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Comparison of the Effectiveness of Dialectical Behavior Therapy Skills Training (DBT-ST) and Mindfulness-Based Cognitive Therapy (MBCT) on Cognitive Emotion Regulation in Individuals with Symptoms of Borderline Personality Disorder

Bahareh. Samadi[1], Bahram. Mirzaian[2*], Hossein Ali. Ghanadzadegan[2]

[1] Ph.D Student, Department of Psychology, Sari Branch, Islamic Azad University, Sari, Iran
[2] Assistant Professor, Department of Psychology, Sari Branch, Islamic Azad University, Sari, Iran

*** Corresponding author email address**: bahrammirzaian@gmail.com

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A B S T R A C T

Objective: Borderline Personality Disorder (BPD) is the most common personality disorder in psychiatric settings and one of the disorders that causes the most harm to individuals. The aim of the present study was to compare the effectiveness of Dialectical Behavior Therapy Skills Training (DBT-ST) and Mindfulness-Based Cognitive Therapy (MBCT) on cognitive emotion regulation in individuals with symptoms of Borderline Personality Disorder.

Methods and Materials: This research was a semi-experimental study, utilizing a pre-test, post-test design with a control group and a follow-up period. The statistical population included all clients aged 18 to 45 who referred to counseling centers in the city of Sari during the first half of 2022 and had files. From all these individuals, those willing to cooperate were selected through purposive non-random sampling, resulting in a sample of 45 participants. These individuals were then randomly assigned to three groups (Group 1: Dialectical Behavior Therapy Skills Training, n = 15; Group 2: Mindfulness-Based Cognitive Therapy, n = 15; and Group 3: Control group, n = 15). Data collection was conducted using the Cognitive Emotion Regulation Questionnaire by Garnefski et al. (2001). The Dialectical Behavior Therapy Skills Training group (2003) participated in 12 weekly 90-minute group sessions, and the Mindfulness-Based Cognitive Therapy group (2002) participated in 8 weekly 90-minute group sessions. Data were analyzed using repeated measures ANOVA.

Findings: The results indicated that Dialectical Behavior Therapy Skills Training and Mindfulness-Based Cognitive Therapy were effective on cognitive emotion regulation in individuals with symptoms of Borderline Personality Disorder (P = 0.001). There was a significant difference in the effectiveness of Dialectical Behavior Therapy Skills Training and Mindfulness-Based Cognitive Therapy on cognitive emotion regulation between the experimental groups and the control group.

Conclusion: Based on the results of this study, it can be concluded that Dialectical Behavior Therapy Skills Training and Mindfulness-Based Cognitive Therapy, through individuals' cognitive coping strategies, can lead to improvements in psychological indicators and enhancement of mental health in individuals with symptoms of Borderline Personality Disorder.

Keywords: *Dialectical Behavior Therapy, Mindfulness-Based Cognitive Therapy, Cognitive Emotion Regulation, Borderline Personality Disorder.*

1. Introduction

Individuals with Borderline Personality Disorder (BPD) are typically emotionally unstable and impulsive, often displaying patterns of intense and chaotic relationships. Their personal lives are markedly disorganized and unstable, characterized by repeated frustrations and rejections (Morton et al., 2012; Nohi & Hasani, 2017). People with BPD are almost always in a state of crisis, experiencing frequent mood swings. Patients may be argumentative one moment, depressed the next, and later complain of feeling numb. Their behavior is highly unpredictable, and their achievements rarely match their capabilities. The painful nature of their lives is reflected in their repetitive self-destructive behaviors. Due to their feelings of dependency and hostility, they have tumultuous interpersonal relationships. They can become dependent on those close to them and, when disappointed, express intense anger towards their close friends (Jabraeili et al., 2014; Johnson, 2021). Given the emotional instability coupled with an unstable self-image, it is unsurprising that they have highly unstable interpersonal relationships. These relationships are deep but turbulent, often involving excessive idealization of friends or partners, which subsequently leads to frustration, disappointment, and anger. Nevertheless, they desperately attempt to avoid real or imagined abandonment, possibly due to a profound fear of abandonment (Aghayousefi et al., 2016; Alden, 2008; Einy & Narimani, 2019).

Borderline Personality Disorder is the most prevalent personality disorder in psychiatric settings and one of the most damaging to the individual. According to the DSM-5, the prevalence rate of this disorder in the general population is estimated to be around 1.6%, potentially rising to 5.9% (APA, 2022). Another characteristic of these patients is impulsivity, exemplified by excessive spending, unsafe sexual relationships, binge eating, and substance abuse (Vakili et al., 2016). Borderline Personality Disorder is marked by a pervasive pattern of instability in interpersonal relationships, self-image, and emotions. The main feature of individuals with BPD is emotional instability and cognitive emotion dysregulation. They seem almost always in a state of crisis, which can lead to maladaptive emotional responses such as anger and aggression, resulting in inadequate stress coping strategies (Morton et al., 2012; Nohi & Hasani, 2017; Taghizadeh, 2015). Emotional instability is generally related to negative emotions, with anger and rage appearing to be the primary emotions in Borderline Personality Disorder (Morton et al., 2012).

Linehan's biosocial theory suggests that BPD is primarily a dysfunction in the emotion regulation system. Behavioral patterns in BPD are either functionally related to dysregulation or are the inevitable outcomes of this fundamental dysregulation across multiple or all emotional domains, including both positive and negative emotions. From Linehan's perspective, dysfunction in the emotion regulation system is considered the core pathology. Emotional dysregulation results from a combination of emotional vulnerability and difficulties in modulating emotional responses. Emotional vulnerability is conceptualized as heightened sensitivity to emotional stimuli, intense emotional responses, and slow return to emotional baseline (Nohi & Hasani, 2017).

One effective third-wave psychotherapy method for reducing symptoms in individuals with BPD is Dialectical Behavior Therapy (DBT). DBT was developed from standard cognitive-behavioral therapy as a treatment for BPD, particularly for adults with severe dysfunction and recurrent suicidality (Kashani & Vaziri, 2013; Mohamadizadeh et al., 2018). In recent years, another therapeutic approach that many researchers have investigated for its effectiveness across various domains is Mindfulness-Based Cognitive Therapy (MBCT). MBCT was initially developed by Teasdale and colleagues in 1992 by integrating principles and components of Kabat-Zinn's Mindfulness-Based Stress Reduction program with Beck's cognitive therapy (Segal et al., 2018). This therapeutic approach consists of 8 sessions. The primary goal of MBCT is to help participants connect with their thoughts, feelings, and bodily sensations, and to break the habitual, dysfunctional cycles such as rumination that make them vulnerable to psychological disorders (Creswell et al., 2019). Generally, MBCT, as one of the third-wave cognitive-

behavioral therapies, has been effective for a wide range of psychological problems and disorders (Dalili & Bayazi, 2019). Zamani et al. (2018) found that DBT improves distress tolerance and cognitive emotion regulation (Zamani et al., 2015). Therefore, this study compares the effectiveness of Dialectical Behavior Therapy Skills Training and Mindfulness-Based Cognitive Therapy on cognitive emotion regulation in individuals with symptoms of Borderline Personality Disorder.

2. Methods and Materials

2.1. Study Design and Participants

The present research employed a quasi-experimental design with pre-test and post-test (two experimental groups and one control group), where DBT skills training and MBCT were applied to the experimental groups, and the control group received no treatment. A follow-up test was conducted two months later. The control group, considered a waitlist, received MBCT at the end of the study after the follow-up test. The statistical population included all clients aged 18 to 45 who referred to counseling centers in Sari during the first half of 2022 and had files. From all individuals, those willing to cooperate and providing full consent were selected through purposive non-random sampling, resulting in a sample of 45 participants.

The sample size was estimated using the following equation based on previous studies, with values of $\sigma = 4.67$, $d^2 = 4.507$, $\alpha = 0.05$, and Power = 0.90, yielding a sample size of 12.99. In this study, the sample size was overestimated to 15 individuals per group, considering potential dropouts. Initially, the Borderline Personality Scale questionnaire by Rawlings et al. (2001) was administered among the population, and 45 individuals with symptoms of BPD were selected based on inclusion criteria. They were then randomly assigned to three groups of 15 each (15 in Experimental Group 1, 15 in Experimental Group 2, and 15 in the Control Group). Data collection involved both library and field methods. To collect data, the Cognitive Emotion Regulation Questionnaire by Garnefski et al. (2001) was used. The DBT skills training group (2003) participated in 12 weekly 90-minute group sessions, and the MBCT group (2002) participated in 8 weekly 90-minute group sessions. At the end of the sessions, participants in all three groups were separately invited for the post-test. After two months, all participants completed the Cognitive Emotion Regulation Questionnaire by Garnefski for the third time (follow-up phase).

2.2. Measures

2.2.1. Cognitive Emotion Regulation

This questionnaire was developed by Garnefski, Kraaij, and Spinhoven (2001) in the Netherlands and is available in both English and Dutch versions. It is a multidimensional self-report questionnaire designed to identify cognitive coping strategies after experiencing negative events or situations. Suitable for individuals over 12 years old, it comprises 36 items divided into 9 cognitive strategies: self-blame, acceptance, rumination, positive refocusing, planning, positive reappraisal, putting into perspective, catastrophizing, and blaming others. Items are rated on a 5-point Likert scale, from "never" to "always." Cronbach's alpha for the subscales ranges from 0.73 to 0.80, and test-retest reliability over 5 months ranges from 0.41 to 0.59. The questionnaire's correlation with the Depression Scale is 0.38 and with the Anxiety Scale is 0.33. Hasani (2010) normed the Persian version of the CERQ in Iranian culture. In this study, reliability was confirmed using internal consistency methods (Cronbach's alpha ranging from 0.76 to 0.92) and test-retest reliability with varimax rotation, subscale correlations (correlation range 0.32 to 0.67), and criterion validity. Yusefi (2006) reported a Cronbach's alpha of 0.82 for this questionnaire. The CERQ's reliability in the present study was determined using Cronbach's alpha, yielding a value of 0.74 (Garnefski et al., 2003; Garnefski et al., 2009; Garnefski & Kraaij, 2006; Garnefski et al., 2001; Garnefski et al., 2007; Garnefski et al., 2004; Tabatabaei Nejad & Ibn Yamin, 2021). To determine the reliability of the CERQ in the current study, Cronbach's alpha was used, with subscale values for self-blame (0.84), rumination (0.79), catastrophizing (0.81), blaming others (0.83), overall maladaptive strategies (0.86), acceptance (0.82), positive refocusing (0.78), planning (0.80), positive reappraisal (0.76), putting into perspective (0.81), and overall adaptive strategies (0.84).

2.3. Interventions

2.3.1. Dialectical Behavior Therapy

The treatment protocol used in this study consisted of twelve 90-minute sessions. Each session included an introduction to session goals and topics, in-session discussions and exercises, and homework assignments. DBT skills training followed the protocols by McKay, Wood, and Brantley (2007) and Linehan (1992), conducted in 12

weekly 90-minute sessions (Iri et al., 2019; Linehan, 1992; Linehan & Dexter-Mazza, 2008; Linehan et al., 2015; McKay et al., 2007; McKay et al., 2019).

1. Pre-test and introduction; mindfulness: defining dialectics and principles and ways of dialectical thinking and acting, teaching that there is more than one way to view issues. Teaching three states of mind (reasonable mind, emotional mind, and wise mind); mindfulness concept; mindfulness breathing exercise, feedback, and assignments.
2. Fundamental mindfulness: "What" skills - observing, describing, participating; focusing entirely on the present moment; recognizing thoughts, emotions, feelings; letting go of judgmental thinking; merging with current experience; focusing exercise, feedback, and assignments.
3. Fundamental mindfulness: "What" skills training; radical acceptance concept; defusion practice; non-judgment; wise mind meditation, feedback, and assignments.
4. Fundamental mindfulness: effective action; mindfulness-based daily schedule; wise mind meditation, feedback, and assignments.
5. Fundamental interpersonal effectiveness: mindful attention to interpersonal relationships; identifying communication styles; should thinking and its consequences; barriers to using interpersonal skills, feedback, and assignments.
6. Fundamental interpersonal effectiveness: key interpersonal skills; identifying personal values; identifying personal needs; expressing needs; inability to identify needs, feedback, and assignments.
7. Advanced interpersonal effectiveness: assertiveness script; listening skills; assertive behavior; analyzing problematic interactions, feedback, and assignments.
8. Emotion regulation: recognizing emotions and how they work; importance of identifying and labeling emotions; practicing identifying and labeling emotions; emotion log, feedback, and assignments.
9. Emotion regulation: the relationship between emotions and behavior; reducing vulnerability to distressing emotions; practicing recognizing self-harm behaviors; observing oneself without judgment, feedback, and assignments.
10. Emotion regulation: reducing cognitive vulnerability (coping thoughts, evidence review); defusion of thoughts and emotions; acting opposite to intense emotional urges, feedback, and assignments.
11. Distress tolerance: crisis survival strategies; defining crisis and its characteristics; recognizing crisis situations; distraction skills, feedback, and assignments.
12. Distress tolerance and summary: creating a distraction plan; practicing committed action; using self-encouraging coping thoughts; generalizing skills outside therapy, summary, and session review; post-test.

2.3.2. Mindfulness-Based Cognitive Therapy

This therapy was designed using the protocol of Mindfulness-Based Cognitive Therapy by Williams et al. (2002) and was conducted in 8 weekly 90-minute sessions (Williams, 2017; Zemestani & Fazeli Nikoo, 2019).

1. Introduction, pre-test, building group rapport, automatic guidance, mindful eating of a raisin, body scan meditation, homework focusing on daily activities, and 45-minute body scan meditation.
2. Coping with obstacles, body scan meditation, thoughts and feelings exercise, homework including ten minutes of mindful breathing, focusing on a daily activity in a different way, daily report of a pleasant event experience.
3. Mindful breathing, mindful movement, breath and stretch exercise, three-minute breathing space, homework including mindful breathing and movement exercises, and practicing three-minute breathing three times a day.
4. Being in the present moment, five-minute mindful seeing or hearing, sitting meditation, mindful walking, homework including sitting meditation, three-minute breathing space as a coping strategy for unpleasant emotions.
5. Acceptance and allowing, sitting meditation, awareness of breath and body, emphasizing awareness of reactions to thoughts, feelings, and physical sensations, homework including sitting meditation and three-minute breathing space.
6. Thoughts are not facts, sitting meditation, awareness of breath and body, mood, thoughts, and alternate perspectives exercise, preparing participants for the course end, forty-minute daily exercise, further reflection, and relapse prevention planning.
7. Self-care strategies, sitting meditation, awareness of breath, body, sounds, thoughts, and feelings, recognizing the relationship between activities and

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mood, homework selecting a practice from all course types to continue after the course.

8. Applying learnings to future mood states, body scan meditation, concluding meditation, course review, homework selecting a practice program for the next month; post-test.

2.4. Data analysis

To test the hypotheses, repeated measures ANOVA was used. Data were analyzed with SPSS-21. Ethical considerations included obtaining patients' consent to participate, assuring them that all information would remain confidential, providing personal scores to those interested in knowing their psychological status, and ensuring voluntary participation. Participants could withdraw at any time.

3. Findings and Results

The mean (standard deviation) age of the participants in the experimental group was 39.7 (9.4) and in the control group was 37.2 (7.9). The descriptive findings, including the mean and standard deviation of pre-test, post-test, and follow-up scores for cognitive emotion regulation in individuals with symptoms of Borderline Personality Disorder, are presented separately for the two experimental groups and the control group.

Table 1

Mean and Standard Deviation of Pre-test, Post-test, and Follow-up Scores for Cognitive Emotion Regulation in Experimental and Control Groups

Variable	Group	Pre-test	Post-test	Follow-up
		M	SD	M
Positive Cognitive Emotion Regulation	Experimental (DBT)	44.21	4.57	55.29
	Experimental (MBCT)	44.86	3.69	64.71
	Control	44.21	3.98	45.00
Perspective-taking	Experimental (DBT)	7.29	1.20	10.50
	Experimental (MBCT)	7.50	1.34	11.93
	Control	7.50	1.16	8.07
Positive Reappraisal	Experimental (DBT)	10.57	2.20	12.14
	Experimental (MBCT)	10.86	2.10	13.43
	Control	10.29	1.72	10.43
Planning	Experimental (DBT)	10.29	1.89	12.86
	Experimental (MBCT)	10.57	2.91	14.29
	Control	10.36	1.21	10.29
Positive Refocusing	Experimental (DBT)	9.21	1.71	10.21
	Experimental (MBCT)	9.36	1.44	12.93
	Control	9.14	1.83	9.36
Acceptance	Experimental (DBT)	6.64	1.55	9.57
	Experimental (MBCT)	6.57	1.50	12.14
	Control	9.50	1.78	6.86
Negative Cognitive Emotion Regulation	Experimental (DBT)	48.64	3.15	37.79
	Experimental (MBCT)	48.50	3.63	30.93
	Control	47.29	3.62	46.36
Blaming Others	Experimental (DBT)	11.57	1.86	8.71
	Experimental (MBCT)	11.14	2.14	6.79
	Control	11.00	1.84	11.07
Catastrophizing	Experimental (DBT)	12.64	1.27	9.57
	Experimental (MBCT)	12.93	1.14	7.57
	Control	12.00	1.46	11.64
Rumination	Experimental (DBT)	13.14	1.29	9.43
	Experimental (MBCT)	13.07	1.38	7.52
	Control	13.07	1.43	12.57
Self-Blame	Experimental (DBT)	11.29	0.91	10.07
	Experimental (MBCT)	11.36	1.21	9.00
	Control	11.21	0.89	11.07

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As shown in Table 1, the mean pre-test scores for cognitive emotion regulation in both experimental groups (MBCT and DBT) and the control group were approximately equal. However, in the post-test, the mean cognitive emotion regulation scores for the experimental groups (MBCT and DBT) were significantly different from the control group's mean scores. Additionally, follow-up values for the two experimental groups (MBCT and DBT) and the control group are also observable in the above table. To compare the effectiveness of Dialectical Behavior Therapy Skills Training and Mindfulness-Based Cognitive Therapy on cognitive emotion regulation in individuals with symptoms of Borderline Personality Disorder across pre-test, post-test, and follow-up stages, repeated measures ANOVA (one within-subjects factor and one between-subjects factor) was used. The three stages of pre-test, post-test, and follow-up were considered as the within-subjects factor, and the subject grouping into three groups was considered as the between-subjects factor.

Before conducting the main analyses, several assumptions were checked to ensure the validity of the statistical tests used in this study. The assumptions of normality, homogeneity of variances, and sphericity were tested and confirmed. Normality was assessed using the Shapiro-Wilk test, with all p-values greater than 0.05, indicating that the data were normally distributed (e.g., pre-test scores for the DBT group: $W(15) = 0.978$, $p = 0.841$; MBCT group: $W(15) = 0.984$, $p = 0.917$). Homogeneity of variances was evaluated using Levene's test, which yielded non-significant results across all variables, confirming equal variances between groups (e.g., pre-test positive cognitive emotion regulation: $F(2, 42) = 0.634$, $p = 0.538$). The assumption of sphericity was tested using Mauchly's test, which was not violated for any of the repeated measures variables (e.g., perspective-taking: $\chi^2(2) = 1.285$, $p = 0.526$). Thus, the assumptions underlying the use of repeated measures ANOVA were satisfied, allowing for accurate and reliable analysis of the data.

Table 2

Summary of Repeated Measures ANOVA (Mixed) Results for Grouping, Treatment Stages, and Interaction

Variable	Source of Change	Sum of Squares	df	Mean Square	F	p	Effect Size
Perspective-taking	Group	145.968	2	145.968	5.574	.01	.222
	Treatment Stages	165.762	1	165.762	46.894	.01	.546
	Group × Stages Interaction	58.381	2	29.190	8.258	.01	.298
Positive Reappraisal	Group	101.333	2	101.333	7.232	.01	.271
	Treatment Stages	47.250	1	47.250	15.565	.01	.285
	Group × Stages Interaction	20.857	2	10.429	3.435	.04	.150
Planning	Group	166.302	2	166.302	16.187	.01	.454
	Treatment Stages	92.190	1	92.190	45.144	.01	.537
	Group × Stages Interaction	57.167	2	28.583	13.997	.01	.418
Positive Refocusing	Group	137.444	2	137.444	7.581	.01	.280
	Treatment Stages	58.333	1	58.333	39.565	.01	.504
	Group × Stages Interaction	43.166	2	21.580	14.639	.01	.429
Acceptance	Group	272.111	2	272.111	9.604	.01	.330
	Treatment Stages	183.048	1	183.048	128.960	.01	.768
	Group × Stages Interaction	100.595	2	50.298	35.435	.01	.645
Blaming Others	Group	162.968	2	162.968	10.489	.01	.350
	Treatment Stages	131.250	1	131.250	69.949	.01	.642
	Group × Stages Interaction	69.071	2	34.536	18.406	.01	.486
Catastrophizing	Group	124.000	2	124.000	11.016	.01	.361
	Treatment Stages	207.429	1	207.429	131.540	.01	.771
	Group × Stages Interaction	90.042	2	45.036	28.559	.01	.594
Rumination	Group	226.778	2	226.778	16.428	.01	.457
	Treatment Stages	246.857	1	246.857	98.598	.01	.717
	Group × Stages Interaction	81.500	2	40.750	16.276	.01	.455
Self-Blame	Group	36.048	2	36.048	5.974	.01	.235
	Treatment Stages	45.762	1	45.762	49.379	.01	.559
	Group × Stages Interaction	16.095	2	8.048	8.684	.01	.308

The results in Table 2 show that the F value calculated for the stages (pre-test, post-test, and follow-up) is significant at the 0.01 level. Specifically, the interaction of group and treatment stages for perspective-taking, positive reappraisal,

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planning, positive refocusing, acceptance, blaming others, catastrophizing, rumination, and self-blame showed significant differences. Consequently, there is a significant difference in the mean pre-test, post-test, and follow-up scores for perspective-taking, positive reappraisal, planning, positive refocusing, acceptance, blaming others, catastrophizing, rumination, and self-blame in individuals with symptoms of Borderline Personality Disorder across the three stages of pre-test, post-test, and follow-up. Bonferroni post hoc tests were conducted to examine differences between the means in the treatment stages.

Table 3

Summary of Bonferroni Post Hoc Test Results for Pre-test, Post-test, and Follow-up

Pre-test	Stage 1	Stage 2	Mean Difference	Std. Error	p
Perspective-taking	Pre-test	Post-test	2.738	0.405	.001
	Pre-test	Follow-up	2.810	0.410	.001
	Post-test	Follow-up	0.071	0.064	.807
Positive Reappraisal	Pre-test	Post-test	1.429	0.375	.001
	Pre-test	Follow-up	1.500	0.380	.001
	Post-test	Follow-up	0.070	0.041	.274
Planning	Pre-test	Post-test	2.075	0.310	.001
	Pre-test	Follow-up	2.095	0.312	.001
	Post-test	Follow-up	0.024	0.023	1
Positive Refocusing	Pre-test	Post-test	1.595	0.259	.001
	Pre-test	Follow-up	1.667	0.265	.001
	Post-test	Follow-up	0.088	0.079	1
Acceptance	Pre-test	Post-test	2.952	0.270	.001
	Pre-test	Follow-up	2.981	0.289	.001
	Post-test	Follow-up	0.112	0.109	1
Blaming Others	Pre-test	Post-test	2.381	0.292	.001
	Pre-test	Follow-up	2.500	0.299	.001
	Post-test	Follow-up	0.119	0.062	.190
Catastrophizing	Pre-test	Post-test	2.929	0.263	.001
	Pre-test	Follow-up	3.143	0.274	.001
	Post-test	Follow-up	0.214	0.118	.233
Rumination	Pre-test	Post-test	3.238	0.335	.001
	Pre-test	Follow-up	3.429	0.345	.001
	Post-test	Follow-up	0.190	0.078	.056
Self-Blame	Pre-test	Post-test	1.238	0.180	.001
	Pre-test	Follow-up	1.476	0.210	.001
	Post-test	Follow-up	0.238	0.130	.222

The results in Table 3 show that there are significant differences between the scores of the subscales of cognitive emotion regulation in individuals with symptoms of Borderline Personality Disorder in the pre-test and post-test stages, and in the pre-test and follow-up stages. The differences between the post-test and follow-up stages are not significant, indicating the stability of the treatment. The comparison of means indicates that the subscales of cognitive emotion regulation in individuals with symptoms of Borderline Personality Disorder differ significantly in the post-test and follow-up stages compared to the pre-test stage.

Table 4

Summary of Tukey Post Hoc Test Results for Two Experimental Groups

Variable	Groups	Mean Difference	Std. Error	p
Perspective-taking	MBCT Group - DBT Group	1.048	0.790	.557
Positive Reappraisal	MBCT Group - DBT Group	0.952	0.578	.322
Planning	MBCT Group - DBT Group	1.048	0.095	.031
Positive Refocusing	MBCT Group - DBT Group	1.857	0.657	.021
Acceptance	MBCT Group - DBT Group	1.643	0.821	.157
Blaming Others	MBCT Group - DBT Group	1.405	0.208	.022

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Catastrophizing	MBCT Group - DBT Group	1.286	0.324	.041
Rumination	MBCT Group - DBT Group	1.280	0.173	.021
Self-Blame	MBCT Group - DBT Group	0.690	0.379	.229

The results in Table 4 show that there are significant differences between the scores of the subscales of cognitive emotion regulation in individuals with symptoms of Borderline Personality Disorder in the MBCT experimental group compared to the DBT experimental group. According to the mean and effect size indices, MBCT resulted in greater changes in the subscales of planning, positive refocusing, blaming others, catastrophizing, and rumination, except for perspective-taking, positive reappraisal, acceptance, and self-blame in individuals with symptoms of Borderline Personality Disorder. This indicates that MBCT is stronger than DBT for this group of individuals.

4. Discussion and Conclusion

The aim of the present study was to compare the effectiveness of Dialectical Behavior Therapy Skills Training (DBT-ST) and Mindfulness-Based Cognitive Therapy (MBCT) on cognitive emotion regulation in individuals with symptoms of Borderline Personality Disorder. The findings showed that both DBT-ST and MBCT are effective in cognitive emotion regulation. However, there was a significant difference between the two experimental groups in terms of their impact on cognitive emotion regulation. Specifically, the subscale scores for cognitive emotion regulation in individuals with symptoms of Borderline Personality Disorder in the MBCT group differed significantly from those in the DBT group. According to the mean indices and effect sizes, MBCT caused more significant changes in the subscales of planning, positive refocusing, blaming others, catastrophizing, and rumination, except for perspective-taking, positive reappraisal, acceptance, and self-blame in individuals with symptoms of Borderline Personality Disorder. This indicates that MBCT is more effective than DBT for this group of individuals. This finding is consistent with the results of prior studies (Abdollah et al., 2008; Aghayousefi et al., 2016; Amini & Shariatmadar, 2018; Arab Markadeh & Dehghani, 2018; Collard et al., 2008; Creswell et al., 2019; Dalili & Bayazi, 2019; Davis & Hayes, 2011; Gleig, 2009; Godfrin & van Heeringen, 2010; Goldberg et al., 2019; Iri et al., 2019; Jabraeili et al., 2014; Kabat-Zinn, 2003; Kashani & Vaziri, 2013; Kaviani et al., 2005; Mohamadizadeh et al., 2018; Mohammad-Khani et al., 2011; Montazernia et al., 2021; Morton et al., 2012; Mousavi et al., 2019; Razavizadeh Tabadkan & Jajarmi, 2019; Segal et al., 2018; Shaaban et al., 2020; Shayganfar, 2020; Tabatabaei Nejad & Ibn Yamin, 2021; Taghizadeh, 2015; Vakili et al., 2016; Williams, 2017; Zamani et al., 2015; Zemestani & Fazeli Nikoo, 2019).

Dialectical Behavior Therapy (DBT) is a treatment with a clear structure that uses behavioral techniques. Emphasis on validation leads to the acceptance of emotional problems, which ultimately facilitates change. A characteristic of diabetic patients is their difficulty in distancing themselves from and emerging from negative emotions and moods. During the DBT skills training process, patients observe their depressive mood and its physiological, mental, behavioral, and emotional consequences nonjudgmentally through behavioral exercises and self-observation, learning mechanisms to transition from this state (Iri et al., 2019; Jabraeili et al., 2014). Mindfulness skills and distress tolerance are the most effective DBT strategies for treating depressive symptoms. Additionally, in DBT training, we ask individuals to develop a different relationship with their unpleasant experiences and to be aware of how they decide to respond to emotions through acceptance and validation of unpleasant feelings. This relationship appears to reduce anxiety, depression, and maladaptive emotional strategies, ultimately improving cognitive emotion regulation. One component of DBT skills training is emotion regulation. Emotion regulation skills include identifying emotions, understanding emotions, reducing emotional vulnerability, and decreasing emotional distress. Individuals with symptoms of Borderline Personality Disorder were taught specific strategies such as building positive experiences, maintaining mindfulness of positive experiences, letting go of painful emotions through experiencing, observing, describing, and accepting emotions, and acting opposite to unjustified emotions. This may explain why the cognitive emotion regulation scores of this group showed more significant changes compared to the control group (Lynch et al., 2006).

Mindfulness-Based Cognitive Therapy (MBCT) is a novel therapeutic approach that focuses on modifying and controlling thought processes. This method teaches patients to stop the cycle of rumination and distance themselves from negative thoughts. In general, mindfulness training helps identify unhelpful thoughts and their triggers, stop

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ruminating about negative events and their consequences, aid in cognitive emotion regulation, and ultimately improve problem-solving skills, reduce depression, and enhance mood and emotion regulation. Flexible attention training, cognitive enrichment, stopping rumination, correcting false positive and negative beliefs, and challenging negative beliefs about emotions reduce rumination (Kirby & Gilbert, 2019; McKay et al., 2007; McKay et al., 2019). Using MBCT techniques, including cognitive flexibility training, attention improvement, decentering, cognitive enrichment, stopping rumination, correcting beliefs about rumination, and challenging negative beliefs about emotions, can reduce rumination and subsequently improve psychological problems in individuals with symptoms of Borderline Personality Disorder. This therapeutic approach helps patients focus on the present and positive events, reducing their attention to and rumination on negative thoughts, thereby better regulating their emotions.

It can be said that MBCT training helps individuals with Borderline Personality Disorder accept their emotions, and this acceptance reduces their attention and hypersensitivity to these symptoms. In other words, MBCT enables individuals with Borderline Personality Disorder to improve their cognitive recognition and awareness of irrational beliefs and anxiety through mindfulness exercises like checking and positively reassessing thoughts, thus helping reduce their anxiety (Rahmani & Omidi, 2019; Rahmani Moghaddam et al., 2023). Therefore, it can play a significant role in improving irrational beliefs, maladaptive schemas, and anxiety.

One reason MBCT is more effective than DBT in reducing irrational beliefs, maladaptive schemas, and anxiety is the different perspectives on beliefs in these therapies. In DBT, beliefs are enduring thoughts that constantly exist, causing misinterpretation of intrusive thoughts, thereby reducing irrational beliefs, maladaptive schemas, and anxiety. DBT assumes that improving irrational beliefs, maladaptive schemas, and anxiety requires challenging and reconstructing these beliefs, leading to fewer negative thoughts and improving these symptoms in individuals with Borderline Personality Disorder. However, unlike DBT, MBCT views beliefs as products of cognitive fusion. MBCT believes that thoughts are natural mental processes. Thoughts become beliefs when individuals fuse with their content. When someone acts according to the content of a thought, they have fused with it, resulting in negative thoughts that reduce irrational beliefs, maladaptive schemas, and anxiety in individuals with Borderline Personality Disorder. MBCT aims to observe thoughts rather than observe from thoughts. Therefore, if beliefs in DBT are the cause of reduced irrational beliefs, maladaptive schemas, and anxiety, in MBCT, beliefs result from reduced irrational beliefs, maladaptive schemas, and anxiety. This explains why MBCT is more effective than DBT in addressing these issues.

The physical and psychological problems of Borderline Personality Disorder created limitations during the research process, especially during therapy sessions. The results are limited to individuals with Borderline Personality Disorder and cannot be generalized to other patients with different issues or disorders. Limited experimental and controlled research on DBT was another limitation. Future studies should be conducted with different sample groups and evaluated against this study's results. Future research should be conducted in broader geographical areas to increase confidence in generalizing the findings. Based on the results, it is suggested that professionals involved in treating patients with multiple sclerosis use DBT and MBCT as effective complementary therapies. Future studies should also compare DBT and MBCT with other therapeutic approaches to enable a comparison of their effectiveness. It is recommended that future researchers use a specialist as a therapist to reduce potential biases. Given that this study is quantitative, future research should use qualitative methods (e.g., grounded theory based on semi-structured interviews). This study should be followed up with individual counseling after group training.

5. Limitations & Suggestions

The present study has limitations, including that although the components of the current educational treatment package were determined using the qualitative method of thematic analysis, they are derived from the perspectives of the researcher and the professors, and their interpretations of the subject, and other researchers might approach the issue differently. Additionally, the information and data collected in the study pertain to the time of the research and may not precisely match future needs. Therefore, it is suggested that further studies be conducted based on the mentioned limitations to examine the therapeutic effects of interventions based on a healthy body image. It is also recommended that this method be studied in other cities and for different age groups.

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Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. This study was conducted with ethical approval (code IR.IAU.SARI.REC.1400.136) from the Ethics Committee of Islamic Azad University, Sari Branch.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors contributed equally.

References

Abdollah, O., Parvane Mohammad, K., Parviz, P., & Abbas, D. (2008). Efficacy of combined Cognitive Behavior Therapy and Mindfulness Based Cognitive Therapy in patients with Major Depressive Disorder. *Feyz*, *12*(2), 9. https://www.magiran.com/paper/588471

Aghayousefi, A., Oraki, M., Ghorbani, T., & Mahdieh, M. (2016). The Effect of Dialectic Behavior Therapy to Increase the Self-Differentiation in Women with Borderline Personality Disorder and Substance Use. *Clinical Psychology Studies*, *6*(23), 61-80. https://doi.org/10.22054/jcps.2016.4558

Alden, S. A. (2008). *Borderline personality disorder and aggression: Exploring mediating and moderating roles of psychophysiological arousal*. Emory University. https://search.proquest.com/openview/0b318c6d81646d9cf70f62c844a27a2a/1?pq-origsite=gscholar&cbl=18750

Amini, a., & Shariatmadar, a. (2018). The Effectiveness of Group Dialectic Behavioral Therapy on Catastrophizing & Ruminations of mothers with Mental Retarded children. *Counseling Culture and Psycotherapy*, *9*(34), 171-190. https://doi.org/10.22054/qccpc.2018.30478.1777

APA, A. P. A. (2022). *Diagnostic And Statistical Manual Of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR)*. https://doi.org/10.1176/appi.books.9780890425787

Arab Markadeh, R., & Dehghani, A. (2018). The Effectiveness of Group-Based Dialectic Behavioral Therapy on Depression and Perceived Stress of Female Students [اثر بخشی رفتار درمانی دیالکتیکی به شیوه ی گروهی بر افسردگی و استرس ادراک شده دانشجویان دختر]. *J-Nurs-Edu*, *7*(6), 24-30. http://jne.ir/article-1-922-en.html

Collard, P., Avny, N., & Boniwell, I. (2008). Teaching Mindfulness Based Cognitive Therapy (MBCT) to students: The effects of MBCT on the levels of Mindfulness and Subjective Well-Being. *Counselling Psychology Quarterly*, *21*(4), 323-336. https://doi.org/10.1080/09515070802602112

Creswell, J. D., Lindsay, E. K., Villalba, D. K., & Chin, B. (2019). Mindfulness Training and Physical Health: Mechanisms and Outcomes. *Psychosomatic Medicine*, *81*(3). https://journals.lww.com/psychosomaticmedicine/fulltext/2019/04000/mindfulness_training_and_physical_health_.2.aspx

Dalili, Z., & Bayazi, M. H. (2019). The effectiveness of Mindfulness-Based Cognitive Therapy on the illness perception and Psychological Symptoms in patients with Rheumatoid Arthritis. *Complementary Therapies in Clinical Practice*, *34*, 139-144. https://www.sciencedirect.com/science/article/pii/S1744388118306571

Davis, D. M., & Hayes, J. A. (2011). What are the benefits of mindfulness? A practice review of psychotherapy-related research. *Psychotherapy*, *48*(2), 198-208. https://doi.org/10.1037/a0022062

Einy, S., & Narimani, M. (2019). Effectiveness of Cognitive Analytic Therapy in Object Relations and Defense Mechanisms in Borderline Personality Disorder. *Journal of Modern Psychological Researches*, *14*(53), 207-228. https://psychologyj.tabrizu.ac.ir/article_9135.html

Garnefski, N., Boon, S., & Kraaij, V. (2003). Relationships Between Cognitive Strategies of Adolescents and Depressive Symptomatology Across Different Types of Life Event. *Journal of youth and adolescence*, *32*(6), 401-408. https://doi.org/10.1023/A:1025994200559

Garnefski, N., Koopman, H., Kraaij, V., & ten Cate, R. (2009). Brief report: Cognitive emotion regulation strategies and psychological adjustment in adolescents with a chronic disease. *Journal of adolescence*, *32*(2), 449-454. https://doi.org/10.1016/j.adolescence.2008.01.003

Garnefski, N., & Kraaij, V. (2006). Relationships between cognitive emotion regulation strategies and depressive symptoms: A comparative study of five specific samples. *Personality and individual differences*, *40*(8), 1659-1669. https://www.sciencedirect.com/science/article/pii/S0191886906000377

Garnefski, N., Kraaij, V., & Spinhoven, P. (2001). Negative life events, cognitive emotion regulation and emotional problems. *Personality and individual differences*, *30*(8), 1311-1327. https://www.sciencedirect.com/science/article/pii/S0191886900001136

Garnefski, N., Rieffe, C., Jellesma, F., Terwogt, M. M., & Kraaij, V. (2007). Cognitive emotion regulation strategies and emotional problems in 9–11-year-old children. *European Child & Adolescent Psychiatry*, *16*(1), 1-9. https://doi.org/10.1007/s00787-006-0562-3

Garnefski, N., Teerds, J., Kraaij, V., Legerstee, J., & van den Kommer, T. (2004). Cognitive emotion regulation strategies

and depressive symptoms: differences between males and females. *Personality and individual differences*, *36*(2), 267-276. https://www.sciencedirect.com/science/article/pii/S0191886903000837

Gleig, A. (2009). Mindfulness and Psychotherapy – Edited by Christopher K. Germer, Ronald D. Siegel and Paul R. Fulton. *Religious Studies Review*, *35*(3), 151-152. https://doi.org/10.1111/j.1748-0922.2009.01357.x

Godfrin, K. A., & van Heeringen, C. (2010). The effects of mindfulness-based cognitive therapy on recurrence of depressive episodes, mental health and quality of life: A randomized controlled study. *Behaviour Research and Therapy*, *48*(8), 738-746. https://www.sciencedirect.com/science/article/pii/S0005796710000719

Goldberg, S. B., Tucker, R. P., Greene, P. A., Davidson, R. J., Kearney, D. J., & Simpson, T. L. (2019). Mindfulness-based cognitive therapy for the treatment of current depressive symptoms: a meta-analysis. *Cognitive behaviour therapy*, *48*(6), 445-462. https://doi.org/10.1080/16506073.2018.1556330

Iri, H., Makvandi, B., Bakhtiarpour, S., & Hafezi, F. (2019). Comparison of the effectiveness of Acceptance and Commitment Therapy and Dialectical Behavioral Therapy on health anxiety, psychosocial adjustment and cognitive emotion regulation of divorced women. *medical journal of mashhad university of medical sciences*, *61*(supplment1), 79-88. https://doi.org/10.22038/mjms.2019.13786

Jabraeili, S., Babapour Kheraddin, J., & Mahmoodaliloo, M. (2014). Efficacy of Dialectical Behavior Therapy in Reducing Symptoms of Suicidal Behavior and Mood Instability Measures of Borderline Personality Disorder. *Journal of Modern Psychological Researches*, *8*(32), 75-88. https://psychologyj.tabrizu.ac.ir/article_4296.html

Johnson, M. L. (2021). Neuroqueer feminism: turning with tenderness toward borderline personality disorder. *Signs: Journal of Women in Culture and Society*, *46*(3), 635-662. https://www.journals.uchicago.edu/doi/abs/10.1086/712081

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*, *10*(2), 144-156. https://doi.org/10.1093/clipsy.bpg016

Kashani, F. L., & Vaziri, S. (2013). The Effect of Dialectical Behavioral Therapy in Decreasing the Symptoms of Borderline Personality Disorder. *Thought and Behavior in Clinical Psychology*, *7*(28), 27. https://www.magiran.com/paper/1271480

Kaviani, H., Javaheri, F., & Bahiray, H. (2005). Efficacy of Mindfulness-Based Cognitive Therapy in Reducing Automatic Thoughts, Dysfunctional Attitude, Depression And Anxiety: A Sixty Day Follow-Up [اثربخشی شناخت‌درمانی مبتنی بر ذهن‌آگاهی (mbct) در کاهش افکار خودآیند منفی، نگرش ناکارآمد، افسردگی و اضطراب: پیگیری ۶۰ روزه]. *icss*, *7*(1), 49-59. http://icssjournal.ir/article-1-117-en.html

Kirby, J. N., & Gilbert, P. (2019). Commentary Regarding Wilson et al. (2018) "Effectiveness of 'Self-Compassion' Related Therapies: a Systematic Review and Meta-analysis." All Is Not as It Seems. *Mindfulness*, *10*(6), 1006-1016. https://doi.org/10.1007/s12671-018-1088-8

Linehan, M. M. (1992). Behavior therapy, dialectics, and the treatment of borderline personality disorder. In *Handbook of borderline disorders.* (pp. 415-434). International Universities Press, Inc.

Linehan, M. M., & Dexter-Mazza, E. T. (2008). Dialectical behavior therapy for borderline personality disorder. In *Clinical handbook of psychological disorders: A step-by-step treatment manual, 4th ed.* (pp. 365-420). The Guilford Press. https://awspntest.apa.org/record/2008-00599-009

Linehan, M. M., Korslund, K. E., Harned, M. S., Gallop, R. J., Lungu, A., Neacsiu, A. D., McDavid, J., Comtois, K. A., & Murray-Gregory, A. M. (2015). Dialectical Behavior Therapy for High Suicide Risk in Individuals With Borderline Personality Disorder: A Randomized Clinical Trial and Component Analysis. *JAMA Psychiatry*, *72*(5), 475-482. https://doi.org/10.1001/jamapsychiatry.2014.3039

Lynch, T. R., Chapman, A. L., Rosenthal, M. Z., Kuo, J. R., & Linehan, M. M. (2006). Mechanisms of change in dialectical behavior therapy: Theoretical and empirical observations. *Journal of Clinical Psychology*, *62*(4), 459-480. https://doi.org/10.1002/jclp.20243

McKay, M., Wood, J. C., & Brantley, J. (2007). *The Dialectical Behavior Therapy Skills Workbook: Practical DBT Exercises for Learning Mindfulness, Interpersonal Effectiveness, Emotion Regulation, and Distress Tolerance*. New Harbinger Publications. https://books.google.com/books?id=iyBdbJMQBdMC

McKay, M., Wood, J. C., & Brantley, J. (2019). *The dialectical behavior therapy skills workbook: Practical DBT exercises for learning mindfulness, interpersonal effectiveness, emotion regulation, and distress tolerance*. New Harbinger Publications. https://books.google.com/books?hl=en&lr=&id=NpeQ3q5e58MC&oi=fnd&pg=PR3&ots=qhHa1-DlGZ&sig=G3Ljo5uvlP0qOet3oLxu6-8bIXg

Mohamadizadeh, L., Makvandi, B., Pasha, R., BakhtiarPour, S., & Hafezi, F. (2018). Comparison of the Efficacy of Dialectical Behavior Therapy (DBT) and Schema Therapy (ST) on Impulsive Behavior in Patients With Borderline Personality Disorder [Research]. *Journal of Guilan University of Medical Sciences*, *27*(106), 44-53. http://journal.gums.ac.ir/article-1-1663-en.html
http://journal.gums.ac.ir/article-1-1663-en.pdf

Mohammad-Khani, P., Dabsoun, K., Hosseini, F., & Momeini, F. (2011). Comparison of the Effectiveness Mindfulness-Based Cognitive Therapy and Cognitive-Behavior Therapy and Treatment as Usual on Depression and Additional Symptoms and Other Psychiatric Symptoms. *Journal of Clinical Psychology*, *3*(1), 19-26. https://doi.org/10.22075/jcp.2017.2043

Montazernia, B., Koushki, S., Oraki, M., & Mirzaian, B. (2021). Comparing The Efficacy of Acceptance and Commitment Therapy (ACT) and Dialectical Behavior Therapy Skills Training (DBT-ST) on Cognitive Emotion Regulation in Patients with Type II Diabetes. *Iranian Journal of Health Psychology; Vol*, *4*(1). https://www.academia.edu/download/82111000/IJOHP_Volume_4_Issue_2_Pages_33_48.pdf

Morton, J., Snowdon, S., Gopold, M., & Guymer, E. (2012). Acceptance and Commitment Therapy Group Treatment for Symptoms of Borderline Personality Disorder: A Public Sector Pilot Study. *Cognitive and Behavioral Practice*, *19*(4), 527-544. https://doi.org/10.1016/j.cbpra.2012.03.005

Mousavi, S. A., Zare-Moghaddam, A., Gomnam, A., Mirbluk bozorgi, A., & Hasani, F. (2019). Mindfulness from theory to therapy [ذهن آگاهی از تئوری تا درمان]. *frooyesh*, *8*(1), 155-170. http://frooyesh.ir/article-1-413-en.html

Nohi, S., & Hasani, J. (2017). The Relationship between Cognitive Emotion Regulation Strategies and Defense Mechanisms with Borderline Personality Disorder. *Thoughts and Behavior in Clinical Psychology*, *12*(43), 57-66. https://jtbcp.roudehen.iau.ir/article_1044.html

https://jtbcp.roudehen.iau.ir/article_1044_978fe7f372d556179921b21e47835165.pdf

Rahmani, M., & Omidi, A. (2019). The Effectiveness of Dialectical Behavior Therapy on Quality of Life Among Women with Overweight and Binge Eating Disorder: A Clinical Trial [Research]. *Journal of Rafsanjan University of Medical Sciences*, *18*(2), 133-146. http://journal.rums.ac.ir/article-1-4122-en.html

Rahmani Moghaddam, F., Bagherzadehgolmakani, Z., Touzandehjani, H., & Nejat, H. (2023). Exploring the Impact of Dialectical Behavior Therapy on Emotional Regulation and Rumination among the Physically Disabled People using the Services of the Welfare Organization of Mashhad. *Research in Clinical Psychology and Counseling*, *13*(1), 123-138. https://doi.org/10.22067/tpccp.2023.75967.1269

Razavizadeh Tabadkan, B. B. Z., & Jajarmi, M. (2019). The Effectiveness of Mindfulness-based Cognitive Therapy (MBCT) on Depression, Rumination and Perceived Stress in Women with Type 2 Diabetes [اثربخشی شناخت درمانی مبتنی بر ذهن آگاهی بر افسردگی، نشخوار فکری و استرس ادراک شده زنان مبتلا به دیابت نوع۲]. *nkums-journal*, *11*(1), 1-8. https://doi.org/10.52547/nkums.11.1.1

Segal, Z., Williams, M., & Teasdale, J. (2018). *Mindfulness-based cognitive therapy for depression*. Guilford publications. https://books.google.com/books?hl=en&lr=lang_en&id=QHRVDwAAQBAJ&oi=fnd&pg=PP1&dq=51.+Segal,+Z.+V.,+Williams,+J.+M.+G,+Teasdale,+J.+D.+(2013).+Mindfulness-based+cognitive+therapy+for+depression.+New+York:+The+Guilford+Press.&ots=EWyh9FMCra&sig=NIz-JNlV5Wsu568A38PeKNr5Hp4

Shaaban, n., Dehghani, m., Rafaati, e., Ghorbani, s., & Amani, o. (2020). The efficcacy of mindfulness-based cognitive therapy on emotional self-awareness and meta-cognitive beliefs in adolescents with generalized anxiety disorder [Research]. *Journal of nursing education*, *8*(5), 55-66. http://ijpn.ir/article-1-1580-en.html

Shayganfar, N. (2020). The Effectiveness of Mindfulness-Based Cognitive Therapy on Suicidal Thoughts of Female Students with Major Depression Disorder [اثربخشی شناخت درمانی مبتنی بر ذهن آگاهی بر افکار خودکشی دانش آموان دختر با اختلال افسردگی اساسی]. *frooyesh*, *9*(7), 25-34. http://frooyesh.ir/article-1-1929-en.html

Tabatabaei Nejad, F., & Ibn Yamin, M. (2021). The Impact of Mindfulness-Based Cognitive Therapy on Rumination, Quality of Life, Emotion Regulation, and Communication Beliefs of the Women Dissatisfied with their Husbands. *Military Psychology*, *11*(44), 31-43. https://jmp.ihu.ac.ir/article_206026.html

Taghizadeh, M. (2015). Effectiveness of Emotion Regulation Techniques of Dialectical Behavior Therapy on Emotion Regulation Strategies in Women with Borderline Personality Disorder and Substance Abuse Disorder: Multiple Baseline Design [اثربخشی تکنیکهای تنظیم هیجانی رفتاردرمانی دیالکتیک بر راهبردهای تنظیم هیجان زنان با اختلالات شخصیت مرزی و اختلال سوء مصرف مواد: طرح خط پایه چندگانه]. *rph*, *9*(3), 66-73. https://doi.org/10.18869/acadpub.rph.9.3.66

Vakili, J., Kimiaee, S.A., & Salehi-Fadardi, J. (2016). The Effectiveness of Dialectical Behavior Therapy on Borderline Personality Disorder Symptoms of prisoners. *Journal of Clinical Psychology*, *8*(3), 97-106. https://doi.org/10.22075/jcp.2017.2248

Williams, K. (2017). *Neuropsychological mechanisms of mindfulness-based cognitive therapy for depression* University of Manchester]. https://research.manchester.ac.uk/files/84020071/FULL_TEXT.PDF

Zamani, N., Farhadi, M., Jamilian, H. R., & Habibi, M. (2015). Effectiveness of Group Dialectical Behavior Therapy (Based on Core Distress Tolerance and Emotion Regulation Components) on Expulsive Anger and Impulsive Behaviors. *HBI_Journals*, *17*(11), 53-61. http://jams.arakmu.ac.ir/article-1-2993-en.html

Zemestani, M., & Fazeli Nikoo, Z. (2019). Effectiveness of Mindfulness-Based Cognitive Therapy on decrease of symptoms of depression, rumination and emotion regulation in pregnant women. *Applied Psychology*, *13*(1), 119-139. https://doi.org/10.29252/apsy.13.1.119

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