

The Effectiveness of Teaching Dialectical Behavior Therapy Skills on Cognitive Emotion Regulation of Opium Addicts in Detoxification Phase

Sara Gholami¹

PhD ,General Psychology, Central Tehran Branch, Islamic Azad University, Tehran, Iran¹

Abstract

The present study aims at investigating the effectiveness of teaching dialectical behavior therapy skills on cognitive emotion regulation of opium addicts in detoxification stage. The study makes use of a quasi-experimental method. The study subjects have been selected based on a purposive method and they were randomly assigned to two intervention and control groups: both of the groups were subjected to tests at the same time and before the independent variable was implemented; afterwards, the groups were again tested after the independent variable was implemented on the intervention group as well as in a 3-month follow-up period. The study population was comprised of all male addicts who had been passing detoxification stage in Boghrat substance abuse clinic, in the city of Tehran in 2015-2016. The current research paper takes advantage of a purposive sampling method and uses diagnostic interviews by the author through utilizing the criteria outlined in DSM-5 and also through inquiring ideas and notions from a psychotherapist as a result of which 34 individuals were selected and eventually the study was completed with 27 individuals as the study sample volume; their information was assessed by means of Cognitive Emotion Regulation Questionnaire (CERQ). The results obtained by the use of descriptive statistics (statistical indices such as frequency, percentage, mean) and inferential statistics (covariance analysis) indicated that teaching dialectical behavior therapy skills is effective on the cognitive emotion regulation of the addicts in their detoxification phase.

Keywords: dialectical behavior therapy, cognitive emotion regulation, opioids

Introduction:

Addiction is an acute or chronic intoxication by an industrial or natural substance the use of which gives the individual an acquisitive resistance and the individual becomes incumbently urged to take more of it due to the gradual decline of its effects (Sayyed Javadi et al, 2013). Drug abuse and addiction are the two of the most important issues of the present era worldwide. It has moved beyond the health-therapeutic borders and changed into a psychological, social and family problem; in spite of the widespread efforts made globally to control narcotics, the outbreak and use of them are constantly increasing and the drug-taking age is decreasing (Askari Jannat Abadi, 2012). Drug dependency and substance abuse are the most important problems of the present era in a global level and the death tolls of the drug abusers are increasing on a daily basis (Jandaghi et al, 2012). Consuming the drugs that change the temperaments and behaviors is one of the most distinct social-psychological harms and drug dependency is a complicate disorder caused by biological, psychological, social and spiritual factors. In fact, the intertwined nature of the biological, psychological, social, economical, political and cultural factors behind such a problem have all turned it into one of the most intricate individual, familial and social problems. Addiction and its side effects are among the most important problems of the human communities (Refahi et al, 2015). Statistics indicate that the addiction prevalence has reached to over 7.5% to 8% of the country's adults (Tafreshi, 2011), whereas it ranges from 1% to 2% in industrial countries. The UN's general office of narcotic drugs besides the three global crises, namely poverty and population growth, environment degradation and nuclear threats, enumerates narcotic drugs as the fourth crisis of the world (Sayyed Javadi et al, 2013). There are various methods for treating addiction among which medication methods, behavior, psychological, cognitive, cognitive-behavior, spiritual and religious therapies can be pointed out. A number of specialists divide these therapeutic methods to two substantial groups, medication and psychotherapy. In psychotherapy, various methods, based on whatever the method the psychologist believes in and therefore feels more comfortable in applying it, are applied from cognitive therapy to behavior therapy (Mahmoud Alilou and Sharifi, 2011).

The concept "behavior therapy" was first invented by Eysenck (Zamani et al, 2014). The concept implies the entire methods the objective of which is bringing about a change in the current behaviors. In behavior therapy, the attention is not focused on revealing and analyzing the subconscious psychological conflicts the way it is in psychoanalysis. Behavior therapy is the clinical application of the behavioral experiments' results that are obtained based on learning theories like classic conditioning and factorial conditioning. The important point in behavior therapy is changing the behavior via teaching new behaviors, correcting the previous behaviors and eliminating the unfavorable behaviors. Each sign of a psychological disorder necessitates the application of a different therapeutic method. Behavior therapy aims at elevating the quality of life and creating adaptation through behavioral restructuring. Of course, the causes leading to disorders in childhood are taken into account in behavior therapy. But, a greater emphasis is put on the individual's learning background. However, behavior therapy essentially aims at creating a change in the current behaviors, unfavorable behaviors and inefficient thinking patterns (Janbozorgi and Dastani, 2014).

Dialectical behavior therapy is an approach that combines source-oriented acceptance and empathy with cognitive-behavioral problem-solving and social skills training. Dialectical behavior therapy underlines the point that the patients' non-adaptive behaviors (like self-harm, suicidal behaviors, drug and alcohol abuse) serve the irritating emotional experiences

(Emamgholipour et al, 2015). A temporary reduction in arousal occurs following such non-adaptive behaviors and the use of such non-adaptive strategies is hence negatively corroborated. Thus, the main body of DBT's focus revolves around the application and generalization of certain adaptive skills in which the treatment method is taught and its ultimate goal is helping the patients break and overcome this defective cycle (Mahmoud Alilou and Sharifi, 2011).

Disorders connected to substance abuse are more frequent than the other clinical problems in terms of prevalence in such a way that the lifelong prevalence rate of substance abuse disorders reaches to 35.3% of the overall population based on a report by National Institution of Mental Health (NIMH) (Kabor, 2014).

American Association of Psychology (2013) knows the symptoms of drug dependency as encompassing a constellation of physiological, behavioral and cognitive signs based on which the individual, in spite of having drug dependency disorders, continues use. In such cases, there is a use pattern that usually leads to tolerance, deprivation and use compulsory behaviors. Corresponding to this definition, substance abuse results in the devastation of the psychological or physical functions, whereas dependency is created when an individual takes a drug in a compulsory and uncontrollable manner and s/he will indicate withdrawal signs upon quitting (Saremi et al, 2013).

Inter alia all sorts of substance abuse, opioid abuse is the most common one (American association of psychology, 2013). Allegedly, the adolescents and the youngsters, particularly males, are the most vulnerable social group to such a type of substance abuse (Dehghani Firouzabadi et al, 2014). Also, according to Iran's population pyramid a substantial part of which is comprised of the adolescents (Ahmadi et al, 2015), it is necessary to identify the factors and the situations that play fundamental roles in the process of prevention, treatment and staying clean of drug use. Nowadays, the majority of the people know substance abuse as a chronic, recurring disease accompanied by long-lasting relapses that have turned the treatment into a somewhat big problem. As it is expressed in research reports, after detoxification, many of the drug abusers consume drugs again upon entering rehabilitation periods within 90 days (Nikbakht et al, 2014). Thus, finding a solution for treating the drug abusers that features a lower rate of regression likelihood is intended by the researchers.

Thus, any defection in the emotional regulation can become a considerable issue in programs devised in line with recurrence prevention. When an individual feels tensed for taking drugs, effective management of the emotions can reduce the danger of substance abuse. The ability to manage emotions causes the individual to make use of appropriate coping strategies in situations where there is a high risk of use (Abulghasemi et al, 2010).

An innovation in psychological treatment methods particularly substance abuse and addiction that has paid special attention to emotional skills is dialectical behavior therapy (DBT) where training, accepting and validating the emotions are highly emphasized. The standard therapeutic protocol of dialectical behavior therapy for the individuals with borderline personality disorder embraces the essential skills that are connected to the treatment of the problems contributing to addiction.

For patients with substance abuse, these essential skills are taught in a standard format in the form of a prescription. These skills that are applied for fighting the temptations and reducing the recurrence risk incorporate mindfulness skills, depression tolerance, emotion regulation

and interpersonal relationships (Dimeff and Linehan, 1992; Dimeff and Koerner, 2007). One of the factors resulting in individual's failure in overcoming drug is their not being equipped with appropriate emotional regulation methods. Therefore, teaching these skills to drug abusers can reduce the therapy failures. The preliminary efforts for preventing and treating drug dependency are directed towards avoidance or overcoming certain negative behaviors and emotional conditions. In the meanwhile, if it is made possible to teach and learn such characteristics as endurance and factors that are found effective on preventing drug abuse including the immediate determinants like risky situations, individual's coping skills, expectations' outcomes and the effects of violation avoidance and latent antecedents like lifestyle imbalances, appetencies and crazes (From Hayes et al, 2015), prevention and treatment can be extended to a second dimension that involves strengthening of the individuals' positive traits so as to make them augment their decision-making power in proportion to the environment. In the process of fighting the drug abuse and drug dependency, the solutions that are concentrated on the individual aspects alongside with the other combinatory methods are highly fruitful. In this regard, one of the important individual aspects is paying attention to the emotions and making a proper use of them in human relations, perception of one's own feelings and those of the others, self-restraint, feeling sympathy with the others and positive utilization of the emotions in thinking and cognition. Andrada et al (2014) in a case study came to a conclusion that teaching dialectical behavior therapy skills causes an improvement in the emotions' regulation.

From long ago, our country because of its geographical situation and having nearly 2000 kilometers of shared borders with the two countries of Afghanistan and Pakistan that are also known as golden crescent and produce over 3500 tones narcotic drugs annually (Zarring Kalk, 2010) has always been in a close quarter combat with the drug abuse and physical and psychological harms and social and economical losses resulting thereof. But, today, we are confronted with a novel problem in this area and that is the change in the narcotic drugs use pattern, from traditional substances to industrial ones. Such a phenomenon, per se, is in need of new challenges; that is because the industrial drugs, unlike the traditional ones, are not smuggled through given geographical borders and the small and unsafe domestic laboratories have been turned to the places where these substances are made and produced (Mohammadi, 2011).

In their current spread, the drug abuse and addiction have created numerous social and psychological problems in every corner of the world. The outbreak and prevalence of this phenomenon in the Iranian community have both led to the emergence of a wide spectrum of psychological/social and family-related harms. Based thereon, it is not only detoxification and drug quitting that should be considered in the process of treating the drug abuse and overcoming addiction rather various types of psychotherapeutic methods should be deployed in the course of a thorough analysis of psychological dependency. According to the fact that addiction age is demonstrating a descending trend and considering the human and material expenditures of fighting the supply and distribution of drugs and the time spent for doing so, and with a consideration of the psychological and physical symptoms of drug abuse, the high costs and the low success rates and the addicts' lack of tendency towards recovery and the fact that they only take medications for leaving behind their states of languor, it can be said that treatments have not been followed with much promising results. Also, according to the performed surveys, it seems that the addicts who are subjected to medication regress to drug abuse with a greater likelihood (Kamarzarrin et al, 2013). A review of the prior studies indicates that there is not much effectiveness acquired in the success of preservative

medications, without social-psychological interventions, due to their sole insistence on medication (Roozen et al, 2006; Larney et al, 2014).

The overall objective of the current research paper is determining the effectiveness of teaching dialectical behavior therapy skills on the addicts' cognitive emotion regulation in their stage of detoxification from opioids.

The present article is seeking to prove or reject the hypothesis that "teaching dialectical behavior therapy skills is effective on the cognitive emotion regulation of the addicts in the course of their detoxification from opioids.

Nadimi (2016) carried out a research called "the effectiveness of dialectical behavior therapy (based on skill training) on the reduction of impulsiveness and the increase in emotion regulation of the women dependent on methamphetamine". The study was a quasi-experimental research of the pretest-posttest type with evidence group. It made use of convenience sampling method to select 34 methamphetamine-dependent women who had referred to the city of Birjand's addiction treatment center in 2014 and were subjected to preservative medication by methadone. The study sample volume was stochastically assigned to two experiment and evidence groups.

Then, only the experiment group was subjected to 12 ninety-minute sessions of group dialectical behavior therapy. The data were gathered through making use of BART inventory of impulsive personality as well as by the use of difficulty in emotion regulation scale (DERS). The questionnaires were administered to the study sample volume within the format of pretests, posttests and during a follow-up period. The results indicated that dialectical behavior therapy significantly reduces the impulsiveness and increases the emotion regulation of the women dependent on methamphetamine.

Kabor (2014) in a study entitled "emotion regulation in drug abusers" indicated that the use appetency is recognized as a state of emotion the regulation of which is also to be considered as a sort of emotion regulation directly influencing the drug taking habit. Moreover, in the model proposed by Kabor, drug use is realized as a state of emotion regulation that replaces the emotion regulation's adaptive strategies after drug abuse; thus, it can be said that according to the emphasis of teaching emotion regulation on correcting the non-adaptive strategies and negative emotions that are created in various situations, the grounding for direct and indirect reduction of drug abuse appetency can be provided through effective management of the emotions.

Study Method:

The present study aims at determining the effectiveness of teaching dialectical behavior therapy skills on addicts' cognitive emotion regulation.

The study population includes all of the male opium addicts who had referred to (Boghrat) drug abuse clinic situated in the city of Tehran in 2015-2016 and were in their stage of detoxification.

The study sample volume was consisted of 34 male opium addicts passing detoxification stage in Boghrat clinic. The study inclusion criteria were the followings: 1) a past history of narcotic drugs abuse (opium, heroin); 2) being in an age range from 25 to 45 years of age; 3) being featured with the substance abuse diagnostic scales based on DSM-5; 4) having an

education level of at least diploma; 5) an elapse of at least 6 months and at most 2 years from the onset of treatment by methadone medications; 6) having no prior experience of treatment by dialectical behavior therapy and 7) being addicted for one year at minimum and four years at maximum. The study exclusion criteria were as follows: 1) the existence of any other co-dependencies such as on alcohol; 2) having received other psychiatric interventions and NA services simultaneously and for the past six months; 3) the need for taking nerves and psychological medications; 4) the lack of interest to continue participation in therapy sessions; 5) a past history of hospitalization in psychotherapy centers during the past year and 6) the existence of other psychological disorders such as psychosis and bipolar personality disorder.

The present study is a quasi-experimental research. The study subjects have been selected based on a purposive method but haphazardly assigned to two intervention and control groups. Then, both of the groups were evaluated simultaneously before being subjected to independent variable. After the independent variable was run on the intervention group as well as during a three-month follow up, the study sample volume was again evaluated. Finally, the results obtained in the evaluations and follow-up period were compared for both of the groups so as to investigate the effects of the independent variable. Two individuals were excluded from the study before registering the pretest results and one individual was excluded after the pretest results were acquired for their expression of disinterest to continue participation. The remaining subjects were randomly assigned to two intervention and control groups. Also, during the stages of the study, three subjects during the first three weeks and one individual during the intermediate sessions were excluded from the study (the former for the change that was brought in their treatment program and one individual due to being in need of nerves and psychotherapeutic medications); in addition, another individual was excluded from the intervention group, for expressing disinterest to continue participation. Finally, the study was completed with 27 study subjects. It is worth mentioning that the study subjects participated in 12 ninety-minute sessions held once a week in substance abuse clinic. The primary intervention indicators were as stated below:

- ۱) Mindfulness skills;
- ۲) Distress tolerance;
- ۳) Emotion regulation, and
- ۴) Effective interpersonal relationships.

Cognitive emotion regulation questionnaire (CERQ) was used to assess the variable of concern to the present study. The preliminary draft of the questionnaire was codified by Garnefski, Kraaij and Spinhoven (2001) in the Netherlands through a review of the study related background and in a critical look at the instruments adopted to assess stress coping styles. This version, which contains 36 articles and is codified for individuals above 12 years of age, evaluates the individual's thoughts after experiencing a negative event or harming incidents. The questionnaire evaluates 9 subscales: self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing and other-blame cognitive strategies. The scores range from 1 (almost never) to 5 (almost always). The reliability and validity of the questionnaire, as one of the most frequently used tools in the area of investigating the emotion regulation processes, are confirmed in various countries, including in France, China and Turkey.

The short form of the questionnaire's Persian version contains 18 articles for which a reported Cronbach's alpha coefficient ranging in value from 0.68 to 0.82 indicates that the 9 subscales of the Persian version's short list enjoy an optimum credibility. Analysis of the primary

component, meanwhile accounting for a 75-percent variance, supports the main 9-factor pattern of the cognitive emotion regulation questionnaire. Moreover, a high correlation coefficient has been reported for the relationships between the subscales and the correlation pattern of the subscales from the shortlisted Persian version of the questionnaire with depression symptoms is reflective of a good criterion validity of the scale (Hasani, 2011).

Analyses of the Findings:

Descriptive Findings:

Table 1: descriptive information regarding the sample volume's performance in the cognitive emotion regulation pretests and posttest

Variable	Stage	Group	Number	Mean	Std. Deviation
Self-blame	Pretest	Experiment	14	5.92	1.73
		Control	13	6.46	2.18
	Posttest	Experiment	14	5.35	1.49
		Control	13	6.46	2.29
	Follow-up	Experiment	14	5.42	1.22
		Control	13	6.38	2.21
Acceptance	Pretest	Experiment	14	5.28	1.89
		Control	13	6.69	2.46
	Posttest	Experiment	14	6	2.03
		Control	13	6.38	1.93
	Follow-up	Experiment	14	5.85	1.99
		Control	13	6.61	1.80
Rumination	Pretest	Experiment	14	7.14	1.56
		Control	13	7.76	1.87
	Posttest	Experiment	14	5	1.03
		Control	13	7.76	1.83
	Follow-up	Experiment	14	5.14	1.02
		Control	13	7.61	1.66
Positive refocusing	Pretest	Experiment	14	5.57	1.34
		Control	13	5.38	0.86
	Posttest	Experiment	14	7.14	1.16
		Control	13	5.69	1.18
	Follow-up	Experiment	14	7.07	1.26
		Control	13	5.53	0.96
Refocus planning	Pretest	Experiment	14	5.85	1.02
		Control	13	6.07	1.75
	Posttest	Experiment	14	7.71	1.13
		Control	13	6.46	1.45
	Follow-up	Experiment	14	7.50	1.55
		Control	13	6.30	1.60
Positive reappraisal	Pretest	Experiment	14	5.07	1.07
		Control	13	6.07	2.01
	Posttest	Experiment	14	6.92	1.07
		Control	13	6.30	1.70

Putting into perspective	Follow-up	Experiment	14	6.78	1.05
		Control	13	5.92	1.55
	Pretest	Experiment	14	5.92	2.01
		Control	13	6.15	2.15
	Posttest	Experiment	14	7.14	2.28
		Control	13	6.23	2.31
Catastrophizing	Follow-up	Experiment	14	7.07	2.20
		Control	13	6.15	2.15
	Pretest	Experiment	14	7	2.21
		Control	13	7.67	1.69
	Posttest	Experiment	14	5.64	1.54
		Control	13	7.84	1.57
Other-blame	Follow-up	Experiment	14	5.92	1.73
		Control	13	8	1.22
	Pretest	Experiment	14	6.64	2.13
		Control	13	5	1.41
	Posttest	Experiment	14	5.21	1.47
		Control	13	5	1.35
Follow-up	Experiment	14	5.28	1.32	
	Control	13	5.30	1.54	

Study Hypothesis Test:

Teaching dialectical behavior therapy skills is effective on cognitive emotion regulation of the opium addicts passing detoxification stage.

To investigate the hypothesis and evaluate the effect of teaching dialectical behavior therapy skills on cognitive emotion regulation of the opium addicts passing their detoxification stage, there was made use of multivariate covariance analysis because it was found out that its entire assumptions hold true.

Table 2: results of multivariate covariance analysis on cognitive emotion regulation posttest in both control and experiment groups after adjusting the pretests of the study sample volume

Tests	Values	F-statistic	Effect's degree of freedom	Error's degree of freedom	Significance level	Effect size
Pillai's trace	0.958	20.147	9	8	0.001	0.958
Wilk's Lambda	0.042	20.147	9	8	0.001	0.958
Hetling's effect	22.665	20.147	9	8	0.001	0.958
Roy's largest root	22.665	20.147	9	8	0.001	0.958

As it is observed in table (2), all the four related statistics, namely Pillai's trace, Wilk's lambda, Hetling's effect and Roy's largest root are found smaller than $\alpha=0.05$ and therefore

are considered statistically significant in a 95% level ($\alpha=0.05$). This way, the null hypothesis is rejected and it becomes evident that the amounts of the dependent variables, “self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing and other-blame”, are influenced by the independent variable, “teaching dialectical behavior therapy skills” through an adjustment made in the pretest effect. In other words, there is a significant difference between the experimental group and the control group at least in terms of one of the dependent variables (self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing and other-blame). The amount of this difference or effect is equal to 0.870, put it differently, 90% of the individual differences in the posttest scores of the “cognitive emotion regulation” is attributed to the effect of teaching dialectical behavior therapy skills.

To figure it out that which of the variables (self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing and other-blame) makes such a difference appear, several one-way covariance analyses were undertaken and the results are presented in table (3).

Table 3: one-way covariance analysis results in the MANCOVA context on the posttest (self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing and other-blame) in both the control and experimental groups after adjusting for the pretests in the study sample volume

Variation source	Dependent variable	Sum of Squares	Degrees of freedom	Mean squares	F-ratio	Significance level	Eta squared	Statistical power
Groups	Self-blame	3.388	1	3.388	6.103	0.025	0.276	0.641
	Acceptance	0.083	1	0.083	0.026	0.874	0.002	0.053
	Rumination	25.816	1	25.816	25.359	0.001	0.613	0.997
	Positive refocusing	5.820	1	5.820	19.053	0.001	0.544	0.983
	Focus on planning	8.454	1	8.454	16.770	0.001	0.512	0.970
	Positive reappraisal	6.184	1	6.184	8.417	0.01	0.345	0.777
	Putting into perspective	1.817	1	1.817	3.873	0.067	0.195	0.456
	Catastrophizing	11.682	1	11.682	10.157	0.006	0.388	0.849
	Other-blame	5.399	1	5.399	13.128	0.002	0.451	0.925
	Error	Self-blame	8.883	16	0.555			
Acceptance		50.595	16	3.162				
Rumination		16.289	16	1.018				
Positive refocusing		4.887	16	0.305				

	Focus on planning	8.065	16	0.504	-	-	-	-
	Positive reappraisal	11.755	16	0.735				
	Putting into perspective	7.505	16	0.469				
	Catastrophizing	18.401	16	1.150				
	Other-blame	6.580	16	0.411				
Total	Self-blame	1037	27					
	Acceptance	1133	27					
	Rumination	1189	27					
	Positive refocusing	1170	27					
	Focus on planning	1418	27	-	-	-	-	-
	Positive reappraisal	1239	27					
	Putting into perspective	1351	27					
	Catastrophizing	1307	27					
	Other-blame	756	27					

In table (3), the results of the covariance analysis in the MANCOVA context of the posttests (self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing and other-blame) are presented with controlling for the pretest effect between the two study groups. Based on the results inserted in the table, because in subscales such as “rumination, positive refocusing, refocus on planning, positive reappraisal, catastrophizing and other-blame”, the calculated F-values, with a degrees of freedom equal to 1 and 16 is larger than the F-value given in the table and also because the obtained significance level for subscales such as “rumination, positive refocusing, refocus on planning, positive reappraisal, catastrophizing and other-blame” are smaller than $\alpha=0.01$, the effectiveness of teaching dialectical behavior therapy skills on such subscales as “rumination, positive refocusing, refocus on planning, positive reappraisal, catastrophizing and other-blame” is confirmed with a 0.99 confidence. Based on the results given in table (1), the posttest mean scores of the experimental groups are increased for variables “positive refocusing, refocus on planning and positive reappraisal” in respect to control group and this is reflective of a significance difference. The obtained effect index (Eta squared) signifies the idea that 27% of the reduction in the score acquired for “self-blame” and 61% of the reduction in the score obtained for “rumination”, 54% of the increase in the score calculated for “positive refocusing”, 51% of the increase in the score of “refocus on planning”, 34% of the increase in the score attained for “positive reappraisal”, 39% of the decrease in the score gained for “catastrophizing” and 45% of the reduction in the score of “other-blame” for the study subjects from experimental group can be attributed to “teaching dialectical behavior therapy skills”.

Investigation of the Results in Follow-up Stage:

To survey the effect of teaching dialectical behavior therapy skills on cognitive emotion regulation in the follow-up tests of the opium addicts passing their detoxification stage, multivariate covariance analysis was used because all its assumptions were found holding true.. The results are summarized in table (4).

Table 4: results of multivariate covariance analysis on cognitive emotion regulation follow-up tests in both the experimental and control groups after adjusting the pretest scores of the study sample volume

Tests	Values	F-statistic	Effect's degree of freedom	Error's degree of freedom	Significance level	Effect size
Pillai's trace	0.920	10.264	9	8	0.002	0.920
Wilk's Lambda	0.080	10.264	9	8	0.002	0.920
Hetling's effect	11.547	10.264	9	8	0.002	0.920
Roy's largest root	11.547	10.264	9	8	0.002	0.920

As it is observed from table (4), all four relevant statistics, i.e. Pillai's trace, Wilk's Lambda, Hetling's effect and Roy's largest root, are smaller than $\alpha=0.05$ and therefore statistically significant in a 95% ($\alpha=0.05$) level. This way, the null hypothesis is rejected and it is made clear that the amounts of the dependent variables (self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing and other-blame) are influenced by the independent variable (teaching dialectical behavior therapy skills) through an adjustment made in the pretest effect. In other words, there is a significant difference between the experimental and control groups at least in terms of one of the dependent variables (self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing and other-blame). The amount of such a difference or effect is equal to 0.870. To put it differently, 90% of the individual differences in the follow-up test scores obtained for "cognitive emotion regulation" pertains to the effect of teaching dialectical behavior therapy skills. To figure it out that which of the variables (self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing and other-blame) causes the difference to appear between the two groups, several one-way covariance analysis were carried out in MANCOVA context. The results are given in table (5).

Table 5: results of one-way covariance analysis in MANCOVA context of the follow-up test (self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing and other-blame) for both the experimental and control groups after adjusting the study sample volume's pretest scores.

Variation	Dependent variable	Sum of	Degrees	Mean of squares	F-ratio	Significance level	Eta squared	Statistical
-----------	--------------------	--------	---------	-----------------	---------	--------------------	-------------	-------------

source	Squares	degrees of freedom	Mean Square	F	p-value	eta squared	power
Groups	Self-blame	1	۱,۳۳۵	۱,۷۵۱	۰,۲۰۴	۰,۰۹۹	۰,۲۳۸
	Acceptance	1	۱,۱۴۲	۰,۳۳۴	۰,۵۷۱	۰,۰۲۰	۰,۰۸۵
	Rumination	1	۲۲,۹۸۹	۲۱,۰۳۷	۰,۰۰۱	۰,۵۶۸	۰,۹۹۰
	Positive refocusing	1	۶,۹۴۶	۱۱,۷۷۵	۰,۰۰۳	۰,۴۲۴	۰,۸۹۶
	Focus on planning	1	۵,۷۰۶	۳,۱۹۱	۰,۰۹۳	۰,۱۶۶	۰,۳۹۰
	Positive reappraisal	1	۵,۴۹۹	۶,۸۶۵	۰,۰۱۹	۰,۳۰۰	۰,۶۹۲
	Putting into perspective	1	۵,۳۰۳	۵,۰۹۰	۰,۰۳۸	۰,۲۴۱	۰,۵۶۳
	Catastrophizing	1	۹,۹۶۱	۶,۴۹۲	۰,۰۲۱	۰,۲۸۹	۰,۶۶۸
	Other-blame	1	۳,۸۰۸	۴,۸۹۱	۰,۰۴۲	۰,۲۳۴	۰,۵۴۷
Error	Self-blame	16	۰,۷۶۲				
	Acceptance	16	۳,۴۱۶				
	Rumination	16	۱,۰۹۳				
	Positive refocusing	16	۰,۵۹۰				
	Focus on planning	16	۱,۷۸۸	-	-	-	-
	Positive reappraisal	16	۰,۸۰۱				
	Putting into perspective	16	۱,۰۴۲				
	Catastrophizing	16	۱,۵۳۴				
	Other-blame	16	۰,۷۷۹				
Total	Self-blame	27	۱۰۲۱				
	Acceptance	27	۱۱۴۰				
	Rumination	27	۱۱۷۱				
	Positive refocusing	27	۱۱۳۱				
	Focus on planning	27	۱۳۶۷	-	-	-	-
	Positive reappraisal	27	۱۱۴۴				
	Putting into perspective	27	۱۳۱۱				

Catastrophizing	۱۳۸۱	27
Other-blame	۸۰۹	27

In table (5), the results of covariance analysis are offered in MANCOVA context of the follow-up tests (self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing and other-blame) through controlling for the effect of pretest of the both studied groups. Based on the results inserted in the table, because in subscales “rumination and positive refocusing” (in $\alpha=0.01$ level) and in the subscales “positive reappraisal, putting into perspective, catastrophizing and other-blame” (in $\alpha=0.05$ level), the amounts of the calculated F with degrees of freedom equal to 1 and 16 are found larger than the amount of the table’s F-value, therefore the effectiveness of teaching dialectical behavior therapy skills on the subscales “rumination and positive refocusing” with a 0.99 confidence and on the subscales “putting into perspective, positive reappraisal, catastrophizing and other-blame with a 0.95 confidence is confirmed. Based on the results of table (1), the mean scores of the follow-up test have increased for the experimental group in variables “positive refocusing, putting into perspective and positive reappraisal” in contrast to the control group and this is suggestive of a significant difference. Also, the experimental group’s mean scores have undergone a decrease in the follow-up test for variables “rumination, catastrophizing and other-blame” in comparison to the control group. And, this, as well, indicative of a significant difference. The obtained effect index (Eta squared) is reflective of the idea that 57% of the reduction in “rumination score”, 42% of the increase in “positive refocusing” score, 24% of the increase in “putting into perspective score”, 30% of the increase in “positive reappraisal” score, 29% of the reduction in “catastrophizing” score and 23% of the reduction in “other-blame” score obtained by the participants of the experimental groups can be attributed to “teaching dialectical behavior therapy skills”.

Discussion and Conclusion:

Despite the widespread efforts made worldwide for controlling the narcotic drugs, the prevalence and the use of them are still showing an ascending trend and the substance abuse age is decreasing. There are various treatment methods for getting rid of addiction among which medicinal treatment, behavior therapy as well as psychological, cognitive, cognitive-behavioral, spiritual and religious ways can be pointed out.

Study Hypothesis Test Results:

Teaching dialectical behavior therapy skills is effective on cognitive emotion regulation of the addicts passing their opiate drugs detoxification stage.

After the survey of the abovementioned hypothesis, the null hypothesis was rejected based on the results and it was ascertained that the amounts of the dependent variables (self-blame, acceptance, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing and other-blame) have been influenced subject to the independent variable (teaching dialectical behavior therapy skills) through adjustments made in the pretest effects. In other words, there was found a significant difference between the experimental and control groups at least in terms of one of the dependent variables (self-blame, acceptance, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing and other-blame). The amount of the effect or difference was 0.870. To put it differently, 90% of the individual differences in the posttest scores of “cognitive emotion

regulation” pertains to the effect of training for dialectical behavior therapy skills. Hence, it is confirmed that teaching dialectical behavior therapy skills is effective on the subscales “self-blame, acceptance, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing and other-blame” with a 0.99 confidence. The results obtained herein are consistent with the results acquired in some research papers. Baba’ee et al (2012), Basharpour (2013), Nadimi (2015), Naderi et al (2015) and Hayes et al (2005) have insisted in their studies that dialectical behavior therapy is effective on elevating distress tolerance and on the improvement of emotion regulation of the substance abusers. The distress tolerance and emotion regulation that are the primary reasons for inclinations towards and continuation of the drug use can be improved in the individuals through training them with dialectical behavior therapy; on the other hand, it seems that mindfulness-based treatment approach can be an appropriate method for the treatment and prevention from the recurrence of such a disorder through its targeting the mechanisms enabling the change in cognitive emotion regulation strategies in patients with essential depression. Based on the results offered by the realted works, it can be stated that dialectical behavior therapy and acceptance- and commitment-based approaches to treatment of such disorders as drug abuse are less studied qualitatively but the researches that confirm these methods are growing in number.

Suggestions:

Ninety percent of the individual differences in “cognitive emotion therapy” scores pertains to the effect of dialectical behavior therapy skills and the study hypothesis is confirmed accordingly; thus, it is suggested that:

- ۱) Each of the interpersonal skills, distress (discomfort) tolerance skills, emotion regulation skills and central pervasive consciousness (mindfulness) skills, as the behavioral skills, can be taught within the format of various training courses in addiction rehabilitation centers.
- ۲) Since emotion regulation plays a pivotal role in bringing about a normal change and weakness therein is an important factor contributing to the creation of psychological disorders (Cicchetti and Cohen, 2006) and it is a key factor and a determinant of psychological well-being and effective functioning, it is necessary to hold counseling sessions for the parents as well as various society individuals so that they can be helped in gaining a more clear insight of such a type of emotion regulation.
- ۳) The success trends of emotion regulation by the participants taking part in the counseling sessions can be subjected to constant comparisons with an emphasis on the individual and social relationships and/or generally in regard of the effective emotion management styles.

References:

- Abulghasemi, Abbas; Allah Gholilou, Kolsoum; Narimani, Muhammad and Zahed, Adel, (2010), “emotion regulation strategies in substance abusers with high and low reactivity”, journal of Gilan’s Medical Sciences University, 20(77): 15-22
- Ahmadi, Gholamreza; Sohrabi, Faramarz; Borja,I, Ahmad; Ghaderi, Muhammad and Mohseni, Muhammad Saleh, (2015), “the effectiveness of teaching emotion regulation on opium-addicted soldiers’ mindfulness and drug use appetency”, seasonal journal of military psychology, 6(22): 5-21
- Emamgholipour, Samereh; Zamani, Sa’eed; Jahangir, Amir Hussein; Imani, Sa’eed and Zamani, Narges, (2015), “the effectiveness of impulse control and dialectical

- behavior therapy on impulsivity: the motion and cognitive non-planning in young girls with irregular mood, thought and behavior disorders”, 9(35): 7-16
- Janbozorgi, Masoud and Dastani, Mahboubeh, (2014), “a review of the empirical status of the psychotherapists in Iran”, scientific and research biseasonal journal of Islam studies and psychology, 8(15): 145-190
 - Jandaghi, Fatemeh; Neshatdoust, Hamid Taher; Kalantar, Mehrdad and Jebel Ameli, Sheyda, (2011), “investigating the effectiveness of teaching stress mangement based on cognitive-behavioral methods on the anxiety and depression in individuals with drug abuse subject to methadone preservative medications”, journal of clinical psychology, 4(16): 41-50
 - Dehghani Firoozabadi, Samireh; Ghasemi, Hamed; Safari, Sa'eideh; Ebrahimi, Ali Akbar and E'temadi, Ozra, (2014), “effectiveness of motivational interview group sessions on self-esteem and self-efficacy of the female addicts”, seasonal journal of research on addiction, 7(26): 145-158
 - Zamani, Narges; Farhadi, Mehran; Jamiliyan, Hamid Reza and Habibi, Mojtaba, (2014), “the effectiveness of dialectical behavior therapy with an emphasis on distress tolerance indicators and emotion regulation on impulsive behaviors and explosive anger”, scientific and research journal of Arak's Medical Sciences University, 17(11), pp.53-61, serial no.92
 - Zarrin Kelk, Hamid Reza, (2010), “the effectiveness of teaching endurance indicators on the reduction of susceptibility to addiction and changes of students' attitudes to drug use”, seasonal journal of addiction research, no.11
 - Sayyed Javadi, Maryam; Sayyed Mousavi, Elmira; Mohammadi, Raheleh; Ebrahimi Belighi, Fatemeh and Sayyed JAvadi, Mehri, (2013), “investigating the epidemiology of narcotic drugs abuse in addicts self-reported to addiction rehab clinic in Ardabil in 2012”, seventh conference on the knowledge of addiction, Tehran
 - Asgari Jannat Abadi, Muhammad; Bahrayniyan, Sayyed Abdulhamid and Panahi, Mahmoud, (2012), “the survey and comparison of the effectiveness of group schema therapy and group reality therapy on addicts' reduction of recurrence rate and increase in the general health”, departmetn of clinical psychology, MA dissertation, Islamic Azad University, Birjand Branch
 - Kamarzarrin, Hamid; Zare'e Hussein and Borouki Milan, Hassan, (2012), “effectiveness of cognitive-behavioral therapy on the elevation of self-efficacy and symptoms improvement of the substance abusers”, seasonal journal of research on addiction, 6(22):75-85
 - Mohammadi, Kurosh, (2011), “investigating the reasons behind the narcotic drugs use pattern change from traditional (less risky) to industrial (more risky) in Iran”, second cross-country conference on the social and cultural damages”, Tehran, Iran
 - Mahmoud Alilou, Majid and Sharifi, Muhammad Amin, (2011), “dialectical behavior therapy for borderline personality disorder”, Tehran, Tehran University's counseling center
 - Nikbakht, Muhammad; Amir Abadi, Bahareh; Alibeigi, Neda; Hussein Kiyamani, Muhamamd and Ramezani, Abbas, (2014), “the relationship between the signs of opioid drugs rehabilitation with personality characteristics and psychological disorder syndrome”, journal of Ghazvin's Medical Sciences Univeristy, 18(77): 33-38
 - Dimeff LA, Linehan MM. (2008), “dialectical behavior therapy for substance abuser”, Addict Sci Clin Pract; 4(2): 39-47

- Dimeff LA, and Koerner K., (2007), “dialectical behavior therapy in clinical practice applications across disorders and setting”, New York: the Guilford press publication; 100-218
- From Hayes, S. C.; Wilson, K., G., and Gifford, E., V., (2015), “experiential avoidance and behavioral disorders”, the act in context: the canonical papers of Steven C. Hayes, 171
- Kober, K., (2014), “emotion regulation in substance use disorders”, In J., J., Gross (Ed.), handbook of emotion regulation, 2nd ed., pp.428-446, New York, NY: Guilford
- Larney, S., Gowing, L., Mattick, R., P., Farrell, M., Hall, W., and Degenhardt, L., (2014), “a systematic review and meta-analysis of naltrexone implants for the treatment of opioid dependence”, drug and alcohol review, 33(2): 115-128
- Roozen H., G., Waart R., D., Windt D., Brink, W., Yong, C., A., and Kerbof A., F., (2006), “a systematic review of the effectiveness of naltrexone in the maintenance treatment of opioid and alcohol dependence”, european neuropsychopharmacology, 16: 311-323
- Dimeff LA, Linehan MM. (2008). Dialectical behavior therapy for substance abuser. *Addict Sci Clin Pract*; 4 (2): 39-47.
- Dimeff LA, and Koerner K. (2007). *Dialectical Behavior Therapy in Clinical Practice Applications across Disorders and Setting*. New York: The Guilford Press Publications; 100-218.
- From Hayes, S. C., Wilson, K. G., & Gifford, E. V. (2015). *Experiential Avoidance and Behavioral Disorders. The Act in Context: The Canonical Papers of Steven C. Hayes*, 171.
- Kober, K. (2014). *Emotion regulation in Substance Use Disorders*. In J. J. Gross (Ed), *Handbook of emotion regulation (2nd Ed.)* (pp. 428-446). New York, NY: Guilford.
- Larney, S., Gowing, L., Mattick, R. P., Farrell, M., Hall, W., & Degenhardt, L. (2014). *A systematic review and meta analysis of naltrexone implants for the treatment of opioid dependence*. *Drug and alcohol review*, 33(2), 115-128.
- . Roozen HG, Waart RD, Windt D, Brink W, Yong CA & Kerbof AF. (2006). *A systematic review of the effectiveness of naltrexone in the maintenance treatment of opioid and alcohol dependence*. *European Neuropsychopharmacology*, 16: 311-323.