

Research paper

The Effect of Mindfulness-based Cognitive Therapy on the Students Attribution Styles with Major Depressive Disorders

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Abstract

The purpose of this study was to investigate the effect of mindfulness-based cognitive therapy (MBCT) on the student's attribution styles with major depressive disorder (MDD). The research method was quasi-experimental with pretest-posttest design and follow-up with the control group. The study sample included 24 people with MDD who were randomly assigned to a 12-person experimental and control group. The experimental group underwent 8 sessions of 2-hour sessions of MBCT. At the end of the intervention, post-test, and two months after the intervention, the control and experimental groups were followed up. The results showed that MBCT affects attribution styles. These results were consistent at the follow-up stage. Based on the results of this study, it is suggested that MBCT intervention be used to reduce the level of pessimistic attribution style and to increase the optimistic attribution style of female students with MDD.

Keywords: Attribution styles, major depressive, mindfulness-based cognitive therapy, student.

Introduction

Major Depression Disorder (MDD) according to the 5th Diagnostic and Statistical Manual of Mental Disorders, mood disorder is defined as one or more major depressive episodes with no history of mania or hypomania that should last at least two weeks (American Psychiatric Association, 2019), More than 350 million people worldwide suffer from it (Rice, et al., 2019). Studies show that negative attribution styles, especially in dealing with negative life events, cause depression to relapse (Rubenstein, et al., 2016). Attribution styles refer to the explanations that individuals give about the cause of positive and negative events in terms of sustainability, generality, and internality (Liu, & Bates, 2014). The main emphasis of cognitive theories is that people with negative and pessimistic attribution styles, following negative life events, are more likely to suffer from a depressive disorder, so that these types of styles are the cause of the depressive disorder (Kim-Spoon, et al., 2012). One of the treatments for changing the style of documents is MBCT. MBCT is considered as one of the third wave cognitive-behavioral therapies, which is a kind of short-term group intervention (Ghadampour, et al., 2016). So far, no research has been found that directly examines the effect of MBCT on the attribution styles of female students with MDD. Therefore, similar studies have been reported with the present study. Among the researches of Hamidi and Jalilian (2019) in their study, they showed that MBCT has been effective in students' attribution styles. So, this study was conducted to investigate the effect of MBCT on the attribution styles of female students with MDD.

Method

The present research method was quasi-experimental with pre-test-post-test design and follow-up with the control group. The statistical population was all female students with MDD at Razi University in the 2016-

2017 academic year. Using cluster and targeted random sampling with the subject of research, 24 people were structured after a clinical interview and selected based on inclusion and exclusion criteria, which were randomly assigned to two groups of 12 experimental and control groups. The intervention took place in 8 two-hour sessions, one group session per week. Data were analyzed using SPSS-21 software at both descriptive and inferential levels (single-variable and multivariate analysis of covariance).

Tools:

Beck Depression Inventory-II(BDI-II): This questionnaire has 21 items. Gharaei (2003) on 125 Iranian students showed the validity of this questionnaire by Cronbach's alpha of 0.78 and the retest reliability of 0.73with two weeks apart (FathiAshtiani and Dastani, 2013).

Seligman and Singh Attribution Style Questionnaire: The revised form of the attribution Style Questionnaire was presented in 1992 by Seligman and Singh. The validation method of this test through Cronbach's alpha coefficient were 0.93, 0.93 and 0.90, for the source of the cause (internal), the stability of the cause (stability) and the generality of the cause, respectively (Kimayi and Gharib, 2009).

Results

Table 1 shows the results of the mean and standard deviation of the experimental and control groups by groups and stages.

Table 1. Describing the scores of attribution styles of good and bad events and their dimensions

Group membership	Variable	Pre-test		post-test		follow-up		
		M	SD	M	SD	M	SD	
experimental group	attribution styles of good events	Internal- external	13.23	2.07	19.80	3.21	19.56	3.50
		Stable - unstable	12.75	2.50	19.30	3.32	17.27	2.20
		general-specific	19.26	2.24	19.47	3.50	26.14	1.53
		attribution styles of a good event	49.36	3.14	67.93	4.05	68.19	5.68
	attribution styles of bad events	Internal- external	16.33	2.21	12.38	2.55	10.25	2.04
		Stable - unstable	18.02	2.49	12.61	1.38	12.73	1.36
		general-specific	18.29	3.03	16.81	2.29	16.59	2.79
		attribution styles of the bad event	58.20	4.65	45.52	4.63	41.64	3.63
control group	attribution styles of good events	Internal- external	14.02	1.12	15.02	2.05	14.84	1.91
		Stable - unstable	11.38	1.30	13.08	1.98	14.13	2.06
		general-specific	12.80	1.61	13.08	1.87	16.07	3.30
		attribution styles of good event	41.71	3.16	46.78	5.26	49.65	5.79
	attribution styles of bad events	Internal- external	16.18	2.45	14.94	2.42	13.16	2.05
		Stable - unstable	17.70	3.05	15.04	2.14	15.47	2.63
		general-specific	19.12	1.77	18.08	2.19	18.91	2.29
		attribution styles of bad event	57.76	2.40	53.55	4.34	49.72	4.51

To determine the significance of the difference between the above variables, multivariate analysis of covariance was used and all the necessary assumptions were made to perform multivariate analysis of covariance.

As the results of Table 2 show, in the attribution style of good event and its dimensions, MBCT differs significantly between the experimental and control groups in the internal-external dimension in the post-experimental stage at the level of $0.001 < p <$ and in the follow-up stage. At the level of $p < 0.05$, at the stable-

unstable dimension in the post-test phase at the level of $p < 0.01$ and in the follow-up phase at the level of $p < 0.05$; In the general-specific dimension, both in the post-test stage and in the follow-up at the level of $p < 0.05$, in the attribution styles, a good event has resulted in both in the post-test stage at the level of 0.001 and the follow-up stage at the level of $p < 0.05$. On the other hand, in the attribution style of the bad event and its dimensions, MBCT has a significant difference between the two experimental and control groups in the internal-external dimension in the post-test stage at the level of $p < 0.01$ and at the follow-up stage at the level of $p < 0.05$. In the stable-unstable dimension in the post-test phase and the follow-up stage at the level of $p < 0.05$ and the attribution style, the bad event in the post-test phase and the follow-up phase at the level of $p < 0.01$, but in the general dimension.

Table 2. Multivariate covariance analysis results attribution styles score Good and Bad event

Variable	levels	Source of change	F	p	Eta	Statistical power	
Attribution styles are a good event and its dimensions	Internal-external	post-test	Pre-test	0.491	0.49	0.027	0.29
			Group membership	20.38	0.001	0.531	0.99
	Stable -unstable	follow-up	Pre-test	0.41	0.52	0.023	0.12
			Group membership	5.61	0.05	0.238	0.61
	general-specific	post-test	Pre-test	5.14	0.05	0.231	0.71
			Group membership	13.14	0.01	0.422	0.93
	attribution styles are good events	follow-up	Pre-test	5.62	0.05	0.238	0.61
			Group membership	6.17	0.05	0.256	0.65
		post-test	Pre-test	4.80	0.05	0.211	0.55
			Group membership	7.43	0.05	0.292	0.73
		follow-up	Pre-test	0.70	0.41	0.03	0.13
			Group membership	6.68	0.05	0.271	0.69
		post-test	Pre-test	4.75	0.05	0.209	0.59
			Group membership	28.99	0.001	0.617	0.99
	follow-up	Pre-test	2.62	0.12	0.127	0.34	
		Group membership	7.98	0.05	0.307	0.76	
Attribution styles are a bad event and its dimensions	Internal-external	post-test	Pre-test	1.82	0.12	0.092	0.25
			Group membership	9.04	0.01	0.334	0.81
	Stable -unstable	follow-up	Pre-test	8.71	0.01	0.326	0.78
			Group membership	6.27	0.05	0.259	0.66
	general-specific	post-test	Pre-test	0.52	0.47	0.028	0.11
			Group membership	4.63	0.05	0.205	0.53
	attribution styles are bad events	follow-up	Pre-test	0.52	0.47	0.028	0.11
			Group membership	4.63	0.05	0.205	0.53
		post-test	Pre-test	0.21	0.65	0.012	0.07
			Group membership	2.43	0.13	0.119	0.31
		follow-up	Pre-test	0.21	0.65	0.012	0.07
			Group membership	2.43	0.14	0.119	0.31
		post-test	Pre-test	0.34	0.56	0.019	0.08
			Group membership	16.37	0.01	0.476	0.97
	follow-up	Pre-test	0.01	0.90	0.001	0.05	
		Group membership	15.19	0.01	0.458	0.96	

Discussion

The results obtained in this study were consistent with the findings of Hamidi and Jalilian (2019). In explaining the research findings, we can point to the step-by-step of therapeutic intervention, which were designed based on the background, by the style of the students' explanatory documents. Also, the exercises of this treatment had a great impact on the cognitive system and processing of students' information as well as their performance by increasing people's awareness of the present moment. The findings of this study

showed that MBCT significantly increased the attribution style of events with good results and reduced the attribution style of events with bad consequences, so that this increase and decrease in the two stages after the intervention and two months later on was visible. The limitations of the present study include the failure to use another method of psychological intervention alongside MBCT to compare the effectiveness of the two methods; the advice to choose and prioritize the intervention method, given that it was the only females, should be used with caution in generalizing the results to people outside the research community.

References

- American Psychiatric Association. (2019). *Diagnostic and statistical manual of mental disorder American Psychiatric Publishin*. Translated by Rezaee F, et al(2019). Tehran: Arjmand Publication. (Text in Persian).
- Fathiashtian A, Dastani M. (2013). *Psychological tests: personality assessment and mental health*. Tehran: Be'sat. (Text in Persian).
- Ghadampour, E., Gholamrezaei, S., and Radmehr, P. (2016). The effectiveness of mindfulness-based cognitive therapy on interpretation bias and dysfunctional attitude in Suffering disorder comorbidity social anxiety and depression. *Journal of the Shahrekord University of Medical Science*, 18(2): 21-34(Text in Persian).
- Hamidi, F., and Jalilian, H. (2019). The effect of mindfulness-based cognitive therapy on attribution styles of students. *Family and Research Journal*, 15(4):85 -102(Text in Persian).
- Khoury B, Lecomte T, Fortin G, Mass M, Therien P, Bouchard V, Chapleau M.A, Paquin K, Hofmann SG. (2013). Mindfulness-based therapy: A comprehensive meta-analysis. *Journal Clinical Psychology Review*. 33(6):763-771.
- Kim-Spoon, J., Ollendick, T., & Seligman, L. D. (2012). Perceived competence and depressive symptoms among adolescents: The moderating role of attributional style. *Journal Child Psychiatry & Human Development*, 43(4), 612-630.
- Kimyaei S. A, Gharib, S. (2009). The relationship between learning strategies and document styles in students. *Journal of Behavior Science*. 3(2): 99-104(Text in Persian).
- Liu, C., & Bates, T. C. (2014). The structure of attributional style: cognitive styles and optimism–pessimism bias in the attributional style questionnaire. *Personality and Individual Differences*, 66(10), 79-85.
- Radmehr, P. (2015). *The effectiveness of mindfulness-based cognitive therapy on interpretation bias, meta-cognitive beliefs and dysfunctional attitude in adolescences suffering comorbidity social anxiety and depression*. Thesis for Maters degree in General of Psychology. Lorestan University.
- Rice, F., Riglin, L., Lomax, T., Souter, E., Potter, R., Smith, D.J., Thapar, A.K. and Thapar, A. (2019). Adolescent and adult differences in major depression symptom profiles. *Journal of Affective Disorders*, 243(15): 175-181.
- Rubenstein, LM, Freed, RD, Shapero, BG, Fauber, RL, Alloy, LB. (2016). Cognitive attributions in depression: bridging the gap between research and clinical practice. *Journal Psychotherapy Integration*, 26(2): 103-115.

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Conflicts of interest

The authors did not declare conflict of interest.



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