

## The Effectiveness of Acceptance and Commitment Therapy on Suicidal Ideation and Psychological Flexibility in Patients with Bipolar Disorder

1.Sara Jamali, 2.Mahmoud Najafi, 3.Fatemeh Sadat Ghoreishi and 4.Isaac Rahimian Boogar <sup>4</sup>

<sup>1</sup>- M.A. in Clinical Psychology, Faculty of Psychology and Educational Sciences, Semnan University, Semnan, Iran. E-mail: saraj4111 @ gmail.com

<sup>2</sup>- Corresponding Author: Associate Professor, Department of Clinical Psychology, Faculty of Psychology and Educational Sciences, Semnan University, Semnan, Iran. E-mail: m\_najafi@semnan.ac.ir

<sup>3</sup>- Associate Professor, Department of Psychiatry, School of Medicine, Kashan University, Kashan, Iran. E-mail: dr.zoghoreishi@yahoo.com

<sup>4</sup>- Associate Professor, Department of Clinical Psychology, Faculty of Psychology and Educational Sciences, Semnan University, Semnan, Iran. E-mail: i\_rahimian@semnan.ac.ir

### Abstract

This study aimed to evaluate the effectiveness of acceptance and commitment therapy (ACT) on suicidal ideation and psychological flexibility in patients with bipolar disorder (BD). The present study was quasi-experimental with a pretest-posttest design and a control group. Among the BD patients of Kargarnejad Hospital in Kashan, a sample of 30 patients (15 in each group) were selected and randomly assigned into experimental and control groups. The instruments of this study were the Beck Scale for Suicidal Ideation (BSSI) and the Acceptance and Action Questionnaire(AAQ-II). The results showed that ACT reduces suicidal ideation and improves psychological flexibility.

**Keywords:** Acceptance and commitment therapy, bipolar disorder, psychological flexibility, suicidal ideation

### Introduction

Bipolar disorder (BD) is a chronic debilitating mood disorder characterized by recurrent periods of depression and mania (Pankowski, et al., 2017). The suicide rate in these patients is 20 to 30 times higher than in the general population (Plans, et al., 2019). Also, defects in psychological inflexibility, referring to a person's internal and external experiences, are found in BD patients (O'Donnell, et al., 2017). By emphasizing the acceptance of inner experiences and acting in line with values, acceptance and commitment therapy (ACT) is effective in reducing suicidal ideation and improving psychological flexibility. According to this approach, the three basic problems related to awareness, avoiding internal experiences, and not attempting to valuable activities of one's life lead to mental disorders. The main goal of this treatment is psychological flexibility, leading to the consideration of various solutions and thus a reduction in suicidal ideation (Wersebe, et al., 2018). Research by Tighe, et al. (2018); Ghadam, et al. (2020); Abyar et al. (2018); Khorani, et al. (2020); have shown the effectiveness of this treatment in reducing suicidal ideation. On one hand, due to the prevalence and high recurrence of BD, its numerous consequences for patients in various fields, and the need to prevent this phenomenon, and on the other hand, confirming the effectiveness of ACT in this disorder and research gap in this area, this study investigated the effectiveness of ACT on suicidal ideation and psychological flexibility in BD individuals.

## Method

The present study was quasi-experimental with a pretest-posttest design and control group. The statistical population was BD patients in Kargarnejad Hospital in Kashan. Thirty individuals were selected by convenience sampling method and randomly assigned into experimental and control groups. First, a pretest was performed for the subjects, and then the experimental group received eight 90-minute sessions individually, two sessions per week, based on ACT, and according to the protocol prepared by Zettle and Hayes (1980). After the sessions, a post-test was performed for both groups.

**The Beck Scale for Suicidal Ideation (BSSI):** The BSSI with 19 items designed by Beck is used to measure the severity of attitude and plan to attempt suicide. Shayganfar (2020) reported Cronbach's alpha of the BSSI equal to 0.83. In this study, Cronbach's alpha was equal to 0.84.

**The Acceptance and Action Questionnaire(AAQ-II):** The AAQ-II developed by Bond, et al. (2011) is the most widely used tool for measuring empirical avoidance/psychological inflexibility which involves 7 items. Its items are graded based on a 7-point Likert scale. Higher scores on this scale indicate lower psychological flexibility and higher experimental avoidance. The test-retest reliability and internal consistency of this questionnaire were 0.81 and 0.84, respectively (Bond, et al., 2011). In this study, Cronbach's alpha was 0.86.

## Results

Multivariate analysis of covariance (MANCOVA) was used to determine the effectiveness of ACT. Before performing the analysis of covariance, first, the Kolmogorov–Smirnov test was used to check the data distribution normality. The results are listed in Table 1, indicating that this assumption has been met. The Box M test was used to examine the homogeneity of the variance-covariance matrix between groups and the Levene's test was used to measure equality of error variances for variables between groups. The results of Box M test showed homogeneity of variance-covariance matrix (Box M = 6.40,  $F = 1.96$ ,  $p = 0.11$ ). The results of Levene's test showed that the significance levels for suicidal ideation and psychological flexibility were greater than 0.05. Therefore, the assumption of error variance homogeneity for the variables between groups was confirmed. Another important assumption of MANCOVA is the homogeneity of regression coefficients, which is realized by examining the non-interaction of the experimental operation with pretests. In this study, the interaction of experimental practice with pretests was investigated through Wilks's lambda, and according to the results, this interaction was not significant (Wilks's lambda=0.76,  $F=1.58$ ,  $p=0.20$ ). Also, the interactions of suicidal ideation (Wilks's lambda=0.98,  $F=0.17$ ,  $p=0.84$ ) and psychological flexibility (Wilks's lambda=0.91,  $F=1.03$ ,  $p=0.37$ ) were not significant, indicating the homogeneity of regression coefficients. Considering the confirmation of all assumptions, MANCOVA was performed. The results of MANCOVA for the effectiveness of ACT on variables are presented in Table 1.

Table 1: Results of MANCOVA

Effect	Value	F	p	Eta	Observed Power
Pillai's Trace	0.39	8.19	0.002	0.40	0.94
Wilks' Lambda	0.60	8.19	0.002	0.40	0.94
Hotelling's Trace	0.65	8.19	0.002	0.40	0.94
Roy's Largest Root	0.65	8.19	0.002	0.40	0.94

Table 2 shows the results of the analysis of covariance to examine patterns of difference in variables.

Table 2: Analysis of covariance to examine patterns of difference

Source	Dependent Variable	Sum of Squares	df	Mean Square	F	p
Group	Suicidal ideation	127.25	1	127.25	14.92	0.001
	Psychological flexibility	332.80	1	332.80	84.55	0.001

The results of Table 2 show that ACT is effective in reducing suicidal ideation and improving psychological flexibility.

## Discussion

The results showed that ACT improved psychological flexibility in BD patients. Acceptance and commitment cause us to focus on the current situation and to use the opportunities to move towards values despite unwanted events. Psychopathology is caused by psychological inflexibility, and reducing cognitive fusion and experiential avoidance is effective in increasing flexibility. The results also showed that this treatment was effective in reducing suicidal ideation. Mindfulness can reduce individuals' reactive behavior when confronted with suicidal ideation and allow them to stop these ideations.

Limitations of the study included lack of a follow-up period after treatment, lack of generalization of results due to the limited population, lack of comparison of this approach with other approaches, and lack of complete control of drug treatment. It is recommended to repeat this intervention by controlling drug treatment, conducting short-term and long-term follow-ups, and conducting future research on one type of BD.

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## Conflict of Interests

There is no conflict of interests for researchers

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