CHAPATER-2

REVIEW OF LITERATURE

Drug abuse and addiction is a major global problem that destroys economy, health, relationships and career and has several complications including relapse that often remain untreated. Understanding the process of relapse and recovery is essential in the science and treatment of addictions. Relapse in drug abuse often occurs following treatment and is a major concern to treatment providers.

According to the Drug Abuse Treatment Outcome Study (DATOS), of post treatment outcomes for 1450 clients who received community treatments for cocaine and heroin dependence, about 43% of the clients who used heroin in the year after treatment were using heroin within one week after treatment termination and an additional 20% were using heroin within one month of treatment discharge (Hubbard, Flynn, Craddock, & Fletcher, 1997). Half of the remaining clients relapsed one to three months after treatment cessation. Cocaine was being used by 32% of clients within one week of termination. At one month, half had relapsed and an additional 30% relapsed to cocaine use three months after treatment discharge (Simpson, Joe, Fletcher, Hubbard, & Anglin, 1999). Evidently, it is not unusual for substance abuse clients to relapse following treatment, nor is it uncommon for clients to relapse within one year following treatment.

Since relapse is common during the process of recovery from substance abuse, it is essential that it be examined carefully. However, there are several methodological issues that must be considered when trying to understand relapse. Recent research has indicated that a brief period of use after treatment does not necessarily indicate significant use or serious relapse, and a shift to less serious drug use patterns may be viewed as indicators of improvement or harm reduction rather than a true relapse (Marlatt, 1996).

The lack of clarity of the term “relapse” found in the literature makes it difficult to draw conclusions about how addiction researchers understand relapse (Velicer, DiClemente, Rossi & Prochaska, 1990). Numerous models and a myriad
of methods have been employed to understand the process of relapse after drug
treatment and to promote change in addictive behaviours (Hubbard et al., 1997).
Although theoretical relapse models and empirical studies have generated a
significant amount of information and controversy, to date, they have failed to
uncover any common variable that would predict successful maintenance of addictive
behaviour change.

Defining Relapse

A broad definition found in the substance abuse treatment and research
literature understands relapse as an outcome that follows a period of abstinence.
Marlatt (1996) defined relapse as an individual’s reestablishment of drinking levels
prior to treatment and found that exposure to high-risk situations alone is not
sufficient to predict relapse. However, an individual’s perception of his or her ability
to cope with these high-risk situations without using substances is predictive of
relapse (Amodeo & Kurtz, 1998). Relapse has been defined in many ways, both
dichotomously and along a continuum. For example, some researchers consider
relapse to be any use of a substance following treatment (e.g. a single alcoholic drink
following treatment for alcohol abuse), while others consider relapse to be a period
that consists of higher frequency and intensity of use over a period of time (Marlatt
& Gordon, 1985; Shiffman, 1985). Relapse involves an internal process that
combines a perceived high-risk situation and perceived effectiveness of available
coping strategies and self-efficacy that makes it possible to avoid use of substances
(Connors, Maisto, & Donovan, 1996).

In 1986, Brownell and colleagues published an extensive, seminal review on
the problem of relapse in addictive behaviours (Brownell, Marlatt, Lichtenstein, &
Wilson, 1986). At that time, addictive behaviour researchers were moving away from
the disease model of addiction, and towards more cognitive and behavioural
definitions of addictive disorders. Relapse has been described as both an outcome- the
dichotomous view that the person is either ill or well, and a process- encompassing
any transgression in the process of behaviour change (Brownell et al., 1986; Wilson,
The origin of the term “relapse” is derived from a medical model, indicating a return to a disease state after a period of remission, but this definition has been diluted and applied to a variety of behaviours, from alcohol abuse to schizophrenia. Essentially, when individuals attempt to change a problematic behaviour, a lapse (or instance of a previously cessated behaviour) is highly probable. One possible outcome, following the initial setback, is a return to the previous problematic behaviour pattern (relapse). Another possible outcome is the individual getting “back on track” in the direction of positive change (prolapse). Regardless of how relapse is defined, a general reading of the psychotherapy outcome literature from a variety of behaviour disorders reveals that “relapse” may be the common denominator in the treatment of psychological problems. That is, most individuals who make an attempt to change their behaviour in a certain direction (e.g., lose weight, reduce hypertension, stop smoking, etc.), will experience lapses that often lead to relapse (Polivy & Herman, 2002).

Opioid dependence is a worldwide health problem with severe medical and social consequences (Degenhardt et al., 2013). The reasons for this spiral course of relapses, lapses and prolapses are varied. Amongst other critical players, personality, stress, maladaptive coping mechanisms and social support have been considered as the most significant factors which not only effect onset of drug consumption and its maintenance but are also responsible for relapse, hence hindering abstinence. A brief overview of these factors is presented here.

**Personality**

Personality is considered as a unique pattern of traits, which characterize the individual. Personality is not a fixed state, but a dynamic totality, which is continuously changing due to interaction with the environment. The term ‘personality’ is much older than the term ‘psychology’ itself (Mohan, 1996a). Personality has been recognized as an extremely important determiner of human behaviour. This popular concept of personality reflects its origin in the classical Latin word ‘persona,’ a mask worn by Roman actors.

In 2nd century A.D., Galen gave the concept by giving the doctrine of four temperaments, viz., the melancholic, the choleric, the sanguine, and the phlegmatic.
Jung (1923) in his widely accepted type theory utilized the term extroversion and introversion. Extroversion according to Jung (1923) was defined as a turning outward of libido on to people and objects in the external world and introversion was described as inner directedness. Allport (1937) defined personality as “the dynamic organization within the individual of those psychophysical systems that determine his unique adjustment to his environment. Guilford (1959) regarded an individual’s personality as a unique structure of traits. Later, Eysenck and his co-workers extended these theoretical concepts to laboratory settings and real-life situations. With their dimensional approach to personality at descriptive and causative levels, they have ushered a new era in the study of personality. Mischel (1976) defined personality as the distinctive patterns of behaviour (including thoughts and emotions) that characterize each individual’s adaptation to the situation of his life. According to Pervin (1980) “Personality represents those characteristics of the person or the people that generally account for consistent patterns of response to situations.”

Personality refers to a general style of interacting with the world, especially with other people - whether one is withdrawn or outgoing, excitable or placid, conscientious or careless, kind or stern. A basic assumption of the personality concept is that people do differ from one another in their style of behaviour, in ways that are at least relatively consistent across time and place (Ferguson, 2000). According to most personality psychologists, ‘personality’ refers to “characteristics that are pervasive and enduring and form a central part of the person’s identity” (Costa & McCrae, 1995).

Theoretical Perspectives of Personality

Psychoanalytical Viewpoint

Sigmund Freud’s Psychoanalytic theory includes a theory of personality structure, with id as a store house of unconscious drives and impulses; the super ego as conscience; and the ego as executive force, or mediator, balancing the pressures of id and superego with the constraints of reality. Freud also described the stages of psychosexual development (oral, anal, phallic, latency, and genital) and proposed that puzzling events such as dreams and slips of tongue” reveal unconscious impulses and conflicts.
Behavioural Viewpoint

Behavioural theory is based on the concept that all behaviour, adaptive or maladaptive, is a product of learning. The contributors to this theory are Watson (1928), Pavlov (1960) & Skinner (1972). According to this viewpoint, behaviour is a response to stimuli from the environment and reinforcement is essential to get response. Positive reinforcement is a reward for selected behaviour. Every time a child draws a good picture, the mother pats on his or her back. In negative reinforcement, one would like to avoid a response from a child. Human personality is a combination of stimulus-response habits. Neurotic symptoms viewed as learned habits or responses that are repeatedly reinforced. Maladaptive behaviour can be unlearnt and replaced by adaptive behaviour if the person receives appropriate stimulus to eliminate the maladaptive.

Interpersonal Perspective

According to Inter-personal theory, behaviour grows out of one’s attempts to establish a meaningful relationship with others. A significant contribution to the interpersonal theory was made by Harry, Adolf and Eric (1928). Sullivan (1953) described the basic principles of the inter-personal theory and believed, like Freud, that development proceeds through various stages. But he described how in each stage there is involvement of different pattern of relationship. For instance, infancy brings interactions with parents and there is need for contact. In childhood, more interactions with adults by participation in activities are required. In the stages of pre-adolescence and adolescence, there is gradual withdrawal of the child from parents and peer relationship becomes important. In late adolescence or early adulthood, intimate relationship with heterosexual groups is established. Another aspect of the theory is anxiety which has relationship in the formation of the personality. Since the infant is completely dependent on ‘significant others’ such as mother or father, mother figure like aunt for meeting his physical or psychological needs, lack of any of these needs will lead him/her to an insecure and anxious human being. In early childhood, if he/she perceives himself/herself being rejected he/she will have a negative self-concept which will lead him/her to maladjustment. The other important aspects of the inter-personal theory are social exchange, social role and inter-personal accommodation.
Eysenck’s theory of Personality

Eysenck’s theory of personality is one of the formidable attempts in presenting a complete and explanatory theory. Eysenck (1968) defined personality as, “a more or less stable and enduring organization of a person’s character and temperament, intellect and physique which determines his unique adjustment to the environment”. Eysenck’s definition of personality revolves around four behaviour patterns: the cognitive, the conative, the affective and the somatic. Thus, personality, according to Eysenck, is the sum of actual or potential behaviour patterns of organism as determined by heredity and environment. Eysenck developed and presented an exhaustive personality theory based on intensive research over the years (1947, 1960, 1963, 1967, 1981 & 1995). He posited three independent major dimensions of personality, viz., Extraversion/introversion (E/I), Neuroticism (N) and Psychoticism (P). On the descriptive side, Eysenck (1957) deduced the concept of Extraversion/introversion (E/I) from the nosological categories based on Jung’s (1923) views and supported by Hildebrand’s (1958) study and on the causative side, from Pavlov’s (1941) excitation inhibition balance in the Central Nervous System (CNS), Hull’s (1943) reactive inhibition and Gray’s (1964) level of arousal.

Eysenck and Eysenck (1968) proposed that extraversion refers to the outgoing, uninhibited, impulsive and social inclinations of person. The typical extravert is sociable, likes parties, has many friends, needs to have people to talk to and does not like reading or studying by himself. He craves for excitement, takes chances, often sticks his neck out, acts on the spur of the moment, and is generally an impulsive individual. He is fond of practical jokes, always has a ready answer, and generally likes to laugh and be merry. He prefers to keep moving and doing things, tends to be aggressive and loses his temper quickly; although his feelings are not kept under tight control. He is not always a reliable person. On the other hand, a typical introvert is a quiet, retiring sort of person, introspective, fond of books rather than people; he is reserved and distant except to intimate friends. He tends to plan ahead, looks before he leaps. He does not like excitement, takes matters of everyday life with proper seriousness, and likes the well-ordered mode of life. He keeps his feelings under close control, seldom behaves in an aggressive manner and does not lose his
temper easily. He is reliable, somewhat pessimistic and places great value on ethical standards (Eysenck, 1965). Eysenck (1967) also proposed that extraverts have higher level of cortical inhibition than do introverts and hence habituate more rapidly. Smith, Concannon, Campbell, Bozman and Kline (1990) also found more rapid habituation in extraverts than in introverts. Lucas, Diener, Grob, Suhand and Shao (2000) has also included sociability in description of extraverts, but sociability is a narrower construct than extraversion. Sociability according to them refers to individual differences in the enjoyment of social activities and the preferences for being with others over being alone.

Neuroticism

The second major personality dimension deduced by Eysenck (1947) was neuroticism/stability. Neuroticism refers to a general, emotional over responsiveness, emotional lability, and predisposition to neurotic breakdown under stress. Neuroticism is closely related to the inherited degree of lability of the autonomic nervous system (Eysenck, 1964, 1967). According to Eysenck and Eysenck (1968), neuroticism as contrasted to emotional stability is very much similar to anxiety. An individual scoring high on neuroticism tends to be anxious, worrying, over responsive and depressed. He reacts too strongly to all sorts of stimuli and finds it difficult to get back on an even heel after each emotionally arousing experience (Ibrahim, 1979). His strong emotional reactions interfere with his proper adjustment, making him react in irrational ways (Eysenck & Eysenck, 1975). Such individuals frequently complain of vague somatic upsets of minor kind, such as headaches, digestive troubles, insomnia, backaches etc. and report many worries, display anxieties and other disagreeable emotions. Such individuals are predisposed to develop neurotic disorder under stress, but such predispositions should not be confused with actual neurotic breakdown.

A person may have high scores on neuroticism, yet functioning adequately in work, sex, family and social sphere (Eysenck & Eysenck, 1968). McCrae (1990) has defined neuroticism as a predisposition to experience negative affect and therefore those who are high in neuroticism experience more anxiety, depression, hostility and self-consciousness (McCrae & Costa, 1986).
Psychoticism

Eysenck and Eysenck (1975) and Howarth (1986) reported that a high scorer on psychoticism possesses the following traits: impulsiveness, lack of cooperation, oral pessimism, rigidity, lower super ego controls, low social sensitivity, low persistence, lack of anxiety, egocentric, impersonal, lack of feelings of inferiority, unempathic, creative, aggressive, cold, antisocial and tough minded.

Five Factor Models of Personality

Five Factors of Personality traits are five broad dimensions of personality discovered through empirical research (Goldberg, 1993). These factors are Openness to experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism; description of each is given below.

Openness to Experience:

Openness to Experience describes a dimension of personality that distinguishes imaginative, creative people from down-to-earth, conventional people. Open people are intellectually curious, appreciative of art, and sensitive to beauty. They tend to be, compared to closed people, more aware of their feelings. They, therefore, tend to hold unconventional and individualistic beliefs, although their actions may be conforming. People with low scores on openness to experience tend to have narrow, common interests. They prefer the plain, straightforward, and obvious over the complex, ambiguous, and subtle. They may regard the arts and sciences with suspicion, regarding these endeavors as of no practical use. Closed people prefer familiarity over novelty; they are conservative and resistant to change.

Conscientiousness

Conscientiousness concerns the way in which we control, regulate, and direct our impulses. Impulses are not inherently bad; occasionally time constraints require a snap decision and acting on our first impulse can be an effective response. Also, in times of play rather than work, acting spontaneously and impulsively can be fun. Impulsive individuals can be seen by others as colourful, fun-to-be-with. Conscientiousness includes the factor known as Need for Achievement (NAch). The benefits of high conscientiousness are obvious. Conscientious individuals avoid trouble and achieve high levels of success through purposeful planning and
persistence. They are also positively regarded by others as intelligent and reliable. On the negative side, they can be compulsive perfectionists and work alcoholics.

**Extraversion**

Extraversion (also “extroversion”) is marked by pronounced engagement with the external world. Extraverts enjoy being with people, are full of energy, and often experience positive emotions. They tend to be enthusiastic, action-oriented individuals who are likely to say “Yes!” or “Let’s go!” to opportunities for excitement. In groups, they like to talk, assert themselves, and draw attention to themselves. Introverts lack the exuberance, energy, and activity levels of extraverts. They tend to be quiet, low-key, deliberate, and less dependent on the social world. Their lack of social involvement should not be interpreted as shyness or depression; the introvert simply needs less stimulation than an extravert and more time alone to recharge his batteries. A simple explanation is that an extrovert gains energy by associating with others and loses energy when alone for any period of time. An introvert is the opposite, as they gain energy from doing individual activities such as watching movies or reading and lose energy, sometimes to the point of exhaustion, from social activities.

**Agreeableness**

Agreeableness reflects individual differences in concern with cooperation and social harmony. Agreeable individuals have an optimistic view of human nature, and value getting along with others; they are therefore considerate, friendly, generous, helpful, and willing to compromise with others. Disagreeable individuals place self-interest above getting along with others. They are generally unconcerned with others’ well-being and are less likely to extend themselves for other people. Agreeableness is obviously advantageous for attaining and maintaining popularity, as agreeable people are better liked than disagreeable people. On the other hand, agreeableness is detrimental in situations that require tough or absolute objective decisions.

**Neuroticism**

Neuroticism refers to the tendency to experience negative emotions. Those who score high on neuroticism may experience primarily one specific negative feeling
such as anxiety, anger, or depression, but are likely to experience several of these emotions. People high in neuroticism are emotionally reactive. They respond emotionally to events that would not affect most people, and their reactions tend to be more intense than normal. They are more likely to interpret ordinary situations as threatening, and minor frustrations as hopelessly difficult. Their negative emotional reactions tend to persist for unusually long periods of time, which means they are often in a bad mood. These problems in emotional regulation can diminish a neurotic’s ability to think clearly, make decisions, and cope effectively with stress.

Although a strong association of personality traits with tendency towards alcohol and drug abuse is well recognized, the nature of this relationship remains unclear (Flory, Lynam, Milich, Leukefeld, & Clayton, 2002). Some studies indicated that personality pathology results from substance abuse (Barnes, 1983; Sher & Trull 1994), reflecting not only the toxic effect of substances, but also severe psychosocial stress associated with heavy drug and alcohol use. Other studies have offered the opposite view suggesting that personality profiles, either directly or indirectly, could be a predisposing factor for substance abuse in general (Sher & Trull, 1994; Flory et al., 2002; Milivojevic, Milovanovic, Jovanovic, Svrakic, Svrakic, & Cloninger, 2012; Mirnics, Heincz, Bagdy, Surányi, Gonda, Benko, & Juhasz, 2013). For example, certain personality characteristics may share a common biological pathway with substance abuse, thereby affecting substance-related behaviours (Robinett, Rowlett, & Bardo, 1998; Milivojevic et al., 2012).

An individual’s pattern of drug use is based, in part, on personality characteristics. Personality traits have also been implicated in the etiology of drug addiction. Adolescents who score high on negative emotionality, a trait akin to neuroticism, or low on constraint, a trait akin to conscientiousness, are at greater risk of developing a substance dependence disorder by age 20 (Elkins, King, McGue, & Iacono, 2006). There is a correlation between personality features and drug addiction and addicts suffer from mental disorders and disturbances (cf. Dhobi, 2017). Personality characteristics such as aggression, impulsivity, maladjustment, being anti-social, lack of social interest, disregard for social customs, irresponsibility, lack of
attention to social rules can lead to increased crime, delinquency, violence, murder etc. All these factors are capable of causing chaos in society (Ajil, 2010).

The relationship between Five-Factor model domains and substance-related behaviour found that neuroticism and conscientiousness were linked to substance-related behaviour; however, the dimensions of extraversion and agreeableness were not associated with addictive behaviour (Ruiz, Pincus, & Dickinson, 2003). Heroin addicts scored comparatively high on neuroticism, psychoticism and lie scale; and low on extraversion in studies (Das, 1986; Blaszczynski, Buhrich, & McConnelly, 1985). 

Porrata and Rosa (2000) found that drug addicts were high on neuroticism and low on psychoticism and extraversion. Narayan, Shams, Jain and Gupta (1997) found that drug users were more neurotic, extraverted, impulsive and sociable as compared to non-users. The users also showed less emotional stability, were more sensitive and likely to be easily upset, had less ego strength, and were more insecure, tense, frustrated and tended to disregard rules. Patients who were reported as positive for substance abuse did not respond differently from their counterparts for issues of demographic, pregnancy, career and social support.

People with illicit substance use disorders scored higher on neuroticism and disinhibition; and lower on conscientiousness, agreeableness (i.e., the disposition to experience negative emotions), impulsivity, openness to experience and social deviance (Zilberman, Tavares, & El-Guebaly, 2003; Ruiz, Pincus, & Dickinson, 2003; Ball, 2005; Kornør & Nordvik, 2007; Terracciano, Löckenhoff, Crum, Bienvenu, & Costar, 2008).

Another meta-analysis identified high neuroticism and low Agreeableness as underlying dimensions of most personality disorders (Saulsman & Page, 2004). People with various substance use disorders also seem to have a common personality profile: high neuroticism, low conscientiousness and low agreeableness (Ball, Tennen, Poling, Kranzler, & Rounsaville, 1997; Conway, Kane, Ball, Poling, & Rounsaville, 2003; Martin & Sher, 1994; Trull & Sher, 1994; Piedmont & Ciarrocchi, 1999; Fisher, Elias, & Ritz, 1998; Terracciano & Costa, 2004). Two U.S. studies have examined Five Factor Model personality traits in people with opioid dependence and concluded that personality patterns of opioid dependents were
consistent with those of people with psychiatric and of people with substance use disorders, i.e. high neuroticism, low conscientiousness and low agreeableness (Brooner, Schmidt, & Herbst, 2002; Carter et al., 2001).

Roy (1999) examined neuroticism as a possible determinant of depression in alcoholics. 24 euthymic depressed alcoholics and 18 never-depressed alcoholic controls completed the Eysenck Personality Questionnaire. Euthymic depressed alcoholics had significantly higher neuroticism scores than alcoholic controls. No women alcoholics were studied. Therefore, it was suggested that neuroticism may be a risk factor for depression in alcoholics. Knyazev (2004) found that extraversion was the second-best personality predictor of substance use, confirming the suggestion that introverts are more readily conditioned into conscientious social behaviours.

Apart from this, several studies found neuroticism to be a dominant trait predicting relapse. Fisher et al. 1998; Bottlender and Soyka (2005) neuroticism to be highly associated with relapse. In a comprehensive study conducted by Chatha (2009), it was found that relapsed addicts were high on anxiety, angry hostility, depression, self-consciousness, impulsiveness and vulnerability. All these traits rendered relapsed addicts 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 it is known 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. Numerous studies indicate 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, & Gray, 1992).

Further, the personality dimension of conscientiousness was found to be associated with increased use of problem solving, positive reappraisal of stressful episodes and support seeking coping techniques (Vickers, Kolar, & Hervig, 1989) and increased use of active, planful coping (Watson & Hubbard, 1996). Studies suggest that the personality trait conscientiousness is associated with preventing relapse (Bottlender & Soyka, 2005). Also, McCormick et al., (1998) found that
high levels of conscientiousness, agreeableness and extraversion are associated with greater confidence in ability to refrain from use. Apart from this, Chatha (2009) found conscientiousness to be highly correlated with the abstained group, indicating positive effect on abstaining from drugs. Conscientiousness reflected in their 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, abstained addicts reflected a sense of direction in life, which had a very dominant effect on their life and motivated them to leave drugs Conscientiousness has also been to predict more problem-solving and cognitive restructuring (Connor-Smith & Flachsbart, 2007). A survey analysis showed that neuroticism and consciousness 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 et al., 1998).

Studies found agreeableness and extraversion traits of personality to be positively associated with the abstained 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 (Chatha, 2009).

And now, coming to the trait of extraversion, review of literature suggests that high score on extraversion rendered abstained individuals with warmth, gregariousness, assertiveness, activity, excitement-seeking and positive emotions. As studies suggest that social support is one of the most important factor associated with abstinence, it was found that abstinent individuals were found to be affectionate and friendly, so could access their social support which they obviously had more than neurotics. It is seen that extraversion predicts support seeking (Connor-Smith & Flachsbort, 2007). Chatha (2009) found that abstained individuals were high on
gregariousness which again reflects their strong social support. Also, it was found that abstained individuals were assertive to reach their goals which in turn suggest that 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. Other than this, found that abstinent group showed high score on excitement seeking which suggests that that these individuals were able to find some recreational and stimulating activities that could fill the void which generally leads addicts to negative emotional states; however, 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 also been studied by McCormick et al. (1998) that conscientiousness, agreeableness and extraversion were associated with greater confidence in ability to refrain from use, whereas neuroticism was associated with a corresponding lack of confidence in self-restraint.

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, Russell, Skinner, Frone, & Mudar, 1992). Particular trait dimension, neuroticism is believed to be critical to the stress coping process. Quirk and McCormick (1998) found that substance abusers scoring highest on neuroticism and lowest on agreeableness, extraversion and conscientiousness compared to other substances abusers, reported having the highest level of escape avoidance coping.

Numerous studies suggest that personality may facilitate or constrain coping for e.g., it has been studied that personality traits such as extraversion and conscientiousness predicted more problem-solving and cognitive restructuring. Neuroticism predicted problematic strategies like wishful thinking, withdrawal and emotion focused coping and extraversion, also predicted support seeking (Connor-Smith & Flachsbart, 2007). Similar findings were observed in study conducted by Chatha (2009), where positive coping strategies and personality traits like conscientiousness, agreeableness and extraversion were found to be associated with the success and maladaptive coping strategies and personality trait neuroticism was associated with relapsed cases.
Terracciano et al. (2008) compared the personality profile of tobacco, marijuana, cocaine, and heroin users and non-users using the wide spectrum Five-Factor Model (FFM) of personality in a diverse community sample. Authors found that current cigarette smokers scored lower on conscientiousness and higher on neuroticism as compared to never smokers. They also found that cocaine/ heroin users, scored very high on neuroticism, especially vulnerability, and very low on conscientiousness, particularly competence, achievement-striving, and deliberation. By contrast, marijuana users scored high on openness to experience, average on neuroticism, but low on agreeableness and conscientiousness.

Vorkapić, Dadić-Hero and Ružić (2013) analysed the relationship between personality structure and emotional state of two different groups: heroin addicts and recreational drug abusers. In the group of heroin addicts, higher levels of anxiety and depression were significantly correlated with higher levels of psychoticism, neuroticism, criminality and addiction. In the group of recreational drug users, higher extraversion and social conformity were determined. Furthermore, depression was found higher in the heroin addicts. However, there was no significant difference found between two groups on anxiety.

Zaaijer et al. (2014) studied the role of personality as a risk factor for the development of opioid dependence. They compared to dependent opioid users with healthy controls who never used heroin. Never-dependent opioid users reported more novelty seeking and harm avoidance and less self-directedness and cooperativeness as compared to healthy controls and more reward dependence and self-directedness, and less harm avoidance than dependent opioid users. Furthermore, never-dependent opioid users reported more self-transcendence than both dependent opioid users and healthy controls.

Akhondzadeh, Shabrang, Rezaei and Rezaei (2014) compared the personality characteristics of individuals with addiction who attended narcotics anonymous sessions with those who received methadone maintenance therapy and found a significant difference between the MMT and NA groups with respect to neuroticism, extroversion, and agreeableness. No significant difference was found in the subscales of conscientiousness and openness to experience.
Kornør and Nordvik (2007), in their study found the opioid-dependent sample scored higher on Neuroticism, lower on Extraversion and lower on Conscientiousness than the controls. Effects sizes were small for the difference between the groups in Openness to experience scores and Agreeableness scores.

Other personality traits that may be relevant in understanding relapse are hardiness, impulsivity and self-efficacy. A brief overview of these factors is as under Impulsivity

Impulsivity is characterized by the inclination of an individual to initiate behaviour without adequate forethought to the consequences of his actions, acting on the spur of the moment. Impulsivity has broadly been defined as the tendency to respond quickly and without reflection (Barratt & Patton, 1983), the inability to inhibit behaviour when inhibition is the appropriate response (Schachar & Logan, 1990) or the inability to delay gratification when tolerance of delays produces a less risky outcome (Rachlin, 1974). Impulsivity has also been related to risk-taking, lack of planning, and making up one's mind quickly (Eysenck & Eysenck, 1977). Impulsiveness is operationally defined as a preference for a smaller more immediate reward over a delayed larger reward (Rachlin, 1974) or impaired motor inhibition (Schachar & Logan, 1990).

Several experimental behavioural impulsivity tasks have been developed to assess different components of impulsivity including behavioural inhibition, delay of gratification and risk taking (Kindlon, Mezzacappa, & Earls, 1995). Impulsivity is the failure to resist an impulse, drive, or temptation to perform an act that is harmful to the person or to others. Two types of impulsivity have been described: functional and dysfunctional impulsivity. Functional impulsivity is the tendency to act without forethought when this tendency is optimal or beneficial. Dysfunctional impulsivity is the tendency to act with absence of forethought when this tendency could have a negative consequence. Use of the term “impulsivity” also reflects the extent to which a person is considered to have exercised control over his or her impulses and/or actions.

There are three basic assumptions regarding the nature of impulsivity: an impulsive response is one that is rapid, undesirable, and/or error-prone; it is likely to occur in the presence of appealing stimuli; and/or it is likely to occur in the absence of
strong cognitive control. Impulsivity has been characterized as the tendency to act without thinking or to respond quickly to a given stimulus, without deliberation or evaluation of consequences (White et al., 1994).

There are several theories of impulsivity e.g. Lykken’s (1995) fearlessness model suggests an innate fearlessness results in an inability to learn to avoid antisocial behaviours and to inhibit forbidden impulses, through punishment and the conditioned fear it leaves behind (Lykken, 1995). Fowles and Missel (1994) proposed a theory based on the work of Gray (Gray, 1982; Fowles, 1980) in which the Behavioural Inhibition System (BIS) is seen as a neuro-physiological system that controls responses to impending punishment, while the Behavioural Activation System (BAS) controls responses to signals of impending reward. A central assumption of Gray’s model is that impulsivity arises from neurologically-based motivational systems. The Fowles-Gray models provide several pathways to disinhibition (poor impulse control) including hyper-responsiveness to reward (strong BAS) or abnormal responsivity to punishment because of weak (hypo-responsive) BIS. According to this model impulsivity results from the failure of cues for punishment and frustration to inhibit reward seeking behavior (Gray, 1982; Fowles, 1980).

Impulsivity seems to be a basic part of some disorders - such as personality disorders, conduct disorder, aggression, bipolar disorder, suicidal behaviour, attention deficit and hyperactivity and psychoactive substances abuse (Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001). There is no consensus in the literature about the best way to evaluate impulsivity. Laboratory behavioural measures (Dougherty, Mathias, Marsh, & Jagar, 2005) as well as self-report scales, (Eysenck & Eysenck, 1977; Patton, Stanford, & Barratt, 1995) such as the Barratt Impulsiveness Scale 11 (Patton et al., 1995) and Eysenck Impulsiveness Questionnaire (Eysenck & Eysenck, 1977) are the most commonly used methods to measure impulsivity.

Impulsivity is an important psychological construct. It appears, in one form or another, in every major system of personality. For instance, Eysenck and Eysenck (1985) include impulsiveness (e.g., I usually think carefully before doing anything) as a component of psychoticism and venturesome (e.g., I would enjoy water-skiing) and sensation-seeking (e.g., I sometimes like doing things that are a bit frightening) as
components of extraversion in their three-dimensional view of personality. In his model, Cloninger includes a super factor of novelty seeking, which consists of items asking about thrill seeking and preferring to act on feelings of the moment without regard for rules and regulations (Cloninger, Przybeck, & Svrakic, 1991; Cloninger, Svrakic, & Przybeck, 1993). Finally, Tellegen (1982) incorporates a dimension of control i.e. impulsiveness under his higher-order constraint factor.

In addition to its importance in personality, impulsivity also plays a prominent role in the understanding and diagnosis of various forms of psychopathology. In fact, after subjective distress, impulsivity may be the most common diagnostic criteria in the fourth version of the Diagnostic and Statistical Manual for Mental Disorders (American Psychiatric Association, 1994). In addition to an entire section devoted to impulse-control disorders (e.g., intermittent explosive disorder, kleptomania, and pyromania), impulsivity appears in the diagnostic criteria for psychiatric disorders as varied as: borderline personality disorder (i.e., impulsivity in at least two areas that are potentially self-damaging), antisocial personality disorder (i.e., impulsivity or failure to plan ahead), attention-deficit/hyperactivity disorder (i.e., blurts out answers, difficulty waiting turn, and interrupts or intrudes), mania (e.g., excessive involvement in pleasurable activities that have a high potential for painful consequences), dementia (i.e., disturbance in executive functioning), bulimia nervosa (e.g., feeling as though one cannot control how much one is eating), substance use disorders, and the paraphilias. Additionally, impulsivity serves as a centerpiece in etiologic theories of psychopathy (Newman & Wallace, 1993; Lynam, 1996).

Models of Impulsivity

Buss and Plomin (1975) included impulsivity, along with emotionality, activity, and sociability in their four-factor model of temperament. They hypothesize that impulsivity is a multidimensional temperament with inhibitory control, or the ability to delay the performance or behaviour, as its core aspect. The other three components of impulsivity in this system involve the tendency to consider alternatives and consequences before making a decision, the ability to remain with a task despite competing temptations, and the tendency to become bored and need to seek novel stimuli. Although the authors describe impulsivity and the other temperaments as
separate dimensions they contend that the traits influence behaviour in an interactional manner. For instance, they postulate that while activity and emotionality motivate individuals to action, impulsivity works to slow down or inhibit behaviour.

Zuckerman and colleagues likewise have discussed impulsivity in terms of a general model of personality. **Zuckerman, Kuhlman, Thornquist and Kiers (1991)** began the development of an alternative five-factor model through the factor analysis of several general personality inventories. They identified a factor consisting of the four subscales from Zuckerman's Sensation Seeking Scale (**Zuckerman, 1994**) and other measures of impulsivity which they have since labelled impulsive-sensation seeking. **Zuckerman et al. (1993)** described this scale as consisting of items that "involve a lack of planning and the tendency to act impulsively without thinking", as well as 'experience seeking, or the willingness to take risks for the sake of excitement or novel experiences'. They determined that their impulsive sensation seeking scale measured a construct similar to the NEO conscientiousness factor (**Costa & McCrae, 1992**) and the EPQ psychoticism factor.

Cloninger bases his model of personality structure and development on the physiological underpinnings of behaviour (**Cloninger et al., 1991; 1993**). He has identified four temperament scales through research on studies of twins and families, longitudinal development, and neuropharmacology. Cloninger defines temperament factors as dimensions of personality that involve "automatic, pre-conceptual responses to perceptual stimuli, presumably reflecting heritable biases in information processing" (**Cloninger et al., 1993**). Cloninger includes impulsivity as an aspect of novelty seeking, one of the four temperaments. In addition, novelty seeking also includes: (1) the initiation of approach behaviour in response to novelty; (2) extravagance in approach to reward cues; and (3) the tendency to quickly lose one's temper. Cloninger therefore, apparently conceptualizes impulsivity as an automatic response to novel stimuli that occurs at a preconscious level due to biological tendencies.

Barratt and colleagues (**Barratt, 1993; Gerbing, Ahadi, & Patton, 1987; Patton et al., 1995; Stanford & Barratt, 1992**) have developed one of the most comprehensive approaches to impulsivity by including information from four diverse
perspectives: the medical model, the psychological model, the behavioural model, and
the social model. The research incorporates a variety of measures including self-report
inventories, cognitive and behavioural tasks, and brain-behavioural research with
animals (Barratt, 1993). These researchers (Patton et al., 1995) have identified three
higher-order factors which they argue reflect the different components of impulsivity:
attentional impulsiveness (the inability to focus on the tasks at hand and cognitive
instability), motor impulsiveness (acting on the spur of the moment and lack of
perseverance), and non-planning (no self-control and cognitive complexity). The
latter two factors have been identified by other researchers (Luengo, Carrillo-De-La-
Pena, & Otero, 1991) while the third factor has not replicated reliably. In an effort to
understand impulsivity from a physiological perspective, Newman and colleagues
(Newman & Wallace, 1993; Wallace, Newman, & Bachorowski, 1991) have
attempted to map Eysenck's system of personality on to Gray's neuropsychological
model (Gray, 1987) of approach/avoidance learning. In Gray's model, behaviour
arises from three separate components: the Behavioural Activation System (BAS), the
Behavioural Inhibition System (BIS), and the Nonspecific Arousal System (NAS).
The BAS responds to environmental cues for reward and non-punishment by
initiating approach and active avoidance. The BIS, on the other hand, responds to
environmental cues for punishment and non-reward, with passive avoidance
behaviour, or extinction/inhibition of ongoing behaviour. Thus, the BAS and BIS
have inhibitory connections to each other so that activation of one system inhibits the
other. The third system, the NAS, receives excitatory input from both the BAS and
the BIS. Stimulation of the NAS, in turn, serves to intensify the frequency and
intensity of behaviour emanating from either system. Thus, an increase in the NAS
prepares the organism to respond. Further these authors suggest that extraversion
reflects the relative strength of the BAS to BIS and that neuroticism reflects the
relative strength of the NAS.

Dickman (1990) has proposed a two-dimensional theory of impulsivity based
on an information processing approach to personality. His work stems out of his
observation that impulsivity can have positive as well as negative consequences and
he differentiates between functional (i.e., the tendency to act with relatively little
forethought when such a trait is optimal) and dysfunctional impulsivity (i.e., the tendency to act with less forethought than most people of equal ability when this is a source of difficulty). He has argued that dysfunctional impulsivity is associated with disorderliness, a tendency to ignore hard facts when making decisions, acting without forethought, and a tendency to engage in rapid, error prone information processing because of an inability to use a slower, more methodical approach under certain circumstances. On the other hand, functional impulsivity is associated with enthusiasm, adventuresome activity, and an ability to engage in rapid error prone information processing when such a strategy is rendered optimal by the individual's other personality traits. Despite attempts to place impulsivity in a comprehensive theory of personality by researchers such as Eysenck, Jackson, and Cloninger, none of the frameworks put forward have gained widespread acceptance. This may be due, in part, to the variety of personality models used as a reference point and their disagreement on the number and content of personality dimensions.

It has been shown that trait impulsivity is an important determinant of substance use during development, and in adult’s momentary 'state', increases in impulsive behaviour may increase the likelihood of substance use, especially in individuals attempting to abstain (De Wit, 2009). Conversely, acute and chronic effects of substance use may increase impulsive behaviours, which may, in turn, facilitate further substance use (De Wit, 2009). Finally, association between impulsivity and substance abuse may be mediated through a common third factor, (De Wit, 2009; Perry & Carroll, 2008) such as personality.

Thus, it is important to evaluate relationship of personality dimensions with impulsivity in substance dependent populations. Also, different from other populations, impulsivity is closely linked to substance use and abuse, both as contributors to use and as consequences of use (De Wit, 2009). Identification of dimensions of personality predictors as of impulsivity might allow us to differentiate among subgroups of patients with heroin dependency who, despite sharing the same diagnosis, may need different and specific approaches to the treatment of such dimensions. Thus, the personality dimensions that predict impulsivity in heroin dependents may differ than other populations (Cloninger, 1996).
Impulsivity may also serve as a moderator of the relationship between substance-use behaviour and substance-use outcomes, such as substance use related problems (Simons, 2003; Simons & Carey, 2002; Wills, Sandy & Yaeger, 2002). Impulsivity might contribute significantly to the risk of suicide attempts in substance-dependent patients (Koller, Preuss, Bottlender, Wenzel, & Soyka, 2002), may interrupt their outpatient or inpatient treatment (Murray, Parkar, Mannelli, DeMaria, Desai, & Vergare, 2003), and may mediate the effects of substance use on aggression (Fulwiler, Eckstine, & Kalsy, 2005).

Evren, Bozkurt, Evren, Can, Yiğiter and Yılmaz (2014) in their study maintained that severity of impulsivity and dimensions of impulsivity were higher in heroin dependent inpatients than healthy controls. Impulsivity was negatively correlated with reward dependence, persistence, self-directedness, and cooperativeness, whereas positively correlated with novelty seeking, harm avoidance, self-transcendence, depression and anxiety. Low self-directedness, persistence and high novelty seeking scores predicted impulsivity in heroin dependent male inpatients.

Evren, Yılmaz, Can, Bozkurt, Evren and Umut (2014) evaluated the changes in impulsivity and aggression scores among male heroin dependent patients using buprenorphine/naloxone as a maintenance treatment and those who relapsed within 12 months of their discharge from the hospital. Among 52 heroin dependent patients, 44.23% (n=23) were considered to have relapsed during the 12-month follow-up. Socio-demographic variables did not differ between the groups. The mean score of verbal aggression was lower in the relapse group than in the maintenance group at baseline, whereas physical aggression and impulsivity scores were higher in the relapse group than the maintenance group at the end. In the maintenance group aggression (hostility) and impulsivity (motor and non-planning) were lower at the end of 12 months, whereas aggression (motor and verbal aggression) and impulsivity (attentional and non-planning) were higher in the relapse group.

Fieldman, Woolfolk and Allen (1995) observed impulsiveness to be associated with neuroticism and empirically witnessed opiate addicts to be impulsive and aggressive with impaired social relationships.
Miller (1991) evaluated a neuro-psychodynamic model for assessing and treating the addicted population. Variables that were predictive of both relapse and sustained recovery were discussed. Personality features of abstainers included future goal-oriented, frustration tolerance, and self-efficacy, fear of uncertainty and dependence. The relapers were shown to do poorly on tests of language, abstract reasoning, planning, and cognitive flexibility. They were categorized as being impulsive, having antisocial personality and affective disorders. The author stated that chronic relapers had a cognitive style that was non-reflective and impulsive and they lacked the ability to use inner speech and other types of self-regulating mechanisms that enable evaluation and planning of behaviour. Several studies suggest that neuroticism/negative emotionality is associated with drug abuse. For example, substance use is associated with high levels of anxiety (Kessler, Crum, Warner, Nelson, Schuleberg, & Anthony, 1997; Kushner et al., 1996; Sher & Trull, 1994) and, to a somewhat lesser degree, mood disorders. In addition, clinical drug abusers typically score high on psychometric measures of neuroticism and negative emotionality (Meszaros, Willinger, Fischer, Schnobeck, & Aschauer, 1996; Bronner, Templer, Svikis, Schmidt, & Monopolis, 1990; Kannapan & Cherian, 1989). The broad personality dimension that appears to be most relevant to drug abuse is that of impulsivity/disinhibition. This dimension incorporates traits such as sensation seeking, aggressiveness, impulsivity, and psychoticism.

Additionally, cross sectional high-risk studies (Sher, 1991) demonstrate that traits reflecting impulsivity/disinhibition are elevated in the offspring of drug users. Most importantly, prospective studies consistently indicate that impulsive/disinhibited individuals are at elevated risk for the development of substance-related problems (Bates & Labouvie, 1995; Zuker, Fitzgerald, & Moses, 1995; Hawkins, Catalano, & Miller, 1992; Zucker & Gomberg, 1986). The importance of impulsivity/disinhibition as an early predictor of later drug abuse has been outlined (Zucker et al., 1995).

Robles, Huang, Simpson and McMillan (2011) compared methadone maintenance treatment (MMT) patients (n = 30) who had not used illegal drugs for 2 years with drug-using MMT patients (n = 30) and controls (n = 25) in terms of addiction severity, delay discounting DD rate, and impulsiveness. Methadone patients abstinent from illegal drugs scored significantly lower on a number of addiction severity measures than the drug-using methadone patients. In addition, both groups of
methadone maintenance treatment (MMT) patients showed significantly higher rates of DD and impulsiveness than the control group; however, no differences in DD rate or impulsiveness were found between the groups of patients. Results suggest that DD rate and impulsiveness may not covary with indicators of addiction severity in MMT patients.

Impulsive behaviour is implicated in the initiation, maintenance, and relapse of drug-seeking behaviours involved in drug addiction. Research shows that changes in impulsive behaviour across the lifespan contribute to drug use and addiction (Argyriou, Um, Carron, & Cyders, 2017). Three domains of impulsive behavior have been opined: impulsive behaviour-related personality traits, delay discounting, and prepotent response inhibition.

Baldacchino, Balfour and Matthews (2015) examined illicit heroin users and found increased motor impulsivity and impaired strategic planning among them. Additionally, they placed higher bets earlier and risked more on the CGT. Stable MMT participants deliberated longer and placed higher bets earlier on the CGT but did not risk more. Chronic opioid exposed pain participants did not differ from healthy controls on any measures on any tasks. The identified impairments did not appear to be associated specifically with histories of intravenous drug use, nor with estimates of total opioid exposure.

Impulsivity paves way for a relapse among addicts and the present study aims to investigate its role in maintaining abstinence.

Hardiness

The personality dimension of hardiness has received its due by the researchers acknowledging its role as a protective factor against illness. The hardy persons easily commit themselves to what they are doing (rather than feeling alienated), generally believe that they can at least partially control events (rather than feeling powerless), and regard change to be a normal challenge or impetus to development (rather than a threat). Their basic sense of purpose and involvement in life mitigates the potential disruptiveness of any single occurrence. The coping styles of hardy persons reflect their belief in their own effectiveness as well as their ability to make good use of other human and environmental resources. Coping for them consists of turning stressful
events into possibilities and opportunities for their personal development and that of others around them (Kobasa, Maddi, & Kahn, 1982).

The concept of individual hardiness was originally developed by existential psychologists (e.g. Fromm, 1947; Allport, 1955; Kobasa & Maddi, 1977) to describe individuals who continuously rise to their life’s challenges and turn stressful experiences into opportunities for personal growth (Kobasa et al., 1982). Kobasa et al. (1982) describe hardiness as significantly influencing how people cope with stressful events. Hardiness is a term that was first identified in the literature describing personal resilience in terms of the health status of individuals (Kobasa, 1979). Kobasa and her colleagues argued that the ability to be resilient increases individuals’ chances for physical and psychological health. Resiliency, as defined by Bartone, Ursano, Wright and Ingraham (1989), involves the capability to recover after a stressful encounter and to make quick adjustments through coping. In this context, hardiness also describes the ability to cope. On the other hand, the absence of resilience may be characterized by increased levels of risk factors to physiological and psychological well-being (Kobasa et al., 1982; Banks & Gannon, 1988; McCubbin & McCubbin, 1992).

According to Kobasa (1979), “Hardiness is a personality dimension that is believed to confer resistance against the effects of psychological stress. Hardiness is a composite, consisting of internal locus of control, commitment and challenge.” Kobasa et al. (1982) have also defined each component differently: “Commitment is a tendency to involve oneself in whatever one is doing or encounters. Challenge is a belief that change rather than stability is normal in life and that the anticipation of change is interesting and an incentive to growth rather than threat to security. Control is a tendency to feel and act as if one is influential in the face of the varied contingencies of life.”

Commitment

Commitment is the tendency to involve oneself fully in one's total life space. Commitment is reflected in the ability to feel actively involved with others and a belief in the truth, value, and importance of one’s self and one’s experience (Wagnild & Young, 1991; Tartasky, 1993; Huang, 1995). Adverse situations are ultimately seen as meaningful and interesting (Maddi & Kobasa, 1984). Individuals high on this
dimension are committed to various aspects of their life including interpersonal relationships, family, and the self (Low, 1996). Measured or indicated by the absence of alienation (Bigbee, 1985), commitment is reflected in one’s capacity to become involved, rather than feeling estranged. From an existential point of view, this dimension represents a fundamental sense of one’s worth, purpose, and accountability, which protects against weakness while under adversity (Bigbee, 1985; Pollock, 1989; Sullivan, 1993).

Since Kobasa's (1979a) study, many other researchers have investigated the health and hardiness connection (Hull, 1987; Kobasa, 1979b; 1982; Greene & Nowack, 1995). Greene and Nowack (1995) studied coping styles in relation to hardiness and health and supported the notion that a positive association exists between stress, coping and health. In accordance with this finding, Li-Ping and Hammontree (1988) determined hardiness was significantly associated with future strain and stress. Results ultimately showed that "Hardiness will operate as a resistance resource in the stress and strain relationship and also the stress and illness relationship."

The effects of hardiness have also been linked to the drug field in regard to coping with addiction. A study conducted by Hirky and Anne (1998) interviewed injection drug users in an urban methadone program to examine whether coping serves as a mediator of the relationship between social support, personality, hardiness, and psychological distress. Results indicated the relationship between hardiness and distress was fully mediated through lower levels of a latent construct measured by behavioural disengagement and denial coping. The path from hardiness to coping was significant, as was the path from coping to distress. Direct effects to distress were found for social support, life events, and gender. Whether stress is a direct result from a biological dependency or social environments, people who exhibit characteristics of a hardy personality will better cope with that stress.

Control

Control, including responsibility, is the tendency to believe and act as if one can influence the course of events within reasonable limits. Control is measured by
the absence of powerlessness that an individual feel (Bigbee, 1985), refers to the belief that one can control or influence occurrences in one’s life, that personal efforts can modify stressors so as to reduce them into a more manageable state (Maddi & Kobasa, 1984; Bigbee, 1985; Pollock, 1989; Wagnild & Young, 1991; Tartasky, 1993; Huang, 1995), or that a contingency exists between one’s actions and external events (Sullivan, 1993).

Challenge

Challenge is based on the belief that change rather than stability is the normative mode of life, anticipated as an opportunity for personal growth (Orr & Westman, 1990). It reflects the belief that change is not a threat to personal security, but an opportunity for personal development and growth (Maddi & Kobasa, 1984; Bigbee, 1985; Pollock, 1989; Wagnild & Young, 1991; Tartasky, 1993; Huang, 1995). Indicated by the absence of a need for security, it represents the individual’s positive attitude towards change and the belief that one can profit from failure as well as success (Brooks, 1994). Fears surrounding potential mistakes and the feelings of embarrassment which are frequently a consequence of making them, present an obstacle to overcoming challenges and, thus, personal growth (Brooks, 1994). These fears frequently lead to avoidance behaviours which perpetuate the fear and prevents the individual from confronting and overcoming the challenge. Fostering challenge can also be accomplished by learning from one’s experiences.

Sullivan (1993) notes that Kobasa’s concept of challenge describes an individual who has developed flexible coping styles. There is some evidence that hardiness does moderate the effects of stress upon health. However, there is also argument about exactly which components of the hardiness construct are responsible for this effect. Some studies suggest that the commitment and control aspects have a more significant moderating effect on the stress-health link than that of challenge. However, in contrast to this hypothesis, Contrada (1989) found that it was the challenge component of hardiness, as opposed to control or commitment, which correlated with blood pressure reactivity.
Defining the three components of hardiness, Maddi (1990) opined that “Persons high in commitment think of themselves and their environments as interesting and worthwhile and thus can find something in whatever they are doing that appeal to their curiosity and seems meaningful. Persons high in control believe that they can, through efforts, have an influence on what goes on around them. And persons high in challenge believe that what improves their lives is growth through learning rather than easy comfort and security.” Hardiness is usually conceptualized as a cognitive personality variable consisting of a sense of commitment, control, and challenge (Sinclair & Tetrick, 2000).

Westman (1990) has also found the notion agreeable that “hardiness operates as a stress buffer as well as a direct influence on health.” Personality dimension of hardiness not only influences stress appraisal and hence transformational coping directly, but also through its influence on social support, hardy people seek the kind of social relationships that support transformational coping in times of stress, whereas people low in hardiness do the opposite, thus perpetuating their tendency towards regressive coping. Social support has a complicated role in the relationship between stressful events and illness.

Following this, the term continued to be employed by management theorists in their examination of the links between stress and health (Low, 1996). Although it continues to be employed most frequently in the contexts of medicine and illness (Pollock, 1989; Jennings & Staggers, 1994), researchers are beginning to conceptualize hardiness as a general health promoting factor (Bigbee, 1985), which enables individuals to remain both psychologically and physically healthy despite confrontations with stressful situations or experiences (Kobasa et al., 1982).

Theoretically, hardiness develops in early childhood and emerges as the result of rich, varied, and rewarding life experiences (Maddi & Kobasa, 1984). According to Kobasa (1979a), the effects of hardiness on mental health are mediated by the individual’s cognitive appraisal of a stressful situation and his/her repertoire of coping strategies. Specifically, hardiness alters two appraisal components: it reduces the appraisal of threat and increases one’s expectations that coping efforts will be successful (Tartasky, 1993). Hardiness has also been shown to be associated with the
individual’s use of active, problem-focused coping strategies for dealing with stressful events (Kobasa, 1982; Gentry & Kobasa, 1984). These two mechanisms are, in turn, hypothesized to reduce the amount of psychological distress one experiences and to contribute to the long-term psychological well-being of an individual.

Hardiness alters the individual’s cognitive appraisal process, such that individuals are able to reframe or reinterpret adverse experiences (Pollock, 1989; Tartasky, 1993). Hardiness is concerned with a variety of resistance resources available to the individual who can neutralize the otherwise debilitating effects of stress (Kobasa, 1979; Kobasa et al., 1982). The psychological component of hardiness is referred to specifically as “cognitive hardiness”. Kobasa (1979) considered that people capable of handling highly stressful conditions have personality traits consisting of commitment, control and challenge, based on existential personality theories (Kobasa & Maddi, 1977).

Hall (1986) suggested that personality hardiness and its three components buffered against illness suggesting that the subjects who were low on both hardiness and fitness were more susceptible to reporting a history of illness than subjects high on one or both variables. No relationship was found between reports of stressful life events stressors and psychological responses.

Solcova and Tomanek (1994) explored possible pathways through which hardiness might buffer against stress. Results indicated that hardiness might have a positive impact on an individual’s ability to: 1) Cope with resources in the sense that hardy people have more self-competence 2) Cognitive appraisal in their everyday life and 3) Coping responses because hardy persons employ a higher level of coping strategies than less hardy persons.

Nakano (1990) examined the effect of hardiness and Type-A Behaviour (TAB) on the relationship between stressful life events and physical and psychological well-being in 78 Japanese men (aged 36-47 years). He found that hardy subjects were less likely to have physical symptoms and depression. There was a significant interaction between stressful life events and Type-A Behaviour. Psychologists have been attempting to isolate the components of the stress-hardy
personality ever since then (Funk, 1992). The belief that if the approach to life used naturally by stress-hardy individuals incorporates mental and behavioural skills, which can be taught to others, over time, the regular use of these skills can become effective healthy habits that can replace less functional ones. This is the foundation of hardiness for hard times.

A study by Lawler and Schmied (1992) on hardiness in women suggested that hardiness and locus of control buffered the effects of illness. Hardy individuals have the ability to cope in a way that is adaptive, once stress and/or adversity is perceived (Tartasky, 1993). They prefer to rely on active, transformational coping strategies which act to cognitively transform a potentially negative event into a growth producing experience (Bigbee, 1985; Funk, 1992). Less hardy individuals who are more likely to engage in distancing, avoidance, and emotionally-focused coping, individuals who score high on hardiness measures are more likely to engage in problem-focused, active, and support-seeking coping strategies (Pollock, 1989). These latter coping strategies, in comparison to emotionally-focused coping (distancing) have typically been regarded as adaptive, since individuals engaging in problem-focused coping generally demonstrate fewer indications of distress and maladjustment (Cooper, Russell, & George 1988; Evans & Dunn, 1995).

Sinclair and Terrick (2000) suggested that hardiness is best conceptualized as a multi-level and multi-dimensional construct in which different facets obtain different relationships with health and performance criteria. Shirkan (2000) describes hardy individuals as having the ability to endure and prevail over stressful situations. They use effective coping strategies in dealing with stressful situation, engaging in what is called transformation coping, which means they have ability to use the appropriate cognitive and behavioural skills to reduce the effects of stress and illness. Research by Hardiness Institute (2004) has revealed that employees in the organizations high on hardiness are higher on performance; possess better leadership qualities, good moral conduct, and health. Thus, hardiness, as a personality, combined has implication for the functional, psychological, physical well-being of an individual.

Vaillant (2004) noted that psychologically healthy people are more adaptive and flexible. They tend to have the following: stable family life, satisfying marriage,
steady progression in their careers, and an absence of any disabling mental or physical illness. The above discussion suggests that hardiness is related to mental health, low depression and anxiety, and higher adjustment. This can have a significant positive role in abstinence among opioid users.

Commander, John, Sigurd and Paul (2012) in a study found that after controlling for age and sex, low psychological hardiness and high avoidance coping are significant predictors of alcohol use and abuse. Maddi and Kobasa (1984) found that those low in hardiness more often revert to regressive or avoidance coping strategies which could include excessive alcohol consumption or drug abuse. Eid, Larsson, Johnsen, Laberg, Bartone and Carlstedt (2009) conducted a study in which it was suggested that low hardiness levels in people could serve as a risk marker for stress related alcohol and substance abuse. Jocoy, Jon, Laberg and Johnson (2015; c.f. Dhobi, 2017) conducted a study which examined psychological hardiness and avoidance coping strategies as predictors of risk for alcohol abuse for military personnel. The results suggested that alcohol screening programmes for returning veterans may be improved by including assessment of such psychological variables as hardiness and avoidance coping. Abbaas, Abdollahi, and Talib (2012; c.f. Dhobi, 2017) conducted a cross sectional study in 2012 in Tehran which suggested that people with low level of spirituality and low levels of hardiness were more prone to suicidal ideations due to substance abuse.

Self-efficacy

The construct of self-efficacy represents one core aspect of Bandura’s social-cognitive theory (Bandura, 1977; 1997). Bandura (1977) has defined self-efficacy as “the expectation that one can successfully execute the behaviour required to obtain desired outcomes in a specific situation”. Feeling self-efficacious is related to successful adjustment to a host of negative life events. Feelings of efficacy have been shown to lead to greater effort, motivation and perseverance in the face of an impressive array of negative life events (Bandura, 1989). In a nutshell, according to Bandura (1994) self-efficacy means “people’s beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives”.
Self-efficacy beliefs determine how people feel, think, motivate themselves and behave. Such beliefs produce these diverse effects through four major processes. They include cognitive, motivational, affective, and selection processes. Self-efficacy has been defined as an individual’s beliefs about his performance capabilities in a particular domain (Woolfolk, 2001). The researchers report that an individual’s sense of self-efficacy is also related to achievement of goals (Pajares, Britness, & Valiante, 2000) and attributions (Chase, 2001; Shermar, 2002) and self-regulation (Joo, Bong, & Choi, 2000).

Flammer (2001) opines that self-efficacy refers to the individual’s capacity to produce important effects. People, who are aware of being able to make a difference, feel good and therefore take initiatives. People who perceive themselves as helpless are unhappy and not motivated for actions. It has been proved that the psychological effects of helplessness are different depending on whether the helpless persons believe themselves to be helpless forever, whether being helplessness is unique, and whether related to a specific domain or to most domains of life. In the worst case, helpless people are, deeply sad about not having control; are not motivated to take initiatives or to invest effort and perseverance; are cognitively blind for any alternative or better view of the state of the world and, devaluate themselves. Person who believes in being able to cause an event can have a more active and self-determined life course. This “can do” cognition mirrors a sense of control over one’s environment.

Bandura's conceptualization of self-efficacy encompasses two components, efficacy expectations and outcome expectations. Efficacy expectations refer to one's conviction that he or she can successfully produce the behaviours that will lead to a desired outcome, while outcome expectations refer to one's belief that a particular course of action will produce a certain outcome (Bandura, 1977a). Efficacy expectations influence one's choice of settings, behaviours, and persistence (Bandura, 1997b). Those with low efficacy expectations are likely to avoid situations in which they feel unable to cope. Instead, they will seek out situations in which they feel that they will be able to handle. Persistence in producing behaviours is also affected by efficacy expectations. Individuals who have high levels of efficacy
expectations will be more likely to persist with behaviours when they become difficult and will therefore be more likely to execute the behaviour successfully which in turn increases their efficacy expectations even more (Bandura, 1998). On the other hand, individuals with low levels of efficacy expectations will be more likely to cease production of behaviours once the behaviours become difficult, which will in turn reinforce their already low efficacy expectations (Strauser, 1995; Strauser, Waldrop, Hamsley, & Jenkins, 1998; Strauser, Waldrop, & Jenkins, 1998). The concept of self-efficacy is this situation-specific meaning that one will have a range of both high and low self-efficacy expectations at one time depending on specific situation, task, or behaviour (Sadri & Robertson, 1993).

Schaler (1995) reported self-efficacy as people’s confidence in their ability to achieve a specific goal in a specific situation. If people believe that they are powerless, they are likely to act in the powerless way. Self-efficacy theory may be viewed as one approach to the more general study of the application of social learning or social cognitive theory to vocational behaviour (Krumblotz, Mitchel, & Jones 1976; Mitchel & Krumblotz, 1984; Lent, Brown, & Hackett, 1994).

According to Hackett and Betz (1981), self-efficacy is mediated by a person's beliefs or expectations about his/her capacity to accomplish certain tasks successfully or demonstrate certain behaviours. When individuals have low self-efficacy expectations regarding their behaviour, they limit the extent to which they participate in an endeavour and are more apt to give up at the first sign of difficulty. Their efficacy beliefs serve as barriers to their career development. Low self-efficacy beliefs of women are thought to reflect the limited and disadvantaged position women have in the workplace and the limited range of career options presented to them. It is a construct based on cognitive and behavioural concepts that Bandura (1977b) describes as an individual's perception of his or her skills and abilities and whether the skills/abilities produce effective and competent actions. Self-efficacy influences perceptions of actions and coping behaviours and the choice of environments and situations in which the individual will attempt to access. Bandura (1998) states that there is a reciprocal relationship between cognitive process and behaviour change in self-efficacy theory.
Bandura (1986) has identified four main sources that seem to have influence upon the development of self-efficacy. These include mastery experiences, vicarious experience, social persuasions, and emotional and physiological states. Mastery experiences, the result of purposive performance, are the most influential source. People’s interpretation of the effects of their actions, help them to create their efficacy beliefs. Success raises self-efficacy; failure lowers it. The second source of efficacy information is vicarious experience of the effects produced by the actions of others. This source of information is weaker than enactive attainment, but, when people are uncertain about their own abilities or have limited prior experience, they become more sensitive to it. The effects of modeling are particularly relevant in this context. The third source, social persuasions, involves exposure to the verbal judgments of others and is a weak source of efficacy information, but persuaders can nonetheless play an important part in the development of an individual's self-beliefs. In addition to this, emotional and physiological states such as anxiety, stress, arousal, and fatigue also provide information about efficacy beliefs. Some of the other important factors influencing self-efficacy are discussed below:

a) Familial Influence on Self-Efficacy

Beginning in infancy, parents and caregivers provide experiences that differentially influence children’s self-efficacy. Home influences that help children interact effectively with the environment positively affect self-efficacy (Bandura, 1997; Meece, 1997). Initial sources of self-efficacy are centred in the family, but the influence is bidirectional. Parents who provide an environment that stimulates youngsters’ curiosity and allows for mastery experiences help to build children’s self-efficacy. In turn, children who display more curiosity and exploratory activities promote parental responsiveness. When environments are rich in interesting activities that arouse children’s curiosity and offer challenges that can be met, children are motivated to work on the activities and thereby learn new information and skills (Meece, 1997). As children grow, peers become increasingly important. Parents who steer their children toward efficacious peers provide further vicarious boosts in self-efficacy.
b) Transitional Influences

Periods of transition in schooling bring additional factors into play that affect self-efficacy. Eccles and her colleagues (Eccles & Midgley, 1989) have reported that the transition to middle school brings several changes. Strength of self-efficacy determines whether behaviour will be initiated, how much effort will be expended, and how long it will be maintained in the face of obstacles or aversive experiences. Self-efficacy is not a passive trait or characteristic, but rather a dynamic aspect of the self-system that interacts with the environment and with other motivational mechanisms.

Lent and Hackett (1987) stated “self-efficacy determines what we do with the skills we have”. Benjamin and Stewart (1989) proposed the usefulness of the self-efficacy concept in understanding the factors that lead to welfare dependency and the connection between public assistance and participation in the workforce. These researchers theorized that the mastery of behaviours needed for labour market success, including obtaining the appropriate educational credentials, has a direct effect on one’s self-efficacy which, in turn, influences future choices about participation in the labour market.

London and Greller (1991) pointed out that women can be blocked from career opportunities as effectively by their own beliefs and assumptions as they can by the discriminatory practices of others in the labour market. There has been a great deal of research exploring the construct of self-efficacy as it relates to a number of clinical, social, and health behaviours (Maddux, 1995). A few studies have considered its relevance to the role strain literature (Matsui & Onglatco, 1992; Kahn & Long 1998).

According to theory and research (Bandura, 1995), self-efficacy has definitive influence on people’s thoughts, feelings, and actions. In terms of feeling, a low sense of self-efficacy is associated with depression, anxiety, and helplessness. Such individuals also have low self-esteem and harbour pessimistic thoughts about their accomplishments and personal development. In terms of thinking, a strong sense of competence facilitates cognitive processes and performance in a variety of settings,
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including quality of decision-making and academic achievement. When it comes to preparing for action, self-related cognitions are a major ingredient of the motivation process. Self-efficacy levels can enhance or impede motivation. People with high self-efficacy choose to perform more challenging tasks (Bandura, 1995). They set themselves higher goals and stick to them. Actions are reshaped in thought, and people anticipate either optimistic or pessimistic scenarios in line with their level of self-efficacy. Once an action has been taken, high self-efficacious persons invest more effort and persist longer than those who are low in self-efficacy. When setbacks occur, they recover more quickly and maintain the commitment to their goals.

According to Pajares (1996), people's beliefs in their efficacy have diverse effects. Such beliefs influence the choice of behaviours in which individuals will engage and the courses of action they will pursue. People engage in tasks in which they feel competent and confident and avoid those in which they do not. Self-efficacy beliefs also influence how much effort people will expend on an activity, how long they will persevere when confronting obstacles, how resilient they will prove in the face of adverse situations, whether their thought patterns and emotional reactions are self-hindering or self-aiding, how much stress and depression they experience in coping with taxing environmental demands, and the level of accomplishments they realize.

A strong sense of efficacy enhances human accomplishment and personal wellbeing in many ways. People with a strong sense of personal competence approach difficult tasks as challenges to be mastered rather than as threats to be avoided, have greater intrinsic interest and deep engrossment in activities, set themselves challenging goals and maintain strong commitment to them, heighten and sustain their efforts in the face of failure, quickly recover their sense of efficacy after failures or setbacks, and attribute failure to insufficient effort or deficient knowledge and skills which are acquirable. People with low self-efficacy may believe that things are tougher than they really are. Such a belief fosters stress, depression, and a narrow vision of how best to solve a problem. High self-efficacy, on the other hand, helps create feelings of serenity in approaching difficult tasks and activities. As a result of these influences, self-efficacy beliefs are strong determinants and predictors of the level of accomplishment that individuals finally attain. Self-efficacy expectations
determine whether an individual’s coping behaviour will be initiated, how much task related effort will be expended and how long that effort will be sustained despite discontinuing evidence (Bandura & Cervone 1983; Bandura, 1997a). Self-efficacy expectations, when viewed in relation to career, refer to a person's beliefs regarding career-related behaviours, educational and occupational choice, and performance, and persistence in the implementation of those choices (Betz & Hackett, 1997). They are reflected in an individual's perception about his/her ability to perform a given task or behaviour (efficacy expectation) and his/her belief about the consequences of behaviour or performance (outcome expectation) (Hackett & Betz, 1981).

According to Pajares (2002), of all the thoughts that affect human functioning, and standing at the very core of social cognitive theory, are self-efficacy beliefs. Self-efficacy beliefs provide the foundation for human motivation, well-being, and personal accomplishment. This is because unless people believe that their actions can produce the outcomes they desire, they have little incentive to act or to persevere in the face of difficulties. Much empirical evidence now supports Bandura's contention that self-efficacy beliefs touch virtually every aspect of people's lives whether they think productively, self-debilitating, pessimistically or optimistically; how well they motivate themselves and persevere in the face of adversities; their vulnerability to stress and depression, and the life choices they make. Self-efficacy is also a critical determinant of self-regulation. Of course, human functioning is influenced by many factors. The success or failure that people experience as they engage in the myriad tasks that comprise their life naturally influences the many decisions they must make. Also, the knowledge and skills they possess will certainly play critical roles in what they choose to do and not do. Individuals interpret the results of their attainments, however, just as they make judgments about the quality of the knowledge and skills they possess.

Flammer (2001) prefers self-efficacy to helplessness as a concept. Self-efficacy beliefs provide us with security and pride. When we lack self-efficacy in important domains, we either strive for self-efficacy (by fighting, learning or training) or search for compensation. Valiante (2004) believes that efficacy contributes more heavily to occupational preferences. Perceived efficacy is a robust contributor to career development. Self-efficacy characterized by spiritual improvement creates a set-back and variations in the rate of progress. Self-efficacy leads to greater self-
satisfaction and interest. Employees with low sense of efficacy are stressed because they have limited opportunities to make full use of their talents. Perceived self-efficacy affects how well individuals manage requirements and challenges of occupational pursuits (Bandura, 2005).

Career choice and development is one example of the power of self-efficacy beliefs to affect the course of life paths through choice-related processes. The higher the level of people's perceived self-efficacy, the wider the range of career options they seriously consider, the greater their interest in them, and the better they prepare themselves educationally for the occupational pursuits they choose and the greater is their success. Occupational structure is a good part of people’s lives and provides them with a major source of personal growth.

From the above definitions, it is clear that individuals high on self-efficacy feel that they can produce results and don’t perceive themselves as helpless. Employed women with their higher skills, in a variety of situations are likely to feel more in control of the situation than the unemployed women who are likely to be having more feeling of helplessness because of lower position and power. People with higher perceived self-efficacy to fulfil job functions consider a wide range of career options. Some people eliminate an entire class of vocation based on perceived self-efficacy.

Vielva and Iraurgi (2001) assessed how far causal attributions about abstinence and relapse, drinking self-efficacy, drinking locus of control expectancy and coping behaviour discriminate abstainers from relapsers following treatment for alcohol dependence. A multicentre 6-month follow-up study was conducted in Mental Health Centres and self-help groups in Vizcaya (Spain). The sample comprised of 201 alcoholics who were assessed at their centres and groups on two occasions: while they were in treatment and 6 months later. During treatment, participants completed several questionnaires related to cognitive and behavioural variables. Drinking problem and background variables were also assessed. Six months later, their drinking status and treatment attendance were examined. Multivariate tests showed that self-efficacy expectancy and long previous time in abstinence independently discriminated alcoholics who maintained abstinence from those who
did not. Other cognitive-behavioural variables showed bivariate association with abstinence but did not add predictive power to these two measures. The results of this study were consistent with the extensive literature that confirms the predictive power of self-efficacy. Unexpectedly, it did not find independent positive relationships between other psychological variables and abstinence. Given that self-efficacy can predict outcome in the medium term, it is suggested that treatment could target this variable.

Florentine and Hillhouse (2003) examined the relationship between self-efficacy and the cessation of alcohol- and drug-dependent behavior. Evidence suggests that the Relapse Prevention Approach may incorrectly specify a relationship between self-efficacy and recovery. Instead of high situational coping self-efficacy, it may be that the acknowledgment of loss of control over alcohol and drug use, or low controlled use self-efficacy, promotes recovery because the addict embraces the need for lifelong abstinence. Findings from a prospective study of 356 drug treatment outpatients indicated self-efficacy predicted higher levels of abstinence acceptance independent from the possible influences of alcohol and drug use histories and treatment history. Self-efficacy, overtime was associated with an increase in abstinence acceptance, and high and increasing levels of abstinence acceptance predicted alcohol and drug abstinence. These findings suggest a new social-cognitive theory of recovery--the Addicted-Self Model. This model asserts that the cessation of alcohol- and drug-dependent behavior is more likely to occur when the addict attributes the loss of control over drug and alcohol use to a stable, permanent property of the self and embraces the need for life-long abstinence (Florentine & Hillhouse, 2003).

Senbanjo, Wolff, Marshall and Strang (2009) studied the association between coping, self-efficacy and persistent use of heroin by patients enrolled in a methadone treatment program. Half of the participants (95/191) reported heroin use in the preceding 14-day period. Heroin use during methadone treatment was associated with financial problems, spending time with other drug users, cocaine use, low mood and dissatisfaction with the daily methadone dose. Compared with ‘Heroin-abstinent’ patients, the ‘Heroin’ group reported significantly lower mean coping self-efficacy scores. Satisfaction with methadone dose showed no association with self-efficacy.
D’Silva and Aminabhavi (2013) studied the addictive behaviour of adolescents on their adjustment, self-efficacy and psychosocial competency. They revealed that drug addicted adolescents differed significantly from those who were not addicted to drugs in their adjustment, self-efficacy and psychosocial competence. More specifically drug addicted adolescents have shown significantly lower adjustment in terms of home, social, emotional and educational domains when compared to those adolescents who were not addicted to drugs. Similarly, drug addicted adolescents have shown significantly lower self-efficacy than their counterparts. Finally, drug addicted adolescents are also found to have lower psychosocial competency in terms of problem solving, decision making, critical thinking, creative thinking, empathy, self-awareness, coping with emotions, coping with stress, interpersonal relationships, effective communication as well as overall compared to those adolescents who are not addicted to drugs.

With a lot of studies indicating a significant interplay of personality factors in addiction, relapse and abstinence, the present investigation aims to bring out the critical personality factors that can transform the course of recurrent relapses.

Stress

Stress designates bodily processes created by circumstances that place physical or psychological demands on an individual (Selye, 1976). The external forces that impinge on the body are called stressors (McGrath, 1982). Theories that focus on the specific relationship between external demands (stressors) and bodily processes (stress) can be grouped in two different categories: approaches to ‘systemic stress’ based in physiology and psychobiology (among others, Selye, 1976) and approaches to ‘psychological stress’ developed within the field of cognitive psychology (Lazarus, 1966, 1991; Lazarus & Folkman, 1984; McGrath 1982).

Systemic Stress: Selye’s Theory

The popularity of the stress concept in science and mass media stems largely from the work of the endocrinologist Hans Selye. In a series of animal studies, he observed that a variety of stimulus events (e.g., heat, cold, toxic agents) applied intensely and long enough can produce common effects, meaning not specific to either stimulus event. Besides these nonspecific changes in the body, each stimulus
produces, of course, its specific effect, heat, for example, produces vasodilatation, and cold vasoconstriction. According to Selye, these non-specifically caused changes constitute the stereotypical, i.e., specific, response pattern of systemic stress. Selye (1976) defines this stress as ‘a state manifested by a syndrome which consists of all the non-specifically induced changes in a biological system.’

Figure A: Showing Selye’s General Adaptation Syndrome model.

This stereotypical response pattern, called the ‘General Adaptation Syndrome’ (GAS), proceeds in three stages.

(a) The alarm reaction:

It comprises an initial shock phase and a subsequent counter shock phase. The shock phase exhibits autonomic excitability, an increased adrenaline discharge, and gastro-intestinal ulcerations. The counter shock phase marks the initial operation of defensive processes and is characterized by increased adrenocortical activity.

(b) Resistance

If noxious stimulation continues, the organism enters the stage of resistance. In this stage, the symptoms of the alarm reaction disappear, which seemingly indicates the organism's adaptation to the stressor. However, while resistance to the noxious stimulation increases, resistance to other kinds of stressors decreases at the same time.
(c) Exhaustion

If the aversive stimulation persists, resistance gives way to the stage of exhaustion. The organism's capability of adapting to the stressor is exhausted, the symptoms of stage (a) reappear, but resistance is no longer possible. Irreversible tissue damages appear, and, if the stimulation persists, the organism dies.

Although Selye's work influenced a whole generation of stress researchers, marked weaknesses in his theory soon became obvious. First, Selye's conception of stress as a reaction to a multitude of different events had the fatal consequence that the stress concept became the melting pot for all kinds of approaches. Thus, by becoming a synonym for diverse terms such as, for example, anxiety, threat, conflict, or emotional arousal, the concept of stress was in danger of losing its scientific value (cf. Engel, 1985). Besides this general reservation, specific critical issues have been raised. One criticism was directed at the theory's core assumption of a nonspecific causation of the GAS. Mason (1971, 1975b) pointed out that the stressors observed as effective by Selye carried a common emotional meaning: they were novel, strange, and unfamiliar to the animal. Thus, the animal's state could be described in terms of helplessness, uncertainty, and lack of control. Consequently, the hormonal GAS responses followed the (specific) emotional impact of such influences rather than the influences as such. In accordance with this assumption, Mason (1975b) demonstrated that in experiments where uncertainty had been eliminated, no GAS was observed. This criticism leads to a second, more profound argument: unlike the physiological stress investigated by Selye, the stress experienced by humans is almost always the result of a cognitive mediation (cf. Arnold, 1960; Lazarus, 1966, 1974). Selye, however, fails to specify those mechanisms that may explain the cognitive transformation of ‘objective’ noxious events into the subjective experience of being distressed. In addition, Selye does not take into account coping mechanisms as important mediators of the stress–outcome relationship. Both topics are central to psychological stress theories as.

Psychological Stress: The Lazarus Theory

Two concepts are central to any psychological stress theory: appraisal, i.e., individuals' evaluation of the significance of what is happening for their well-being, and coping, i.e., individuals' efforts in thought and action to manage specific demands
(cf. Lazarus, 1993). Since its first presentation as a comprehensive theory (Lazarus, 1966), the Lazarus stress theory has undergone several essential revisions (cf. Lazarus, 1991, Lazarus & Folkman, 1984, Lazarus & Launier 1978). In the latest version (Lazarus, 1991), stress is regarded as a relational concept, i.e., stress is not defined as a specific kind of external stimulation nor a specific pattern of physiological, behavioural, or subjective reaction. Instead, stress is viewed as a relationship (‘transaction’) between individuals and their environment. ‘Psychological stress refers to a relationship with the environment that the person appraises as significant for his or her well-being and in which the demands tax or exceed available coping resources’ (Lazarus & Folkman, 1986). This definition points to two processes as central mediators within the person–environment transaction: cognitive appraisal and coping.

**Figure B: Showig Lazarus’ transactional model of stress and coping**

The concept of appraisal introduced into emotion research by Arnold (1960) and elaborated with respect to stress processes (Lazarus, 1966; Lazarus & Launier, 1978) is a key factor for understanding stress-relevant transactions. This concept is based on the idea that emotional processes (including stress) are dependent on actual expectancies that persons manifest regarding the significance and outcome of a specific encounter. This concept is necessary to explain individual differences in
quality, intensity, and duration of an elicited emotion in environments that are objectively equal for different individuals. It is generally assumed that the resulting state is generated, maintained, and eventually altered by a specific pattern of appraisals. These appraisals, in turn, are determined by several personal and situational factors. The most important factors on the personal side are motivational dispositions, goals, values, and generalized expectancies. Relevant situational parameters are predictability, controllability, and imminence of a potentially stressful event.

In his monograph on emotion and adaptation, Lazarus (1991) developed a comprehensive emotion theory that also includes a stress theory (cf. Lazarus, 1993). This theory distinguishes two basic forms of appraisal, primary and secondary appraisal (Lazarus, 1966). These forms rely on different sources of information. Primary appraisal concerns whether something of relevance to the individual's well-being occurs, whereas secondary appraisal concerns coping options. Within primary appraisal, three components are distinguished: goal relevance describes the extent to which an encounter refers to issues about which the person cares. Goal congruence defines the extent to which an episode proceeds in accordance with personal goals. Type of ego-involvement designates aspects of personal commitment such as self-esteem, moral values, ego-ideal, or ego-identity. Likewise, three secondary appraisal components are distinguished: blame or credit results from an individual's appraisal of who is responsible for a certain event. By coping potential, Lazarus means a person's evaluation of the prospects for generating certain behavioural or cognitive operations that will positively influence a personally relevant encounter. Future expectations refer to the appraisal of the further course of an encounter with respect to goal congruence or incongruence.

Specific patterns of primary and secondary appraisal lead to different kinds of stress. Three types are distinguished: harm, threat, and challenge (Lazarus & Folkman, 1984). Harm refers to the (psychological) damage or loss that has already happened. Threat is the anticipation of harm that may be imminent. Challenge results from demands that a person feels confident about mastering. These different kinds of
psychological stress are embedded in specific types of emotional reactions, thus illustrating the close conjunction of the fields of stress and emotions.

**Lazarus (1991)** distinguishes 15 basic emotions. Nine of these are negative (anger, fright, anxiety, guilt, shame, sadness, envy, jealousy, and disgust), whereas four are positive (happiness, pride, relief, and love). Two more emotions, hope and compassion, have a mixed valence. At a molecular level of analysis, the anxiety reaction, for example, is based on the following pattern of primary and secondary appraisals: there must be some goal relevance to the encounter. Furthermore, goal incongruence is high, i.e., personal goals are thwarted. Finally, ego-involvement concentrates on the protection of personal meaning or ego-identity against existential threats. At a molar level, specific appraisal patterns related to stress or distinct emotional reactions are described as core relational themes. The theme of anxiety, for example, is the confrontation with uncertainty and existential threat. The correlational theme of relief, however, is `a distressing goal-incongruent condition that has changed for the better or gone away' (**Lazarus, 1991**).

Coping is intimately related to the concept of cognitive appraisal and, hence, to the stress relevant person-environment transactions. Most approaches in coping research follow **Folkman and Lazarus (1980)**, who define coping as `the cognitive and behavioural efforts made to master, tolerate, or reduce external and internal demands and conflicts among them.' This definition contains the following implications:

a) Coping actions are not classified according to their effects (e.g., as reality-distorting), but according to certain characteristics of the coping process.

b) This process encompasses behavioural as well as cognitive reactions in the individual.

c) In most cases, coping consists of different single acts and is organized sequentially, forming a coping episode. In this sense, coping is often characterized by the simultaneous occurrence of different action sequences and, hence, an interconnection of coping episodes.

d) Coping actions can be distinguished by their focus on different elements of a stressful encounter (**cf. Lazarus & Folkman, 1984**). They can attempt to
change the person–environment realities behind negative emotions or stress (problem-focused coping).

They can also relate to internal elements and try to reduce a negative emotional state or change the appraisal of the demanding situation (emotion-focused coping).

**Resource Theories of Stress: A Bridge between Systemic and Cognitive Viewpoints**

Unlike approaches discussed so far, resource theories of stress are not primarily concerned with factors that create stress, but with resources that preserve well-being in the face of stressful encounters. Several social and personal constructs have been proposed, such as social support (Schwarzer & Leppin, 1991), sense of coherence (Antonovsky, 1979), hardiness (Kobasa, 1979), self-efficacy (Bandura, 1977), or optimism (Scheier & Carver, 1992). Whereas self-efficacy and optimism are single protective factors, hardiness and sense of coherence represent tripartite approaches. Hardiness is an amalgam of three components: internal control, commitment, and a sense of challenge as opposed to threat. Similarly, sense of coherence consists of believing that the world is meaningful, predictable, and basically benevolent. Within the social support field, several types have been investigated, such as instrumental, informational, appraisal, and emotional support.

The recently offered conservation of resources (COR) theory (Hobfoll, 1989, Hobfoll, Freedy, Green, & Solomon, 1996) assumes that stress occurs in any of three contexts: when people experience loss of resources, when resources are threatened, or when people invest their resources without subsequent gain. Four categories of resources are proposed: *object resources* (i.e., physical objects such as home, clothing, or access to transportation), *condition resources* (e.g., employment, personal relationships), *personal resources* (e.g., skills or self-efficacy), and *energy resources* (means that facilitate the attainment of other resources, for example, money, credit, or knowledge).

**DEPRESSION**

Depression has been one of the most intensely studied mental disorders. It is a widespread disorder, and depressive symptoms are common across a broad range of
psychological problems (Kazdin, 2000). Beck, Rush, Shaw and Emery (1979) observed that depressed individuals share common cognitive features, i.e., a negative view of the self in relation to the world, and in relation to the future. A model based on three factors viz., affective, motivational and cognitive has been given by Beck et al. (1979). Among the three approaches for depression, viz., psychoanalytic, interpersonal and cognitive one, the last was proposed by Beck (1967) while studying the etiology of depression. He argued that all individuals possess cognitive structures called schemas that guide the ways information is attended to and interpreted. Such schemas are determined from childhood by our interactions with the external world. For example, a child who is constantly criticized may begin to believe that he/she is worthless. They might then begin to interpret every failure experience as further evidence of their worthlessness. If this negative processing of information is not changed, it will become an enduring part of their cognitive organization, that is, a schema. When this schema is activated (e.g., by a poor grade in a test or any other failure experience), it will predispose them to depressive feelings (e.g., I am no good). As a result of this faulty information processing, depressed persons demonstrate a cognitive triad of negative thoughts about themselves, the world and the future (Friedman, 1998).

ANXIETY

Anxiety is defined as a complex state that includes cognitive, emotional, behavioural and bodily reactions. Worry refers to the cognitive aspect of anxiety whereas anxiety refers to its awareness (Spielberger, 1966). Anxiety is a stage characterized by heightened autonomic system activity, specifically activation of the sympathetic nervous system i.e., increased heart rate, blood pressure, respiration and muscle tone, subjective feelings of tensions and cognitions involve apprehensions and worrying (Kazdin, 2000).

Kierkegaard (1844) stressed the relation of anxiety with the existence of possibility and potential freedom. Whenever, the individual attempts to carry any possibility into action, anxiety is a necessary accompaniment and potential freedom means the ability to experience and tolerate the anxiety that necessarily comes with the consideration of possibility. Freud (1933) defined anxiety as a transformed ego. Freud regarded anxiety as the “fundamental phenomenon and the central problem of
neurosis”. American Psychiatric Association (1994) considers anxiety as “a danger signal felt and perceived by the conscious portion of the personality. It is produced by a threat from within the personality - with or without stimulation from external situations.” Webster (1981) defined anxiety as a “painful uneasiness of mind over an impending or anticipated ill”. Rachman (1998) defined anxiety as "a pervasive and significant negative affect that is a central feature of many psychological problems”.

Stress not only plays a key role in modulating the development and expression of addictive behavior, but also is a major cause of relapse following periods of abstinence (Ungless, Argilli, & Bonci, 2010). In a study by Ames and Roitzsch (2000) patients who endorsed a greater overall number of daily stressors had a higher probability of experiencing cravings. Two possible hypotheses were proposed for this finding. First, individuals who experience a greater number of stressors may experience cravings because substance use has been associated with stressful minor life events since these individuals have used substances as a means of coping with these events in the past. This hypothesis is consistent with the tension reduction theory of substance abuse as proposed by Cappell and Greeley (1987). Second, an alternative hypothesis is that individuals who report experiencing a greater number of minor stressors may also experience cravings because they have heightened attention onto these stressful events, thereby influencing the number of cravings they experience. There are many reports that relapse to alcohol and drug use is more likely to occur in individuals exposed to high levels of life when compared with men. Moos (1992) found that women reported more reliance on both approach and avoidance coping. There are also associations between age and coping preferences. Folkman, Lazarus, Pimley and Novacek (1987) found that older adults are more likely to rely on cognitive approach and avoidance coping styles and less likely to utilize behavioral approach processes such as seeking social support, problem solving, and confrontation. In general, personal coping resources such as self-efficacy (Fleishman, 1984) and an internal locus of control (Parke, 1984) are associated with more reliance on approach coping.

Holahan and Moos (1987) found that self-confidence and high family support predicted an increase in approach coping and a decline in avoidance coping. Pearlin
and Schooler (1978) considered the relative contributions of personality characteristics and coping responses to psychological well-being. Feifel and Strack (1989) reported that competitive and extraverted individuals tend to rely more on confrontation and less on acceptance/resignation.

Ouimette, Coolhart, Funderburk, Wade and Brown (2007) indicated that patients with PTSD were less likely to report first substance use triggered by cue-based urges and more likely to report use in response to negative emotions of an interpersonal nature than those patients without PTSD. Other characteristics of first use associated with PTSD included greater subjective urges right before using, greater efforts to obtain substances and more likelihood to use intoxication. Patients with unremitted PTSD reported poorer outcome and self-efficacy expectations than those without PTSD or with remitted PTSD.

Hyman et al. (2009) compared opioid dependent individuals entering naltrexone treatment with healthy controls on measures of stress, coping, and social support and examined the relative contribution of group membership, coping and social support to stress within the sample. Compared with controls, opioid dependent subjects reported greater stress, lesser use of adaptive coping, but comparable use of maladaptive/avoidant coping. No group differences were found with respect to social support. Perceived stress was predicted by group membership, low social support and greater use of maladaptive/avoidant coping, and the prediction by social support and maladaptive/avoidant coping did not differ by group.

Some other studies also believed that psychological characteristic and relapse is distinguished by a low self-esteem, self-concept and high level of emotional helplessness. Another study has emphasized that relapsed addict person reported more problems related to depression, anxiety, and self-esteem than non-relapsed addicts (Swendsen, Conway, Rounsaville, & Merikangas, 2002).

Mainly anxiety and depression are an important part of addiction that can lead to relapse in those who stop using drugs, and also relapse can lead to more anxiety or depression. It is also indicated that relapsed addicted individual suffers from low self-esteem in comparison to non-relapsed addicts. That may be the reason why they turn
to drugs to alleviate the feelings associated with low self-worth, feelings of inadequacy, poor self-image and inability to cope with the demands of day-to-day life that prove too much, and drugs are sought as a means of escape (Wulsin, Valliant, & Wells, 1999). Addicted life style and family support or family neglect is the key point in relapsed or non-relapsed addicts. Neglect leads to further lowering of self-esteem, poor self-concept, and moral and ethical dilemmas among addicts. So relapsed addicts with low self-esteem, poor self-concept and poor family support do not value themselves, but they turn to other people. Typically, they will help others at their own expense because they place more value on them than they do on themselves (Wulsin, 2001). Many people, in recovery from drug and alcohol addiction relapse because not enough attention is paid to this stressor. Addicts and alcoholics who have stopped using drugs and drinking alcohol need to re-build their self-esteem and self-image as a matter of urgency if relapse is to be avoided. Counselling and therapy can be useful in helping to identify the specific areas needing most attention, but the footwork is the responsibility of the individual. The personality disorders which are more common in relapsed rather than non-relapsed often cause acutely uncomfortable feelings such as overwhelming sadness, hopelessness, numbness, isolation, sleep disorders, digestive and food related disorders (Sher, Bartholow, & Wood, 2000).

Depression can take a variety of courses and chronicity, with relapse and recurrence relatively common over the lifespan (Kovacs, 1996a). Kovacs and colleagues, in a noteworthy longitudinal study of depression in adolescents, found that for some youngsters, particularly those with a dysthymic disorder, their depression may last for many years, and in some, it represents a precursor or risk factor for other psychiatric disorders. (Kovacs, 1996). Addiction and depression often go hand in hand. Depression may be the reason an addict starts using drugs or alcohol. Or, it may develop as the addiction progresses. Depression and other psychiatric illnesses increase the risk of addiction. Of all the people who are diagnosed as having a psychiatric illness, 29% are alcohol or drug abusers, as many as 37% of people abuse alcohol and 53% of people abuse drugs and they have at least one serious mental illness. Depression, already common in the general population, is even more common among alcoholics and drug abusers. If left untreated, depression can hinder the
addiction recovery process and may lead to relapse. On the other hand, an untreated addiction problem may also develop depression in the patient and consequently lead to relapse. Hence, this vicious cycle of depression and addiction needs to be recognized and requires simultaneous treatment.

The Epidemiologic Catchment Area study conducted by the National Institute on Health reported that almost one-third of the individuals with depression had a co-existing substance use disorder at some point in their lives (Farrell, Howes, & Taylor, 1998; Kessler et al., 1994; Regier et al., 1990). Clients with addiction and depression often have other diagnoses including bipolar, anxiety, personality or other addictive disorders. In one of recent studies of 153 new clients seeking treatment at 6 different substance abuse clinics, clients had a mean Beck Depression Inventory score of 18.8 (SD=13.0), which is in the moderate range, and a mean Beck Anxiety Inventory score of 23.3 (SD=21.8), which is in the moderate to severe range. Although these clients were new admissions to substance abuse clinics, 31.4% were taking antidepressants; 10.5% were taking mood stabilizers; 8.5% were taking anti-anxiety medications; and 7.8% were taking anti-psychotic medication (Dennis, 2000). In a study of mentally ill chemical abusers greater distress was reported by mentally ill chemical abusers than by psychiatric patients who do not abuse psychoactive substances. Group comparisons indicated that mentally ill chemical abusers reported greater levels of somatization, depression, anxiety, obsessive compulsiveness, paranoia, and psychotic symptoms (Carey et al., 1991). In another study by Ahmadi et al. (2005), assessing the rate of current mood disorders in 500 opioid-dependent outpatients, 336 (67.2%) subjects were diagnosed as having mood disorders. Of these subjects 274 (54.8%) had substance induced depression, 37 (7.4%) had major depression, 14 (2.8%) had, dysthymia, five (1%) had depression due to general medical condition, three (0.6%) had cyclothymia, three (0.6%) had bipolar mood disorder (Type I). Of the 500 participants, 319 (63.8%) reported more than 5 years use of opioid. Of the subjects, only 16 (3.2%) reported no episode of abstinence and the majority 484 (96.8%) reported one or more episodes of abstinences. Evaluations of diagnosis and symptoms of depression were undertaken in 157 opiate addicts at entrance to a multimodality drug treatment program and followed up six months later,
it was reported that 17% were having an episode of major depression and 60% had at least mildly elevated depressive symptoms at entrance to treatment (Rounsaville, Weissman, Crits-Christoph, Wilber, & Kleber, 1982).

Clinical studies suggest that half of opioid- and cocaine-dependent individuals report lifetime depression, whereas one-third have depressed mood at intake to addiction treatment (Rounsaville et al., 1982; Kleinman, Miller, & Millman, 1990). Thus, the finding of significantly higher depression scores in opiate-dependent persons is in agreement with earlier work. While some patients may use the substance as 'self-medication' for their depression, opium itself may produce clinically significant depression. Clinicians obviously need to carefully assess opiate-dependent individuals for depression, which must also be treated.

Hopelessness is a clinically important state relative to morbidity and suicide risk among addicts. Heroin addicts have an exceedingly high rate of suicide. Recent studies with other clinical populations have found that hopelessness is a mediating variable between depression and suicidal behaviors. In another study, 191 heroin addicts were administered the Beck Depression Inventory, the Hopelessness Scale, and the Suicide Contemplation Scale. It was found that suicide intent was significantly correlated with hopelessness, but not with depression. Negative thinking, particularly in relation to the self and the future, is a well-established characteristic of episodes of depression (Haaga, Dyck, & Ernst, 1991). Cognitive theories of depression have been predominant among psychological approaches to understanding depression. Cognitive models (Ingram, Mirands, & Segal, 1998; Nolen-Hoeksema, 1991; Abramson, Metalsky, & Alloy, 1989; Rehm, 1977; Beck, 1967, 1987) emphasize the role of maladaptive beliefs, inferential styles, or information processing biases as vulnerability factors for depression that increase people’s risk for becoming depressed when they experience stressful life events. Moreover, a growing body of evidence suggests that negative cognitive styles and information processing do, indeed, increase risk for depression (Abramson et al., 1989; Alloy & Clements, 1998). If negative cognitive styles do confer vulnerability to depression, then it becomes important to understand the origins of these cognitive styles. Such an
understanding may lead to the development of early interventions to prevent initial onset and recurrences of depression.

Alloy (2001) reviewed and addressed empirically several potential development precursors of cognitive vulnerability to depression. Although diverse samples were included in these studies, which vary from children to adolescents to young adults, the recurrent theme being exposure to a negative interpersonal context of some kind (e.g., negative parenting practices, negative inferential feedback from significant others, early history of maltreatment, negative appraisals of competence from significant others, low intimacy in romantic relationships, family discord or disruption) leads to the development of personal cognitive vulnerability to depression.

Goodman and Gotlib (1999) suggested a variety of factors that may be associated with the development of negative cognitive structures like modeling negative cognitions, exposure to depressive behaviour and affect, are responsible for the etiology of depression.

Various personality characteristics and symptoms have also predicted substance abuse relapse. Antisocial personality traits predicted relapse after completion of treatment for alcohol dependence (Sandahl, 1984) and antisocial personality diagnosis is linked with less favorable outcome in drug abuse treatment (Alterman & Cacciola, 1991). There is strong evidence for a connection between depression and other negative mood states and substance abuse relapse. Negative affect has been found to figure prominently in relapse to tobacco, opiate and alcohol use (Wills, 1990).

Momeni, Moshtagh and Pourshahbaz (2010) evaluated the effectiveness of cognitive-behavioral group therapy on craving, symptoms of depression and anxiety among the patients under MMT. The results indicated that post-test and follow-up scores of craving index were decreased significantly. Depression and anxiety scores showed significant decrease as well.

Noori et al. (2015) studied the associated parameters of anxiety and depression among female spouses of male drug dependents. Drug dependence of the husband and lower monthly income of the family predicted the higher level of anxiety
among the participants, while older age, shorter marital duration, and lower educational level in addition to spousal drug dependence, and lower family income were significantly associated with higher levels of depression. Spousal drug dependence and lower monthly income were common predictors of anxiety and depression among spouses of drug dependents in Iran, while older age, shorter marital duration and lower educational level were predictors of depression.

In previous studies, cigarette smokers were found to score high on impulsivity and neuroticism, and low on agreeableness and conscientiousness (Terracciano & Costa, 2004; Paunonen & Ashton, 2001; Malouff, Thorsteinsson, & Schutte, 2006). However, in European and Asian studies and some older US studies, smokers were also found to score high on extraversion (Malouff et al., 2006; Arai, Hosokawa, Fukao, Izumi, & Hisamichi, 1997; Munafo & Black, 2007). Compared to cigarette smoking, there are fewer studies on the personality correlates of illegal drug use, and these are based on smaller sample sizes and a variety of personality measures. A meta-analysis (Gorman & Derzon, 2002) examined personality correlates of marijuana use, categorizing traits into "negative affect" (depression, anxiety), "emotionality" (extraversion, social disinhibition), and "unconventionality" (tolerance of deviance, non-religiosity). These measures map loosely onto neuroticism, extraversion, and openness to experience to experiences, respectively. Results suggested that marijuana use was related to high levels of unconventionality, and only weakly to emotionality and negative affect. Another meta-analysis (Bogg & Roberts, 2004) examined the role of a wide range of conscientiousness related measures on health risk behaviors. Across studies, a consistent association was found between marijuana use (as well as other drug use) and low scores on conscientiousness-related traits. Cocaine users are characterized by high scores on neuroticism-related traits (Saiz, Gonzalez, Paredes, Martinez, & Delgado, 2001; Kilbey, Breslau, & Andreski, 1992), such as depression and impulsivity (Ball & Schottenfeld, 1997; Rosenthal, Edwards, Ackerman, Knott, & Rosenthal 1990), as well as psychoticism (Saiz et al., 2001; Kilbey et al., 1992), a trait related to low agreeableness and low conscientiousness. Finally, studies of heroin users consistently depict them as high on neuroticism (Brooner et al., 2002; Tremeau et al., 2003;
Blaszcynski et al., 1985; Kornor & Nordvik, 2007). Many studies show an association of heroin use with high extraversion and high psychoticism, but this association appears to be less robust (Tremeau et al., 2003; Blaszcynski et al., 1985; Kornor & Nordvik, 2007).

Focus on negative affect and stress in the present investigation can meaningfully contribute towards a deeper understanding of relapse and help us to frame relapse prevention programs that can take into consideration, arousal regulation and stress management.

Coping

Coping is “a continuous cognitive and behavioural process of overcoming stress and stressful consequences of external forces” (Mohan, 2003). A given situation is appraised as stressful only when one lacks the resources to deal with it. These resources decide one’s potential in dealing with stress and the consequences of stress. Where effective coping helps to maintain equilibrium, ineffective coping leads to maladjustment and disease. Hence the ways of coping one employs has a significant role to play in combating stress (Lazarus, 1984). The conceptualization of coping processes is a central aspect of contemporary theories.

According to Pearlin and Schooler (1978), ways of coping can be viewed as “things that people do to avoid being harmed by life strains”. The term coping is viewed as a stabilizing factor that may help individuals maintain psychological adaptation during stressful periods (Folkman & Lazarus, 1985a; Billings & Moos, 1984). At a general level, coping has been broadly defined as “any efforts at stress management” (Folkman & Lazarus, 1988). Lazarus (1981) described ways of coping as ‘overt’ and ‘covert’ behaviours that are taken to reduce or eliminate psychological distress resulting from the impossibility of either flight or fight.

According to Lazarus (1991), coping refers to the cognitive and behavioural efforts to manage specific external or internal demands (and conflicts between them) that are appraised as taxing or exceeding the resources of a person. Coping is described as either a subcategory of defence (Cohen & Lazarus, 1979) or a reaction that appears in adversities (White, 1974). Its meanings are concretized as particular
strategies appropriate for the special situation. Coping mechanisms include individual’s own attempt directly to alter the threatening condition, include the individual’s attempt to change their appraisal of stressors as less threatening and include individual’s attempts to regulate emotions of distress.

According to White (1974), coping is a process involving effort towards solution of problems. Coping would occur when an individual confronts a fairly drastic change or problem that defies familiar ways of behaving, requires the production of new behaviour and very likely gives rise to uncomfortable efforts like anxiety, despair, guilt, shame or grief; the relief of which forms part of the needed adaptation. Haan (1977) has argued that coping is commonly understood to be a good way to handle problems. Fleishman (1984) defined coping as cognitive or behavioural response “to eliminate psychological distress or stressful conditions”. According to Schuler (1984), coping is a process of analysis and evaluation to decide how to protect oneself against the adverse effect of any stressor and its associated negative outcomes.

Building upon the transactional model of Folkman and Lazarus (1985), Frydenberg and Lewis (1993) defined coping as a set of cognitive and affective actions which arise in response to a particular concern. They represent an attempt to restore the equilibrium or remove the turbulence for the individual. This may be done by solving the problem (that is, removing the stimulus) adjusting to the concern without bringing about a solution. While it is true that it is difficult to predict or identify that what is going to restore the equilibrium for an individual, nevertheless it seems clear that there are efforts to remove the discomfort and these efforts can be called coping.

**Coping Styles**

Researchers have systematically examined coping strategies among different people. Usually coping strategies have been divided into two types i.e. problem focused, or emotion focused. Others add a third style: appraisal focused coping based on cognitive analysis, redefinition and avoidance.
Antonovsky (1979) described three components of coping strategies viz. rationality which means the accurate objective assessment of the stressful situation, flexibility which means considering several different possible ways of dealing with a stressful situation, and farsightedness which means thinking through the consequences and discussing the problem with someone else.

Lazarus and Folkman (1984) opined that one’s efforts to cope may be problem focused where focus is to decrease stress by changing the person-environment relationship and emotion focused where focus lies on the way one interprets the stress. Coping processes refer to the cognitive and behavioural efforts individuals employ in specific stressful circumstances (Moos & Schaefer, 1993). Moos and Schaefer (1993) have proposed four basic type of coping processes a) Cognitive approach which encompasses paying attention to one aspect of the situation at a time, drawing on past experiences, mentally repressing alternative actions and their probable consequences and accepting the reality of a situation but restricting it to find something favourable, b) Behavioural approach which includes seeking guidance and support and taking concrete action to deal directly with a situation or its aftermath, c) Cognitive avoidance coping which comprises response aimed at denying or minimizing the seriousness of a crisis or its consequences, as well as accepting a situation as it is and deciding that the basic circumstances cannot be altered and d) Behavioural avoidance coping which covers seeking alternate rewards that are trying to replace the losses involved in certain crises by becoming involved in new activities and creating alternate sources of satisfaction.

Folkman, Lazarus, Pimley & Novacek (1987) identified eight coping strategies which are as follows a) Confrontive Coping: aggressive efforts to change the situation. b) Seeking Social Support: Efforts to obtain emotional comfort and information from others. c) Planful Problem Solving: deliberate problem focused efforts to solve the situation. d) Self Control: efforts to regulate what one is feeling e) Distancing: efforts to detach oneself from stressful situation f) Positive Reappraisal: efforts to find positive meaning in the experience by focusing on personal growth. g) Accepting Responsibility: acknowledging one’s role in the

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problem h) *Escape Avoidance*: wishful thinking (I wished the situation would go away).

**Socio-demographic factors in Coping**

Coping process posits that aspects of the personal system, the environmental system, characteristics of the focal life crises or transitions and an individual’s appraisal of the situation provide a context for the selection and effectiveness of coping responses. Different factors have been suggested by various researchers, which influence the selection of coping responses.

**McCrae (1989)** found that women are more likely than men to use avoidance coping processes such as hostile reaction, distraction, passivity, and wishful thinking (Endler & Parker, 1990), but when compared with men, **Moos (1992)** found that women reported more reliance on both approach and avoidance coping. There are also associations between age and coping preferences. **Folkman et al. (1987)** found that older adults are more likely to rely on cognitive approach and avoidance coping styles and less likely to utilize behavioural approach processes such as seeking social support, problem solving, and confrontation. In general, personal coping resources such as self-efficacy (Fleishman, 1984) and an internal locus of control (Parke, 1984) are associated with more reliance on approach coping.

**Holahan and Moos (1987)** found that self-confidence and high family support predicted an increase in approach coping and a decline in avoidance coping. **Pearlin and Schooler (1978)** considered the relative contributions of personality characteristics and coping responses to psychological well-being. Individuals high on optimism, control and self-esteem are more likely to rely on active coping and planning (Carver, Scheier, & Weintraub (1989).Costa, Zonderman and McCrae (1991) also found that older adults rely less on reaction and emotional expression and are less likely to show frustration towards other people. However, older men prefer resignation to avoidance, whereas middle-aged men do not (Feifel & Strack, 1989).

**Baum and Posluszny (1999)** opined that coping constitutes an important aspect of stress, one of the principal routes that behavioural and cognitive responses can take during stress. **Lazarus and Folkman (1984)** suggested that coping is
selected by individuals to combat stress and avoid illness. Many life situations also pose grave psychological threats like evaluation anxiety (Krohne & Laux, 1982) and loneliness (Jones, 1982; Schultz & Moore, 1984; Solano, 1982). These researchers evaluated the ways in which people cope with situations that threaten their self-esteem and concluded that, any relation found between coping and long-term outcome was probably due to the person’s repeatedly experiencing stressful situations that touch on a particular area of vulnerability, insofar as a single, isolated instance of poor coping was not likely to have long term implications for health and well-being.

Some ways of coping seem to be better suited to certain kinds of situations than are others. For example, problem focused coping, directed at changing or eliminating sources of stress, is associated with more positive outcomes when the source of the stress is controllable and with poorer outcomes when it is not (Vitaliano et al., 1990). Laux and Weber (1991) have examined that the choice of a coping strategy depends on the emotion that is being experienced. Lester, Smart and Baum (1994) examined a more general pattern, coping flexibility, and correlates of this style of approaching stressful situations. Flexible coping is reflected by systematic use of wide variety of different coping strategies in different situations rather than more rigid applications of a few coping strategies across settings. However, greater coping flexibility has been linked to better adjustment, less depression and fewer physical ailments in people having chronic illness and alcoholism (Ell & Mostardi, 1986). Conversely, rigid styles have been associated with higher levels of depression and higher relapse rates in alcoholics (Shapiro, 1979).

Solomon, Mikulincer and Habershaim (1990) examined the relationship of life events, coping strategies and social resources, on one hand and self-report of somatic problems following the stress of combat, on the other hand.

Coping is a complex phenomenon based on resources and the relationship between the person and the environment. Emotion-centred problem solving can be used to maintain hope and keep up spirits. This might be important in coping with bereavement or coping with high levels of stress such as war or life-threatening situations. Problem-solving approaches may be appropriate for moderate levels of stress that are potentially long term but capable of change, e.g. work situations or
chronic illness. Both coping resources and coping process focus on how people resolve and adapt to stressful life circumstances (Robinson & Inkson, 1994).

Coping with stress may also play a role in how people adapt to health problems in general (Behen & Rodrigue, 1994; Courbasson, 1998; Endler & Parker, 1999; Endler, Parker, & Summerfeldt, 1998), and issues related to addiction, in specific treatment and rehabilitation.

Many treatment and rehabilitation programs have focused on helping individuals with substance abuse problems, to acquire better coping strategies in order to face the stressors they encounter in their daily lives (Breslin, O’Keeffe, Burrell, Ratliff-Crain, & Baum, 1995; Swift, 1997).

Following the treatment, positive reappraisal and problem-solving strategies were found to increase while cognitive avoidance and emotional discharge coping strategies were found to decrease. A brief coping skills treatment for cocaine abuse was found to decrease cocaine use and to decrease the length of cocaine binges but was not found to affect relapse or the use of substances other than cocaine (Monti, Rohsenow, Michalec, Martin, & Abrams, 1997). Other research has suggested that coping can predict relapse in substance abusers and can also act as a powerful protective factor (Connors, Longabaugh, & Miller, 1996; Connors, Maisto, & Zywiak, 1996). Alcoholics who do not rely highly on problem-oriented coping have been found to consume more alcohol on a single occasion than those who exclusively use problem-oriented coping (Breslin et al., 1995). While active coping efforts (i.e., problem-focused strategies) have been shown to be more of a protective factor, especially in terms of initiation and relapse, avoidance oriented coping has been found to be maladaptive (Wills & Hirky, 1996).

Johnson and Pandina (2000) found no group difference between problem and non-problem adolescent alcohol users in their use of seeking emotional support. Instances of seeking emotional support included going to someone for advice.

Some forms of coping specifically involve the emotional effects of confronting a stressor. A cross-sectional investigation by Windle and Windle (1996) with a sample of 733 primarily Caucasian youth showed that emotion focused coping
was predictive of alcohol use and positively associated with alcohol problems (Windle & Windle, 1996). Coping via expressing anger has also been shown to be a risk factor for the higher initial amount, overall amount, and rapid escalation of engagement in substance use, as it has also been shown to have a unique positive relationship to adolescent substance use among a large, diverse sample of youth (Wills, McNamara, Vaccar, & Hirky, 1996; Wills, Sandy, Yaeger, Cleary, & Shinar, 2001).

Task-oriented coping has been shown to have a moderate correlation with the problem solving scale of Amirkhan’s (1990) Coping Strategy Indicator (Endler & Parker, 1994). Examples of task-oriented or problem solving coping behaviors include “tried different ways to solve the problem until you found one that worked,” and “set some goals for yourself to deal with the situation.” Problem solving has also been shown to be negatively associated with substance abuse among a sample of high risk youth (Sussman, Dent, & Galaif, 1997). Adolescents who report greater reliance on problem-focused coping report less substance use involvement (Wagner, Myers, & McInich, 1999). In sum, research suggests that frequent use of problem solving coping methods is largely negatively related to substance use. The relationship between cognitive forms of coping and adolescent substance use is less clear. A broad dimension entitled cognitive coping includes instances of coping such as “tell myself it will be over in a short time,” “try to put it out of my mind,” and “try to notice only the good things in life” (Wills, 1985). Based on a longitudinal study, examining two cohorts of seventh graders for two years, this category of coping has been shown to be a significant positive predictor of cigarette smoking among youth at the beginning of seventh grade. Cognitive coping is negatively associated, however, with alcohol use at the end of eighth grade (Wills, 1985). Behavioral coping has been shown to have a negative relationship to substance use (Wills et al., 1996; Wills et al., 2001). Examples of behavioral coping are “get information you need to solve the problem,” “think about the choices before doing something,” “think hard about what steps to take,” and “take action to try to solve the problem.” Additionally, adolescents who engage in prayer or relaxation to cope with stressors are less likely to use substances
This review presents a clear account of indices of different coping styles.

The use of avoidance coping skills has been identified as a risk factor for relapse in substance abusers (Cooper et al., 1992). Studies have reported neuroticism to be consistently associated with increased use of passive, ineffective coping mechanisms (Endler & Parker, 1990; Costa & McCrae, 1989). In association between neuroticism and responses to the Ways of Coping checklist (Folkman & Lazarus, 1980; 1985), neuroticism correlated with increased use of wishful thinking, self-blame, avoidance and emotion focused thinking (Bolger, 1990; Hooker, Frazier, & Monahan, 1994; Smith et al., 1989).

Roy et al. (2005) conducted a study to investigate the dispositional styles in patients with substance dependence. The subjects included 30 male detoxified substance dependent patients and 30 matched normal controls. Both the groups were assessed with Brief COPE inventory. Patients group was high on maladaptive emotion-focused coping.

Christine, Norman and Nancy (2002) investigated the relationship between coping and psychological distress among 71 men with substance use disorders, at both pre--and post-treatment and found that task-oriented and avoidance-oriented coping did not predict psychological distress, although task-oriented coping was negatively related to hypochondriacs, anxiety and depression.

Halim and Sabri (2013) studied pattern of defense mechanisms, coping styles and its association among relapsing addicts and found that neurotic defense mechanisms and task-oriented coping style are the most used by relapsing addicts. The neurotic and maturity defense mechanisms are significantly correlated to all three types of coping styles, while the immaturity defense mechanisms were found to be correlated with emotion-oriented coping style. Associations found between these two variables indicate a need to incorporate the elements of defense mechanisms and coping styles in relapse prevention counseling.

Jafari, Eskandari, Sohrabi, Delavar and Heshmati (2010) studied effectiveness of coping skills training based on “Marlatt Relapse Prevention Model”
in relapse prevention and resilience enhancement among people with substance dependence. The experimental group underwent 12 sessions of coping skills training and the control group did not receive any treatment. Result showed that experimental and control groups had a significant difference in relapse rates. In addition, a significant difference has been observed between two groups in resilience enhancement at periods of post-test and follow-up indicating that coping skills training is effective in resilience enhancement and relapse prevention in people with substance dependence.

**Lewis (2010)** studied gender differences in coping strategies, as well as to whether or not coping strategies are related to the onset of substance use and the results revealed that religious coping was significantly associated with onset of alcohol (for boys and girls) and marijuana (for boys).

The present study will try to identify the relationship between coping styles and substance use, which may help the mental health professionals working in de-addiction settings to identify effective and healthy coping strategies to forestall the onset of substance use, lapse and relapse.

**Social Support**

Social support has been defined as “those social interactions or relationships that provide individuals with actual assistance” *(Hobfoll, 1988)*. There are two facets of social support: **Received support** refers to naturally occurring helping behaviours that are being provided, whereas **perceived support** refers to the belief that such helping behaviours would be provided when needed. In a nutshell, received support is helping behaviour that did happen, and perceived support is helping behaviours that might happen *(Barrera, 1986; Sarason, Sarason, & Pierce (1992)*. The term ‘Social Support’ refers to the help and support people receive from family, friends and society in times of adversities and need. Social support is a mediating factor that acts as a buffer against the adverse effects of life stress. Social support protects the individual against disease and aids in recovery by providing a buffer against stress. People who have ‘Close Others’ to rely upon during stressful experiences can cope more effectively and keep away from negative psychological or health outcomes *(Johnson*
& Sarason, 1978;1979; Syme, 1979). Cobb (1976) has defined social support more specifically as information that leads individuals to believe that they are cared for and loved, are esteemed and valued, and belong to a network of communication and mutual obligation. These three areas of information include ‘Esteem support, Emotional support and Community support’.

Schaefer, Coyne and Lazarus (1981) also identified three dimensions of social support namely Emotional support, which involves intimacy and has to do with receiving reassurance; Tangible support or the provision of direct aid and services; and Informational support, which includes advice concerning solutions to one’s problems and feedback about one’s behaviour. Lazarus and Folkman (1984) defined social support as what an individual draws on in order to cope. Thoits (1986) viewed social support as a source of coping assistance e.g. advice and encouragement from a confidant may increase the likelihood that a person will rely on logical analysis, information seeking or active problem solving in times of crisis. Thoits (1986) opined that social support reduces or buffers the adverse psychological impact of exposure to stressful life events and ongoing life strains. Relationship with others especially with intimates, significantly lowers risk of disease in response to stress exposure.

Structural support refers to the existence of and interconnections between social ties. Measures of structural support usually include marital status, number of people in one’s household, and number of social contacts. These measures are often considered in combination as social integration. Functional support refers to the utility of one’s social contacts in providing specific functions, such as emotional support, tangible or instrumental aid, feelings of belonging, and informational support (Cohen, 2000; King, 1998).

Deficits in parental support and ineffective parental control practices have been frequently identified as risk factors for adolescent substance use (Hawkins et al., 1992). Wills and Cleary (1996) tested how the effect of parental, emotional and instrumental support on substance abuse in adolescents is mediated. They concluded that parental support was inversely related to substance use throughout the period from early to middle adolescence, and stress-buffering effects were observed
throughout this period. The results are consistent with previous findings on effects of social support for adolescents (Wills, 1990b), and the pattern of results is consistent with the theoretical position that enhancement of coping ability is an important mechanism through which social support contributes to adjustment (Wills, Blechman, & McNamara, 1996; Thoits, 1986).

There has been a considerable amount of research showing that support from family, friends and community networks is related to better physical health, lower level of psychological symptomatology and absence of alcoholism and drug abuse in adolescents (King, Reis, Porter, & Norsen, 1993; House, Landis, & Umberson, 1988; Cohen & Syme, 1985).

O'Dowd (1973) examined one aspect of the family relationships, i.e. emotional support to determine whether supportiveness among family members correlated with the absence of illicit drug use. The central interest was that group of young black males who despite ample opportunity and environmental exposure to such deviance remained non-deviant and drug free. It was also predicted that within the same family, a high level of congruence would exist between the level of support perceived by the adolescents and preadolescents in both the drug free and drug using families. Drug free adolescents perceived themselves and were perceived by family members to receive and were observed to receive significantly more support than did the drug-using adolescents, preadolescents in drug-free families also obtained more support than did the pre-adolescents with the drug using adolescent brothers. Mothers of the drug using adolescents perceived themselves to be giving support to their sons at a level equal to that perceived by mothers of drug-free adolescents. Supportiveness did discriminate between the two groups, showing that emotional support was related to illicit drug use immunity. The parent-child relationship was a significant factor in predetermining the behaviour of children. The family as a primary socializing agent predisposes the individual towards deviance or non-deviance which includes use of hard narcotics. Protective effects of social support among adults have been found both for structural measures such as total network size and for functional measures such as availability of emotional and instrumental support (Cohen & Wills, 1985). Beneficial and protective effects of social support on adolescents also have been extensively
demonstrated (Wills, Mariani, & Filer, 1996; Sandler, Miller, Short, & Wolchik, 1989).

Research with adult populations is replete with evidence that social support is inversely related to substance use (Wills, 1990a; Mermelstein, Cohen, Lichtenstein, Kamarck, & Baer, 1986). Most research on adolescents have been focused on the role of support from parents as a protective factor; parental support has been indexed through measures of closeness and confiding in the parent-child relationships or of adolescents’ perceived support from parents for helping them to deal with problems. Such measures of functional support from parents are related to better mental health outcomes and to lower likelihood of substance use (Barerra, Chassin, & Rogosch, 1993; Wills, Vaccaro, & McNamara, 1992; Brook, Brook, Gordon, Whiteman, & Cohen, 1990; Greenberg, Siegel, & Leitch, 1983). In addition, several studies have demonstrated stress buffering effects. The relationship between negative life events and adverse outcomes is reduced for adolescents with a higher level of emotional support from parents (Greenberg et al., 1983).

Slaght (1999) interviewed 150 male inmates after three months in the community to determine what environmental influences were having the greatest impact on drug reuse and suggested that more emphasis is needed on family relationships before and after the treatment.

Some investigators analysed effects of parental support in terms of observational learning that when parents engage in supportive interactions with children, they demonstrate task-oriented problem-solving skills, which children then learn through observation and modelling. This could occur directly in the context of supportive transactions between parents and child or indirectly as the child observes a parent interacting with others. The observation of supportive communications between family members would be conducive to learning how to listen to others, empathize with others’ distress, and engage in cooperative efforts to master problems (Dubow & Tisak, 1989). To the extent that a child has multiple opportunities to see alternative solutions being considered and problem-solving skills being demonstrated, he or she would be more likely to approach problems with the attitude that they can be
solved through direct action and less likely to cope with problems through avoidance, anger and indulgence in alcoholism or drug abuse.

Parent’s appropriate responsiveness would increase the effectiveness of socialization processes and enable the child to better develop the ability to self-regulate during times of emotional distress rather than taking refuge in drugs (Gunnar, 1994; Rothbart, Derryberry, & Posner, 1994).

Social support has beneficial effects because the availability of supportive functions from other persons helps an individual to deal better with problems (Wills & Filer, 1996; Thoits, 1986; Wills, 1985b). In the context of adolescence, emotional or instrumental support from parents, helps adolescents to cope with problems from school, home, or family domains and may help them deal with emotional states such as anxiety, depression, or anger (Wills et al., 1996; Sandler et al., 1989). When parents provide this kind of support, adolescents become better at regulating their emotions at problem solving (Blechman & Culhane, 1993; Wills, 1990b). Models of resilience effects also posit that parental support assists children to achieve good adaptation in difficult life circumstances because it contributes to the development of better competence in academic and asocial domains (Wills et al., 1996; Masten, Morison, Pellegrini, & Tellegen, 1990; Rutter, 1990). These models predict for adolescents, that parental support will be related to more adaptive coping (e.g. problem solving), less maladaptive coping (e.g., coping with problems through anger) and better competence in academic tasks. Because these variables are risk factors for adolescent substance use (Newcomb, Maddahian, & Bentler, 1986; Wills, 1986), a mechanism is predicted in which the effect of parental support on adolescent substance use is mediated through effects on coping and competence. Implicit in this model is the suggestion that good support may help to reduce the occurrence of negative life events, which also are a risk factor for adolescent substance use (Chassin, Mann, & Sher, 1988; Newcomb & Harlow, 1986; Wiills, 1986).

Wills and Cleary (1996) suggest two perspectives on the relation of parental support to adolescent behaviour. One perspective emphasizes the role of instrumental and social competence in the development of problem behaviour. To the extent that young persons are rejected or devalued by others in significant social relationships, they are likely to become distressed and angry and hence would have less reason to accept conventional values and more reason to see deviant values as acceptable. Such
a process is implicit in Jessor and Jessor’s (1977) theory of problem behaviour, and
evidence of similar processes has been demonstrated in several contexts (Cole, 1991;
Asher & Coie, 1990; Dodge, Coie, Pettit, & Price, 1990). Similarly, difficulty with
academic performance may be conducive to viewing a major social institution
(school) and a major social value (academic achievement) as boring or irrelevant and
hence may encourage affiliation with individuals who reject these values. This
process has been suggested by a body of findings linking lower academic competence
to propensity for problem behaviours including substance use and delinquency
(Newcomb & Harlow, 1986). From this perspective, the role of parental support for
helping to build academic and social competence would theoretically be a part of its
operation as a protective factor.

A second perspective, not mutually exclusive is more cognitive. This
perspective suggests that adolescents who feel they are not supported by, and cannot
trust, their parents would also derive a negative perception of other social
relationships, they would have systematically different schemes of what people are
like (Sarason, Pierce, Shearin, Sarason, Waltz, & Poppe, 1991). To the extent that
a young person perceived others as untrustworthy and potentially hostile, he or she
would be less likely to form intimate a social relationships and more likely to provoke
others or respond aggressively to others even in objectively neutral situations. A
negative scheme of social relationships predisposes an adolescent, to multiple drug
usage (Sarason, Pierce, & Sarason, 1990; Dodge, Pettit, Me Claskey, & Brown,
1986).

The role of perceived social support in the prevention and treatment of drug
abuse and relapse is shown in various studies. In this regard, the studies by Spoth and
Redmond (1994) and Blume, Green, Joanning and Quinn (1994) suggest that the
existence of supportive structures and networks, as well as supportive interventions
such as spiritual and familial support have major role in promotion of treatment goals
in drug abusers and prevention of relapse. Available social support affects the line of
addiction and recurrence in addict people (Ellis, Bernichon, Yu, Roberts, & Herrell,
2004). Perceived social support acts as a shield against the recurrence and relapse by
increasing the psychological health (Dodge & Potocky, 2000). Richardson (1999)
found that the presence of family members in the social network of addicts in order to
prolong drug abstinence is effective one year after the detoxification.Davis & Jason
(2005) also concluded that there was a positive relationship between drug abstinence duration and receiving social support. Clients' perceptions regarding social support, improves their psychosocial functioning during the treatment process (Chong & Lopez, 2005). Other studies also showed that during the early stages of treatment, the support of other people has important role in addiction treatment (Laudet, Cleland, Magura, Vogel, & Knight, 2004; Warren, Stein, & Grella (2007).

According to Piko (2000) who investigated psychological, social strength and perceived parental support may cause drug addiction in adolescence. It is also noted through this study that low perceived social support by father may cause greater risk of all types of addiction as compared to mother and friends perceived support. There is a major role of family in the life of a drug addicts. There are different ways of addiction through which the family is involved. The addict’s dependency, and response to addiction is closely dependent on the family influence. The treatment of the individual also depends on the family support (Nirmala, 2005). There is a positive effect of social support on self-esteem (Esenay, 2002; Kahriman, 2002; Unuvar, 2003). Social support is the most powerful force through which a person can cope with the stress in an easy and successful manner (Dir, 2011). Some other characteristics such as hyperactivity, low persistence, and slow recovery from stress, emotional labilitiy and disinhibited behaviour are associated with substance use (Wills, Duhamel, & Vaccaro, 1995; Hawkins et al., 1992; Basu, Verma, Malhotra, & Malhotra, 1995) assessed two psychological parameters, sensation seeking and alienation among opioid dependents and found that opiate dependent subjects were high on sensation seeking and alienation. Drug abuse behaviour has been observed as an interactional phenomenon, wherein the drug, the personality of drug addict and the environment interact with each other.

Malhotra, Malhotra and Basu (1999) compared the perspective of relapsed alcohol dependent patients and their family members regarding relapse precipitants. 30 consecutive male patients attending the centre with relapse of alcohol dependence following previous inpatient treatment and their respective family members were taken. The majority of the family members [80%] were spouses of the patients, while in 20% of cases the family members were parents. Mean duration of dependence in the patient was 10.1 years. The majority of the patients were first time relapsers [63.3%] with a history of having received inpatient treatment once in the past. The
mean duration of admission was 34.5 days. Both the patients and their families listed items related to ‘reduced cognitive vigilance’ as the most common relapse precipitants. Reasons pertaining to external situations and euphoric states as well as unpleasant mood states were also frequently reported by them. The least frequently reported reason by the patient was the negative mood state of feeling afraid. There was a high degree of concordance between the patients and their family members regarding beliefs about precipitants of alcoholic relapse. It emerged that family support can help the addicts from relapsing.

Some investigators have proposed that an important aspect of the social support is its influence on the coping strategies that individuals engage in under stress. Social support protects people from damaging effects of stress through its effects mediating appraisal and coping processes (Lazarus & Delongis, 1983; Lazarus & Folkman, 1984). Holahan and Moos (1987) in a series of longitudinal studies found that individuals with more personal and social resources were more likely to rely on approach coping and less likely to use avoidance coping. According to Gorski (1990) social support can help in reduction of the interpersonal conflict and stress and can encourage the individual to overcome a specific temptation to lapse. The role of the friends and family members is crucial. They help in the process of relapse, prevention by modeling desired behavior and creating a supportive interpersonal environment. They also help by monitoring the patients' behaviour and by helping him to identify attitudes, behaviours or situations that might signal impending relapse. In this regard, family education, family orientation therapy and family support groups help in strengthening the family support for the patients' recovery. They help the family members by teaching them to be aware of the problems faced by the recovering patients to modify their behavior and interpersonal interactional patterns and to cope effectively with the patients recovery process, including the ways to respond to lapse if that might occur. (Gorski, 1990; Annis, 1990; Carroll, 1991).

Booth, Russell, Soucek and Laughlin (1992) opined that social support is becoming recognized as a positive influence on health and health maintenance. Forms of support, which bolster the patient’s sense of personal efficacy, should enhance the alcoholic's ability to cope with a specific stressor (i.e., overcoming his or her addiction). Patients reporting higher levels of social support during alcoholism treatment, especially support that enhances his or her self-esteem, should therefore demonstrate improved outcome compared to patients with lower levels. Sixty-one
consecutive admissions to an inpatient alcoholism treatment program at a rural midwestern medical center completed an assessment of six forms of social support (Guidance, Reliable Alliance, Reassurance of Worth, and Opportunity for Nurturance, Attachment, and Social Integration) in terms of support obtained from family and friends and from the treatment environment. For each patient, additional information concerning age, marital status, financial support, and previous alcohol-related hospitalizations was also obtained. Outcome of treatment was measured by readmission for an alcohol-related diagnosis within 1 year of discharge. Survival analysis found that reassurance of worth from family and friends and number of previous hospitalizations were independent and significant predictors of time to readmission. Higher levels of reassurance of worth or esteem support significantly lengthened time to readmission, with the reverse relationship found for number of previous hospitalizations. These results suggest that specific sources (family and friends) and forms (reassurance of worth) of social support are important to the recovering alcoholic and that the effect of social support on treatment outcome is independent of the alcoholic's history of prior treatment failure. Interventions or program modifications should be designed specifically to bolster these facets of social support rather than addressing more general forms of support.

Kulhara et al. (1998) found negative correlation between social support score and a number of undesirable life events (on PSLES scale) in 30 married and 30 unmarried schizophrenics. Malhotra et al. (2000) compared perceived social support among 25 alcohol dependent and 25 heroin dependent patients. No significant differences were noted in both the groups. Authors noted that overall mean scores were on the lower side.

Peirce, Frone, Russell and Cooper (2000) examined perceived social support, depression, and substance abuse. An integrative model was developed from affect regulation theory and theories of social support. Dysfunctional drinking results revealed that low perceived social support was positively related to alcohol use. It is now generally accepted that deficient social support (SS) increases the risk of developing depressive symptoms (Henderson, 1998). Stressful life events (SLEs) have been found to have a substantial causal relationship with the onset of episodes of major depression (Kendler et al., 1999). Two major hypotheses have been investigated in the literature as to how social support works (Cohen & Wills, 1985).
Dobkin, Civita, Paraherakis and Gill (2002) studied the role of functional social support in treatment retention and outcome among outpatient adult substance abusers. The goals of this study were: to compare patients with high and low functional social support at intake and six month later on various risk factors; to test the stress buffering role of functional social support on treatment outcomes and to determine whether levels of functional social support at intake predicted treatment retention. Consecutive admissions to an outpatient treatment program were assessed at intake (n=206) and at 6 months follow up (n=172) using the Addiction Severity Index. Patients completed questionnaires pertaining to social support, stress and psychological functioning both at intake and at 6 months. It was reported that both high and low social support group experienced marked decline in negative affect and in the severity of substance abuse over time. There were some group difference e.g. symptoms of depression and psychological distress were higher among patients with low social support at intake and at 6 months. Patients with low social support at intake reported higher severity of alcohol and drug abuse at six months. Hierarchical regression analysis showed that functional social support was a modest predictor of reductions in the severity of alcohol abuse follow up, after controlling for the number of days in treatment. Higher level of social support explained a modest (6%) proportion of the variances in alcohol, related outcomes. Survival analysis demonstrated that the rate of the dropping of treatment was significantly higher for patients with low social support. Dobkin et al. (2002) concluded that higher functional social support at intake is a positive predictor of retention in treatment, and a modest predictor of reductions in alcohol intake. Overall, social support accounted for a small percentage of the variance in drug/alcohol related outcomes.

McKay, Lynch, Shepard, Morgenstern, Forman and Pettinati (2005) determined whether substance use severity, psychiatric severity, social support, self-help attendance or motivation moderated substance use outcomes in a telephone-based continuing care intervention. A randomized study compared three 12-week continuing care interventions: weekly telephone monitoring and counseling combined with a support group in the first 4 weeks, twice-weekly individualized relapse prevention and twice-weekly standard group counseling. Following completion of 4-week intensive out-patient programs, 359 patients with alcohol and/or cocaine dependence were assigned randomly to a continuing care condition and followed quarterly for 12 months. Ten potential moderator variables were examined in separate
analyses. Two of these variables reflected pretreatment status, whereas the other variables were focused on performance while in the intensive out-patient programs. A composite risk measure was also constructed from dichotomized versions of seven of these variables, with higher scores indicating greater potential for relapse. The dependent measures were total abstinence and percentage of days abstinent from alcohol and cocaine in each quarter. Of 40 interaction contrasts that were examined with individual risk indicator measures, only one reached the 0.05 level of significance. Patients with any alcohol use in intensive out-patient programs had a higher percentage of days in abstinence in standard group counseling than in weekly telephone monitoring and counseling. In addition, high scores on the composite risk indicator predicted higher total abstinence rates in standard group counseling than in weekly telephone monitoring and counseling, whereas low to moderate scores predicted higher abstinence rates in weekly telephone monitoring and counseling than in standard group counseling. It was concluded that for most graduates of intensive out-patient programs, the combination of brief weekly telephone therapeutic contacts and a support group in the first month produced outcomes that are as good as those obtained in more intensive face-to-face continuing care interventions. However, patients with current dependence on both alcohol and cocaine who make little progress towards achieving the central goals of intensive out-patient programs may have better outcomes if they receive twice-weekly group counseling following intensive out-patient programs. These findings highlight the significance of support available from professional to help patient’s present relation.

The lack of proper communication with the family members (single individuals) and lack of understanding and maltreatment of husband, wife, and children (married individuals) was found as an important factor in addiction relapse (Din Mohammadi, Amini, YazdanKhah, 2007) but the change of family expressed emotion and its impact on addiction received little attention.

Panchanadeswaran, El-Bassel, Gilbert, Wu and Chang, (2008) in a study entitled “An examination of the perceived social support levels of women in methadone maintenance treatment programs who experience various forms of intimate partner violence “by making use of face-to-face, structured interviews on 416 women addicted to methadone found that lower levels of perceived social support were significantly associated with physical aggression which is a potential factor of drug abuse (Atkins & Hawdon, 2007). Humphreys (2012) in a study stated that
social support is so crucial that several approaches to addiction treatments focus on the reorganization of social support. Wills and Vaughan (1989) extracted from two cohorts of urban adolescents, and stated that peer support was positively related to substance use. Dobkin, Civita, Paraherakis and Gill (2002) suggested that both high and low social support groups experienced marked declines in negative effect and in severity of substance abuse overtime. Higher functional social support at intake is a positive predictor of retention in treatment and a modest predictor of reductions in alcohol intake.

Saleem, Tahir and Ul Huda (2013) they studied perceived social support and clinical anger among drug addicts of Southern Punjab, Pakistan. Results indicated an inverse relation between perceived social support and clinical anger.

Atadokht, Hajloo, Karimi and Narimani (2015) studied the role of family expressed emotion and perceived social support in prediction of addiction relapse. Results showed a positive relationship between family expressed emotions and the frequency of relapse and a significant negative relationship between perceived social support and the frequency of relapse.

Social Support can buffer the effect of stress on psychological and physiological resilience among adults that can prevent relapse.

The ongoing review of literature directs the need to carry out a comprehensive research with special focus on dimensions of personality, stress, coping and social support to establish their facilitative or obstructive interplay in determining relapse and abstinence.