# On the Predictive Role of Personality Traits, Cognitive Strategies of Emotion Regulation, Attachment Styles, and Brain-Behavioral Systems in Active & Non-Active Addiction and Impulsiveness Potential

## Abstract

**Objective**: This study aimed at determining personality traits, cognitive strategies of emotion regulation, attachment styles, and brain-behavioral systems as predictors of impulsiveness, active and non-active addiction potential among university students. **Method:** All the male students of Azad University of Ahwaz in the academic year 2013-2014 constituted the statistical population of this study. The number of 360 students was selected from this population as the sample of the study via simple random sampling method. The participants filled out Addiction Potential Scale, Barratt Impulsiveness Scale, NEO-Five Factor Inventory, Hazan & Shaver's Attachment Scale, Behavioural Inhibition System and Behavioural Activation System (BIS/BAS) scale, and Cognitive Emotion Regulation Questionnaire. Pearson and Canonical correlation coefficients were used for data analysis. **Results:** The results of canonical correlation analysis indicated that the strongest relationship with the first Canonical dimension existed between impulsiveness from the first set of variables (dependent) and Behavioral Activation System from the second set of variables (independent). **Conclusion:** People with a higher Behavioral Activation System have also a higher level of impulsivity. This is of vital importance in the treatment and prevention cases.

**Keywords**: personality traits, cognitive strategies of emotion regulation, attachment styles, brain-behavioral systems, active and non-active addiction potential

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## Introduction

Nowadays, the social problem of drug addiction in society is growing increasingly. Drug use is the second most common disease, the peak age of its onset is 18-34 years of age and affects men more than women. A decrease in productivity due to drug use has been estimated in Canada between 3.2 and 7.1 billion dollars (Zargar, Najarian & Naami, 2008). The current statistics show that about 16 percent of Iranian addicts are under 19 years of age and 28% are between 20 and 24 years of addiction (Barghi, 2002). Hossein's (2004) study showed that the prevalence of drug use among students is 22.4 percent. On the other hand, the growing trend of mental and physical diseases threatens humans' individual and social life. However, the bulk of these diseases and problems are predictable and preventable. For example, drug use is the second most common psychiatric illness (Barghi, 2002) and also many financial losses and casualties are due to the impulsiveness of behavior (Muryati, 2005, translated by Ganji, 2010). Many studies have been done in the pathology of addiction and impulsiveness, and each set of risk factors have been examined. Addiction potential, that is to say a strong desire for a person to use drug that causes him/her to prefer drug use to another behavior (Zargar et al., 2008). Also, impulsiveness means fast action without foresight and conscious judgment of mind (Bayrami, Bakhshipoor, Eftekhari & Khakpoor, 2011).

According to information provided in the fourth guide DSM and the findings obtained from overview of several studies suggest that impulsiveness and addiction are recognized as criterion variables and outcomes of lifestyle, parenting, inappropriate behaviors, cognition and emotion and all social and personality-related destructive factors, especially in the younger age group. Because studies have shown that addiction is a serious factor of adverse performance, efficiency and productivity in individual and social life increase the risk of cardiovascular diseases, early cancers, accidents and suicides .On the other hand, it is possible that aggressive behavior and impulsive violence is associated with drug use and may occur in the form of skirmish or criminal acts or may cause the drug user to be injured by others (Barghi, 2002). Some resources have categorized risk factors of addiction and impulsivity in a different way, but by nature more or less of the same category, however it seems that personality traits, cognitive emotion regulation strategies, parental attachment and systems of brain-behavior are more predictable than anything else supposed to.

Nowadays, the Big Five theory of personality has given a clearer approach to the relationship between personality, addiction potential and impulsiveness. In general, personality refers to the particular patterns of thought, feeling and behavior that distinguish an individual from other people (Wagner, 2012). Theory of five factors distinguished basic dimensions of personality. Extraversion includes features such as irritability, sociability (the desire to

establish interpersonal relationships), confidence and emotional expression in large quantities. Agreeableness (acceptance) includes features such as trust, altruism, respect the wishes and needs of others, kindness, love, and other appropriate prosocial behaviors. Dutifulness (conscientiousness) contains a high level of thinking, along with appropriate control reactions and purposeful behavior. Excited people are emotionally unstable, anxious, erratic, shy, and depressed. Openness includes features such as imagination, and those who are strong in this case usually have diverse interests (Wagner, 2012)

Many researchers and most ordinary people believe that the structure of personality for impulsiveness is more favorable than others. On the one hand, people think that agreeableness is certainly the basic and necessary condition for developing the risk of impulsiveness and addiction, and thus they greatly simplify the problem themselves. The only advantage of this personality type is that the issue of intellect is given a clear appearance. On the other hand, various factors of personality are associated with drug use and impulsiveness and some of the characteristics predict the likelihood of addiction (including rejection of relative and current values, resistance, power resources, strong demand for independence, antisocial traits, extreme aggression, feelings of lack of control over life, low self-esteem, lack of social skills and discipline). In this regard, Dubey, Arora, Gupta & Kumar (2010) compared drug users' personality traits with non-addicts' personality traits by using a 5-point Likert scale. The study revealed that consumer group's score was higher on neuroticism and extraversion, while the non-addicts received higher score on openness to experience and conscientiousness. Also, Zargar & Ghafari (2009) stated that neuroticism has a positive relationship with addiction potential and conscientiousness and agreeableness have a negative relationship with addiction potential.

Emotion regulation is a process through which people consciously decide what emotion to have and when they experience and express it (Gross, 2007). In this way, people who blame themselves and consider each small event as a catastrophe are situated at one end of the spectrum, and in contrast, those who have high acceptance are positivist and do not blame others and are situated at the other side of the spectrum (Gross, 2007).Researchers also believe that in the early years of university, emotional issues are of great importance and perhaps the start for using drugs can be connected to the first years of university (Arria et al., 2008). Hence, one of the factors that can be associated with addiction and impulsivity on campus is cognitive emotion regulation strategies.

Also, Schreiber, Grant, & Odlaug (2013) showed that emotion regulation is more conducive to reducing impulsivity. Attachment includes the deep emotional bonding with specific people in life. People who have secure attachment in comparison to those who have avoidant or ambivalent attachment are better able to attract and adapt to the conditions in terms of stress and social

support (Pakdaman, 2001). Attachment forms the basis of our adulthood personality.

Child-parent attachment patterns could pave the way for dealing with problems in future life such as learning, emotional, occupational problems, etc., and also determine attitudes towards the problems and the readiness of people to solve problems along with the individuals actions and reactions against social problems and failures. For example, Baher, Susan, Anastasizos and Bingdao (2002, quoted Pakdaman, 2001) concluded that attachment to parents has a significant relationship with drug use.

Finally, the brain-behavioral systems are the ones in the brain that control emotional behaviors (Pascalis, Arwari, Matteucci, & Mazzocco, 2005). In general, there are two brain-behavioral systems that include Behavioral Activating System (BAS) and Behavioral Inhibition System (BIS). These two emotional systems form the character by setting an individual's susceptibility to threats and received rewards. Brain -behavioral systems include three important systems. First, Behavioral Activating System, which is sensitive to the conditioning signs of reward and punishment deletion. The system has two components: the technology (active search for reward) and active avoidance (providing certain behavior to avoid punishment). Second, it is the BIS which is sensitive to conditioning signs of reward and punishment deletion and has two components: the passive avoidance (avoiding punishment through inactivity or surrender) and extinction (stopping behaviors that have no rewards). Finally, the fight- escape system that is sensitive to the unconditioned aversive stimuli. The system has two components: war (defensive aggression rather than offensive aggression) and escape (Fast escape from the source of the threat). Individual differences in character reflects differences in individual sensitivity in behavioral activation and behavioral inhibition systems (Frankenthaler and Morris, 2006). According to the Gray's theory of Sensitivity to Reinforcement, both emotional systems form the character by setting an individual's sensitivity to threats and received rewards (Atashkar, Fathi Ashtiani and Azadfallah, 2007). People with strong behavioral activating system try to seek rewards but they are more likely to engage in risky behaviors and experience more positive emotion and finally show higher levels of impulsive behaviors (Mussap, 2006).

In this way, risk-taking and thrill-seeking people with strong behavioral inhibition system, predispose to impulsive behavior and attempt to use the drug.

According to what mentioned earlier, it is essential to address the contributing and predictive factors and discuss theories and approaches related to the preparation of addiction for the purpose of detecting various reasons of drug use. Therefore, these underlying reasons determine whether the type of consumption pattern in drug use is an indication of the tendency to the drug or not. All these raised approaches and theories indicate the underlying causes of addiction, the implications and the ways to predict, prevent and control the problem of drug use among young people. Thus, the implementation of research that examines

the content of these theories and the role of predictive factors for addiction potential in Iranian society is necessary from two directions: 1) Increased insight about and awareness of this problem among youth, 2) Effective and applicable strategies should be offered to predict and prevent youth drug problems. In terms of predicting addiction and impulsiveness, attention to the predictors is important because, on the one hand, it is relatively stable in the course of time, on other hand, it can be observed and controlled from the early years of life (Hussein, 2004). Therefore, personality traits, cognitive strategies of emotion regulation, attachment styles and the brain-behavioral systems have important predictive conditions for addiction and impulsiveness.

Besides the importance of the issue of addiction and impulsivity for the whole society, the results of this study can be used by institutions and organizations that are directly involved in the problem of addiction and impulsiveness (such as the Organizations of Education, universities, police, addiction treatment centers, welfare, etc.). Therefore, public awareness about the scope of drug use and readiness to control it can be increased and appropriate skills to deal with problems of drug abuse can be fostered. Also, study about the problems of drug and alcohol for those health centers with prevention activities can promote and facilitate information services to mental health centers, social workers and police. Thus, one can adopt appropriate approaches with the purpose of impact on society and reducing the demand for drug use. However, the basic problem in the mind is the dispersion of psychological predictive factors of addiction and impulsiveness in Iranian society, especially the student community and what explanations and solutions are available? According to the social interest in studying the problem of addiction and impulsiveness in students, the focus of the present study is on the predictive factors which are effective in these two common phenomenon which so far have not been of great interest in the area of research within and outside the country, especially in the context of clinical psychology. The aim of this study is to answer the question of whether the five personality traits, positive and negative cognitive strategies of emotion regulation, attachment styles and systems of brain-behavioral are predictors of active and passive readiness to addiction and impulsiveness in students.

## Method

### Population, sample, and sapling method

This study was a descriptive correlational research in terms of data collection. The population of this study included the male students at Ahvaz Islamic Azad University in the academic year 2013-14 (N=8130). Morgan table was used to determine the sample size (1979). Hence, a 400-participant sample was randomly selected from the population and 360 participants who were willing to participate in research. For sample selection, a list of all male students of this university was prepared and, then, the researchers randomly selected 400

students using random numbers table. Finally, the data pertaining to 360 participants were analyzed.

### Instruments

1. Addiction Potential Scale: The Iranian Addiction Potential Scale was constructed by Zargar (2006) as per the psycho-social conditions of Iranian society. This scale consists of two factors and includes 36 questions and 5 lie detector questions. Each question is scored based on a Likert scale from zero (strongly disagree) to 3 (strongly agree). In the first factor, most questions are related to anti-social behavior, craving, positive attitude to drugs, depression, and sensation seeking (active preparation). In the second factor, most questions pertain to unassertiveness and depression (inactive potential). The reliability of this scale was calculated via Cronbach's alpha which was desirable (.90). Similarly, Cronbach's alpha coefficients for the first factor (active) and the second factor (inactive) were reported to be .91 and .75, respectively. In addition, two methods were used to calculate validity. In criterion validity, drug addicts and non-addicts' Addiction Scale were distinguished from each other. The construct validity of the scale was obtained by correlating it with the 25-item list of clinical symptoms where the correlation coefficient of .45 was obtained at the significance level of .001 (Zargar, 2006; Zargar et al., 2008). In this study, the reliability of this scale was obtained equal to .87 and .85 for the first factor (active preparation) and the second factor (inactive preparation) using Cronbach's alpha.

2. Barratt Impulsiveness Scale: This scale contains 30 items that evaluate three factors, namely cognitive impulsivity, motor impulsivity, and non-planning. The questions have been developed in multiple choice format and the highest score that is obtained from the sum of the three factors equals 120. Mokri, Edalati, Esmaili Javid & Atef Vahid (2008) calculated the reliability and validity of the Persian version of Barratt scale in determining risk-seeking behavior and impulsivity. Cronbach's alpha coefficient of .83 was reported for this scale. In the same way, the sub-scales showed a significant correlation with each other (r=.40). In this study, the reliability of this scale was obtained equal to .79 using Cronbach's alpha.

3. NEO-Five Factor Inventory: This questionnaire was developed by Costa and McCrae in 1985 and was extended in 1989, and was standardized and validated in Iran (Haghsehnas, 2009; cited in Anisi, Joshanloo & Gohari Kamel, 2011). There are five factors of nervousness or neuroticism, extraversion, openness, agreeableness, and conscientiousness in this scale. The short form of this questionnaire consists of 60 questions that have been arranged on a 5-point Likert scale (1 to 5) ranging from strongly disagree to strongly agree. Anisi et al. (2011) examined the reliability and validity of the short form of this scale. The results of their study showed that Cronbach's alpha coefficients were .83,

.80, .60, .58, and .39 for the subscales of conscientiousness, neuroticism, agreeableness, extraversion, and openness, respectively. In addition, they evaluated the convergent validity of the subscales by correlating them with the three subscales of neuroticism, extraversion, and psychoticism in Eysenck Personality Questionnaire. In this regard, the correlation coefficients between .47 and .68 were obtained that were statistically significant at the level of .05. In this study, the reliability coefficients of neuroticism, extraversion, openness, agreeableness, and conscientiousness were obtained equal to .79, .89, .84, .84, and .88 by using Cronbach's alpha, respectively.

4. Hazan & Shaver's Attachment Scale: This questionnaire has been constructed by Hazan & Shaver (1987) and was validated on nurses in public hospitals of Isfahan in Iran by Rahimian Bougar, Noori, Arizi, Molavi & Forooghi Mobarakeh (2004). It contains 15 questions that measure secure attachment, avoidant, and ambivalent styles. The items are scored based on a Likert scale ranging from never (zero) to almost always (four). The factor analysis of the questionnaire conducted by Collins & Reid (1990) led to the extraction of three factors, namely secure attachment, avoidant, and ambivalent styles that are interpreted by researchers as the capacity to join in intimate relationships. Hazan & Shaver reported the test-retest reliability and Cronbach's alpha coefficients of the questionnaire to be equal to .81 and .78, respectively. In addition, Collins & Reid also calculated the reliability of this scale through Cronbach's alpha and reported its coefficient to be .78. In this study, the reliability coefficients of the three styles of secure attachment, avoidant, and ambivalent ones were obtained equal to .76, .83, and .77, respectively.

5. Behavioural Inhibition System and Behavioural Activation System (BIS/BAS) scale: This questionnaire measures the activity degree of brain/ behavioral systems and their components. This is a self-report four-choice questionnaire that has been designed by Carver & White in 1994 and consists of 24 questions. Carver & White (1994) reported Cronbach's alpha coefficients of the components of approach, active avoidance, passive avoidance, extinction, fight/flight system to be respectively .71, .61, .58, .61, .65, and .65 for men; and .68, .35, .59, .63, .71, .71 for men (cited in Atashkar et al., 2007). In the present study, the Cronbach's alpha reliability of the questionnaire was obtained equal to .77.

6. Cognitive Emotion Regulation Questionnaire: This is a self-report questionnaire that was designed by Garnefski, Teerds, Kraaij, Legerstee & Van den Kommar (2006). The original version of this scale consists of nine subscales and 36 questions. Negative strategies include self-blame, blaming others, rumination, and catastrophizing, whereas positive strategies include acceptance, refocus on planning, positive refocusing, positive reappraisal, and putting in perspective. The items of this questionnaire are scored based on a 5-point Likert scale (always, often, often, sometimes, never). The designers of this scale have reported the Cronbach's alpha reliability of .91 for positive strategies and .87 for

negative strategies. Ghasemzadeh Nasaji, Peivastehgar, Hoseinian, Mootabi & Bani Hashem (2010) reported high coefficients in line with the above findings. In the present study, the short 26-item form was used and Cronbach's alpha coefficients of .77 and .84 were obtained for positive strategies and negative strategies, respectively.

### Results

The mean and standard deviation of the sample's age were 34.43 and 4.78 years, respectively. In terms of marital status, 64.4% and 35.6% were single and married, respectively. The descriptive statistics of the variables are presented in the table below.

**Table 1. Descriptive statistics of the studied variables in the sample**

| Variable | Mean | SD | Minimum | Maximum |
|---|---|---|---|---|
| Neuroticism | 18.77 | 5.66 | 9 | 35 |
| Extraversion | 29.97 | 2.92 | 25 | 38 |
| Openness to experience | 28.67 | 3.73 | 23 | 40 |
| Agreeableness | 32.99 | 3.98 | 26 | 42 |
| Conscientiousness | 34.03 | 5.37 | 23 | 44 |
| Positive cognitive strategies | 44.06 | 10.49 | 23 | 44 |
| Negative cognitive strategies | 53.84 | 13.73 | 23 | 70 |
| Secure attachment style | 2.34 | .73 | 1.4 | 3 |
| Avoidant attachment style | 1.18 | .51 | .2 | 2.2 |
| Ambivalent attachment style | 1.4 | .54 | .6 | 2.4 |
| Behavioral Activation System | 40.31 | 6.24 | 31 | 48 |
| Behavioral Inhibition System | 19.20 | 3.31 | 15 | 26 |
| Active addiction potential | 27.14 | 17.56 | 10 | 62 |
| Passive addiction potential | 5.95 | 3.8 | 2 | 14 |
| Impulsivity | 62.48 | 8.66 | 49 | 74 |

The correlation matrix of active and passive addiction potential and impulsivity with predictor variables is presented in the table below.

**Table2: Correlation matrix of active and passive addiction potential and impulsivity with predictor variables**

| Predictor       variables | Active addiction potential | | Passive addiction potential | | Impulsivity | |
|---|---|---|---|---|---|---|
| | R | Sig. | r | Sig. | r | Sig. |
| Neuroticism | .27 | .001 | .04 | .44 | .18 | .001 |
| Extraversion | .11 | .03 | .34 | .001 | .16 | .02 |
| Openness to experience | -.25 | .001 | -.50 | .001 | .81 | .001 |
| Agreeableness | -.15 | .03 | -.20 | .001 | .41 | .001 |
| Conscientiousness | -.03 | .57 | -.22 | .001 | .40 | .001 |
| Positive cognitive strategies | -.55 | .001 | -.13 | .01 | -.54 | .001 |

| Predictor        variables | Active addiction potential | | Passive addiction potential | | Impulsivity | |
|---|---|---|---|---|---|---|
| | R | Sig. | r | Sig. | r | Sig. |
| Negative cognitive strategies | .50 | .001 | .12 | .01 | .49 | .001 |
| Secure attachment style | -.70 | .001 | -.42 | .001 | -.22 | .001 |
| Avoidant attachment style | .15 | .004 | .38 | .001 | .49 | .001 |
| Ambivalent attachment style | .19 | .001 | .34 | .001 | .61 | .001 |
| Behavioral Activation System | -.18 | .001 | -.62 | .001 | -.38 | .001 |
| Behavioral Inhibition System | .48 | .001 | .13 | .01 | .48 | .001 |

As it is observed in the above table, all the correlation coefficients between the variables are significant, but the correlation between conscientiousness and active addiction potential and the relationship between neuroticism and passive addiction potential are insignificant. In this study, Canonical correlation analysis was used to evaluate the multivariate correlations between predictor variables and the criterion variable. First, significant test results were used for the total model where four multivariate indexes are presented in the table below.

**Table 3: Results of multivariate tests for the full model of Canonical analysis (conventional)**

| Test | Value | F | Df | Df of errors | Sig. |
|---|---|---|---|---|---|
| Pillai's trace | 2.90 | 874.76 | 36 | 1041 | .001 |
| Hotelling's trace | 599.56 | 5723.59 | 36 | 1031 | .001 |
| Wilks' Lambda | .001 | 2169.08 | 36 | 1020.07 | .001 |
| The largest root | .99 | - | - | - | - |

As it can be observed from the above table, the results represent the significance of multivariate results. Canonical correlation coefficients and multivariate tests are presented for each dimension in the table below.

**Table 4: Eigenvalues and Canonical correlation**

| Number of functions or roots | Squared correlation | Canonical Correlation | Cumulative percentage | Percentage | Eigenvalues |
|---|---|---|---|---|---|
| 1 | .99 | .99 | 89.10 | 89.10 | 534.24 |
| 2 | .98 | .99 | 97.96 | 8.85 | 53.09 |
| 3 | .92 | .96 | 100 | 2.03 | 12.22 |

The first canonical correlation is conventionally more important than the other correlations. According to the findings of this study, the canonical "covariate" or independent variable accounts for about 89% of the canonical dependent variable or the criterion variable for the first canonical correlation. In general,

canonical dimensions equal to the number of variables in the smaller set (3 variables) are investigated. It should be added that the number of statistically significant dimensions can be even smaller than the number of variables in the smaller set. Canonical dimensions, also called canonical variables, are the latent variables that are comparable with the factors obtained in factor analysis.

**Table 5: Results of dimension reduction**

| Root | Wilk's Lambda | Df | Df of errors | F | Sig. |
|---|---|---|---|---|---|
| **1 out of 3** | .001 | 36 | 120.07 | 2169.08 | .001 |
| **2 out of 3** | .0014 | 22 | 692 | 809.75 | .001 |
| **3 out of 3** | .075 | 10 | 247 | 424.11 | .001 |

F test results show that all three canonical correlation are statistically significant. For the first canonical correlation, the F statistic equals 2169.08; it is equal to 809.75 for the second canonical correlation; and it is equal to 424.11 for the third canonical correlation. In the present model, three canonical dimensions were considered and they were then calculated where all the three ones were significant. However, since canonical correlation is stronger for the first dimension, the first dimension is selected as the strongest canonical correlation. Initial canonical coefficients and standards for predictor variables are presented in the table below.

**Table 6: Initial canonical coefficients for the predictor variables**

| Predictor variables | Initial canonical coefficients Dimension 1 | Standard canonical coefficients Dimension 1 |
|---|---|---|
| **Neuroticism** | .06 | -.35 |
| **Extraversion** | .15 | -.46 |
| **Openness to experience** | .10 | -.39 |
| **Agreeableness** | .09 | .26 |
| **Conscientiousness** | .03 | .19 |
| **Positive cognitive strategies** | .01 | .16 |
| **Negative cognitive strategies** | .01 | -.11 |
| **Secure attachment style** | .01 | .01 |
| **Avoidant attachment style** | .13 | .35 |
| **Ambivalent attachment style** | .04 | .12 |
| **Behavioral Activation System** | .13 | -.82 |
| **Behavioral Inhibition System** | .19 | .63 |

A standard canonical coefficients are used to evaluate the relative importance of the role of each variable unit in each of the dimensions and their interpretation is the same as the interpretation of coefficients in regression analysis. Therefore, in accordance with Table 6, the variables that assume more importance in the first dimension have been highlighted. For the selection of effective variables in each dimension, the important rule is that the lowest standardized canonical coefficients should be .30 (Garson, 2008). In the first dimension, Behavioral

Activation System (with the standard canonical coefficient of -.82) was dominant. It was followed by behavioral inhibition system (with the standard canonical coefficient of .63) and extraversion (with the standard canonical coefficient of -.46). Other dimensions have lower correlation coefficients. Initial canonical coefficients have been presented in the table below criterion variables in the first dimension.

**Table 7: Initial Canonical coefficients for the dependent variables**

| Variable | Initial canonical coefficients Dimension 1 | Standard canonical coefficients Dimension 1 |
|---|---|---|
| Active addiction potential | -.03 | -.52 |
| Passive addiction potential | .13 | .50 |
| Impulsivity | .10 | .91 |

As it can be seen from the above table, the variable with higher importance in the first dimension has been highlighted. In the first dimension, impulsivity (with the standard canonical coefficient of .91) has had a greater impact on explaining the first dimension. As it has been shown in Table 6, in the first series, behavioral activation system is strongly associated with the first canonical variable (-.82). Hence, it seems that the first canonical variable represents higher behavioral activation system. According to Table 7, in the second series, impulsivity has the highest correlation with the first canonical variable (.91). It can be concluded that the two series of variables have a significant relationship (canonical correlation) with each other.

**Discussion and Conclusion**

This study aimed to examine the relationship of personality traits, cognitive emotion regulation strategies, attachment styles, and brain-behavioral systems with active and passive addiction potential and impulsivity. The results of the research on the relationship between personality traits and the outcome variables are consistent with the results of research conducted by other researchers, such as Dubey, Arora, Gupta & Kumar (2010), Hong & Paunonen (2009), Zargar & Ghafari (2009), Schreiber, Grant & Odlaug_ (2013). Personality traits are considered among the important etiological factors in high-risk behaviors, such as smoking, alcohol drinking, drug use, and unsafe sexual activities. As it was observed, the correlation coefficient between neuroticism and passive addiction potential is not significant. Since anti-social behavior, craving, positive attitude to drugs, depression, and sensation seeking are the most effective factors in active addiction potential and neurotic individuals are oriented towards substance use more than others, there is a possibility that such individuals suffer from this disease compared to people with their opposite personality type. People with sensation seeking (neuroticism) are emotionally unstable and anxious and

these features provide the conditions for impulsive behavior and they often show more impulsive behavior. Some people in the community turn to drug use for being welcomed in the community and some try to portray a more mature and greater image of themselves. Extraversion includes characteristics, such as sociability, confidence and determination, ambition, pragmatism, and high energy. Thus, the person who scores high on extraversion is likely more prone to addiction because this issue makes him/her prone to high-risk behaviors in the group. Extraverts are more prone to impulsive behavior because they show unplanned and rapid responses to internal or external stimuli regardless of the negative consequences that these reactions suggest for themselves and others. People with the dominant personality trait of openness usually hold various interests and tend to experience the new excitement. Therefore, they become involved in creative and diverse activities, which reduce the possibility of their orientation toward addiction. Their passion to experience to accept the opinions of others leads them to show reaction regardless of the possible consequences. Therefore, they may become involved in new activities arising from new comments involved and this passion and ignorance of the consequences of their activities are the behavioral characteristics of impulsiveness. Individuals with agreeableness get oriented to higher positive social and psychological health aspects. Agreeableness focuses on interpersonal tendencies. Low scores on this dimension lead to impulsive sensation seeking, and, thereby, vulnerabilities to and preparedness for to high-risk behaviors, such as drug use increase. As it was observed, the correlation coefficient between the personality trait of conscientiousness and active addiction potential is not significant. People with the dominant personality trait of conscientiousness are likely to be concerned about the work and activities that are entrusted to them. Thus, it is not possible to find any clear relationship with addiction potential because of preoccupation with the assigned responsibilities and tasks. The enjoyment of a powerful superego allows the ego to manage and control his/her emotions and impulses with higher strength. Postponing immediate and fleeting needs shifts one's attention and focus to the satisfaction of more significant and longer-term needs that play an important role in mental health. In addition, it reduces the neurotic anxiety caused by the conflict existing between personality structures and these factors lead to more control over behavior and reduce impulsive behavior in such a person.

The findings obtained from this research on the relationship between emotion regulation strategies and dependent variables are consistent with those of the studies carried out by Ali Moradi & Hooshiar (2011), Shahandeh & Aghayousefi (2012), Fenichel (1945, cited in Wagner, 2012), Arria et al. (2008). Garnefski et al. (2006) believe that any defects in emotion regulation can make one vulnerable to psychological problems, such as depression and anxiety. Depression is one of the factors contributing to the active addiction potential. Thus, if depressed people are exposed to substances, they will be more likely to develop addiction

and will be entrapped into addiction faster. Individuals' differences in the use of different cognitive emotion regulation styles lead to emotional, cognitive, and social consequences since the use of reappraisal styles is correlated with positive emotions, better interpersonal functions, and high well-being (Gross & John, 2003). Positive emotions influence the expanded thinking, the growth of positive personality traits, such as resistance and resilience, and optimism. Indeed, the people who have an open mind and active cognitive abilities are less involved in quick and impulsive behaviors. Therefore, they experience less stress and anxiety and undergo lower addiction potential. Emotion regulation strategies are an optimized interaction of cognition and emotion to cope with negative situations (Ochsner & Gross, 2005). Inability to control negative emotions arises from negative thoughts and beliefs about worry and the use of ineffective coping strategies. Thus, the people that use negative cognitive strategies of emotion regulation will not act properly in the interpretation, coping, and expression of appropriate emotions in different situations. This issue leads to increased possibility of developing depression and anxiety and, thereby, they are not able to express themselves appropriately in different situations. These factors somehow lead to addiction potential. As impulsive behaviors are hasty, unplanned, without thinking, and prone to errors, these people show more impulsive behaviors for overcoming negative beliefs, dysfunctional coping methods, and anxiety.

The results obtained about the relationship between attachment styles and outcome variables are consistent with those of the studies obtained by Fossati (2005), Zahedian, Mohammadi & Samani (2011), Shah Bahrami (2010), Borjali, Bershan & Dortaj (2009). Sensitive and responsive care act as a secure site by providing comfort, support, and protection as well as by helping suferrers create positive role models for the self and others. Therefore, people with secure attachment styles do not seek peace and security in substance use because they originally benefit from peace, security, and positive patterns of behavior and are less prone to addiction. In avoidance attachment, maternal inattention to the child's needs makes perfect psychological structures not get formed in line with the internal control of behavior. As a result, these people depend on external affairs and habits, and drug use is considered one of the ways to remedy the deficiencies within them. Attachment styles (avoidant) end in the acquisition of turbulent and early identity diversion bases in individuals, take away their autonomy and increase the grounds for imitation, compliance, and seduction. Accordingly, these individuals lose the necessary determination and explicitness for the rejection of the unreasonable requests that are out of social norms. These characteristics increase their addiction potential. Ambivalent individuals always suffer from some kind of distress. In dealing with new situations, they experience distress and show negative emotions and may tend to addiction to get rid of bad moods. Lack of proper interaction between mother and child, emotional deprivation in childhood, fathers' negligence in relation to the child's emotional

needs, lack of common sympathy in dealing with stressful problems, and paternal inability in the reasonable expression of their feelings all lead the adolescents to turn to drug use. The adolescents and young people with secure attachment style show more autonomy and act in accordance with social norms in the face of stressful situations. They benefit from required self-esteem and the ability to inhibit the evil demands that lead to the loss of social rights of other members of society. Therefore, these characteristics reduce the incidence of impulsive behavior. People with attachment styles (insecure-avoidant) do not have the required inhibition ability to restrain from unreasonable demands and, thereby, embark on misusing. All these factors cause the incidence of impulsive behavior in these people. The child's initial experiences with parents or the type of emotional relationship with their parents in childhood can affect his/her relations in adulthood (Khushabi, 2007).

The results obtained regarding the relationship between brain-behavioral systems and outcome variables are consistent with the results of the studies conducted by Hundt, Kimbrel, Mitchell & Grey (2008), Loxton, Nguyen, Casey & Dawe (2008), Shahande & Agha Yousefi (2012), Ali Moradi et al. (2011). People with a strong behavioral activation system attempt to earn rewards and are more likely to get involved in risky behaviors. In addition, they experience more positive emotions, and, thereby, they have a higher addiction potential because they seek reward in the euphoria caused by drug use. Individuals with a strong behavioral inhibition system are conservative and are more likely to show avoidance behaviors and to experience more anxiety (Mussap, 2006). Conservativeness is a feature that prevents people from getting engaged in risky behaviors and are far less prone to addiction. Behavioral activation system sensitivity is indicative of one's impulsivity (Ali Moradi et al., 2011). People with a strong behavioral activation system seek rewards and are more likely to get engaged in risky behaviors, experience more positive emotions, and show higher levels of impulsive behavior. People with a strong behavioral inhibition system think of the consequences of their acts because of their conservatism, and this has caused them to become less involved in impulsive behavior.

Despite the observance of most of the methodological points, the limitations pertaining to the population and sample size of this study make it difficult to generalize the results to some extent. Moreover, since this research is a correlation study, no causal relation between the variables has been revealed and, thereby, it is not possible to consider the independent variables as the cause of the dependent variable in generalizing the results. In the same way, it is recommended to provide training to mothers so that they can bring about the development of secure attachment style in children in the early years of the child's birth by the establishment of a desirable affective relation.

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