

# THE EFFECTIVENESS OF DIALECTICAL BEHAVIOR THERAPY SKILLS TO REDUCTION IN DIFFICULTY IN EMOTION REGULATION AMONG STUDENTS

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## Abstract

*Emotion dysregulation is one of the most important symptoms in many psychiatric disorders such as borderline personality disorder (BPD) and related pathology. Accordingly, there are four components of intervention in the treatment of group therapy: mindfulness, Distress Tolerance, emotional regulation and Interpersonal Effectiveness. The goal of this study was to survey the effectiveness of training the dialectical behavior therapy skills to see if it causes the reduction in difficulty emotion regulation among university students. This research was quasi-experimental with pretest, posttest, and control group. Participants were selected among students who had difficulty in controlling their emotion. Twenty-one students who had entry criteria in this study were randomly divided into two experimental (DBT skill group) and waiting list groups. All of participants filled out Difficulties in Emotion Regulation Scale (DERS) before interventions and immediately after the end of therapeutic session. The result indicated that training dialectical behavior therapy skills would lead to decrease difficulty in emotion regulation; moreover, a reduction was observed in some subscales including non-acceptance of emotional responses, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies and emotional clarity. The current study showed that emotional regulation training in a non-clinical sample can be effective in reducing negative emotions and increasing the acceptance and awareness so Dialectical behavioral therapy by increasing the ability to control and regulate emotions can increase positive mood and increase control feelings.*

**Key words:** Emotion regulation, Dialectic behavior therapy, Emotion dysregulation, Behavior therapy skills.

Recibido: 07-08-19 / Aceptado: 02-09-19

## INTRODUCTION

Emotion regulation refers to the processes which help a person for monitoring, evaluating, and modulating his emotional reactions face of environment and other people. Difficulties in emotion regulation lead to the inability to control immediate feeling, lack of awareness to personal feelings and impulsive behaviors. Actually a rapid growing body of research supports the role of emotion regulation difficulties in multiple forms of psychopathology and maladaptive behaviors. Therefore, it is not surprising that 85% of disorders diagnosed by DSM -5, encompass some descriptions of problems including deficit in emotions or lack of coherence between emotional components (Kring & Sloan, 2009). Marsha Linehan was the first person who presented a definition for emotion and made a concept for emotion regulation in scope of mental health. She defines emotion as a brief, complex, non-voluntary, patterned, and completely sys-

tematic response to external and internal stimulus (Linehan et al., 1993). Emotional disorder can be defined as a defeat in change an emotional response through a favorable method or defined under the title of using strategies in a way that leads to long-term harmful effects (Werner, Goldin, Ball, Heimberg, & Gross, 2011). Emotional disorder can also encompass maladaptive strategies or defeat and difficulty in using effective strategies mechanisms (Kring, & Sloan). Gratz (2004) assumes that difficulty in emotion regulation is along with some components including non-acceptance emotions, disability to use purposive behaviors, difficulty in impulse control, lack of emotional awareness, limited access to emotion regulation strategies, and lack of emotional clarity. (Gratz, & Roemer, 2004). Researches indicate that difficulties in emotion regulation would lead to resistance against treatment. (Azizi, Borjali, Golzari, 2010, Hempel, Vanderbleek, & Lynch, 2018) and is comorbid with mental disorders. More than 50% of axis 1 disorders and 100% of axis 2 disorders are along with emotion regulation. (Gross, Levenson, 1997). Patients with eating disorder (Boutelle, Braden, Knatz-Peck, Anderson, Rhee, 2018), generalized anxiety

disorder (Dagleish et al., 2018) drug abuse (Fox, Axelrod, Paliwal, Sleeper, Sinha, 2007) or Anorexia Nervosa (Wisniewski, Hernandez, Waller, 2018) show more difficulty in emotion regulation compared to control group. According to conducted studies in Iran, difficulty in emotion regulation plays role in various disorders such as post-traumatic stress syndrome (Harned, Wilks, Schmidt, Coyle, 2018), drug abuse (Issazadegan et al., 2014), bipolar and depressed patients (Dagleish et al., 2018), social anxiety (Shirotsuki, & Noda, 2018), bullying behaviors and being victim of bullying during adolescence (Basharpour, Molavi, Barahmand, & Mousavi, 2013, Center, & Lynch, 2018).

Emotion regulation emphasizes on using behaviors and thoughts that have role in emotions in order to control them; it means that emotion regulation affects the emotional experiences method and emergence of them (Bar-On, & Parker, 2000).

Dialectic behavior therapy (DBT) is one of the most effective methods in emotions regulation and control (Linehan et al., 1993). Dialectic Behavior Therapy (DBT) is a third-wave therapeutic approach composed of cognitive behavioral therapy principles and Eastern philosophy of Zen that was invented for treating Borderline Personality Disorder. This approach has combined interventions related to cognitive-behavioral treatments, which are based on "Change" principle, with teachings and technics of Eastern philosophy of Zen that is based on acceptance principle (Wagner, & Linehan, 2006). Therapeutic approach of patients with emotion difficulty should encompass some treatments that are able to regulate and moderate inner pressures and emotional arousal modes through cognitive processes. Cognitive-behavioral approach is an increasing effective treatment for emotional problems (Wagner, & Linehan, 2006). Dialectic behavior therapy is a cognitive-behavioral therapy that not only uses CBT skills such as cognitive restructuring and incident management but also treats maladaptive behaviors (such as impulsive aggression) through teaching emotional regulation skills, distress tolerance and effective interpersonal relationships (Frazier, & Vela, 2014).

4 categories of skills are taught in DBT including 1) mindfulness skills, 2) interpersonal efficacy skills, 3) emotional regulation skills, and 4) distress (affliction) tolerance skill (Linehan et al., 1993). Dialectical position is observed in DBT skills in which, mindfulness and distress tolerance are acceptance-based skills, and interpersonal efficacy and emotion regulation are change-based skills (King, 2014). Goodman (2014) expresses that dialectic behavior therapy leads to change in emotional difficulty in a person with borderline personality disorder (Goodman et al, 2014, Navarro-Haro et al., 2019).

Evidences imply that component of dialectical behavior therapy skills training can itself be effective in reducing emotion disorder in many of mental health

disorders. Ortiz (2015) presented a Trans-Diagnostic Treatment Model based on dialectical behavior therapy for emotional disorder. This model consists of some skills that help people to reduce vulnerability to emotions through handling emotional situations, interpreting emotional signs properly, paying attention to biological, experiential, and practical changes, and finally suitable emotional process (Ortiz, 2015).

Overall, college is a critical period when developmental tasks are intense and mental health issues emerge and persist (Zivin, Eisenberg, Gollust, & Golberstein, 2009) several research about university have found that 8.9% of students seriously considered suicide, 6.3% intentionally harmed themselves, and 34.5% reported they had felt so depressed it was difficult to function, all within the previous year. In addition, 92% of counseling directors believe that more students suffer from severe psychological issues and emotion dysfunctional in the past 5 years. Coping skills are inherent part of developing resilience for managing the demands of college. The issue of emotion regulation and emotional control is one of the most important issues for students. Problems with friends, partner, family, and issues related to their studying and education cause arousal and experience of many excitements in them. And for this reason, emotional self-discipline is important for them. A DBT-informed program may help college students to develop effective coping strategies (Panepinto, Uschold, Olandese, & Linn, 2015, Chugani, & Landes, 2016). DBT is derived from cognitive-behavioral therapy, but the inclusion of a dialectical philosophy, radical behaviorism, and mindfulness makes it a unique trans-diagnostic treatment for emotion dysregulation which have been perform through college students. Lee & Mason (2018) showed that "training the college students, indicate that even a 4-week program may be effective in enhancing psychological resilience and global mental health", by this description, the present study can be a way to reduce students' problems (Lee, & Manson, 2019). DBT provides concurrent group-based didactic skills training.

Since emotion regulation problems are along with numerous issues in scope of mental pathology, does it reduce difficulty in emotion regulation in non-clinical sample or not? Our main hypothesis in this study is that the teaching of emotional regulation skills in students reduces their problems in this area and Group Training Emotion Regulation Skills Can Improve both Emotional Adaptation and Emotional Knowledge in University Students.

## METHOD, PARTICIPATE, MEASUREMENT

This study follows quasi-experimental plan with pretest-posttest and control group. Statistical population consists of all female students in one of Rafsanjan universities which is located in the south-east

of Iran and had difficulty in emotion regulation. Sampling was done in two steps. The first step, "Difficulties in Emotion Regulation Scale (DERS)" of Gratz and Roemer (2004) was filled out by students and ones who had higher difficulties in emotion regulation (2 standard deviations above average) were chosen as target group and at the next step, In the second stage, the students who completed the cut-point score on the DERS, completed the Beck anxiety and depression test and were eliminated from the sample group if they were higher than the cut-point score. In the last step, 20 students with high score in DERS were entered into the study and randomly assigned to two experimental and waiting lists groups. The mean age of the participants in the two groups was 21.5 years, ranged in age from 18 to 25 (M: 21.5, SD: 2.5)

This treatment is taken from Linehan skill training manual for treating borderline personality disorder (Linehan et al., 1993). Experimental group received 8 sessions approximately 2 hours of dialectical behavior therapy twice a week. Each session consisted of introduction of goals, subjects which related to that session, discussion and practices in session and practices out of session. In addition, each session after second session was started with a 5-minutes practice of generalized awareness through breathing and then review on practices related to previous session. A pre-session was hold before the start of main sessions to introduce members to each other and to make them familiar with goals of group. In this session after welcoming, group members became familiar with each other as well as goals and rules of the group; such as, definition of dialectic and thinking method, principles and performance were presented and explained to them. Two categories of skills were taught and practiced in first session in order to access the generalized awareness. The first category consisted of "what" skills that include some actions should be done by person to gain generalized awareness (these actions include three skills of observance, description, and involvement). The second category, "how" skills included the way that these actions can be done (including three skills of taking non-judgmental position, generalized-self-awareness, and efficient performance). Third and fourth sessions were associated with the first part of distress tolerance component that is survival strategies in crisis. Survival strategies in crisis include 4 collections of skills as follows: distraction strategies, self-relaxation by using five senses, moment improvement skills and loss-benefit techniques. In the fourth session, those skills which were taught during second (distracting strategies) and third (self-relaxation skills, moment improvement skills and loss-benefit technique) sessions, were performed by participations. Fifth session included the second part of distress tolerance that is acceptance of reality. This skill encompasses three categories of skills including absolute acceptance, mind turning and satisfaction.

Component of emotion regulation was discussed in sessions six and seven. Subjects of these sessions included this question: What is emotion and what are its components? These sessions consisted of teaching pattern to recognize emotions and label them, which leads to increase ability in controlling emotions, acceptance of emotions even if they are negative, teaching patient to abandon emotional pain, accept emotions and change negative emotions through opposite reaction to emotion. Effective relationship skills were taught in eighth sessions. These skills include assertiveness skills, listening skills and negotiation skills. At the end, respondents filled out research questionnaires before and after treatment and the data were analyzed using Mann-Whitney U and independent t-test methods.

### DIFFICULTIES IN EMOTION REGULATION SCALE

This scale was created in 2004 by Gratz and Roemer. This scale consists of 36 items with a total score and 6 specific scores for subscales related to different aspects of difficulty in emotion regulation. These subscales include non-acceptance of emotions, having difficulties with utilizing those behaviors that symmetric and directly related to goals, difficulty in impulse control, lack of emotional awareness, limited access to emotion regulation strategies and lack of emotional clarity (Gratz, & Roemer, 2004). Higher scores suggest greater problems with emotion regulation. Results related to reliability by Gratz and Roemer indicated that this scale had high internal consistency. In relation with validity, the structure had validity and was enough predictor for scale.

#### Beck Depression Inventory

This questionnaire contains 21 questions and feedback to assess symptoms of depression is made. Beck et al reviewed studies that had used this tool and found that the retest reliability coefficient, depending on the type of interval between implementation and population 0.48 to 0.86 varied. Beck et al (1996) test-retest reliability within a week achieved 0.93 and the validity and reliability has been confirmed in numerous studies (Beck, Steer, & Brown, 1996, da Sá Junior, Andrada, & Andrada, Gorenstein, & Wang, 2018). (The purpose of this test was to examine the status of participants in the depression scale and to examine the criteria for exclusion in the study).

#### BECK ANXIETY INVENTORY

A self-report questionnaire to measure the severity of anxiety in adolescents and adults is provided. The test has 21 questions. Aaron Beck et al

(1990), Beck Anxiety Inventory (BAI) were introduced. 0.92 coefficient of internal consistency, test-retest reliability within a week 0.75, and question correlation from 0.3 to 0.76 varied (Tobias, Lehrfeld, Rosenfeld, Pessin, & Breitbart). Five types of content validity, concurrent, construct, and diagnostic agent for this test is measured all of which reflects the high efficiency of this tool to measure the severity of anxiety (Ulusoy, Sahin, & Erkmen, 1998, Beck, Epstein, Brown, Steer, 1988). (The purpose of this test was to examine the status of participants in the depression scale and to examine the criteria for exclusion in the study).

## RESULTS

According to table 1, mean scores of experimental and waiting list groups is almost equal in pretest and these groups are not significantly different in terms of research variables.

Then, ANCOVA was used to examine the effect of treatment on total level of difficulty in emotion regulation and its components due to the relationship between components of emotion regulation difficulty and the obtained results are presented in the following.

According to table above, it can be observed that dialectical behavior therapy skills training can improve difficulty in emotion regulation which includes non-acceptance of emotions, difficulty in impulse control, lack of emotional awareness, limited access to emotion regulation strategies, and lack of emotional clarity.

## DISCUSSION

Dialectical Behavior Therapy (DBT) has been increasingly applied in university students has been performed because of its beneficial outcomes which are related to enhancing emotions regulation capacities and reducing dysfunctional behaviors (Muhomba, Chugani, & Uliaszek, 2017) Two programs has been done in college students centers have published data on their work using the comprehensive DBT model (Engle, Gadischkie, Roy, & Nunziato, 2013) The comprehensive DBT model consists of individual therapy, group skills training, phone coaching, and a therapist consultation team. DBT group skills training, a component of the comprehensive model, is frequently offered in settings where it may not be clinically feasible to offer a comprehensive, multicomponent treatment (Linehan et al., 2015). Although DBT skills training has shown promise as an effective intervention in clinically diverse samples of college students, a continuing challenge is that the DBT skills training manual (Linehan, 2015) currently contains enough skills to run weekly

groups. Many DBT skills training groups for college students have offered a small selection of content from each skills training module (i.e., mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness skills).

The purpose of this study was to evaluate the effectiveness of emotion regulation skills training based on the DBT Protocol in reducing emotional problems through a group of university students who have difficulties in emotion regulation. In summary, dialectical behavior therapy training for experimental group compared to control group (waiting list group) that revealed the following results:

One of the most important results of dialectical behavior therapy training in people with difficulty in emotion regulation was the reduction in difficulty in emotion regulation totally. A view on subscales of emotion regulation difficulty indicated that provided trainings could significantly reduce dimensions of non-acceptance, emotional responses, difficulty in impulse control, lack of emotional awareness, emotional clarity and limited access to emotion regulation strategies specifically among members of this group although we did not observe any significant reduction in purposive goals. The data obtained from this research was coordinated with recent findings of Neacsu (2013). He studied the effect of dialectical behavior therapy skills training as a trans-diagnostic treatment for emotion regulation difficulty (Neacsu, Eberle, Kramer, Wiesmann, & Linehan, 2014). Results of this study indicated that respondents who learned dialectical behavior therapy trainings showed faster reduction in emotion regulation problems compared to supportive treatment. Dialectical behavior therapy skills training was more successful in increasing access to regulation strategies and engaging in purposive behaviors in emotional incidents. Souler (2009) emphasizes in another study that this treatment is effective in relation with impulsive behavior (Soler et al., 2009) also recent studies indicated that dialectical behavior therapy reduces impulse intensity and it is effective in emotion regulation and improvement of emotional instability (MacPherson, Cheavens, & Fristad, 2013). These results are matched with results obtained from present paper regarding reduction in impulsive behaviors. Linehan (1993) conducted a study entitled "effectiveness of dialectical behavior therapy" and showed that patients who are treated by dialectical behavior therapy, are more successful in regulating and controlling their emotions. In another study, these skills were used as moderators for improvement of emotion regulation in dialectical behavior therapy in patients with borderline personality disorders. The initial analysis implied that increasing use of dialectical behavior therapy skills could mediate the relationship between treatment time and reduction in emotion dysregulation (Neacsu et al., 2014). Therefore, the results of present study are matched with

results of other similar studies; moreover, it not only could reduce difficulty in emotion regulation but also could consider other dimensions regarding treatment program. Now, the other aspect of such effect is discussed here.

First, we discuss effectiveness of this therapeutic program regarding theoretical aspect. In this treatment, patients are trained to be aware of their emotions, behaviors and thoughts in all moments of life. Participants are taught to gain the required ability to distinguish between mental moods and to be aware of mental moods of each moment they are in it. In this regard, they can evaluate benefit or harm of any mental situation regarding to their features, and can be aware of implications of such mental situations and change them if necessary. On the other hand, this treatment teaches distress tolerance skills and survival strategies in crisis to patients and help them how to use some skills such as distraction skills, self-relaxation by five senses, improvement of moments, and benefit-loss techniques in emotional arousal conditions in order to reduce emotion intensity and impulsive behaviors. The other part of distress tolerance skills is associated with reality acceptance skills. This skill helps a person to make decision wisely in different situations and cope with emotional pain better and this requires mind-turning skills learning. It should be noted that person would obtain reality acceptance skill if he did not judge himself and others. In fact, fundamental acceptance is defined as an ability to be aware of thoughts, feelings and emotions in present moment without any judgment. According to this definition, fundamental acceptance can be considered as an important component of mindfulness (Ortiz, 2015). Emotion regulation component discusses training a pattern for emotions and labeling them that leads to increase in ability to control emotions. In addition, the person learns some skills to reduce vulnerability to negative emotions besides teaching some positive emotional experiences through creating short-term positive emotional experiences (such as entertainment) and long-term positive emotional experiences (Linehan, 2014). In summary, it can be stated that use of DBTS-based group therapy leads to reduction in difficulty in emotion regulation among students as well as reduction in its subscales including acceptance of emotional responses, difficulty in impulse control, lack of emotional awareness and limited access to emotion regulation strategies and emotional clarity, which has covered and encompassed the therapy content of numerous symptoms among patients.

In addition to these results, although subscale of difficulty in purposive behavior was decreased in experimental group compared to control group, this reduction was not significant. Whereas, this subscale was significantly reduced in research of Linehan (2014) Difficulty in purposeful behavior would reflect difficulties in focusing and finishing tasks when experiencing negative emotions. This issue can be ex-

plained that first, this scale emphasizes on cognitive and behavioral components at the same time and success in this scale requires stronger cognitive-behavioral skills. One of differences between present study and Neacsiu study is number of sessions. Neacsiu research consisted of 16 sessions, while session of present study was 8 sessions; hence, there was not enough time for learning these skills. The other difference was related to studied population. Non-clinical population was studied in present study and the difference in mentioned variable might have affected the results.

However, the important question is that why patients with difficulty in emotion regulation in Iranian cultural conditions benefit from such programs. It can be stated that difficulty in emotion regulation includes common aspects beyond the cultural aspect and it was mentioned, emotional difficulty is along with other disorders usually and this indicates that this disorder can be a mechanism that leads other disorders. The other point is that present skill-training program aims on removing basic symptoms of this disorder and since symptoms of difficulty in emotion regulation are relatively similar in all of cultures despite the cultural differences, effectiveness of this program is acceptable in an Iranian sample. On the other hand, the reason for effect of such treatment might be more considerable of this treatment to the structure of the life style of patients. In this treatment contrary to some other therapeutic methods, any specific value or life style is not imposed to patients and they make decision based on their own value systems. This treatment can help patients to diagnose and identify changeable and unchangeable individual and environmental elements to concentrate on those behaviors and actions that are more beneficial in order to prevent from wasting energy and life capital of people.

## LIMITATION

There are several limitations in this study. First, the size of the sample is quite small which limited the generalizability of the findings. Second, all outcome data collected were in the form of self-report questionnaires. Third, the sample of this study was selected from the university students and should be cautiously generalized to other groups in the community. Finally, current research has applied emotion regulation skills in a group setting and may differ in individual studies.

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**Table 1. Descriptive values of research variables in experimental and control groups during pretest and posttest**

	Posttest				Pre-test				Variable
	Control		Experimental		Control		Experimental		
	Standard deviation	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation	Mean	
	10.82	108.9	13.22	70.5	13.54	123.1	11.98	115.7	Difficult to adjust the overall emotion
	3.43	17.6	2.11	10.7	4.78	22	2.26	19.7	Rejection of emotional responses
	2.49	18	4.32	14.6	3.07	20.1	5.08	17.4	Difficulty in carrying out purposeful behavior
	2.85	17.8	3.44	12.9	4.18	22	4.29	21.7	Difficulty in controlling impulses
	2	19	7	12.9	3.26	18.7	3.23	17.4	Lack of emotional knowledge
	3.5	21.6	2.65	13.8	4.92	26.3	5.2	26.3	Limited access to emotion regulation strategies
	3.41	14.9	3.06	10.6	3.55	14	4.23	13.2	Lack of emotional clarity

**Table 2. The effect of treatment on total level of difficulty in emotion regulation and its components using ANCOVA**

Source	SS	Df	MS	F	Sig	ETA <sup>2</sup>
Difficult to adjust the overall emotion	4499/228	1	4499/228	31/788	0/001	0/652
Rejection of emotional responses	175/811	1	175/811	23/852	0/001	0/584
Difficulty in carrying out purposeful behavior	46/636	1	46/636	3/554	0/077	0/173
Difficulty in controlling impulses	118/272	1	118/272	11/387	0/004	0/401
Lack of emotional knowledge	190/554	1	190/554	55/867	0/001	0/767
Limited access to emotion regulation strategies	304/200	1	304/200	31/756	0/001	0/651
Lack of emotional clarity	80/413	1	80/413	8/613	0/009	0/336