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The Effect of Beck's Cognitive Therapy and Mindfulness-Based Cognitive Therapy on Sociotropic and Autonomous Personality Styles in Patients With Depression

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Abstract

Background: Depression is characterized by a great risk of relapse and recurrence. Mindfulness-based cognitive therapy (MBCT) and cognitive therapy are efficacious psychosocial interventions for recurrent depression.
Objectives: The aim of the present research was to compare the effect of Beck's cognitive therapy (BCT) and MBCT on reduction of depression and sociotropic and autonomous personality styles in Iranian depressed patients.
Patients and Methods: The study sample consisted of 30 subjects randomly selected from patients with depression in Mashhad city, Iran. The subjects were assigned randomly to experimental groups. The 2 techniques used for treatment were BCT and MBCT. The data collection instruments used in the research consisted of psychological interview, the Beck Depression Inventory II and the revised Personal Style Inventory (RPSI). The research data was analyzed using repeated measures analysis of variance (ANOVA).
Results: BCT and MBCT were effective in reducing depression, but BCT and MBCT did not cause any change in the sociotropic and autonomous personality styles in patients with depression.
Conclusions: The results provide support for the role of BCT and MBCT plays in reducing depression. However, the results did not approve their role in changing sociotropic and autonomous personality styles in patients with depression.

Keywords: Cognitive Therapy, Depression, Mindfulness-Based Cognitive Therapy, Personality Styles

1. Background

The role of personality variables in cognitive and behavioral therapies has been discussed infrequently in the literature (1). Few attempts have been made to integrate research on personality into a broader perspective on process and outcome in such therapy. Given the widespread use and demonstrated effectiveness of cognitive and behavioral therapies, it is surprising that personality factors have received such limited attention, even in the treatment of personality disorders. One obstacle to apply personality theories to study cognitive and behavioral therapies is that traditional, trait-based approaches to personality are not easily incorporated into the theory underlying cognitive and behavioral treatment. Cognitive and behavioral treatment explains behavior based on interactions among specific cognitions, mood states and situational factors (1).

Beck proposed that two personality dimensions (sociotropy and autonomy) confer vulnerability to the onset of depressive episodes (2). Robins and Luten (3) and Bagby et al. (4) reported no gender differences between the personality styles; however, clinically depressed women scored significantly higher than clinically depressed men on an autonomy personality style. In contrast, Scheibe et al. (5) found that clinically depressed women show higher levels of sociotropy than men, but McBride et al. did not find that clinically depressed men are more prone to autonomy than women (6).

Researches performed by Stravynski et al. (7), Fennell and Teasdale (8), Singer (9) and Watkins and Teasdale (10) reported the effect of cognitive therapy to decrease depression. Teasdale et al. (11) concluded that mindfulness-based cognitive therapy (MBCT) decreases the rate of depression relapse.

Hamidpour (12) showed that MBCT in comparison with Beck's cognitive therapy (BCT) is more effective in the reduction of depression and modification of maladjustment schemas. Teasdale et al. (13) reached the conclusion that MBCT and BCT both decrease the rate of depression relapse. Ma and Teasdale (14), Baer et al. (15), Rokke and Robinson (16) and Kenny and Williams (17) showed that MBCT significantly decreases depression.

Hammen et al. (18) found a significant association between sociotropic and autonomous personality styles

and vulnerability to life events in patients with bipolar disorder, but this was not significant in unipolar patients. Robins et al. (19) found that sociotropic personality style is associated with a group of depression symptoms, whereas autonomous personality style had no association with depression symptoms. Robins (20), Haslam and Beck (21), Allen et al. (22), Pusch et al. (23) and Giordano et al. (24) showed that sociotropic personality style plays an important role in the vulnerability of individuals to depression.

Furthermore, Bieling et al. (25) showed that a high level of autonomy facilitates cognitive therapy in patients with depression. Mazure et al. (26) by studying 43 normal individuals found that sociotropy (rumination with disapproval) and autonomy (need for control) are considered as major anticipators of depression without considering occurrence of stressful life events. Sibley and Overall (27) showed that sociotropic and autonomous personalities have positive significant relationships with anxious-avoidant attachment styles. Godfrin and van Heeringen (28) showed that MBCT caused a significant reduction in both short and longer-term depressive mood and better mood states and quality of life. Manicavasgar et al. (29) showed significant improvements in depression and anxiety scores of both treatment methods and no significant differences between the two treatment methods of MBCT and cognitive behavior therapy. However, significant differences were found when participants in the two treatment methods were dichotomized into those with a history of 4 or more episodes of depression versus those with less than 4 episodes. No such differences were found in the MBCT method. No significant differences were found between the two treatment methods for depression or anxiety at 6 and 12 months follow-ups.

In conclusion, research results indicate that BCT and MBCT have the required efficiency for treatment of depression and probably have a significant impact on sociotropic and autonomous personality styles.

2. Objectives

Considering that few researches have been performed on the effect of BCT and MBCT on sociotropic and autonomous personality styles and most studies aimed at conceptually expanding each of these two techniques, performing this applied research seems necessary. Therefore, the current study attempted to examine the effect of these two techniques on depression and sociotropic and autonomous personality styles in patients with depression.

3. Patients and Methods

This was a quasi-experimental study with pre-test and post-test, and follow-up on the two study groups. In this research, cognitive therapy is considered an independent variable consisting of two categories of BCT and MBCT. Each of these techniques was administered to one of the experimental groups. Depression and sociotropic and autonomous personality styles were considered dependent variables.

The research sample consisted of 30 patients with depression referred to clinical centers of Mashhad city, Iran. Subjects were selected through convenience sampling method and randomly divided into 2 experimental groups (each consisting 15 individuals). Subjects of both groups were assessed in 3 phases: a) pre-test: before conducting the trial (first session), b) post-test: after conducting the trial (last session), and c) follow-up (2 months after the trial).

A clinical psychologist collected the data. Both autonomous and sociotropic personality styles were participated in this research and that the participants were not separated by their personality styles. The inclusion criteria were age over 20 years, diagnosis of depressive disorder and receiving no psychological therapies during the study. The exclusion criteria included drug use (antidepressant drugs), substance addiction and other psychological disorders at Axis I according to the results of the diagnostic interview.

The mean and standard deviation of patients' age in the BCT and MBCT groups were, respectively, 28.60 ± 5.68 and 29.40 ± 5.54 (with a range of 20 - 40 years). In each group, 6 men (40%) and 9 women (60%) were participated. Subjects in each group were matched for their education level. The education level of participants (high school diploma to bachelor's degree) facilitated the process of therapeutic instructions. Patients were not matched for severity of depression.

Participants were informed that this intervention was a part of the research and the results would be useful for them, and were assured of the confidentiality of their information and identity. Following the study, they had the chance to continue the therapy sessions.

3.1. Measures

A semi-structured clinical interview based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) was used for the diagnosis of Axis I disorders (30).

Beck's Depression Inventory II (BDI-II): BDI-II is a 21-item questionnaire designed by Beck et al. (31), which assesses the severity of depression symptoms on a scale of 0 - 3. Scores ranging from 0 to 13 illustrate minimal depression, 14 to 19 mild, 20 to 28 moderate and 29 to 63 as severe depression. The BDI-II has high internal reliability ($\alpha = 0.91$) and good convergent validity with the BDI-I (0.93) (32). Internal consistency coefficient of the Persian version of BDI-II was 0.94 among Iranian people (33).

Revised Personal Style Inventory (RPSI): The RPSI (34) consists of 2 24-item scales that measure the domains of sociotropy and autonomy. Both scales have exhibited strong internal consistency and test-retest reliability (35, 36). The 2 scales have low intercorrelation, low to moderate positive correlations with depressive symptomatology and good convergent and discriminate validity with various theoretically related measures (37). In the study by Gholami (38), internal consistency coefficient of the Persian version for the RPSI was 0.80.

3.2. Interventions

A. BCT: This treatment technique was invented by Beck. It is regarded as the most common technique of cognitive therapy for depression, the effectiveness and efficiency of which have been reported as significant in various researches (2).

B. MBCT: A full description of this treatment technique has been presented by Segal et al. (39) in a book with the same title. This technique is considered new amongst existing cognitive therapies. The effectiveness of this technique has been reported in a number of researches (13, 28).

Each treatment method was applied in 12 1-hour sessions. The therapeutic sessions were held for 1 week for each group and were conducted by a therapist at the Clinic of Police Power of Islamic Republic of Iran in Mashhad. These sessions lasted for 3 months. In the first, last and follow-up sessions, BDI-II and RPSI were administered to patients. The research data was analyzed using repeated measures analysis of variance (ANOVA) and SPSS software (version 16.0, SPSS Inc., Chicago, IL, USA).

4. Results

Results presented in Table 1 show a decline in the mean of depression scores obtained from the BCT and MBCT groups at post-test and follow-up compared to pre-test. Furthermore, MBCT, compared with BCT, caused more decrement in depression scores, which indicates the higher effectiveness of MBCT compared with BCT in decreasing depression. However, these 2 techniques cause no significant changes in scores of sociotropic and autonomous personality styles.

Table 2 shows no significant differences between BCT and MBCT groups for depression symptoms ($P > 0.050$). However, a significant difference was found between factor scores (pre-test, post-test and follow-up) of depression symptoms ($P < 0.001$). However, no significant correlation was found between factor scores (pre-test, post-test and follow-up) and groups for depression symptoms ($P > 0.050$). These results indicate equal effectiveness of the 2 treatment techniques in decreasing depression symptoms. Moreover, time had no impact on decreasing the effectiveness of any of the treatment techniques (from post-test to follow-up). Multiple comparisons test also showed that depression symptoms decreased significantly at post-test and follow-up in comparison with pre-test in both therapies.

Moreover, Table 2 shows no significant difference between BCT and MBCT groups for sociotropic personality style scores ($P > 0.050$). Furthermore, no significant differences were observed between factor scores (pre-test, post-test and follow-up) of sociotropic personality style ($P > 0.050$). No significant correlation was observed between factor scores (pre-test, post-test and follow-up) and groups for sociotropic personality style scores ($P > 0.050$). These results suggest that neither of these therapies caused any significant change in sociotropic personality style.

Table 2 shows no significant difference between BCT and MBCT groups for autonomous personality style scores ($P > 0.050$). In addition, no significant differences were found between factor scores (pre-test, post-test and follow-up) of autonomous personality style ($P > 0.050$). No significant correlation was observed between factor scores (pre-test, post-test, and follow-up) of autonomous personality style. These results suggest that neither of the therapies brought about any significant change in autonomous personality style scores.

Table 1. Mean and Standard Deviation of Depression and Sociotropic and Autonomous Personality Styles in the Experimental Groups

Variable	Group	Pre-Test		Post-Test		Follow-Up	
		SD	Mean	SD	Mean	SD	Mean
Depression							
	BCT	4.69	32.25	4.45	9.02	5.42	9.33
	MBCT	4.96	31.26	3.73	6.13	3.73	6.51
Sociotropic personality							
	BCT	11.54	45.4	17.16	44.33	9.69	40.8
	MBCT	8.3	42.6	15.62	36.06	10.46	43.46
Autonomous personality							
	BCT	6.52	40.2	9.42	37.73	11.81	43.02
	MBCT	6.41	35.33	11.89	37.13	12.74	40.05

Abbreviations: BCT, Beck's cognitive therapy; MBCT, mindfulness-based cognitive therapy; SD, standard deviation.

Table 2. Summarized Results of Repeated Measures ANOVA of Depression Symptoms Scores at Pre-Test, Post-Test and Follow-Up in Experimental Groups

Source	SS	DF	MS	F	P Value
Depression Symptoms					
Between-subjects					
Group	00115.6	01	0115.6	02.89	.100
Error	NA	NA	NA	NA	NA
Within-subjects					
Factor	8568.15	01	8568.15	517.56	.001
Factor × group	0022.82	01	0022.82	001.38	.250
Error	0463.53	28	0463.53	NA	NA
Sociotropic personality style					
Between-subjects					
Group	0165.38	01	0165.38	1.01	.320
Error	4569.51	28	0163.20	NA	NA
Within-subjects					
Factor	0052.27	01	0052.27	000.59	.450
Factor × group	0112.07	01	0112.07	001.27	.270
Error	2376.67	28	0088.45	NA	NA
Autonomous personality style					
Between-subjects					
Group	0176.4	01	0176.40	1.55	.220
Error	3192.22	28	0114.01	NA	NA
Within-subjects					
Factor	0212.82	01	0212.82	002.5	.130
Factor × group	0014.02	01	0014.02	000.16	.690
Error	2386.67	28	0085.24	NA	NA

Abbreviations: DF, degree of freedom; MS, mean of squares; NA, not available; SS, sum of squares.

5. Discussion

The research results showed that both BCT and MBCT significantly decreased depression. The results also showed no significant difference in depression decrement between BCT and MBCT. Both methods have been equally effective in decreasing depression. The results of this research are consistent with the findings of other researchers (2, 7, 9-12, 29). By comparing the results of this study with those of other researches, these two methods were proven to be reasonably effective in decreasing depression.

Although no significant difference was found between BCT and MBCT for decreasing depression, MBCT, which places more importance on the role of cultural and linguistic components, seems to be more flexible than BCT.

On the other hand, cognitive challenges to patients' thoughts and beliefs cause the process of cognitive therapy to reach a dead end. The reason, as Teasdale suggests (40), is that most cognitive schemata of individuals are characterized by cognitive impenetrability. In MBCT, a more comparative and efficient schema is used, and the main purpose is to change patient's intellectual and emotional beliefs, whereas in BCT, the only purpose is to change intellectual beliefs.

This finding could be an indication that MBCT also targets other effective mechanisms that decrease depression symptoms despite not affecting rumination or disapproval in patients.

Moreover, depression score in follow-up phase increased a little in comparison with post-test. Increased depression score is indicative of probable relapse of illness and shows that treatment techniques were not effective after interventions, which is probably due to short-term treatment course and/or ineffectiveness of techniques.

The research results showed that neither BCT nor MBCT had any significant effect on changing sociotropic personality style. This result supports the findings of some other researches (25, 26). Research findings of Robins et al. (19), Robins (20), Haslam and Beck (21), Allen et al. (22), Pusch et al. (23) and Godfrin and van Heeringen (28) showed that sociotropic personality style is an important anticipating variable for depression. These researchers believed that

sociotropic personality style plays an important role in vulnerability of individuals to depression. Results of this study are congruent with research findings of Hammen et al. (18). They showed that sociotropic personality style was ineffective as an important factor in unipolar patients' vulnerability to life events (18).

The research results also showed that BCT and MBCT had no significant effect on changing autonomous personality style. This result is not congruent with the findings of some researches (25, 26). Research findings of Haslam and Beck (21), Allen et al. (22), Pusch et al. (23) and Giordano et al. (24) showed that taking autonomous personality style into consideration in therapies, especially in cognitive therapies, is very important.

The results of the present study indicate that scores of autonomous and sociotropic personality styles showed an approximate decrease at follow-up compared with post-test. Lack of significant effect of these two therapies on these personality styles is probably because personality styles are persistent behavioral patterns that change over a long period of time. The results provide support for the role of BCT and MBCT plays in reducing depression, but no support for BCT and MBCT in changing sociotropic and autonomous personality styles in patients with depression.

The duration of depression and number of times committed suicide are two important variables that could affect the process of treatment; therefore, it is recommended to consider these two variables in future studies. Moreover, among other limitations of this study, were small sample population, non-matching of patients regarding the severity of depression and only a 2-month follow-up which made the generalizability of results from a clinical situation to natural situations of patients' real life a problem.

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Authors' Contributions

All authors participated in designing the study and analyzing the data. Hossin 4 Gholami was the psychotherapist who collected the data; Abbas Abolghasemi and Hossin Gholami collected the clinical data and drafted the manuscript; Mohammad Narimani and Masood Gamji performed parts of the statistical analysis; all authors read and approved the final manuscript.

Declaration of Interest

None declared.

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