

## Abstract

**Objective:** The aim of this study was to compare dysfunctional attitudes, cognitive distortions, and difficulty in emotion regulation between people with substance abuse and normal people.

**Method:** The research method of this study was descriptive and causal-comparative. The population of this study consisted of the men with substance abuse (opium and opium sap) who had referred to one of the rehabilitation camps of Mahneshan city. In addition, the normal people of this city constituted the population of the control group in this study. The number of 90 subjects with substance abuse was selected as the sample units via purposive sampling according to the inclusion criteria of this study. Similarly, the number of 90 normal subjects was selected as the sample units of the comparison group via convenience sampling method. The subjects of both groups had been matched together in terms of age and education level. Then, Dysfunctional Attitude Scale (DAS-40), Cognitive Distortions Scale, and Difficulties in Emotion Regulation Scale were administered to both groups.

**Results:** The results showed that there were significant differences between the two groups in all three variables and drug abusers gained higher scores in dysfunctional beliefs, emotional regulation difficulties, and cognitive distortions. **Conclusion:** These differences are important in the design of clinical interventions for treatment.

**Keywords:** dysfunctional attitudes, cognitive distortions, emotional regulation difficulties, substance abuse

# On the Comparison of Dysfunctional Attitudes, Cognitive Distortions, and Difficulty in Emotion Regulation between People with Substance Abuse and Normal Individuals

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## Research on Addiction Quarterly Journal of Drug Abuse

Presidency of the I. R. of Iran  
Drug Control Headquarters  
Department for Research and Education

Vol. 10, No. 39, Autumn 2016  
<http://www.etiadpajohi.ir>

## Introduction

In the context of psychology, the issue of addiction has been much discussed. Substance abuse is a serious health problem in many modern societies, especially in developing countries. Illness, death, and injuries caused by substance abuse cost the community a lot. Its emotional complications on the lives of abusers and their families are not measurable. The increasing tendency towards drug use is considered as one of the most important components of social harm and the decreasing age of addiction has highlighted the need of the assignment of attention to this phenomenon, especially among young people (Kiamarsi & Abolghasemi, 2011). Human beings tend to use drugs for various reasons, such as failure, inefficient beliefs, irrational and distorted cognition, pleasure seeking, sensation seeking, weakness in the recognition of emotional states, and social problems. Research findings have shown that people with substance abuse are weak in strategies for coping with stress, perfectionism, and self-efficacy, and they usually choose unsuitable problem-solving methods (Ranjbar-Noushiri et al., 2013). Some personal characteristics, such as low self-esteem, sensation seeking, and depressed mood affect one's attitudes toward drugs (Sussman, Dent, & Leu, 2000). Some previous studies have shown that people with substance abuse show higher levels of stress (Rahmanian & Hasani, 2005), mood disorders and emotional states (Remo & Squat, 1998, cited in Rahmanian & Hasani, 2005). The psychological dimensions of addiction have been examined from different perspectives by Seligman (1990), Beck (1976), Lazarus (1984), and Ellis (1973). Each of these theorists has explored an aspect of the causes of addiction where the integration of these three perspectives gives a better understanding of the issue of addiction, although other causes, such as social and economic status, are also involved. Among the prominent characteristics of people with substance abuse, one can refer to the constant consumption of drugs despite its negative consequences, such as serious medical conditions, legal problems, loss of jobs, loss of friends, and reduced social status. This phenomenon is quite similar to the results obtained from patients with orbitofrontal cortex lesions. It seems that individuals in both groups are not sensitive to the future consequences of their behavior and show self-regulating and defective symptoms in real life (Bechara et al., 2001). According to these observations, addictive neurological models also emphasize the role of prefrontal cortex in the loss of control and compelled use of drugs in people with drug dependence (Goldstein & Volkow, 2002). Since permanent drug users report that drug use has a beneficial effect on their emotional and affective state, drug use may act as an emotional regulation strategy that reduces the bothersome emotional state (Barlow, Allen, & Choate, 2004).

Some studies have shown that inefficient attitudes are consistent with the psychological consequences in dependence on drug abuse (Haji Alizadeh, Bahrainian, Nazari, & Modares Gharavi, 2008). According to Beck's cognitive

theory, these negative cognitive attitudes (which reveal low self-esteem) are unreliable and irrational beliefs (referred to as ineffective attitudes) (Beck, Rush, Shaw, & Emery, 1979). The inefficient attitudes are the beliefs and psychosocial orientations that one has towards him/herself, the world, and the future (Abela & Skitch, 2007). These attitudes lead to bias in one's perception and understanding of events, affects one's actions and emotions, and causes self-abusive behavior and emotional disturbances. Based on the studies done by Holman (2004), a report on the rate of drugs and its effect on feelings and emotion, addiction processes are influenced by the beliefs and attitudes of people with substance abuse. Similarly, in a research entitled "Inefficient attitude and coping styles and its relationship with suicide attempt", Farmani et al. (2014) showed that there was a relationship between inefficient attitudes and coping styles in suicide attempt. Haji Alizadeh et al. (2008), compared inefficient attitudes between people with substance abuse and normal people and evaluated the resultant psychological consequences, and concluded that inefficient attitudes act as a harmful factor in tendency to drug use and increases the likelihood of drug use. On the other hand, Ranjbar Nousheri, Mahmoud Alilou, Asadi Mojreh, Ghodrati, & Najar Mobaraki (2012) compared stress coping strategies, perfectionism, and self-efficacy between people with substance use disorder and normal people, and showed that there is a significant difference between the two groups in terms of the subscales of stress coping strategies, including distancing, self-control, accepting responsibility, escape-avoidance, and problem-solving. In addition, the affected group had a lower mean value than the normal group in terms of positive perfectionism. In another study, Sa'ed, Yaghoobi, Roshan, & Soltani (2010) compared inefficient meta-cognitive beliefs between dependent and non-dependent individuals, and showed that there is a significant difference between the two groups in the linear combination of dependent variables in terms of positive meta-cognitive beliefs, negative cognitive beliefs, cognitive uncertainty, the need to control thought, and cognitive awareness.

On the other hand, based on Beck's cognitive theory, it is thought that negative thoughts or distorted interpretations arise from the activation of negative beliefs accumulated in long-term memory. According to this theory, emotional disorders are correlated with the activation of cognitive dysfunction structures. Attitudes and maladaptive schemas can be considered as structures for the retrieval of general concepts stored in memory or as an organized set of information, beliefs, and assumptions that construct the content of each schema through individual life experiences. In fact, attitudes can be used in the perception and evaluation of new information. Attitudes influence behavior, affects, and emotions through information processing, and contribute to decision-making in the course of thinking and provide the most predictable prediction. Aharonovich et al. (2006) conducted a study on the prediction of cognitive distortions in cocaine and cannabis users, with their poor

responsiveness to behavioral treatments. Spada, & Wells (2008) investigated the metacognitive beliefs about the consumption of alcohol and the development of two case studies, and reported that metacognitive beliefs play a role in vulnerability to substance abuse, and provide the conditions for the vulnerability of people to substance dependence. Sa'ed et al. (2010) also showed that negative meta-cognitive beliefs about worry, depression, and suppression are the most likely predictors of drug dependence disorder.

As it was mentioned above, one of the factors of substance abuse is the problem in emotion regulation. Inability in emotional regulation is an underlying mechanism of mood disorders and anxiety. Despite the positive and constructive role of emotions in human life, there is also another dimension for them, which is the destructive aspect of emotions in people's lives. In fact, emotion regulation refers to processes in which individuals influence their emotions. According to this process, it becomes clear how the person experiences and expresses emotions. In the same way, Aldau, Nolen-Hoeksema, & Schweizer (2010) investigated the relationship between ineffective strategies in emotional regulation and psychopathology. The results showed that strategies, such as ruminating, suppressing, and avoiding problem solving had the greatest effect on mental disorders and addiction. In another study, it was shown that the people with effective emotional management are exposed to a lower risk of drug abuse and use coping strategies in dealing with the use of addictive drugs. Trinidad, & Jahnsone (2004) concluded that those who have difficulty in emotional adjustment turn to drug use in order to adjust or modify their emotions. Parker, Taylor, Eastabrook, Schell, & Wood (2008) also showed that the difficulty in emotion regulation leads to drug abuse. They also concluded that people with low levels of emotional regulation strategies tend to use drugs due to their inability in effective coping with emotions and their management, especially at the onset of drug use. Fox, Hong, & Sinha (2008) suggest that drug users and alcohol-dependent patients have some difficulties in emotion regulation and impulse control. In the same way, Shiffman (1993) assessed the patterns and motivations for cigarette smoking and showed that drug-dependent people who undergo negative emotions, such as anxiety and depression are more likely to use drugs. In a study entitled "Assessment of risk for substance use disorder consequent to consumption of illegal drugs: Psychometric validation of the neuro-behavior disinhibition trait", Mezzich et al. (2007) showed that weak emotion regulation is considered an important precursor to drug abuse disorders. Azizi, Mirzaea & Shams (2010) assessed the relationship of distress tolerance and emotional regulation with the degree of students' dependence on smoking, and reached the conclusion that the individuals with a high tendency to smoke cigarette have more difficulty in identifying their emotions than in controlling their emotions. Furthermore, drug-dependent individuals stop or retrogress in the process of growing emotions. In another study, Zaed, Allahgholilou, Abolghasemi, & Narimani (2010) showed that when a person is put under

pressure by others for drug use, the poor management of emotions increases the risk of substance abuse. Hasani & Rahmanian (2005) showed that people with substance abuse have difficulty in emotion regulation, are more emotional, are more sensitive to repetition and uniformity, tend to violate the social norms, have a difficulty in the field of disinhibition, and, in general, have a higher level of sensation seeking. Similarly, Bashpour (2013) showed that the severity of substance dependence is positively related to the self-boredom and the boredom of others. Craving also has a positive relationship with self-boredom, rumination, disaster building, control of attention, and intelligent control. In addition, Kiamarsi & Abolghasemi (2011) showed that self-efficacy, sensation seeking, and stress coping strategies are related to substance abuse in students. Nejati, Shiri, & Noori (2012) showed that drug users have less ability in terms of mind-reading capability, and representation of happy emotional states, sadness, and anger than healthy people.

According to the above-mentioned points, substance abuse is one of the psychiatric disorders that many and varied causes and reasons are involved in its occurrence. Recent research has focused on risk factors and multiple etiologies. Although social factors in tendency to drug use are greatly emphasized, drug abuse can be related to personality traits, beliefs, cognitive distortions, incompatible and ineffective attitudes, and difficulty in emotional regulation (Glantz, 1992). The aim of this study was to compare the different dimensions of ineffective attitudes, cognitive distortions, and difficulty in emotional regulation between substance abusers and normal people in an Iranian population.

## **Method**

### **Population, sample, and sampling method**

The current research method is a causal-comparative one. The male and female opium and sap users who referred to one of the addiction treatment camps in Mahneshan city in 2014-2015 constituted the statistical population of this study. Moreover, normal people in this city constituted the comparison population. Drug abusers were selected via random cluster sampling method. In this regard, a list of all addiction treatment centers affiliated with the Welfare and Medical Sciences of Zanzan Province was provided at first. Then, Mahneshan addiction treatment center was randomly selected from among the centers. Thereafter, the questionnaires were completed by the addicts after the provision of collaboration between the center's authorities, the researchers, and substance abusers. The criteria for entry included the consumption of at least twice narcotics (opium and sap) a day based on personal reports, and drug use for more than a year. The normal group was selected from among those who had not consumed any drugs and were living in Mahneshan. The two groups were matched with each other based on age and education. The size of the statistical samples was equal to 90

for each group after the fall and, thereby, a total of 180 participants constituted the whole sample.

### **Instruments**

1. **Dysfunctional Attitude Scale:** This questionnaire was developed by Beck & Weissman in 1987 with the aim of measuring dysfunctional attitudes and maladaptive beliefs in adults and based on Beck's cognitive theory of depression and anxiety. The items measure those beliefs and attitudes that include highly non-verifiable criteria for the evaluation of personal performance and self-worth as well as the evaluation of the underlying assumptions and beliefs that build schemas. It consists of 40 items that are responded to based on a 7-point Likert scale (totally agree = 7 to totally disagree= 1) (Weissman & Beck, 1978). In Iran, the reliability has been reported through retest method to be 90% within an interval of 6 weeks. In addition, Cronbach's alpha coefficient of this test has been obtained equal to 0.75. This questionnaire has been translated and revised by Yekeh Yazadan Doust (1998) and its reliability coefficient on a 30-person sample was reported 0.72 (Soleimani, 2006). The results of the factor analysis revealed two factors. Hence, it contains two factors, namely perfectionism and need for social approval. Its Cronbach's alpha coefficient has been reported in the range of 0.84 to 0.92 in various studies. In addition, Weissman has reported the retest reliability of this test to range from 0.80 to 0.84 in an 8-week interval (Salehzadeh, 2011). The significant correlation between inefficient attitudes and other depression scales, including the Beck Depression test, indicates the convergence validity of this test. This scale also discriminates the depressed individuals from ordinary people, which represents the divergent validity of this test (Soleimani, 2006).

2. **Cognitive Distortions Questionnaire:** This questionnaire was developed by Salar (2008) and includes 20 items that measure the cognitive distortions introduced by Albert Ellis where each unreasonable thought takes 2 items. In this way, the items numbered 1 and 2 are related to all-or-nothing thinking; the items numbered 3 and 4 pertain to exaggerated generalization; the items numbered 5 and 6 belong to mental filters; the items numbered 7 and 8 pertain to discounting the positive; the items numbered 9 and 10 are related to jumping to conclusions where question 9 is focused on mind reading and question 2 pertains to predictive misconceptions; the items numbered 11 and 14 refer to magnification/minimization; the items numbered 12 and 13 are related to emotional reasoning; the items numbered 15 and 16 pertain to should statements; the items numbered 17 and 18 belong to labelling; and the items numbered 19 and 20 pertain to personalization. Each subscale is scored from 1 to 5 (1 for totally agree, 2 for agree, 3 for no idea, 4 for disagree, and 5 for totally disagree), whereas the question numbered 1 is scored in reverse from 5 to 1. As a respondent gains a higher score, s/he will be more likely to think more appropriately; on the other hand, as one gains a lower score, s/he will use more

cognitive distortions. The standardization of the questionnaire was conducted on a 300-person population (151 men, 149 women) in Gorgan city where the coefficient of 0.72 was obtained for women and 0.725 was obtained for men.

3. Difficulties in Emotion Regulation Scale (DERS): Emotional regulation is defined as a category that includes awareness and perception of emotions, acceptance of emotions, the ability to control impulsive behaviors, and behavioral performance in accordance with desired goals for the achievement of individual goals and situational requirements. The initial version of DERS was a self-reporting 41-item tool that had been developed to clinically evaluate the complexity of emotional regulation. The items of this scale were compiled and selected using the texts of emotion regulation. However, 5 items of this scale were eliminated due to low correlation and low factor loading and, therefore, the number of items was reduced to 36 ones. This scale has 6 subscales (Gratz, & Roemer, 2004), including non-acceptance of emotional responses (non-accept), difficulty engaging in goal-directed behavior (goals), impulse control difficulties (impulse), lack of emotional awareness (awareness), limited access to emotion regulation strategies (strategies), and lack of emotional clarity. The results of reliability studies show that there is a high internal consistency for the whole scale (0.93), non-accept (0.85), goals (0.89), impulse (0.86), awareness (0.80), strategies (0.88), and clarity (0.84). The re-test reliability coefficients were obtained equal to 0.88 for the whole scale, 0.69 for non-accept, 0.69 for goals, 0.57 for impulse, 0.68 for awareness, 0.89 for strategies, and 0.80 for clarity. In addition, the internal consistency of the translated version of this scale was calculated in a pilot study on 48 students of Ferdowsi University of Medical Sciences and Mashhad University of Medical Sciences (31 females and 17 males). The results of this study showed a high internal consistency for the whole scale ( $\alpha = 0.86$ ), and also for the subscales: non-accept = 0.75, goals = 0.74, impulse = 0.76, awareness = 0.63, strategies = 0.86, and clarity = 0.85 (Alavi, 2009).

## Results

68 people (37.8%) of selected have high school graduates, 78 people (43.3%) had diploma education, and 34 people (18.9%) had postgraduate education. Also, 49 people (27.2%) aged 20-25 years old, 65 people (36.1%) were in the age range of 30- 25 years old, 45 people (25%) were in the age range of 35-35 years and 21 people (11.7%) in the range of 40-35 years. The descriptive statistics of the variables studied are presented in Table 1.

**Table 1. Descriptive statistics of variables in term of separated groups**

<i>Variables</i>	<i>Groups</i>	<i>Number</i>	<i>Mean</i>	<i>Standard deviation</i>
<b>Dysfunctional Attitude</b>	Substance abuse	90	127.63	26.67
	Normal	90	107.54	12.05
<b>Cognitive Distortions</b>	Substance abuse	90	78.01	6.42
	Normal	90	75.49	6.09
<b>Difficulties in Emotion Regulation</b>	Substance abuse	90	138.94	9.97
	Normal	90	130.67	8.64

Multivariate analysis of variance should be used to investigate the difference between the groups in the variables studied. One of the assumptions of this analysis is the equivalence of the variance of errors. The results of the Levene test indicated that this assumption was not made in inefficient attitudes ( $P < 0.001$ ). Therefore, the Pillay index as a multi-variable index was used. The results of multivariate analysis of variance showed that the two groups differ in the linear composition of the variables ( $P < 0.001$ ,  $F = 4.67$ , Effect of Pillay = 0.074). One-dimensional variance analysis was used to investigate patterns of difference.

**Table 2: Results of univariate analysis of variance for different patterns**

<i>Variables</i>	<i>Sum of squares</i>	<i>df</i>	<i>Mean of squares</i>	<i>F statistics</i>	<i>Sig.</i>
<b>Dysfunctional Attitude</b>	84.30	1	84.3	6.51	0.001
<b>Cognitive Distortions</b>	74.10	1	74.1	3.72	0.001
<b>Difficulties in Emotion Regulation</b>	79.7	1	79.7	5.94	0.001

As shown in Table 2, there is a significant difference between the two groups in all variables. Regarding descriptive statistics, it can be said that in all variables, the substance abuse group has received higher scores.

### **Discussion and Conclusion**

There is a significant difference between substance abusers and normal people in terms of inefficient attitudes. This finding is inconsistent with the findings reported by Hajipoor (2002) and Denof (1987). Moreover, the percentage of people with inefficient attitudes in the group of substance abuse subjects was higher than that of healthy ones, which is consistent with the research findings reported by Haji Alizadeh et al. (2008) and Martinier (1994). In general, inefficient thoughts and cognitive distortions can be the reason for emotional disorders. Moreover, inefficient attitudes and low self-esteem have a significant relationship with some risk behaviors, such as suicide attempt. Inefficient attitudes are the biased assumptions and beliefs that a person has towards him/herself, the surrounding world, and the future (Abela, & Skitch, 2007). These attitudes lead to the emergence of some kind of bias in a person's understanding and perception of events that affect feelings and behaviors, and predispose him/her to depression and other psychological disorders. In Beck's therapeutic system, it is attempted to reduce reactions of the emotional process and self-mutilating behavior by modifying the defective or misleading thinking and maladaptive ideas that underlie these reactions (Beck, 1976; Beck, Rush, Shaw, & Emery, 1979). Other theories confirm that individual beliefs about drugs as well as individual beliefs about social norms play a decisive role in drug use. In addition, the cognitive factors and systems of belief are significantly different between the adolescents with substance abuse and the ones who are fugitive from drugs.

There is a difference between substance abusers and normal people in terms of cognitive distortions. The observed difference exists in all the subscales of



cognitive distortion scales except exaggerated generalization and emotional reasoning. Since there are a limited number of studies on the relationship between cognitive distortions and addiction, what has been extracted from the review of the articles suggests the existence of a relationship between cognitive distortions and addiction. Aharonovich et al. (2006) found that there are meaningful levels of cognitive distortions and impairment in abusers of cocaine and cannabis. Among addicts, issues such as cognitive distortions, distorted cognitive and attributive styles, defense mechanisms like denial, rationalization, and blaming are observed. Based on cognitive theories, the most important reason for drug use is one's expectations from and conclusions about drugs.

There is a difference between substance abusers and normal people in terms of difficulty in emotion regulation. The ability to manage emotions causes an individual to use appropriate coping strategies in situations where there is a high risk of drug use. Generally, people with high emotional regulation are more capable in predicting the wishes of others, perceive unwanted pressures from others, control their emotions better, and, thus, show more resistance to drug use (Trinidad & Jahnsone, 2002). People with low emotional regulation often turn to substance abuse to counter their negative emotions (Trinidad, Unger, Chou, & Johnson, 2004). The results of Holman's (2004) study showed that people with emotional disorders gained higher scores in impulsivity and cognitive reasoning. Fox, Hong, & Sinha (2008) found that cocaine abusers had a lot of difficulties in the perception and regulation of emotions and impulse control, especially in the early stages of dependence. Khantzian (1997) also believes that impaired emotional regulation and low tolerance are among the causes of turning to addiction. It seems that the low tolerance force these individuals to find an immediate way to get rid of emotions (Su et al., 2008). Krystal (1978) believes that people with drug dependence have already been stopped in the process of developing emotions. Krystal has repeatedly referred to this in his research. The appearance of impairment in impulse control in these people is in line with the types of research that suggest that these patients alternate among the intense emotions of anger, agitation, obsessive feelings of depression, and discomfort. The results of this study were also indicative of the presence of distress tolerance, especially in the field of distress evaluation and absorption. The results of this study are partly consistent with the implicit meaning in Brown, Lejuez, Kahler, & Strong's research (2002). In Brown et al's. study (2002), it was found that people with a higher level of distress tolerance were more successful in smoking cessation during a six-month period. It seems that distress tolerance is directly correlated with emotional tolerance without the need for turning to drug use. When a person is pressured to use drugs, poor emotional control increases the risk of substance abuse. Conversely, effective emotional management reduces the risk of substance abuse. The ability to manage emotions causes an individual to use appropriate coping strategies in situations where there is a high risk of substance use. Moreover, the individuals with high positive emotional regulation

are more likely to predict the wishes of others. They perceive unwanted pressures from others, control their emotions better, and, thus, show more resistance to drug use (Trinidad & Jahnsone, 2002). People with low emotional regulation often turn to substance abuse to counter their negative emotions (Trinidad, et al., 2004). Since emotional regulation capability can determine the quality of a person's relationship, those who are able to regulate their emotions will better understand their emotions and others' emotions and, thus, they gain a better understanding of people in different situations and enjoy developed interpersonal and interpersonal skills. Therefore, such people take advantage of better relationships than those who have difficulty in emotional regulation (Lopez et al., 2004). In fact, the individuals with difficulty in emotion regulation cannot regain their emotional state, are less able to maintain relationships, feel that they are in contact with others in negative patterns, and they feel that they are out of control (Abbot, 2005).

In general, substance abusers suffer from inefficient attitudes, maladaptive patterns of thinking, emotional distress, and self-destructive behaviors and, thereby, they experience negative emotions and feelings in life situations. Such emotions are the most important stimulus for drug abuse and, consequently, drug dependence. In sum, it should be acknowledged that cognitive processes, such as beliefs pertaining to drug use, inefficient attitudes, and so on, play a very important role in drug abuse and dependence. Therefore, the results of this study indicate higher rates of inefficient attitudes, cognitive distortions, and difficulty in emotional regulation in substance abusers than in normal people. The results of this research should be taken into account with respect to its limitations such as social acceptability, bias in self-report, effects of the situation, weak recall, and errors in self-report measurement. Moreover, because of the non-control of the confounding variables, care and discretion should be exercised in making inferences about the causal relationships and in generalizing the current research findings. It is suggested that both genders be included in future studies.

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