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Effectiveness of Dialectical Behavioral Therapy in Increasing Distress Tolerance of Women Drug Abusers

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ABSTRACT

There are various methods for increasing distress tolerance abuse drug users. The aim of this study was Effectiveness of dialectical behavior therapy in Increasing Distress Tolerance of Women Drug Abusers. This study is a quasi-experimental design from Pretest - posttest with control group. The population consisted of all female addicts referred abuse treatment centers in Birjand in 2013. By available sampling method, 30 people were selected among all Female referrers and randomly divided into experimental and control groups. The measurement tool was distress tolerance scale (DTS). This questionnaire has been previously used in Iran and its reliability and validity have been confirmed. The intervention group participated in 20 sessions of dialectical behavior therapy, while the control group did not receive any treatment. The data was analyzed by Paired T Test and covariance analysis at the significant level P<0/05 in SPSS (version 18). Results showed that dialectical behavior therapy significantly is effective in increasing distress tolerance abuse drug users (P<0/001). The subjects in experimental group had retained the improvement in two months follow-up. the dialectical behavior therapy can well improve one of main reasons for substance abuse and its continuation (low distress tolerance).

KEYWORDS: dialectical behavior therapy, distress tolerance, abuse drug, women.

1. INTRODUCTION

Drug abuse and drug dependence is one of the major biological, psychological, social problems that undoubtedly all countries deal with it. Drug addiction is defined as a mass of negative consequences associated with drug addiction that these consequences are intensified every day and the world has been facing with astonishing prevalence of drug abuse in recent decades, generally in society, particularly in adolescents and youth [1]. Several factors are involved in drug abuse and to design effective programs to prevent drug abuse, it is necessary to understand the causes of this phenomenon and its related factors [2]. Over the past few decades, various theories have tried to explain clearly the reasons for the tendency of people to drug addiction. These theories examined a wide range of genetic, psychological, and social aspects [3]. Although, there are lots of controversy about the causes and etiology of the disorder, but the self-medication hypothesis (SMH) has provided a detailed explanation about the reasons to tend to this disorder. The theory provides a psychological meaning for one of the biggest public health and medical issues [4]. Khantzian has proposed this theory nearly two decades ago and believed that the theory provides a useful perspective that with the help of it, we can understand the powerful emotional and pain elements that justify the dependence on alcohol and other drugs. This hypothesis aims to ignore the socio-cultural and bio-genetic factors, but it is complementary to other theories. The main advantage of SMH is that it addresses the psychological and emotional aspects of addiction, what has been neglected in most clinical and scientific studies. Khantzianin SMH refers to the short comings in Ego and their inability to tolerate emotions. He points out that these people find relief by taking their preferred drugs and situations of distress and turmoil is more tolerable for them. Most opioid dependences, in response to the question how they felt when used drugs for the first time, in addition to recognizing the general tranquility and improving their emotional level, pointed out that opiates reduced their strong aggressive emotions. It seems that the "self-medicate" effect of the opiates is the best reason and excuse for continued drug use [5]. Wermser also cited the defects in people's emotional defense, and described how these people sometimes succumb by the annoyance cause of their intense shame and anger and how sometimes they lack emotions [6]. In some studies, it is noted that emotions of these patients are changing between the intense emotions of anger and resentment, depression and sadness [7]. So, it seems that disorder in distress tolerance is the most significant reasons for the acquisition, maintenance and relapse of drug dependence.

According to SMH, the people have a low distress tolerance and impaired emotional regulation (4), and this is exactly what is taught in dialectical behavioral therapy (DBT) skills training. Moreover, in spite of the emphasis on change, in this treatment the patient relapse is also confirmed and prevents negative emotions and feelings to desperate the patients [8]. Distress tolerance is defined as the capacity to experience and endure the negative psychological states.

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Distress may result from cognitive or physical processes, but it appears as emotional state that is often determined with the desire to relieve emotional experience [9] which is impaired in drug abusers. Dialectical behavioral therapy which is known as a new treatment in the world is a kind of cognitive - behavioral therapy which is developed by Linehan to treat individuals with chronic suicidal drives, and trains four sets of skills to client including emotion regulation, distress tolerance, mindfulness and interpersonal relationships [10]. Linehan's fundamental assumption in DBT program was that people with suicidal drives lack problem-solving skills needed to solve their problem and the same factors also causes deep suffering for patients and their problems in creating worthwhile life [11].

To date, DBT was applied for the treatment of a number of behavioral problems. Applying treatment in suicidal attempts, and self-injury behavior [12-14], drug abuse [15-16, 5], overeating disorders [17-18], is indicative of the effectiveness of this treatment. Thus, by combining self-medication hypothesis with dialectical skills training, it can be said that the therapist increases the patient's tolerating capacity that from the perspective of self-medication theory is the main reason for turning to drugs and where the patient felt therapist focuses solely on admissions, he also emphasizes the change. Since, in the current situation in our country, the number and percentage of female abusers is increasing, the aim of this study is to assess the efficacy of dialectical behavior therapy for increasing distress tolerance in women drug abusers.

2. RESEARCH METHOD

This research is a quasi-experimental design type pretest - posttest with control group, which has a follow up period. The statistical population consists of all female drug abusers referring to Birjand treatment centers in winter 2013. The sample includes 30 addicts who were selected from among all women drug users after successful completion of detoxification through available sampling method. Then they were equally and randomly included into two groups: intervention and control. Inclusion criteria included having the drug abuse criteria based on the criteria of DSM-IV, passing more than a week of successful detoxification and lack of regular use of antipsychotics in the treatment time. The exclusion criteria consisted of having psychotic, bipolar disorders or major depression, suffering especial physical illness at the time of performing research and illiteracy at reading and writing.

The research tool was Distress Tolerance Scale (DTS). It is a self-evaluating index of tolerance in emotional turmoil which has been developed by Simons and Gaher in 2005. It has 15 materials and 4 subscales. Micro-scales include: tolerance, attraction, evaluation, and adjustment which are graded in a five grades scale. The alpha coefficients for these scales are 0.72, 0.82, 0.78, and 0.70 respectively, and 0.82 for the total scale. It has been also found that this scale has a good criterion validity and initial convergence [9]. Alavi [6] also showed a high internal homology for total scale (α=0.71, M=42.47, SD=8.59) and medium reliability for these subscales (0.54 for tolerance, 0.42 for attraction, 0.56 for evaluation, and 0.58 for adjustment). Azizi calculated the Cranach's alpha of this questionnaire equal to 0.672, reliability coefficient using retest method for total scale equal to 0.81 and for subscales of tolerance, attraction, evaluation, and adjustment equal to 0.71, 0.69, 0.77, and 0.73 respectively [19].

After sample selection and putting them into experimental and control groups randomly, the mentioned questionnaires were performed in 2 groups. The experimental group was then treated under group style dialectical behavior therapy for 20 sessions of 90 minutes, and the control group only received Naltrexone and no training. In this training course, firstly, 2 sessions were allocated to mental-awareness skills which its main objective is to create the ability of attention control in person through training being non-judgmental, self-mental-awareness and being efficient. Then 8 sessions were devoted to skill-training the tolerance in turmoil where through a series of behavioral practices such as activities, having participation in a number of tasks, comparing with those who have better situations, deliberate creating positive emotions, temporary suppression of painful conditions, and substituting the opinions, the person's senses changes to boost his tolerance in turmoil, pain and sorrow. After that 2 sessions again were allocated to mental-awareness, and 8 sessions of emotional adjustment skill were embedded within the end of training where persons is taught how to reach peace and control and adjust his emotions. After the end of intervention, the two groups were evaluated by mentioned questionnaires. Then, 2 months after post-test, both groups were examined again in tracking period in order to indicate that if this change is stable over time. By the way, the skill training DBT was performed according to Linehan instruction of dialectic behavioral therapy [20, 11], and dialectical behavior therapy techniques of McKee, Wood and Bartley [21].

A summary of the implementation method of DBT (the subject of training sessions) is as follows: First session: after preliminary introduction of persons to each other, some explanations about dialectic behavioral therapy and its objective was presented. Then the training was started by these topics: inattention Practice, wise mind and intuition. Second session: making decision based on wise mind, fundamental acceptance, judgment and labels. Third session: fundamental acceptance, distraction from self-hurting behaviors, distraction through pleasure activities. Fourth session: distraction through attention to work or another thing, distraction from thoughts. Fifth session: distraction through leaving the situation, distraction through assignments and daily works. Sixth session: distraction through counting, self-sedation. Seventh session: making image of safe place, exploring the values. Eighth session: identifying the super power and better relation with super power, determining an own relaxation time. Ninth session: living in real-time, use of self-encourage coping thoughts. Tenth session: fundamental acceptance, confirming self-conversations, new coping approaches. Eleventh session: not to judge and your daily experiences, Conscious relation with others. Twelfth session: doing effective works, mindfulness attention in daily life, and daily schedule of attention-awareness. Thirteenth Session: Understanding the emotion and its nature. Fourteenth session: Overcoming barriers to healthy emotions, emotions and become behavioral. Fifteenth session: reducing physical vulnerability against disturbing emotions. Sixteenth session:

self-observing without self-judgment. Seventeenth session: reduction of cognitive vulnerability, increasing the positive emotions. Eighteenth session: mindfulness attention to emotion without judging the motion. Nineteenth session: facing with emotion, acting against intense emotional desires. Twentieth Meeting: problem solving. (It is notable that at the beginning of each session, 30 minutes were allocated to review and examination the previous session and solve the probable problems.)

3. RESULTS

The mean age of study subjects who were all women was 29 ± 6.8, with a minimum of 18 and maximum 45 years old that 53.33% of them were married, 26.66% single and 20% were divorced. The most frequent used drug was opium and opium sap with 74.6% and the lowest was crack with 33.3%. In addition, all subjects had at least one relapse (76.66% of people 1 to 3 times and 23.33% more than 3 times). Table 1 presented the descriptive statistics of the studied variables for each group. The table presented the mean and SD of scores of answers of both groups for sub-scales.

Table 1. Mean and SD of distress tolerance subscales in two intervention and control groups before and after intervention

Subscale	Group	Before intervention	After intervention	P-value
Tolerance	Intervention	1.57 ± 0.31	3.21 ± 0.74	P<0.001
	Control	1.27 ± 0.34	1.33 ± 0.28	P=0.425
Attraction	Intervention	1.47 ± 0.41	3.54 ± 0.65	P<0.001
	Control	1.33 ± 0.31	1.41 ± 0.32	P=0.319
Assessment	Intervention	1.44 ± 0.29	3.65 ± 0.89	P<0.001
	Control	1.36 ± 1.39	1.32 ± 0.29	P=0.195
Regulation	Intervention	1.41 ± 0.41	3.83 ± 0.74	P<0.001
	Control	1.49 ± 0.27	1.39 ± 0.26	P=0.493

In the present study, analysis of covariance was used to evaluate the efficacy of dialectical behavior therapy in increasing distress tolerance of drug abusers. Before ANCOVA, it is necessary to examine its assumptions.

Insignificance interaction of diffraction variable (pre-test) and the dependent variable in the distress tolerance variable ($f = 6.73$) and its subscales revealed that the data support the hypothesis of homogeneity of regression slopes ($P > 0.05$). Also, approximate parallel and a linear relationship between the variables also indicates the confirmation of these hypotheses. Due to the condition of a linear relationship between auxiliary random variable and the dependent variable and on the other hand, the slope of the regression lines are parallel, so the homogeneity of regression is confirmed. However, Levin test results on the dependent variable of distress tolerance ($f = 3.24$) was insignificant ($P > 0.05$), so the condition of similarity of error variance between groups is established. Kolmogorov - Smirnov test insignificance ($P > 0.05$) also implies the normality of the pre-test variable distribution in the experimental and the control group. Therefore, with respect to compliance with the assumptions of covariance analysis, variable of distress tolerance in both experimental and control groups is compared. The results of the analysis of covariance is shown in table below.

Table 2. Covariance analysis results, difference between intervention and control groups scores

	Sum of squares	Degree of freedom	Mean squares	f-Statistics	Significance	R^2
Tolerance Distress	32.145	1	32.145	389.26	0.000	0.72

As the results of analysis of covariance in Table 2 shows, the effectiveness of dialectical behavioral therapy, after controlling the effect of pre-test (diffraction variable) is significant on increasing the distress tolerance, so there is a difference between the two groups, that is, distress tolerance in the experimental group is increased. The results of covariance analysis in relation to distress tolerance subscales, including emotional distress tolerance ($P < 0.001$, $f = 118.12$), attracting with negative emotions ($P < 0.001$, $f = 124.04$), distress mental estimates ($P < 0.001$, $f = 178$) and adjusting efforts to relieve distress ($P < 0.001$, $F = 217.94$) was significant that indicates the effectiveness of dialectical behavior therapy in increasing all components of distress tolerance.

Table 3. Covariance analysis results of difference between mean scores of the intervention group at follow-up

	Sum of squares	Degree of freedom	Mean squares	f-Statistics	Significance
Distress tolerance	0.159	1	0.159	0.354	0.593

The results of analysis of covariance with intragroup repeated measurement for cores of distress tolerance in post-test and follow-up of the experimental group is given in the table above. Insignificance of distress tolerance variable is 0.593 ($P > 0.05$), indicates the similarity of mean scores of people response in the post-test and follow-up stages of distress tolerance, so dialectical behavior therapy effects was stable after 2 months.

4. DISCUSSION AND CONCLUSION

The purpose of this study was to investigate the efficacy of dialectical behavior therapy in increasing distress tolerance in women drug abusers in Birjand. According to the findings of this study, it was observed that dialectical behavior therapy training could well increase the distress tolerance in drug abusers which is in line with research by Nadimi, Shahabi Zadeh, Pishgar and Dastjerdi [22], Azizi, Borjali and Gulzari [5], Alavi, Moddares Gharavi, Yazdi and Salehi [23], Fischer [16], Miller et al [24]. Nadimi et al., [22] by evaluating the effectiveness of dialectical behavior therapy in a group in increasing distress tolerance and improving emotional regulation of men drug abusers in Zahedshahr, concluded that teaching dialectical behavior therapy significantly increased distress tolerance of men's abuse. Aziziet al., [5] evaluated the effectiveness of dialectical behavior therapy and cognitive therapy on relapse of and emotional problems of drug abusers. The results showed that both methods can improve distress tolerance for drug abusers but DBT method was more effective. Alavi et al., [23] examined the effectiveness of dialectical behavioral therapy method in group (based on the basic mindfulness, distress tolerance, and emotional regulation) on depression symptoms in students. The results showed that dialectical behavior therapy has been able to increase the distress tolerance and the emotional regulation of students significantly.

The persons having low tolerance in turmoil, firstly believes that excitement emotion is unbearable and they cannot deal with their distress and turmoil. Secondly these persons do not accept existence of emotion and become ashamed and unrest of its being because they under estimate their ability to deal with emotions. The third main feature of emotional adjustment of persons having low tolerance in turmoil is their much effort to prevent experienced negative emotions. It should be mentioned that if these people are not able to relieve these emotions, then all their attention is drawn to this turbulent emotion, and their function is significantly decreased [9]. In Alice theory frame, the component of tolerance in turmoil can reduce the emotional turmoil through modifying maladaptive beliefs of low frustration tolerance. In Alice's theory, low frustration tolerance results from this belief that frustration is unbearable and must be avoided any way. This concept is equivalent to low tolerance in turmoil in DBT [6].

Many studies have shown in the field of drug that those who are suffering from drug abuse have some problems in distress tolerance and psychological pressure components [25-27], and have some defects in the necessary skills to deal with problems, and that's' why they use drugs as a way to cope with it ti reduce the undesirable emotions caused by difficult situations [28-29]. Kari, and Termer et al., in recent years examined the alcohol and drug abusers and in their research, they concluded that people with low distress tolerance use drugs to regulate their emotions [30]. Also, Brown, Lejuez and Kahler [31], in a study on smokers have found that people with higher distress tolerance were more successful in the field of smoking cessation in a 3-month period. That is, the higher the distress tolerance, the tolerance of the patients to tolerate emotions without turning to cigarettes will be higher.

In his self-medication hypothesis, Khantzian knows the origins of addiction disorders in psychological suffers and distresses. In his view, people who submit to drug, often face with many basic distresses continually and this confusion is the main factor for the tendency to addiction. Khantzian points out that it is not as clear as in no other position, people who have experienced severe harm, are suffered from drug abuse disorder. He refers to deficits in the Ego of addicted people and their disability to tolerate emotions and states that they relieve themselves by using their preferred drug, and their emotional states are more tolerable. It seems that the self-treatment is also a good excuse for drug abuse [4].

In general, about the effectiveness of dialectical behavior therapy on distress tolerance subscales, it seems that training basic admission improves the emotional distress tolerance. Training distraction from self-harming behaviors, distraction through enjoyable activities, and distraction through focusing on work or other subject, distraction of thoughts, and distraction from the position leave was effective on the sub-scale of attracting with negative emotions and has improved it. Training values discovery, imaging a safe place, and identifying superior power and better communication with it will result in improvement of mental distress and learning new coping strategies, approving self-talks, using self-encouraging coping thoughts and living in the present have resulted in regulation of efforts to alleviate distress [22].

The findings of this study showed that dialectical behavior therapy training can improve tolerance of distress in women drug abusers, and its effect will remain after 2 months. Since dialectical behavior therapy is a new therapy in the world and especially in Iran, it seems necessary to carry out several research in different areas. As mentioned, people who tend to drug abuse or have been caught in it, have weaknesses in emotional regulation and distress tolerance, indicating the necessity of putting all above should in educational programs; so it is recommended that at the macro level, society, organizations and institutions do an effort to prevent drug abuse and make the society safer by informing, holding workshops and training sessions based on dialectical behavior therapy for public, especially those who are prone to drug abuse (including adolescents and youth) in the field of training skills of increasing distress and confusion tolerance. Also, due to the fact that distress tolerance strategies are learned in childhood and at the end of adolescence, they are almost become an automatic cognitive style of person and almost stabilized, therefore, it is recommended to start training stop using negative strategies and positive and adaptive strategies in childhood and by parents and to be completed through relevant skills in schools. One of the restrictions we faced in the implementation of this project was sampling method that unwillingly we used convenience sampling. Therefore it is recommended to observe the caution in generalizing the results.

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