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# An Analytical Study on Effectiveness of Relapse Prevention Therapy in Substance Abusers

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## I. INTRODUCTION

Life has become a hardship for many of us these days, which is why we see a picture of chaos all around us. There is a stressor reservoir that has drowned and continues to drown many of our fellow humans. Some people, who are more vulnerable and desire to get away from their worries in a handy way, fall prey to these ostensibly simple stress relievers known as "drugs." However, the state they are in now is like to someone drowning in the ocean of life and then rising to the surface. People have lost their sense of direction in life, dismissing what they truly desire in favour of blindly following where others and life are leading them, resulting in them missing out on their lives.

Today, drug usage has become a serious source of concern for us. Over time, the terms abuse and addiction have been defined and reinterpreted. The expert committee on addiction established by the World Health Organization (WHO) in 1957 produced the following report on drug addiction and habit as a component of abuse:

A state of periodic or chronic intoxication caused by the frequent ingestion of a drug is known as drug addiction (natural or synthetic). It has the following characteristics:

- 1) An overwhelming urge or urge (compulsion) to keep using the substance and obtain it by any means possible.
- 2) A proclivity to raise the dose.
- 3) A psychological (psychological) and, in general, a physical dependence on the drug's effects.
- 4) Negative consequences for individuals and society.

Drug habituation (habit) is a state that occurs when a substance is consumed repeatedly.

It has the following characteristics:

- a) A desire (but not a requirement) to continue taking the medicine because of the greater sensation of well-being it produces.
- b) There is little or no tendency for the dose to be increased.
- c) There is some psychological dependence on the drug's effects, but no physical dependence and thus no abstinence symptoms (withdrawal).
- d) Any negative consequences, if any, centred on the individual.

In 1964, a new WHO Committee determined that these definitions were insufficient and recommended that the term "drug dependence" be used instead, but the committee did not define dependency.

The American Academy of Pain Medicine, the American Pain Society, and the American Society of Addiction Medicine collaborated in 2001 to produce "definitions pertaining to the use of opioids for the management of pain," which defined the terms: Addiction is a primary, chronic neurobiologic disease whose development and manifestations are influenced by genetic, psychological, and environmental variables. It is defined by one or more of the following behaviours: inadequate control over drug use, compulsive use, continuing use despite harm, and yearning.

It's worth noting that the Diagnostic Statistical Manual (DSM IV) (2006) defines abuse and dependency using precise criteria. Substance dependence, rather than addiction, is defined by DSM IV as a maladaptive pattern of substance usage that leads to clinically substantial impairment or distress, as demonstrated by three (or more) specific criteria occurring at any time throughout the 12-month period.

Illegal substances, as well as prescription and over-the-counter medicines, are known to create addiction.

**A. Causes And Theories Of Drug Addiction**

Many factors influence a person’s initial drug use: Individual factors, psychosocial factors, biological factors etc. These factors are less important as drug use continues and the person repeatedly experiences the potent pharmacological effects of the drugs. Therefore, now we will try to understand the underlying and associated causes of drug addition by reviewing there theoretical viewpoints.

Table No. 1.1  
Showing Types of Drugs

Classification	Drug	Effect
Sedative	Alcohol (ethanol) Barbiturates Nembutal (pento barbital) Seconal (secobarbital) Veronal (barbital) Tuinal (secobarbital and amobarbital)	<input type="checkbox"/> Reduce tension <input type="checkbox"/> Facilitate social interaction <input type="checkbox"/> Blot out feelings or events <input type="checkbox"/> Reduce tension
Stimulants	Amphetamines Benzedrine (amphetamines) Dexedrine (dextoamphetamines) Methedrine (metha-amphetamines) Cocaine (coca)	<input type="checkbox"/> Increase feelings of alertness and confidence <input type="checkbox"/> Decrease feelings or fatigue <input type="checkbox"/> Stay awake for long <input type="checkbox"/> Decrease feeling of fatigue <input type="checkbox"/> Increase endurance <input type="checkbox"/> Stimulate sex drive
Narcotics	Opium and its derivatives Opium Morphine Codeine Heroin Methadone (synthetic narcotic)	<input type="checkbox"/> Alleviate physical pain <input type="checkbox"/> Induce relaxation and pleasant revive <input type="checkbox"/> Alleviate anxiety and tension <input type="checkbox"/> Treatment of Heroin
Psychedelics and Hallucinogens	Cannabis Marijuana Hashish Mescaline (peyote) Psilocybin (psychotogenic much room)	<input type="checkbox"/> Induce changes in mood, thought, and behaviour
	LSD (lysergenic acid diethylamide-25) PDC (phencyclidine)	<input type="checkbox"/> “Expand” one’s mind induce stupor
Anti-anxiety drugs (minor tranquilized)	Librium (chlordane poxide) Miltown (meprobamate) Valium (diazepam) Xanax	<input type="checkbox"/> Alleviate tension and anxiety induce relaxation and sleep

### 1) *Psycho Analytic/ Dynamic Theory*

Sigmund Freud took great interest in addictions. In 1897 he wrote to a friend that “masturbation is one great habit that is a primary addiction and that the other addictions for alcohol, morphine, tobacco, etc. only enter into life as a substitute and replacement of it” (Frosch, 1985, p.28). Thus it appears that to Freud, both smoking and drinking were related to oral eroticism (Frosch, 1985; Royce and Scratchley, 1996). At other point in his life, Freud postulated that alcoholism was a slow form of suicide which sprang from the death instinct or that latent homosexuality could be a causal contributor to the misuse of alcohol (Haynes, 1988; Royce and Scratchley, 1996). Freud’s primary theories regarding the etiology of alcoholism - slow suicide, oral fixation and latent homosexuality, Royce and Scratchley (1996) conclude that of those three Freudian theories, the first may have some slight foundation, the second does not explain why the oral gratification must be from alcohol and not any other and the homosexual theory was pretty well refuted when some state laws were changed to allow women to drink in bars and the alcoholics went right on drinking without paying any attention to the sex of whoever was on the next barstools.

Later analytic viewpoint added elements to the traditional Freudian viewpoint that oral gratification was a prime component in the etiology of addiction. In the late 1920’s Glover asserted that in addiction attributed to a fixation at oral and anal sadistic stages, alcoholics exhibited a propensity to regress to a “narcissistic state of ego organization which sets into action a primitive ego mechanism of projection “as well as” a disordered and severe primitive conscience leading to fruitless exploitation of the same mechanism of projection” (Frosch, 1985, p.30).

### 2) *Disease Model/ Theory*

The ‘disease model’ or ‘medical model’ has been accepted and adopted by the American Medical Association, the World Health Organization and the National Council on Alcoholism (McKim, 1997). In this model, as defined in the International Classification of Disease (ICD-10), addiction is a physical disease, like all other diseases, is characterized by signs and symptoms as well as by its progressive nature. It is destructive in nature if not attended to and it is assumed that the only means of eradicating the disease is to target the toxic agent. In the case of addiction, the substance of abuse is to be avoided. However, one problem with viewing addiction as a disease, is that it is not clear as to how the disease begins.

### 3) *Physical-Dependence Theory/ Biological Perspective*

Among the more biologically based theories, the ‘physical-dependence theory’ of addiction (i.e. withdrawal relief paradigm or opiate addiction model) is more specific to opiate dependence. Since chronic use of opiate causes pathological changes in autonomic functioning, producing effects such as withdrawal and tolerance, this model regards compulsive drug taking as the behavioural manifestation of a desperate need to relieve aversive withdrawal symptoms (Lyvers, 1998). In effect, this model regards the behavioural manifestation of drug addiction to take place once the physical dependence has been established. The user becomes an addict and regards himself as such, once he makes a cognitive connection between administration of the opioid and relief of withdrawal distress. This model purposes that the behavioural addiction will cease once the extinction of drug related conditioned response is accomplished. This can be done through temporary relief measures such as administering the narcotics antagonist naltrexone, which blocks the opioid receptors and subsequently the effects of opioids.

Researchers have conducted numerous investigations using animal models and functional brain imaging on humans in order to define the mechanisms underlying drug addiction in the brain. This incorporates several areas of the brain and synaptic changes or neuroplasticity, which occurs in these areas.

#### *B. Acute effects*

Acute (or recreational) drug use causes the release and prolonged action of dopamine and serotonin within the reward circuit. Different types of drugs produce these neurotransmitters by different methods. Dopamine binds to the D1 receptor, triggering a signaling cascade within the cell. CAMP-dependent Protein Kinase (PKA) phosphorylates CAMP response element binding protein (CREB) a transcription factor, which induces the synthesis of certain genes including CFOs (Kolivas and Volkow, 2005).

#### *C. Reward Circuit: (Reinforcement Model)*

Addictive drugs are positive reinforcers, so its essential to understand the reward circuit, or the pathways in which drugs act and how drugs can alter those pathways. The reward circuit, also referred to as the mesolimbic system, is characterized by the interaction of several areas of brain. The Ventral Tegmental area (VTA) consists of dopaminergic neurons which respond to glutamate. These cells respond when stimuli indicative of a reward are present.



The VTA supports learning and sensitization development and releases dopamine (DA) into the forebrain (Jones and Bonci, 2005). These neurons also project and release DA into the nucleus accumbens (Eisch and Harburg, 2006), through the mesolimbic pathway. Virtually all drugs causing drug addiction increase the dopamine release in the mesolimbic pathway (Rang, H.P., 2003) in addition to their specific effects.

The nucleus accumbens (NACC) consists mainly of medium-spiny projection neurons (MSNs), which are GABA neurons (Kourrich et al., 2007). NACC is associated with acquiring and eliciting conditioned behaviours and involved in the increased sensitivity to drugs as addiction progresses (Jones and Bonci, 2005).

The prefrontal cortex, more specifically the anterior cingulate and orbito- frontal cortex (Kalivas and Volkow, 2005) is important for the integration of information which contributes to whether behaviour will be elicited. It appears to be the area in which motivation originates and the salience of stimuli are determined (Floresco and Ghods Sharifi, 2007).

The basolateral amygdala projects into the NACC and is thought to be important for motivation as well (Floresco and Ghods, Sharifi, 2007).

More evidence is pointing towards the role of the hippocampus in drug addiction because of its importance in learning and memory. Much of this evidence stems from investigations manipulating cells in the hippocampus alter dopamine levels in NACC and firing rates of VTA dopaminergic cells (Eisch and Harburg, 2006).

#### *D. Stress Response*

In addition to the reward circuit, it is hypothesized that stress mechanism also play a role in addiction. Koob and Kreek have hypothesized that during drug use corticotrophin releasing factors (CRF) activate the hypothalamic pituitary-adrenal axis (HPA) and other stress system in the extended amygdala. This activation influences the deregulated emotional state associated with drug addiction. It also appears that - opioid receptor system, which enkephalin acts on, is influential in the reward system and can regulate the expression of stress hormones (Koob and Kreek, 2007).

#### *E. Behaviour*

Understanding how learning and behaviour work in the reward circuit can help understand the action of addictive drugs. Drug addiction is characterized by strong drug seeking behaviours in which the addict persistently craves and seeks out drugs, despite the knowledge of harmful consequences (Kalivas and Volkow, 2005; Koob and Kreek, 2007) Addictive drugs produce a reward, which is the euphoric feeling resulting from sustained DA concentrating in the synaptic cleft of neurons in the brain. Operant conditioning is exhibited in drug addicts as well as laboratory mice, cats and primates; they are able to associate an action or behaviour, in this case seeking out the drug, with a reward, which is the effect of the drug (Jones and Bonci, 2005). Evidence shows that this behaviour is most likely a result of the synaptic changes which have occurred due to repeated drug exposure. (Kalivas and Volkow, 2005; Koob and Kreek, 2007; Jones and Bonci, 2005).

#### *F. Family History/ Genetic Predispositions*

Studies that have investigated generational differences in the transmission of drug abuse revealed that drug abuse is elevated among siblings of drug abusers and that there is a direct relationship between parental drug use or abuse and offspring's use or abuse (Merikangas et al.1992). It was also investigated by Merikangas (1990); and Pukins (1991) that high occurrence of alcoholism among offspring of parents with alcoholism demonstrates that family history is one of the most potent predictors of vulnerability to alcohol abuse, which results to some extent from genetic factors.

Further on high rate of alcohol and opioid dependence has been evidenced in the 1<sup>st</sup> degree relatives of opioid dependent patients. (Prasant et al., 2006). It is also witnessed that the knowledge of father's alcohol use and its time of onset may be used to determine children who are at added risk of problematic alcohol use later in life, (Selijamo et al., 2006) indicating familial and genetic influence on addiction. Therefore its seen parenting and familial influence on substance use and substance use disorder are important areas of study both for theories of etiology and for the development of preventive and treatment interventions (Chassin et al., 2006). A growing literature suggests individual differences in vulnerability to develop substance related problems are influenced to a large degree by genetic factors (Prescott et al., 2006). Family, twin and adoption studies provide strong evidence that addiction runs in families and that this is determined in part by genetic factors (David, B., 2008).

### G. Behaviourist : Learning Theories

Other approach to the etiology of addiction was studied by the behaviourists, they explained addiction from the framework using classical and operant conditioning paradigm. Once learned, the behaviour is maintained by reinforcing contingencies (Shaffer and Schneider, 1985). Wilker hypothesized a two stage approach to addiction, utilizing these paradigms for Wilker, the acquisition of an addiction can be explained in terms of the classical conditioning model. This occurs with the addict's pairing of conditioned stimuli such as thoughts or emotions with an unconditioned stimulus, such as a narcotic. The rush euphoria experienced by the addict with the ingestion of narcotics then serves as an unconditioned response. Wilker believed that operant conditioning is responsible for the maintenance of an addiction, asserting that the narcotic's 'fix' averts the unpleasant side effects of the withdrawal. In operant terms, the cessation of the unpleasant effects of withdrawal constitute negative reinforcement (Shaffer and Schneider, 1985; Wilker, 1965). Shaffer and Schneider (1985) contended that the use of Antabuse and Naltrexone as clinical interventions are based in part on Wilker's two stage model. They state that Naltrexone, which is a narcotic agonist, suppressor the link between conditioned stimuli and conditioned responses. Further, Antabuse acts as an aversion consequences replacing previous consequences that were positively reinforcing. Benjamin Rush experimented with aversion therapy in the 1780's. In the early part of the 19th century, a physician known as Dr. Kain "used a tartar emetic as an aversive agent to link the taste and smell of alcohol to nausea" (White, 1998, p.105). Traditionally, much of behavioural treatment in general, and of addictions specifically is based on the principles of reinforcement: that positive reinforcement, negative reinforcement and punishment serve as powerful behavioural motivators (Atkinson, Atkinson and Hilgoid, 1983). Radical behaviourism holds that internal cognitive events are inappropriate targets for behavioural assessment and intervention (Atkinson, Atkinson and Hilgoid, 1983; Shaffer and Schneider, 1985). However most practitioners today who are using behavioural approaches to treat addictions take a less restrictive approach. Shaffer and Schneider (1985) describe what they call the "neo classical" approach to behavioural therapy for addictive behaviour as worked by "the centrality ascribed to various internal constructs of dysphoria". They cite the negative consequences of withdrawal including such unobservable internal states as anxiety, panic and addictive cravings, e.g. as being constructs which are fundamental to such technique as systematic desensitization, reciprocal inhibition and flooding.

### H. Social Learning Theory

Social learning theory assumes that not all behaviour can be attributed solely to external reinforcers. Rather, behaviour can also be learned through the observation of others (Crooks and Stein, 1991). Social learning theory as it applies to etiology and treatment of addiction assumes that, like prosocial behaviour, deviant behaviour patterns are acquired and maintained on the basis of three regulatory systems: First, social learning theorist assume that some behaviour patterns are under the control of external stimulus events and are effected largely by the classical conditioning model. Secondly, reinforcement process – the main focus of operant conditioning is considered as another major form of behaviour control. Third, and perhaps the most important system of regulatory influence for the social learning school, is the role of cognitive mediational processes (Shaffer and Schneider, 1985, p.46).

Unlike traditional models of classical and operant conditioning, the social learning perspective considers people to be actively involved in the learning process. Rather than passively responding to environmental contingencies, human beings actively participate in determining their reinforcers and interpreting the relevance of those reinforcers (Crooks and Stein, 1991; Shaffer and Schneider, 1985). Thus, it is our active interpretation of our environment and of events, which determines their status as subjective reinforcers and which in turn impels us to respond in a particular manner.

Modeling is a prime example of the interaction between environment and cognitions as it applies to learned behaviour. One way in which people learn how to behave appropriately in a given social situation is by picking up on subtle or overt behavioural cues. A number of experiments have indicated that the rate of alcohol consumption in college students increases or decreases in response to the drinking behaviour of a confederate (Caudill and Marlatt, 1975; De Ricco, 1977).

Another form of interpersonal influence is, of course, adherence to group norms and values. Peele's (1988) assertion was that a person's concept of morality was responsible, in part, for his or her addictive behaviour, and his assertion that an individual's code of ethics was determined, in fact, by identification with a particular group. Peele believed that this might help explain the comparatively low rates of alcohol for persons of particular religion denominations, such as orthodox Jews and practicing Mormons. Also a person's desired identification with his ideal person could serve as a powerful influence in the etiology or maintenance of addictive behaviour. For years, books, movies and television threat upon the public the image of a 'real man'. The 'tough guy' image was a hard drinker, hard smoker, hard bodied and rough in demeanor and style. As early as 1959, Brunn concluded that heavy drinking (though not drunkenness) was seen as a masculine virtue (Mc Corty, 1985).

Again it has been seen that sociocultural factors that have an impact on drug use or abuse include community drug use pattern (Robins, 1984) and neighbourhood disorganization (Sampson, 1985). Growing up and living in a community with high rates of crime, ready availability of drugs, association with delinquent peers and acceptance of drug use and abuse are all associated with drug abuse (Clayton and Voss, 1981; Elliott et al., 1985; Brook et al., 1988; Cohen et al., 1990; Robin and Mc Envoy, 1990). The larger sociocultural environment also has important effects on drug use. The frequency and nature of representation of alcohol, tobacco and illicit drugs in media (including advertising and modeling by those in the sports and entertainment industries) may have important effects on the normative climate. In addition social and legal policies (taxes, restrictions on conditions of purchase and use, legal status, enforcement) may have important effects on use or abuse.

Ethnographic studies have explored various risk factors for drug use and abuse, as well as the impact of drug abuse on the community. Among Mexican Americans, it has been noted that several risk factors, such as low socio economic status, higher school drop out rates and residing in barrios in large cities exacerbates drug use (Padilla et al., 1979; Carter and Wilson, 1991). Reattachment from conventional norms is expressed in unconventional role like adult role of marriage and employment. It's not surprising that in some African American population, drug abuse continues into adulthood since conventional adult roles are not assumed (Brunswick et al., 1992). Also, delinquency and crime are strongly linked to drug use and there is increasing involvement of reservation youth in gangs.

### *I. Treatment Of Drug Addiction*

Treatment for drug addiction varies greatly depending on the kind of drugs taken, the amount of substance consumed, the duration of the addiction, medical issues, and the individual's social demands. Personality, drug(s) of addiction, spiritual or religious idea, mental or physical disease, and geographic availability and pricing of programmes all play a role in determining the ideal type of recovery programme for an addicted person. Treatment techniques for drug addiction are often divided into the following categories:

- 1) Pharmacological Intervention.
  - a) Long-Term Rehabilitation
  - b) A 12-step method for the short term
- 3) Psychological counselling

#### *• Pharmacological Interventions*

It is critical to treat physical discomfort or undesirable physiological changes that occur in the human body or brain as a result of illicit drug use before moving on to behavioural or cognitive approaches for treatment. These medications make it easier for individuals to seek counselling and other behavioural therapies that are necessary for recovery and rehabilitation.

Disulfiram, acamprostate, and topiramate (Soyka and Rocsner, 2006; Pettinati and Robinowitz, 2006) are pharmacological treatments for alcohol addiction. Rather than substituting for alcohol, these drugs are designed to reduce the desire to drink, either by directly reducing craving (acamprostate and topiramate) or by producing unpleasant effects when alcohol is consumed (disulfiram). Modafinil, Lamotrigine, Gabapentin, and Memantine are examples of medicines that operate on glutamate neurotransmission and have been proposed for use in the treatment of alcohol and other drug addiction (Gass and Olive 2008).

Treatment for stimulant addiction can be tough, with substitute medications typically being ineffectual. However, novel medications like nocoine, vanoxerine, and Modafinil, as well as the GABAB agonist baclofen, may have greater promise (Ling et al., 2006; Preti 2007). For the treatment of methamphetamine addiction, another recently effective trial used a combination of the benzodiazepine antagonist Flumazenil and hydroxyzine one gabapentin (Ueschel et al., 2007).

Various medicines have been used to treat nicotine addiction, including bupropion, mecamylamine, and the more recently produced varenicline. Rimonabant, a cannabinoid antagonist, has also been tested for the treatment of nicotine addiction, but it is not generally used. (Frishman, 2007; Garwood and Potts, 2007) Siu and Tyndale, 2007; Siu and Tyndale, 2007).

Opioid antagonists like naltrexone and nalmefene have also been shown to be effective in the treatment of alcoholism (Srisurapanont and Jaursunaisin, 2005; Karhuwara et al., 2007), which is notoriously difficult to cure. These medicines have also been used to a lesser extent for long-term maintenance therapy of former opiate addicts, however this cannot be said until the patient has been abstinent for a long time, as they can cause acute opioid withdrawal symptoms if not. 2007 (Commer, Sullivan, and Hube). A possible benefit of augmentation with low dose NTX to improve outcome following opioid determination has been demonstrated for a certain set of patients (Mannelli et al., 2007).

Buprenorphine, methadone, and naltrexone are the most widely prescribed opiates treatments. Following the pharmaceutical therapies, the following behavioural and counselling approaches are discussed.

#### *J. Outpatient/Residential Treatment*

The types and level of services provided vary. Treatment like this is less expensive than residential or inpatient treatment, and it is frequently more suited to people who are employed or have a large social support network. Drug education and warning may be the extent of low-intensity programmes. Depending on the specific patient's features and needs, other outpatient models, such as intense day therapy, can be comparable to residential programmes in terms of services and effectiveness. Group counselling is emphasised in many outpatient programmes. Some outpatient programmes are designed to help individuals who are suffering from physical or mental health issues in addition to their drug addictions. Hubbard et al., 1998; Simpson and Brown, 1998 both testified to the treatment's success.

##### *1) Residential Treatment/Rehabilitation for a Long Period of Time*

It offers care 24 hours a day, seven days a week, in non-hospital settings. The therapeutic community (TC) is the most well-known residential treatment paradigm, though other models, such as cognitive behavioural therapy, may also be used.

TCs are residential programmes that last anywhere from 6 to 12 months. TCs emphasise on the individual's "resocialization" and make the entire "Community" of the programme, including other residents, staff, and the social backdrop, active therapeutic components. Treatment focuses on establishing personal accountability and responsibility, as well as socially productive lines, in the context of an individual's social and psychological weaknesses (Lewis et al., 1993). Treatment is highly regimented and can be confrontational at times, with activities aimed at helping residents analyse harmful ideas, self-concepts, and patterns of behaviour, as well as embrace new, more harmonic, and productive ways of interacting with others. Many TCs are extremely thorough, and they may include on-site job training and other support services.

The typical TC resident has more severe problems than patients in other types of drug treatment, with more co-occurring mental health problems and criminal involvement. (Sacks et al., 1998); Research suggests that TCs can be adapted to treat people with particular requirements, such as teenagers, women, people with severe mental illnesses, and people in the criminal justice system (Sacks et al., 1998). (Stemens; Arbiter and Glider 1989).

##### *2) Residential Program for a Limited Time*

They use a modified 12-step method to give intensive yet shorter residential treatment. Originally created to treat alcoholism, many of these programmes expanded to include the treatment of illicit substance usage and addiction during the mid-to-late 1980s cocaine epidemic. The first residential therapy programme lasted three to six weeks. Inpatient treatment at a hospital, followed by extensive outpatient counselling and involvement in a self-help organisation like Alcoholic Anonymous. Reduced health-care coverage for substance abuse treatment has resulted in a reduction in the number of these programmes, and the average duration of stay under managed care review is significantly shorter than it was in the beginning. Self-help groups have shown significant improvements in several of the treated outcomes. Many individuals with SUDs who joined a 12-step self-help group improved their treatment outcomes (Kelly et al., 2003).

b) Psychotherapy/counseling  
Each strategy focuses on a different component of drug addiction and its effects on the individual, family, and society. The methods should be used to supplement or enhance existing therapy programmes, not to replace them.

#### *K. Supportive Expressive Psychotherapy*

It is a time-limited, targeted psychotherapy designed specifically for heroin and cocaine addicts (Luborsky, 1984). There are two primary components to the therapy. Supportive strategies that allow patients to open up about their personal experiences. Patients can use expressive strategies to help them discover and resolve interpersonal connection challenges.

The role of drugs in relation to issue feelings and behaviours, as well as how problems might be managed without the use of drugs, receive special consideration. Patients in methadone maintenance treatment who had psychotic difficulties were given individual supportive-expressive psychotherapy to see how effective it was. Both groups performed equally in terms of opiate usage when compared to patients who simply received drug counselling, however the supportive expressive psychotherapy group used less cocaine and required less methadone. Furthermore, patients who received supportive-expressive psychotherapy kept many of their benefits (Woody et al., 1995). Supportive expressive psychotherapy, when combined with drug counselling, improved outcomes for opiate addicts in methadone treatment who had severe psychological disorders, according to a previous study (Woody et al., 1987).



#### *L. Drug Counseling on an Individualized Basis*

Its primary goal is to reduce or eliminate the addict's illicit drug consumption. It also covers topics including employment status, unlawful behaviour, family/social relationships, and the content and structure of the patient's recovery programme. (McLellan and colleagues, 1993). Individualized drug counselling assists the patient in developing coping strategies and tools for refraining from drug use and maintaining abstinence by focusing on short-term behavioural goals. The addiction counsellor supports 12-step involvement and refers clients to additional medical, psychiatric, employment, and other resources as needed. Individuals are urged to come one or two times each week to sessions. (McLellan and colleagues, 1988).

In a research comparing opiate users who only received methadone to those who received methadone plus counselling, those who only received methadone showed limited improvement in reducing opiate usage. The addition of counselling resulted in a significant increase in progress. Adding onsite medical/psychiatric, employment, and family services enhanced results even more. (Woody and colleagues, 1983).

Individualized drug counselling, along with group drug counselling, was found to be quite beneficial in lowering cocaine use in another trial with cocaine addicts. As a result, it indicates that this technique is effective in outpatient therapy for both heroin and cocaine users (Crits – Cristoph et al., 1983).

#### *M. Motivational Enhancement Therapy (MET)*

It is a client-centered counselling strategy for initiating behaviour change by assisting clients in resolving their ambivalence about seeking treatment and quitting drug usage. Rather than coaching the client step by step through the recovery process, this approach offers tactics to promote quick and internally motivated change in the client. (Budney and colleagues, 1996). This therapy begins with an assessment battery session and continues with two to four individual treatment sessions with a therapist. The first treatment session focuses on presenting feedback gleaned from the initial assessment battery in order to elicit self-motivational comments and inspire discussion about personal substance usage. The principles of motivational interviewing are used to boost motivation and develop a transformation strategy (Miller, 1986).

Evidence of change in numerous indicators of risk and damage was seen in a single session of motivational interviewing, though not as extensively as the change in drug intake. It lowered their cigarette and alcohol consumption, primarily through the use of modules rather than through quitting (MacCambridge and Strang, 2004). In the same year, another study (Carroll, 2004) discovered strong evidence that motivational interventions reduced substance use.

One recommended and discussed with the client coping methods for high-risk scenarios. In future sessions, the therapist assesses progress, examines current cessation techniques, and continues to encourage. Sustained abstinence requires a commitment to change. Clients are occasionally invited to attend sessions with a significant other. This method has proven to be effective in the treatment of alcoholics and marijuana addicts (Stephens; Roffman and Simpson 1994).

Adolescent Behavioral therapy is a type of behavioural therapy that is used to help adolescents.

It is based on the idea that unwanted behaviour can be altered by clearly demonstrating the desired behaviour and rewarding incremental steps toward achieving it on a regular basis. Filling out specific assignments, practising planned behaviour, and recording and reviewing progress are all therapeutic activities, with praise and privileges offered for accomplishing specified goals (Azrin; Aciero et al., 1998). Urine samples are taken on a regular basis to track drug usage. The goal of the therapy is to provide the patient three sorts of control.

Stimulus Control assists patients in avoiding drug-related events and learning to spend more time in activities that are incompatible with drug usage. Urge Control assists patients in identifying and altering thoughts, feelings, and plans that lead to drug use. Family members and others who are important in helping patients avoid drugs are included in social control. When possible, a parent or significant other attends therapy sessions and helps with therapeutic assignments and reinforcing desired behaviour.

According to studies, this therapy assists teenagers in becoming drug-free and boosts their ability to remain drug-free when treatment is completed (Azrin, Macmohan et al., 1999).

Adolescents also improve in a variety of other areas, including employment/school attendance, family relationships, depression institutionalisation, and alcohol usage (Azrin et al., 1994).

The inclusion of family members in therapy and remorse drug abstinence, as proved by urine examination, are significantly responsible for the positive outcomes. In recent years, there has been significant progress in the development of effective behavioural therapy for substance abuse. Disorders of use (Carroll, 2004).

#### *N. Multi-dimensional family therapy (MDFT) for Teenagers*

It is a family-based outpatient drug abuse treatment programme for teenagers. MDFT views adolescent drug use as a network of influence (i.e., individual, family, peer, and community) and suggests that reducing unwanted behaviour and increasing desirable behaviour can be accomplished through multiple and family sessions held in the clinic, at home, or with family members at the family court, school, or other community locations (Diamond and Liddle, 1996).

The therapist and the adolescent concentrate on crucial developmental tasks such as decision-making, negotiation, and problem-solving skills throughout individual sessions.

Teenagers learn to communicate their thoughts and feelings in order to cope better with life's stresses, as well as occupational skills. Parents evaluate their individual parenting style in parallel sessions with family members, learning to identify influence from control and having a positive and developmentally appropriate influence on their child (Schmidt; Liddle and Dakof, 1996).

#### *O. Multisystemic Therapy (MST)*

It address the factors associated with serious antisocial behavior in children and adolescents who abuse drugs (Henggeler et al., 1996). These factors include characteristics of the adolescents (for example, favorable attitudes towards drug use), the family (poor discipline, family conflict, parental drug peers (positive attitudes towards drug use) school (dropout poor performance) and neighborhood (Criminal subculture). By participating in intense treatment in natural environments (homes, schools, and neighbourhood settings) youths and families complete a full course of treatment. MST significantly reduces adolescents drug use of treatment and for at least 6 months after treatment numbers of incarcerations and out of home placement of juveniles offset the cost of providing this inter-service and maintaining the clinicians low caseloads (Schoenwald et al., 1996; Hengger et al., 1998).

#### *P. Combined Behavioral and Nicotine Replacement Therapy for Nicotine Addiction*

It consists of two main components. The transdermal nicotine patch or nicotine gum reduces symptoms of withdrawals, producing better initial abstinence (Fiore et al., 1994). The behavioral component concurrently provides support and reinforcement of coping skills, yielding better long term outcomes. Through behavioral skills training, patients learn to avoid high risk situations for making relapse early on the later to plan strategies to cope with such situations. Patients practice skills in treatment, social, and work settings. They learn other coping techniques, such as cognitive refusal skills, assertiveness, and time management (APA, 1996). The combined treatment is based on the rationales that behavioral and pharmacological treatments operate by different yet complementary mechanisms that produce potentially addictive effects (Hughes, 1991).

#### *Q. Vouches-Based Reinforcement Therapy in Methadone Maintenance Treatment*

It helps patients achieve and maintain abstinence from illegal drug by providing them with voucher each time they provide a drugfree urine sample. The voucher has monetary value and can be exchanged for goods and services consistent with the goals of greatness. Initially, the voucher value are low, but their value increases with the number of consecutive drugfree urine specimens the individual provides. Cocaine, Heroin positive urine specimens reset the value of the vouchers to the initial low value. The continece of escalating incentives is designed specifically to reinforce periods of sustained drug abstinence. Studies show that patients receiving vouchers for drugfree urine samples achieved significantly more weeks of abstinence and significantly more weeks of sustained, abstinence than patients who were given vouchers independent of urine analysis results (Silverman et al., 1996). In another study, urinalysis positive for Heroin decided significantly when the voucher program was stable and increased significantly when the program was stopped (Silverman et al., 1996).

Furthermore, in ninety Cannabis-dependent adults seeking treatment were randomly assigned to receive CBT, abstinence based voucher incentives or combination. It was found that abstinence based vouchers were effective for engendering extended period of continuous marijuana abstinence during treatment. Similarly Lussier et al. (2006) found voucher based reinforcement therapy generated significantly better outcomes than did the control treatment group.

#### *R. Day Treatment with Abstinence Contingencies and Vouchers*

It was developed to treat homeless Crack addicts for the first 2 months, participants must spend 5 hours daily in the program, which provides lunch and transport them to and from shelters. Interventions include individual assessment and goal setting, individual and group counseling, multiple psycho educational groups (for example, didactic groups on community resources, housing, Cocaine and HIV/AIDS prevention establishing and reviewing personal rehabilitation goals, relapse prevention; weekend planning), and patient governed community meeting during which patients review their goals and provide support and encouragement to each other.

Individual counselling occurs once a week, and group therapy sessions are held three times a week. After 2 months of day treatment and at least 2 weeks of abstinence, participants graduate to a 4-month work component that pays wages that can be used to rent inexpensive, drugfree housing. A voucher system also rewards drug free related social and recreational activities (Milky; Coldwell et al., 1996).

This innovative day treatment was compared with treatment consisting of twice-weekly individual counseling and 12-step groups, medical examinations and treatment, and referral to community resources for housing and vocational services. Innovative day treatment allowed by work and housing dependent upon drug had more positive effect on alcohol use, Cocaine use and days homeless (Milby et al., 1996).

To date most successful treatment house included combination of Motivation Enhancement Treatment plus Cognitive Behavioral coping skills training and contingency management approaches (Litt et al., 2008). Significant amount of research supports the efficacy of contingency management intervention in the treatment of drug abuse (Caroll 2004; Rawson et al., 2006).

The therapist functions simultaneously as teacher and coach, fostering a positive, encouraging relationship with the patient and using that relationship to reinforce positive behavior change. The interaction between the therapist and the patient is realistic and direct but not confrontational or parental. Their patients are trained to conduct treatment sessions in a way that promotes the patients self esteem, dignity, and self worth. A positive relationship between patient and therapist is a critical element for patient retention.

Treatment materials draw heavily on other tested treatment approaches. Thus, this approach includes elements pertaining to the areas of relapse prevention, family and group therapies, drug education, and self help participation. Detailed treatment manuals contain work sheets for individual sessions; other components include family educational groups, early recovery skills groups, relapse prevention groups, conjoint sessions, urine tests, 12-step programs, relapse analysis, and social support groups.

A number of project have demonstrated that particle patients treated with Matrix model demonstrate statistically significant reductions in drugs and alcohol use, improvement in psychological indicators and reduced risky sexual behavior associated with HIV transmission. These reports, along with evidence suggesting comparable treatment response for Methamphetamine users and Cocaine users and demonstrated efficacy in enhancing Naltrexone treatment of opiate addicts, provide a body of empirical support for case of the model (Huber, et al., 1997; Rawron et al., 1995).

## II. REVIEW OF RELATED LITERATURE

Review of literature is a vital part of any research. It helps the researcher to know the areas where earlier studies had focused on and certain aspects untouched by them. Within the stagewise model, during maintenance of the recovery stage for persons with substance use disorders, monitoring and treating co-occurring psychiatric disorders that are not substance related is clinically essential. Individuals who have more severe and persistent disorders, such as schizophrenia, bipolar disorder, and severe mood disorders, should be receiving integrated treatments (Mueser et al., 2003). The form and timing of treatments for disorders of the mild to moderately severe type, such as depression, anxiety, social phobia, posttraumatic stress disorder, and axis II disorders, are less certain, although these too will require ongoing monitoring and care (Cacciola et al., 2001).

In fact, few studies have specifically examined relapse prevention therapies for persons with substance use and other psychiatric disorders. Given that co-occurring psychiatric disorders are common among persons with substance use disorders, and these are typically associated with negative outcomes, this area of research remains critically important.

The rapidly developing research literature on integrated mental health and addiction treatment for persons with dual disorders has focused on the engagement and persuasion stages of the therapeutic relationship. The goals of these stages involve engaging clients in treatment and initiating abstinence rather than on the prevention of relapse to substance use. Longitudinal data about correlates of remission and recovery for persons with dual diagnoses have only recently become available, but no interventions have been formally tested during the maintenance stage (Dark, Wallach and Mc Govern, 2005). Three recent reviews found 26 controlled trials of integrated dual disorder treatments and verified the paucity of research during the maintenance phase of treatment (Brunette et al., in press; Dark et al., 2004; Mueser et al., in press).

One promising approach to integrated group therapy (as opposed to integrated treatment services) for relapse prevention was developed by Weiss and colleagues and is currently being tested in stage III effectiveness trials (Weiss et al., 2000).

This integrated group therapy focuses on relapse prevention skills for co-occurring substance use and bipolar disorders and addresses triggers and relapse risks for both disorders during the course of a structured manual-guided psychotherapy (Weiss, Majauits and Greenfield et al., 2000). However, studies of this approach focus only on symptom change and substance use associated with the index treatment (Leshner, 1999).

No studies of relapse prevention therapies have been reported for the maintenance stage or within the context of ongoing or continuing professional care for persons with co-occurring disorders.

The scientific approach to relapse of substance use can be credited to the early work of Brownell and colleagues (1986) as well as Marlatt (1985). Consistent with behavioral and cognitive-behavioral psychology, these authors carefully studied the relapse process, using the methods of functional analysis of the antecedents and consequences of substance use. This model articulated and studied relapse as a process, not simply an event or a "breakdown of willpower" (Marlatt and Gordon, 1985).

On the basis of a number of studies of relapse antecedents, attempts to categorize them and develop predictive schemes, limitations to the original model of relapse have been identified (Lawman et al., 1996; Donovan and Kadden, 1996; Greenfield et al., 2000; Cohen et al., 2002; Rohsenow and Monti, 1999; Miller and Rollnick, 1991; Beattie and Longabaugh, 1999). Among these are the nonlinearity of the true relapse process, limited emphasis on culture and context, and, perhaps most significantly, lack of attention to neurobiology, particularly the fundamental brain changes inherent in the addiction process (Kadden, 2001; Vastag, 2003; Morgolis and Jweben, 1998; McLellan et al., 2000). The most current relapse prevention model is less linear and hierarchical as well as more complex, developmental, recursive, and dynamic (Witkiewitz and Marlatt, 2004).

Relapse prevention therapy as a specific intervention is one of a number of evidence-based practices for substance use disorders and now has a well-documented track record of producing positive outcomes (Allsop et al., 1997; Chaney et al., 1978; O'Farell et al., 1998). Recent reviews have shown relapse prevention therapy to be "empirically supported" (Mc Crady, 2000) and evidence based (Mc Govern, 2003). Relapse prevention therapy, a form of cognitive-behavioral therapy, consists of a number of key ingredients (Carroll and Schottenfeld, 1997; Carroll, 1996) reducing exposure to substances, fostering motivation for abstinence (decisional balancing of pros and cons of use and abstinence and processing ambivalence), self-monitoring (situations, settings, and states), recognizing and coping with cravings and negative affect, identifying thought processes with relapse potential, and deploying, if necessary, a crisis plan. Aspects of relapse prevention therapy have evolved to become core ingredients in nearly all psychosocial treatments for substance use disorders, including traditional 12-step model rehabilitation programs (Mc Govern, 2004). In an analysis of 24 randomized controlled trials of relapse prevention, Carroll (1996) concluded that relapse prevention was an effective treatment for disorders related to nicotine, alcohol, cocaine, marijuana, and other drugs. Minimal differences in effectiveness were found across classes of substances. Compared with a control condition, relapse prevention demonstrated effectiveness approximately 50 percent of the time; more often than not, the effects were sustained at follow-up. Compared with alternative active psychotherapeutic treatments, relapse prevention results were comparable but not significantly better.

Relapse prevention, was initially designed as an adjunct to existing treatments. It has also been extensively used as stand-alone treatment and serves as the basis for several other cognitive and behavioural treatments (Witkiewitz et al., 2005). On this preceded Shanton (2005) commented that relapse prevention needs more emphasis on interpersonal factors i.e. social support as it is a phasic response that interacts with coping behaviour and affective state, in addition to its role as a distal risk. In other studies the efficacy and effectiveness of relapse prevention was again provided for addictive disorders (Witkiewitz and Marlatt, 2004; Carroll, 1996; Irvin et al., 1999). Several studies have shown sustained main effects for RP, suggesting that RP may provide continued improvement over a longer period of time (indicating a "delayed emergence effect"), whereas other treatments may only be effective over a shorter duration (Carroll, Rounsaville, Nichigordon, 1994; Hawkins, J.D., Latacano and Gillmore 1989; Rawson et al., 2002). Moreover, Goldstein and Colleagues (1989) had found a significant delayed effect for an RP condition as compared to an educational support control condition at six months for smokers treated in a 10-week group program (Niaura et al., 1989). Later Carroll and Colleagues (1994) also found, while comparing RP with an operationalized clinical management condition and pharmacotherapy using desipramine hydrochloride or placebo, a significant psychotherapy-by-time effect at one-year follow-up, indicating a delayed response to treatment among patients who received RP. Then, Rawson and Colleagues also identified a "sleeper effect" for RP in patients with cocaine dependence (Rawson et al., 2002). These findings of delayed effects of RP are consistent with the notion that learning new coping skills to deal with high risk situations takes time and leads to a decreased probability of relapse over time. Polivy and Herman (2002) have demonstrated that 90 percent of individuals who attempt to change their behaviour struggle with lapses and do not achieve change on their first attempt.

We view RP as having an important role in the continuous development of brief interventions for alcohol and drug problems, such as motivational interviewing (Miller and Rollnick, 2002), brief physician advice (Fleming et al., 1997), and brief assessment and feedback (Dimeff et al., 1999; Monti, Colby and O'Leary, 2001). Incorporating the cognitive-behavioural model of relapse and RP techniques, either within the brief intervention or as a booster session, will provide additional help for the individuals who are attempting to abstain or moderate their use following treatment. Relapse prevention techniques may also be supplemented by other treatments for addictive behaviours, such as pharmacotherapy (Schmitz et al., 2001) or mindfulness meditation (Marlatt, 2002).



Medication and meditation have already been used successfully as adjuncts to RP (Schmitz et al., 2001; Taub et al., 1994).

It has been seen that individuals with higher levels of impairment along dimensions such as psychiatric severity appear to benefit most from RP compared with those with less severe levels of impairment.

Irvin and Colleagues (1999) conducted a meta-analysis of 26 published and unpublished clinical trials on RP techniques between 1978 and 1995, involving a total sample of 9,504 participants. These studies have assessed the efficacy of RP and were also consistent with Marlatt and Gordon's approach to RP. The strongest treatment effects were for alcohol and polysubstance use outcomes, reducing substances use and improving psychosocial adjustment. The effects were weaker for smoking and cocaine. Some studies empirical limitation could be responsible for the inconsistent support for the effects of RP on smoking cessation. Other randomized trials of RP for smoking showed that additional supportive elements such as stress management, emotion regulation techniques, and abstinence "resource renewal" may be needed in addition to RP in a smoking intervention (Hajek et al., 2005). The results of these studies indicate that more research should focus on modifying and improving RP techniques in the context of other substance user such as cocaine, nicotine, and opioids. The analysis also showed that individual, group and marital modalities were equally effective. Another finding was that medication seem to be very helpful in reducing relapse rates in the context of alcohol problems.

Further it is seen that recent randomized control trials support the reported efficacy of combined CBT-like therapies and naltrexone for alcohol-dependent individuals (Anton et al., 2005). The combine (effects of combined pharmacotherapies and behavioural interventions) study suggested that medical management of an alcohol dependent patient with a physician providing treatment with naltrexone and basic advice and information is as effective as cognitive- behavioural therapy (CBT). The trial enrolled 1,383 alcohol dependent subjects and randomly assigned them to one of eight groups that could include naltrexone, acamprosate, or both of the drugs, with or without what was identified as a cognitive- behavioural intervention (CBI). One group received the CBI alone, without placebo. The patients who received a medication received medical management that was fairly rigorous (9 appointments over 16 week), during which the physician or a nurse discussed the patients diagnosis and progress and suggested attendance to AA. Those who got the CBI received up to 20 sessions, which was comparable with a streamlined version of outpatient alcoholism treatment. Subjects receiving medical management with naltrexone, CBI, or both fared better on drinking outcomes, whereas acamprosate showed no evidence of efficacy, with or without CBI. Putting it more into clinical significance, the percentages of subjects with a good clinical outcome were 58% for those who received only medical management and placebo, 74% for those who received medical management with naltrexone and cognitive- behavioural treatment, and 71% for those who received medical management with placebo and cognitive behavioural treatment. The subjects were also followed for a year after the 16-week treatment, and although the patterns of efficacy remained much the same, there was appreciable fall-off for all groups (Anton et al., 2006). In a recently completed trial, 121 cocaine-dependent individuals were randomized to one of four conditions in a 2x2 factorial design: disulfiram plus CBT, disulfiram plus Interpersonal Therapy (IPT) that did not include RP components, placebo plus CBT, and placebo plus IPT. This study showed significant main effects for CBT over IPT. The patients assigned to CBT reduced their cocaine use more significantly than those assigned to IPT and patients assigned to disulfiram reduced their cocaine significantly more than those assigned to placebo. In addition, the CBT x time effect remained statistically significant after controlling for retention, which was a significant predictor of better drug use outcomes (Carroll et al., 2004).

Furthermore, the results of a study randomizing 128 cocaine users to either CBT or 12-step facilitation (TSF) suggested that CBT was more effective than TSF overall. Several matching hypothesis were supported. CBT was differentially effective for participants with low levels of abstract reasoning skills (Maude Griffin et al., 1998).

The literature evaluating the efficacy and effectiveness of RP with stimulant users has been nearly all conducted with cocaine users as the study participants. Some data support the view that the response to RP treatment is quite comparable between cocaine-dependent individuals and those dependants on methamphetamines (Rawson et al., 2000). Rawson and Colleagues (2004) conducted a study with methamphetamine-dependent individuals assessing the effectiveness of the Matrix- treatment protocol (based on cognitive behavioural principals described in Marlatt and Gordon, 1985, used as an outpatient intensive approach for the treatment of stimulant users: Rawson et al., 1989, 1995, 2002; Shoptaw et al., 2004) versus "treatment as usual" in eight community treatment organizations. The in-treatment approach has positive empirical evidence for treating methamphetamine-dependent individuals when compared to a group of community treatment programs. Rawson et al. (2002) recently compared group CBT, voucher contingency management (CM), and a CBT/CM in combination with standard methadone maintenance treatment for cocaine-using methadone maintenance patients. During the acute phase of treatment, the CM group had significantly better cocaine use outcomes. However, during the follow-up period, a CBT sleeper effect emerged again, where the CBT group had better outcomes at the 26-week and 52-week follow-up than the CM group. Another similar study in the context of intensive methadone maintenance showed

similar results with best one year outcomes for the CM + CBT combination (Epstein, Hawkins et al., 2003). Two trials have compared the delivery of RP in individual versus group format. Schmitz et al. (1997) and Marques and Formigoni (2001) found no differences in-group versus individually delivered CBT. These results suggest that CBT/RP can be effectively implemented in either format. Furthermore, a recent study has demonstrated that stress induced cocaine craving could be of benefit in improving relapse outcomes in cocaine dependence (Sinha et al., 2006).

The empirical literature on testing RP strategies (12 trials) for cannabis abuse has also incorporated treatment components focusing on aversion training, motivational enhancement, contingency, reinforcement and case management. A multisite study involving 450 marijuana-dependent individuals demonstrated that a nine-session individual approach that integrated cognitive behavioural therapy and motivational interviewing approach, which in turn was more effective than a delayed- treatment control condition (MTP Research Group, 2004). The relatively modest long-term outcomes reported in the trials conducted thus far suggest that intervention protocols need to be developed to effectively meet the needs of this population.

Several studies included spouses in the RP intervention (O'Farell et al., 1993). A recent study evaluated conjoint treatments in 90 men with alcohol problems and their female partners. The subjects were randomly assigned to one of the three outpatient conjoint treatments: alcohol behavioural couples therapy (ABCT), ABCT with relapse prevention techniques (RP/ABCT) (as per Marlatt and Gordon, 1985), or ABCT with interventions encouraging Alcoholic Anonymous (AA) involvement (AA/ABCT). Couples were followed for 18 months after treatment. Across the three treatments, drinkers who provided follow-up data maintained abstinence on almost 80% of days during follow-up, with no differences in drinking or marital happiness outcomes between groups. In the RP/ABCT treatment, attendance at post-treatment booster sessions were related to post treatment abstinence during follow-up treatment in both concurrent and time-lagged analysis (Mc Crady, Epstein et al., 2004). Despite strong evidence for efficacy of psychological treatments of alcohol use disorder, aggregate rates of continuous abstinence after treatment are well below 50% and relapses are more.

Theory based active ingredients of effective treatment for substance use disorder have been reviewed and found four effective psychosocial treatments: motivational interviewing and motivational enhancement therapy, 12-step facilitation treatment, cognitive-behavioural treatment and behavioural family counseling and contingency management and community reinforcement approaches (Moos, 2007).

Cognitive behavior therapy (CBT) has also shown its effectiveness in combination with antidepressants among alcohol and substance dependent adolescents and adults with co-existing depression (Hides et al., 2009). On the other hand in a recent meta-analysis, behavioural couple therapy (BCT) showed clear advantage over individual based treatment for alcoholism and drug abuse problem (Powers, Vedel and Emmelkamp, 2008).

Shifting our attention back to relapse prevention therapy, a form of cognitive- behavioral therapy, it has been evidenced to be useful with adolescents in treatment for substance use disorder (Ramo, Myers and Brown, 2007). Importance of relapse prevention has been witnessed time and again and stated that successful treatment of drug addiction must involve relapse prevention informed by our understanding of the neurobiological bases of drug relapse (Fuchs, Lasseter and Yie, 2009).

Recently, new innovative component has been reviewed for substances use relapse prevention: psychodrama group therapy in the context of relapse prevention. The proposed psychodrama group format features facilitator guidelines for directing relapse prevention behavioral role plays, substances use specific role plays, and a format for post role play processing of group participants experiences (Somov, 2008).

Psychological theory and interventions relevant to relapse and relapse prevention (RP) were reviewed, with a focus on addictive behaviour. The past two decades have produced increased attention toward the relapse problem and important advances in the conceptualization of relapse (i.e. a process rather than a discrete event) (Thomas, Jennifer and Erika, 2007).

No single model of RP could ever encompass all individuals at different levels of behaviour change. Therefore a comprehensive evaluation of the determinants of relapse and underlying processes may be more helpful to identify RP strategies. Relapse prevention techniques need to be studied in more diverse samples of individuals, including ethnic minority groups (De La Rosa, Segal and Lopez, 1999) and adolescent who receive formal treatment (Mc Carthy et al., 2003).

Beurden, E.V., Brooks, L., Dight, R. (2016) examined heavy episodic drinking and sensation seeking in adolescents as predictors of harmful driving and celebrating behaviors. This study sought to clarify the relative importance of engagement in heavy episodic drinking (HED) independently of sensationseeking tendency (SS), as a predictor of potentially harmful (and protective) behaviors. A written survey was administered to students aged 15–17 years in 40 high schools in New South Wales (NSW), Australia to measure HED, SS, and harmful and protective behaviors associated with drug and alcohol use, driving, and celebrating. Of 2705 respondents, 60% reported HED, 36% failed to wear a seatbelt, 23% rode with an alcohol-impaired driver, 23% rode with a drug-

impaired driver and 9% had been alcohol impaired while driving. Twothirds (65%) had engaged in harmful behaviors and 99% had engaged in protective behaviors while celebrating. SS, gender, income, and age were significant predictors of HED. HED and SS were significant, independent predictors of every harmful or protective behavior. HED had the greatest effect on harmful celebrating behaviors, riding with an alcohol-impaired acquaintance, and riding with a drug-impaired driver. HED had a stronger effect than SS, for alcohol-impaired driving, riding with an alcohol-impaired acquaintance, riding with a drug-impaired driver, and harmful celebrating behaviors.

Stacy A. Sterling (2011), Drug use and related problems may compromise depression treatment, and older adults may be especially at risk for poor outcomes. However, alcohol and drug use among older adults have not been studied in settings in which depression treatment is provided. This study examined the prevalence and clinical and demographic correlates of alcohol and drug use and misuse of prescription drugs among adults with depression seeking outpatient psychiatric care (excluding chemical dependency treatment). Drug use, heavy episodic drinking, and history of alcohol-related problems were common. Alcohol use in the prior 30 days was reported by 53% of men and 50% of women. Cannabis use in the prior 30 days was reported by 12% of men and 4% of women; and misuse of sedatives in the prior 30 days was reported by 16% of men and 9% of women. In exact logistic regression, higher BDI-II score was associated with cannabis use (odds ratio = 15.8, 95% confidence interval = 2.0-734.0, exact  $p = 0.003$ ).

Gayle A. Dakof (2011), Female adolescent drug use has increased dramatically in the last 30 years, and there is a growing consensus that the syndrome of female adolescent substance abuse is different from the well-recognized male pattern. Gender differences in patterns of comorbidity and family functioning were investigated in a sample of 95 youths (42 girls and 53 boys) referred for substance abuse treatment. The findings indicate that male and female adolescent substance users differ in several clinically meaningful ways. The results from a discriminant function analysis indicate that substance-using adolescents referred to treatment are distinguished especially by the greater degree to which girls have internalizing symptoms and family dysfunction. The clinical implications of these gender differences are articulated.

### III. RATIONALE OF THE STUDY

Treatment for drug addiction vary widely according to the types of drugs involved, amount of drug used duration of the drug addiction, medical complications and the social needs of the individual Determining the best type of recovery programme for an addicted person depends on a number of factors, including personality, drug (s) of addiction, concept of spiritually or religion, mental or physical illness, and local availability and affordability of programs.

Pharmacological treatments for alcohol addiction includes drugs like disulfiram, acomprosate and topiramate (Soyka and Rocsner, 2006; Pettinati and Robinowitz, 2006), rather than substituting for alcohol, these drugs are intended to reduce the desire to drink, either by directly reducing craving as with acomprosate and topiramate, or by producing unpleasant effects when alcohol is consumed, as with disulfiram. Additional drugs acting on glutamate neurotransmission such as modafivil, Lamotrigine, gabapentin and memantine have also been proposed for use in treating addiction to alcohol and other drugs (Gass and Olive 2008).

Treatment of Stimulant addiction can often be difficult, with substitute drugs often being ineffective, although never drugs such as nocoine, vanoxerine and Modafivil may have more promise in this as well as the GABAB agonist baclofen (Ling et al., 2006; Preti 2007). Another, strategy that has recently been successfully trialed used a combination of the benzodiazepine antagonist Flumazenil with hydroxyzine one gabapentin for the treatment of methamphetamine addition (Ueschel et al., 2007).

While going through the available literature with regard to the present investigation, the present investigator found that no study has been conducted to study on the effectiveness of relapse prevention therapy in substance abusers. The present investigator feels that there is a need to conduct a study on the effectiveness of relapse prevention therapy in substance abusers. The present study is an attempt in this direction.

### IV. RESEARCH METHODOLOGY

The common idea of methodology is the collection, the comparative study, and the critique of the individual methods that are used in a given discipline or field of inquiry. It can be defined as “a body of methods, rules, and postulates employed by a discipline”, or a particular procedure or set of procedures or the analysis of the principles or procedures of inquiry in a particular field”. Any piece of research is incomplete without a proper plan of action. A research is designed to enable the researcher to arrive at as valid, objective and accurate selection of the given problem as possible. Research design, is, thus, a detailed plan of how the goals of research will be achieved. Every study is distinguished on the basis of its different purposes and approaches. Therefore, so many methods have been adopted. For the present study, Descriptive Method was used. Because it is considered as one of the best method in education, it describes the current status of the research work. It involves interpretation, comparison, measurement, classification, evaluation and generalization all directed towards an understanding and solution of significant educational problems.

#### A. Objectives Of The Study

The following objectives are formulated for the proposed study:

- 1) To study the effectiveness of relapse prevention therapy for the treatment of drug addictions.
- 2) To study the personality correlates of drug abstinence.
- 3) To study the personality correlates of drug relapse.
- 4) To study link between coping strategies and drug abstinence.
- 5) To study link between coping strategies and drug relapse.
- 6) To study the personality differences in the addicts undergoing group therapy and the addicts without any therapeutic intervention.
- 7) To study the difference in coping strategies of addicts undergoing group therapy and the addicts without any therapeutics intervention..

#### B. Hypotheses Of The Study

The following hypotheses are formulated to empirically validate the above objectives:

- 1) Relapse prevention therapy have a positive effect on maintaining abstinence and preventing relapse.
- 2) There exists an association between personality traits and treatment outcome.
- 3) There exists a link between maladaptive coping strategies and relapse.

#### C. Sample

For the experimental group (which underwent relapse prevention therapy), sample of 103 opiate drug addicts was taken from De-Addiction Center Delhi.

For the control group, (which did not undergo relapse prevention therapy) sample of 50 opiate drug addicts was taken from Red Cross Drug Addiction Center, New Delhi.

The addicts were selected from various socio-economic strata and their age ranging from 18 to 46 years.

#### D. Procedure

##### 1) Tests used

##### a) Ways of Coping Questionnaire by (Lazarus and Folkman, 1984).

The ways of coping questionnaire assesses thoughts and actions individuals use to cope with the stressful encounters of everyday living. It is desired from a cognitive phenomenological theory of stress and coping that is articulated in stress, appraisal and coping (Lozarus and Folkman, 1984) and elsewhere (e.g. Lazarus, 1981; Lozarus and Launier, 1978). This questionnaire has been used primarily as a research instrument in studies of the coping process. It is designed to identify the thoughts and actions an individual has used to cope with a specific stressful encounter. It measures coping processes, not coping disposition or styles.

##### b) Description of Scales, Administration and Scoring

The sample from which the coping scales were developed was composed of 75 middle and upper middle class while married couples who had at least one child living at home. Husband and wives were interviewed separately in their homes by different interviewers once a month for five months. Subjects were asked describe the most stressful encounter experienced during the previous week and then to fill out the ways of coping questionnaire.

Three separate factors analyzes were completed, using different strategies for combining person – occasions, or observation. This analysis called for eight factors and the resulting eight scales are described as follows table no. 1.

##### c) Description of the coping scales

- Confrontive Coping: Describes aggressive efforts to alter the situation and suggests some degree of hostility and risk taking.
- Distancing: Describes cognitive efforts to detach oneself and to minimize the significance of the situation.
- Self-Controlling: Describes efforts to regulate one's feelings and actions.
- Seeking social support: Describes efforts to seek informational support, tangible support and emotional support.
- Accepting Responsibility: Acknowledges one's own role in the problem with a concomitant theme of trying to put things right.



- **Escape Avoidance:** Describes wishful thinking and behavioural efforts to escape or avoid the problem. Its on this scale contrast with those on the distancing scale, which suggest detachment.
- **Planful Problem Solving:** Describes deliberate problem focused efforts to alter the situation, coupled with an analytic approach to solving the problem.
- **Positive Reappraisal:** Describes efforts to create positive meaning by focusing on personal growth. It also has a religious dimension.

#### d) Administration

The ways of coping questionnaire can generally be completed in about ten minutes, although the time will vary with respondents. Items on the questionnaire have been designed to be answered in relation to a specific stressful encounter, although no single standardized method has been devised for eliciting it. Although the ways of coping questionnaire is self administered, an interview can be held before administration to help the individual reconstruct the focal encounter. The interview can range from a brief summary of the encounter to a full exploration of its content, depending on the purpose of the research.

In our study we used the self-administrated method, to complete the questionnaire, preceded by brief instructions as to recalling stressful events and on its basis completing the questionnaires.

#### e) Scoring

There are two methods for scoring the ways of coping questionnaire, raw and relative. Raw scores describe coping effort for each of the eight types of coping, whereas relative scores describe the proportion of effort represented by each type of coping.

In both methods of scoring, individuals respond to each item on a 4-point likert scale, indicating the frequency with which each strategy is used: indicates “does not apply and/or not used”, 1. Indicates “used somewhat”, 2. Indicates “used quit a bit” and 3. Indicates “used a great deal”.

In the raw scoring the raw scores are the sum of the subjects responses to the items that comprise a given scale. This method, used in the majority of our research, provides a summary of the extend to which each type of coping was used in a particular encounter. These scores are raw scores and not factor scores.

Relative scores, which were suggested to us by Peter Vitaliano (Vitaliano et al., 1987), describe the contribution of each coping scale relative to all of the scales combined. A relative score for each scale is computed by (a) calculating the average item score for the items on a given scale by dividing the sum of the rating on the scale by the number of items on that scale, (b) calculating the sum of the average item score across all eight scales, and (c) dividing the average item score for a given scale by the sum of the average item scores across all eight scales.

#### f) Reliability and Validity

Ways of Coping Questionnaire has been tested for reliability by examining the internal consistency. Estimates of coping measures generally fall at the low end of the traditionally acceptable range. Although the alpha coefficients for the 8 scales i.e. Confrontive coping (.70), Distancing (.61), Self Controlling (.70), Seeking Social Support (.76), Accepting Responsibility (.66), Escape Avoidance (.72), Planful Problem Solving (.68), Positive Reappraisal (.79), are found higher than the alphas reported for most other measures of coping process. And this test has been used successfully in Indian Context.

Ways of Coping Questionnaire has been found to have Construct validity. The evidence of which is in the fact that results of the studies done by e.g. Braukmann, Filipp, Angleitner and Olbrich (1981), Happner, Reeder and Larson (1983). Kirmeyer and Diamond (1985), and Manne and Sandler (1984), are consistent with the theoretical predictions.

#### 2) NEO Five-Factor Inventory (NEO-FFI) by Costa and Mc Crae (1992).

The NEO-FFI is a 60 item version of form 5 of the NEO PI-R that provides a brief, comprehensive measure of the five domains of personality. It consists of five 12-item scales that measure each domain. Information or specific facets within each domain is not provided, and the shortened scales are somewhat less reliable and valid than the full NEO-PI-R with  $\alpha$  ranging from .89 to .93 for the five domains. Internal consistency coefficient from the facets, with each facet scale comprising fewer items than each of the Big Five scales, were necessarily smaller, ranging from .54 to .83.

Cronbach's Alpha values were: Conscientiousness = .81, Neuroticism = .81, Extraversion = .75, Agreeableness = .72 and Openness = .71, which are similar to the ones reported for the original NEO-FFI in the USA. Costa and McCrae reported in the NEO manual research findings regarding the convergent and discriminate validity of the inventory. Examples of these findings include the following:

For the Myers-Briggs Type Indicator, Introversion is correlated with the NEO facet Warmth at  $-0.61$ , and with the NEO facet Gregariousness at  $-0.59$ . Intuition is correlated with the NEO facet Fantasy at  $0.43$  and with the NEO facet Aesthetics at  $0.56$ . Feeling is correlated with the NEO facet Tender-mindedness at  $0.39$ .

For the Self-Directed Search (a personality inventory developed by John L. Holland for careers work), Artistic is correlated with the NEO facet Aesthetic at  $0.56$ , Investigative is correlated with the NEO facet Ideas at  $0.43$ , and Social is correlated with the NEO facet Tender-mindedness at  $0.36$ .

#### a) *The Five Domains*

- *Neuroticism (N)*

The general tendency to experience negative affects such as fear, sadness, embarrassment, anger, guilt and disgust is the core of the N domain. Men and women high in N are also prone to have irrational ideas, to be less able to control their impulses and to cope more poorly than others with stress. As the same suggests, patients traditionally diagnosed as suffering from neuroses generally score higher on measure of N (eg. Eysenck and Eysenck, 1964). But the N scale of the NEO PI-R like all its other scales, measures a dimension of normal personality. N should not be viewed as psychopathology, but individuals may be at risk for kind of problem. Individuals low on these scores are emotionally stable. They are usually calm, even-tempered and relaxed and they are able to face stressful situations without becoming upset or rattled.

- *Extraversion (E)*

Extraverts are of course sociable, but sociability is only one of the traits that comprise the domain of extraversion. In addition to liking people and preferring age groups and gatherings, extraverts are also assertive, active and talkative. They like excitement and stimulation and tend to be cheerful in disposition. They are upbeat, energetic and optimistic. Thus, introverts are reserved rather than unfriendly, independent rather than followers, even paced rather than sluggish. Introverts may say they are shy when they mean that they prefer to be alone: they do not necessarily suffer from social anxiety. Finally introverts are not unhappy or pessimistic.

- *Openness (O)*

As a major dimension of personality, openness to experience is much less well known than E. The elements of O – active imagination, aesthetic sensitivity, attentiveness to inner feelings, preference for variety, intellectual curiosity and independence of judgement – have often played a role in theories and measures of personality, but their coherence into a single broad domain has seldom been recognized. Open individuals are curious about inner and outer worlds, and their lives are experientially richer. They are willing to entertain novel ideas and unconventional values and they experience both positive and negative emotions more keenly than do closed individuals. Openness is especially related to aspects of intelligence, such as divergent thinking that contribute to creativity (Mc Crae, 1987). But its by no means equivalent to intelligence.

- *Agreeableness (A)*

Like extraversion, agreeableness is primarily a dimension of interpersonal tendencies. The agreeable person is fundamentally altruistic. He or she is sympathetic to others and eager to help them, and believes that others will be equally helpful in return. By contrast, the disagreeable or antagonistic person is egocentric, skeptical of others intentions, and competitive rather than cooperative.

- *Conscientiousness (C)*

A great deal of personality theory, particularly psychodynamic theory, concerns the control of impulses. During the course of development most individuals learn how to manage their desires and the inability to resist impulses and temptations is generally a sign of high N among adults. But self control can also refer to a more active process of planning, organizing and carrying out tasks and individual differences in this tendency are the basis of conscientiousness. The conscientious individual is purposeful, strong-willed and determined.

*b) Validity and Reliability*

The NEO-PI-R has been translated in several languages and used in more than 50 cultures (McCrae and Terracciano, 2005). Evidence of convergent and discriminant validity is presented in the manual (Costa and McCrae, 1992) and a large literature demonstrates cross-observer agreement and prediction of external criteria such as psychological well-being, health risk behaviors, educational and occupational achievements, coping mechanisms and longevity (Costa and McCrae, 1992; Terracciano et al., 2008). In a previous study Lockenhoff et al.

(in press) tested the validity of personality assessment in the ECA sample and found adequate alpha reliabilities, retest-stability and factor structure of the NEO-PI-R scales.

*3) Relapse Prevention Therapy*

Relapse Prevention Therapy, in group setting will be used as an treatment intervention. Comprehensive guidelines of relapse prevention techniques will be collaborated from empirically tested models of relapse prevention therapy.

Following modules of RPT are determined in convenient and brief version:

*a) Session I*

• *Introduction and building of rapport*

In this session the patients were introduced to what drug addiction is?

It is a desire or compulsive need to continue taking the drug and to obtain it by any means.

It's a tendency to increase the doze.

It's a psychic (psychological) and a physical dependence on the drugs. It's a detrimental effects on the individual and society.

Q.: Why do we continue taking drug?

- ✓ to eliminate pain (negative reinforcement)
- ✓ To feel high (positive reinforcement)
- ✓ One takes drug to eliminate physiological distress i.e. physical withdrawals or psychological distress i.e. to handle depression and stressful events. People try to use drug as a coping strategy due to habitation.
- ✓ Or one takes drugs to feel high, euphoric or good, to feel the kick.

• *Comprehensive information on how drugs work on brain*

There are three related stages in addiction:

✓ Stage 1: Acute drug effect

At this early stage, the individual experiences the rewarding effects of the addictive drug.

Dopamine is the key brain chemical involved at this stage.

✓ Stage 2: Transition to Addiction

At this stage, the individual transitions from recreational use to actual addiction.

Glutamine is the key brain chemical involved at this stage.

✓ Stage 3: End Stage Addition

At the final stage, the individual experiences a strong urge to get the addictive drug, loses control of the drug seeking desire, experiences a diminished pleasure after using the addictive drug.

➤ *The Dopamine Connection*

The biological link among all addictions is dopamine. This brain chemical is released during pleasurable activities ranging from sex and eating to more detrimental behaviour such as drinking and drug taking "if a drug or an activity produces a sharp spike in dopamine, then the people will like it, they will experience it as pleasurable, and it will be addictive. A powerful drug like cocaine or any other drug elevates dopamine level much faster than normal pleasurable activities.

➤ *Getting and Staying Hooked*

Coming down from a drug high is caused by a decrease in dopamine levels. If you force brain cells to produce excessive dopamine on a regular basis, they become stressed and produce less dopamine. Over time addicts become depressed and need drugs just to stimulate dopamine to normal levels. Then one becomes trapped in a cycle of craving and addiction to avoid withdrawal symptoms and depression.

• *Discussing Mental Health Issues/ Consequences of Drug Abuse*

Drug abuse heightens the risk for HIV infections through needle sharing, prostitution i.e. indulging in unsafe sexual behaviours. Injection drug users are most likely to develop serious infections and illnesses (e.g. viral hepatitis, endocarditis, pneumonia etc.). It is found among narcotic addicts, health conditions like high blood pressure, hyperlipidemia, increased blood glucose, abnormal pulmonary, abnormal liver function, positive hepatitis C, syphilis and TB are most frequently witnessed. Some form of psychiatric disorders may result from drug abuse e.g. paranoid psychosis, tactile hallucinations, suicidal behaviour, depression. Drugs have deteriorating effect on verbal memory, verbal fluency, attention and psychomotor speed etc.

b) *Session II*

• *Recognizing denial and working on acceptance*

What is denial?

It is a “quitting drugs is easy. I have done it many times”. Denial is when an addict thinks, he does not have a problem in managing his drug abuse behaviour he can control himself. He can handle drugs and can leave drugs anytime he wants without any help, on his own. When he thinks, “I am not that seriously in addiction yet, my dose of drugs is small”. When he thinks, “I have not reached that stage yet, which others have reached, others are more sick, I can control it”.

Note: if any individual is in denial state, he can not move forward towards recovery. What is acceptance?

- ✓ First and foremost an addict has to accept that he has a problem of drug addiction, he has to admit “I am an addict”.
- ✓ Has to accept that, this is his weakness for the whole life, he does not have to forget it, because the day he forgets, he will have every chance to relapse.
- ✓ Has to accept that, he needs help, without professional help he cannot manage this problem on his own.
- ✓ Has to accept that, he cannot control himself from taking drugs but has to learn how to manage or cope with his drug abuse behaviour.
- ✓ Has to accept that he needs to learn how to recognize, avoid or cope with any situation which leads to drug abuse behaviour.

➤ *Motivational Conversation*

One important question is why do you want to leave drugs?

Is it that you want to leave drugs, because you have family conflicts? Or others are telling you to leave or you are in a financial crisis or you are in a health crisis? ....

If these are the reasons for you to learn drugs then you can relapse any moment, as these situations can arise in your life any time even when you are clean, so these associations are dangerous. So the reason for you to leave drugs should be that you want to live your life. And leave them for yourself not for others that you want to have a healthy, fulfilling life, where each moment is a bliss.

As we know life of an addict is a crippled life, he is totally dependant on drugs, from waking up in the morning when he cannot start his day without drugs, then the people he has to avoid, who stop him from taking drugs, the food he has to take, so that it does not hamper the drugs effect, till the time he has to sleep, which he cannot have without drugs. So he is not living his life but is living a life dictated by drugs.

So this brings us to another important question that you must introspect: Do you want to live a handicapped life?

Have you got freedom? Are you happy?

Have you made anyone else happy lately?

Have you progressed in your life in the recent past, in any sphere of your life like, health, wealth or relationships?

Answers to the above questions will help you to make one very important decision in your life, an important choice that you must make, as you have only two from which to choose i.e. life or death.

You have got only two choices, if you do not choose life then you are defiantly moving towards your doom. But if you choose life and totally surrender to the programme than we would help you to find a new meaning in life.



c) *Session III*

• *What is relapse?*

After the treatment, when an addicts again starts taking addictive substance frequently, he/she has relapsed. Relapse process is shown in (Fig. 2.1).

• *How relapse happens:*

- ✓ **Something Happens (Trigger situation):** Sometime an individual encounters a situation in which his thoughts of drug taking gets triggered e.g. passing from the place from where he/she use to procure drugs, meeting an acquaintance with when he/she use to take drugs, sudden stressful situation etc.
- ✓ **Core Beliefs (you thoughts and decision):** After the situation has arisen, what the person thinks at that time, about himself handling the situation, i.e. his self efficacy is low or high is very important. If he thinks I can handle this situation without drugs, then he/she will make use of effective coping strategies and stay away from drugs and will not move to next stage. But if he/she thinks they are helpless, or cannot handle this situation, or use ineffective coping strategy in that situation they will move to the next stage.
- ✓ **Craving:** Next stage is craving. Here the urge to take drugs starts accelerating.

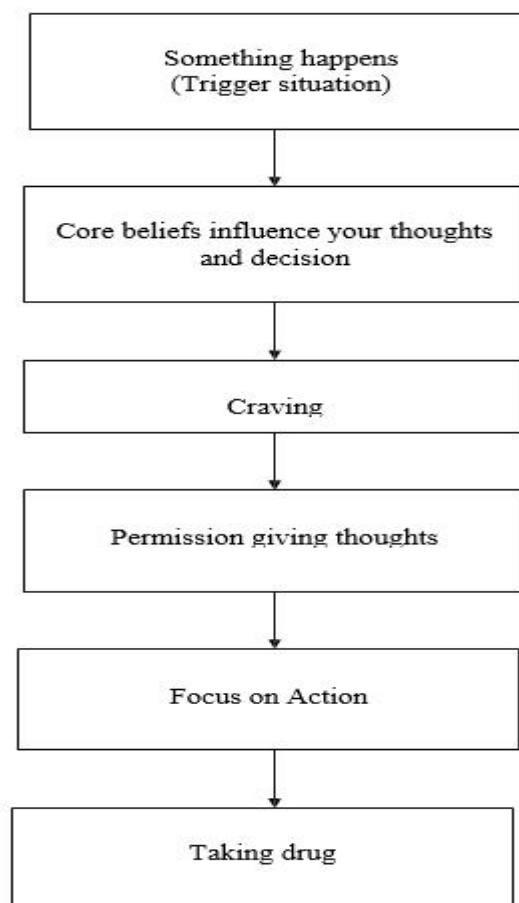
An individual's energy starts to move towards one dominant thought i.e. drugs. It starts with mental craving and progresses to physical craving e.g. one starts feeling anxiety, restlessness etc.

**Permission Giving Thoughts:** After the craving gets heavy on an individual, he permits himself to take drug rationalizing his actions with thoughts like he cannot handle carving, or thinks I will take only once, or I deserve this break, or I need this drug etc.

**Focus on Action:** After permitting himself/ herself to take drug, the individual focuses on how to procure the drug.

**Drink or Drug:** The last stage is when an individual actually takes the drug.

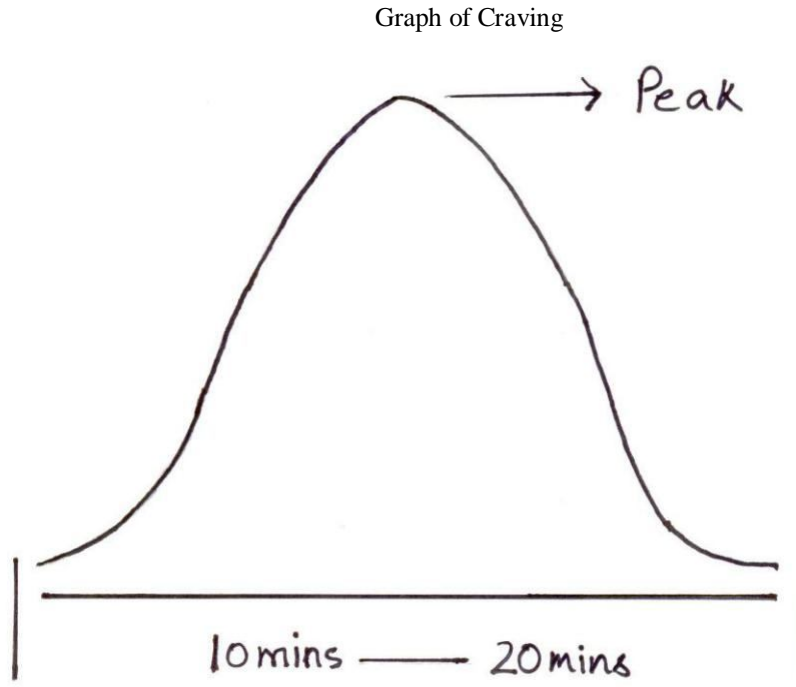
Fig. 3.1: Understanding How Relapse Happens



d) Session IV

• *Understanding craving and how to handle it?*

Craving is an internal urge to take drugs. One starts with mental craving i.e. an individual starts to get multiple drug related thoughts and it progress towards physical craving i.e. physical symptoms like body aches, heart's palpitation etc. start to appear.



It is a bell shaped graph, where craving starts with a few thoughts regarding drugs and then the thoughts starts to multiply and it starts increases and moves upwards towards its peak where craving is maximum. At this point an individual, if does not use effective coping strategy then, might give himself/ herself the permission thought to go take drug. But if the individual copes with it and let it pass, then gradually the craving subsides and fades away. Its not going to stay forever. Its of brief time period, if this time period is handled effectively then he can stay away from drugs.

• *How to handle craving? Cognitive intervention*

- ✓ The first and the most important aspect is to recognize craving. You have to identify first that you have begun with thoughts of drug. And remember it eventually goes away.
- ✓ Think of negative effects if you take drug. Think of all the success you have had will turn into failure in an instance.
- ✓ Motivate yourself/ challenge yourself. Take it as a challenge that you have to win and later feel good about that you made it.

➤ *Behavioural Interventions*

- Change the environment immediately if you can and come into a safety zone. Where you get no cues of drugs and where you are sure you won't be getting drugs at all.
- Talk to someone about your craving, or confess that you are having craving and ask for help.
- Eat something at that time. Preferably sweet which would fill you stomach.
- Last but the most important step is to divert your mind with some activity (Physical/ mental) which is of your interest and which would need some cognitive effort on your part, so that your thoughts get diverted.

e) Session V

Discussing relapse situations/ triggers and how to cope with them Coping with negative emotional status - These determinants involve coping with negative emotional states mood or feelings like sadness, loneliness, boredom, guilt, resentments and grudges.

Tips to work on the above feelings:

- Write down your negative thoughts and replace them with positive ones.
- Question yourself, (a) "I am having these thought, is it because I am going through a low phase or is the situation really this bad? Because generally we get more negative thoughts when we are feeling depressed. (b) Would these thoughts and feelings help in my recovery or would they hinder it and take me towards relapse?"
- Understand the chain of reaction of your negative thoughts.

Negative thoughts lead to negative emotions and then it leads to negative behaviour so change your approach, by enforcing a positive behaviour which would lead to positive emotions and that would lead to positive thoughts. Don't set ideal, do some activity.

Increase positive psychomotor activity. (indulge in hobby etc.) Be solution focused. "I have to find a solution"

Increase socialization and communication. Break the chain of negative thoughts.

Replace your thoughts with good times in past. Imagine good times in your future.

Remind yourself this phase will pass, its not going to stay forever.

#### f) Session VI

Discussing relapse situations/ triggers and how to cope with them.

Sudden stress/trauma/Crisis: Financial or emotional at home or work place. Tips to work on above situations:

Postpone any sudden decision for a while.

Talk to a few people for solution, who are sincere to you.

Find out a number of possible solutions, before taking a final decision. Don't be alone.

Remember this is a temporary phase. Remember you can handle it.

#### g) Session VII

Discussing relapse situations/ triggers and how to cope with them

People, places and objects – These determinants involve coping with people (Paraphernalia) who are associated with your drug taking behaviour i.e. using drugs or procuring them. Associations with places where you use to procure drugs or use to use them.

And association with objects which trigger the thoughts of drugs e.g. Foil paper, match box etc.

##### • *Tips to cope with people*

Recognize these people are dangerous for you. Avoid meeting these people.

If you meet accidentally, do not indulge in friendly conversation. Say "No" assertively, do not leave any open doors for future.

Cut all associations with them.

To avoid meeting these people, go out with some of your family member or sincere friend, who would hinder both you and these people to get in touch.

##### • *Tips to cope with places*

Recognize these places are dangerous for you. Remind yourself that you can do it.

Avoid going or passing from these places, even if you have to take a longer way to reach your destination.

Don't go or pass alone from these places, go with some of your family member or your sincere friend.

Challenge and motivate yourself before passing that place that you have to pass or go through it successfully.

##### • *Tips to cope with objects*

Recognize that these objects are dangerous for you. Avoid getting in contact with them if you can.

Remove any such object with which you have associated drugs from your house. Recondition yourself with the faulty associations you have made with these objects and drugs e.g. foil paper is also used for wrapping food at home and for children to take to school.

#### h) Session VIII

Discussing relapse situation/ triggers and how to cope with them.

- *Celebration/ parties (Rewarding one's self/ challenge one's self that "I can control urges")*

These determinants deal with coping with high risk situations like parties and celebrations where drugs will be used. Here the individual either justifies himself that he is too exhausted or feels there is nothing exciting or good in his life, so he deserves a shot, "just once". He thinks he would not take it again and goes to a party to take the drug. But unfortunately falls into the vicious circle again. Tips to deal with above situation

Recognize these situations are dangerous for you. Avoid going to such celebrations.

If you have to go, go with a family member initially.

Remember if you take once, you will definitely fall into the vicious circle. Celebrate with your family, go for a holiday.

Find other activities in your life which give you equal amount or level of excitement which you use to get from drugs.

Remember its your over confidence, if you are thinking you will control yourself from taking drugs when you get in contact with them.

Remember always drugs are stronger than you, if you get in contact with them, they will definitely overpower you.

Don't forget you always have to stay away from drugs.

Never forget you are an addict, that drugs are your weakness, so you have to keep away.

- *Family Trust*

This determinant involves coping with interpersonal situation with family members and friends who have doubt that an individual is still into drugs, specially when he/she is out of their site, or is sitting alone, not communication or socializing. This situation arises in the early stages of recovery, as the addict is going through a low phase, he/she coping skills are less, health is low. And in initial stage families trust is low. If in this situation such a problem arises the addicts feel triggers to take drugs as this allegations increase there stress level, anger and frustration, and they feel "I might as well take drugs and prove them right".

Tips to cope with above situation:

Remember, your family is not doubting you, its there deep rooted love and insecurity.

You don't have to gain anyone's trust, will come by itself.

It's there problem, if they are doubting you, you don't have to take there problem in your life.

Remember, you have nothing to prove to anyone, you are leaving drugs for yourself not anyone else.

To satisfy your family members, take them along wherever you have to go. Don't sit alone at home.

Participate in family activities, spend more time with your family, which you don't use to. If you are out and can't take your family along, then keep in touch with them through phone calls frequently.

- *Free time/ no employment*

This determinant involves to cope with addicts who do not have any job to do and have allot of ideal time for themselves. This situation is of high risk to them as free mind is devil's workshop.

Tips to deal with above situation:

Develop your hobbies.

Make a strict time table to follow the whole day, discipline your life e.g. waking up and sleeping, eating, exercise, time for religious activity. Do all your works yourself.

Induce yourself in doing small-small works at home. Help everyone around you.

Do voluntary works.

### 3) *Assessment*

At the end of 12 weeks, the effectiveness of RT was assessed. The criteria for assessment was the compliance with treatment shown by the addicts.

### 4) *Analysis*

The data obtained were processed to obtain the following information:

- 1) Frequency distribution, mean, standard deviation and skewness and kutoses of all the variables included in the study;
- 2) 2-Test was applied to see the difference between the two groups i.e. experimental and control group.
- 3) Discriminant Analysis



Discriminant analysis is a multivariate statistical technique appropriate to obtain information as to, are the two groups significantly different on the basis of variables under investigation? What are the numbers of misclassification in each group, and which variables are associated with group 1 and which are associated with group 2, along with their respective discriminate weights?

### V. RESULT & DISCUSSION

Data analysis is the act of transforming data with the aim of extracting useful information and facilitating conclusions. Data analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data. According to Shamoo and Resnik (2003) various analytic procedures provide a way of drawing inductive inferences from data and distinguishing the signal (the phenomenon of interest) from the noise (statistical fluctuations) present in the data.

The organization, analysis and interpretation of data and formulation of conclusions and generalizations are necessary steps to get a meaningful picture out of the raw information collected. The analysis and interpretation of data involves the objective material in the possession of the researcher and the subjective reactions and desires to derive from the data the inherent meanings in their relation to the problem.

The results of the study have been discussed under three major headings:

- 1) Descriptive statistics
- 2) Z-test
- 3) Discriminant analysis

#### A. Descriptive Statistics

Frequency distributions of the scores on all the variables were setup. The scores on all the thirteen variables were collected for the two groups (i.e. experimental and control group) selected from the sample. The means, standard deviations, skewness and kurtosis of these scores on all the variables were computed and are reported in tables 4.1 to 4.4.

A careful look at the table reveals that most of the variables are more or less normally distributed with a few exceptions.

However, these slight deviations from normality should cause no concern because discriminant analysis used for this investigation, is found to be a robust technique by several authors (see in particular Lachenbruch, 1975), and can tolerate some deviations from the assumption of “multivariate normal distribution” of discriminating variables.

Table 5.3  
Frequency Distribution of Scores on NEO-FFI (Control Group, N=50)

C.I.	N	E	O	A	C
11-15	1	1	-	-	2
16-20	11	10	8	6	3
21-25	13	15	27	16	7
26-30	18	20	13	20	17
31-35	5	4	2	6	19
36-40	-	-	-	-	2
41-46	2	-	-	2	-
<b>Mean</b>	24.92	25.04	23.28	26.52	28.5
<b>SD</b>	6.11	4.44	3.64	5.00	5.44
<b>Skewness</b>	.556	-.304	.164	.728	-.965
<b>Kurtosis</b>	.724	-.77	.219	1.028	.939

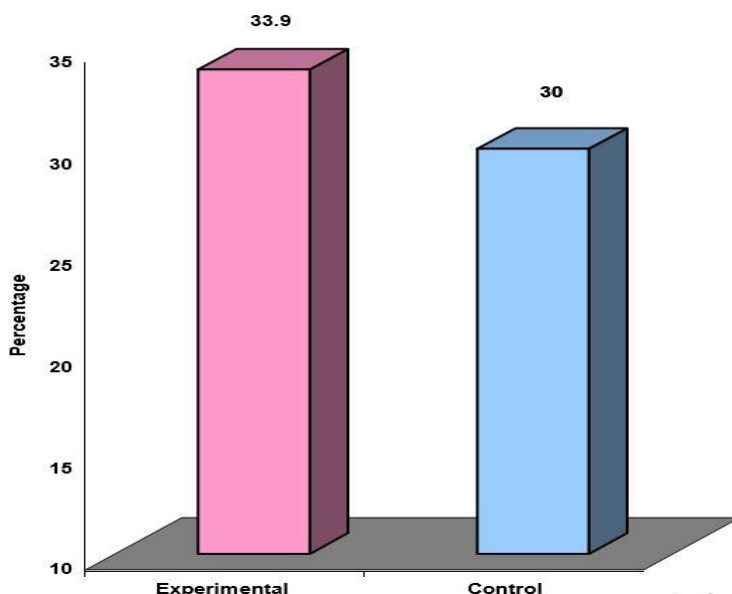
Table 5.4  
Frequency Distribution of Scores on NEO-FFI (Experimental Group, N=103)

C.I.	N	E	O	A	C
6-9	-	1	-	-	-
10-13	-	1	2	-	1
14-17	7	7	7	-	2
18-21	21	18	27	7	6
22-25	28	25	37	31	15
26-29	23	31	22	35	27
30-33	17	13	8	28	29
34-37	4	7	-	2	-
38-41	3	-	-	-	-
<b>Mean</b>	25.17	25.01	23.11	26.79	29.24
<b>SD</b>	5.77	5.73	4.23	3.77	5.43
<b>Skewness</b>	.363	-.325	-.184	-.188	-.257
<b>Kurtosis</b>	-.045	.262	-.055	-.315	.121

Table 5.5  
Showing Percentages of Successful Cases of Experimental and Control Group

Sr. No.	Groups	N	Successful cases	Percentage
1.	Experimental	103	35	33.9
2.	Control	50	15	30

Graph 5.1  
Showing Percentage of Successful Cases of Experimental and Control Group



### B. Z-TEST

To see the effectiveness of Relapse Prevention Therapy (RPT) on drug addicts, percentage of successful cases of both groups, control and experimental were viewed (shown in table 5.5 and graph 1).

Further Z-test was applied to see the difference between these groups. Calculated value of Z score came out to be ( $P > .05$ ).

So, from the above statistics we can infer that RPT does not have a significant usefulness in preventing relapse in our sample, as percentage of both groups where therapy was given (experiment group) and where therapy was not given (control group) came out to be more or less the same. The value of Z score further confirmed the inference as no significant difference was found on both the successful groups, hence the effectiveness of RPT was not apparently visible on the experimental group.

Thus our hypothesis was rejected, as RPT therapy was not effective for treatment for drug addiction.

What we can comprehend from the above, is that RPT was found less useful in the treatment of drug addicts in our sample. On the contrary over the years, RPT has provided an important heuristic and treatment framework for clinicians working with several types of addictive behaviour (Carroll, 1996). The efficacy and effectiveness of Relapse Prevention Therapy for addictive disorders have been witnessed often (Witkiewitz and Marlette, 2004; Carroll, 1996; Irvin et al., 1999). Relapse Prevention was initially designed as an adjunct to existing treatments and has also been extensively used as standalone treatment (Witkiewitz, 2005).

In Lau of the empirical evidence on efficacy of RPT, as stand-alone treatment, it was used on our sample for the present study. But our results showed its effect on the contrary. Not much evidence is there to support our findings, but a meta-analysis conducted by Irvin et al. (1999) reported that although relapse prevention therapy has become widely adopted cognitive behavioural treatment intervention for alcohol, smoking and other substance use, outcome studies have yielded an inconsistent picture of this approach or condition for maximal effectiveness. Previous study reported the same findings, as to its inconsistent picture for effectiveness. (Rawson et al., 1993).

In another review by Carrolls (1996) concluded that little support existed for the notion that RP (Relapse prevention) was differentially effective across class of substance use disorder. But later Irvin et al. (1999), conducted a meta analysis and found that RP, was significantly more effective in treating alcohol and poly-substance use than in treating smoking or cocaine use. So from this evidence we can infer that RP is not significantly effective across classes of substance uses disorder and opiate sample was not particularly mentioned in the studies. And these studies indicated that more research should focus on modifying and improving RP techniques in the context of other substance users as cocaine, nicotine and opioids. Therefore we can comprehend that usefulness of RP on opiate addicts is not empirically supported and so was the case in our study.

An important shortcoming of RPT has been pointed out by Stalin (2005), he commented that relapse prevention needs more emphasis on interpersonal factors, i.e. social support, as it a phasic response that interacts with coping behaviour and affective state, is addition to its role as a distal risk.

It has been noted that the vast majority of opiate addicts in drug-treatment programs relapse within a year of detoxification, regardless of the type of the treatment used, because of the addict's environment. According to Lyvers, Wikler proposed that withdrawal symptoms become classically conditioned to the environment in which the addict hustles for and self-administers opiates (as cited in Lyvers, 1998). In addition to this Maulik, Tripathi and Rajpal (2002), also found that environmental factors are important for first use and for relapse prevention. Further research with the important people instrument has shown that social support for abstinence is related to treatment outcomes. Size of the daily network predicted less drinking, less drug use and less problem severity during the 6 months after treatment. Increasing the number of people the patient sees daily while replacing substance-involved with abstinent-supportive people may improve treatment outcomes (Zywiak et al., 2009). Another important meta-analysis has pointed out that behavioral couple therapy produces better outcomes than individual based treatment for alcoholism and drug abuse problems (Powers, Vedel and Emmelkamp, 2008). So the treatment should involve family and should emphasis on interpersonal relationships. Therefore from the above we can reckon that the social support system of the addicts i.e. the family, important people and environment has a major influence, on the treatment outcome.

This factor is particularly very important in the Indian context, as family plays a major role in an individual's, social support system. Individual has maximum interaction with the family and in addiction this interpersonal interaction is badly hampered and needs to be attended to very importantly. And lacking of this important component might have affected the outcome of our therapy.

One reason for the non-success of our therapy in context of Indian society can be attributed to the fact that in our society alcohol use is socially acceptable and addicts after the treatment take alcohol causally and in its intoxication effect on brain end up in taking their mother drug and relapse. Another important aspect of relapse prevention (RP) has been studied by Carroll and Colleagues (1994), who found a significant psychotherapy-by-time effect at one year follow-up, indicating a delayed response to treatment among patients who received RP. Then, Rawson and Colleagues also identified a "sleeper effect" for RP in patients with cocaine dependence (Rawson et al., 2002). These findings of delayed effect of RP are consistent with the notion that learning new coping skills to deal with high risk situations takes time and leads a decreased probability of relapse overtime. Polivy and Herman (2002) have demonstrated that 90 percent of individuals who attempt to change their behavior struggle with lapses and do not achieve change on their first attempt.

This renders us to another possibility that our therapy did not show its effect as soon as three months from their treatment, as this was a short duration follow up. Although the therapy was given to the addicts who volunteered to join the therapy sessions, but there is a possibility that among these who joined the therapy were some unidentified addicts who were yet in the pre contemplation and the contemplation stage of recovery. Whereas it has been studied that RP is most effective in the action and the maintained stage of recovery, where motivational interventions were needed more extensively.

Also, over the years it has been seen through scientifically researched studies (NIDA Report) that no single treatment is enough for addiction. It is also seen that choice of treatment should be based primarily on the needs of the individual clients (Paul and Kathleen, 2003). So we can understand that for an effective treatment plan, we must first attend to the individual needs of the addicts and also assess the readiness for change parameter of the addict to assign him into the most effective treatment plan for him/her. Also more emphasis should be give to social support and interpersonal relationship and the environment of addicts which become a major cause for relapse.

So from the above discussion we can gather that, RPT alone may not be always sufficient to treat drug addiction. Additional therapeutic intervention and techniques like social support, motivation enhancement therapy, and individual focused therapy, family based therapies and other behavioural techniques etc. should be combined with RPT.

Our results bring us to reflect on another perspective. As we have seen sometimes even after vigorous therapeutic interventions, individuals do not leave drugs and on the other hand some people leave drugs even without any external intervention, the same condition was witnessed in our sample. The same percent of drug addicts became successful to abstain from drugs without the therapy i.e. controls group and the addicts of the experimental group where therapy was given (shown in table 5.5).

This brings us to an important conclusion that individual differences i.e. personality traits and coping strategies exerted a great influence in our sample to abstain from drugs.

Thus we accept our other two hypotheses, stating that there exists an association and links between personality traits and treatment outcomes, and maladaptive coping strategies and relapse.

After getting clear that individual differences were more important to bring success, we would like to know which variables were congenial to facilitate abstinence in drug addicts. For this purpose we applied discriminant analysis to the different groups.



### C. Discriminant Analyses

Discriminant analysis is a multivariable statistical technique appropriate to obtain information as to, are the two groups significantly different on the basis of variables under investigation? What is the number of misclassification in each group? and which variables are associated with group 1 and which are associated with group 2, along with their respective discriminant weights?

Discriminant analysis was applied to following groups:

- Relapse cases of experiment and control group Vs successful cases of experiment and control group (combined).
- Relapse cases Vs successful cases of experimental group alone.
- Relapse cases Vs successful cases of control group.
- Relapse cases of experiment group Vs relapse cases of control group.
- Successful cases of experiment group Vs successful cases of control group.

A total of thirteen variables (eight pertaining to coping strategies and five pertaining to personality) were employed in the study to test their discriminating powers for the above defined groups.

Again stating the analysis was done with the purpose of finding the significance of difference between the groups and the discriminant co-efficient of all the variables included in the study, so as to identify the variables, which are best predictors of successful cases and relapsed cases. The results of the discriminant analysis are presented in table 5.6 to 5.10. The variables along with their discriminant co-efficient are arranged in descending order in the tables i.e. variable having maximum weightage in predicting group membership is placed at the top, while the variables at the lower and are having minimum weightage.

#### 1) Discriminant analysis applied on relapse Vs successful group (group A experimental and group B Control combined)

Table 5.6 shows the results of discriminant analysis applied to both the groups, where group A consists of relapse cases of both the groups and group B consist of successful cases of both the groups. The results reveal that group differs dominantly on the variable Neuroticism, implying Neuroticism to be highly associated trait among relapsed cases. This indicates individuals who are high on Neuroticism are prone to relapse. This shows the individuals belonging to this group are high on negative emotionality. They are more anxious that makes them more fearful, prone to worry, nervousness, tensed and they are more jittery. These people have the tendency to experience anger and related states such as frustration and bitterness more often. They experience depressive affect easily; feelings of guilt, sadness, hopelessness and loneliness accompany them mostly. So we can see that negativity surrounded the relapsed drug addicts conspicuously. Negative emotionality, Sensation-seeking and lack of self regulation have the highest correlation with drug abuse and dependence

(Chassin et al., 2004; Trull and Sher, 1994), the individuals high on this traits are vulnerable to drugs, which has been the case in our study as well. Neurotic individuals are high on emotions of shame and embarrassment. These individuals are uncomfortable around others, sensitive to ridicule and prone to feelings of inferiority. Impulsiveness is another characteristic associated with neuroticism and empirically witnessed opiate addicts tend to be impulsive and aggressive with impaired social relationships (Fieldman et al., 1995) as already mentioned above. So we can see that the individual who relapsed in our sample were experiencing more negative emotionality, showed angry hostility, had low sociability and very importantly were high on impulsiveness, as this reflects their inability to control cravings and urges. In these individuals desires were perceived as being so strong that the individual could not resist them, although they might have regretted that later.

The individuals with neurotic characteristics are highly vulnerable to stress. They feel incapability to cope with stress. The role of personality in coping process has been studied over the years. Studies have linked the personality trait dimension of Neuroticism to increased use of Avoidance and other maladaptive coping strategies (Bolger, 1990). The use of Avoidance technique has been identified as risk factor for relapse in substances abuses (Cooper et al., 1992). Particular trait dimension Neuroticism is believed to be critical to the stress coping process. Quirk and Mc Cormick (1998) found that substance abusers scoring the highest on Neuroticism and the lowest on Agreeableness, Extraversion and Conscientiousness compared to other substances abusers reported having the highest level of Escape avoidance coping.

Further the table shows that Planful coping, Positive Reappraisal, Seeking Social Support, Distancing, Confronting Coping, Self Control, Accepting Responsibility, Conscientiousness are important predictors of the Group B (successful cases). Now reflecting on the predictors of group B i.e. successful cases, we can see that personality trait Agreeableness, Openness and coping strategy, Escape Avoidance are low predicting variables of the successful group. It can be seen that Planned solving of the problems, Seeking Social Support and Positive Reappraisal are dominant strategies used by the group of the cured addicts.

This indicates those individuals who use these coping strategies are successful to abstain from drugs. Other variables i.e. Extraversion, Escape Avoidance, Openness and Agreeableness are also found to be predictors of successful group but these are less important because of low discriminant co-efficient.

Table 5.6

Showing the Variables along with the Discriminant Coefficients found to be Significant in Relapse and Successful Cases of Combined Experimental and Control Group

Variables significant for Group I (Relapsed)	Discriminant Coefficients	Variables significant for Group II (Successful)	Discriminant Coefficients
Neuroticism	.15	Planful Coping	1
		Positive Reappraisal	.678
		Seeking Social Support	.571
		Distancing	.467
		Confrontive Coping	.453
		Self Control Coping	.452
		Accepting Responsibility	.362
		Conscientiousness	.342
		Extraversion	.336
		Escape Avoidance	.116
		Openness	.087
		Agreeableness	.061

Wilk's Lambda = .954 < .008

Stress can be a major trigger for both the initial development of addiction as well as maintaining it. So to cope with stress is a very important factor to study in drug addicts. This group highest predicting weightage of success is given to the variables Planfull coping, Positive reappraisal and Seeking social support. This implies the successful group made deliberate problem focused efforts to alter the stressful situation, coupled with an analytic approach to solving the problem. They created positive meaning out it by focusing on their personal growth. And also they made efforts to seek informational support, tangible support and emotional support. Our findings are empirically supported that male alcoholics and abusers who utilized fewer Self Blame coping and more supported significantly less alcohol three month following treatment.

This group also used Distancing, with making a cognitive effort to detach one self and to minimize the significance of the stressful situation which could have been their initial efforts, but studying the use of other vigorous coping strategies to manage stress has mellowed down the impact of this coping. These individuals also showed some aggressive efforts to alter the situation but at the same time they also used the self controlling coping strategies with which they could regulate their feelings and actions. Here it is important to note that the analysis of these groups is combined of both the experiment and control group. So it is inclusive of the drug addicts who underwent the RPT. This reflects that therapy might have exerted some usefulness in subsiding the non-effective coping strategies.

Further, the personality dimension of Conscientiousness was seen in this group which is associated with increased use of Problem solving, Positive reappraisal of stressful episodes and Support Seeking Coping techniques (Vickers et al., 1989) and increased use of active, Planful Coping (Watson and Hubbard, 1996). Our study has replicated the same findings. So, on the personality dimension the successful group comprised of Conscientious individuals who are competent, orderly, dutiful, achievement stressing, self disciplined. And Conscientiousness has been found to be positively associated with Problem solving, Planning and Seeking Social Support coping strategies (George et al., 2001) as was witnessed in our sample.

On the other hand, this group and relatively used less Escape Avoidance Coping strategy, were low on Openness, Extraversion and Agreeableness personality dimensions.

Now from the results we can infer that the successful cases, used more of positive coping strategies and had personality dimension, Conscientiousness associated with them, which facilitated them to remain abstinent.

Table 5.7  
Showing the Variables along with the Discriminant Coefficients found to be Significant in Relapse and Successful Cases of Experimental Group

Variables significant for Group I (Relapsed)	Discriminant Coefficients	Variables significant for Group II (Successful)	Discriminant Coefficients
Neuroticism	.219	Positive Reappraisal	1
		Planful Coping	.653
		Seeking Social Support	.647
		Distancing	.633
		Confrontive Coping	.532

		Self Control Coping	.514
		Accepting Responsibility	.466
		Extraversion	.37
		Conscientiousness	.352
		Escape Avoidance	.215
		Agreeableness	.171
		Openness	.127

Wilk's Lambda = .94 < .01

2) *Relapse cases Vs successful cases of experimental group.*

Table No. 5.7 shows the results of discriminant analysis applied on thirteen variables of experimental group separately, where group 1 consists of relapse cases and group 2 consists of successful cases in the experimental group. Discriminant analysis on these groups was applied to further clarify that which variables were important for relapse and which variables were helpful in success to abstain from drugs. The table shows more or less consistent results with the preceding findings of combined cases of both the experimental and control group. Wilks Lambda value .94 which is significant at .01 level, indicating that the two groups are significantly different from each other. Once again Neuroticism is found to be a dominant predictor of the relapsed group which is again solidifying that neuroticism has negative impact on abstaining from drugs. On 1997 Ball et al., studied the personality, temperament and character dimensions and DSM-IV personality disorders in substance abusers and found Neuroticism was associated with many disorders. So we can comprehend that facets like anxiety, angry hostility, depression, vulnerability, impulsiveness contributed to quite an extent to the relapse of the drug addicts.

On the other hand, the successful group again showed coping strategies like Positive Appraisal, Planful Coping, Seeking Support, Distancing, Confronting Coping, Self Control and Accepting Responsibility to be strong predictors of successes.

These consistent results, further press upon the importance of these coping strategies in abstaining from relapse. Also the personality traits of Extraversion, Conscientiousness exert positive effect on success in drug addicts. Once again the coping strategy escape avoidance proved to be a weak predictor of the successful group. The use of Avoidance Coping skills has been identified as a risk factor for relapse in substance abusers (Cooper et al., 1992). We can infer from this is that escape avoidance coping is not used by the successful group predominating. Personality trait Agreeableness and Openness again are bearing very low coefficient value indicating these traits to be less important for the success of this group where RPT was given.

On the whole seeing the results of the successful group, we come to know that effective coping strategies were used by this group i.e. Positive Reappraisal, Planful

Coping, Seeking Social Support, Self Control, Accepting Responsibility, which have been identified to be useful for abstaining from drugs (Ebrahimi, A., 2002). Whereas this group was witnessed to use some of the non-effective coping strategies like Distancing and Confrontive Coping as well. But viewing the proportion of other effective copings, which is more, we can understand the effect of these coping was mellowed down. As it is clear from the results, if these addicts used Distancing and Confronting Coping and at the same time used Positive Reappraisal, Planful Coping and Seeking Support, which has higher coefficient value, then the effect of positive coping strategies dominated the former non-effective strategies.



Table 5.8  
Showing the Variables along with the Discriminant Coefficients found to be Significant in Relapse and Successful Cases of Control Group

Variables significant for Group I (Relapsed)	Discriminant Coefficients	Variables significant for Group II (Successful)	Discriminant Coefficients
Neuroticism	.436	Agreeableness	.61
Escape Avoidance	.255	Accepting Responsibility	.103
Self Control Coping	.196	Conscientiousness	.088
Confrontive Coping	.151	Positive Reappraisal	.062
Planful Coping	.126	Extraversion	.026
Seeking Social Support	.064		
Distancing	.013		
Openness	.001		

Wilk's Lambda = .772 < .01

3) Relapse cases Vs successful cases of control group

Table 5.8 shows the results of discriminant analysis applied on scores on thirteen variables, obtained from two groups of control condition in which, no therapy was given only clinical management was given. Here group 1 consists of relapse cases and group 2 consists of successful cases. The results show that the two groups are significantly different from each other. This can be inferred from the Wilks Lambda value which came out to be .772 which is significant at 0.01 level.

Neuroticism and Escape Avoidance coping strategy are identified to be predominant variables predicting the relapsed group. Followed by Self Control Coping, Confronting and Planful Coping, which bear low weightage to predict relapse and at the bottom like the Seeking Social Support Coping and Distancing Coping and the Personality variable Openness show negligible co-efficient, indicating the least important predictors of this group. So once more, we witnessed Neuroticism and Escape Avoidance coping to be highly associated with relapse. Studies have reported Neuroticism to be consistently associated with increased use of passive, ineffective coping mechanisms (Endler and parker, 1990; Costa and Mc Crae, 1989). In association between Neuroticism and responses to the Ways Of Coping checklist (Folkman and Lazarus, 1980; 1985), Neuroticism correlated with increased use of Wishful Thinking, Self Blame, Avoidance and Emotion Focused Thinking (Bolger, 1990; Hooker et al., 1994 and Smith et al., 1989). The use of ineffective coping skills is not unexpected considering correlated of the trait dimensions of Neuroticisms; neurotic individuals tend to respond to negative events with sadness, guilt, anxiety and anger. So from this information we gather that relapsed cases were high on Neuroticism which leads them to use escape avoidance coping strategy to handle stress. And rendering them to this ineffective coping leads addicts towards relapse.

This group also used some other in-effective coping strategies i.e. Confronting Coping and Distancing Coping, indicating some level of aggressive/ hostility and risk taking, and some level of cognitive efforts to detach themselves from the stressful situation, although the co-efficient values on these variable is low and almost negligible for the later variable, still we cannot ignore the negative effect it had on the addicts to abstain from drugs. Some of the effective strategies like Self Control, Planfull Coping and Seeking Social Support were also used by this group, but reflecting on the co-efficient values, their influence is negligible as compared to other ineffective coping strategies.

Now attending to our second group, this comprised of successful cases of the control group. The results show the personality trait of Agreeableness to be most conspicuous predictor of this group. Indicating the successful individual are straight forward, sincere and ingenious, they have concern for others feelings, they inhibit aggression and believe in forgive and forget. These individuals are also humble and are high on self efficacy. All these characteristics have been found to be congenial for abstaining from drugs; hence it was proved in our investigation. Further the personality traits of Conscientiousness and Extraversion are found to be associated with this group i.e. in other words associated show low values, but the positive impact cannot be overlooked. It has been found that individuals high on Extraversion, Agreeableness and Conscientiousness reported utilized fewer Escape Avoidance coping on the least maladaptive coping patterns (Quirk and Mc Cormick, 1998). Consistent results came in our investigation, along with personality trait of Agreeableness, Conscientiousness and Extraversion, this group used effective coping strategies like accepting responsibility and positive reappraisal, which had a positive impact on these addicts to abstain from drugs, even though they received no abstain from drugs, even though they received no psychological therapy. So, we can conclude that these individual differences, i.e. these personality characteristics and these coping strategies played a very important part in keeping them away from drugs.

Table 5.9  
Showing the Variables along with the Discriminant Coefficients found to be Significant in Relapse Cases of Experimental and Control Group

Variables significant for Group I (Experimental)	Discriminant Coefficients	Variables significant for Group II (Control)	Discriminant Coefficients
Neuroticism	.506	Confrontive Coping	.356
Agreeableness	.486	Escape Avoidance	.258
Conscientiousness	.185	Openness	.215
Seeking Social Support	.053	Self Control Coping	.145
Planful Coping	.035	Extraversion	.093
		Positive Reappraisal	.074
		Distancing	.063
		Accepting Responsibility	.018

Wilk's Lambda = .891 < .01

4) *Discriminant analysis applied on relapse cases of experimental group Vs relapse case of the control group.*

Table No. 5.9 shows the results of discriminant analysis applied on scores on thirteen variables, obtained from two groups of relapsed cases, where group 1 consists of relapsed cases of experimental group and group 2 consists of relapsed cases of control group. The results show that, the two groups are significantly different from each other. This can be inferred from the Wilks Lambda value which came out to be .891 which is significant at 0.5 level.

Discriminant analysis on these two groups was done to see if there was any difference in the addicts who opted for undergoing group therapy and the addicts who opted not to undergo any therapeutic intervention and rely only on clinical management, but eventually failed in keeping themselves away from drugs.

The results show, the group which opted to join RPT group sessions, Neuroticism and Agreeableness personality traits are the dominant predictors of this group and Conscientiousness and coping strategic; Seeking Social Support and Planful Coping are lighter predictors of this group. As we can see although this group seem to be using some useful coping strategies but their effect here is very less.

Once again Neuroticism has been found to be highly associated with the relapsed group.

Although this group is high on Neuroticism, reflecting some negative emotionality, hostility and impulsiveness in these addicts, but at the same time they have shown considerable values of the traits Agreeableness and Contentiousness, which highlights the characteristics like trust, that they believe that others are honest and well intentioned and would help them out of drugs. And they are concerned for other welfare that may be there near and dear ones and also they are compliant with the therapeutic environment, attending group therapies.

Conscientiousness reflected some characteristics like competence i.e. they believe that they could do it, they were orderly, self-disciplined, dutiful to the experts and had sense of stressing to achieve their goals i.e. to abstain from drugs. These entire characteristic rendered them to enter the therapy group but viewing very high Neurotic tendencies in them, these individuals were unsuccessful to abstain from drugs as Neuroticism is significantly associated with relapse in drug abusers (Battlender and Soyka, 2005). Now, viewing the results of the control group, where therapy was not a desired option, Confronting Coping and Escape Avoidance were the most dominant predictors of the addicts. Followed by, personality trait Openness and Self Controlling Coping strategy. At the bottom lie the variable having least weightage predicting this group that are Extraversion, Positive reappraisal, Distancing and Accepting responsibility.

Reflecting on these results we can comprehend that these individuals who did not opt for group therapy used very ineffective coping strategies to handle stress, like aggressiveness, using hostility and got involved in some amount of risk taking behaviour. Also they indulged in non-effective cognitive efforts like wishful thinking and used behavioural efforts to escape or avoid the situation, which suggests there decision not to enter the therapy as they wanted to escape from these drug related problem which would be discussed in the therapy or they did not want to give so much of importance to this problem, which would need psychological intervention. Using aggressive measures they thought they could make alteration in their behaviour and abstain from drug. But essentially it went against them.

Further this group is associated with personality trait of Openness, which reflects that these individuals wanted to try out their own ideas to handle their drug problems. And they also showed associated self control coping strategies to handle stress, which gave them confidence that they could rely on themselves to handle this problem of drugs in their life.

Now we came on the minor predictor of this group, which show that these individuals used some effective coping i.e. Positive Reappraisal and Accepting Responsibility but their proportion is much less than the ineffectiveness. Another ineffective coping strategy used by them is Distancing, which had adverse effect on their efforts, as they used cognitive efforts to detach themselves and they tried to minimize the significance of the situation, along with Escape Avoidance these traits went against them, to join the therapy group as they thought leaving drugs was not a very big problem for them, they could do it on the own. The personality trait of Extraversion induced in these individual's optimism that they could handle this situation on their own, and assertiveness making them dominant, forceful, excited high on self efficacy that they do not need any professional psychological help.

Table No. 5.10 shows the results of discriminant analysis applied on scores on thirteen variables obtained from two groups of successful cases, where group I consists of successful cases of experimental group and group 2 consists of successful cases of control group.

The results show that the two groups are significantly different from each other. This can be inferred from the Wilks Lambda value which came out to be .007 was significant at .05 level.

Table 5.1: Frequency distribution of scores on ways of Coping Questionnaire (Control Group, N=103)

CI	Confrontive Coping	Distancing	Self-Control Coping	Seeking Social Support	Accepting Responsibility	Escape Avoidance	Planful Coping	Positive Reappraisal
1-3	3	2	3	6	2	2	-	-
4-6	5	7	-	10	15	2	9	2
7-9	10	13	13	2	21	6	8	1
10-12	13	13	15	21	12	10	16	18
13-15	15	12	15	6	-	13	13	11
16-18	4	2	3	5	-	9	3	9
19-21	-	1	1	-	-	8	1	9
Mean	10.66	10.24	11.32	9.58	7.84	13.5	10.94	14.2
SD	3.77	3.60	3.81	4.477	2.63	4.59	3.55	4.16
Skewness	-.356	0.287	-0.327	-0.196	-.43	-.42	.26	.01
Kurtosis	-.82	.43	.716	-.57	-.19	-.01	-.26	-.51

Discriminant analysis on these two groups was applied to see which were the most important variables that, helped addicts to abstain from drugs successfully. This would be clarified from the difference found in the groups which underwent therapy and the ones who became successful even without the therapy, indicating that personality variables and the coping strategies they use were high determinant of their success.

Looking at the results of group I, we gather that Neuroticism was a most dominant predator of the successful individuals in the experimental group. Followed by Accepting Responsibility, Escape avoidance and Confronting coping.

Retrospecting our previous analysis, similarity in the experimental group is witnessed. In both the experimental groups i.e. (relapsed and successful) Neuroticism is found to be a dominant trait. So from this we can understand that these individual entered the psychotherapy group, as they were accompanied by negative emotionality i.e. guilt, embarrassment, anxiety and apprehension about their future. So, all these vulnerable characteristics lead them to decide to take professional help. This is also reflected from the next important variable which is predicting this group i.e. Accepting Responsibility. So we can render that these individuals acknowledged their own role in the problem and made a concomitant of trying to put things right. And this leads them to success for maintaining abstinence. Further as we see this group is associated with the Escape Avoidance coping which is quite likely as we have discussed earlier that Neuroticism is highly correlated with escape avoidance coping (George et al., 2001). Then at the last Confrontive Coping is found to be a low predictor of this group, indicating that these individual used some aggressive means to alter their situation, which to some extent as we can see worked positively for them. In this group Accepting Responsibility seem to have worked very well, because we know individuals who never accept their own responsibility and blame other for their problems, always except others to solve their problem which is never possible.



Table 5.2: Frequency distribution of scores on ways of Coping Questionnaire  
(Experimental Group, N=103)

CI	Confrontive Coping	Distancing	Self Control Coping	Seeking Social Support	Accepting Responsibility	Escape Avoidance	Planful Coping	Positive Reappraisal
0-2	5	2	3	5	2	2	1	-
3-5	14	7	7	17	20	3	9	5
6-8	23	25	13	16	32	18	19	9
9-11	24	28	32	26	40	24	19	12
12-14	22	25	23	20	9	25	29	17
15-17	15	15	9	13	-	14	18	23
18-20	1	1	13	6	-	11	8	25
21-23	-	-	2	-	-	6	-	12
Mean	9.5243	10.24	11.32	9.92	7.89	12.33	11.39	14.63
SD	4.12	3.77	4.67	4.65	2.71	4.66	4.13	4.89
Skewness	-0.078	-.001	.031	-.071	-.463	.087	-.227	-.612
Kurtosis	-.812	-.552	-.377	-.834	-.542	-.292	-.802	-.479

Shifting our attention to the results of 2nd group, which got successful without the RPT, we can gather the personality traits of Conscientiousness, Agreeableness and Extraversion are strong predictors of this group. Openness personality trait is comparatively less associated with them, but still the influence is evident. Further, the coping strategies, which are found to be associated with this group in hierarchy are, Distancing, Planful Coping, Positive Reappraisal having more weightage than Self control and Seeking Social Support which show low co-efficient indicating weak predictors of this group.

Table 5.10  
Showing the Variables along with the Discriminant Coefficients found to be Significant in Successful Cases of Experimental and Control Group

Variables significant for Group I (Experimental)	Discriminant Coefficients	Variables significant for Group II (Control)	Discriminant Coefficients
Neuroticism	.881	Conscientiousness	.87
Accepting Responsibility	.242	Agreeableness	.74
Escape Avoidance	.229	Extraversion	.217
Confrontive Coping	.194	Distancing	.211
		Openness	.18
		Planful Coping	.17
		Positive Reappraisal	.15
		Self Control Coping	.04
		Seeking Social Support	.01

Wilk's Lambda = .997 < .01

From the above, we can reckon, Conscientiousness, Agreeableness, Extraversion, followed by Openness personality variables are most important traits associated with the success for leaving drugs. This finding is consistent with the earlier analysis we have exhausted, Agreeableness, Conscientiousness and Extraversion have been found to be highly associated with maintaining success in abstaining from drugs. Our results are supported by McCormick et al. (1998) that high levels of Conscientiousness, Agreeableness and Extraversion are associated with greater confidence in ability to refrain from use. Especially the personality trait Conscientiousness is associated with preventing relapse (Bottlender and Soyka, 2005).

In the discriminant analysis of these two groups, the significance of these variables is most important. These individuals being high on Conscientiousness are high on competence, which refers to the sense that one is capable, sensible, prudent and effective, they are well organized individuals dutiful making them high on being governed by conscience, also they are high on aspiration level and worked hard to achieve their goals, these individuals are self-discipline so they have ability to motivate themselves to get their jobs done, and they thought carefully before acting. So we can relate that these characteristic played a very important role in keeping them away from drugs, even though they didn't under go any therapeutic intervention.

Further Agreeableness personality trait, as we have discussed earlier makes these individuals sincere, ingenious, complaint, modest and most important tender minded which worked for them positively. Extraversion is another personality trait which is associated with success in the drug addicts to abstain from drugs.

This trait reflects that these individuals are full of optimism, positive emotions, they are assertive, had high level of energy which again worked in favor of them to keep away from drugs. Openness inculcated some good traits in them like good aesthetic sense, fantasy, ideas, willingness to try novel activities and ideas, these qualities made it easy for them to channelize their energies to more positive fruitful activities, which kept them away from drugs and they could easily fill the void they felt after leaving drugs.

Now, moving on to the important coping strategies associated with success. This group used mostly effective coping strategies like Planful Coping, Positive Reappraisal, Self Controlling and Seeking Social Support and it has been studied that positive coping strategies are associated with reduced likelihood of using substance abuse (Mohammad, 2009), although the coefficient bourn by these variables are low but we cannot ignore the positive effect they exerted on the success of this group. The only non-effective coping used by this group was distancing coping but viewing the proportion of other effective Coping and Positive personality traits, it is use was negligible by the addicts. So we can comprehend that these addicts used planful and analytic approach to solve their problems, they created a positive meaning out of the situation by growing personally, they exerted control on their feelings and actions and made a few efforts to seek information, support which was negligible as they mostly relied own their own assets. The sign of Distancing Coping used by these individual reflects that they tried cognitively to detach themselves and minimize the significance of the situation, but these efforts were less significant as we have a overall look at other important character they possess.

## VI. DISCUSSION

The results of our study indicated that Relapse Prevention Therapy (RPT) was relatively less useful for the treatment of drug addiction in our sample. the possible reasons for this could be attributed to the facts that in RPT, the component of social support has been less emphasized. Whereas social support at the family, as well as significant others plays a very important role in producing good results in abstaining from drugs (Zywiak et al., 2009). Another perspective could behold that the effectiveness of RPT could be seen later after the three months of treatment as sleeper's effect has been witnessed for RPT in substance abusers (Rowson et al., 2002). Our results also reflect that drug addiction treatment needs to be a collaborative approach. No single approach is sufficient for the treatment. Initial assessment of the individual's needs, functional analysis and the assessment of the stage of addiction should be done before exposing him to the respective treatment.

Another very important aspect which came forth from our results was that the individual differences played a very dominant role in preventing relapse and abstaining from drug use in our sample. It was observed that relapsed addicts differed significantly from the successful drug addicts giving support to the preceded statement.

The personality trait neuroticism was a dominant trait predicting relapse. This finding is consistent with empirical review stating this trait to be highly associated with relapse (Fisher, Elias and Ritz, 1998; Mecormuck et al., 1998; Bottlender and Soyka, 2005). This reflects, that relapsed addicts in our sample were high on Anxiety, Angry hostility, Depression, Self consciousness, Impulsiveness and Vulnerability. All these traits rendered them maladjusted in the environment outside them as well as inside them. Neuroticism might have influenced their ability to develop and access their coping resources, as we know that more neurotic people are less able to find and cultivate strong, healthy friendship and are less able to draw in social support in the time of stress. And we have already studied that social support is one of the important factor which helps addicts to abstain from drugs. Also Neuroticism has been shown to be a predictor of cue-elicited craving, suggesting that individuals high on Neuroticism may be biologically predisposed to attend to such stimuli thereby increasing their risk for relapse (Powell, Bradky and Gray, 1992). So from this we understand that relapsed addicts in our sample might have given in for craving cues easily and another trait associated with high vulnerability in our sample is high impulsivity, which is through of as two related dimensions reflecting an increased sensitivity to reward and a separate trait related to impulsive decision making (Dawe et al., 2007). This means they could not delay their gratification to case of pain (psychological or physiological) and wanted immediate reward and made impulsive decision to take drugs. Neuroticism also associated with lowered lack of confidence in self restraint, (McCormick et al., 1998). Neuroticism is found to be related to a greater perception of threat in a given stressor and Neuroticism was related to the use of more emotion- focused coping strategies (Schewchuk et al., 1999). So we can understand that addicts in our sample were high with emotional negatively and were highly vulnerable to stress and had low self efficacy and as we know that addict's life is full of stressors, so when they faced these stressors they could not cope effectively with them and took drugs as their conditioned coping strategy. They had their own irrational ideas about the environment as they were filled with negative effect like resentments for others, grudges, guilt, shame which all rendered them vulnerable and were less able to control their impulses and could cope poorly with stress so they relapsed.

On the other hand personality traits, conscientiousness was found highly correlated with the successful group, indicating positive effect on abstaining from drugs. Conscientiousness reflected in our successful addicts the traits like competence, order, dutifulness, achievement striving, self-discipline, which helped them to abstain from drugs. Achievement striving trait made these addicts highly aspired to work hard and achieve their goal of abstinence. Also very important aspect of their personality is reflected from this score, that they had a sense of direction in life, which had a very dominant effect on their life and motivated them to leave drugs. They being self disciplined and competent, made it easy for them to achieve their goal. Conscientiousness has also been to predict more problem-solving and cognitive restructuring (Connor-Smith and Flachsbart, 2007).

A survey analysis showed that Neuroticism and conscientiousness were significant predictors of relapse. Odds ratio showed that the risk of relapsing was greatest for those patients who were low in Conscientiousness and high in Neuroticism (Fisher, Elias and Ritz, 1998), these results were reproduced in our study.

Further the Agreeableness and Extraversion traits of personality were also found to be positively associated with the successful group, showing its positive effect on addicts to abstain from drugs. Agreeableness, shows that successful addicts were high on trust, straightforwardness, altruism, compliance, modesty and tender mindedness. This mean that successful addicts had low level of negative emotionality, as these traits reflect a very healthy state of mind. They trusted others, did not carry any negativity towards them like resentments, grudges and did not show aggression. They were also cooperative with the people in their lives and had love for all. These traits really helped them come out of drugs, as they had a positive energy within themselves, which helped them through it. And now, coming to the trait of Extraversion, which rendered these successful individuals with Warmth, Gregariousness, Assertiveness, Activity, Excitement-seeking and Positive emotions. This means that these individual were affectionate and friendly, so could access their social support which they obviously had more than neurotics and as we have studied that social support is one of the most important factor associated with abstinence. Its seen that Extraversion predict, Support Seeking (Connor-Smith and Flachsborn, 2007). Gregariousness again reflects their strong social support. We also come to know that these individuals were assertive to reach their goals, also very important aspect is reflected of successful addicts here, that high assertiveness shows they were able to control their impulses and could say "No" to drugs when came in contact either by themselves or by anyone's offers, and protected themselves from relapse. Excitement seeking shows that these individuals found some recreational and stimulating activities that could fill the void which generally leads addicts to negative emotional states, but these addicts were full of positive emotions which gave them the positive energy to abstain from drugs and find something meaningful in life to live for. It has been studied by McCormick et al. (1998) that Conscientiousness, Agreeableness and Extraversion were associated with greater confidence in ability to refrain from use, where as Neuroticism was associated with a corresponding lack of confidence in self restraint, hence it supports our findings.

As we have reviewed earlier there exists a link between personality traits and coping strategies. Personality may facilitate or constrain coping for e.g. it has been studied that personality traits Extraversion and Conscientiousness predicted more problem-solving and cognitive restructuring, Neuroticism. Neuroticism predicted problematic strategies like Wishful Thinking, withdrawal and emotion focused coping and Extraversion, also predicted Support Seeking (Connor-Smith and Flachsbart, 2007). Similar findings were seen in our sample as well, where positive coping strategies and personality traits like Conscientiousness, Agreeableness and Extraversion were associated with the success and maladaptive coping strategies and Personality trait Neuroticism was associated with relapsed cases. Now we will direct our attention to the coping strategies used by our successful and relapsed addicts.

Most major theories and models of addiction identify stress as an important factor in increasing drug use and in relapse. Substantial pre-clinical data support the notion that stress exposure enhances drug self-administration and that stress reinstates drug-seeking behavior (Sinha, 2005). So, now we reflect the different coping strategies they use to deal with stress. Our results showed that positive coping strategies like Planful Coping Strategy, positive reappraisal and seeking social support was associated with the successful group. Planful Problem solving reflects that the successful addicts made deliberate problem focused efforts to alter the situation when they were encountered with stressors. They used an analytic approach to solving their problems rather than using non-effective strategies like Escape Avoidance or Confrontive Coping. Further these individuals tried to find a positive meaning out of the situation by focusing on personal growth, used some religious ideologies also e.g. if they were not faced by these difficulties in their lives they might have not got any chance to grow in life or improve themselves. And the use of Seeking Social Support coping gave these individuals the biggest strength, as these individuals seek informational support, tangible and emotional support. This means that they totally surrendered to the important other in their life that helped them out of this. It also shows as we have studied above that these individuals trusted others and asked for help. When they asked for help meant that they had fully accepted their illness and they were ready to try every means to make things right in their life.



On the other hand, Escape Avoidance Coping strategy was identified to be a strong predictor of relapsed group. This coping reflects that the relapsed addicts made use of wishful thinking things would just turn out their way without working any efforts on their parts and they also made efforts to escape or avoid problem in life. And the biggest escape they took was into drugs. Avoidance coping strategies has been associated with low self-efficacy (Levin, Ilgen and Moos, 2007), indicating that relapsed addicts had low confidence in facing any stressors in their lives and also handling cues to use or craving for drugs. Findings have supported our preceding statement that a within- day mechanism through which coping strategies, especially Avoidance coping, may influence daily variation in craving and in turn affect abstinence (Cleveland and Harris, 2009). It has been found that positive coping strategies were associated with reduced likelihood of using substance abuse, where as negative coping strategies were associated positively with using substances (Mohammad, 2009), which was also the case in our study.

So, from the above we can gather that positive personality traits and positive coping strategies exerted a more dominant and positive effect on the success in our sample, where as RPT could not correspond to the addicts for abstaining from drugs.

## VII. CONCLUSION & IMPLICATION

### A. Conclusion

- 1) Relapsed drug addicts differ significantly from the successful drug addicts.
- 2) Neuroticism is a single dominant trait predicting relapses in the drug addicts.
- 3) Coping strategies like planfull coping, Positive Reappraisal and Seeking Social Support are highest predictor of success in drug addicts.
- 4) Personality variable Conscientiousness is positively associated with success of drug addicts.
- 5) Escape avoidance coping strategy is found to be low predictor of success in drug addicts.
- 6) Openness and Agreeableness personality traits were found to be least predicting traits of success.
- 7) The two groups i.e. relapse and successful groups of experimental group are significantly different from each other.
- 8) Neuroticism is a single dominant trait predicting relapse in the drug addicts.
- 9) Coping strategies Positive Reappraisal, Planfull Coping and Seeking Social Support are most important predictors of successful group in drug addicts.
- 10) Personality traits of Extraversion and Conscientiousness were positively associated with successful group.
- 11) Escape Avoidance coping was found to be a low predictor of success in drug addicts.
- 12) Openness and Agreeableness personality variables were found to be least predicting traits of success.
- 13) The two groups were found significantly different from each other.
- 14) Personality trait of Neuroticism was once again found to be a strong predictor of the relapsed cases and personality trait of Openness exerted negligible effect.
- 15) Coping strategies, Escape Avoidance was a high predictor of relapse.
- 16) Further coping strategies Self Control, Confronting Coping, Planful Coping, Seeking Social Support and Distancing were associated with relapse, but imperatively exerted low effect on them.
- 17) Personality trait, Agreeableness was found to be a strong predictor of success.
- 18) Personality traits, Conscientiousness and Extraversion were also found to be associated with success.
- 19) Coping strategies Accepting Responsibility and Positive Reappraisal were found to be associated with successful group.
- 20) The two groups are significantly different from each other.
- 21) Neuroticism, Agreeableness and Conscientiousness personality variables are important predictors of relapse cases of experimental group.
- 22) Seeking Social Support and Planful Coping were low predictors of relapse cases of experimental group.
- 23) Confrontive Coping and Escape Avoidance are important predictors of relapse cases of central group.
- 24) Openness personality trait is associated with this control group.
- 25) Self controlling coping strategy is also associated with the control group.
- 26) Extraversion, Positive Reappraisal, Distancing, Accepting Responsibility are low predictors of the relapse cases of control group.
- 27) Neuroticism, Confronting Coping and Escape Avoidance Coping are highly associated with relapse.
- 28) Successful cases of experimental group Vs successful cases of control group
- 29) The two groups were significantly different from each other.
- 30) Personality trait of Neuroticism was strong predictor of experimental successful group.

- 31) Accepting Responsibility, Escape Avoidance, and Confrontive Coping were predictors of experimental successful group.
- 32) Personality traits of Conscientiousness, Agreeableness and Extraversion were strong predictors of control successful group.
- 33) Openness personality trait was comparatively low predictor of this group.
- 34) Coping strategy distancing was relatively high predictor of control group.
- 35) Planful Coping, Positive Appraisal, Self Controlling and Seeking Social Support Coping were associated with success of control group but were relatively low predictor of this group.

#### B. Implications

Drug addiction is a grave concern to our society. Drug addiction is endangering the very roots of our society. A large number of youth is getting engulfed in this epidemic. The present study was a small attempt to handle this life threatening disease and some important implications were drawn out of this investigation, which are stated as follows:

- 1) Drug addiction treatment should incorporate more than one therapeutic intervention, in accordance to the individual need of the addicts.
- 2) There should be a more emphasis on strengthening and developing social support system in the life of addicts which should be emphasized in the treatment intervention. More people should be encouraged to get involved in the therapy sessions like spouse, family and close friends for better results.
- 3) Addicts should be assigned to different treatment techniques after assessing in which stage of recovery they are in.
- 4) Special emphasis should be made on the assessment of personality of addicts and so that the treatment intervention would try to rectify any maladaptive traits of personality. Like, in our sample Neuroticism trait of personality was a big hindrance, so special individual sessions would be needed to help them.
- 5) Initially addicts should be given individual counseling and then they should be made to join the group sessions.
- 6) The socio culture milieu of the patients should also be considered while developing RPT for them.

### VIII. LIMITATION, DELIMITATION & FUTURE SUGGESTION

#### A. Limitation Of The Study

- 1) Due to ongoing pandemic COVID-19 affecting the worldwide countries, the data was collected only through online mode (Google form survey). IT might affect the data collected on the questionnaire filled is not completely genuine or somebody else in the family has helped the students to fill it. SO, biasness is reported in the data collection.
- 2) There are some constraint to submit the specific time period.
- 3) Further the data from experimental group was collected online.

#### B. Delimitations Of The Study

- 1) The study is based on the data collected from De-Addiction Center Delhi .only.
- 2) The study is further delimited to sample of 103 opiate drug addicts from De-Addiction Center Delhi only.

#### C. Future Suggestion

- 1) Similar studies may be conducted at substance abusers.
- 2) The study can also be conducted with the sample of rural and urban students.
- 3) Similar studies may also be taken to study the variables like socio-economic status, rural and urban etc.
- 4) A similar study can be conducted on different age groups, college student populations, different genders, and the nonworking population.
- 5) Drug awareness programmes, job opportunities, educating the people regarding the effects of narcotic drugs may be helpful to control this menace. Steps should be taken by the government to provide best health care services to the citizens at affordable cost
- 6) Number of Rehabilitation centres having vocational skills should be opened to bring the addicts to the main stream of society

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**APPENDIX**  
**WAYS OF COPING**

Please read each item below and indicate, by using the following rating scale, to what extent you used it in the situation you have just described.

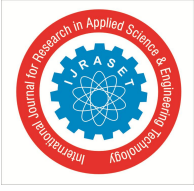
Not used	Used somewhat	Used quite a bit	Used a great deal
0	1	2	3

- 1. Just concentrated on what I had to do next – the next step.
- \_\_\_\_\_ 2. I tried to analyze the problem in order to understand it better.
- \_\_\_\_\_ 3. Turned to work or substitute activity to take my mind off things.
- \_\_\_\_\_ 4. I felt that time would make a difference – the only thing to do was to wait.
- \_\_\_\_\_ 5. Bargained or compromised to get something positive from the situation.
- \_\_\_\_\_ 6. I did something which I didn't think would work, but at least I was doing something.
- \_\_\_\_\_ 7. Tried to get the person responsible to change his or her mind.
- \_\_\_\_\_ 8. Talked to someone to find out more about the situation.
- \_\_\_\_\_ 9. Criticized or lectured myself.
- \_\_\_\_\_ 10. Tried not to burn my bridges, but leave things open somewhat.
- \_\_\_\_\_ 11. Hoped a miracle would happen.
- \_\_\_\_\_ 12. Went along with fate; sometimes I just have bad luck.
  
- \_\_\_\_\_ 13. Went on as if nothing had happened.
  
- \_\_\_\_\_ 14. I tried to keep my feelings to myself.
  
- \_\_\_\_\_ 15. Looked for the silver lining, so to speak; tried to look on the bright side of things.
  
- \_\_\_\_\_ 16. Slept more than usual.
  
- \_\_\_\_\_ 17. I expressed anger to the person(s) who caused the problem.
  
- \_\_\_\_\_ 18. Accepted sympathy and understanding from someone.
  
- \_\_\_\_\_ 19. I told myself things that helped me to feel better.
  
- \_\_\_\_\_ 20. I was inspired to do something creative.
  
- \_\_\_\_\_ 21. Tried to forget the whole thing.





- 22. I got professional help.
- 23. Changed or grew as a person in a good way.
- 24. I waited to see what would happen before doing anything.
- 25. I apologized or did something to make up.
- 26. I made a plan of action and followed it.
- 27. I accepted the next best thing to what I wanted.
- 28. I let my feelings out somehow.
- 29. Realized I brought the problem on myself.
- 30. I came out of the experience better than when I went in.
- 31. Talked to someone who could do something concrete about the problem.
- 32. Got away from it for a while; tried to rest or take a vacation.
- 33. Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.
- 34. Took a big chance or did something very risky.
- 35. I tried not to act too hastily or follow my first hunch.
- 36. Found new faith.
- 37. Maintained my pride and kept a stiff upper lip.
- 38. Rediscovered what is important in life.
- 39. Changed something so things would turn out all right.
- 40. Avoided being with people in general.
- 41. Didn't let it get to me; refused to think too much about it.



- 42. I asked a relative or friend I respected for advice.
- 43. Kept others from knowing how bad things were.
- 44. Made light of the situation; refused to get too serious about it.
- 45. Talked to someone about how I was feeling.
- 46. Stood my ground and fought for what I wanted.
- 47. Took it out on other people.
- 48. Drew on my past experiences; I was in a similar situation before.
- 49. I knew what had to be done, so I doubled my efforts to make things work.
- 50. Refused to believe that it had happened.
- 51. I made a promise to myself that things would be different next time.
- 52. Came up with a couple of different solutions to the problem.
- 53. Accepted it, since nothing could be done.
- 54. I tried to keep my feelings from interfering with other things too much.
- 55. Wished that I could change what had happened or how I felt.
- 56. I changed something about myself.
- 57. I daydreamed or imagined a better time or place than the one I was in.
- 58. Wished that the situation would go away or somehow be over with.



- \_\_\_\_\_ 59. Had fantasies or wishes about how things might turn out.
- \_\_\_\_\_ 60. I prayed.
- \_\_\_\_\_ 61. I prepared myself for the worst.
- \_\_\_\_\_ 62. I went over in my mind what I would say or do.
- \_\_\_\_\_ 63. I thought about how a person I admire would handle this situation and  
used that as a model.
- \_\_\_\_\_ 64. I tried to see things from the other person's point of view.
- \_\_\_\_\_ 65. I reminded myself how much worse things could be.
- \_\_\_\_\_ 66. I jogged or exercised

#### NEO FIVE PERSONALITY QUESTIONNAIRE

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

Disagree strongly 1	Disagree a little 2	Neither agree nor disagree 3	Agree a little 4	Agree Strongly 5
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#### I see Myself as Someone Who...

- \_\_\_\_\_ 1. Is talkative
- \_\_\_\_\_ 2. Tends to find fault with others
- \_\_\_\_\_ 3. Does a thorough job
- \_\_\_\_\_ 4. Is depressed, blue
- \_\_\_\_\_ 5. Is original, comes up with new ideas
- \_\_\_\_\_ 6. Is reserved
- \_\_\_\_\_ 7. Is helpful and unselfish with others
- \_\_\_\_\_ 8. Can be somewhat careless
- \_\_\_\_\_ 9. Is relaxed, handles stress well
- \_\_\_\_\_ 10. Is curious about many different things
- \_\_\_\_\_ 11. Is full of energy
- \_\_\_\_\_ 12. Starts quarrels with others
- \_\_\_\_\_ 13. Is a reliable worker
- \_\_\_\_\_ 14. Can be tense
- \_\_\_\_\_ 15. Is ingenious, a deep thinker

- \_\_\_ 23. Tends to be lazy
- \_\_\_ 24. Is emotionally stable, not easily upset
- \_\_\_ 25. Is inventive
- \_\_\_ 26. Has an assertive personality
- \_\_\_ 27. Can be cold and aloof
- \_\_\_ 28. Perseveres until the task is finished
- \_\_\_ 29. Can be moody
- \_\_\_ 30. Values artistic, aesthetic experiences
- \_\_\_ 31. Is sometimes shy, inhibited
- \_\_\_ 32. Is considerate and kind to almost everyone
- \_\_\_ 33. Does things efficiently
- \_\_\_ 34. Remains calm in tense situations
- \_\_\_ 35. Prefers work that is routine
- \_\_\_ 36. Is outgoing, sociable
- \_\_\_ 37. Is sometimes rude to others
- \_\_\_ 38. Makes plans and follows through with them
- \_\_\_ 39. Gets nervous easily
- \_\_\_ 40. Likes to reflect, play with ideas
- \_\_\_ 41. Has few artistic interests
  
- \_\_\_ 42. Likes to cooperate with others
- \_\_\_ 43. Is easily distracted
- \_\_\_ 44. Is sophisticated in art, music, or literature





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