

## **EFFECTIVENESS OF ACCEPTANCE AND COMMITMENT BASED THERAPY UPON PERCEIVED STRESS REDUCTION AND INCREASED SOCIAL ADJUSTMENT AT META-AMPHETAMINE DRUG DEPENDENTS REHABILITATION CENTER IN TEHRAN**

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### **ABSTRACT**

The purpose of this study is to examine the efficacy of acceptance and commitment based therapy upon perceived stress reduction and increased social adjustment on meta-amphetamines dependents. Therefore, among substance abusers rehab centers in second area of Tehran city, 24 people were selected and divided into experimental and control group. Both groups were tested before and after training sessions with Cohen's perceived stress and Bell's social adjustment questionnaires, the experimental group participated in 8 sessions of acceptance and commitment based therapy, but the control group did not receive any training. The results of analysis of covariance showed that acceptance and commitment therapy is effective to reduce stress and increase perceived social adjustment on meta-amphetamine abusers and this psychological treatment can be used along with other effective treatments for these people.

**Keywords:** *Acceptance and Commitment Based Therapy, Perceived Stress, Social Adjustment*

### **INTRODUCTION**

Meta-amphetamine which its crystallization has been termed as glass in Iran, is one of the materials that have been severely abused and the frequency of use of it in the country, is 2.5% of all consumers (Oranges *et al.*, 1384). This substance is highly addictive and according to its impact on the brain's dopaminergic system, instant Flash mode creation (orgasm) and subsequent conditioning of individuals, provides a higher chance of slippage and additional relapse (Chunk, Clock, Patterson Group *et al.*, 2005; quoted Behrouzian, 2014). Methyl amphetamines is a psychotropic substance and a powerful stimulant of the central nervous system and its direct impact on brain mechanisms, creates joy and excitement in the individual and yet it causes severe sleep disturbances or insomnia, and severe loss of appetite. A person has no appetite to eat for hours or even days; however, this substance will cause thirst and the consumer is forced to drink plenty of water.

This substance was first built in 1893 in Japan during World War II, and was used by Japanese, American and German soldiers to relieve fatigue and increase energy. After war the remaining drugs entered into the Japanese market, but because of its unusual way for consumption it got forbidden. According to statistics of the Organization in the fight against drugs, 5.2% percent of addicts are glass consumers in Iran (Anti-drug Campaign, 2011).

The use of meta- amphetamines is associated with symptoms of psychosis, depression, cognitive problems, unsafe sex methods and increase in violence (Smoot *et al.*, 2010). The data suggests that patients with depression or anxiety disorders are less successful in attempts to quit smoking than ordinary people. Symptoms of depression are more common in people with drug abuse or drug addict (Fathi-Ashtiani, 2013). This substance creates many malformations and problems of compatibility, especially in social adjustment, personal and collaborative relations. Studies of Fury and Charlton (2002) and Fury (2000) has shown that students who have lower compatibility are more likely to be driven to alcohol, drugs and stimulants.

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Social adjustment includes compatibility with own social environment, this adjustment may be obtained by changing the environment or oneself. Adaptation and on top of it all, social adjustment are influenced by the cultures and beliefs which it varies from one society to another (Abraham and Verghese, 1986). Human behavior is influenced by many factors, including family, school, peer groups and other social factors. Human personality can reach perfection in case of a suitable balance and interaction between him/her and their surroundings (quoted by Wong and Ang, 2007). Social pressures clearly have a great impact on individuals' behavior but since human beings are flexible, not only they can become adjusted to the environment, but they can also transform the environment according to their own wishes. Adjustment in terms of psychology means adaptation to the environment in order to meet the individual's needs. How Pourmoghadas states individuals' social adjustment is that, everyone has psychological needs that must be resolved in order to establish the mental balance. Psychologists have looked into their own adjustment to environment and have considered traits of personality that helps them to adapt to the surrounding world to be normal. According to social learning theory, human beings and situations are affected both-sided. Parsons claims that social interaction has two aspects. What one is trying to do, depend on two aspects: One is what the person is interested in doing. Another is what others expect from him/her.

Psychological phenomena such as stress is not only an unpleasant experience during an outbreak and has a lot of complications in this position But it is also a great experience, especially in the long term it can cause unpleasant physical and psychological side effects. It is also developed from the relationship between an individual and the environment in which it is perceived as a threat to their health. Different ways of coping with stress in a stressful person will produce different results (quoted by Witten and Austin, 2008). So for a person who is under stress, evaluation of stress levels and ways of coping with this stress is important. High, frequent and prolonged stress, could lead to conflict in a person (Cung *et al.*, 2009). Stress can cause physical and emotional problems such as lack of self-satisfaction, sense of failure, anxiety, severe stress, frustration, depression and poor quality of life for the individual (Wen and Kim, 2002). If the stress experienced by the patient is not properly controlled it will have a significant impact on unhealthiness (Cung, 2009). There are various models of drug addiction treatment including individual, group, family and self-help treatment. The main purpose of such therapies is to create one's knowledge and understanding of addicts' environment. Several studies have shown that cognitive therapy is an effective treatment for drug dependence (Carroll, 1999; Phinney, 2004; Hunter *et al.*, 2012; Ghorbani and Sarraimi, 1389). In recent decades, new approaches and techniques emerged that can be termed under the general title of Model-based admissions which the acceptance and commitment based therapy is one of these techniques. The method is briefly called ACT, its main purpose is mental flexibility that is creating a practical ability to choose between different options. In fact, in this approach rather than to avoid thoughts, feelings, memories or disturbed desires, suitable option will be selected (Ferman and Herbert, 2008). In this treatment the first attempt can be the increase of psychological acceptance of subjects' experiences (thoughts, feelings, etc.) and correspondingly non-effective control deeds decrease. In this approach, the individual is taught that any action to prevent or control these unwanted mental experience is ineffective or has a reverse effect and aggravates problems. In the second step a person's mental awareness increases, meaning that the person is aware of all his/her mood, thoughts and behavior in the present moment; thirdly, a person learns to separate himself/herself from these mental experiences (Cognitive separation) in a way to be able to act independently from these experiences. The fourth step is carried out in the attempt to reduce the extreme focus on self-visualization or personal stories such as being a victim that the person is made for themselves in his/her mind; the fifth step is to help the individual to recognize main and personal values and convert them into specific behavioral goals. And the last step is motivating act of commitment toward goals and values of the specified activity along with the acceptance of mental experiences (Hayes, 2006). Treatment based on research and commitment has been effective in various areas such as depression (Kanter *et al.*, 2006), antipsychotics (Batch and Hayes, 2002), substance abuse (Guildford and Kohlberg, 2004), job burnout (Bund and Bunch, 2003) and pain relief (Kuq *et al.*, 2005). Given the impact of this approach on other aspects of psychology, this

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study investigates the efficacy of acceptance and commitment based therapy on reducing perceived stress and social adjustment of meta-amphetamine abusers.

## MATERIALS AND METHODS

The present study is a quasi-experimental design with control group, the pre-test and post-test along with the available samples. The population of this study includes abusers who were admitted to the Iranian hospital in Tehran. 24 people were selected and divided into two groups of experiment and control and cases were tested by Cohen's Perceived Stress and the Bells Social Adjustment questionnaires, then the ACT experimental group was treated for 8 sessions, but the control group did not receive any treatment. After the therapy sessions, both groups were tested again. Adjustment Inventory was developed by Bell in 1961, with 160 questions which were answered using Yes, No or don't know (?) options by the patients. The validity of test- retest in the test manual was reported 70.0 to 93.0 and coefficient of internal consistency has been variable from 74.0 to 93.0. Bell reported the coefficients validity of consistency for the subscales of the home, health adjustment, social adjustment, emotional adjustment, and career adjustment and for the whole test has been reported respectively, 91/0, 81/0, 88/0, 91/0, 85/0 and 94 / 0. Also high reliability of this test in the diagnosis of neurotic and normal groups has shown solidarity with Eysenck Personality Inventory (Bell, 1962).

Perceived stress scale was developed in 1983 by Cohen et al. and has three versions of 4, 10 and 14 that the substance used in this study is version 10. This scale is used for general measuring of perceived stress in the past month and stressful thoughts and feelings about events, control, and domination, coping with mental pressures and experienced stress are measured.

Cohen *et al.*, (1983) have reported proper validity and reliability for this version through a conducted research. Klein (2000) also reported the value of Cronbach's alpha as 83/0. Pasha (1390), again used both Cronbach's alpha and split-half methods to determine the validity of Perceived Stress Questionnaire that the whole questionnaire resulted respectively with 84/0 and 81/0, indicating good reliability coefficients for the questionnaire (quoted Jamshidi, 1391).

## RESULTS AND DISCUSSION

### Results

The following table shows the mean and standard deviation of the pre-test and post-test scores as presented in the two groups of Stress and Coping:

**Table 1: Mean and standard deviation of pre-test and post-test scores in both experimental and control group**

		Group	Mean	Standard deviation
Perceived Stress	Pretest	Experimental	24/25	2/37
		Control	20/45	7/48
	Posttest	Experimental	20/75	6/18
		Control	21/82	4/97
Social adjustment	Pretest	Experimental	179/20	6/71
		Control	179/11	6/80
	Posttest	Experimental	187/01	5/81
		Control	176/19	4/76

As it can be seen in the table above, it shows the change on mean scores of the pre-test in Perceived Stress scales from 24/25 to 20/75 and social adjustment from 20/179 to 01/187, Indicating that the treatment was effective in reduction of perceived stress and increase of social adjustment. To compare this difference statistically, three main criteria for analysis of covariance were reviewed:

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**Table 2: Results of homogeneity of variance(s) test**

F		df1	df2	Sig.
Perceived Stress	0/075	1	22	0/394
Social adjustment	1/064	1 1		22 0/314

As shown in Table 2, Leven test is not significant in both variables ( $P=0/314$   $P=0/394$ ) and so the examined assumption of equality of variances by Leven method show that data, did not questioned assumptions of equality of error variances. In addition, given that the interaction between pre-test stress and the group is not significant; the data supports the hypothesis of homogeneity of regression slopes. Therefore, the implementation of covariance is permitted to examine the effects of main variables of post-test variables and group. Results of covariance analysis, by controlling pre-test and analysis of post-test stress and adjustment of experimental and control groups, indicates that there is a significant difference between the participants of experimental and control groups.

**Table 2: Summary analysis of covariance subjects scores**

	Source	Sum of squares	df	Mean	f	Significance	Partial level eta
	Pretest	55/718	1		59/020	0/01	0/957
Perceived Stress	Group	33/205	1	55/718 33/205	35/422	0/01	0/567
	Error		21				
Social adjustment	Pretest	265/195	1	265/195	8/806	0/07	0/295
	Group	264/661	1	264/661	8/789	0/07	0/295
	Error	632/389	21	30/114			

As can be seen in the table above, f calculated at 0/05 is a significant error. After adjusting the pretest scores, there is a significant effect between the experimental group and the control group. (Partial Eta=0/982,  $P=0/001$ ,  $F_{(1, 25)}=1380/046$  &  $R^2=0/982$  (adjust  $R^2=0/981$ ). Also, the calculated f in adjustment variable at alpha level of (0/07) is significant. After adjusting the pretest scores, there is a significant effect between the experimental group and the control group. (Partial Eta=0/295,  $P=0/07$ ,  $F_{(1, 25)}=8/789$ ). In the end, it can be concluded that by maintaining the pre-test scores of both groups, there is a significant difference in the Post-test scores between the two groups. Therefore, the effect of the acceptance and commitment based therapy, in the experimental group as compared to the control group was a significant decrease in perceived stress and increase in social adjustment. Therefore, there is insufficient evidence to confirm the hypothesis of this study.

## Discussion

Based on the findings obtained, it was shown that acceptance and commitment based therapy have been effective on the reduction of perceived stress and increased social adjustment on meta-amphetamine abusers. This finding is consistent with the results of Jahangir (2012), Imani (2012), Dabaq (2012) Badri (2012) Rahimi (2012) and Dortaj (1389). The explanation for this finding could be said that ACT targets the main problem and the overall goal is to increase psychological flexibility and the ability to contact with the present and change behavior in order to serve the values (Luma et al., 2007). In this approach, the form and frequency of internal events is not directly concerned, instead acceptance and tendency to unpleasant experiences such as anxiety, negative thoughts and memories, is facilitated by value centered lifestyle (Hayes, 2001). Hayes believes that many of the conflicts and human sufferings are caused by the denial of pain. When we feel fear, anxiety, depression or other negative emotions or when we think we

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are less than others and are worthless, in fact, we are working to strive into the experiences and the struggle with inner experience begins. As a result human life is subsides with years of fruitless attempts and destructive behaviors. In fact, in acceptance and commitment based therapy, considering the acceptance of what cannot be accepted along with awareness and presence of the moment, the person learns that his/her stress is more cognitive aspect and by creating greater flexibility will also gain more consistency. Therefore it can be concluded that a realistic understanding of self and the world around us, flexibility in dealing with new situations and personal and social problem solving has a strong relationship with social adjustment and could affect it (Winters *et al.*, 2004). Cognitive behavioral therapy helps to maintain the mental health of a person by focusing on the determinants of a person's beliefs and increase of rational beliefs. This treatment increases the possibility of failure in controlled feeling of arousal by the accessibility of teaching methods to control anxiety? and it helps to a person to reduce anxiety in the face of difficulties. On the other hand, in cases of drug abuse, it is one of the ways of coping with anxiety and failure, as a result, coping and problem-solving skills in these patients increases their ability to cope.

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