related locus of control , β= .01, t= *.17, p*= .877, 95% BCa CI [-.07, .09]. Conscientiousness personality trait will not directly predict drug-related locus of control among substance user. The R^2 tells us that both Conscientiousness and

perceived social support explains 72.60% of variance in drug-related locus of control. The analysis suggest that the direct effects (c'= .01, p= .877) of Conscientiousness on drug-related locus of control are not significant but the total effect is significant (c= .26). This suggests that perceived social support mediates the relationship between Conscientiousness and drug-related locus of control which can be interpreted as conscientiousness predicts drug-related external locus of control through the path of perceived social support (β= .26, 95% BC*a CI* [.14, .38].

Indirect Effects of Neuroticism on Drug-related Locus of Control. Above table 14 indicates the mediating role of perceived social support in relationship between neuroticism personality trait and drug-related locus of control among substance users. Findings from path c (total effect) illustrate that neuroticism significantly predicts drug-related external locus of control, β= .19, *t*= 2.91, *p*= .004, 95% BC*a CI* [.06, .33], and explains 4.16% of variance.

The above table also reveals that neuroticism do not predicts perceived social support, β= .61, *t*= *1.87, p*= .063, 95% BC*a CI* [-.03, 1.25], explains 1.71% of variance. We can infer from these results that those substance users who have neuroticism personality trait will not have impact on their perceived social support. Moreover results from path b of the above table illustrate that whilst controlling the effects of neuroticism on drug-related locus of control, perceived social support positively predicts drug-related locus of control, β= .18, *t*= *22.98, p*= .000, 95% BC*a CI* [.16,.19]. These results prove that high perceived social support predicts drug-related external locus of control among substance users. As explained earlier, increased scores on drug-related locus of control depict external locus of control and decrease scores depict the internal locus of control.

The above table also shows the findings related to the direct effects of the predictor variable (neuroticism) on the outcome variable (drug-related locus of control) and suggest that while controlling the effects of perceived social support, neuroticism significantly predicts the

drug-related external locus of control, β= .09, *t= 2.49, p=* .013 95% BC*a CI* [.02, .16]. Neuroticism personality trait will predict drug-related external locus of control among substance user. The R^2 tells us that both neuroticism and perceived social support explains 73.43% of variance in drug-related locus of control. The analysis suggest that both direct effects of neuroticism on drug-related locus of control (c'= .09, p= .013) and total effect (c= .19) while combining the effects of perceived social support are significantly positive. On the other hand, indirect effects of neuroticism on drug-related locus of control, β= .11, 95% BC*a CI* [-.00, .24] is not significant as the value of biased characted confidence interval bootstrap BCa CI crosses zero. So we can infer that perceived social support do not mediates the relationship between neuroticism and drug-related locus of control.

Indirect Effects of Openness to Experience on Drug-related Locus of Control. Above table 14 indicates the mediating role of perceived social support in relationship between openness to experience personality trait and drug-related locus of control among substance users. Findings from path c (total effect) illustrate that openness to experience significantly and positively predicts drug-related locus of control, β= .22, *t=* 3.30, *p=* .001, 95% BC*a CI* [.09, .36], and explains 5.18% of variance.

The above table also reveals that openness to experience also positively predicts perceived social support, β= 1.22, *t= 3.87, p=* .000, 95% BC*a CI* [.60, 1.84], explains 6.98% of variance. We can infer from these results that those substance users who have openness to experience personality trait will have increased perceived social support. Moreover results from path b of the above table illustrate that whilst controlling the effects of openness to experience on drug-related locus of control, perceived social support also positively predicts drug-related locus of control β= .18, *t= 22.98, p=* .000, 95% BC*a CI* [.16, .19]. These results prove that high perceived social support will predict drug-related external locus of control among substance users.

The above table also shows the findings related to the direct effects of the predictor variable (openness to experience) on the outcome variable (drug-related locus of control) and suggest that while controlling the effects of perceived social support, openness to experience has non-significant relationship with drug-related locus of control , β= .002, *t= .07, p= .947,* 95% BC*a CI* [-.07, .07]. Openness to experience personality trait will not directly predict drug-related locus of control among substance user. The R^2 tells us that both openness to experience and perceived social support explains 72.60% of variance in drug-related locus of control. The analysis suggest that the direct effects (c'= .002, p= .947) of openness to experience on drug-related locus of control are not significant but the total effect(c= .22) is significant. This suggests that perceived social support mediates the relationship between openness to experience and drug-related locus of control which can be interpreted as openness to experience predicts drug-related external locus of control through the path of perceived social support (β= .22, 95% BC*a CI* [.11, .33].

Figure 13

Mediation model of Extroversion and Drug-related Locus of Control through Perceived Social Support among Substance Users (N=202)

Indirect effect, b = .46, 95% BCa CI [.36, .56].
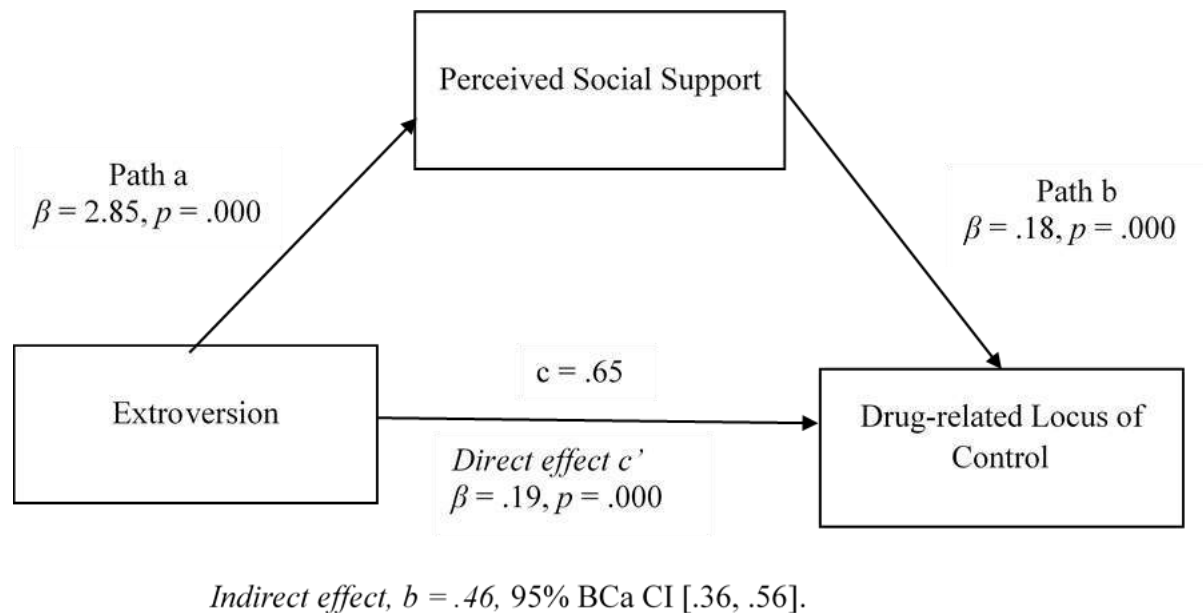
It can be observed from the Figure 20 that direct effect (path c' = .19) is smaller than the total effect (path c = 65), although both are significant. So partial mediation is occurring. It is obvious from the figure 13 that positive indirect effect of extroversion on drug-related locus of control is found significant via perceived social support, b = .46, 95 % BCa CI [.36, .56]. We can infer that extroversion predicts drug-related external locus of control via perceived social support among substance users.

Direct path of extroversion and perceived social support is shown in the Table 14 (previous Table). Extroversion positively predicts perceived social support, b = 2.85, t = 8.98, p = .000, 95 % BCa CI [2.22, 3.48]. While controlling for the effect of extroversion on drug-related locus of control, perceived social support (the mediator) significantly predicts drug-related external locus of control, b= .18, t = 22.98, p<.000, 95% BCa Cl [.16, .19]. Direct effect suggests that, whilst controlling for the effect of perceived social support on drug-related locus of control, the extroversion significant predicts drug-related external locus of control, b

= .19, t = 3.93, p<.000, 95% BCa Cl [.09, .28]. Value of R^2 mentioned in the table indicates that both extroversion and perceived social support explain 74.57% of variance in drug-related locus of control.

Figure 14

Mediation model of Agreeableness and Drug-related Locus of Control through Perceived Social Support among Substance Users (N=202)

Indirect effect, b = 0 .23, 95% BCa CI [.11, .36].
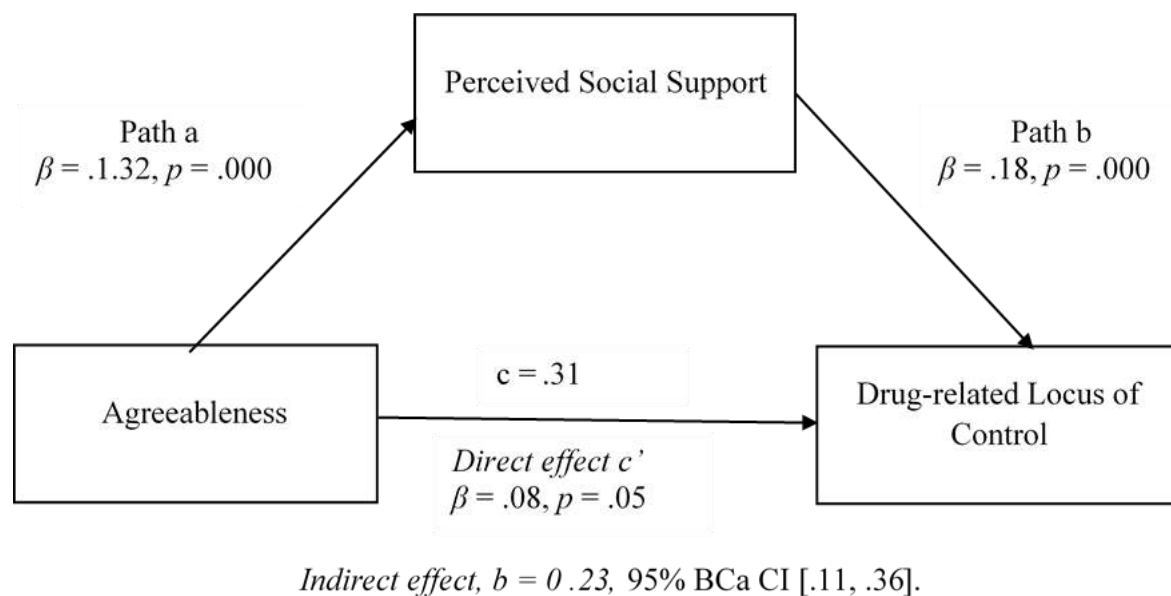
It can be observed from the Figure 14 that direct effect (path c' = .08) is smaller than the total effect (path c = .31), although both are significant. So partial mediation is occurring. It is obvious from the figure 14 that significantly positive indirect effect of agreeableness on drug-related locus of control is found via perceived social support, b = .23, 95 % BCa CI [.11, .36]. According to the instructions of Drug-Related Locus of Control scale, higher scores will show individual's feelings of external locus of control and lower scores will show internal locus of control. So we c infer that there is significant mediation effects of perceived social support in relationship between agreeableness and drug-related external locus of control.

Direct path of agreeableness and perceived social support is shown in Table 14 (previous Table). Agreeableness positively predicts perceived social support, b = 2.85, t = 8.98, p = .000, 95 % BCa CI [2.22, 3.48]. While controlling for the effect of agreeableness on drug-related locus of control, perceived social support (the mediator) significantly predicts drug-related external locus of control, b= .18, t = 22.98, p<.000, 95% BCa Cl [.16, .19].   Direct effect suggests that, whilst controlling for the effect of perceived social support on drug-related

locus of control, the agreeableness has significant relationship with drug-related external locus of control, b = .08 t = 1.99, p<.047, 95% BCa Cl [.00, .16]. Value of R^2 mentioned in the table indicates that both agreeableness and perceived social support explain 73.14% of variance in drug-related locus of control.

Figure 15

Mediation model of Conscientiousness and Drug-related Locus of Control through Perceived Social Support among Substance Users (N=202)
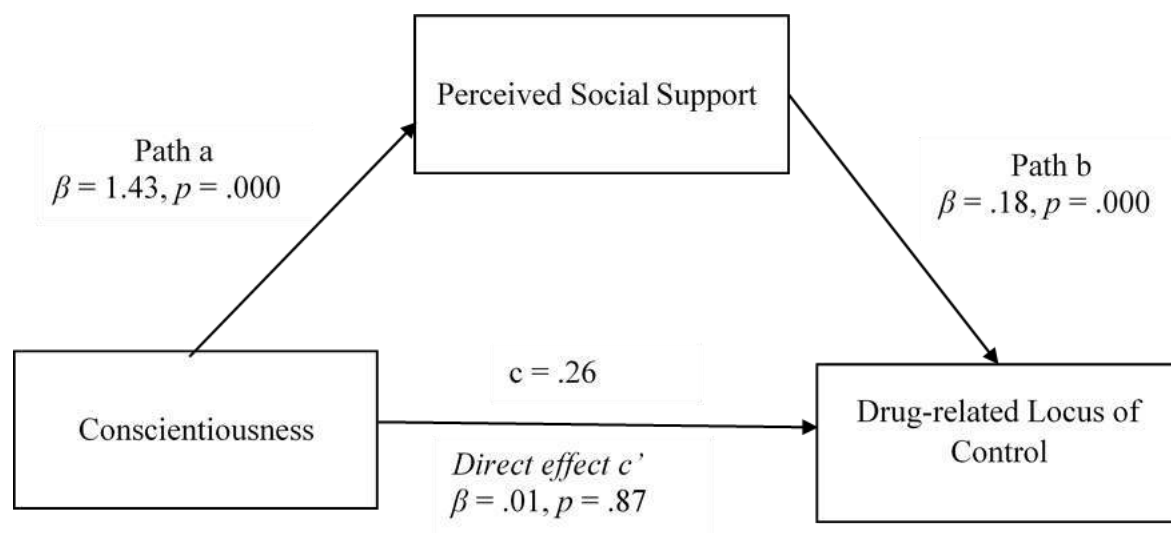
Indirect effect, b = 0.26, 95% BCa CI [.14, .38]

It can be observed from the Figure15 that direct effect (path c' = .01) is smaller and non-significant than the total effect (path c = .26) which provides us the evidence that the mediation effects exist.In order to find evidence for mediation, CIs are computed using bias corrected and accelerated bootstrapping method. The results suggest that there is a significant indirect effect of conscientiousness on drug-related external locus of control via perceived social support, b= .26, 95% BC*a CI* [.14, .38] biased characted confidence interval bootstrap BCa CI. These confidence intervals do not cross zero so we can infer complete mediation effect of conscientiousness through perceived social support on drug-related locus of control.

Direct path of conscientiousness and perceived social support is shown in the Table 14 (previous Table). Conscientiousness positively predicts perceived social support, b = 1.43, t = 4.16, p = .000, 95 % BCa CI [.75, 2.10]. While controlling for the effect of conscientiousness on drug-related locus of control, perceived social support (the mediator) also significantly

predicts drug-related external locus of control, b= .18, t = 22.98, p<.000, 95% BCa Cl [.16, .19]. Direct effect suggests that, whilst controlling for the effect of perceived social support on drug-related locus of control, the conscientiousness non-significantly predicts drug-related locus of control, b = .01, t = .17, p= 877, 95% BCa Cl [-.07, .09]. Value of R^2 mentioned in the table indicates that both conscientiousness and perceived social support explain 72.60% of variance in drug-related locus of control.

Figure 16

Mediation model of Neuroticism and Drug-related Locus of Control through Perceived Social Support among Substance Users (N=202)
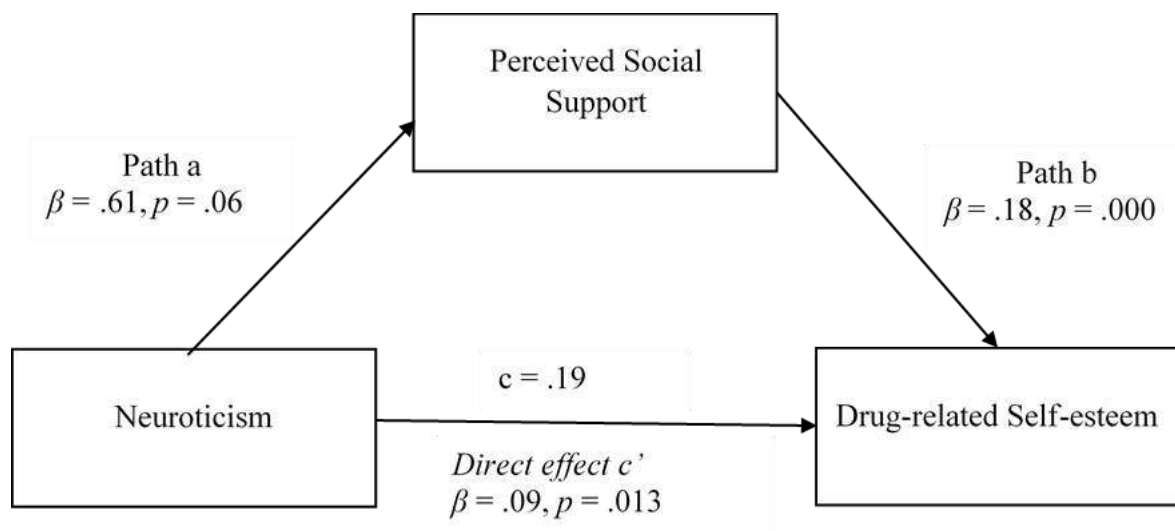
Indirect effect, b = 0 .11, 95% BCa CI [-.00, .24].

It can be observed from the Figure 16 that direct effect (path c' = .09) is smaller than the significantly positive total effect (path c = .19) both are significant. In order to find evidence for mediation, CIs are computed using bias corrected and accelerated bootstrapping method. The results suggest that there is a non-significant positive indirect effect of neuroticism on drug-related locus of control via perceived social support, b= .11, 95% BC*a CI* [-.00, .24] biased charected confidence interval bootstrap BCa CI. These confidence intervals cross zero so we can infer that perceived social support do not mediates the relationship between neuroticism and drug-related locus of control.

Direct path of neuroticism and perceived social support is shown in the Table 14 (previous Table). Neuroticism non-significantly predicts perceived social support, b = .61, t = 1.87, p = .063, 95 % BCa CI [-.03, 1.25]. While controlling for the effects of neuroticism on drug-related locus of control, perceived social support (the mediator) is significantly predicts

drug-related external locus of control, b= .18, t = 22.98, p<.000, 95% BCa Cl [.16, .19].   Direct

effect suggests that, whilst controlling for the effect of perceived social support on drug-related

locus of control, the neuroticism significantly predicts drug-related external locus of control, b

= .09, t = 2.49, p= .013, 95% BCa Cl [.02, .16]. Value of R^2 mentioned in the table indicates

that both neuroticism and perceived social support explain 73.43% of variance in drug-related

locus of control.

Figure 17

Mediation model of Openness to Experience and Drug-related Locus of Control through
Perceived Social Support among Substance Users (N=202)

Indirect effect, b = 0 .22, 95% BCa CI [.11, .33].
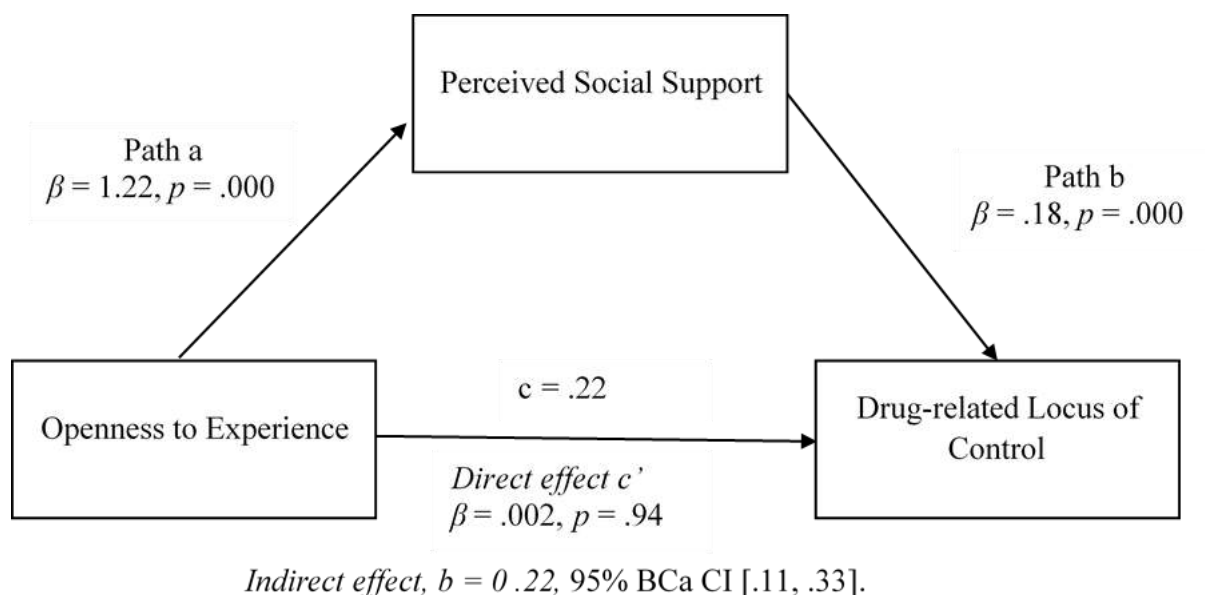
It can be observed from the Figure 17 that direct effect (path c' = .002) is smaller and non-significant than the total effect (path c = .22) which provides us the evidence that the mediation effects exist.In order to find evidence for mediation, CIs are computed using bias corrected and accelerated bootstrapping method. The results suggest that there is a significant indirect predictive effects of openness to experience on drug-related external locus of control via perceived social support, b= .22, 95% BC*a CI* [.11, .33] biased characted confidence interval bootstrap BCa CI. These confidence intervals do not cross zero so we can infer complete mediation effect of openness to experience through perceived social support on drug-related locus of control.

Direct path of openness to experience and perceived social support is shown in the Table 14 (previous Table). Openness to experience positively predicts perceived social support, b = 1.22, t = 3.87, p = .000, 95 % BCa CI [.60, 1.84]. While controlling for the effect of

openness to experience on drug-related locus of control, perceived social support (the mediator) also significantly predicts drug-related external locus of control, b= .18, t = 22.98, p<.000, 95% BCa Cl [.16, .19].   Direct effect suggests that, whilst controlling for the effect of perceived social support on drug-related locus of control, the openness to experience non-significantly predicts drug-related locus of control, b = .002, t = .07, p= 947, 95% BCa Cl [-.07, .07]. Value of R^2 mentioned in the table indicates that both openness to experience and perceived social support explain 72.60% of variance in drug-related locus of control.

Difference between Constructs on the Basis of Demographics

The most important objective of the current phase was to establish the differences among the study variables i.e. Drug-related self-esteem, drug-related locus of control and perceived social support on the basis of special demographic characteristics i.e. family system, number of relapse, prison history, and crime/offense history along with different types of crimes among substance users residing in addiction treatment and rehabilitation centers of twin cities.

There are different opinions and evidences supporting the two different perspectives individuals with higher self-esteem may be more resilient and motivated to overcome obstacles, including addiction. On the other hand, those with lower self-esteem may be more vulnerable to relapse due to feelings of inadequacy or low self-worth. While considering drug-related locus of control, those with an internal locus of control believe they have personal agency in their addiction recovery, while those with an external locus of control attribute the outcomes of their addiction primarily to external factors such as luck or fate. The debate arises when considering whether individuals with an external locus of control are more prone to relapse, as they may feel less responsibility for their actions. The impact of prison history on drug-related self-esteem and drug-related locus of control is also a significant factor to consider. Some argue that incarceration can negatively affect self-esteem due to the stigma and challenges associated

with imprisonment, potentially leading to higher relapse rates. Others argue that the structured environment and access to rehabilitation programs within prisons can help individuals develop a sense of control and improve self-esteem, subsequently reducing the likelihood of relapse.

Moreover, repeated relapses can also one of the leading cause to deteriorate drug-related self-esteem, reinforcing a negative cycle. Conversely, multiple relapses can lead individuals to develop a stronger internal locus of control as they learn from past experiences, increasing their motivation to achieve sustained recovery. Ultimately, the debate surrounding the interplay between drug-related self-esteem, drug-related locus of control, prison history, and relapse is complex and multifaceted. So the current phase is going to make the debate into the conclusion with robust analysis and findings.

Table 15

Means, Standard Deviations and t-values of differences on Drug-related Self-esteem, Self-competence, Self-confidence, self-regard, Perceived Social Support and Drug-related Locus of Control between Nuclear and joint family system (N=202)

	Nuclear (*n* = 75)	Joint (*n* = 127)			95% *CI*		
Variables	*M (SD)*	*M (SD)*	*t*	*p*	*LL*	*UL*	Cohen's *d*
DRSE	84.70(15.65)	76.77(18.84)	3.07**	.00	2.84	13.02	0.457
Self-competence	43.18(8.73)	40.06(10.70)	2.14*	.03	.24	6.00	0.319
Self-confidence	22.44(8.45)	19.97(8.61)	1.98*	.04	.01	4.92	0.289
Self-regard	19.08(5.19)	16.74(6.34)	2.70**	.00	.63	4.04	0.404
DRLOC	21.30(5.64)	19.73(5.41)	1.97*	.05	-.00	3.15	0.284
PSS	56.92(25.99)	50.70(25.93)	1.64	.10	-1.23	13.67	0.239

*df=200, *p<.05, **p<.01*

Note. CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit, DRSE= Drug-related Self-esteem, DRLOC= Drug-related Locus of Control. PSS= Perceived Social Support.

Table 15 shows the difference in study variables on the basis of family system. Result shows that the substance users living in nuclear family system have more drug-related self-esteem (t=3.07**, p<.01) self-competence (t=2.14*, p<.05), self-confidence (t=1.98*, p<.05) self-regard (t=2.70**, p<.01) and drug-related locus of control perceived social support (t=1.97*, p<.05) than substance users living in joint family system.

Table 15 also indicates that substance users living in nuclear family system are more likely to have external locus of control while users living in joint family system have internal locus of control. The result revealed non-significant difference in perceived social support (t=1.62, p=ns) between two groups.

Table 16

Means, Standard Deviations and t-values of differences in Drug-related Self-esteem, Self-competence, Self-confidence, Self-regard, Perceived Social Support and Drug-related Locus of Control on the basis of history of imprisonment among substance users (N=202)

Variables	No Imprisonment (*n* = 128) *M (SD)*	Imprisonment (*n* = 74) *M (SD)*	*t*	*p*	95% *CI* LL	UL	Cohen's *d*
DRSE	90.34(11.68)	61.34(11.14)	17.29**	.00	25.69	32.31	2.54
Self-competence	45.01(5.68)	34.66(12.50)	8.05**	.00	7.82	12.89	1.07
Self-confidence	24.91(6.34)	13.92(7.55)	11.06**	.00	9.03	12.95	1.58
Self-regard	20.41(4.59)	12.76(5.09)	10.96*	.04	6.28	9.03	1.58
DRLOC	23.14(4.98)	15.41(1.69)	12.91**	.00	6.55	8.91	2.08
PSS	67.64(20.53)	27.69(10.59)	15.57**	.00	34.89	45.02	2.44

*df =200, *p<.05, **p<.01, Note: CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit, DRSE= Drug-related Self-esteem, DRLOC= Drug-related Locus of Control, PSS= Perceived Social Support.*

Table 16 indicates the significant differences in drug-related self-esteem, it's three factors, drug-related locus of control and perceived social support on the basis of history of imprisonment/lock up. The result established that the substance users who have no history of imprisonment or lock up have more drug-related self-esteem (t=17.29**, p<.01), self-competence (t=8.05**, p<.01), self-confidence (t=11.06**, p<.01), self-regard (t=10.96*, p<.05) and perceived social support (t=15.57**, p<.01) than substance users with the history of imprisonment.

The table 16 also indicates that there is the significant difference in drug-related locus of control between substance users with the history of imprisonment and non-imprisoned substance users. Hence, those who have history of imprisonment have drug-related internal locus of control but the users with no history of imprisonment are more likely to have external locus of control.

Table 17

Means, Standard Deviations and t-values of differences in Drug-related self-esteem, Self-Competence, Self-confidence, Self-Regard, Perceived Social Support and Drug-related Locus of Control on the basis of history of drug dealing offense among substance users (N=202)

Variables	With No h/o Drug Dealing (*n* = 141) *M (SD)*	With h/o Drug Dealing (*n* = 61) *M (SD)*	*t*	*p*	95% *CI* LL	UL	Cohen's *d*
DRSE	87.71(13.23)	61.24(13.87)	2.86**	.23	22.40	30.51	1.95
Self-competence	44.45(6.74)	33.77(12.47)	7.87**	.00	7.99	13.35	1.06
Self-confidence	23.51(7.62)	14.81(7.38)	7.41**	.00	6.38	11.00	1.16
Self-regard	19.75(4.96)	12.65(5.37)	9.09**	.00	5.56	8.63	1.37
DRLOC	22.09(5.41)	16.21(3.12)	7.92**	.00	4.41	7.34	1.33
PSS	62.94(23.06)	30.06(16.40)	10.08**	.00	26.43	39.30	1.64

*df= 200, *p<.05, **p<.01, Note. CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit, DRSE= Drug-related Self-esteem, DRLOC= Drug-related Locus of Control, PSS= Perceived Social Support.*

Table 17 indicates the significant differences in drug-related self-esteem, it's three factors, drug-related locus of control and perceived social support on the basis of history of drug dealing. The result established that the substance users who have no history of drug dealing offense have more drug-related self-esteem (t=2.86**, p<.01), self-competence (t=7.87**, p<.01), self-confidence (t=7.41**, p<.01), self-regard (t=9.09**, p<.01) and perceived social support (t=10.08**, p<.01) than substance users with the history of drug dealing offense.

The table 17 also indicates that there is the significant difference in drug-related locus of control between substance users with the history of drug dealing offense and with no history of drug dealing. Hence, those who have history of drug dealing have drug-related internal locus of control but the users with no history of drug dealing are more likely to have external locus of control.

Table 18

Means, Standard Deviations and t-values of differences in drug-related self-esteem, self-competence, self-confidence, self-regard, perceived social support and drug-related locus of control on the basis of history of Harassment offense among substance users (N=202)

Variables	No Harassment (*n* = 180) M (SD)	h/o Harassment (*n* = 22) M (SD)	t	p	95% CI LL	UL	Cohen's d
DRSE	94.50(14.80)	77.91(17.66)	4.22**	.00	24.33	8.84	1.02
Self-competence	47.36(5.45)	40.47(10.29)	1.35	.18	-6.82	1.28	0.84
Self-confidence	26.04(8.85)	20.25(8.39)	1.93*	.05	-6.80	.071	0.67
Self-regard	21.09(5.38)	17.18(5.99)	2.24*	.02	5.13	.33	0.69
DRLOC	24.90(5.73)	19.75(5.25)	4.29**	.00	7.52	2.79	0.94
PSS	70.00(23.37)	50.93(25.67)	3.32**	.00	30.39	7.73	0.78

*df= 200, *p<.05, **p<.01, Note. CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit, DRSE= Drug-related Self-esteem, DRLOC= Drug-related Locus of Control, PSS= Perceived Social Support*

Table 18 indicates the significant differences in drug-related self-esteem, it's three factors, drug-related locus of control and perceived social support on the basis of history of drug dealing. The result established that the substance users who have no history of harassment offense have more drug-related self-esteem (t=4.22**, p<.01), self-confidence (t=1.93*, p<.05), self-regard (t=2.24*, p<.05), drug-related locus of control (t=4.29**, p<.01), and perceived social support (t=3.32**, p<.01) than substance users with the history of harassment offense. No significant difference in self-competence (t=1.35, p=ns) was found between two groups.

The table 18 also indicates that there is the significant difference in drug-related locus of control between two groups which indicates that those who have history of harassment offense have drug-related internal locus of control but the users with no history of harassment offense are more likely to have external locus of control.

Table 19

Means, Standard Deviations and t-values of differences in Drug-related Self-esteem, Self-competence, Self-confidence, Self-regard, Perceived Social Support and Drug-related Locus of Control on the basis of history of Cheating offense among substance users (N=202)

Variables	No Cheating (*n* = 174) M (SD)	h/o Cheating (*n* = 28) M (SD)	t	p	95% CI LL	UL	Cohen's d
DRSE	87.36(13.64)	78.49(18.45)	2.44**	.01	-16.04	-1.69	0.55
Self-competence	43.61(7.08)	40.84(10.48)	1.35	.18	-6.81	1.28	0.31
Self-confidence	23.78(8.06)	20.42(8.64)	1.93*	.05	-6.80	.07	0.40
Self-regard	19.96(4.77)	17.23(6.14)	2.25*	.02	-5.13	-.33	0.49
DRLOC	19.88(5.49)	23.03(5.12)	2.85**	.00	-5.34	-.97	0.59
PSS	50.55(26.10)	68.25(23.35)	3.42**	.00	-27.89	-7.49	0.71

*df= 200, *p<.05, **p<.01, Note. CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit, DRSE= Drug-related Self-esteem, DRLOC= Drug-related Locus of Control, PSS= Perceived Social Support*

Table 19 indicates the significant differences in drug-related self-esteem, it's three factors, drug-related locus of control and perceived social support on the basis of history of cheating offense. The result established that the substance users who have no history of cheating offense have more drug-related self-esteem (t=2.44**, p<.01), self-confidence (t=1.93*, p<.05), self-regard (t=2.25*, p<.05) and perceived social support (t=3.42**, p<.01) than substance users with the history of cheating offense. No significant difference in self-competence (t=1.35, p=ns) was found between two groups.

The table 19 also indicates that there is the significant difference in drug-related locus of control between two groups which indicates that those who have history of cheating offense

have drug-related external locus of control but the users with no history of cheating offense are more likely to have internal locus of control.

Table 20

Mean, Standard Deviations and F-value along Number of Relapses on Drug-related Self-esteem, Drug-related Locus of Control and Perceived Social Support (N=202)

	1st Relapse (*n*=59)	2-5 Relapses (*n*=77)	6-More Relapses (*n*=66)				
Variable	*M (SD)*	*M (SD)*	*M (SD)*	*F*	*P*	η^2	Post hoc
DRSE	85.69(14.47)	86.25(12.00)	66.76(20.11)	33.20	.00	0.25	3<1<2
DRLOC	22.20(5.50)	21.35(5.31)	17.42(4.66)	15.80	.00	0.17	3<2<1
PSS	58.02(23.95)	62.27(23.38)	37.73(24.28)	20.67	.00	0.13	3<1<2

df (2, 199), ***p<.01* level, *Note. DRSE= Drug-related Self-esteem, DRLOC= Drug-related Locus of Control, PSS= Perceived Social Support*

Table 20 shows that there is a significant difference of DRSE, DRLOC and perceived social support among the three groups (1st relapse, 2 to five relapse & 6 or more relapse).

Post Hoc Turkey HSD comparison was done to further define the analysis clearly.

Table 21

Post Hoc Tukey HSD Comparisons for Drug-related Self-esteem, Drug-related Locus of Control and Perceived Social Support (N=202)

Category				95% CI	
Independent	*Joint*	*Mean Difference*	*P*	*LB*	*UB*
First Relapse	Two-Five Relapses	-.55	.98	-6.99	5.88
	More than Five Relapses	18.93**	.00	12.27	25.60
Two-Five Relapses	More than Five Relapses	19.49**	.00	13.25	25.73

Drug-related Locus of Control

Category				95% CI	
Independent	*Joint*	*Mean Difference*	*P*	*LB*	*UB*
First Relapse	Two-Five Relapses	-.55	.61	-1.26	2.96
	More than Five Relapses	18.93**	.00	2.59	6.97
Two-Five Relapses	More than Five Relapses	19.49**	.00	1.88	5.97

Perceived Social Support

Category				95% CI	
Independent	*Joint*	*Mean Difference*	*p*	*LB*	*UB*
First Relapse	Two-Five Relapses	-.55	.56	-13.99	5.48
	More than Five Relapses	18.93**	.00	10.20	30.38
Two-Five Relapses	More than Five Relapses	19.49**	.00	15.10	33.99

* The mean difference is significant at **$p<.01$ level.

The Table, 20 and 21 shows that number of relapse significantly effect on the drug-related self-esteem, drug-related locus of control and perceived social support of the substance users. It is shown from the Table 21 that statistical significant difference exists across number of relapse in drug-related self-esteem, drug-related locus of control and perceived social

support among substance users. F value was significant so that is why post-hoc test was conducted to determine the pairwise comparison. As sample size with respect to number of relapse was unequal so suggested analysis for this case was Games-Howell (Field, 2000). Post Hoc test results indicates that multiple relapses effect on the Drug-related self-esteem, drug-related locus of control and perceived social support of the substance users. The more substance user relapse, it decreases the drug-related self-esteem and perception of social support of that client. Moreover, multiple relapse also develop internal locus of control. As the decreased score indicates client's internal locus of control, while increased score indicates client's external locus of control.

Discussion

Substance use refers to the uncontrollable, irresistible urge to take any substance or a drug that make an individual physical, psychologically and emotionally dependent which ultimately impair one's personal, interpersonal and social behavior. No other phenomenon similar to addiction has ever damaged or threatened human societies. Addiction to any substance affects individual's different aspects of personality and unique characteristics i.e, self-esteem, self-control, self-efficacy, cognitive, emotional and psychological functioning. Drug-related self-esteem and drug-related locus of control are the important aspects of individual's life after exposure to substance use which should be dealt to enhance the abstinence and reintegration of an addict into the healthy society.

The current study III aimed to examine the relationship among personality traits, perceived social support, drug-related self-esteem and drug related locus of control. Perceived social support was hypothesized to mediate the relationship between Personality traits including five broad personality factors i.e. openness to experience, agreeableness, conscientiousness, neuroticism, extraversion and outcome variables i.e. drug-related self-esteem (DRSE) and drug-related locus of control (DRLOC). Another purpose of the study was to check the differences among the study variables on the basis of demographic variables i.e number of relapse, prison history, history of different offenses, marital status, family structure etc.

Relationship among study Variables

The first objective of the study was to determine the relationship between constructs i.e. personality traits, perceived social support, drug-related self-esteem and drug-related locus of control among substance users. Findings from the study revealed significantly positive relationship between Personality traits i.e. openness, agreeableness and Extroversion and conscientiousness, neuroticism and drug-related Self-esteem among substance users. People

with high levels of openness are typically more open to new and unconventional experiences which lead to an exciting lifestyle, and as a result, these types of individuals hold positive self-evaluation and attitudes toward themselves (Niazi & Mehmood, 2017). This hypothesis was supported in the light of the results.

A research was performed to check the relationship between personality traits and self-esteem. The results derived a positive association of agreeableness, openness, extraversion, and conscientiousness with self-esteem however, a negative relationship of neuroticism and self-esteem was found. This showed that people who were more open to new experiences, agreed to the opposite views, and had a socially outgoing personality had higher levels of self-esteem (Amirazodi & Amirazodi, 2011).

Previous research findings suggest that individuals with increased neuroticism and openness to experience, and lower scores in conscientiousness and agreeableness are at increased risk to initiate substance use. To explain more, author discriminated that amphetamine, benzodiazepines, cannabis, cocaine, crack, heroin users are those individuals who belong to neuroticism factor of personality (Belcher et al. 2014; Fehrman et al., 2019).

The results also demonstrate positive correlation between big five personality traits and drug-related locus of control. The findings conclude that all of the five traits have a direct relationship with drug-related external locus of control. Several studies confirmed the positive correlation between extraversion, openness to experience, neuroticism, conscientiousness, agreeableness and locus of control among addicts (Ernst-Linke et al., 2022; Morris & Carden, 1981; Ucho et al., 2016).

The current study also found that perceived social support has a significantly positive relationship between personality traits i.e. openness, agreeableness and Extroversion and

conscientiousness except neuroticism among substance users. Swickert and colleagues (2010) found similar results in their study on addicts to find out how big fiver personality traits relate to the social support perceived from the environment. It has been established that addicts higher in extraversion, agreeableness, conscientiousness, and openness and low in neuroticism report higher levels of perceived social support. They have a big social circle and they have increased levels of support from the people around them (Swickert et al., 2010). Neuroticism factor of personality found to have no significant relationship with perceived social support. Neuroticism, as a personality trait, indeed tends to have a weaker relationship with perceived social support compared to other traits. Supportive relationships can still exist, but they might be perceived differently or require a different approach in terms of seeking and receiving support. There might be a few reasons for this. First, neuroticism is characterized by a tendency to experience negative emotions such as anxiety, worry, and insecurity. Individuals high in neuroticism may have a more pessimistic outlook and perceive less social support due to their heightened sensitivity to potential threats or rejection. Second, neuroticism often leads to a self-focused perspective, where individuals are preoccupied with their own emotional experiences and may struggle to recognize or seek support from others. This self-focused attention can make it challenging for them to notice and appreciate the social support available to them.

Moreover, there was proven to be significantly positive relationship between personality traits and three sub-factors of drug-related self-esteem among substance users. The results showed that extraversion, agreeableness, and openness have a positive association with self-competence. This is proved in the light of previous research conducted to check the relationship between the self-regard and behavioral manifestation of personality traits. The presence of positive self-regard is associated with a decrease in neuroticism and an increase in creativity. Self-acceptance and a positive attitude towards oneself contribute to a balanced and highly self-identified personality. A higher level of self-regard is observed in younger age

groups, as it is built upon optimistic outlooks on life and a creative approach to problem-solving (Levus, 2012).

Self-confidence was positively associated with all five traits which is supported by a research performed to assess the association of personality with self-esteem. A person with higher sense of self and who values his ideas and perspective is the one who has confidence in himself (Yu et al., 2019). Moreover, extraversion and conscientiousness were found in a positive relationship with self-regard in the results section. This is evident from previous research which aimed at self-regard and the big five personality traits. The participants who had higher regard for themselves had greater public appearance and vice versa (Mahadevan et al., 2019).

The current study also signifies the positive correlation between drug-related self-esteem and perceived social support. This indicates that those substance users who perceive their siblings, friends, and family as supportive in each aspect of their life tend to have greater feelings of self-respect while dealing with life attached or stigmatized with addiction. Similar study analyzed the association of perceived social support and self-esteem and found a positive correlation hence supporting the hypothesis. Thus research was conducted on drug users to find out the correlation of self-esteem and perceived social support. An addict who had higher social support automatically had higher regard and liking for self as compared to the one who has no shoulder to cry on (Cao & Liang, 2017).

A study focused on the association between locus of control and perceived social support. The results indicated that people who had high perceived social support had an external locus of control and vice versa. An external locus of control refers to the belief that external factors, rather than personal abilities or efforts, have a greater influence on one's life outcomes. Drug users who have high support from their social groups are less likely to blame

themselves for the bad happenings in their lives (Abdullah et al., 2021). People with an external locus of control may attribute their successes or failures to luck, chance, or the actions of others. Individuals who feel supported by others may rely on that support to navigate life's challenges, leading them to perceive external factors as having a greater impact on their lives.

Furthermore, the results also highlighted the positive correlation between perceived social support and three subscales of self-esteem i.e. self-confidence, self-competence, and self-regard. The results of the present research confirmed a positive association among the study variables. The results of the current study was supported by the previous research finding which elaborated that people who had more perceived social support tend to have greater self-confidence (Lin et al., 2018). Moreover, a significant positive relationship between perceived social support and self-competence was found (Kaldi & Xafakos, 2017). Another research confirmed a positive correlation between self-regard and perceived social support (Commerford & Reznikoff, 1996). In the light of all these findings, it can be assumed that having a positive self-regard, self-competence, and self-confidence can contribute to experiencing higher levels of perceived social support. When we feel good about ourselves and believe in our own abilities, it can often lead to stronger connections and support from others. It's wonderful to see how our own self-perception can impact our social interactions. Praising self on good decisions, good deeds, positive changes and achievement of set goals proven to be a key to positive environmental perception.

Moreover, drug-related locus of control has two dimensions, internal locus of control and external locus of control. One of the major finding of the current study is significant correlation between drug-related internal locus of control and newly introduced phenomena of drug-related self-esteem. Findings suggest that people who have internal locus of control have relatively higher levels of drug-related self-esteem as compared to people with drug-related

external locus of control. The results supported by the previous study which was conducted to highlight the association between self-esteem and drug-related locus of control. The findings concluded that self-esteem is higher in addicts with an internal locus of control hence supporting the current study's hypothesis (Saadat et al., 2012). This suggest that those substance users who have greater drug-related self-esteem will attribute their drug-related issues, calamities and resolution of these problems to the control of his own choices and decisions rather than luck or any external factors. Another study aimed to find out the relationship of various factors along with self-esteem and locus of control. The findings elucidated that internal locus of control and self-esteem have a significant positive relationship. This was explained in the way that people who have confidence in their decisions and value their choices are the ones who own up to their decisions hence scoring higher on internal locus of control (Frankham et al., 2019).

Drug-related self-esteem has three sub-factors i.e. self-competence, self-confidence and self-regard. These were derived from exploratory factor analysis and confirmed after confirmatory analysis in the initial parts of the current research. The findings from the current study also established significantly positive relationship of drug-related self-esteem with its sub factors i.e. self-regard, self-confidence, and self-competence supported by previous study finding. A similar research was conducted to confirm the correlation among the aforementioned variables and the findings supported the current idea that addicts who have high self-esteem also score higher on self-competence, self-confidence, and self-regard. An addict who has high positive regard for himself, is confident about the future and thinks of himself as a useful person will be a high scorer on self-esteem (Chen et al., 2022).

While the current findings establish that there was a significantly negative relationship between drug-related locus of control and three sub-factors of DRSE i.e. among substance

users. According to the instructions given by author of the drug-related locus of control scale, individuals with low scores will be considered as having internal locus of control while high scorers will have drug-related external locus of control. Negative correlation suggest that substance users with increased self-competence, self-confidence and self-regard are more likely to have drug-related internal locus of control. All of the sub factors of self-esteem were found to be in a negative correlation with the drug-related locus of control as evident in the results. People who have high scores on self-regard, self-competence, and self-confidence reported to have low score on locus of control (Oguntuase & Sun, 202).

Mediation Effects of Perceived Social Support

The fifth and subsequent objectives of the current study were regarding the predicative association of personality traits (openness, agreeableness and Extroversion and conscientiousness, neuroticism) with drug-related self-esteem and drug-related locus of control taking perceived social support as mediating variables. It was assumed that personality traits causes drug-related self-esteem and drug-related locus of control among substance users, mediated through perceived social support. Drug-related self-esteem and drug-related locus of control among substance users with different types of personality can be effected by the perception of social support. Findings from the current study suggest that perceived social support is likely to mediate the relationship between personality traits (openness, agreeableness and Extroversion and conscientiousness, neuroticism) and drug-related self-esteem among substance users. The results showed that perceived social support fully mediated the relationship between agreeableness, conscientiousness and openness and drug-related self-esteem. On the other hand, extroversion and drug-related self-esteem were partially mediated. Furthermore, no mediation was found between neuroticism and drug-related self-esteem which is consistent with the results concluded in previous study (Nogueira, 2019). Findings from this study concluded that all personality traits positively predict self-esteem but only agreeableness

and extroversion personality traits have positive correlation with perceived social support. Moreover insignificant relationship between neuroticism and self-esteem was found through the path of perceived social support which was consistent with the results of current study (Nogueira, 2019).

For instance Previous literature also support the findings by suggesting that the affects personality traits have on self-esteem of an individual can be elucidated by social support. Extroversion holds strongest association with self-esteem and social support while openness to experience holds little effect on self-esteem but have no relationship with social support. On the other side agreeableness, neuroticism and conscientiousness also has some influence over self-esteem (Cukrowicz et al., 2008).

Another study aimed to find out the role of perceived social support as an outcome for big five personality traits. The author concluded that higher agreeableness, openness to experience and conscientiousness resulted in greater perceived social support (Barańczuk, 2019) which in turn leads to greater self-esteem in adults (Bojanić, et al., 2019). Results from another study indicated that extraversion, agreeableness, openness, and conscientiousness predicted perceived social support among participants (Udayar et al., 2019).

These results can also be supported in the light of another extensive research conducted on Chinese residents to assess the role of perceived social support as a mediator between personality traits and self-esteem. The results of the research showed that participants who had high social support had a positive association between big 5 traits and self-esteem (Yu et al., 2021).

Personality traits have some meaningful characteristics behind them. People who score higher in agreeableness tend to be kind, compassionate, and cooperative. They are more likely

to have harmonious relationships and be well-liked by others. This positive social interaction generates a sense of support, leading to an increased perception of social support. Individuals who are open to experience are curious, imaginative, and receptive to new ideas. This characteristic often leads to a broader social network and diverse interactions. Having a diverse social support network can enhance self-esteem as it provides validation and a sense of belonging. Conscientiousness: High levels of conscientiousness are associated with being responsible, organized, and dependable. People who are conscientious tend to have stronger social ties, as they are reliable and trustworthy. This fosters a greater sense of support, which can positively impact self-esteem. When individuals feel supported by others, it contributes to their overall well-being and self-perception. The validation, encouragement, and acceptance received from social support can enhance self-esteem, creating a positive cycle of self-worth and confidence. To back up the current findings, another research highlighted that extraversion, neuroticism, and openness predicted overall social support. That is, at low levels of extraversion, low neuroticism was associated with greater perceived support irrespective of level of openness. At high levels of extraversion, high neuroticism and low openness was associated with the lowest level of perceived support (Swickert et al., 2010).

Another objective was to hypothesize that perceived social support is likely to mediate the relationship between personality traits and drug-related locus of control. The current study explored the specific pathways and mechanisms through which personality traits influence perceived social support, and in turn, how perceived social support shapes an individual's drug-related locus of control.

The results showed that perceived social support mediated the relationship of conscientiousness and openness with drug-related locus of control. Perceived social support

acts as a partial mediator between extroversion, agreeableness, and drug-related locus of control. However, no mediation was found between neuroticism and locus of control.

The findings were supported by the previous literature. A study was conducted to check the predicting role of perceived social support in providing a relationship between personality traits and locus of control. A regression model showed that locus of control of success was significantly affected by two traits i.e. Extraversion and conscientiousness (Filipiak & Łubianka, 2021).

This can be backed up from a previous research conducted to assess the predicting role of perceived social support on locus of control. The findings provided the conclusion that perceived social support strengthened the association between conscientiousness, openness and locus of control (Dağ & Şen, 2018).

For instance, we can infer that Perceived social support can be seen as a potential mechanism through which personality traits influence an individual's locus of control. Personality traits, such as extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience, can affect how individuals perceive and interact with their social environment. Perceived social support may act as a mediator by influencing an individual's beliefs about their control over their own lives. If someone feels supported by their social network, but perceive it as a source of dependency and resulted in believe that only external support can control their life circumstances and their own outcomes, they will ultimately have an external locus of control. On the contrary, if someone lacks perceived social support, they may feel more empowered and more dependent on internal factors, capabilities and worth, leading to an internal locus of control. In this way, perceived social support can serve as a bridge between personality traits and drug-related locus of control.

Demographic Differences among Study Variables

The current phase has also covered the differences in DRSE and DRLOC on the basis of family system, number of relapses, criminal record (drug dealing, theft, murder and attempt to murder, fraud, kidnaping, gambling, fight, rape/harassment and minor street crimes) and prison history among substance users. According to the seventh hypothesis, drug-related self-esteem, self-competence, self-confidence, and self-regard are significantly higher among substance users living in a nuclear family system than joint family system. The results are in favor of the above hypothesis.

A research was conducted to explain the relationship between self-esteem and the type of family of a drug user. The results were summarized as the addicts who lived in a nuclear family system had higher levels of self-esteem (Banstola et al., 2020). Another research highlighted that drug users coming from joint families have relatively low self-esteem, self-regard, self-competence, and self-confidence due to excessive stigmatization and fear of embarrassment (Ahmed et al., 2021).

The next hypothesis states that substance users living in joint family systems have an internal locus of control than users living in nuclear family systems who are more likely to have an external locus of control. The results of the current research confirm the above stated hypothesis.

A research examined male addicts from rehab centers and found the association between joint families and internal locus of control i.e. they take responsibility for their actions (Haider, 2020). Another study confirmed a direct relationship between nuclear family system and external locus of control hence supporting the hypothesis (Lalhmingmawii & Laldinpuii, 2021).

For instance, Substance users are more likely to have inclination towards some antisocial activities because of some major contributing factors like peer pressure, financial demands to pay for drugs etc. There are certain factors that some are more inclined towards committing crime and the others do not indulge in these activities. The individuals with low self-esteem may be more prone to engaging in substance use and criminal behavior as a means to cope with negative emotions or to fit in with certain social groups. Low self-esteem can sometimes lead to feelings of alienation and a desire for acceptance, which can make individuals more vulnerable to substance abuse and criminal activities. On the other hand, drug-related locus of control plays a role in determining an individual's beliefs about their control over drug use. Those who believe they have less control over their drug use may be more likely to engage in risky behaviors and criminal activities associated with obtaining drugs. It's important to note that these factors do not necessarily determine criminal behavior among substance users, as individual circumstances, environmental influences, and other psychological factors also play significant roles. Understanding these relationships can help inform prevention and intervention strategies for individuals struggling with substance abuse and criminal behavior.

Hence, the current study also tried to pin point this important subject among substance user population. The last objective of the study was to find the differences between construct on the basis of prison history and types of criminal offense among substance users. The results suggested that drug-related self-esteem and it's sub-factors i.e. self-competence, self-confidence, and self-regard are significantly higher among substance users with no history of imprisonment than the substance users who have a history of imprisonment.

Similar findings were derived from one of the study conducted on female addicts who were sent to prison. The results depicted that female prisoners who used drugs had low self-esteem than those addict females who never went to prison (Torkaman et al., 2020). Another

interventional study was performed to assess the reported levels of self-esteem in addicts who were in prison. The findings supported the hypothesis that self-esteem is low in addicts with history of imprisonment (Kim et al., 2020).

On the other hand, substance users with the history of imprisonment proven to have internal locus of control than substance users with no history of imprisonment supported by previous findings from a study conducted by Caputo (2019). Caputo conducted a study to check the relationship between locus of control and imprisonment history in drug addicts. The results summarized that those addicts who went to prison had a relatively more on internal locus of control (Caputo, 2019).

To check the association between number of relapses and drug-related self-esteem, a study was performed. The results supported the study findings that increased multiple relapses lower drug-related self-esteem in drug users (Xia et al., 2022). Dealing with multiple relapses can indeed have a significant impact on self-esteem, as it can lead to feelings of guilt, shame, and frustration. However, it's important to remember that relapses are a common part of the recovery process for many individuals. It might be helpful to approach abstinence with compassion and understanding, recognizing that addiction is a complex and challenging issue. Focusing on successes and strengths, no matter how small they may seem, can help boost drug-related self-esteem.

A study was conducted to find out the impact of perceived social support on multiple of relapses in drug users. The results highlighted the negative association among the two variables. An increase in the number of relapses decreased perceived social support and vice versa (Swanepoel et al., 2016). Another study confirmed that drug addicts having higher perceived social support have decreased number of relapses relatively (Atadokht et al., 2015).

Moreover, multiple relapses also effect the drug-related locus of control among substance users which was proven with the results of the current study. It was hypothesized that substance users with multiple relapse are more likely to have internal locus of control than those are with first relapse. The results validate the hypothesis of the present study.

Similarly, a study was performed on indoor patients in a rehab facility to assess the relationship between locus of control and the number of relapses among drug addicts. The results showed that those patients who had high internal locus of control had more relapses (Patel et al., 2022).

We can conclude that multiple relapses in drug addiction can contribute to the development of an internal locus of control because they often lead individuals to feel personally responsible for their relapses and the consequences that follow. This internal locus of control refers to the belief that one's actions and choices have a significant impact on their outcomes. When someone experiences multiple relapses, they may start to attribute their inability to stay clean solely to their own character flaws or shortcomings. They may believe that they lack willpower, discipline, or self-control, leading them to view themselves as being in complete control of their addiction. This internalized perspective can have both positive and negative effects. On one hand, it can empower individuals to take ownership of their recovery and make positive changes. They may feel motivated to seek out additional help, resources, or strategies to overcome their addiction. On the other hand, it can also lead to self-blame and a persistent feeling of failure. The belief that one has complete control over their addiction can create added pressure and feelings of guilt when relapses occur, exacerbating negative self-perceptions and potentially hindering recovery progress. It's crucial to strike a balance between taking personal responsibility and understanding the complex nature of addiction. Recovery often requires a combination of self-reflection, professional guidance, and external support systems

Another significant assumption of the current study was that drug-related self-esteem, self-competence, self-confidence, self-regard will be significantly higher among substance users with no history of drug dealing offense than the substance users who have history of drug dealing offense. This hypothesis was proven with the findings which were supported with previous findings that drug users who get involved in drug trafficking have reported to have excessive guilt of not only doing drugs themselves but also bringing others in this line. These factors were explained in a research hence providing a positive association between drug-related self-esteem, its subscale, and no history of drug dealing offense (Ebrahem et al., 2022).

Drug dealing is the most prominent offense usually substance users attempt to get financial benefits to get drugs in required amount. So the analysis related to demographics in the current study also covered this prospect that substance users with history of drug dealing offense are more likely to have an external locus of control than users with no history of drug dealing offense who are more likely to have an internal locus of control. The results validate the hypothesis. Caputo also concluded that People who are involved in drug dealing offense tend to be less likely to own their decisions and mostly blame all the consequences of their actions on the external environment. The study found out that an external locus of control is observed in addicts involved in drug-dealing crimes (Caputo, 2019).

Likewise, other prominent offenses were cheating and harassment to achieve secondary gains. These offenses were also discussed by proposing that substance users with no history of cheating and harassment offense are more likely to have high Drug-related self-esteem, self-competence, self-confidence, self-regard among substance users than with a history of cheating and harassment The results proved the hypothesis. Higher levels of self-esteem indicated high confidence which relates to the lowered frequency of cheating behaviors. People who cheat on various occasions seek a shortcut as they do not give themselves enough regard to do something

the right way. Hence, addicts who have lower self-esteem get more involved in cheating and embezzlement (Lee et al., 2021). Another research was found in regards to this hypothesis. Addicts with low self-esteem are often engaged in acts of harassment or bullying (Abreu et al., 2023).

Involvement in cheating and harassment can have a negative impact on one's self-esteem, self-confidence, and self-regard. Engaging in these behaviors can create feelings of guilt, shame, and regret, which can erode one's sense of self-worth. For substance users, this impact can be even more pronounced. Substance use itself often comes with its own set of negative effects on self-esteem and confidence, as individuals may feel trapped in a cycle of addiction and struggle with feelings of powerlessness. When combined with involvement in cheating and harassment, these negative emotions can intensify further.

Likewise, these offenses were also discussed by proposing that substance users with no history of cheating and harassment offense are more likely to have internal locus of control than users with history of cheating and harassment offense who are more likely to have external locus of control. The result found significant relationship between drug-related internal locus of control and history of cheating and harassment offense. Substance users who have ever attempted cheating, forgery and harassment in their life have drug-related external locus of control. Previous evidence support the notion. In a research by Prakash and Vijayalakshmi (2022), it was concluded that those addicts who had history of cheating, harassment, and negative behaviors had an external locus of control. Similar research was conducted which showed that people who have external locus of control were more involved in bullying and harassment (Saracaloğlu, 2021). When individuals engage in cheating and harassment, they may rely on these behaviors as coping mechanisms or strategies to exert control over their environment. Substance use can often be accompanied by feelings of helplessness and a lack of control over one's life. The combination of substance use and engagement in negative

behaviors like cheating and harassment can reinforce the belief that control and power lie outside of oneself. This external locus of control can further perpetuate substance use and hinder the ability to make positive changes. Breaking this cycle requires addressing both the substance use and the underlying attitudes and beliefs about control.

Conclusion

The current study designed to explore the mediating role of perceived social support in relationship between personality traits (openness to experience, agreeableness, conscientiousness, neuroticism, extraversion), drug-related self-esteem, it's sub-factors self-competence, self-confidence, self-regard and drug-related locus of control. Drug-related self-esteem is newly introduced phenomena. Drug-related self-esteem refers to an individual's perception of their self-worth in relation to their drug use or substance dependency. It involves how drugs or substances impact a person's confidence, self-image, and overall feelings of worthiness. It can include both positive and negative aspects, such as feeling more confident or capable while under the influence of drugs, but also experiencing guilt, shame, or a diminished sense of self when the negative consequences of drug use become apparent. It's important to note that drug-related self-esteem can have serious implications on a person's mental health and well-being. Moreover it also impact prevention treatment and intervention of substance use, abstinence and recovery from substance use.

The second important construct was drug-related locus of control which can be defined as feelings of self-control or being control by external circumstances with reference to decisions about drug addiction and relapse. The current study concluded the significant relationship between positive personality factors like agreeableness, openness to experience, conscientiousness and extroversion while provided evidence of no significant relationship between neuroticism and drug-related self-esteem. Based on the results of the current study, it is evident that perceived social support plays a significant role in mediating the relationship

between personality traits, self-esteem, and drug-related locus of control. This suggests that individuals who perceive higher levels of social support are more likely to have positive personality traits, higher self-esteem, and a stronger sense of control over their drug-related behaviors. Furthermore, findings suggest a positive relationship between personality traits and self-esteem, and its factors i.e. self-competence, self-confidence and self-regard indicating that individuals with more favorable personality traits tend to have higher levels of self-esteem.

Additionally, there was a notable relationship between self-esteem and internal locus of control among substance users, suggesting that individuals with higher self-esteem feel a greater sense of control over their substance use. In conclusion, these findings highlight the importance of perceived social support in influencing the relationships between personality traits, self-esteem, and drug-related locus of control. They also emphasize the role of self-esteem in determining an individual's sense of control over their substance use. These insights can be valuable for understanding and designing interventions focused on enhancing social support, promoting positive personality traits, and boosting self-esteem among substance users.

Moreover, the findings of the current study also targeting the very important demographic factors of prison history and criminal offense i.e. forgery, drug dealing, harassment which are more common and comorbid issues with substance use. Having a prison history and a criminal record can indeed have an impact on drug-related self-esteem. It seems that these experiences may contribute to a decrease in drug-related self-esteem, meaning that individuals may feel less confident or positive about themselves in relation to drug-related activities. Additionally, the research suggests that these experiences may also lead individuals towards developing an internal locus of control. This means that they may start to believe that they have more control over their own actions and outcomes, rather than attributing those solely to external factors. Taken together, these findings suggest that prison history and criminal record can have a complex influence on an individual's self-esteem and perception of control

when it comes to drug-related behaviors. It's important to consider these factors when examining and addressing the needs of individuals who have had these experiences. Promoting good social support could be suggested as per findings which postulate that individual's perception of positive social support from family, siblings, peers, friends, and significant others can improve their drug-related self-esteem, self-confidence, self-competence which ultimately will lead towards treatment adherence, abstinence and recovery.

It's important to address and work through these issues to restore and rebuild one's self-esteem and self-confidence. Seeking support from professionals, such as therapists or counselors, can provide valuable guidance and assistance in building a healthier sense of self. Additionally, engaging in positive and uplifting activities, cultivating healthy relationships, and practicing self-care could all contribute to regaining a sense of self-worth and self-regard.

Treatment programs that focus on empowering individuals, building self-awareness, and developing healthy coping strategies can help shift the locus of control from external to internal. By fostering a sense of personal agency and responsibility, individuals can regain control over their lives and reduce the likelihood of engaging in cheating and harassment.

<div align="right">**Chapter 5**</div>

Main Study. Efficacy of Motivation-Enhancement Therapy Model for Inpatient Substance Users

Following Study used pre-test post-test control group design aimed to study the efficacy of Motivation-Enhancement Therapy (MET) to strengthen the Drug-related self-esteem and Drug-related internal locus of control to further enhance treatment adherence, control drop-out and to maintain abstinence.

Table 22

Conceptual Framework of Main Study: Intervention Study

Pretest and Posttest -Control-Group Design					
Groups	Allocation of Subjects	Variables	Pretest	Treatment	Posttest
Experimental Group (MET)	N=20	DRSE DRLOC	O_1	MET	O_2
Control Group (BPS)	N=20	DRSE DRLOC	O_1	General Counseling	O_2

Objectives of Main Study

The current study aimed to fulfil the following objectives;

1. To study the efficacy of Motivation Enhancement Therapy in enhancing drug related self-esteem (DRSE) and drug-related internal locus of control among substance users.

2. To study the efficacy of MET intervention in reducing Drug-Related External Locus of Control and increasing Drug-Related Self-Esteem (DRSE), self-competence, self-confidence and self-regard among substance users compared to Bio-psychosocial intervention.

Hypotheses of the Main Study

The following hypotheses have been formulated for the main study.

1. There will be significant increase in Drug related self-esteem, self-competence, self-confidence, self-regard and drug-related internal locus of control from pretest to posttest measures among substance users of treatment group.

2. There will be significant decrease in drug-related external locus of control, self-confidence and self-regard from pretest to posttest measures among substance users of treatment group.

3. There will be significant difference in drug related self-esteem, self-competence, self-confidence, self-regard and drug-related internal locus of control across two different treatment conditions (MET & General counseling).

Method

The following study was carried out with the sample selection through screening of motivation for change with the help of standardized tool "University of Rhode Island Change Assessment (URICA)". Sample was further divided into two groups i.e., intervention group and control group which were assessed at pre intervention and post intervention levels. In the current study, Motivation Enhancement therapy was used to positively influence the individual's drug-related internal locus of control and drug-related self-esteem to achieve ultimate goals of abstinence and treatment adherence.

Sample

The sample for current phase was consist of male substance users (n=40) divided into two groups i.e., MET group (n=20) and control group (n=20). Combination of stratified and systematic random sampling technique was used to select sample for both groups. The substance users with the history of multiple treatments and relapses were selected with the age range from 20-45. Informed consent, demographic information on age, qualification, marital

status, family type (joint, nuclear), number of treatments taken, types of drugs used, longest duration of treatment taken, duration of each of the drug used and criminal record (number of times one would get imprisonment) was taken from the participants.

Inclusion Criteria. Male substance users from rehabilitation centers of twin cities were selected to participate in the study after screening for motivation for change. Inpatients with poor motivation for change, less than 45 years of age and above 20 years of age in-patients with multiple treatment and relapse history will be selected for both interventions. Participants having education level of 10th standard or above were included. Substance users with heroin as a current substance of use were selected for participation in study.

Exclusion Criteria. Patient with first treatment, above the age of 45 years, patients with alcohol, hallucinogens, or tranquilizers use, well-motivated and those who are not willing to participate in the study were excluded.

Participants Selection in Intervention and Control Group. Firstly all substance users coming for rehabilitation were assessed for their motivation for change. Almost 200 heroin users were gone through from screening of motivation for change. The sample was selected by administering the "University of Rhode Island Change Assessment (URICA)" scale to assess trans-theoretical stages of change or motivation to change for substance users. The readiness score derived from the URICA were used prior to treatment to predict outcomes. Scoring guidelines were followed in order to obtain the raw scores and cut off scores for participant's motivation for change. According to the author's scoring guidelines, in order to obtain a readiness to change score, items of the each subscale were summed and divided by 6 to get the mean for each subscale. Mean for three subscales (contemplation, action and maintenance) was summed up and subtracted the pre-contemplation mean (C+A+M-PC) and obtain the readiness to change score of the each inpatient substance user to select as a research participant. 8 or lower classified as Pre-contemplators 8-11 classified as Contemplators 11-14

classified as Preparators into Action Takers (DiClemente, & Hughes, 1990). The substance user inpatient with pre-contemplation or contemplation stage of motivation were selected to participate in the current study.

Comparison of Intervention and Control Group

In order to compare the Participants of MET group and BPS group on motivation for change, bar graph was used.

Figure 18

Motivation for change score comparison for MET group & BPS group
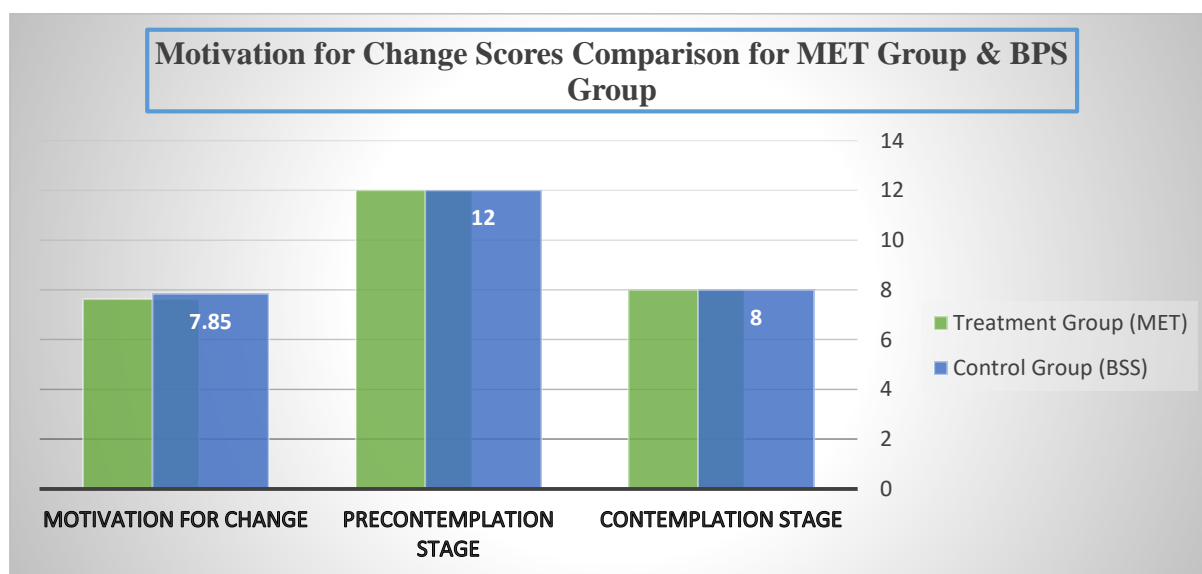
The above bar graph shows the frequency of participants in different stages of motivation. The results from frequencies and percentages indicate that no significant difference in level of motivation was found between MET group (M= 7.63, SD= 1.32) and BPS group (M=7.85, SD= .95). According to the raw scores derived from the URICA, 12 participants from MET and BSS group were in pre-contemplation stage of motivation. While 8 from both groups were in contemplation stage of motivation. No participant from MET and BPS group were on preparation or action stage of motivation.

Demographic Information

The main study consist of participants with following demographic characteristics i.e.

Age, marital status, family system, prison history, criminal record and qualification.

Table 23

Demographic Characteristics of the Participants in Two Groups (N = 40)

Variables	*f*	%	M	SD	*F*	%	M	SD
		MET Group *(n = 20)*				Control Group *(n = 20)*		
Age (years)	20		3.40	.88	20		3.40	.75
Age (categories)								
Early Adulthood (20-25)	5	25.0			3	15.0		
Middle Adulthood (26-30)	2	10.0			6	30.0		
Late Adulthood (31-55)	13	65.0			11	55.0		
Qualification			2.00	1.21			2.45	.99
Middle (8th)	10	50.0			3	15.0		
Secondary (10th)	4	20.0			9	45.5		
Higher Secondary (11-12)	2	10.0			4	20.5		
Graduation (13-16)	4	20.0			4	20.0		
Marital Status			1.50	.51			1.60	.50
Single	10	50.0			8	40.0		
Married	10	50.0			12	60.0		
Family Structure			1.60	.50			1.60	.50
Nuclear	8	40.0			8	40.0		
Joint	12	60.0			12	60.0		
History of Treatment			1.20	.41			1.35	.48
Three to Five	16	80.0			13	65.0		
Six or More	4	20			7	35.0		
Treatment Duration			2.00	.00			1.20	.41
Three to Five Months	0	0.0			16	80.0		
Six month or More	20	100			4	20.0		
Prison History			1.7	.47			1.60	.50
Yes	6	30			8	40.0		
No	14	70			12	60.0		
Stage of Motivation			7.63	1.32			7.85	.95
Pre-contemplation	12	60.0			12	60.0		
Contemplation	8	40.0			8	40.0		
preparatory	0	0.0			0	0.0		

Note. n = number of participants, % = percentage, M = Mean, SD = Standard Deviation

Demographic characteristics of the both (MET & BPS) groups indicate that participants in both groups are comparable in age, qualification, marital status, Family system, number of treatment, treatment duration, and prison history. Both groups have same number of participants which were MET (n=20), BPS (n=20) group. The overall age range for the study participants was 20-45 with M=3.30, SD=1.08 for MET group and M=3.40, SD=.75 for BSS group. Three age groups were formed in which 13 participants (65%) were in late adulthood (31-55), 5 participants (25%) early adulthood (20-25) and 2 (10%) participants were in Middle Adulthood (26-30) from MET group. From control (BSS) group, 11 participants (55%) were lied in late adulthood (31-55), 6 participants (30%) Middle Adulthood (26-30) and 3 participants (15%) in early adulthood (21-25) category of age.

In the current study, participants have four levels of education for both groups i.e., MET group (M= 2.00, SD=1.21) and control (BSS) group (M=2.45, SD= .99) from which 10 participants (50%) were from Middle, 4 (20%) secondary and graduate (20%) and only 2 participants (10%) lied in higher secondary level of education among MET group. In control group 3 (15%) were in middle, 9 (45%) secondary and 4 (20%) in higher secondary and graduate level respectively were lied in the level of education. According to the demographic characteristics of the participants, 50% (10) of the participants were married and 50% were single in MET group while 12 (60%) were married and 8 (40%) were single in the control (BSS) group. Most of the participants from MET group (f=12, 60%) and control (BSS) group (f=12, 60%) were living in joint family system.

History of the treatment and longest duration of treatment was also important characteristic of the participants for current study in order to implement intervention (MET) as MET intended to deal with the clients with multiple relapses. Larger number of sample was with the past history of treatment three to five times (f=16, 80%) in MET and (f=13, 65%) in control group while only 4 (10%) participants from MET group and 7 (35%) were

with six or more treatments. All participants (f=20, 100%) from MET group were with the six month or more duration of treatment while in control group, 16 (80%) were with three to five month long treatment durations in the past.

According to the results of the table, 6 (30%) participants from MET group and 8 (40) from control group were having the prison history in cases like drug dealing, fight, attempt to murder, murder, theft, deception or gambling. Most of the participants were lied under no criminal history i.e., 14 (70%) and 12 (60%) from MET and control group respectively.

Stage of motivation was the significant finding required for the selection of the participants for both groups which was carried out before the initiation of both interventions as a main criteria for participant selection. No significant difference in level of motivation was found between MET group (M= 7.63, SD= 1.32) and BSS group (M=7.85, SD= .95). There were also an Equal participants under pre-contemplation stage of motivation (f=12, 60%) and contemplation stage (f=8, 40%) from MET and control group. No participant was from preparatory stage of motivation in both groups.

Main Study: Intervention and Post-Intervention Assessment

This part of the study was comprised of four steps.

- Sample selection for both (MET and bio-psycho-social) groups through screening of motivation for change with the help of "University of Rhode Island Change Assessment (URICA)"scale.

- Pre assessment of drug-related self-esteem and Drug-Related Locus of Control of two groups to investigate the effects of two different treatment interventions.

- The third step followed by application of motivation enhancement therapy intervention on treatment group and to provide general counseling to the nonequivalent control group.

- Last is Post assessment of drug-related self-esteem and Drug-Related Locus of Control of two groups to compare the effectiveness of two different treatment interventions.

Assessment Measures

Assessment measures used in the current study were also used in the previous study II and III. Description of these scales i.e., Drug-related Self-esteem (DRSE) Scale and Drug-related Locus of control (DRLOC) Scale is given in the method section of study III (see pp. 45-47)

Data collection

Data was collected from admitted substance users of a one rehabilitation facility for both groups after screening for appropriate participants for intervention study requirements through the administration of one scale for screening and three scales for the comparison purpose in the current Study.

Drug-related self-esteem Scale.

Drug-related Locus of Control Scale

Intervention Plan

The current intervention study was designed by keeping in view, the sample type, its availability, and characteristics, ethical and practical issues while working with in-door substance users. Non-equivalent pretest/posttest control group design is considered as higher in external validity and internal validity than other quasi-experimental design in real world interventions because they allow better control for confounding variables than other non-

experimental designs (Thomas, 2022). Slight modifications in the sampling and methodology can restore the internal validity (Mohr, 1982).

Non-equivalent pretest/posttest control group design is well suited with the objective of the current study which aimed to compare control group with conventional intervention method that are as similar as possible to the treatment group in terms of baseline (pre-intervention) and demographic characteristics (White & Sabarwal, 2014).

In the current study, Motivation Enhancement Therapy (MET) was used as an intervention for treatment group parallel to the bio-psycho-social model intervention for control group. MET is the most structured and intensive client-centered therapy based on motivation related intervention. Intervention plan was designed on the basis of MET guidelines given in MET with substance use, an Evidence-based best practice manual which is a public domain and can be used with modification according to the cultural differences of the therapist and the clients (Miller & Rollnick, 1991).

In the current phase of the study, Motivation Enhancement Therapy (MET) was used to improve client's motivation to remain in in-door treatment and remain in touch with the decision of abstinence from substance use. MET is an evidence-based intervention for in-patient substance users, begins with the assumption that the client himself is the main stakeholder and responsible for change in his life. The therapist's core task is to guide and enlighten the client that will promote the client's strength, commitment and motivation for change. Unlike the other convention therapist-centered intervention techniques widely used in rehabilitation centers, MET technique is a client-centered intervention with promising role in mobilizing the client's internal and innate resources to initiate, persist in and comply with behavioral change process (Miller et al., 1994). MET is based on the integrated concepts of

social psychology, psychotherapy and motivational psychology covering four major points of change:

1. Human being have innate resources to change their behavior.

2. Initiation, Persistency and maintenance of change can be sustained successfully if the individual becomes aware of short-term and long-term pros and cons of change (if motivation is boosted).

3. Stages of readiness can be best described by Prochaska and DiClemente's (1982) stages of change model starting in sequence, from pre-contemplation- contemplation – determination - action - maintenance. Therapist's task primarily begins when the client is in pre-contemplation or contemplation stage of change and sustained till the progression of stage of change towards determination and action stage regarding substance related problem.

4. The main direction of the therapist's task is to facilitate a client's internal resources to facilitate a process that can lead them to the determination or action stage where their internal resources will take over and will drive their behavioral change to meet the desired goal of treatment compliance and abstinence.

Motivation Enhancement Therapy (MET) has five basic motivational principles described by Miller and Rollnick (1991), such as:

1. Reflective listening (expressing empathy), accepting client as they are, client's self-direction and freedom of choice are respected.

2. Developing discrepancy between where the clients are and where they want to be. To enhance and focus the client's attention on such discrepancies with regard to substance use. It may be necessary first to develop such discrepancy by raising the client's awareness of the adverse personal consequences of his or her drug use.

3. Avoid direct argumentation as unrealistic attacks on client's substance use will eventually evoke opposition, defensiveness and resistance to change.

4. Roll with resistance by viewing ambivalence as normal, not pathological and exploring it openly. Solutions will be evoked by the therapist rather than provided by the therapist.

5. Supporting self-efficacy because it's a key determinant of behavioral change (Bandura, 1982). The client must be persuaded that changing or reducing his drug use behavior is possible. Otherwise crisis of discrepancy will be more likely to resolve with defensive and negative coping strategies of denial and rationalization in order to reduce the discomfort attached with this discrepancy and change will not happen in client's behavior. This protective process will ultimately provide hope to change and make the behavioral consequences better for the future (Miller et al., 1994).

MET has been proved to be most effective evidence-based intervention for the treatment of substance users. MET effectively improves treatment compliance and adherence and show small to medium effects with the variability across setting and intervention providers. Motivational interviewing reviewed as the most efficacious as a brief intervention for heavy drinking and found as an effective treatment modality for reducing hazardous alcohol use especially with young occasional heavy users than older (Jhanjee, 2014; Vasilaki et al., 2006). Cochrane review (2011) postulated that motivational interviewing can reduce the probability of substance use compared with no intervention. MET was proven to be most effective treatment intervention while combining with standardized psychosocial intervention strategies. Moreover, it can be offered both as a stand-alone intervention strategy and combined with other treatment modalities (Jhanjee, 2014; Smedslund et al., 2011). It is evident that abstinence rate from substance use can be improved when psychosocial treatments such as relapse prevention, cognitive behavior therapy and motivation

enhancement therapy (MET) are used in combination with replacement therapy (naltrexone, acamprosate) (Feeney et al., 2002; Jhanjee, 2014).

In the current study, management plan was based on ten sessions which were based on the non-intensive therapy approach considering the MET guidelines. The difficulty level in terms of wording used in difference MET related activities and procedures was easy to comprehend and focused to meet the educational background, culture and age of the participants.

The manual techniques were implemented in Urdu language and the activities related to self-affirmation and future plan were developed by the MET therapist according to the guidelines given in the manual which were suitable and understandable to the targeted participants.

Current intervention study was based upon one 9 individual sessions and one family session. The duration of each individual session was about 45 minutes long and family session was about 50 minutes long. Each individual session started with reviewing previous session activities and guidance to improve the activity and moving towards next topic of discussion for the ongoing session. Total intervention duration spanned over 12 months in which group of 4 participants were taking individual sessions. The reason behind the long time duration of intervention was slow admission process, participant selection process which was going parallel for both groups (MET & BSS) and drop out of the participants. 10 participants were dropout from the intervention group on the basis of individual reasons i.e., death of one of the parent (1), payment issues with the rehabilitation facility (6), medical emergency (2) and court case issue (1). 10 participants were also dropped out from BSS (control) group with similar issues. Some of the participants from MET group also took follow-up sessions. The MET therapist has provided follow-up sessions as an after care process to show concern, openness and dealt with the issues, challenges and discussed

improvements. These follow-up sessions were not the part of formal intervention study so did not formally included in results and implementation process.

Table 24

Detail of Complete Intervention Plan

Description	Week wise	Minutes
Number of intervention sessions	9	
Number of Family sessions	1	
Number of weeks	4	
Total duration of intervention	48	
Time duration of each individual session		45
Time duration of each Family Session		50
Total Duration of Intervention Sessions		455(per Client)

Prerequisite and Guidelines for MET Intervention Plan

There were some basic requirements for the initiation of interventions both MET and General counselling which were considered to ensure the effectiveness of the Motivation Enhancement therapy. The therapist was expert addiction professional with some basic trainings in providing rehabilitation services to the substance users. Both experts (MET Therapist and Bio-psychosocial model Therapist) were having more than one year experience in the field of substance use intervention and rehabilitation. MET therapist's Characteristics and basic principles of the MET as mentioned in the Evidence-based practice manual of "Motivational Enhancement Therapy for Drug abusers" (1995) were considered for the current study. MET therapist followed the practical guidelines to develop intervention plan based on MET which is mentioned in the manual (Miller, 1995). In order to select the participants for both groups of the current study, motivation for change (stage of change) was evaluated by using University of Rhode Island Change Assessment (URICA) scale before the history session as recommended in manual and then divided the participants into treatment and control group.

Required Material for Intervention

For the effective implementation of MET intervention, MET manual suggested but not bound some material (Miller, 1995). Printed material included MET sessions record sheet signed by the participant and the therapist, Change plan Worksheet, List of self-Affirmation Statements to practice for the participants as per the participant's individual need reflected in the history and discussion, Personal feedback Report and therapy room which was been provided by the rehabilitation center management.

Table 25

Session Plan for Treatment and Control Group (Motivation Enhancement Therapy   & Bio-psycho-social Model)

Session Plan of Treatment Group (Motivation Enhancement Therapy)		
Sessions	**Objectives**	**Activities**
1	*Assessment of Motivational Stage for Change*	Assessment of stage of change was done with the help of University of Rhode Island Change Assessment (URICA) consisting the four dimensions of motivation i.e., pre-contemplation, contemplation, action and maintenance. Informal assessment for the stage of motivation was also utilized taking into consideration the cultural variations.
2	*History Taking & Rapport Building*	Collection of baseline information about demographics i.e., age, marital status, history of previous treatments, duration, types, duration, quantity and mode of each drug, reasons for the drug initiation and relapse. It also involved the personal and family history, any significant life events and discussion related to premorbid personality. Formal and informal data was gathered for the purpose of rapport building and change readiness evaluation.
Pre-testing		Formal assessment (Pre-test) done using Drug-related Locus of Control (DRLOC) scale and Drug-related Self-esteem Scale (DRSES). Pretesting was not included in formal session conducted by the therapist. Rehabilitation center staff in-charge carried out the pretesting with the help of these two scales in order to avoid therapist's influence.
3	*Post Detoxification Condition/Psycho-education on Overall In-patient treatment*	Session involved the discussion about post detoxification physical and psychological condition and therapeutic alliance. Psycho-education was also provided about the in-patient treatment and rehabilitation consisting the process and duration of rehabilitation, introduced the process of Motivation Enhancement Therapy (MET), its individual activities, worksheets.
MET Phase I: Building Motivation for Change.		
4	*Self-Evaluation of Drug Use (A-M)*	These self-evaluations were probed by the therapist by asking questions related to client's own feelings, ideas, concerns and plans while focusing on empathic listening, reflection, affirmation and reframing. It has

determined the required struggle and participation of the therapist-client relationship. From this evaluation, pros and cons of the drug use had been weighed. These areas of evaluation include;

Amount and tolerance, **B**ehavior ,**C**oping ,**D**ependence ,**E**motional **H**ealth ,**F**amily ,feeling **G**ood About Self (Self-Esteem) ,Physical **H**ealth ,**I**mportant Relationships ,**J**ob, Work and School ,**K**ey People ,**L**oving Relationships and Sexuality ,**M**ental Abilities.

5	*Eliciting Self-Motivational Statements*	During fifth session of MET, the therapist tried to elicit certain forms of positive self-statements that can be considered to be self-motivating. Open-ended questions related to positive and healthy circumstances of client's life before substance use were used for eliciting positive self-affirmations. These statements involved the content related to self-realization about effects of drug use, practical problems related to drugs, expression of need, desire, willingness to change and positivity about possible change. These statements include: 1. I can look inside myself as a source of joy 2. I am worthy of great things. 3. I like the person I'm becoming 4. I am creating the life I want for myself. 5. I am becoming the best version of myself 6. I embrace my individuality. 7. Every day is a blessing. 8. I am willing to work on myself.
	MET Phase II. Strengthening commitment to Change	
6	*Communicating Free Choice and Consequences of Action and Inaction*	Session has started with revising the last session to smooth the transition of first phase of MET into second phase. Main session content contained; 1. Recognizing the readiness of the client for change (determination stage development and enhancement). 2. Asking Key questions and summing up all of the motives for change the person has given and acknowledging points of ambivalence.

		3. Discussing and negotiating plan for change. The therapist clarified the role of patient and the therapist regarding change and made the client realize that "Only he can change his drug use, and it's up to him." Reflection and summarizing helped the client in making plans. 4. Communication of free of choice and self-decision making. 5. Probing and brain storming about the possible consequences of taking action of inaction for continuation of drug use as before with reference to the client's life circumstances.
7	*Abstinence and Harm Reduction*	This session was consist of explaining persuasive reasons for the choice of abstinence like; 1. Successful abstinence is a safe choice. 2. There are good reasons to at least try a period of abstinence 3. No one can guarantee a "safe" level of drug use (including alcohol use) that will cause you no harm. Harm reduction counselling and psycho-education was also the part of seventh session which pointed out; 1. Legal risks involved in the use of illicit substances. 2. Medical conditions that contraindicate any use like chronic health concerns like Human Immunodeficiency Virus (HIV), Hepatitis B and C (HCV/HBC) and Tuberculosis etc. 3. Psychological problems likely to be exacerbated by use like, depression, anxiety, obsessive compulsive disorders and Psychosis. 4. Strong external demands on the client to abstain 5. Hazards of Use/abuse of multiple drugs at the same time
8	*Change Plan Worksheet*	During this session the change plan worksheet (CPW) has been used to help the client to specify action plan for abstinence. CPW was consist of qualitative information on; 1. The changes I want to make are... 2. The most important reasons why I want to make these changes are... 3. The steps I plan to take in changing are... 4. The ways other people can help me are... 5. I will know that my plan is working if... 6. Some things that could interfere with my plan are...

9	***Involving client's Significant others (CSO) in MET***	The ninth session was consist of involving client's significant others, especially wife (if married), parents and siblings. Session content include; 1. Debriefing about overall MET procedure of the therapy and its difference from conventional treatment procedure followed by the rehabilitation center. 2. Debriefing about the role of significant others in the decision making, future goal setting and abstinence process. 3. Goals for significant others and spouse involvement. 4. Eliciting feedback from the Significant others. 5. Eliciting self-motivational statements from the CSO. 6. Expectations of CSO regarding treatment, rehabilitation, aftercare and recovery of the client.
	MET Phase III. Follow Through Strategies	
10	***Reviewing progress and Renewing Motivation/Post-test***	In the last session, reviewed the summary of previous tasks completed in phase I, phase II and previous motivational commitments were connected with the redoing commitments and summarized all activities i.e., goals, plans and positive self-affirmations etc., to proceed in outer environment. In last session, the specific situations were discussed and dealt which can be the source of psychological craving and abstinence plan was revised. Two kinds of situations were explored: 1. Situations in which the client used drugs. 2. Situations in which the client didn't use drugs.
	Post-test	Post-test was conducted by the staff member while utilizing Drug-related Self-esteem Scale (DRSE) and Drug-related Locus of Control Scale (DRLOC).
Session Plan of Control Group (General Counselling/Bio-psycho-social Model) Done by psychologist designated by Rehabilitation Center		
Session	**Objectives**	**Activities**
1	**Assessment of Motivational Stage for Change**	Third session was consisted of the assessment of client's motivation for change, and adherence to the treatment completion. University of Rhode Island Change Assessment (URICA) has been used which was consist of the four dimensions of motivation i.e., pre-contemplation, contemplation, action and maintenance.

		Informal method of assessment for motivation was also utilized by the therapist. Assessment of level of motivation was done to assess whether he have primary or secondary motivation to change.
2	*History Taking & Rapport Building*	Collection of baseline information about demographics i.e., age, marital status, history of previous treatments, duration, types, duration, quantity and mode of each drug, reasons for the drug initiation and relapse. It also involved the personal and family history, any significant life event and discussion related to premorbid personality. Formal and informal data was gathered for the purpose of rapport building.
3	*Post Detoxification Condition/Psycho-education on Overall In-patient treatment*	Session involved the discussion about post detoxification physical and psychological condition and therapeutic alliance. Psycho-education was also provided about the in-patient treatment and rehabilitation consisting the process and duration of rehabilitation process, session plan, domains which were covered under the treatment strategies.
Pre-testing		Formal assessment (Pre-test) done using Drug-related Locus of Control (DRLOC) scale and Drug-related Self-esteem Scale (DRSES). Pretesting was not included in formal session conducted by the therapist. Rehabilitation center staff in-charge carried out the pretesting with the help of these two scales in order to avoid therapist's influence.
4	**General Counselling to Motivate client for treatment**	Fourth session involved the general counselling on the basis of bio-psycho-social model of treatment for substance use to motivate the client for the completion of treatment and to initiate required change in his expectation verses reality process.
5	**Addictive Behaviors, roots and modification**	In fifth session, therapist dealt with the identified addictive behaviors of the clients and used functional analysis, contingency management and counselling to make the client realize the negative consequences of actions.
6	**Relapse warning signs and coping skills**	Session included the psycho-education about relapse warning signs, stages of relapse (Emotional, Mental, and Physical) and coping strategies to deal triggers of each stage of relapse. Some of the Strategies were coping skills training, imagery-based exposure, functional analysis etc.
7	**Assertiveness skills, anger**	Seventh session dealt with the perpetuating factors of substance use like peer pressure, low stress tolerance, lack of impulse control or poor anger management. The session involved the guideline provision about the

	Management, Stress management	role of these factors contributing in lapse or relapse and how to manage or deal with these factors. Coping strategies to deal included assertiveness skills training, anger management techniques according to type of anger manifestation method of the client, stress management techniques, social skills training.
8	**Relapse prevention plan**	Eighth session involved the revision of previous learned strategies and to implement these strategies for the client's unique causality of relapse. With the guidance of the therapist, relapse prevention plan chart was developed by the client which was consist of different tips to prevent relapse like controlling physical signs of weakness (H.A.L.T), avoiding high risk situations, postpone responding, distracting, contacting rehabilitation unit, identifying post-acute withdrawal signs, seeking help, problem solving techniques along with strong future goal setting (short-term and long-term).
9	**Involvement of family and combined family meeting session**	Second last session was allocated for counselling with significant others with the objectives to debrief about the overall implemented intervention as well as relapse prevention plan. It was also consist of discussion on client's expected future goals according to client's available resources, opinion of family members on the client's goal setting, role of family in relapse possibilities (enabler or protector) and prevention. Family counselling session was also aimed to resolve interpersonal issues, weak support system and to strengthen recovery capitals.
10	**Termination Session**	The therapist wrapped up and summarized the complete intervention and relapse prevention plan to reassure the possible support from the side of rehabilitation unit. The therapist and the client together revised the future goal setting and done required amendments. Follow up sessions were also offered10 days after discharge from rehabilitation unit.
Post-test		Post-test was conducted by the staff member while utilizing Drug-related Self-esteem Scale (DRSE) and Drug-related Locus of Control Scale (DRLOC).

Procedure

Intervention plan was approved by concerned supervisor and University's Board of Advanced Studies and Research as the manual was only providing the guidelines to formulate indigenous intervention plan according to the problems and stage of motivation of clients. Researcher took formal written permission from the chairman of the rehabilitation center by providing the information sheet containing details about the intervention plan, purpose and nature of the study, method, sessions, duration and difference from the conventional intervention provided by the rehabilitation unit.

After formal permissions from the chairman and after detoxification process, the substance (heroin) users with multiple relapse and multiple treatment history were screened for the motivation for change with the help of URICA scale. Motivation was also assessed through open-ended interview questions during first session. Clients with poor motivation for treatment and recovery were selected for participation in both (MET & Bio-psychosocial) groups. After motivation for change screening, every first participant was selected for treatment (MET) group and every second participant was shifted to the control (bio-psycho-social) group. 200 heroin users were gone through the process of screening. Thirty (n=30) participants were selected for treatment group and thirty (n=30) for control Group after evaluation of motivation for change. 10 participants from MET group and 10 from BSS group (1 after 5 sessions because of medically deferred) were dropped out after two to three sessions, with multiple individual reasons that were beyond the participant's control. After drop out, only 20 participants from treatment group and 20 for control group have completed the intervention procedure. Complete study related information was provided and inform consent was signed by the participants to aim at voluntarily inclusion of participants in the study. Only those admitted substance users were allowed to participate in the study who volunteered for participation. Participants were guaranteed about the privacy and confidentiality of the information taken as demographics as well as the responses taken on the variable scales and the utilization of the data only for study

purposes. Participants of the treatment group were informed about the intervention steps of the current study, duration of each sessions and number of sessions supposed to give during whole procedure. Motivation screening was considered as first session which was conducted after 3 days of admission in treatment facility. Second session was conducted at the detoxification unit of the rehabilitation center to gather the preliminary information about their history of drug use and to build rapport. In order to comply with ethical considerations and to avoid evaluation biases, staff in-charge conducted Pre-intervention assessment of treatment and control group. All scales (drug-related self-esteem scale and drug-related locus of control scale) were administered individually for pre testing purpose.

After the completion of pretesting phase, treatment group received Motivation Enhancement Therapy (MET) consisting three phases; 1. Building Motivation for change, 2. Strengthening Commitment to Change and 3. Follow Through Strategies. These phases were suggested by the original MET manual (Miller & Rollnick, 2002). Maximum ten MET sessions were conducted with the gap of one day between sessions. Second last session was aiming to involve family and significant others in the treatment and recovery process of the client.

After the termination session all participants from treatment group received post-intervention testing with the help of drug-related Locus of Control scale and Drug-related Self-esteem scale which was carried out by the staff in-charge of respective rehabilitation unit.

Current phase of the study also maintained control for researcher and clinical biases with the involvement of another expert addiction treatment professional who performed pre-testing and post-testing process and also maintained statistical record of both trails. The final data was analyzed by using Statistical Package for Social Sciences.

Like treatment group, control group followed the same procedure. Initially a formal meeting with the psychologist serving in respective rehabilitation was arranged and requested for taking part in the current phase of the research by taking major role as psychologist for

control group. Informed consent was included the details regarding the purpose of the study, requirements of the confidentiality and professional services needed for the completion of the intervention phase. Participants of the study were selected simultaneously and divided into two groups (treatment and control) after fulfilling requirement to evaluate their motivation for change and giving their consent for participation. Second session of the control group was also on history taking, preliminary information gathering and rapport building. Control group followed the same procedure and ethical considerations regarding pre-test and post-test like treatment group. With the help of staff in-charge of the rehabilitation center, Pretest and posttest from control group participants was conducted by using measurement scales (Drug-related Locus of Control and Drug-related Self-esteem). Sessions were also conducted by the expert psychologist having Advance Diploma in Clinical psychology and MS in clinical psychology (scholar) who was appointed by the rehabilitation center from past two years. Control group received bio-psycho-social (BPS) treatment intervention which was already followed by the rehabilitation center. Bio-psycho-social model (BPS) of addiction posits that multiple factors like biological, psychological, social, temperament and personality plays important role in the initiation and continuation of substance use so these all factors must be focused equally during intervention, prevention and treatment of substance use (Skewes & Gonzalez, 2013).

Participants from control group also received ten individual sessions in alternate days. Which also include one session with family members or significant others to contribute in client's treatment and recovery. The staff in-charge maintained statistical record of both trails (pretest & posttest). The final data was analyzed by using Statistical Package for Social Sciences to assess differences before and after intervention by using paired sample t-test. Comparison of Differences between treatment and control group were also measured while using independent sample t-test.

Summary of Sessions. Current treatment plan was developed from the manual containing guidelines for intervention plan using Motivation Enhancement Therapy (MET) (Miller, 1995). Current in-patient rehabilitation and intervention plan for substance users was comprised of 10 individual sessions including one family session. All therapeutic Sessions were arranged in alternative days after three days of detoxification period. Each session started with the revision and brief discussion of previous session and task in order to make connection among the therapeutic activities of MET sessions. This also helped the therapist to collect the feedback on the previous activity from the client reflecting the compliance and level of understanding of the client about the intervention. 2 to 3 follow up sessions of 10 clients were also taken although follow up sessions were not the formal part of the intervention study.

Detailed Session Wise Activities

Following are the details of the session wise activities.

Session I. Assessment of Motivational Stage for Chang. After the three days of detoxification period, the rehabilitation facility allowed to implement the formal intervention process which was began with the screening of the participants. Session I focused on the assessment of client's motivation for change on the basis of trans-theoretical model of change devised by Prochaska and DiClemente (1982, 1984, 1985, 1986) that described how the person change his/her addictive behaviors, with or without formal treatment. Trans-theoretical model explain the transition of an individual's stage of change as they grow in the capacity to modify their problem behaviors. Each of the stage requires specific task related to change required for the certain stage. These stages are six in this mode (Prochaska & DiClemente, 1984, 1986).

1. Pre Contemplation

2. Contemplation

3. Determination

4. Action

5. Maintenance

Assessment of stage of change was done with the help of University of Rhode Island Change Assessment (URICA) consisting the four dimensions of motivation i.e., pre-contemplation, contemplation, action and maintenance. Informal assessment for the stage of motivation was also utilized taking into consideration the cultural variations.

After the initial session regarding motivational stage for change, the participants were selected for both groups and every second participant with poor motivation was selected for MET group and every first participant with poor motivation was selected for bio-psycho-social treatment group.

After the participant selection, major therapeutic sessions for MET group were conducted in three phase therapeutic plan.

Session II. History Taking and Rapport Building. Session II covered the basic information of the participant regarding demographic information and history taking related to drugs, types, duration, litigation, current drug of choice, supportive individuals, personal life, family history, job and leisure time activities etc. It also included collecting information related to the concerns regarding whole therapeutic process, and expectations during detoxification. During history taking other formal and informal data gathered for the purpose of rapport building.

Session III. Post Detoxification Condition/Psycho-education on Overall In-patient treatment. Session III was focused on the psycho-education related to detoxification period, which was ten days fixed by the rehabilitation facility. During that period, the client's treatment focus on the psycho-education related to psychological condition of the client which can affect the therapeutic process. The detailed information related to post-acute withdrawal signs, coping techniques and medicinal effects of given psychiatric treatment was

given to the client. The session was more focused on building client's self-competence to deal with difficult time of treatment so that the client could be able to move towards the initial level of therapeutic intervention (MET) smoothly.

MET Phase I: Building Motivation for Change

Session IV. Eliciting Self-Motivational Statements. Self-perception theory by Bem (1965, 1967, 1972), explains that "when someone hear his own self talk, he learn what he believe". Individual's own words are more persuasive to that individual than words spoken by others. As suggested in the manual, during MET session, certain forms of positive self-statements were elicited that can be considered to be self-motivating (Miller, 1985).

The constructive part of this process was that the MET therapist tried to elicit from the client, certain positive and self-motivational statements and affirmations (Appendices M). These include statements of:

1. Assertively discussing about the substance use and it's effects.

2. Recognizing the practical substance use-related problems.

3. Conveying a motivation to change, need and desire for change.

4. Expressing positivity about the possible change.

Open-ended questions were also be used with the clients who were feeling difficulty doing this task of eliciting such positive statements.

Session V. Self-Evaluation of Drug Use (A-M). Session five proceeded the client's self-evaluation of the severity and intensity of drug use which determined the required struggle and participation of the therapist-client relationship. From this evaluation, pros and cons of the drug use were weighed. These areas of evaluation include;

Amount and tolerance, **B**ehavior ,**C**oping ,**D**ependence ,**E**motional **H**ealth ,**F**amily ,feeling **G**ood About Self (Self-Esteem) ,Physical **H**ealth ,**I**mportant Relationships ,**J**ob, Work and School ,**K**ey People ,**L**oving Relationships and Sexuality ,**M**ental Abilities.

These self-evaluations were probed by the therapist by asking questions related to client's own feelings, ideas, concerns and plans while focusing on empathic listening, reflection, affirmation and reframing rules of Motivation enhancement therapy.

During the fifth session, the MET therapist provided the client with personal feedback like affirmation, compliment, and reinforced the client sincerely to enhance the interest of the client on the change process and to strengthen the change process.

MET Phase II. Strengthening commitment to Change

Session VI. Communicating Free Choice and Consequences of Action and Inaction. Session started with revising the last session to smooth the transition of first phase of MET into second phase. Major session plan was based upon;

1. Recognizing the readiness of the client for change (determination stage development and enhancement).

2. Asking Key questions and summarizing the client's motivation to change and accepting the targeted ambivalence.

3. Discussing and negotiating plan for change. Task of the therapist would be to make the client realize that "Only you can change your drug use, and it's up to you." Reflection and summarizing would be helpful for the client in making plans.

4. Communication of free of choice and self-decision making.

5. Probing and brain storming about the possible consequences of taking action of inaction for continuation of drug use as before.

Session VII. Abstinence and Harm Reduction. This session was based upon explaining persuasive reasons for the choice of abstinence like;

1. Successful abstinence is a safe choice.

2. It is good to at least enjoying the abstinence from substances once.

3. There is no safe quantity and way of drug use which will guarantee no harm.

Furthermore psycho-education and guidance regarding Harm reduction was provided and other consequences with reference to each participant's life experience were pointed out;

1. Illicit substances and related legalities.

2. Medical issues which could be getting worse because of any substance use.

3. Mental health issues associated with substances.

4. Environmental demands and factors that restrain the client from substance use.

5. Non-prescribed medication use that can be hazardous while using in combination with illicit drugs.

6. Client's past drug dependency related issues.

Session VIII. Change Plan Worksheet. During this session the change plan worksheet (CPW) suggested in the manual was used to help the client to specify action plan for abstinence. CPW included the information like;

1. The changes I want to make are...

2. The most important reasons why I want to make these changes are...

3. The steps I plan to take in changing are...

4. The ways other people can help me are...

5. I will know that my plan is working if...

6. Some things that could interfere with my plan are...

Session IX. Involving client's Significant others (CSO) in MET. The ninth session was with the client's care takers or significant others in order to take part in the client's abstinence journey with the help of MET which involved;

1. Debriefing about overall MET procedure of the therapy.

2. Role of significant others in the decision making and abstinence process will be guided.

3. Goals for significant others and spouse involvement will be guided.

4. Eliciting feedback from the Significant others.

5. Eliciting self-motivational statements from the CSO.

6. Therapist will also address the expectations of CSO.

7. Handling the disruptive involvement of CSO while MET sessions.

MET Phase III. Follow Through Strategies

Session X. Reviewing progress and Renewing Motivation. Last session was proceeded with the summary of previous tasks completed in phase II and connecting previous motivational commitments with the redoing commitments. In last session, the specific situations were focused and dealt which can be the source of psychological craving. Abstinence plan was also revised in order to update the changes required after the session with client's significant others. Two kinds of situations were explored:

1. Situations in which the client used drugs.

2. Situations in which the client didn't use drugs.

Termination session also involved the summary of all work done in previous phases of MET process, goals, plans and positive self-affirmations to proceed in outer environment.

Implementation of General Counselling Treatment (Control Group)

Control group consist of 20 participants (BSS) received general counselling about the drug abuse, recovery and abstinence which was already implemented by the psychologists of the rehabilitation facility. The details regarding the treatment plan was shared by the psychologist who implemented BSS model of intervention on control group.

Session I. Assessment of Motivational Stage for Change

Session II. History Taking and Rapport Building

Session III. Psycho-education regarding treatment process and rules of the facility.

Session IV. General counseling to motivate client for treatment

Session V. Addictive Behaviors, roots and modification.

Session VI. Relapse warning signs and coping skills.

Session VII. Assertiveness skills to deal with peer pressure and social issues.

Session VIII. Relapse prevention plan management according to the resources of the client.

Session IX. Involvement of family and combined family meeting. Future goal setting according to client's available resources (short term goals and long term goals).

Session X. summarizing the whole plan of goals, improvements and termination of the therapeutic relationship along with the discussion of future expectations.

Data analysis

The data was analyzed quantitatively on statistical package for the social sciences (SPSS)-21 using statistical techniques i.e., Pearson Correlation Coefficient, independent sample t-test and Paired sample t-test.

Adherence and Competence

The researcher had professional training in substance use treatment, intervention and prevention from Global Trainers and also had 12 years practical experience in dealing with substance users through rehabilitation, psycho-education and after care in rehabilitation center and her private clinic. MET sessions were conducted in Urdu language by considering cultural norms. All material required for participant's practice purpose was designed into Pakistan's National Language. All therapeutic sessions were duly signed on MET Implementation record sheet from the participants after completion of each individual session and complete MET implementation record sheet was also signed by the researcher to insure integrity and adherence to ethics. While audio or video recording had not been allowed by the rehabilitation management which was limitation on the behalf of therapist/researcher. In order to adhere with

the instructions and suggestions given by the Board of Faculty (BoF), International Islamic University Islamabad, therapeutic sessions were conducted by two different addiction professionals with intervention group and control group. Therapist affiliated with the respective rehabilitation center had conducted sessions with participants from control group without any influence of the researcher. While researcher had conducted MET sessions with intervention group participants in the presence of rehabilitation staff and counselors.

Ethical Considerations

- The research was conducted according to the guidelines of American Psychological Association (APA, 2013).

- Final approval was taken from Board of Advance Studies and Research (BASR), International Islamic University, Islamabad, Pakistan for conducting the research.

- Formal permission was taken from the respective chairman of the rehabilitation center and information regarding procedure of complete intervention plan was provided to get approved from the chairman to implement on their in-patient substance users.

- Informed consent was signed from the participants for both treatment and control group. Information about the purpose, procedure, data usage, privacy and confidentiality and self-determination policy were also mentioned in informed consent.

- Pre-test, post-test administration and data record of both treatment and control group was maintained with the help of staff in-charge of the rehabilitation unit in order to avoid biasness and researcher's influence on the data collection and maintenance.

- Participants of control group received intervention based on bio-psycho-social model of substance use treatment from rehabilitation unit-based psychologist in order to avoid therapeutic biasness and in order to follow the recommendations suggested by the expert panel of University board of Faculty (BoF).

- Data was analyzed and results were reported without manipulation.

Results

The current study was conducted to assess the effectiveness of Motivation Enhancement Therapy as an intervention to improve drug-related self-esteem and drug-related locus of control to enhance treatment efficacy and relapse prevention among substance users comparing to the conventional (bio-psycho-social) intervention followed by rehabilitation centers. Firstly the sample was selected by administering the "University of Rhode Island Change Assessment (URICA)" scale to assess trans-theoretical stages of change or motivation to change for substance users. The readiness score derived from the URICA can be used prior to treatment to predict outcomes. Scoring guidelines were followed in order to obtain the raw scores and cut off scores for participant's motivation for change. According to the author's scoring guidelines, in order to obtain a readiness to change score, items of the each subscale were summed and divided by 6 to get the mean for each subscale. Mean for three subscales (contemplation, action and maintenance) was summed up and subtracted the pre-contemplation mean (C+A+M-PC) to obtain the readiness to change score of the each inpatient substance user to select as a research participant. (DiClemente, & Hughes, 1990). The data was screened to confirm the normality assumption. The current study data fulfilled all the assumptions of normality as recommended by Field (2009). Firstly the values of skewness and kurtosis were assessed which must fall between -2 to +2 to consider normal univariate distribution of data (George & Mallery, 2010). The results of descriptive statistics showed that the value of skewness and kurtosis for all study variables ranges within the recommended range. Overall results of normality assumptions revealed that the data fulfils the parametric assumptions (normal distribution, homogeneity of variance, continuous/interval scale data, independence of observation) and was suitable to run parametric tests (Field, 2009). After descriptive statistics, inferential statistics were conducted including Pearson correlation, paired sample t-test to

assess differences between pretest and posttest among both groups (treatment and control group), independent sample t-test to assess the effectiveness of the Motivation-enhancement Therapy on improving drug-related self-esteem (DRSE), self-competence dimension (SC), self-confidence dimension (SC), self-regard dimension (SR) of DRSE and drug-related locus of control (DRLOC) compared to control group (bio-psycho-social).

Table 26

Descriptive Statistics for Drug-related-Self-Esteem and Drug-Related Locus of Control in Substance Users from treatment and Control Group

(N=40)

			Pretest					Posttest				
				Ranges					**Ranges**			
Variable	K	α	M(SD)	Actual	Potential	Skew	Kurt	M(SD)	Actual	Potential	Skew	Kurt
DRSE	17	.85										
MET Group			63.1(15.80)	43-95	1-119	.65	-.49	81.1(8.83)	64- 97	1-119	-.24	-.72
BPS Group			69.7(10.09)	40-87	1-119	-1.25	2.89	72.1(10.16)	40-87	1-119	-1.64	4.43
Self-competence	8											
MET Group			28.3(8.44)	18-46	8-56	.64	-.50	48.6(5.28)	40-56	8-56	-.12	-1.49
BPS Group			33.3(7.0)	18-45	8-56	-.26	-.21	35.4(4.78)	22-43	8-56	-.97	2.46
Self-Confidence	4											
MET Group			19.9(4.12)	12-27	5-35	-.25	.12	16.6(3.26)	6-24	5-35	-.31	-.76
BPS Group			19.0(5.27)	13-30	5-35	.92	-.19	24.2(4.36)	15-31	5-35	-.42	-.53
Self-Regard	5											
MET Group			16.4(3.20)	10-21	4-28	-.44	-.14	20.5(4.69)	8-26	4-28	-1.04	.84
BPS Group			15.7(3.74)	11-23	4-28	.48	-.76	19.3(3.59)	12-26	4-28	-.20	-.40
DRLOC	15	.72										
MET Group			24.2(1.55)	21-27	1-30	-.37	-.33	18.4(2.33)	15-22	1-30	-.02	-1.35
BPS Group			25.3(1.65)	23-29	1-30	.46	-.15	23.2(1.94)	20-27	1-30	.08	-.44

Note: K=total no of items, M=Mean, SD=Standard Deviation, DRSE= Drug-related Self-esteem, DRLOC= Drug-related Locus of Control

The above table 26 shows the psychometric properties of scales during pretest and posttest phase of treatment group and control group. The total number of items (K) of Drug-related self-esteem scale were 17 with three subscales I.e., Self-Competence (n= 8), Self-confidence (n=4) and Self-Regard (n=5). The Drug-related Locus of Control scale have total 15 items. The maximum score on Drug-related locus of control scale shows the tendencies towards external locus of control while minimum score reveals the internal locus of control trait. The value of Cronbach's α for Drug-related Self-esteem (α = .85) is indicative of a good reliability of scale. Further, reliability analysis of Drug-related Locus of control (DRLOC) scale was also done. Reliability analysis showed that DRLOC scale have fair reliability (α = .72).

Table 27

Pearson Correlation Matrix between Drug-related self-esteem, self-competence, self-confidence, Self-regard subscales and Drug-related Locus of control in post-test among treatment (n=20) and control group (n=20)

	Measure	Motivation-Enhancement Therapy (n=20)					Bio-psycho-social Model Group (n=20)				
		1	2	3	4	5	1	2	3	4	5
1	Drug-related Locus of Control	-	-.89**	-.76**	-.85*	-.83**	-	-.45*	.71**	.83**	.88**
2	Drug-related Self-esteem	-	-	.80**	.93**	.91**	-	-	-.36	-.32	-.39
3	Self-Competence Subscale	-	-	-	.69*	.61**	-	-	-	.23	.40
4	Self-Confidence Subscale	-	-	-	-	.91**	-	-	-	-	.79**
5	Self-Regard Subscale	-	-	-	-	-	-	-	-	-	-

**p<0.01, *p<0.05

The above table indicates that Drug-related locus of control has significantly negative correlation with Drug-related self-esteem (r=-.89**, p<0.01*)*, Self-competence factor (r=-.76**, p<0.01), Self-Confidence (r= -.85*, p<0.01*)* and Self-regard factor (r= -.83**, p<0.01*)* among MET group. This result reveals that Drug-related internal locus of control have significantly positive relationship with Drug-related self-esteem and self-competence because low scores on DRLOC shows the internal locus of control while increased scores indicate external locus of control. DRSE was also positively correlated with self-competence (r= .80**, p<0.01) self-confidence (r= .93**, p<0.01) and self-regard (r= .91**, p<0.01) factors. The above table also shows the correlation results of control group (bio-psycho-social model). The results indicate that

Drug-related locus of control also has significantly negative correlation with Drug-related self-esteem (r=-.45*, p<0.05*), Self-competence factor (r=-.71**, p >.01), Self-Confidence (r= .83**, >.05*) and Self-regard factor (r= .88**, p >.01) among control group. The table results further explain that DRSE has no significant relationship with self-competence(r= .36, p = ns), self-confidence (r= .32, p= ns) and self-regard (r= .39, p= ns), in control group. Self-competence also has no relationship with self-confidence (r= .23, p= ns) and self-regard(r= .40, p= ns) among control group participants. Self-confidence factor has also positively correlated with self-regard in both treatment (r=.91**, p<0.01) and control (r=.79**, p<0.01) group.

Comparison of Differences at pre-test and post-test level among both groups (Treatment and Control)

Paired sample t-test was use in order to compare both groups of the current study i.e.' treatment group (Motivation Enhancement Therapy) and control group (Bio-psycho-social Therapy Model), differences in Drug-related Self-esteem, Self-Competence, Self-confidence, Self-Regard Subscales and Drug-related Locus of Control at pre and post intervention level.

Table 28

Paired Sample t-test on Drug-related Self-esteem, Self-Competence, Self-Confidence, Self-Regard subscales and Drug-related Locus of Control at Pre-intervention and Post intervention Level (Treatment Group)(n=20)

	Pre-test (*n*=20)		Post-test (*n*=20)				95%CI		
Variable	M	SD	M	SD	*T*	*p*	LL	UL	*Cohen's d*
Drug-related Self-esteem	63.1	15.80	81.1	8.83	4.36**	.01	-26.63	-9.37	1.41
Self-Competence	28.3	8.44	48.6	5.28	5.08**	.01	-16.66	-6.94	1.66
Self-Confidence	19.0	5.27	24.25	4.36	3.40**	.05	-8.48	-2.02	1.08
Self-Regard	15.7	3.73	19.35	3.58	2.94*	.05	-6.16	-1.04	0.98
Drug-related Locus of Control	24.2	1.55	18.4	2.32	8.31**	.01	4.34	7.26	2.94

*df=19,**p<0.01, Note: SD=standard deviation, M=Mean.*

Results of paired sample t-test for treatment group shows significant difference in Drug-related self-esteem (t (39) = 4.36**, p< 0.01) and locus of control (t (19) = 8.31**, p< 0.01) before and after Motivation-enhancement Therapy. The results revealed that after Motivation Enhancement Therapy, Drug-related self-esteem has been significantly increased (*M*=81.1, *SD*=8.83). The results also indicated that there was a significant decrease in drug-related locus of control (*M*=18.4, *SD*=2.32). According to the scale description (Hall, 2001), it reveals that the participants improved their drug-related internal locus of control as the lowest scores in the DRLOC scale indicates internal locus of control and increased scores in DRLOC scale explain the tendencies of drug-related external locus of control. There was also increase in Self-confidence (t (19) = 3.40**, p< 0.05), Self-competence (t (19) = 5.08**, p< 0.01), self-regard (t (19) = 2.94*, p< 0.05).

Table 29

Paired Sample t-test on Drug-related Self-esteem, Self-Competence, Self-Confidence, Self-Regard subscales and Drug-related Locus of Control at Pre-intervention and Post intervention Level (Control Group) (n=20)

Variable	Pre-test (*n*=20)		Post-test (*n*=20)				95%CI		
	M	SD	M	SD	*t*	*p*	LL	UL	*Cohen's d*
Drug-related Self-esteem	69.7	10.08	72.1	10.16	18.86**	.01	-3.42	-1.47	0.23
Self-Competence	33.3	7.00	35.4	4.78	1.64	.12	-4.78	.57	0.35
Self-Confidence	16.8	3.42	16.2	5.04	.12	.90	-.98	2.18	0.02
Self-Regard	19.5	4.31	20.5	3.82	.29	.77	-2.88	.98	0.7
Drug-related Locus of Control	25.3	1.66	23.2	1.94	18.76**	.01	1.69	2.40	1.16

*df=39, **p<0.01, SD*=standard deviation, *M*=Mean.

Results of paired sample t-test shows the significant difference in drug-related self-esteem (*t (19) = 5.24**, p<0.01)* and drug-related locus of control (*t (19) = 12.08**, p<0.01*) before and after taking intervention (bio-psycho-social). Results reveal that after the intervention, drug-related self-esteem has been significantly increased (*M*=72.1, *SD*=10.16). The results also indicate that there was also a significant decrease in the scores of drug-related locus of control (*M*=23.2, *SD*=1.94) after the intervention. It indicates that the participants improved their drug-related internal locus of control as the lowest scores in the DRLOC scale indicates internal locus of control and increased scores in DRLOC scale explain the tendencies of drug-related external locus of control. The table findings also suggest that Self-competence (t (19) = 1.64, p = ns), Self-

confidence (t (19) = .12, p = ns), and Self-regard (t (19) = .29, p = ns) factors were not significantly different from pre-intervention after taking Bio-psycho-social (BSS) treatment among control group.

Comparison of MET Intervention and Control (BSS) Group

In order to compare groups i.e., intervention and control group, differences at pre and post-intervention on Drug-related self-esteem, its factors i.e., Self-competence, Self-confidence, Self-regard and Drug-related locus of Control, independent sample t-tests were conducted.

Table 30

Independent Sample t- test Showing Pre and Post Intervention in Group (Intervention and Control Groups) Differences among Drug-related self-esteem, Self-Competence, Self-confidence, Self-regard (subscales) and Drug-related Locus of Control among Substance Users (N=40)

	MET Group (n=20)		BPS Group (n=20)						95% CI
	M	SD	M	SD	T	p	LL	UL	Cohen's d
Pre-Intervention									
DRLOC	24.2	1.55	25.3	1.65	2.07	<.05	-.02	-.02	.68
DRSE	63.1	15.80	69.7	10.09	1.57	>.05	1.93	1.93	.49
Subscales of DRSE									
Self-Competence	28.3	8.45	33.3	7.00	2.03	<.05	-.03	-.03	.65
Self-Confidence	19.0	5.27	19.9	4.12	.63	>.05	2.07	2.08	.20
Self-Regard	15.7	3.74	16.4	3.21	.59	>.05	1.58	1.58	.18
Post Intervention									
DRLOC	18.4	2.32	23.2	1.94	7.08	<.01	-3.42	-3.42	2.24
DRSE	81.1	8.83	72.1	10.16	2.97	<.05	15.04	15.04	.94
Subscales of DRSE									
Self-Competence	40.1	5.41	35.4	4.78	2.91	<.05	7.97	7.97	.92
Self-Confidence	24.2	4.36	20.0	4.69	2.93	<.05	7.10	7.10	.93
Self-Regard	19.3	3.58	16.6	3.26	2.48	>.05	4.89	4.89	.79

Df =38, **p<0.05 Note: SD=standard deviation, M=Mean, MET= Motivation Enhancement Therapy, BPS= Bio-psycho-social, DRSE= Drug-related Self-esteem, DRLOC= Drug-related Locus of Control

The above table shows statistical data comparing two groups (MET Group and Bio-psychosocial Group) before and after an intervention. There was a significant difference in the means of the groups' scores for the Pre Intervention data and the Post Intervention data, according to the t-test and p-value. Additionally, the Cohen's d effect size indicates a moderate to large effect. However, there was no significant difference in the means of the Drug-Related Self-esteem (t (38) = 1.57, p = ns) and significant difference in scores of drug-related locus of control (t (38) = 2.07*,

p<0.05) scores between the groups before the intervention. There was a significant difference of drug-related locus of control (*t (38) = 7.08***, *p<0.01*) and drug-related self-esteem (*t (38) = 2.97**, p<0.01*) after the intervention between two groups.

The Self-Competence subscale (DRSE) had a significant difference in the means of the scores between the two groups both pretest (*t (38) = 2.04*, p<0.05)* and posttest (*t (38) = 2.91*, p<0.05)*, with a moderate (.65) to large (.92) effect size. Self-confidence subscale did not have a significant difference in the means of the scores between the groups in pre intervention (*t (38) = .63, p=ns)*, but have a significant difference in the Post Intervention data (*t (38) = 2.93*, p<0.05)*, with a large (0.92) effect size. Similarly, Self-Regard subscale also did not have a significant difference between the groups pretest (*t (38) = .59, p=ns)* but have significant difference in post intervention (*t (38) = 2.48*, p<0.05)* with moderate (0.79) effect size. The result shows that the MET improves drug-related internal locus of control (*M*=18.4, *SD*=2.32), Drug-related self-esteem (*M*=81.1, *SD*=8.83), self-competence (*M*=48, *SD*=5.28). The table results also show that MET improves self-confidence (*M*=24.2, *SD*=4.36) and self-regard ((*M*=19.3, *SD*=3.58) more than Bio-psycho-social intervention (DRLOC= *M*=23.2, *SD*=1.94; DRSE= *M*=72.1, *SD*=10.16; Self-competence= *M*=35.4, *SD*=4.78; Self-confidence= *M*=20.05, *SD*=4.69; Self-regard=*M*=16.6, *SD*=3.

Chapter 7

Discussion

The present study was conducted to assess the effectiveness of Motivation Enhancement Therapy on promoting drug-related internal locus of control and drug-related self-esteem. It was also intended to compare the effectiveness of MET and BPS intervention to promote self-esteem and internal locus of control. For this purpose, MET intervention was designed on the basis of 10 sessions. Motivational interviewing focus on eliciting change behavior among substance users with the help of 3 to 4 sessions. The current study designed 10 session intensive Motivation Enhancement Therapy to elicit change behavior and to promote the positive personality characteristics of the clients. Evidences support the effectiveness of the long duration MET intervention. Because it allows the client and the therapist to address relapses and triggers as they occur in the client's past life (Deane, et al., 2012). This nine to ten session MET well suited to address the precipitants and magnitude of relapse and allow the therapist to modify in the change plan of the client with multiple relapse (Polcin et al., 2017).

The primary focus of the current study was to investigate the efficacy of MET in reducing Drug-Related External Locus of Control and increasing Drug-Related Self-Esteem (DRSE) among substance users compared to the BSS intervention strategy. Based upon the literature, it was suggested that improvement in these elements of the client's personality will ultimately increase treatment engagement, retention and completion for better abstinence. The findings suggested the significantly large difference in the effects of MET and BPS on Drug-related self-esteem, drug-related locus of control and related study variables among substance users. Findings elaborated that MET has significantly larger effects in increasing drug-related self-esteem. Drug-related self-esteem is a behavioral representation of patterns of decisions, coping, self-concept, and feelings of

self-efficacy of substance users after multiple relapses. It refers to the client' feeling of worth that they have for themselves after substance use.   Similar findings were presented in one of the study conducted to investigate about the effectiveness of motivational interviewing to increase self-esteem as a core to the recovery among 15 alcohol users who have alcoholic parents. Findings revealed that motivational interviewing has significantly increased self-esteem after intervention among alcoholics who have alcoholic parents. There was a significant difference on the level of self-esteem after the motivational interviewing intervention and client's showed significant increase in self-esteem after the intervention. It also increased self-worth of alcohol users. The researchers suggested that the motivational interviewing approach helped in improvement in livelihood and have an impact on their journey to sobriety and relapse (Fanai et al., 2018).

Therefore, in order to reinstate the substance user's self-esteem and self-confidence, the client's willingness to accept responsibility for own behavior is required. To inculcate this sense of responsibility, they need continuous assistance so that they can accept losses they have experienced and develop appropriate coping skills for the future hindrances of their life (Falvo, 2009). Motivational interviewing helps to gain these changes and the activities included in this intervention induce positive attitude on life thereby increasing self-esteem of the client but the abstinence from substance use is an ongoing process that involves a persistent vigilance and promising behavior to remain abstinent (Falvo, 2009). The current study results also concluded that MET has significant impact on converting external locus of control to internal locus of control and self-competence as compared to BPS which is consistent with the other study conducted on 40 subjects with alcohol use disorder. 20 subjects were given 10 sessions of MET and usual treatment, while 20 subjects were given usual treatment. Hence, the conclusion is consistent with the past evidences presented in one of the study addressing the reorienting the locus of control

among violent offenders. This study suggested that treatment readiness has been associated with internalizing locus of control orientation. Motivation and decision to change the behavior have relationship with locus of control. External locus of control is closely linked with the person's lack of commitment to behavior change and therefore there lack of motivation and engagement in rehabilitation activities more likely to perceive rehabilitation activities irrelevant and meaningful when they have external locus of control (Chambers et al. 2008).

Moreover, according to the current study, the group who received MET sessions recorded with improved self-competence compared to the control group. Self-competence and self-efficacy are interrelated as both are linked with perceived ability to deal with new experiences and challenges. These findings are consistent with the conclusions made in the past intervention study conducted on the patients with type 2 diabetes chronic disease. This study found the effects of motivational interviewing on self-efficacy of diabetic patients for health related change behavior (Kumar et al., 2021). Motivational interviewing is more effective in promoting the sense of self-efficacy to control eating behavior which considered to be predictor of success in weight loss (Ekong & Kavookjian, 2016). Self-competence in the face of negative emotions like lack of self-confidence, social pressure and discomforting situations leads the individuals towards performing positive and enjoyable abstinence related activities (Bear, 2015). These findings can be related with the current study findings that chronic disease of addiction can be controlled while promoting self-competence with the help of MET.

Moreover it has also found from the current study that MET helps more in reducing lack of self-confidence. MET helped them identify and explore their own motivations for change because MET intervention involved creating a collaborative and non-judgmental environment where the therapist supported the client to identify own goals, values and explore the discrepancies

between their current behavior and their desired outcomes mentioned in change plan worksheet. Through these MET activities, the client developed greater sense of self-awareness and self-competence which ultimately led them to greater confidence on their ability to make positive changes in their lives according to their circumstances. Similarly O'Halloran et al (2016) argued that the motivational interviewing reinforces the sense of self-competence regarding all behavioral changes because the MET intervention plan was based upon the tasks exclusively related to the commitment confidence evaluation, promoting self-control in stimulating or triggering situations, participation in self-decision-making, supporting client's self-sufficiency, reducing biases and drawing attention to face the challenges proactively and discussing the behavioral change. MET proven to have significance to improve psychosocial outcomes (O'Halloran et al, 2016).

Another important objective of the current study was to find the impact of MET on drug-related self-esteem and locus of control after the intervention (Motivation Enhancement Therapy). According to the findings MET proved to be effective and helpful in enhancing drug related self-esteem (DRSE) and drug-related internal locus of control among substance users. Vikas and his colleagues (2015) introduced the similar findings from the study conducted on the clients with alcohol dependence syndrome. They provided the MET intervention to the sample of 30 patients with diagnosis of alcohol induced-psychological and behavioral disorders, currently using any substance. This intervention study was consist of pre-post design with the three weeks MET intervention, assessment of craving and locus of control before and after MET. Findings proposed significant ($p < 0.01$) difference in craving and locus of control. They have concluded that after MET, the patients showed shift in their locus of control toward internal locus of control and reduction in craving while taking responsibility of changing their drinking behavior as under their

own control. MET had significant contribution in promoting abstinence in alcohol dependent clients (Vikas et al., 2015).

The findings also shown that Motivation Enhancement Therapy has significant impact upon sub factors of DRSE like, self-competence and self-confidence. These findings are consistent with the past findings that MET helps to increase the self-confidence, sense of accomplishment, self-esteem and positive mood which leads towards believe upon own self (Internal locus of control) that the person creates and find more resources to use for more profound changes (Ingersoll, 2022; Fredrickson, 2004).Compared to MET intervention, the control group (BPS) participants also shown significant improvement in Drug-related locus of control. Moreover, control group shown relatively less impact on drug-related self-esteem, self-competence and self-regard after intervention.

Therefore, it is concluded that MET has also a significant impact on client's self-regard. There are several reasons for the significant impact of MET on self-regard of the substance users. Low self-regard may be deeply ingrained in a person's beliefs and behaviors, making it difficult to change in short amount of time. It may also take consistent effort and practice to maintain a positive sense of self-regard. It is important to continue working with therapist and practicing self-care on after care rehabilitation basis to build and maintain healthy sense of self-worth. Both therapies helped in promoting self-regard but because of the activities designed in MET, the treatment group have shown more improvement in self-regard than control group. Self-esteem and self-regard are the two different aspects of personality. Self-esteem is the evaluation of oneself based on personal qualities like self-confidence to cope with relapse triggers, situations and self-competence to deal with relapse triggers and warning signs. While self-regard refers to the overall sense of self-worth and self-acceptance. Therefore, even though therapy helped to

boost self-esteem and locus of control and also moderately improved self-regard. So we can conclude that it may not have fully addressed underlying issues that affect a person's sense of self-worth like past negative consequences of client's choice of being substance user. These consequences include crimes like drug dealing, gambling, cheating, theft and other major or minor crimes. Substance use may adjourn the deep-seated feelings of shame, guilt, and self-loathing attached with these negative life circumstances. Even if an individual's self-esteem improves, these underlying feelings may still persist and prevent them from fully valuing and respecting themselves.

Self-esteem is the major psychological factor contributing to health, quality of life and recovery process of the substance users. Results found that the increased drug-related self-esteem after MET intervention has impact upon promoting drug-related internal locus of control which is consistent with the study conducted in Jammu city which postulated that the person with high self-esteem are more likely to have internal locus of control while person with low self-esteem are eventually more externally locus of control and more prone to become drug abusers (Hafiz et al., 2020).

Conclusion

On the basis of findings from the current study, it can be concluded that Motivation Enhancement therapy can play a significant role on improvising the client's positive personality characteristics to ensure the treatment compliance, adherence and further abstinence process. This study used the intensive MET intervention on in-patient substance users with focus on the culturally focused causes, precipitants, magnitude and consequences of the substance use to address the rehabilitation clients with substance use. Findings from the study demonstrated that both interventions, MET and Bio-psycho-social model are significantly effective for eliciting

change and improvement in positive personality characteristics like drug-related self-esteem and internal locus of control. The results further explained that MET is proved to be more effective in enhancing drug-related self-esteem and drug-related internal locus of control than bio-psycho-social model of substance use rehabilitation. To improve treatment efficacy, self-competence, self-confidence and self-regard are the more important aspects of the client's personality. The findings suggested that MET also has significant impact on these patterns of client's personality. The longer duration MET has some challenges in terms of how we consider and modify MET-based goals and concepts. Change plan worksheet is one of the main example. Implementation of change plan worksheet is the central to the therapeutic work between client and the therapist. It is a task that is finalized at the end of the intervention and was repeated with some clients on exceptional bases. But the concept of change and discussion about change goals need to be understood within the client's natural context which could be possible in follow-up process. Future studies might focus on this important point of the MET intervention to achieve the abstinence goals.

General Conclusion

The term "Substance use" is commonly used for the addiction or substance abuse. The increase in substance usage around the globe is alarming especially in Pakistan where poly drug abuse is more common. Mostly opioid users initiate substance use with the cannabis as a first experienced drug at the approximate age of 18 years. However many of the substance users start with other drugs like tranquilizers, sedatives, opium inhalants, hypnotics and benzodiazepines. Number of factors involved in initiation, continuation, prevention and relapse of substance use i.e. personality traits, level of social support and personal characteristics of self-esteem, self-control, locus of control.

Drug-related Self-esteem is one of the basic factor which effects decision making of the drug addict related to future abstinence and relapse. The indigenous scale on drug-related self-esteem is the need of the time to assess the domain specific self-esteem of the growing population of substance users which might help researcher in field and as well as will help the addiction professionals to measure the unique drug-related self-esteem for therapeutic purpose. This type of self-esteem was pointed out by Martiny & Rubin (2016) by considering it as specific collective state self-esteem. On the other side, it is observed that some personality traits are more prone toward relapse and drug abuse. So the effects of these personality traits on person's treatment decision become more aggravated if the person feels helpless, lack self-confidence, lack self-efficacy, negatively self-evaluate his self and have misperception about the capabilities of being recovered from addiction. The current research assessed three causal factors i.e. drug-related locus of control, personality traits and self-esteem among drug addicts together along with mediating role of perceived social support between these constructs to further implement MET to strengthen drug-related self-esteem, self-competence, self-confidence, self-regard and internal locus of control with reference to the treatment adherence and abstinence from substance use.

The current study succeeded to construct more relevant, indigenous, culture appropriate Drug-related self-esteem scale in Urdu language to assess the selective collective state self-esteem related to life after substance use. Furthermore, the findings also proposed that personality traits have significantly positive relationship with drug-related self-esteem, drug-related locus of control and perceived social support. It was also established that increased drug-related self-esteem will ultimately strengthen drug-related internal locus of control among substance users which means that the substance users will be able to take responsibility for the outcomes of drug abuse and will take initiative to improve their lives.

The current study also established the fact that history of prison is strongly associated with decreased drug-related self-esteem, self-competence, self-confidence, and self-regard, perceived social support and strengthen drug-related internal locus of control. For instance, substance users with criminal history i.e., harassment, drug dealing, forgery/ cheating has drug-related internal locus of control with decreased drug-related self-esteem, self-confidence, self-competence and self-regard and perceived social support in their post-addiction life.

Moreover, perception of social support positively interact with personality traits to effect the drug-related self-esteem and drug-related locus of control among substance users under treatment in rehabilitation centers. Personality traits i.e. openness to experience and Conscientiousness has significant positive indirect effect on drug-related locus of control and drug-related self-esteem through perceived social support.

The demonstrated efficacy of motivation-enhancement therapy was the most valuable finding from the current study with drastic future significance for practicing drug addiction treatment and rehabilitation professionals of Pakistan. MET and Bio-psycho-social model are proven to be significantly effective for eliciting change and improvement in the targeted characteristics of the substance users but MET is proved to be more effective in enhancing drug-related self-esteem and drug-related internal locus of control than bio-psycho-social model of substance use rehabilitation. By implementing MET therapy model for rehabilitation and treatment adherence, the treatment compliance, client's individual characteristics i.e., self-compliance, self-regard, internal locus of control and self-esteem especially related to the drug-related decisions can be improvised which eventually increase the expectancy of prolong abstinence and compliance to follow complete continuums of care including follow-ups.

Implication

Motivation enhancement therapy is a type of intervention that aims to help substance user increase their motivation to change addictive behaviors that negatively impact their treatment adherence and compliance which in turn effect their abstinence from substance use. Motivation Enhancement Therapy model is developed endogenously to implement in Pakistani rehabilitation centers under the guidelines given in the MET manual. Activities are developed in Urdu language which are easy to understand and administer on the client with minimum education level. By implementing MET therapy model for rehabilitation and treatment adherence, the treatment compliance, client's individual characteristics i.e., self-compliance, self-regard, internal locus of control and self-esteem especially related to the drug-related decisions can be improvised which eventually increase the expectancy of prolong abstinence and compliance to follow complete continuums of care including follow-ups.

The findings of the current study could be helpful tool for addiction rehabilitation professionals looking to help patients in changing their negative thought pattern and life style related to frequent relapses in substance use, mental health issues, or other challenges that require behavior change. By helping patients increase their motivation to change eventually means increase in Drug-related self-esteem, self-competence, self-confidence and positive self-regard which is the spirit of any intervention technique to be effective. Improving all these traits of the substance user could potentially improve treatment outcomes and help people achieve their goals for better drug free life and overall promoting positive behavior change.

Limitations

Findings from present study are very helpful for the betterment of intervention strategies in drug rehabilitation profession. However present has following limitations.

- Sample was taken from the single drug rehabilitation center of Rawalpindi in order to control the sample variance on the basis of characteristics which is not the representative of all rehabilitation centers of twin cities, although clients belonged to different parts of Punjab province.

- Only male participants were included in the study which limits the gender-based implication of findings.

- The current study was not sponsored by any organization which refrained the researcher financially to conduct the proper follow ups and more practical activities.

- Researcher faced many problems related to the compliance with the rules of selected rehabilitation facility which restrained the researcher to audio or video recording of the intervention sessions.

- High Drop-out rate which was not under the control of researcher.

Recommendations

On the basis of current study results, following are some recommendations to the future researchers.

- Future researchers should include a larger sample size and both genders in this type of intervention study for making results more applicable to a larger population.

- Future study on motivation enhancement therapy on substance users need to use random sampling method to ensure more representative sample.

- Future study can also assess the post intervention level of motivation along with including other variables of interest like coping strategies, will power, and emotional state of the substance users and environmental effects of rehabilitation facility.

- Future researchers can use ABABA(Within Between Group) design to explore more about the efficacy of Motivation Enhancement Therapy (MET)

- Future researchers can design the Motivation Enhancement Therapy (MET) efficacy studies on substance users in Pakistani context with co-morbid psychiatric disorders and the clients with the history of stimulants and hallucinogen use.

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Appendix A

<u>Informed Consent</u>

موجودہ تحقیق کے دوران حاصل کی گی معلومات خالصتاً تحقیقاتی مقاصد کے لیے استعمال کی جائے گی، ناموں اور شناختی معلومات کو صیغہ راز میں رکھا جائے

گا، اس تحقیقاتی اجازت نامے پہ دستخط کر کے آپ نے اس تحقیق میں شمولیت کی اجازت دے دی ہے۔ ہدایات کیساتھ مختلف قسم کے سکیل دیئے گئے ہیں، ان سکیلوں پر

اپنی رائے کے اظہار کے دوران اپنے نشے کے آغاز کے بعد کی زندگی کو مد نظر رکھتے ہوئے بیانات کا انتخاب کریں۔

تعلیم _____ عمر _____ نام _____

ازدواجی حیثیت _____ خاندانی نظام؛ مشترکہ انفرادی _____ ریلیپس کی تعداد _____

سب سے طویل علاج کا دورانیہ _____ جیل جانے کی تعداد _____ تھانے جانے کی تعداد _____

کیس؛

	جھگڑے		زبردستی		جوا		اقدام قتل		ناجائز فروشی
	دیگر		اغوا		چوری		دھوکا دہی		قتل

INSTRUMENT: FEELINGS ABOUT DRUG USE

Drug-Related Locus of Control (DRLOC)

Now, I'm going to ask you about your feelings about drug use. I'm going to read two statements, Statement A and Statement B, and ask you to choose the one that best describes how you feel now. (CIRCLE ONE NUMBER FOR EACH STATEMENT)

1. A. I feel so helpless in some situations that I need to get high. 1

1. B. Abstinence is just a matter of deciding that I no longer want to use drugs. 2

2. A. I have the strength to withstand pressures at work or home... 1

2. B. Trouble at work or home drives me to use drugs. 2

3. A. Without the right breaks you cannot stay clean... 1

3. B. Drug abusers who are not successful in curbing their drug use often have not taken

Advantage of help that is available...…..2

4. A. There is no such thing as an irresistible temptation to use drugs. 1

4. B. Many times there are circumstances that force you to use drugs....................................2

5. A. I get so upset over small arguments that they cause me to use drugs. 1

5. B. I can usually handle arguments without using drugs.. 2

6. A. Successfully kicking substance abuse is a matter of hard work; luck has little or nothing

to do with it. 1

6. B. Staying clean depends mainly on things going right for you. 2

7. A. When I am at a party where others are using, I can avoid taking drugs. 1

7. B. It is impossible for me to resist drugs if I am at a party where others are using. 2

8. A. I feel powerless to prevent myself from using drugs when I am anxious or unhappy..... 1

8. B. If I really wanted to, I could stop using drugs. 2

9. A. It is easy for me to have a good time when I am sober... 1

9. B. I cannot feel good unless I am high... 2

10. A. I have control over my drug use behaviors.. 1

10. B. I feel completely helpless when it comes to resisting drugs.......................................2

11. A. Sometimes I cannot understand how people can control their drug use. 1

11. B. There is a direct connection between how hard people try and how successful they

  are in stopping their drug use. 2

12. A. I can overcome my urge to use drugs. 1

12. B. Once I start to use drugs I can't stop..2

13. A. Drugs aren't necessary in order to solve my problems. 1

13. B. I just cannot handle my problems unless I get high first.. 2

14. A. Most of the time I can't understand why I continue to use drugs. 1

14. B. In the long run I am responsible for my drug problems. 2

15. A. Taking drugs are my favorite form of entertainment. 1

15. B. It wouldn't bother me if I could never use drugs again. 2

Appendix B-II

Drug-related Locus of Control Scale

ہدایات: اب میں آپ سے نشے کے استعمال سے متعلق احساسات کے بارے میں پوچھنے جارہی ہوں، میں دو بیان پڑھوں گی، بیان- اے" " " اور بیان بی" اور آپ کو ان دو

بیانات میں سے ایک کا انتخاب کرنا ہو گا جو منشیات سے متعلق آپ کی موجودہ کیفیت کو واضح بیان کرتا ہو۔

ایک نمبر کے گرد دائرہ لگا کر انتخاب کریں۔

1(A)	میں کچھ حالات میں اتنا بے بس محسوس کرتا ہوں کہ مجھے نشے کی ضرورت محسوس ہوتی ہے۔
(B)	نشے سے پرہیز کے لیے صرف اس بات کا فیصلہ کرنے کی ضرورت ہوتی ہے کہ اب میں منشیات کا استعمال نہیں کرنا چاہتا۔
2 (A)	مجھ میں گھر یا کام کے دباؤ / بوجھ کو برداشت کا سامنا کرنے کی طاقت ہے۔
(B)	گھر یا کام پر مسائل مجھے منشیات کے استعمال کے لیے اکساتے ہیں۔
3 (A)	صحیح وقفے کے بغیر آپ نشے سے دور نہیں رہ سکتے۔
(B)	نشے کے عادی افراد جو نشہ چھوڑنے میں ناکام رہے۔ اکثر انہوں نے میسر سہولتوں سے فائدہ نہیں اٹھایا۔
4 (A)	ایسی کوئی چیز نہیں ہے جس میں منشیات استعمال کرنے کی ناقابل مزاحمت کشش ہو۔
(B)	بہت دفعہ ایسے حالات پیدا ہو جاتے ہیں جو آپ کو نشہ استعمال کرنے پر مجبور کر دیتے ہیں۔
5 (A)	میں چھوٹی سی بحث سے بھی بہت پریشان ہو جاتا ہوں۔ اور کبھی میرے نشہ کرنے کا سبب / وجہ بن جاتا ہے۔
(B)	میں اکثر نشے کا سہارا لیے بغیر بحث و مباحثہ سنبھال لیتا ہوں۔
6 (A)	نشے کے استعمال سے کامیابی سے چھٹکارا پانے کا انحصار محنت پر ہے، قسمت کا اس سے تھوڑا یا بالکل بھی تعلق نہیں۔
(B)	نشے سے پاک رہنے کا انحصار بنیادی طور پر اس پر ہے کہ چیزیں / حالات آپ کے حق میں ہوں۔
7 (A)	جب میں کسی دعوت میں ہوں جہاں سب نشے کے استعمال سے روک سکتا ہوں۔
(B)	اگر میں ایسی تقریب میں ہوں جہاں دوسرے لوگ منشیات کا استعمال کر رہے ہوں تو میرے لیے نشے سے خود کو روکنا ممکن ہو جاتا ہے۔
8 (A)	جب میں بے چین یا ناخوش ہوں تو میں خود کو منشیات کے استعمال سے روکنے میں بے بس محسوس کرتا ہوں۔

(B)		اگر میں واقعی چاہوں تو میں نشے کا استعمال روک سکتا ہوں۔
(A) 9		جب میں نشے سے پاک / بحالی میں ہوں تو میرے لیے اچھا وقت گزارنا آسان ہے۔
(B)		جب تک میں نشے کا استعمال نہ کر لوں میں اچھا محسوس نہیں کرپاتا۔
(A) 10		مجھے اپنے نشے کے استعمال کے رویوں پر کنٹرول ہے۔
(B)		جب نشے سے بچنے کی بات آتی ہے تو میں مکمل طور پر بے بس محسوس کرتا ہوں۔
(A) 11		کبھی کبھار میں یہ سمجھ نہیں پاتا کہ کیسے لوگ اپنے نشے کے استعمال کو قابو کرپاتے ہیں۔
(B)		لوگ منشیات کے استعمال کو روکنے میں کس حد تک کامیاب ہوئے، اسکا تعلق براہ راست اس بات سے ہے کہ لوگ کتنی سخت محنت کرتے رہے۔
(A) 12		میں اپنی نشے کے استعمال کی طلب پر قابو پا سکتا ہوں۔
(B)		ایک بار جب میں نشے کا استعمال شروع کر دوں تو میں روک نہیں پاتا۔
(A) 13		میرے مسائل کے حل کے لیے نشہ ضروری نہیں ہے۔
(B)		میں جب تک نشے کا استعمال نہ کر لوں۔ اپنے مسائل کو حل نہیں کرپاتا۔
(A) 14		میں زیادہ تر اوقات یہ سمجھ نہیں پاتا کہ میں کیوں نشے کا استعمال جاری رکھتا ہوں۔
(B)		بہت طویل عرصے سے میں اپنے نشے کے استعمال کے مسئلے کا خود ذمہ دار ہوں۔
(A) 15ً		نشے کا استعمال میری پسندیدہ تفریح ہے۔
(B)		یہ میرے لیے پریشان کن نہیں اگر میں دوبارہ کبھی نشے کا استعمال نہ کر سکوں۔

Content Validation of Drug-related Self-esteem (DRSE) Scale

Dear Experts,

I, Samia Yasmeen, am PhD Scholar from International Islamic University, Islamabad, developing a scale of "Drug-related Self-esteem". We need your expert judgment regarding attached item pool based on the literature and previously developed scales on certain concepts. The evaluation is needed on the degree of relevance of each item to the scale components, clarity of statements, whether the items are measuring the content it is supposed to measure, also identify the double barreled and unclear items. Your review should be based on the definition and relevant terminologies that are provided to you. Please be as objective and constructive as possible in your review and use the following rating scale:

Degree of Relevance:	Degree of Clarity:
1= the item is not relevant to the measured domain	1= the item is not clear
2= the item is somewhat relevant to the measured domain	2= the item is somewhat clear to the reader
3= the item is quite relevant to the measured domain	3= the item is quite clear to the reader
4= the item is highly relevant to the measured domain	4= the item is highly clear to the reader

Definition of Drug-related Self-esteem:

Drug-related Self-esteem is a "specific collective state self-esteem" which refers to individual's perception about self in regard of specific area of functioning and group affiliation with reference to drug addiction (Tajfel & Turner, 1979). Drug related self-esteem is one's feelings of self-worth, self-competence, self-regard and self-confidence with reference to life after drug addiction.

Scale Description:

This scale is intended to take responses on 7point likert scale i.e.

کممل طور پر غیر متفق	غیر متفق	تقریباً غیر متفق	غیر جانبدار	متفق	تقریباً متفق	کمل طور پر متفق
1	2	3	4	5	6	7

Scoring:

The highest score on the developing scale will reveal the tendency of having high Drug-related Self-esteem among substance users.

<div align="center">

Drug-related Self-esteem (DRSE) Scale

</div>

ذیل میں کچھ بیانات آپ کی موجودہ زندگی سے متعلق دیے گئے ہیں جن میں یہ پوچھا جارہا ہے کہ آپ اپنے بارے میں کیسا محسوس کرتے ہیں؛ برائے مہربانی آپ اس بات کی نشاندہی کریں کہ آپ ان سے کس حد تک متفق یا غیر متفق ہیں۔ اپنی رائے کے اظہار کے دوران اپنے نشے کے آغاز کے بعد کی زندگی کو مد نظر رکھتے ہوئے بیانات کا انتخاب کریں

Degree of Clarity				Degree of Relevancy				بیانات	نمبر شمار
Highly clear (4)	Quite clear (3)	Some-what Clear (2)	Not Clear (1)	Highly relevant (4)	Quite Relevant (3)	Some-what relevant (2)	Not Relevant (1)		
								میں ایک اچھا شخص ہوں	۱۔
								میں نے منشیات کے استعمال سے چھٹکارا پانے کے لیے بہت جدوجہد کی ہے۔	۲۔
								منشیات کے استعمال کے باوجود، میں اب بھی ایک خاندان کے رکن کے طور پر اپنی ذمہ داریاں پوری کر رہا ہوں	۳۔
								میں ایک ایماندار فرد / شخص ہوں۔	۴۔
								میں منشیات کے استعمال سے پہلے کی طرح ذہین ہوں۔	۵۔
								میں اپنے آپ کی بے عزتی کرتا ہوں جیسا کہ میں ہوں۔	۶۔
								میں نشے سے نجات کی جنگ میں ناکام ہوں	۷۔
								میں اپنے معاشرے سے آنے والے چیلنجوں سے نہیں نمٹ سکتا۔	۸۔
								میں نشے کی تاریکی سے باعزت صحت یابی کی روشنی تک بہت کچھ ٹھیک کر چکا ہوں	۹۔
								میں منشیات کے استعمال سے پہلے کی طرح ذہین انسان نہیں رہا	۱۰۔
								میں اب پر کشش آدمی نہیں رہا۔	۱۱۔
								میں نے اپنے آپ کو معاف کیا جو میں نے غلط کیا ہے۔	۱۲۔
								میں اب بھی اپنے پیشے میں ماہر ہوں۔	۱۳۔

								بیان	نمبر
								میں اب بھی اپنے منشیات کے استعمال سے پہلے کی طرح کام کرنے کے قابل ہوں	۱۴۔
								میں اپنے برے تاثر سے پریشان ہوں جو منشیات کے استعمال کے بعد مجھ پر پڑتا ہے۔	۱۵۔
								میں ایک عادی کے طور پر دیکھنے سے پریشان ہوں۔	۱۶۔
								میری سماجی زندگی بیکار ہے۔	۱۷۔
								مسائل کے حوالے سے میری رائے کی کوئی پرواہ نہیں کرتا۔	۱۸۔
								میں منشیات کے استعمال کے بعد اپنی جسمانی شکل سے ناخوش ہوں	۱۹۔
								میں مثبت / منشیات سے پاک زندگی کے اپنے مقاصد حاصل کر سکتا ہوں۔	۲۰۔
								میں اب بھی اتنا مضبوط ہوں کہ اپنے پیشے کے ذریعہ دیئے گئے جسمانی کاموں کو انجام دوں۔	۲۱۔
								مجھے لگتا ہے کہ میں اپنے بہن بھائیوں اور ساتھیوں سے کمتر ہوں	۲۲۔
								میں اپنی زندگی کے بارے میں مضبوطی سے فیصلے کر سکتا ہوں۔	۲۳۔
								مجھے یقین ہے کہ میں اپنے منشیات کے استعمال کی وجہ سے پیدا ہونے والی پریشانیوں کو سنبھال سکتا ہوں	۲۴۔
								میں محسوس کرتا ہوں کہ دوسرے مجھے ناپسند کرتے ہیں	۲۵۔
								کوئی بھی ان کے آرام کے لیے میری اچھی کوششوں کی تعریف نہیں کرتا	۲۶۔
								میں محسوس کرتا ہوں کہ مجھ میں بہت سی خوبیاں ہیں جو دوسروں میں نہیں ہیں۔	۲۷۔
								میں اپنے کام میں کم توانائی محسوس کرتا ہوں	۲۸۔
								میرے بہن بھائی اور رشتہ دار میرے مقابلے میں زیادہ پرکشش ہیں۔	۲۹۔

									مجھے لگتا ہے کہ میں اپنے معاشرے کے لیے بیکار ہوں	۳۰
									مجھے لگتا ہے کہ میں اپنے منشیات کے استعمال پر قابو نہیں پا سکا۔	۳۱
									جب کوئی مجھ پر اپنی مصیبتوں کا الزام لگاتا ہے تو میں اپنے آپ پر شرمندہ ہوتا ہوں۔	۳۲
									بالکل غیر عادی لوگوں کی طرح میں معمول کی زندگی گزارنے کے قابل ہوں۔	۳۳
									جب دوسرے مجھے عادی کے طور پر بدنام کرتے ہیں تو میں حوصلہ شکنی محسوس کرتا ہوں۔	۳۴
									میرا خاندان میرے عادی بننے کے انتخاب کے لیے ذمہ دار ہے	۳۵
									میں بحالی کے اپنے مقرر کردہ اہداف حاصل نہیں کر سکتا۔	۳۶
									باعزت اور منشیات سے پاک زندگی گزارنا میرا حق ہے جیسا کہ دوسرے جی رہے ہیں۔	۳۷
									میں منشیات کے استعمال کے خلاف اپنے نفس پر قابو پانے پر یقین رکھتا ہوں	۳۸
									مجھے لگتا ہے کہ میں متوازن زندگی گزار رہا ہوں	۳۹
									سماجی تنقید کبھی بھی منشیات کی لت سے میری صحت یابی میں رکاوٹ نہیں بن سکتی۔	۴۰
									میں اپنے ساتھیوں کے دباؤ کا مقابلہ کرنے اور منشیات کو نہ کہنے کی اپنی صلاحیت پر اعتماد محسوس کرتا ہوں۔	۴۱
									مجھے یقین ہے کہ منشیات کے استعمال سے متعلق میرے انتخاب میری اقدار اور ذاتی مقاصد کی عکاسی کرتے ہیں۔	۴۲
									مجھے منشیات سے پاک رہنے اور صحت مند انتخاب کرنے پر اپنے آپ پر فخر ہے۔	۴۳
									مجھے خود کی قدر کا ایک مضبوط احساس ہے جو منشیات کے استعمال پر منحصر نہیں ہے	۴۴

									مجھے منشیات کا سہارا لیے بغیر چیلنجوں اور تناؤ سے نمٹنے کی اپنی صلاحیت پر بھروسہ ہے۔	۴۵
									میں اپنی جسمانی اور ذہنی صحت کی قدر کرتا ہوں، جو مجھے منشیات کے استعمال سے بچنے کی ترغیب دیتا ہے۔	۴۶
									مجھے منشیات کے بغیر زندگی میں لطف اور تکمیل تلاش کرنے کی اپنی صلاحیت پر یقین ہے۔	۴۷
									مجھے یقین ہے کہ میں منشیات سے پاک اور مکمل مستقبل کا مستحق ہوں۔	۴۸
									میں منشیات کے استعمال کے بارے میں باخبر فیصلہ کرنے کی اپنی صلاحیت سے بااختیار محسوس کرتا ہوں۔	۴۹
									میں منشیات کے استعمال سے بچنے سے دوسروں پر ہونے والے مثبت اثرات کے بارے میں اچھا محسوس کرتا ہوں۔	۵۰

Appendix C-II

Newly Constructed and Validated Drug-related Self-esteem (DRSE) Scale

<div dir="rtl">

منشیات سے متعلق خود اعتمادی کا پیمانہ

ہدایات: ہم اس میں دلچسپی رکھتے ہیں کہ آپ درج ذیل بیانات کے بارے میں کیسا محسوس کرتے ہیں۔ ہر بیان کو غور سے پڑھیں اور متعلقہ باکس پر نشان لگائیں کہ آپ

اپنے بارے میں کردہ بیان سے کتنے متفق یا غیر متفق ہیں۔

اپنی رائے کے اظہار کے دوران اپنے نشے کے آغاز کے بعد کی زندگی کو مد نظر رکھتے ہوئے بیانات کا انتخاب کریں مندرجہ ذیل سے منتخب کریں

کمل طور پر غیر متفق	غیر متفق	تقریباً غیر متفق	غیر جانبدار	متفق	تقریباً متفق	کمل طور پر متفق
1	2	3	4	5	6	7

7	6	5	4	3	2	1		
							منشیات کے استعمال کے باوجود، میں اب بھی ایک خاندان کے رکن کے طور پر اپنی ذمہ داریاں پوری کر رہا ہوں	1
							میں نشے سے نجات کی جنگ میں ناکام ہوں	2
							میں اپنے معاشرے سے آنے والے چیلنجوں سے نہیں نمٹ سکتا	3
							میں نشے کی تاریکی سے باعزت صحت یابی کی روشنی تک بہت کچھ ٹھیک کر چکا ہوں	4
							میں اب بھی اپنے پیشے میں ماہر ہوں	5
							میں اب بھی اپنے منشیات کے استعمال سے پہلے کی طرح مہارت سے کام کرنے کے قابل ہوں	6
							میں منشیات کے استعمال کے بعد اپنے برے تاثر سے پریشان ہوں	7
							میں منشیات کے استعمال کے خلاف اپنے نفس پر قابو پانے پر یقین رکھتا ہوں	8

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						میں اپنی زندگی کے بارے میں مضبوطی سے فیصلے نہیں کر سکتا ہوں	9
						میرے بہن بھائی اور رشتہ دار میرے مقابلے میں زیادہ پرکشش ہیں	10
						مجھے لگتا ہے کہ میں اپنے منشیات کے استعمال پر قابو نہیں پا سکا	11
						جب دوسرے مجھے عادی کے طور پر بدنام کرتے ہیں تو میں حوصلہ شکنی محسوس کرتا ہوں۔	12
						میں منشیات کے استعمال سے پہلے کی طرح ذہین انسان نہیں رہا	13
						میں اپنے آپ کی عزتی نہیں کرتا ہوں جیسا کہ میں ہوں	14
						میں خود کو ایک منشیات کے عادی کے طور پر دیکھنے سے پریشان ہوں	15
						میں منشیات کے استعمال کے بعد اپنی جسمانی شکل سے ناخوش ہوں	16
						میں بحالی کے اپنے مقرر کردہ اہداف حاصل نہیں کر سکتا	17

Appendix D

Multidimensional Scale for Perceived Social Support

ہدایات: ہم یہ جاننا چاہتے ہیں کہ مندرجہ ذیل بیانات کے متعلق آپ کیسا محسوس کرتے ہیں۔ ہر بیان کو غور سے پڑھیے۔ نشان دہی کیجیے کہ آپ ہر بیان کے متعلق کس طرح سے

محسوس کرتے ہیں۔

دائرہ لگایئے اگر آپ شدید غیر متفق ہیں۔ "1"

دائرہ لگایئے اگر آپ شدید غیر متفق ہیں۔ "2"

دائرہ لگایئے اگر آپ کچھ حد تک غیر متفق ہیں۔ "3"

دائرہ لگایئے اگر آپ غیر جانبدار ہیں۔ "4"

دائرہ لگایئے اگر آپ کچھ حد تک ہم آہنگی رکھتے ہیں۔ "5"

دائرہ لگایئے اگر آپ بہت ہم آہنگی رکھتے ہیں۔ "6"

دائرہ لگایئے اگر آپ بہت زیادہ ہم آہنگی رکھتے ہیں۔ "7"

7	6	5	4	3	2	1		
							ایک خاص شخص ہے جو ہر ضرورت کے وقت میرے پاس ہوتا ہے۔	1
							ایک خاص شخص ہے۔ جس کے ساتھ میں اپنے غم اور خوشیاں بانٹ سکتا/ر سکتی ہوں	2
							میرے گھر والے میری مدد کرنے کی پوری کوشش کرتے ہیں۔	3
							مجھے میرے گھر والوں سے جس جذباتی مدد اور سہارے کی ضرورت ہوتی ہے وہ مجھے ملتی ہے	4
							میرے پاس ایک خاص شخص ہے۔ جو واقعی میرے لئے رابطے کا ذریعہ ہے۔	5
							میرے دوست میری مدد کرنے کی واقعی کوشش کرتے ہیں۔	6
							جب مشکل پڑے تو میں اپنے دوستوں پر بھروسہ کر سکتا ہوں/ر سکتی ہوں	7
							میں اپنے گھر والوں کے ساتھ اپنے مسائل کے متعلق بات کر سکتا ہوں/ر سکتی ہوں۔	8
							میرے ایسے دوست ہیں جن کے ساتھ میں اپنی خوشیاں اور غم بانٹ سکتا ہوں/ر سکتی ہوں	9
							میری زندگی میں ایک خاص شخص ہے جو میرے احساسات کی پرواہ کرتا/ر کرتی ہے	10
							میرے گھر والے فیصلے لینے میں میری مدد کرتے ہیں	11
							میں اپنے مسائل کے متعلق اپنے دوستوں سے بات کر سکتا ہوں/ر سکتی ہوں	12
							ایک خاص شخص ہے جو ہر ضرورت کے وقت میرے پاس ہوتا ہے	13

Appendix E

Big Five Personality Inventory

ذیل میں دی گئی چند خصوصیات آپ پر لاگو ہو بھی سکتی ہیں اور نہیں بھی۔ ہر جملے کیلئے اس نمبر کو منتخب کریں جو بہترین انتخاب ہو کہ اس حد تک آپ کس حد تک اس سے متفق یا غیر متفق ہیں۔

1= مکمل غیر متفق   2= کسی حد تک غیر متفق   3= نہ متفق نہ غیر متفق   4= کسی حد تک متفق   5= مکمل متفق

میں اپنے آپ کو ایسے شخص کے طور پر دیکھتا ہوں جو کہ ....

مکمل متفق 5	کسی حد تک متفق 4	نہ متفق نہ غیر متفق 3	کسی حد تک غیر متفق 2	مکمل غیر متفق 1	بیانات	نمبر شمار
					باتونی ہے۔	1
					دوسروں میں خامیاں تلاش کرتا ہے۔	2
					ذمہ داری سے مکمل کام کرتا ہے۔	3
					ڈپریسڈ، افسردہ ہے۔	4
					تخلیقی ہے، نئے خیالات کے ساتھ آتا ہے۔	5
					اپنے آپ میں رہتا ہے (ریزرو)۔	6
					دوسروں کے ساتھ بے غرض اور مدد کرنے والا ہے۔	7
					کسی حد تک لاپرواہ ہو سکتا ہے۔	8
					پرسکون ہے، دباؤ کو اچھے سے جھیل سکتا ہے۔	9
					بہت سی مختلف چیزوں کے بارے میں متجسس ہے۔	10
					توانائی سے بھرپور ہے۔	11
					دوسروں کے ساتھ لڑائی شروع کرتا ہے۔	12
					قابل اعتماد کار کن ہے۔	13
					پریشان ہو سکتا ہے۔	14
					تخلیقی ہے، گہری سوچ والا ہے۔	15
					کافی جوش و خروش بڑھانے والا ہے۔	16
					معاف کر دینے والی فطرت رکھتا ہے۔	17
					غیر منظم ہو سکتا ہے۔	18
					بہت زیادہ پریشان ہوتا ہے۔	19
					فعال تخیل رکھتا ہے۔	20
					خاموش رہنے کی کوشش کرتا ہے۔	21
					عام طور پر قابل اعتماد ہے۔	22
					سست رہنے کی کوشش کرتا ہے۔	23
					جذباتی طور پر مستحکم ہے، جلدی پریشان نہیں ہوتا۔	24
					موجد (نئی چیزیں ایجاد کرتا) ہے۔	25

کمل متعلق	کسی حد تک متعلق	نہ متعلق نہ غیر متعلق	کسی حد تک غیر متعلق	کمل غیر متعلق	بیانات	نمبر شمار
5	4	3	2	1		
					متوازن شخصیت رکھتا ہے۔	26
					سرد مہر اور الگ تھلگ رہنے والا ہو سکتا ہے۔	27
					کام مکمل ہونے تک ثابت قدم رہتا ہے۔	28
					بدمزاج (موڈی) ہو سکتا ہے۔	29
					فنکارانہ اور جمالیاتی تجربے کی قدر کرتا ہے	30
					بعض اوقات شرمیلا ہے، کچھ کہنے یا کرنے کے بارے میں پُر اعتماد نہیں ہے۔	31
					لحاظ کرنے والا اور تقریباً ہر کسی کے ساتھ نرم دل۔	32
					مؤثر طریقے سے کام کرتا ہے۔	33
					حالتِ تناؤ میں پر سکون رہتا ہے۔	34
					معمول کے کام کو ترجیح دیتا ہے۔	35
					گھلنے ملنے والا، ملنسار / سماجی۔	36
					کبھی کبھی دوسروں کے ساتھ بدتمیزی کرتا ہو۔	37
					منصوبے بناتا ہے اور ان پر عمل کرتا ہے۔	38
					آسانی سے پریشان ہو جاتا ہے۔	39
					عکاسی کرنا پسند کرتا ہے، خیالات کے ساتھ کھیلتا ہے۔	40
					کچھ فنکارانہ دلچسپیاں رکھتا ہے۔	41
					دوسروں سے تعاون کرنا پسند کرتا ہے۔	42
					آسانی سے توجہ کھو دیتا ہے۔	43
					فن، موسیقی اور ادب میں نفیس ہے۔	44

Appendix F

Beck Depression Inventory

بیک ڈپریشن انونٹری

نام ----------------------------- ازدواجی زندگی ------------ عمر ------------

جنس --------------- پیشہ -------------- تعلیم ---------------

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گروپ نمبر۱

(۰) میں اپنی زندگی محسوس نہیں کرتا ہوں

(۱) میں افسردہ رہتا ہوں

(۲) میں ہر لمحہ افسردہ اور غمگین رہتا ہوں اور اس سے نجات حاصل نہیں کرسکتا

(۳) میں اتنا افسردہ اور غمگین رہتا ہوں کہ برداشت کے باہر ہے

گروپ نمبر۲

(۰) میں خاص طور پر مستقبل کے لیے پریشان نہیں ہوں

(۱) میں مستقبل کے بارے میں بہت مایوس ہوں

(۲) مجھے ایسا محسوس ہوتا ہے کہ میرا کوئی مستقبل نہیں ہے

(۳) میں مستقبل سے بالکل ناامید ہوں اور حالات بہتر ہونے کی کوئی ممکن صورت نظر نہیں آتی

گروپ نمبر۳

(۰) میں خود کو ناکام محسوس نہیں کرتا

(۱) میرا خیال ہے کہ میں عام آدمی سے زیادہ ناکام ہوں

(۲) جب میں ماضی پر نظر ڈالتا ہوں تو تا کامیاں ہی نا کامیاں نظر آتی ہیں

(۳) مجھے محسوس ہوتا ہے کہ میں ایک فردی حیثیت سے مکمل طور پر نا کام ہوں

گروپ نمبر۴

(۰) مجھے اب بھی ہر چیز سے پہلے جیسا اطمینان حاصل ہوتا ہے

(۱) مجھے کسی چیز سے پہلے کی طرح لطف حاصل نہیں ہوتا

(۲) مجھے اب کسی بھی چیز سے پہلے جیسا بھرپور اطمینان حاصل نہیں ہوتا

(۳) میں اب ہر چیز سے خود کو غیر مطمئن اور بور محسوس کرتا ہوں

گروپ نمبر۵

(۰) میں کسی مخصوص قسم کے احساس جرم میں مبتلا نہیں ہوں

(۱) میں ہر وقت احساس جرم و ملامت میں مبتلا رہتا ہوں

(۲) میں بیشتر وقت شدید احساس جرم و ملامت کا شکار رہتا ہوں

(۳) میں ہر لمحہ احساس جرم و ملامت میں گرفتار رہتا ہوں

گروپ نمبر۶

(۰) مجھے یہ احساس نہیں ہوتا کہ مجھے سزا مل رہی ہے

(۱) مجھے یہ اندیشہ رہتا ہے کہ مجھے کو سزا مل رہی ہے

(۲) میں سزا ملنے کی توقع میں رہتا ہوں

(۳) مجھے یہ محسوس ہوتا ہے کہ مجھے سزا مل رہی ہے

گروپ نمبر۷

(۰) میں اپنے آپ سے مایوس نہیں ہوں

(۱) میں اپنی ذات سے مایوس ہوں

(۲) میں اپنی ذات سے کراہت محسوس کرتا ہوں

(۳) میں اپنی ذات سے نفرت کرتا ہوں

گروپ نمبر۸

(۰) میں یہ محسوس نہیں کرتا کہ میں کسی سے بدتر ہوں

(۱) میں اپنی غلطیوں اور کمزوریوں پر اپنے آپ کو تنبیہ کرتا رہتا ہوں

(۲) میں ہر لمحہ اپنی غلطیوں پر خود کو الزام دیتا رہتا ہوں

(۳) میں پیش آنے والی ہر خرابی پر خود کو مورد الزام ٹھہراتا رہتا ہوں

گروپ نمبر۹

(۰) میرے ذہن میں خود کو ہلاک کرنے کا کوئی تصور نہیں ہے

(۱) میرے ذہن میں خود کو ہلاک کرنے کا تصور تو آتا ہے لیکن اس پر عمل نہیں کروں گا

(۲) میں اپنے آپ کو ہلاک کروں گا

(۳) اگر مجھے موقع ملا تو خود کو ہلاک کروں گا

گروپ نمبر۱۰

(۰) میں معمول سے زیادہ نہیں روتا

(۱) میں اب پہلے سے زیادہ آنسو بہاتا ہوں

(۲) میں تو اب روتا ہی رہتا ہوں

(۳) پہلے میں آنسو بہا لیا کرتا تھا لیکن اب اگر روؤ بھی ہوں تو آنسو نہیں نکلتے

گروپ نمبر۱۱

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(۰) مجھے پہلے سے زیادہ تھکاہٹ نہیں ہوتی ہے

(۱) پہلے کے مقابلے میں اب میں زیادہ آسانی سے تھکاوٹ اور برہمی محسوس کرتا ہوں

(۲) مجھے اب ہر بات پر تھکاوٹ محسوس ہوتی ہے

(۳) جن چیزوں پر مجھے پہلے تھکاوٹ اور برہمی محسوس ہوتی تھی اب بالکل نہیں ہوتی

گروپ نمبر ۱۲

(۰) دوسرے لوگوں میں میری دلچسپی ختم نہیں ہوتی ہے

(۱) پہلے کے مقابلے میں اب میں دوسرے لوگوں میں کم دلچسپی لیتا ہوں

(۲) دوسرے لوگوں میں اب میری دلچسپی تقریباً ختم ہوگئی ہے

(۳) اب مجھے دوسرے لوگوں سے قطعی کوئی دلچسپی باقی نہیں رہی ہے

گروپ نمبر ۱۳

(۰) میں اب بھی پہلے کی طرح اپنے فیصلے کرتا ہوں

(۱) پہلے کے مقابلے میں زیادہ تر فیصلے کرتا رہتا ہوں

(۲) اب مجھے فیصلے کرنے میں پہلے سے زیادہ دشواری ہوتی ہے

(۳) اب میں کوئی بھی فیصلہ کرنے کے قابل نہیں رہا ہوں

گروپ نمبر ۱۴

(۰) مجھے اپنی ذات میں کوئی نئی خامی محسوس نہیں ہوتی

(۱) مجھے یہ تشویش رہتی ہے کہ اب پہلے کے مقابلے نحیر رسیدہ اور بدل ہوگیا ہوں

(۲) مجھے محسوس ہوتا ہے کہ مجھ میں ایسی مستقل تبدیلیاں آگئی ہیں جن سے میری دلکشی ختم ہوگئی ہے

(۳) مجھے یقین ہے کہ میں بہت بدل ہوا ہوں

گروپ نمبر ۱۵

(۰) میں اب بھی پہلے کی طرح کام کر سکتا ہوں

(۱) کسی کام کو شروع کرنے میں مجھے اب زیادہ کوشش کرنا پڑتی ہے

(۲) اب میں بڑی مشکل سے خود کو کسی کام کے کرنے پر آمادہ کر پاتا ہوں۔

(۳) اب میں کوئی کام نہیں کر سکتا۔

(۰) میں اب بھی حسب معمول سو سکتا ہوں

(۱) اب میں پہلے کی طرح آسانی سے نہیں سو سکتا

(۲) اب میں معمول سے دو تین گھنٹے پہلے بیدار ہو جاتا ہوں اور اس کے بعد مشکل سے نیند آتی ہے

(۳) معمول سے کئی گھنٹے قبل میری آنکھ کھل جاتی ہے اور دوبارہ نیند نہیں آتی

گروپ نمبر ۱۷

(۰) مجھے اب بھی معمول سے زیادہ تھکن نہیں ہوتی ہے

(۱) پہلے کے مقابلے اب مجھے آسانی سے تھکن ہو جاتی ہے

(۲) میں کوئی بھی کام کروں تھک جاتا ہوں

(۳) اب میں اتنی تھکن محسوس کرتا ہوں کہ کوئی کام نہیں کر سکتا

گروپ نمبر ۱۸

(۰) میری بھوک میں کوئی کمی نہیں آتی ہے

(۱) میری بھوک اب پہلے جیسی بہتر نہیں رہی ہے

(۲) میری بھوک اب کم ہوگئی ہے

(۳) مجھے اب بالکل بھوک نہیں لگتی ہے

گروپ نمبر ۱۹

(۰) آج بھی میرے وزن میں کوئی خاص کمی نہیں آئی ہے

(۱) میرا وزن ۵ پونڈ سے زیادہ ہوگیا ہے

(۲) میرا وزن دس پاؤنڈ سے زیادہ ہوگیا ہے

(۳) میرا وزن پندرہ پاؤنڈ سے زیادہ کی آگیا ہے

میں دانستہ کم کھا رہا ہوں تاکہ میرا وزن کم ہو جائے۔ ہاں ۔۔۔۔۔ نہیں ۔۔۔۔۔

گروپ نمبر ۲۰

(۰) مجھے اپنی صحت کے بارے میں کوئی غیر معمولی تشویش لاحق نہیں ہے۔

(۱) میں اپنی جسمانی تکالیف مثلاً بدن میں درد بدہضمی و قبض سے پریشان ہوں۔

(۲) میں اپنی جسمانی تکالیف سے اتنا فکرمند ہوں کہ کسی اور چیز کے بارے سوچنا مشکل ہوگیا ہے۔

(۳) مجھے اپنی جسمانی تکالیف نے اتنی تشویش میں مبتلا کر دیا ہے کہ اور کچھ سوچ ہی نہیں سکتا۔

گروپ نمبر ۲۱

(۰) جنسی دلچسپی میں مجھے کسی کمی کا احساس نہیں ہوتا۔

(۱) جنس میں میری دلچسپی اب پہلے سے کم ہوگئی ہے۔

(۲) جنس میں میری دلچسپی اب بہت کم ہوگئی ہے

(۳) اب مجھے جنس میں کوئی دلچسپی باقی نہیں رہی ہے

مجموعی حاصل صفحہ ۔1 ------------------------------------

مجموعی حاصل صفحہ ۔2 ------------------------------------

فل سکور ------------------------------------

Appendix G

IMPLIMENTATION OF MET RECORD (TREATMENT GROUP)

ماہر نفسیات کا نام:------------------------ نام:------------------------

سیشن کا دورانیہ:------------------------ منشیات کی بحالی کا مرکز:------------------------

دستخط	سیشن	تاریخ	نمبر شمار
	تبدیلی کے لیے تحریکی مرحلے کا اندازہ		1
	ہسٹری ٹیکنگ اور ریورٹ بلڈنگ		2
	رہائشی علاج پر مجموعی طور پوسٹ ڈیٹو کسیفکیشن کنڈیشن/سائیکو ایجوکیشن		3
	(A-M) منشیات کے استعمال کا ذاتی جائزہ		4
	بحالی کے لیے خود تحریکی بیانات کے استعمال کرنے کے طریقے		5
	عمل اور بے عملی کی آزادی انتخاب کے نتائج پر بات چیت		6
	منشیات سے پرہیز اور نقصان میں کمی		7
	تبدیلی کے منصوبے کے لیے ورک شیٹ		8
	MET میں خاندان کے افراد کو شامل کرنا		9
	پیشرفت کا جائزہ لینا اور تحریک کی تجدید کرنا		10

ماہر نفسیات کے دستخط

Appendix H

University of Rhode Island Change Assessment (URICA)

ذیل میں ہر ایک بیان اس بات کی وضاحت کرتا ہے کہ جب کوئی شخص علاج شروع کر رہا ہو یا اپنی زندگیوں میں مسائل تک پہنچ رہا ہو تو وہ کیسا محسوس کر سکتا ہے۔

براہ کرم اس حد کی نشاندہی کریں جس پر آپ ہر ایک بیان سے متفق یا متفق نہیں ہیں۔ ہر معاملے میں، شرائط کے مطابق اپنا انتخاب کریں۔ آپ ابھی کیسا محسوس کر رہے ہیں،

یہ نہیں کہ آپ نے ماضی میں کیا محسوس کیا ہے یا آپ محسوس کرنا چاہیں گے۔ کے لیے وہ تمام بیانات جو آپ کے "منشیات کے مسئلہ "کا حوالہ دیتے ہیں، آپ کے منشیات کے

غیر قانونی استعمال سے متعلق مسائل کے جوابات۔ "یہاں" اور "یہ جگہ " کے الفاظ آپ کے درخت کا حوالہ دیتے ہیں۔

1= سختی سے اختلاف

2= متفق

3= غیر فیصلہ کن

4= متفق

5= سختی سے متفق

مندرجہ ذیل نمبر کی نشاندہی کریں جو یہ بتاتا ہے کہ آپ ہر ایک بیان سے کتنا متفق یا غیر متفق ہیں۔

سختی سے متفق	متفق	غیر فیصلہ کن	متفق	سختی سے اختلاف		
5	4	3	2	1	میرے اندر کوئی مسئلہ نہیں۔ تبدیل کرنے پر غور کرنا میرے لیے زیادہ معنی نہیں رکھتا۔	1
5	4	3	2	1	میں آخر کار اپنے مسئلے پر کچھ کام کر رہا ہوں۔	2
5	4	3	2	1	میں سوچ رہا ہوں کہ میں اپنے بارے میں کچھ بدلنا چاہتا ہوں۔	3
5	4	3	2	1	بعض اوقات میرا مسئلہ مشکل ہوتا ہے، لیکن میں اس پر کام کر رہا ہوں۔	4
5	4	3	2	1	تبدیل کرنے کی کوشش کرنا میرے لیے بہت زیادہ وقت کا ضیاع ہے کیونکہ مسئلہ کا میرے ساتھ کوئی تعلق نہیں ہے۔	5
5	4	3	2	1	میں امید کر رہا ہوں کہ میں آپ کو بہتر طور پر سمجھنے کے قابل ہو جاؤں گا۔	6
5	4	3	2	1	مجھے لگتا ہے کہ مجھ میں خامیاں ہیں، لیکن واقعی میں تبدیل کرنے کی ضرورت نہیں ہے۔	7

5	4	3	2	1	میں واقعی تبدیلی کے لیے سخت محنت کر رہا ہوں۔	8
5	4	3	2	1	مجھے ایک مسئلہ ہے اور میں واقعی سوچتا ہوں کہ مجھے اس پر کام کرنا چاہیے۔	9
5	4	3	2	1	میں اس چیز کی پیروی نہیں کر رہا ہوں جو میں نے پہلے ہی تبدیل کر دی تھی اور اس کے ساتھ ساتھ جو میں نے تبدیلی کی امید کی تھی، اور میں منشیات کے مسئلے کو دوبارہ سے روکنا چاہتا ہوں۔	10
5	4	3	2	1	اگرچہ میں ہمیشہ تبدیل کرنے میں کامیاب نہیں ہوں، میں کم از کم اپنے مسئلے پر کام کر رہا ہوں۔	11
5	4	3	2	1	میں نے سوچا کہ ایک بار جب میں نے مسئلہ حل کر لیا تو میں اس سے آزاد ہو جاؤں گا، لیکن کبھی کبھی میں خود کو اس کے ساتھ جدوجہد کرتا ہوا پاتا ہوں۔	12
5	4	3	2	1	کاش میرے پاس اپنے مسئلے کو حل کرنے کے بارے میں مزید خیالات ہوتے۔	13
5	4	3	2	1	شاید کوئی یا کوئی اور چیز میری مدد کر سکے۔	14
5	4	3	2	1	میں نے جو تبدیلیاں کی ہیں ان کو برقرار رکھنے میں میری مدد کرنے کے لیے مجھے ابھی مدد کی ضرورت ہو سکتی ہے۔	15
5	4	3	2	1	میں اس مسئلے کا حصہ ہو سکتا ہوں، لیکن مجھے نہیں لگتا کہ میں واقعی ہوں۔	16
5	4	3	2	1	مجھے امید ہے کہ کوئی میرے لیے کچھ اچھا مشورہ دے گا۔	17
5	4	3	2	1	کوئی بھی تبدیلی کے بارے میں بات کر سکتا ہے۔ میں اصل میں اس کے بارے میں کچھ کر رہا ہوں۔	18
5	4	3	2	1	نفسیات کے بارے میں یہ ساری باتیں بورنگ ہیں۔ لوگ اپنے مسائل کیوں نہیں بھول سکتے؟	19
5	4	3	2	1	میں اپنے آپ کو اپنی پریشانی کے دوبارہ ہونے سے روکنے کے لئے جدوجہد کر رہا ہوں۔	20
5	4	3	2	1	یہ مایوس کن ہے، لیکن مجھے لگتا ہے کہ شاید مجھے ایک مسئلہ کی تکرار ہو رہی ہے جسے میں نے سوچا تھا کہ میں نے حل کر لیا ہے۔	21
5	4	3	2	1	مجھے دوسرے آدمی کی طرح پریشانی ہے۔ تو ان کے بارے میں سوچتے وقت کیوں گزارتے ہیں؟	22
5	4	3	2	1	میں اپنے مسئلے پر سرگرمی سے کام کر رہا ہوں۔	23
5	4	3	2	1	آخرکار میں نے اپنے مسئلے کو تبدیل کرنے کی کوشش کی تھی، ہر بار پھر یہ مجھے پریشان کرنے کے لیے آتا ہے۔	24

Appendix I-I

SELF-EVALUATION OF DRUG USE

<div dir="rtl">

منشیات کے استعمال کا ذاتی جائزہ

سب سے پہلے، درج ذیل فہرست میں سے، وہ چار منشیات منتخب کریں جو آپ سب سے زیادہ استعمال کرتے ہیں، یا جن کے بارے میں آپ سب سے زیادہ فکر مند ہیں۔

ٹرانکوئلائزرز	سونگھنا(گلو، گیس، وغیرہ)
ہیروئن	کوکین (بشمول کریک)
چرس	سٹیرائڈز
یا کوئی دوسرا نشہ جو آپ استعمال کرتے ہیں	تمباکو
	ہیلوسینوجنز (جیسے ایل ایس ڈی)

</div>

<div dir="rtl">

1۔ میں یقینی طور پر بہت زیادہ استعمال کرتا ہوں۔	منشیات کی مقدار	AMOUNT	A
2۔ میں شاید اسے بہت زیادہ استعمال کرتا ہوں۔			
3۔ مجھے یقین نہیں ہے			
4۔ میں شاید بہت زیادہ استعمال نہیں کرتا ہوں			
5۔ میں یقینی طور پر بہت زیادہ استعمال نہیں کرتا ہوں۔			
1۔ میرے خیال میں اس کا میرے رویے پر بہت منفی اثر پڑا ہے۔	آپ کا برتاؤ	BEHAVIOR	B
2۔ میرے خیال میں اس کا میرے رویے پر کسی حد تک منفی اثر پڑا ہے۔			
3۔ مجھے لگتا ہے کہ اس کا میرے رویے پر کوئی اثر نہیں ہوا ہے۔			
4۔ میرے خیال میں اس کا میرے رویے پر کسی حد تک مثبت اثر پڑا ہے۔			
5۔ میرے خیال میں اس کا میرے رویے پر بہت مثبت اثر ہوا ہے۔			
1۔ میرے خیال میں اس دوا کے استعمال سے میری زندگی کے مسائل بہت زیادہ بگڑ گئے ہیں۔	زندگی کے مسائل کا مقابلہ کرنا	COPING with Life Problems	C
2۔ میرے خیال میں اس نشے کے استعمال سے میری زندگی کے مسائل قدرے خراب ہو گئے ہیں۔			
3۔ میرے خیال میں اس نشے کا میری زندگی کے مسائل پر کسی نہ کسی طرح کوئی اثر نہیں پڑا ہے۔			
4۔ میرے خیال میں اس نشے کے استعمال سے مجھے زندگی کے مسائل سے تھوڑی بہتر طریقے سے نمٹنے میں مدد ملی ہے۔			

</div>

5۔میرے خیال میں اس نشے کے استعمال سے مجھے زندگی کے مسائل سے بہت بہتر طریقے سے نمٹنے میں مدد ملی ہے۔			
1۔میں یقینی طور پر اس نشے پر منحصر ہوں۔	انحصار(نشے کی لت)	DEPENDENCE (Addiction)	D
2۔میں شاید اس نشے پر منحصر ہوں۔			
3۔مجھے یقین نہیں ہے۔			
4۔شاید میں اس نشے پر منحصر نہیں ہوں۔			
5۔یقینی طور پر میں اس نشے پر منحصر نہیں ہوں۔			
1۔میرے خیال میں اس کا میرے جذبات اور جذباتی صحت پر بہت منفی یانقصان دہ اثر پڑا ہے۔	جذباتی صحت	EMOTIONAL Health	E
2۔میرے خیال میں اس کا میرے جذبات اور جذباتی صحت پر کچھ منفی یانقصان دہ اثر پڑا ہے۔			
3۔میرے خیال میں اس کا میرے جذبات اور جذباتی صحت پر کسی نہ کسی طرح کوئی اثر نہیں پڑا ہے۔			
4۔میرے خیال میں اس نے میرے جذبات اور جذباتی صحت پر کچھ مثبت یامد دگار اثر ڈالا ہے۔			
5۔میرے خیال میں اس کا میرے جذبات اور جذباتی صحت پر بہت مثبت یامد دگار اثر پڑا ہے۔			
1۔میرے خیال میں اس کا میرے خاندان پر بہت نقصان دہ اثر پڑا ہے۔	خاندان	FAMILY	F
2۔میرے خیال میں اس کا میرے خاندان پر کسی حد تک نقصان دہ اثر پڑا ہے۔			
3۔میرے خیال میں میرے خاندان پر اس کا کوئی اثر نہیں ہوا۔			
4۔میرے خیال میں اس کا میرے خاندان پر کسی حد تک مثبت اثر پڑا ہے۔			
5۔میرے خیال میں اس کا میرے خاندان پر بہت مثبت اثر ہوا ہے۔			
1۔اس نے یقینی طور پر مجھے اپنے بارے میں بدتر محسوس کروایا ہے۔	اپنے بارے میں اچھا محسوس کرنا(خود اعتمادی)	Feeling GOOD About Yourself (Self-Esteem)	G
2۔اس نے شاید مجھے اپنے بارے میں برا محسوس کروایا ہے۔			
3۔میں اپنے بارے میں کیسا محسوس کرتا ہوں اس پر اس کا کوئی اثر نہیں ہوا۔			
4۔اس نے شاید مجھے اپنے بارے میں بہتر محسوس کروایا ہے۔			
5۔اس نے یقینی طور پر مجھے اپنے بارے میں بہتر محسوس کروایا ہے۔			
1۔میرے خیال میں اس کا میری صحت پر بہت منفی نقصان دہ اثر پڑا ہے۔	جسمانی صحت	Physical HEALTH	H
2۔میرے خیال میں اس کا میری صحت پر کچھ منفی یانقصان دہ اثر پڑا ہے۔			
3۔میرے خیال میں اس کا میری صحت پر کسی نہ کسی طریقے سے کوئی اثر نہیں ہوا ہے۔			
4۔مجھے لگتا ہے کہ اس نے میری صحت پر کچھ مثبت یامد دگار اثر ڈالا ہے۔			
5۔میرے خیال میں اس کا میری صحت پر بہت مثبت یامد دگار اثر پڑا ہے۔			
1۔مجھے لگتا ہے کہ اس کا میرے سماجی تعلقات پر بہت منفی یانقصان دہ اثر پڑا ہے۔	اہم تعلقات(سماجی زندگی)	IMPORTANT RELATIONSHIPS (Social Life)	I
2۔میرے خیال میں اس کا میرے سماجی تعلقات پر کچھ منفی یانقصان دہ اثر پڑا ہے۔			
3۔میرے خیال میں اس کا میرے سماجی تعلقات پر کسی نہ کسی طریقے سے کوئی اثر نہیں ہوا ہے۔			
4۔میرے خیال میں اس کا میرے سماجی تعلقات پر کچھ مثبت یامد دگار اثر پڑا ہے۔			
5۔میرے خیال میں اس کا میرے سماجی تعلقات پر بہت مثبت یامد دگار اثر پڑا ہے۔			

1۔میرے خیال میں اس کامیرے کام یا تعلیم پر بہت منفی اثر پڑا ہے۔ 2۔میرے خیال میں اس کامیرے کام یا تعلیم پر کسی حد تک منفی اثر پڑا ہے۔ 3۔میرے خیال میں اس کامیرے کام یا تعلیم پر کوئی اثر نہیں پڑا۔ 4۔میرے خیال میں اس کامیرے کام یا تعلیم پر کسی حد تک مثبت اثر پڑا ہے۔ 5۔میرے خیال میں اس کامیرے کام یا تعلیم پر بہت مثبت اثر پڑا ہے۔	کام:کام یا تعلیم	JOB: Work /Education	J
1۔یقینی طور پر میری زندگی میں اہم لوگ ہیں جو سمجھتے ہیں کہ میں بہت زیادہ استعمال کرتا ہوں۔ 2۔شاید میری زندگی میں اہم لوگ ہیں جو سمجھتے ہیں کہ میں بہت زیادہ نشہ استعمال کرتا ہوں۔ 3۔مجھے یقین نہیں کہ آیا میری زندگی میں کوئی بھی اہم لوگ سوچتے ہیں کہ میں بہت زیادہ نشہ استعمال کرتا ہوں۔ 4۔شاید میری زندگی میں کوئی بھی اہم لوگ یہ نہیں سوچتے کہ میں بہت زیادہ نشہ استعمال کرتا ہوں۔ 5۔یقینی طور پر میری زندگی میں کوئی اہم لوگ نہیں ہیں جو سمجھتے ہیں کہ میں بہت زیادہ نشہ استعمال کرتا ہوں۔	کلیدی (اہم)لوگ کیا سوچتے ہیں	What KEY PEOPLE Think	K
1۔میرے خیال میں اس کا بہت منفی اثر ہوا ہے۔ 2۔میرے خیال میں اس کا کسی حد تک منفی اثر پڑا ہے۔ 3۔میرے خیال میں اس کا کسی نہ کسی طریقے سے کوئی اثر نہیں ہوا۔ 4۔میرے خیال میں اس کا کسی حد تک مثبت اثر ہوا ہے۔ 5۔میرے خیال میں اس کا بہت مثبت اثر ہوا ہے۔	آ پیار بھرے تعلقات اور جنسیت	LOVING RELATIONSHIPS AND SEXUALITY	L
1۔میرے خیال میں اس نے میری ذہنی صلاحیتوں پر بہت نقصان دہ اثر ڈالا ہے۔ 2۔میرے خیال میں اس نے میری ذہنی صلاحیتوں پر کسی حد تک نقصان دہ اثر ڈالا ہے۔ 3۔مجھے لگتا ہے کہ اس کا میری ذہنی صلاحیتوں پر کوئی اثر نہیں ہوا ہے۔ 4۔میرے خیال میں اس کا میری ذہنی صلاحیتوں پر کسی حد تک فائدہ مند اثر ہوا ہے۔ 5۔میرے خیال میں اس کا میری ذہنی صلاحیتوں پر کسی حد تک فائدہ مند اثر ہوا ہے۔	ذہنی صلاحیتیں	MENTAL ABILITIES	M
1۔مجھے اپنے استعمال کو تبدیل کرنے کے لیے یقینی طور پر کچھ کرنے کی ضرورت ہے۔ 2۔مجھے اپنے استعمال کو تبدیل کرنے کے لیے شاید کچھ کرنے کی ضرورت ہے۔ 3۔مجھے یقین نہیں ہے کہ مجھے اپنا استعمال تبدیل کرنے کے لیے کچھ کرنے کی ضرورت ہے۔ 4۔مجھے اپنے استعمال کو تبدیل کرنے کے لیے شاید کچھ کرنے کی ضرورت نہیں ہے۔ 5۔مجھے یقینی طور پر اپنے استعمال کو تبدیل کرنے کے لیے کچھ کرنے کی ضرورت نہیں ہے۔	تبدیلی کی ضرورت ہے	NEED for Change	N
1۔میرے خیال میں اس کا میری زندگی پر بہت منفی اثر پڑا ہے۔ 2۔میرے خیال میں اس کا میری زندگی پر کسی حد تک منفی اثر پڑا ہے۔ 3۔مجھے لگتا ہے کہ اس کا میری زندگی پر کوئی نہ کوئی اثر نہیں پڑے گا۔ 4۔مجھے لگتا ہے کہ اس نے میری زندگی پر کسی حد تک مثبت اثر ڈالا ہے۔ 5۔میرے خیال میں اس کا میری زندگی پر بہت مثبت اثر ہوا ہے۔	مجموعی طور پر اثرات	OVERALL Effects	O

Appendix I-II

<div dir="rtl">

بحالی کے لیے خود تحریکی بیانات کے استعمال کرنے کے طریقے

1.	**خود تحریکی بیانات کا انتخاب** ایسے خود تحریکی بیانات کا انتخاب کریں جو آپ کے لیے درست اور بامعنی محسوس کریں۔ اور ان چیزوں کے بارے میں سوچیں جن پر آپ توجہ مرکوز کرنا چاہتے ہیں،
2.	**باقاعدگی سے مشق کریں** اپنے روزمرہ کے معمولات میں مثبت خود تحریکی بیانات کو شامل کریں، جیسے کہ صبح جب آپ بیدار ہوں، مراقبہ کے دوران، یا رات کو سونے سے پہلے انہیں دہرائیں۔
3.	**تصور کریں** جب آپ اپنے خود تحریکی بیانات کو دہراتے ہیں تو اپنے آپ کو مثبت انداز میں دیکھنے کی کوشش کریں، اور تصور کریں کہ آپ کی بحالی کے اہداف کو حاصل کرنا کیسا نظر آئے گا۔
4.	**اپنے آپ پر بھروسہ کرو** مثبت خود تحریکی بیانات کو محض الفاظ کے طور پر مسترد کرنا آسان ہو سکتا ہے، لیکن آپ جو کہہ رہے ہیں اس پر یقین کرنے کی کوشش کریں۔ اپنے آپ کو اپنی ماضی کی کامیابیوں کو یاد دلائیں، اور مثبت تبدیلیاں کرنے کی اپنی صلاحیت پر بھروسہ کریں۔
5.	**اپنے اثبات کو دہرائیں** جب خود تحریکی بیانات کی بات آتی ہے تو تکرار کلیدی ہوتی ہے۔ جتنا زیادہ آپ اپنے مثبت اثبات کو دہرائیں گے، اتنا ہی وہ آپ کے لاشعور میں پیوست ہو جائیں گے اور آپ کی سوچ کے نمونوں کو دوبارہ ترتیب دینے میں مدد کریں گے
6.	**موجودہ دور کا استعمال کریں** اپنے خود تحریکی بیانات کو موجودہ دور میں بیان کریں، گویا آپ اپنے مقاصد کو حاصل کر چکے ہیں۔ مثال کے طور پر، یہ کہنے کے بجائے کہ "میں اپنی نشے کی لت پر قابو پاؤں گا،" کہیۓ "میں اپنی نشے کی لت پر قابو پانے کے قابل ہوں۔"
7.	**اپنے آپ پر صبر اور مہربان بنیں** بحالی ایک سفر ہے، اور تبدیلی میں وقت لگتا ہے۔ اپنے آپ کے ساتھ صبر کریں، اور اپنے اہداف کی طرف کام کرتے وقت اپنے آپ سے رحم اور شفقت کے ساتھ پیش آئیں۔

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Appendix I-III

Eliciting Self-Motivational Statements

خود تحریکی بیانات	
میں ایک اچھے راستے پر ہوں۔	1.
میں خدشات کو چھوڑنے کا انتخاب کرتا ہوں۔	2.
میں قابل احترام ہوں۔	3.
میں ہر روز ہمت کے ساتھ اٹھتا ہوں۔	4.
میں اپنے مقاصد کو ظاہر کر رہا ہوں۔	5.
میں اپنے خوابوں کو مقاصد میں بدل دیتا ہوں۔	6.
میری قدر اور تعریف کی جاتی ہے۔	7.
میں اپنے لیے وہ زندگی بنا رہا ہوں جو میں چاہتا ہوں۔	8.
میں مضبوط اور قابل ہوں۔	9.
حیرت انگیز چیزیں میرے راستے میں آ رہی ہیں۔	10.
میں اپنی زندگی کو بہتر بنانے کے لیے ہر روز چھوٹے چھوٹے قدم اٹھا رہا ہوں۔	11.
میں اپنی پچھلی غلطیوں کے لیے خود کو معاف کرتا ہوں۔	12.
مجھے خوشی محسوس کرنے کے لیے منشیات کے استعمال کی ضرورت نہیں ہے۔	13.
مجھے اپنے اہداف کو حاصل کرنے کی اپنی صلاحیت پر اعتماد ہے۔	14.
پرہیز گاری مجھے اپنے لیے ایک بہتر مستقبل بنانے میں مدد کر رہی ہے۔	15.
مجھے ان تبدیلیوں پر فخر ہے جو میں نے کی ہیں۔	16.
مجھے یقین ہے کہ میرا راستہ کھل رہا ہے۔	17.
میں خوش رہنے کا مستحق ہوں۔	18.

19.	میں غلطیوں کو قبول کر تا ہوں کیونکہ میں ان سے آگے بڑھ سکتا ہوں۔ وہ اب مجھے نیچے نہیں گرا سکتی ہیں۔
20.	نشے کے ساتھ میری جدوجہد اس بات کی وضاحت نہیں کرتی ہے کہ میں کون ہوں۔
21.	میں اپنی اور اپنے پیاروں کا احترام کرتا ہوں۔
22.	میں اپنے آپ کو کریڈٹ دینے سے زیادہ مضبوط ہوں۔
23.	میرے پاس بحالی میں کامیاب ہونے کی ہمت، طاقت، سمجھ اور عزم ہے۔
24.	میں جانتا ہوں کہ جب مجھے ضرورت ہو مدد طلب کرنا ٹھیک ہے۔
25.	میں قبولیت اور محبت کا مستحق ہوں۔
26.	میں اپنے جسم کی عزت کرتا ہوں جو میرے لیے صحت مند ہے۔
27.	مجھے جن مسائل کا سامنا ہے وہ میرے لیے زیادہ بڑے نہیں ہیں، اور میں ان کو حل کرنے کی اہلیت رکھتا ہوں۔
28.	موجودہ لمحے میں سکون مل سکتا ہے۔ مجھے کہیں اور دیکھنے کی ضرورت نہیں ہے۔
29.	میرے اندر وہ سب کچھ ہے جس کی مجھے خوشی کی ضرورت ہے۔
30.	میں شفایاب ہو رہا ہوں۔
31.	میں خود کو ہمدردی کے ساتھ اپنے جذبات پر عمل کرنے کی جگہ دیتا ہوں۔
32.	میں اپنے آپ سے ایک دوست کی طرح سلوک کرتا ہوں جس کی مجھے واقعی پرواہ ہے۔
33.	زندہ رہنے میں خوبصورتی ہے۔
34.	میں تکلیف کا سامنا کرنے کے لئے کافی بہادر ہوں۔
35.	میں ان رشتوں کو ترجیح دیتا ہوں جو مجھے ترقی دیتے ہیں اور میری بحالی کی حمایت کرتے ہیں۔
36.	میں اپنی زندگی میں لوگوں سے رابطہ قائم کرنے اور ان کے سامنے کھلنے کے لیے کافی محفوظ محسوس کرتا ہوں۔
37.	میری صحت یابی مجھے زندگی گزارنے کا موقع فراہم کر رہی ہے جس کا میں حقدار ہوں۔
38.	میں اپنے نشے سے زیادہ مضبوط ہوں۔

39.	میں ہمت والا ہوں۔
40.	میں مستقبل کا سامنا کرنے کے لئے کافی بہادر ہوں۔
41.	میں حال میں رہنے کا انتخاب کرتا ہوں۔
42.	میں ایک مثبت انسان ہوں۔
43.	میں برکتوں کو اپنی طرف متوجہ کرتا ہوں۔
44.	میں آج جو کچھ کرتا ہوں وہ ایک بہتر آنے والا کل بناتا ہے۔
45.	ہینڈل کرنے کے لئے کوئی بڑا چیلنج نہیں ہے۔
46.	مجھے اپنی صلاحیتوں پر یقین ہے۔
47.	آج کا دن اچھا ہے۔
48.	میری زندگی ایک تحفہ ہے۔
49.	میں پراعتماد ہوں۔
50.	میں وہ بن رہا ہوں جو میں بننا چاہتا ہوں۔
51.	میں صحت مند دماغ اور زندگی کی طرف ہر روز ترقی کر رہا ہوں۔
52.	میں اپنی اور دوسروں کی طرف سے محبت، احترام، اور سمجھ کے قابل ہوں۔
53.	میں اپنے صحت یابی کے سفر میں میرے لیے دستیاب تعاون اور وسائل کے لیے شکر گزار ہوں۔
54.	میں منفی خود گفتگو کو چھوڑنے اور اسے خود رحمی سے بدلنے کا انتخاب کر رہا ہوں۔
55.	بحالی کی جانب ضروری اقدامات کرنے پر مجھے اپنے آپ پر فخر ہے۔
56.	میں ترقی کی ذہنیت کو اپنا رہا ہوں اور چیلنجوں کو ترقی کے مواقع کے طور پر دیکھ رہا ہوں۔
57.	میں اپنی صحت یابی کے حصے کے طور پر خود کی دیکھ بھال اور خود سے محبت کی مشق کرنے کے لیے پر عزم ہوں۔
58.	میں صحت مند حدود طے کرنے اور ان چیزوں (نشے) کو نہ کہنے کے قابل ہوں جو مجھے فائدہ نہیں پہنچاتی ہیں۔

	میں اپنے اور اپنے سفر کو قبول کر رہا ہوں، بشمول اتار چڑھاؤ۔	59.
	میں نے جو پیش رفت کی ہے اور اپنے مستقبل کے امکانات کے لیے پرجوش ہوں۔	60.
	میں اپنی جدوجہد کے ذریعے مضبوط اور زیادہ لچکدار ہوتا جارہا ہوں۔	61.
	میں ایک قابل قدر اور قابل شخص ہوں، چاہے میری ذہنی صحت کے چیلنجز ہوں۔	62.
	میری آواز اہمیت رکھتی ہے۔	63.
	میں ہر روز اپنے آپ کا ایک بہتر ورژن بن رہا ہوں۔	64.
	مجھے اپنی اعلیٰ طاقت پر بھروسہ ہے کہ وہ مجھے بحفاظت گھر واپس لے جائے گا۔	65.
	مجھ سے بڑی طاقت میرے قدموں کی رہنمائی کر رہی ہے۔	66.

Appendix I-IV

Communicating Free Choice and Consequences of Action and Inaction

عمل اور بے عملی کی آزادی انتخاب کے نتائج پر بات چیت

منشیات کا استعمال کرنے کا انتخاب ایک ذاتی فیصلہ ہے جس کے آپ کی جسمانی اور ذہنی صحت پر قلیل مدتی اور طویل مدتی دونوں طرح کے نتائج ہوسکتے ہیں۔

نشے کی زیادتی کے لیے مدد نہ لینے کا فیصلہ آپ کے تعلقات، کام اور مجموعی فلاح و بہبود پر مزید منفی اثرات کا باعث بن سکتا ہے۔

مدد اور علاج تک پہنچنے کا انتخاب آپ کو قیمتی وسائل اور معاونت کا نظام فراہم کر سکتا ہے تاکہ آپ کو منشیات کے استعمال کے چیلنجوں پر قابو پانے میں مدد ملے۔

حدود کا تعین کرنے اور مثبت انتخاب کرنے میں ناکامی انحصار کے چکر کا باعث بن سکتی ہے، جس سے مستقبل میں منشیات کے استعمال سے آزاد ہونا مشکل ہو جاتا ہے۔

صحت مند طریقے سے نمٹنے کے طریقہ کار میں مشغول ہونے کا انتخاب کرنا، جیسے کہ تھراپی، ورزش، یا مشاغل، صحت یابی کو برقرار رکھنے اور مکمل زندگی گزارنے کے امکانات کو بہت بہتر بنا سکتا ہے۔

نشہ آور اشیاء کے استعمال کے نتائج کو نظر انداز کرنے کے نتیجے میں قانونی مسائل، مالی مشکلات اور پیاروں کے ساتھ کشیدہ تعلقات پیدا ہوسکتے ہیں۔

منشیات کے استعمال کے خطرات اور نتائج کے بارے میں خود کو آگاہ کرنے کا فیصلہ آپ کو باخبر انتخاب کرنے اور اپنی زندگی پر قابو پانے کا اختیار دیتا ہے۔"" بنیادی جذباتی یا نفسیاتی مسائل کو حل کرنے میں کوتاہی کرنا جو مادہ کے غلط استعمال میں حصہ ڈال سکتے ہیں، بحالی اور مجموعی طور پر فلاح و بہبود کی طرف آپ کی پیشرفت کو روک سکتا ہے۔

اپنے آپ کو ایک معاون اور سمجھ بوجھ کے نیٹ ورک کے ساتھ گھیرنے کا انتخاب آپ کو حوصلہ افزائی اور جوابدہی فراہم کر سکتا ہے جو منشیات کے استعمال پر قابو پانے کے لیے درکار ہے۔

Appendix I-V

Consequences of Action and Inaction

<div dir="rtl">

عمل اور بے عملی کے نتائج

عمل اور غیر عمل کے نتائج پر مشق کرنے کے لیے مندرجہ ذیل فیصلے کے بیلنس ورک شیٹ کا استعمال کیا گیا ہے۔

فیصلہ کا توازن ورک شیٹ

نوٹ: ذیل میں، ان وجوہات میں لکھیں جن کے بارے میں آپ ہر ایک خانے میں سوچ سکتے ہیں۔ زیادہ تر لوگوں کے لیے، "تبدیلی کرنے" کا مطلب شاید الکحل اور منشیات کو

چھوڑنا ہو گا، لیکن یہ ضروری ہے کہ آپ اس بات پر غور کریں کہ آپ کیا خاص تبدیلی لانا چاہتے ہیں، جو کچھ اور بھی ہو سکتی ہے۔

	تبدیلی	کوئی تبدیلی نہیں
فائدہ	میری زندگی پر کنٹرول میں اضافہ	زیادہ پر سکون
	خاندان اور دوستوں سے تعاون	پارٹیوں میں زیادہ مزہ
	ملازمت کے مسائل میں کمی	میرے مسائل کے بارے میں سوچنے کی ضرورت نہیں ہے۔
	صحت اور مالیات میں بہتری	
قیمت (نقصان)	تناؤ / اضطراب میں اضافہ	دوستوں / خاندان کی طرف سے ناپسندیدگی
	زیادہ افسردہ محسوس کریں۔	پیسے کے مسائل
	بوریت میں اضافہ	قریبی تعلقات کو نقصان پہنچانا
	نیند کے مسائل	صحت کے خطرات میں اضافہ

</div>

Appendix I-VI

Abstinence and Harm Reduction

<div dir="rtl">

منشیات سے پرہیز اور نقصان میں کمی

بحث، آگاہی کے ذریعے ان نکات پر توجہ مرکوز کرتے ہوئے قائل کیا

1۔ کامیاب پرہیز ایک محفوظ انتخاب ہے۔

2۔ کم از کم منشیات کی لت سے پرہیز کرنے کی کچھ اچھی وجوہات ہیں۔

(مثلاً یہ جاننے کے لیے کہ منشیات کے بغیر جینا کیسا ہے۔

اور آپ کیسا محسوس کرتے ہیں؛

وہ طریقے سیکھنے کے لیے جن کے ذریعے آپ منشیات پر انحصار کر چکے ہیں؛

اپنی پرانی عادتوں کو ختم کرنے کے لیے؛

تبدیلی کا تجربہ کرنے اور کچھ اعتماد پیدا کرنے کے لیے؛

اپنی شریک حیات کو خوش کرنے کے لیے وغیرہ)

3۔ کوئی بھی منشیات کے استعمال کی "محفوظ" سطح کی ضمانت نہیں دے سکتا (بشمول شراب کا استعمال) جس سے آپ کو کوئی نقصان نہیں ہو گا۔

منشیات سے پرہیز نا کرنے کے خلاف مشورہ دینے کی وجوہات یہ ہیں:

کلائنٹ پر پرہیز کرنے کے لئے مضبوط بیرونی مطالبات	غیر قانونی مادوں کے استعمال میں ملوث قانونی خطرات
حمل	طبی حالات جو کسی بھی استعمال کے خلاف ہیں۔
دوائیوں کا استعمال / استعمال کرنا جو مرکب میں مضر ہیں۔	استعمال سے نفسیاتی مسائل بڑھنے کا امکان ہے۔
	شدید مسائل اور انحصار کی ہسٹری

</div>

Appendix I-VII

CHANGE PLAN WORKSHEET

تبدیلی کے منصوبے کے لیے ورک شیٹ

میں جو تبدیلیاں کرنا چاہتا ہوں وہ ہیں:

سب سے اہم وجوہات جن کی وجہ سے میں یہ تبدیلیاں کرنا چاہتا ہوں وہ ہیں:

میں تبدیلی میں جو اقدامات کرنے کا ارادہ رکھتا ہوں وہ ہیں:

دوسرے لوگ جن طریقے سے میری مدد کر سکتے ہیں وہ ہیں:

شخص   مدد کرنے کے ممکنہ طریقے

مجھے معلوم ہو گا کہ میرا منصوبہ کام کر رہا ہے اگر:

کچھ چیزیں جو میرے منصوبے میں مداخلت کر سکتی ہیں وہ ہیں:

Appendix I-VIII

Involving the Significant Other in MET

<div dir="rtl">

MET میں خاندان کے افراد کو شامل کرنا

کلائنٹ کے منشیات کے استعمال اور مسائل کے بارے میں خاندان کے افراد سے اس کے اپنے (ماضی اور حال) تجربات کے بارے میں پوچھنے کا طریقہ

یہ آپ کے لیے کیسا رہا ہے؟

آپ نے [کلائنٹ کے] منشیات کے استعمال کے بارے میں کیا محسوس کیا ہے؟

کن چیزوں نے آپ کو سب سے زیادہ پریشان کیا ہے؟

ماضی میں آپ کی مدد کرنے کی کوشش کرنے سے کس چیز نے آپ کی حوصلہ شکنی کی ہے؟

آپ کیا دیکھتے ہیں جو حوصلہ افزا ہے؟

کلائنٹ کی موجودگی میں خاندان کے افراد سے پوچھے گئے یہ سوالات ہر طرح کے خدشات کو دور کرنے میں مدد گار ثابت ہو سکتے ہیں:

1۔ منشیات کے استعمال نے آپ کو کیسے متاثر کیا ہے؟

2۔ اب کیا فرق ہے، جو آپ کو منشیات کے استعمال کے بارے میں زیادہ فکر مند بناتا ہے؟

3۔ آپ کے خیال میں کیا ہو گا اگر منشیات کا استعمال اسی طرح جاری رہا جیسا کہ ہوا ہے؟

خاندان کے ارکان سے حمایتی اور تصدیقی تبصرے کرنے کے لیے سوالات پوچھے گئے

1۔ جب وہ منشیات کا استعمال نہیں کر رہے ہیں تو آپ کو [کلائنٹ] کے بارے میں کون سی چیزیں سب سے زیادہ پسند ہیں؟

2۔ آپ نے تبدیلی کی کون سی مثبت علامتیں دیکھی ہیں، جو اس بات کی نشاندہی کرتی ہیں کہ [کلائنٹ] واقعی خود کو بدلنا چاہتا ہے؟

3۔ وہ کون سی چیزیں ہیں جو آپ کو امید دلاتی ہیں کہ اب حالات بہتر ہو سکتے ہیں

</div>

Appendix J

Permission Letter for Data Collection
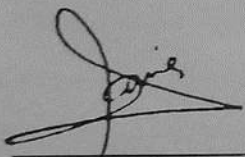
Date: 15-10-2021

To,

The Chairman

Najjat Trust, Banni Chawk, Rawalpindi Cantt

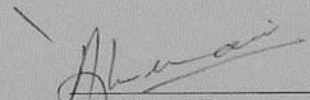**Subject: PERMISSION TO COLLECT DATA FOR INTERVENTION STUDY**

Respected Sir,

I hope you are doing well. My name is Samia Yasmeen (Registration # 54-FSS/PHDPSY/F-18), student of Ph.D. Psychology in Department of Psychology, International Islamic University, Islamabad. I am doing my Ph. D. Psychology research work on the topic "**Drug-Related Self-Esteem, Locus of Control, Perceived Social Support and Personality Traits: Efficacy of Motivation Enhancement Therapy on Substance Users**". Pretest posttest control group study is one of phase of my study. I am writing this letter to take permission to conduct this intervention phase in your rehabilitation center. This study will consist of two groups, Intervention group and control group. Participants of intervention group will receive MET implemented by the researcher herself. While control group participants will receive bio-psycho-social model of intervention already given by your organization. Your psychologist will be requested to take over the treatment activities of control group. I also need support from your rehabilitation incharge to perform pre-testing, post-testing, maintain soft copy of data collected from pre-testing and post-testing. I am writing to request your permission to use the inpatient clients at your rehabilitation center to implement Motivation Enhancement Therapy intervention technique. My technique has been designed from MET manual to help individuals recover more quickly and thoroughly from their Substance use.

I believe that your clients could greatly benefit from this new approach and it would be honor for me to work with them. I understand that your clients' safety and privacy are of the utmost importance. There are no known risks associated with the MET intervention technique. Please rest assured that I will take every necessary precaution to ensure that intervention activities will be conducted in a safe and respectful manner. All information collected during this study will be kept strictly confidential. Name and other identifying information of the client will not be used in any reports or publications. Participation in this study is voluntary. Additionally, I will provide copies of MET protocol and any other necessary documentation for your review. If you have any questions or concerns about this study, please contact Samia Yasmeen at 03435559218. By signing below, you acknowledge that you have read and understand the information presented in this consent form and allow to provide MET intervention to the clients and discussed support in your organization. Thank you for your consideration.

Researcher
Samia Yasmeen (54-FSS/PHDPSY/F-18)
International Islamic University, Islamabad,
Pakistan

Approved By
Chairman
Najjat Trust

Need Permission for Beck Depression Inventory Urdu version

Inbox

Search for all messages with label Inbox

Remove label Inbox from this conversation

S

Samia Yasmeen 54-FSS/PHDPSY/F18 <samia.phdpsy54@iiu.edu.pk>
29, 2022, 8:49 AM

to sheikh1974

Dear Sir,

Greetings,

I hope you are doing well. I am currently doing my Ph.D from International Islamic University Islamabad. I am planning my research on the substance user population for which I need the Urdu Version of Beck Depression Inventory. I need your permission to use Beck Depression Inventory (Urdu Version). Kindly allow me to use your translated version of the said scale. It will be valuable support for me from your side. Your precious response is highly appreciated.

Regards
Samia Yasmeen
Ph.D Scholar
International Islamic University, Islamabad, Pakistan

DR SHEIKH ABDULKHALIQ <sheikh1974@gmail.com> Tue, Aug
30, 2022, 1:08 AM

to me

Dear Samia

Permission granted.

----------Regards----------
Prof. Dr. Sheikh Abdul Khaliq

Appendix K-II

Re: Request for Multidimensional Scale for Perceived Social Support (URDU VERSION) - substance misuse research

External
Inbox
Search for all messages with label Inbox
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N

Nusrat Husain <nusrat.husain@manchester.ac.uk>   Aug   1, 2022, 12:16 AM

to me, research.administrator@globalmentalhealthculturalpsychiatry.com, suleman, Muqadd

ASA Samia

Suleman copied in this email will share the Urdu MSPSS

Your research sounds is interesting and in some ways similar to research we are doing in Pakistan I have copied this email to Muqaddas Rajput our coordinator for substance misuse division may be you and your supervisor may want to collaborate with the division.

Professor   Nusrat   Husain
Professor   of   Psychiatry
Director   Research   Global   Mental   Health
Division   of   Psychology   and   Mental   Health
University of Manchester
Honorary Clinical Professor
University   of   Liverpool
Director   Research   &   Innovation
Honorary   Consultant   Psychiatrist   -   EIS
Mersey Care NHS Foundation Trust

Mahnoor   Saleem
Research   Administrator
research.administrator@globalmentalhealthculturalpsychiatry.com

---

On Fri, Jul 15, 2022 at 11:32 PM Samia Yasmeen 54-FSS/PHDPSY/F18 <samia.phdpsy54@iiu.edu.pk> wrote:
Dear Sir,

Assalam o Alaikum,

I hope this email finds you well. I am Samia Yasmeen. I am Ph.D scholar from International Islamic University, Islamabad. I am doing my Ph.D final Research on the topic " Drug-related Self-Esteem, Locus of Control. Perceived social Support and personality Traits; Effectiveness of Motivation Enhancement Therapy among substance Users". For that, I need the Urdu version of Perceived Social Support Scale, so that I can move forward to data collection without any language barrier with the substance user population. Your translated scale is valuable to me. So kindly allow me to use the urdu version of said scale. Your permission and sharing of the translated scale will be highly appreciated and will be a great contribution to completion of my project.

Regards,
Samia Yasmeen
Ph. D Scholar
International Islamic University, Islamabad, Pakistan

M

Muhammad Suleman Shakoor   Aug   1, 2022, 11:19 AM

ASA Prof. Husain Yes sure I am sharing the MSPSS scale with her. Thank you -- Best Reg Bio-Statistician Assistant Operational Mana

M

Muhammad Suleman Shakoor <suleman.shakoor@pill.org.pk> Aug   1, 2022, 11:22 AM

to me, Nusrat, research.administrator, Muqaddas

ASA   Dear   Samia   Yasmeen Please   find   the   attached   Multidimensional   Scale   for   Perceived   Social Support (English/URDU VERSION) scale with our published paper. If you need   any   help   from   us   you   may   contact   us. Thank   you

--
Best   Regards,

Muhammad   Suleman   Shakoor

Bio-Statistician

Assistant   Operational   Manager   (Punjab/North)

Division: Self-harm and Suicide prevention

Themes: Bio-Statistics – Health Economics

E: suleman.shakoor@pill.org.pk | T: 042-35842310 | C: 92312-4019919

Pakistan Institute of Living & Learning

Suite # 310, Al-Qadir Heights, New Garden Town, Lahore

T: 042-35842310 | E: info@pill.org.pk

Insta: pill.org.pk | FB: @pill2001 | Twitter: @PakistanPill

W: www.pill.org.pk | YouTube: Pakistan Institute of Living and Learning

On 2022-07-31 13:15, Nusrat Husain wrote:
> ASA Samia
>
> Suleman copied in this email will share the Urdu MSPSS
>
> Your research sounds is interesting and in some ways similar to
> research we are doing in Pakistan I have copied this email to Muqaddas
> Rajput our coordinator for substance misuse division may be you and
> your supervisor may want to collaborate with the division.
>
> Professor Nusrat Husain
> Professor of Psychiatry
> Director Research Global Mental Health
> Division of Psychology and Mental Health
> University of Manchester
> Honorary Clinical Professor
> University of Liverpool
> Director Research & Innovation
> Honorary Consultant Psychiatrist - EIS
> Mersey Care NHS Foundation Trust
>
> Mahnoor Saleem
> Research Administrator
> research.administrator@globalmentalhealthculturalpsychiatry.com
>
> -------------------------

Permission to Use Urdu version of Big Five Persona lity

Inventory

Inbox
Search for all messages with label Inbox
Remove label Inbox from this conversation

Samia Mazhar <samia.mazhar@riphah.edu.pk>

Fri,
May 13, 2022,
8:49 AM

to Rayna

Dear Dr Rayna,

Assalam o Alaikum,

I hope this email finds you well. I am doing Ph.D Psychology from International Islamic University, Islamabad. My thesis topic is "DRUG-RELATED SELF-ESTEEM, LOCUS OF CONTROL, PERCEIVED SOCIAL SUPPORT AND PERSONALITY TRAITS: EFFICACY OF MOTIVATION ENHANCEMENT THERAPY ON SUBSTANCE USERS". In my research, I have to use the Big Five Personality Inventory (44-item) Urdu version which you have translated.I need your permission to use the Urdu version of the said assessment tool. Kindly allow me to use your translated version of Big Five Personality Inventory and its psychometric properties in my research.

Your urgent reply is anticipated.
--
Thanks and Regards,
Samia Mazhar
Lecturer (PhD Scholar)
Department of Applied Psychology
Riphah International University, Islamabad

Dr. Rayna Sadia <rayna.sadia@riphah.edu.pk>

Fri,
May 13, 2022,
9:20 AM

to me

Dear Samia,

Thank you for the email.

As communicated earlier (through our telephonic conversation), the translated version of Big Five Inventory is available in my thesis on Lingnan University, Hong Kong website.
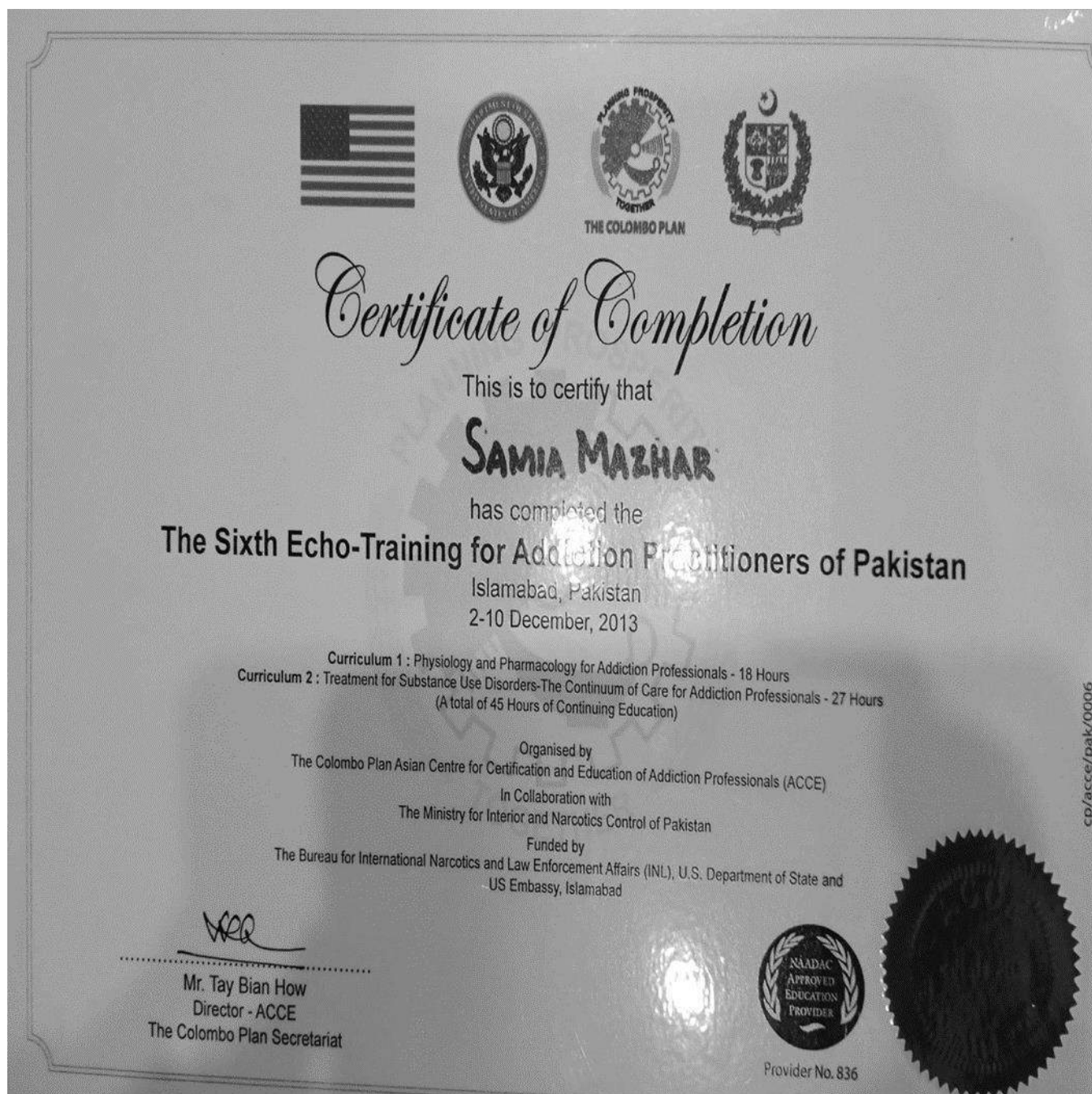
You can access it from there for your research, I am afraid I don't have the Pdf version of the file.

Best,

Rayna Sadia
Assistant Professor,
Al-Mizan Campus,
Riphah International University,
Islamabad

Competence Certificate-I
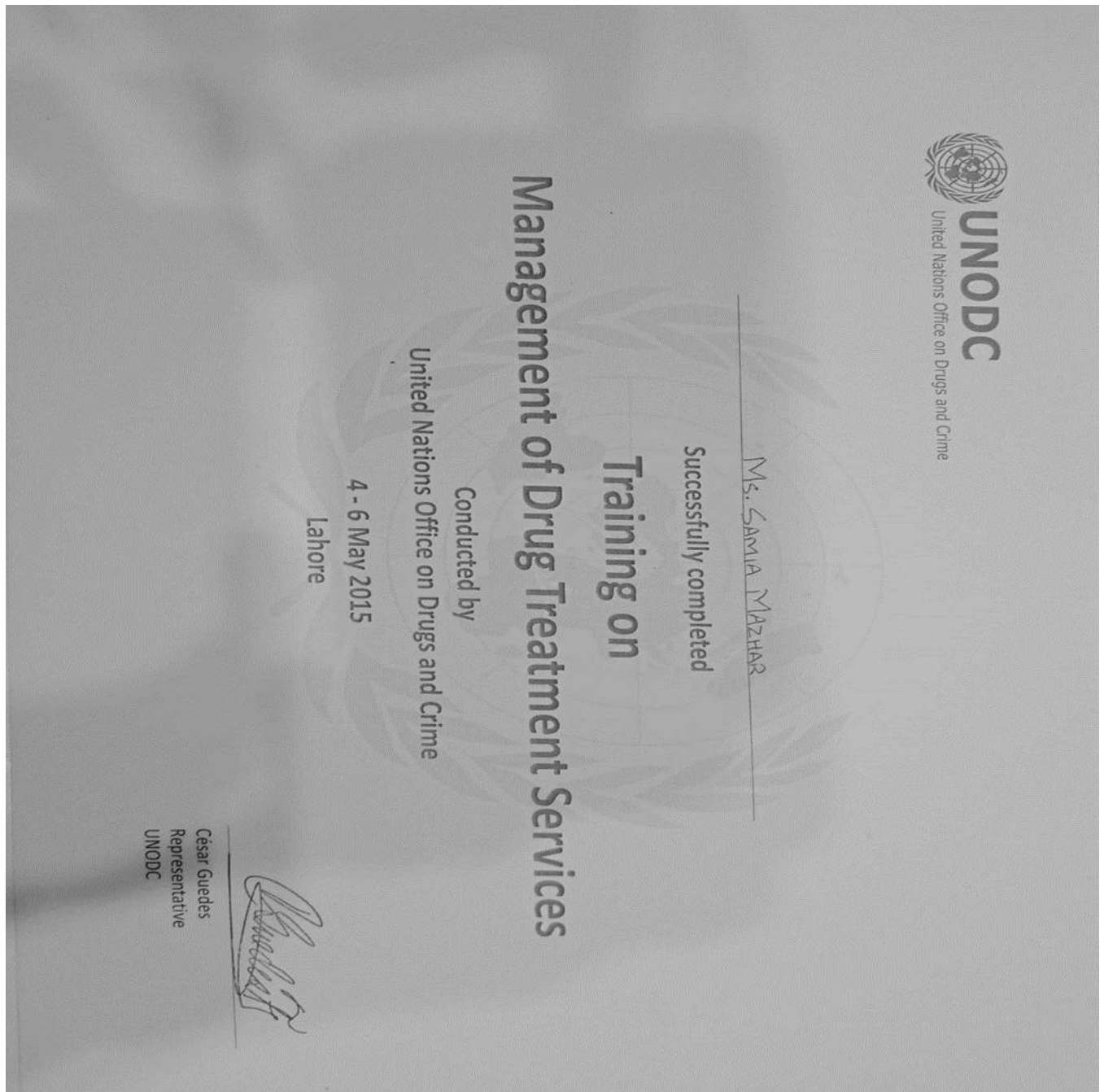

Certificate of Completion

This is to certify that

SAMIA MAZHAR

has completed the

The Sixth Echo-Training for Addiction Practitioners of Pakistan

Islamabad, Pakistan

2-10 December, 2013

Curriculum 1 : Physiology and Pharmacology for Addiction Professionals - 18 Hours
Curriculum 2 : Treatment for Substance Use Disorders-The Continuum of Care for Addiction Professionals - 27 Hours
(A total of 45 Hours of Continuing Education)

Organised by
The Colombo Plan Asian Centre for Certification and Education of Addiction Professionals (ACCE)

In Collaboration with
The Ministry for Interior and Narcotics Control of Pakistan

Funded by
The Bureau for International Narcotics and Law Enforcement Affairs (INL), U.S. Department of State and
US Embassy, Islamabad

Mr. Tay Bian How
Director - ACCE
The Colombo Plan Secretariat

NAADAC
APPROVED
EDUCATION
PROVIDER

Provider No. 836

cp/acce/pak/0006

Appendix L-II

Competence Certificate-II

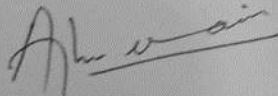Appendix L-III

Competence Certificate-III

NAJJAT TRUST

Head Office Banni
Rawalpindi Pakistan
Ph: 5774643 5542000
E.mail: najjat@yahoo.com
URL: www.najjat.org
Fax: 5772300

Dated: 29 June 2016

To Whom It May Concern

This is to certify that Mrs. Samia Mazhar has performed her duties as Clinical Psychologist in Najjat Trust Rawalpindi from March 2013 to April 2016. During her tenure of work she successfully handled her responsibilities. She also performed her duty as a clinical psychologist in Najjat Trust Old Home (Male) and dealt psychological issues of old inmates with great empathy, care and professionalism. She is confident person and has been found to be devoted, punctual, motivated and hardworking. Her remarkable counseling as well as communication skills really needs appreciation.

We wish her all success in her future endeavors.

Najjat Trust

NAJJAT TRUST
★ PAKISTAN ★

■ NAJJAT MARKAZ   ■ OLD HOME   ■ AMBULANCE CENTRE   ■ FALAHI MARKAZ
Janglat Road Banni   SaidPur Road   SaidPur Road   Najjat Road Banni
5542000   4411188   4411188   5774643