

Original Research**Determining the Effectiveness of Dialectical Behavior Therapy on Improving Coping Strategies and Emotional Regulation of Drug Users Treated in Mid-term Addiction Treatment Centers (Camps)**Abdolrahman Parhiz¹, Behrooz Fathi^{2*}, Seyed Sajjad Dejan³, Fattaneh Auoman⁴

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Abstract:**Background:**

This study is conducted to specify the effectiveness of dialectical behavior therapy in improving coping strategies and emotional regulation of drug users in treatment in medium-term residential centers.

Method:

This study is an experimental study. The research sample includes 20 drug users treated as an experimental group and 20 control groups who were selected by the available method and randomly arranged. Difficulty in emotional regulation was administered before and after the Lazarus Coping Strategies Questionnaire intervention. Then the data were analyzed using SPSS software.

Results:

The results showed that the mean scores of the experimental group in coping strategies in the problem-oriented dimension were higher. In the emotion-oriented dimension, the mean scores of the experimental group were lower than the control group.

Conclusion:

Based on the mentioned results, the experimental group performs better in facing problems and issues. Also, the ability to regulate emotion in the experimental group is higher than in the control group.

Keywords: Coping Strategies, Emotional Regulation, Drug Abuse

Submitted: 22 April 2022, Revised: 16 May 2022, Accepted: 20 June 2022

Introduction

Drug use and addiction is a chronic and reversible phenomenon that causes severe physical, financial, family, and social damage. Despite the problems and consequences of addiction, the number of victims of this scourge is increasing daily, and the manifestation of its deadly aspects to date has not been able to act as an influential factor in preventing addiction of other people, especially young people (Sahand et al., 2009). Despite the difficulty and high cost of addiction treatment imposed on families, a complete treatment system with different approaches to medication, psychotherapy, rehabilitation, and rehabilitation is still needed. Nevertheless, despite these efforts, it has become clear that even the best and newest treatments are associated with a high rate of return on addiction over the years. For this reason, preventive measures and prevention of chronic and increasing addiction in the early period of consumption, especially in the age range of 15 to 30 years, are of great necessity and importance. Research suggests that low levels of emotion regulation due to the inability to cope effectively with and manage emotions play an essential role in initiating and continuing consumption (Parker et al., 2008). The power of emotional management and regulation leads people to use appropriate coping strategies when drug use is possible (Trinidad & Jahnsone, 2000). The results of studies by Schreiber., Grant & Odlaug in 2012 have shown that individuals with emotional disorders score higher on impulsive behaviors, traumatic avoidance, and cognitive reasoning (Schreiber et al., 2012). Thus, these people have more inefficient performance due to problems and deficiencies in practical skills related to emotional regulation and problem-solving methods and delaying impulsive behaviors, which can also lead to relapse and increased cravings. Also, Hemmati, Mahdad, and Aghaei's research in 2020 showed that

emotional regulation training increases the resilience and emotional, psychological, and social well-being of people who quit drugs (Hemmati et al., 2020).

In addition to problems and impairments in the emotional regulation of impulsive behaviors and recklessness, it is also seen in adolescents who use drugs. The study results also showed the effect of an emotional regulation training program on reducing overall impulsivity and cognitive, behavioral, and unplanned impulsivity in female prisoners with drug use experience. The use of this training program also significantly increased rational and intuitive decision-making methods and reduced avoidant, dependent, and immediate decision-making methods (Yarian et al., 2018). People who cannot control their emotions are more likely to become regular drug users. In addition, awareness of emotional states is increasingly associated with drug use by facilitating the avoidance of impulsive behaviors (Doran et al., 2007). In addition to the power of emotional regulation, another important factor in human life is the method of dealing with and managing problems. Therefore, their coping strategies can indicate in individuals how each person faces and faces different challenges. Coping is a person's emotional, intellectual, and behavioral efforts when confronted with stress to overcome or minimize its stressful effects. Various research has shown that drug addicts choose emotion-based and ineffective coping strategies when facing important challenges, critical life events, traumatic events, and high-risk situations (Folkman & Lazarus, 1995). In most cases, drug users use methods that have a limited time effect of reducing emotional stress. In contrast, the time required to deal effectively and practically with drug use and its long-term side effects is inversely related. On the other hand, unprincipled treatment of stress is associated with various consequences such as depression, drug addiction, and high-risk behaviors and

makes people prone to vulnerability (Sinha, 2008).

One of the treatment methods and models that deals with emotional regulation and decision management, etc., is dialectical behavior therapy, which has been used as one of the relatively new therapies to treat some problems and disorders. Previous studies on the effectiveness of dialectical behavior therapy have been more common in consumers referring to medical centers receiving methadone and buprenorphine maintenance medications. At the same time, many consumers are treated and cared for in drug-free treatment centers (mid-term accommodation centers). Therefore, the results of the effectiveness and effect of dialectical behavior therapy may have been effective in addition to drug therapy. Thus, the present study seeks to investigate the effectiveness of dialectical behavior therapy on coping strategies and the ability to regulate emotion in people using non-drug treatment in medium-term residential centers (camps).

There are studies on the effectiveness of dialectical behavior therapy in reducing emotion-related defects, such as (Farhadi et al., 2014; ImamGholipour et al., 2015). In these studies, the results have shown that often training the skills needed for emotional regulation can improve the behaviors of people involved and suffering from various disorders such as fashion consumption.

The results of (Mirzaei et al., 2017) on the effectiveness of dialectical behavior therapy on the patterns of abstinence in patients using drugs have also shown that there is a significant difference between the control and experimental groups in this study after the intervention in terms of the desire to consume and abstinent behaviors.

Mirahmadi and Hassani in 2018, in a study entitled The effect of emotion regulation skills training based on dialectical behavior therapy on the impulsivity of people with substance

abuse showed that this type of training reduces participants' scores on emotional impulsivity, motor arousal, and unplanned cognitive news (Mirahmadi & Hassani, 2018).

In a study on the effectiveness of emotion regulation strategies on smoking temptation, attention bias, and negative emotions, (Szasz et al., 2012) showed that people who used more reassessment and control strategies showed less temptation, less negative emotion, and less attention to the smoking sign. These findings indicated that reassessment techniques were more effective than emotion regulation strategies, including suppression and acceptance of smoking problems.

Modares in 2011 also showed that the most effective dialectical behavior therapy strategies in treating depressive symptoms are the components of Freiger consciousness and distress tolerance (Modares, 2011). A comparative study of the effectiveness of group cognitive-behavioral therapy and dialectical behavior therapy in reducing depressive symptoms in Iranian women consuming drugs is the title of a study in which (Sahranavard & Miri, 2018) gave patients in experimental skill groups eight 90-minute sessions. Data were analyzed using the software. A comparison of the mean score of depression before the intervention in all groups did not significantly differ. However, after the intervention, the findings showed that both CBT and DBT interventions could reduce the average scores of depression in women who used drugs. Therefore, this study highlights the importance of training CBT and DBT skills for substance abusers and provides early evidence of their effectiveness.

(RostamiNezhad et al., 2019), in a study entitled The effectiveness of dialectical behavior therapy on high school male students prone to addiction showed that dialectical behavior therapy had a significant effect on the indicators of internal dissatisfaction, high-risk behaviors, self-esteem, deviation from norms,

self-centeredness, and relationships with friends in the post-test period.

Content of intervention program sessions (Linhan et al., 2001)

sessions	Targets
First session	Initial introduction, why we should learn skills, beginning of the stages of self-awareness
second session	Teaching self-knowledge skills (emotional self-awareness)
Third session	Self-healing training, wise minded decision making, fundamental acceptance, judgments, and labels
Fourth Session	Pay attention to turning away from unwanted behaviors through enjoyable activities, focusing on a topic or other task
Fifth meeting	Paying attention to the wise mind, emotional mind, and rational mind about interpreting and responding to emotions, observing and describing them (self-observation)
Sixth Session	Learning to live in the present, using self-encouraging coping thoughts, encouraging positive self-talk and coping skills in controlling emotions
Seventh session	Learning to live in the present, using self-encouraging coping thoughts, encouraging positive self-talk and coping skills in controlling emotions
Eighth session	Teach the skill of staying away from the emotional mind, teaching the illustration of a safe place, and discovering values
Ninth session	
Tenth session	Mastering your world, learning to plan to increase positive experiences, making a list of enjoyable activities
Eleventh Session	Emotional awareness and acting appropriately against negative emotions (anger, fear, depression, stress, and guilt)
Twelfth session	Applying problem-solving and counter-action skills to negative emotions

Method

Society, sample, and sampling method

The present study is an experimental type (experimental and control group). The sample consisted of 20 drug users treated as experimental group and 20 control group who were selected by convenience sampling and randomly assigned to the groups. The statistical population included people referred to addiction treatment camps in Dehdasht between July and October 2018.

Tool

Difficulties of Emotion Regulation Scale

Response in the five-point Likert scale (1) is rarely, (2) sometimes, (3) almost half of the time, (4) most of the time, and (5) almost always. It is a scale developed by Graz and

Roemer in 2004 to examine the difficulties in emotion regulation and has 36 items and 6 subscales. Sub-scales include r

Ways of coping Questionnaire (WCQ)

The Coping Strategies Questionnaire consists of 66 items based on the (Folkman & Lazarus, 1995). Coping Strategies Scale examines individuals' thoughts and actions when dealing with stressful situations (MahmoudAlilou, 2011). According to a single study (MousaviNasab & Taghavi, 2007) on 763 male and female students in the second and third grades of public high schools in Tehran, the reliability of this questionnaire was estimated to be 0.80 using the internal consistency method (Cronbach's alpha). In the study of (Ramzi et al., 2015), the reliability of this test

was 0.85. This tool has 66 terms in two formats: problem-oriented coping strategies (Includes 23 items and 4 features of social support search, responsibility, thoughtful problem solving, and positive re-evaluation) and emotion-oriented coping strategies (including 26 items and 4 features of coping, avoidance, restraint, and avoidance-avoidance). The terms of this questionnaire are scored from never (zero) to always (three), and the reactions, thoughts, desires, inclinations, and possible actions related to stressors are described (Vaghei et al., 2011). The 16 items in this questionnaire are deviant, and the other 50 items that are scored on the Likert scale measure the individual's coping style. This questionnaire has been used in several studies and different groups to assess coping strategies. Therefore, it is a standard and valid tool (Vaghei et al., 2011).

Methodology

Since the present study is an interventional method, at first, the necessary correspondence and coordination were made with the Welfare Department of Kohgiluyeh city. Then, by referring to the medium-term accommodation centers (camps) and obtaining permission from the relevant authorities, the research was explained to the person leaving the residence. Then, after obtaining personal consent and explaining the confidentiality of information and treatment goals of the project, the participants in the experimental and control groups were arranged in the groups after

selection. Then, while observing the principles of professional ethics and confidentiality of information, they completed the questionnaires on coping strategies and emotional regulation. In the continuation of the group intervention, dialectical behavior therapy was performed for the experimental group. After completing the training course, the mentioned questionnaires were completed again by the experimental and control groups.

Entry and exit criteria

Criteria for entering the research are:

- Having substance abuse criteria based on the criteria in the diagnostic and statistical guide of DSM5 mental disorders
- Start detoxification treatment and treatment program
- Have a minimum literacy.

Exclusion criteria are:

Having severe mental disorders such as psychotic disorders, bipolar disorder, or major depression. Also suffering from severe chronic physical illnesses

Inability to read and write.

Absence from treatment sessions for more than two sessions.

Results

According to the results presented in the table above, the mean and standard deviation of the dimensions of coping strategies in the two groups of pre-test and post-test are presented.

Table 1: Mean and standard deviation of the scores of coping strategies of people with abuse in the experimental and control groups

Control group			Experimental group			Subscale	Coping Strategies	Pre-test
Number	Sd	Mean	Number	Sd	Mean			
20	11.38	33.45	20	9.07	31.43	problem-oriented		
20	10.23	36.28	20	11.46	38.73	Emotion-oriented	Coping	Post-test
20	8.11	32.22	20	10.34	38.23	problem-oriented		

20	9.32	38.34	20	12.82	34.39	Emotion-oriented		
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Table 2: Mean and standard deviation of emotional regulation scores of people with abuse in the experimental and control groups

Control group			Experiment group				Emotional adjustment	Pre-test
Number	Sd	Mean	Number	Sd	Mean	subscale		
20	5.83	19.59	20	5.20	18.45	Rejection	Emotional adjustment	Pre-test
20	4.32	14.22	20	3.31	15.37	Difficulty in targeted behavior		
20	5.94	21.35	20	6.27	19.65	Impulse control		
20	4.66	19.26	20	4.72	23.90	Lack of emotional awareness		
20	6.73	22.18	20	4.43	20.24	limited access		
20	4.23	19.92	20	6.87	18.51	Lack of transparency	Emotional adjustment	Post-test
20	5.11	18.56	20	3.34	14.88	Rejection		
20	4.32	16.45	20	4.82	12.39	Difficulty in targeted behavior		
20	5.65	23.59	20	6.52	14.69	Impulse control		
20	5.72	18.43	20	3.95	11.23	Lack of emotional awareness		
20	7.48	24.12	20	5.22	16.83	limited access	Emotional adjustment	Post-test
20	6.34	20.56	20	4.85	12.93	Lack of transparency		

According to these results, the post-test scores of the experimental group have decreased in the emotion-oriented dimensions. In the problem-oriented strategy dimension, the post-test scores of the experimental group are higher.

The mean and standard deviation of the scores related to the dimensions of emotional regulation in the two sections of pre-test and post-test are presented in Table 2, which shows

the decrease in post-test scores in the experimental group.

The first hypothesis

Dialectical behavior therapy has an effect on improving the dimensions of coping strategies in people undergoing drug treatment.

To analyze the above hypothesis, the method of analysis of covariance was used, the results of which are presented as follows:

Before performing covariance to eliminate the effect of the pre-test, its assumptions are tested.

The presumption of equality of variances (post-test and follow-up) was checked using the M-Box test, which shows that the box test is not significant, so the multivariate covariance test can be continued.

Now that the covariance assumptions have been confirmed, the research hypothesis is tested. To test the effectiveness of dialectical behavior therapy on coping strategies, the effect of pre-test as an effective factor or intervention on coping strategies is specified in the table below.

As shown in Table 3, the difference between the mean scores of coping strategies in the post-test phase in the experimental and control groups is significant ($P < 0.01$). Thus, dialectical behavior therapy has an effect on the coping strategies of addicts treated in addiction treatment centers.

The second hypothesis

Dialectical behavior therapy has an effect on improving the dimensions of emotional regulation in people using drugs under treatment.

Analysis of covariance was used to analyze the above hypothesis. Before performing covariance to eliminate the effect of the pre-test, its assumptions are tested. The assumption of the equality of variances (post-test and follow-up) was checked using the M-box test, which shows that the box test is not significant,

so the multivariate covariance test can be continued.

As shown in Table 4, the difference between the mean scores of emotional regulation in the post-test stage in the experimental and control groups is significant ($P < 0.01$). Thus, dialectical behavior therapy has affected the ability to regulate people's emotions undergoing treatment in addiction treatment centers. Therefore, the first hypothesis is confirmed.

Discussion and Conclusion

The results of the analysis of the findings of the first hypothesis of the research entitled "Dialectical behavior therapy has an effect on improving the dimensions of coping strategies in people using drugs under treatment." The results showed that dialectical behavior therapy was significantly effective in improving all aspects of coping strategies.

Results of the above findings are also consistent with the results of (Ball, 2005; Magid et al., 2007; Roy et al., 2017; Tenenbaum et al., 2011) in terms of coping methods and strategies, impulsivity and irritability in drug users. These studies also showed that, at first, coping strategies in people who use narcotics are used in more emotional and inefficient ways. When effective therapeutic interventions are performed,

Table 3: Summary of analysis of covariance of post-test scores Coping strategies of the two groups with pre-test control

Test stage	Change source	The sum of the squares	Degrees of freedom	Average squares	F	Significance level
Post-test	pre-test	1232.23	1	1232.23	0.932	0.412
	group	17832.25	1	17832.25	82.21	0.001
	Error	245.321	38			

Table 4: Summary of analysis of covariance of post-test scores of emotional regulation of two groups with pre-test control

Test stage	Change	The sum of	Degrees	Average	F	Significance
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	source	the squares	of freedom	squares		level
Post-test	Pre-test	129.61	1	129.61	0.840	0.365
	Group	19828.92	1	19828.92	128.46	0.001
	Error	227.156	34			

dealing with situations, temptation factors, problems, and crises is much better.

As the results showed, there is a significant difference between the two groups in terms of problem-based coping strategies. The dialectical therapy model often focuses on rational behavior and seeks to make more mature and adaptive coping strategies in crises, problems, and issues that are wise. In this regard, reduce the use of emotion-oriented and impulsive methods and focus more on adaptive methods to solve the main problem.

The results of the analysis of the findings of the second hypothesis of the study entitled "Dialectical behavior therapy has an effect on improving the dimensions of emotional regulation in people using drugs". The results showed that dialectical behavior therapy has a significant effect on improving all dimensions of emotional regulation.

The results of this study are also in line with (de Sá Junior et al., 2018). In that study, which was conducted to evaluate the effectiveness of dialectical behavior therapy on the regulation of disturbing emotions, the results showed that teaching dialectical behavior therapy skills improves emotional regulation.

The present study results are in line with the effective model in explaining the emotional state in the research of (Fox et al., 2011; Lennarz et al., 2019). This means that the lack of successful outcomes in social communication, aggression, sudden violence, guilt, and dissatisfaction are also the result of insufficient regulation of emotional responses. The findings of the present study are also consistent with the results of (Azami et al., 2013; ImamGholipour et al., 2015; Jamilian et al., 2014; Zahed et al., 2009) on improving

emotional regulation in people with emotional problems, substance abuse and impulsive behaviors.

Therefore, one of the most important variables that have always been emphasized in substance use is emotional and impulsive behaviors. Various techniques such as emotional awareness, emotional state self-awareness, and exercises related to the initial recognition of critical situations, the ability to use basic techniques of tolerating turbulence, accepting critical resources, and disturbing emotions can reduce the likelihood and possibility of risky behaviors in individuals. In this intervention, according to the step-by-step training program that focuses on the necessary skills for emotional management, after emotional recognition and self-awareness of their disturbing emotions, emotion regulation techniques were used as a previous alternative style in these people, which showed a significant reduction in emotional regulation problems. One of the important dimensions in emotion regulation patterns is access to emotion regulation strategies. According to teaching the necessary treatment patterns in emotion regulation techniques, the amount of knowledge and skills of people in using better techniques in more critical situations was also provided.

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