

## Effectiveness of Acceptance and Commitment Group Therapy with the Islamic Approach to Reduce Anxiety and Depression in Type II Diabetes People in Yazd

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### Abstract

**Objective:** The purpose of this study was to investigate the effectiveness of acceptance and commitment based group therapy (ACT) with the Islamic approach to reduce anxiety and depression in patients with type II diabetes referent to the Yazd Diabetes Research Center.

**Materials and Methods:** The study method was the semi experimental. Forty diabetic patients were simple randomly divided into two equal experimental and control groups. The study was done in the patients referent to the Yazd diabetes center (n= 5000), using a purposeful sampling method. So, all of the patients did completed the beck anxiety (BAI) and depression (BDI-II) questionnaire for diabetic patients. Then, the experimental group received ACT with an Islamic approach every other week during 16 weeks and 120 minutes for each time, and the control group continued their normal plan. The population of both groups performed the anxiety (BAI) and depression (BDI-II) questionnaire again after performing the instructional plan.

**Results:** In this research, the covariance analysis test was used to analyze the results. The findings of the research showed that ACT with an Islamic approach effects on the anxiety ( $P$ : 0.001) and depression ( $P$ : 0.001) in type II diabetes people.

**Conclusion:** The results showed that ACT with Islamic approach is effective on reducing anxiety rate and depression of type 2 diabetic people. Scores of post-test confirmed the effect of treatment method ACT with Islamic approach on reducing of anxiety and depression rate.

**Keywords:** Type II diabetes, Acceptance and commitment based therapy, Islamic approach, Anxiety, Depression

### QR Code:



**Citation:** Hakimian M M, Sedrpoushan N, Abolhassani Shahreza F. Effectiveness of Acceptance and Commitment Group Therapy with the Islamic Approach to Reduce Anxiety and Depression in Type II Diabetes People in Yazd. IJDO 2023; 15 (4) :256-260

**URL:** <https://ijdo.ssu.ac.ir/article-1-836-en.html>



10.18502/ijdo.v15i4.14558

### Article info:

**Received:** 08 March 2023

**Accepted:** 10 November 2023

**Published in December 2023**



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## Introduction

**D**evelopment and detection of body-Psyche disorders needs to have close and permanent bond Psychological factors and physical signs simultaneously (1). Chronic diseases have the most negative effect on public health and the quality of people life among these factors (2-5).

Diabetes is one of the chronic diseases that are caused to physical and mental health problems in people, according to the American Diabetes Association report (6). People with diabetes experience different problems to do their works. Some studies has reported high ranking of emotional problems in diabetics, including anxiety, depression, aggression and many others (7,8). Depression is one of the most common Psychological disorders in diabetics (9). Depression is a behavioral disorder that shows itself with some signs like low behavior, lost feeling, absurdity, mental and motion retardation, guilty feeling and disability in concentration and thinking related to death.(10-13), while patient motivation play a basic role in diabetes management. Some people with weak mental health, doesn't have adequate excitement power and motivation for diabetes management (14-17)

Treatment based on acceptance and commitment with sub structural principals including 1) acceptance or trend to paint experience or other turbulent events without restrain them, 2) act based on value or commitment along with trend to act as a personal meaningful purposes before removing unwanted experiences. (18,19). The aim of this study was considering of treatment group effectiveness based on acceptance and commitment with Islamic approach on reducing anxiety and depression in type 2 diabetes people.

## Material and methods

This research is a semi-experimental study with pre-test, post-test design. The population of this study is comprised of all type II diabetes people (5000) referred to Yazd

diabetes research. Forty individuals were purposefully selected. They were simple randomly divided in two groups. The anxiety and depression questionnaire was completed before the first session and once after the last session.

The descriptive statistics index as well as the statistical method of covariance analysis was used in order to analyzing the data. The significant level was 0.05.the Statistical Package for the Social Sciences -16 was used. This study ethical approval was done in Ali ben abitaleb medical school of Yazd.

## Measurement tools

### Beck Anxiety Questionnaire (BAI)

A self-measurement scale with 21 questions that measure Anxiety. Beck anxiety questionnaire has high internal similarity ( $\alpha=0.9$ ), it has reported high retest coefficient ( $r=0.6$ ) and concurrent viability and moderate to severe cognitive for it (Beck, 1998). Done studies shows this test has high reliability and viability and its internal stability is high ( $r=0.92$ ) and data correlation is varied about 0.3 to 0.76. Its reliability was observed high through two steps of test after one week ( $r=0.75$ ). Correlation with Beck Depression Questionnaire and Beck Anxiety is 0.48.

### Beck Depression Questionnaire (BDI-II)

This questionnaire developed for measurement depression intensity in 1963 by Beck and revised in 1994 (Beck, Ester, Brown, 1996). Depression questionnaire is a tool that measures depression criteria DSM-IV widely. Beck Depression Questionnaire including 21 items to assess depression intensity in the normal and clinical patients. Each item measures a special sign of depression and also including 4 options arranged from low level to high level. The highest score is 63 in the questionnaire (20). The present items set in the questionnaire to explore restlessness, worthless feeling, concentration problem, lost energy, increasing and decreasing sleep and

appetite. This test was done on 94 people in Iran and the results showed that internal reliability of the tool is 0.91 and reliability coefficient is 0.89 for test-retest (21).

### Ethical considerations

This study was approved by Islamic Azad University of Yazd ethics committee. This study is extracted from PHD thesis.

### Results

The mean and standard deviation of the pre-test and post-test of anxiety in both studied groups are presented in Table 1.

The mean and standard deviation of the pre-test and post-test depression scores in both experimental and control groups are presented in Table 2.

### The assumption of normality

Another assumption for using T and F test is the assumption of the scores normal distribution of a sample group or groups in the society. The basis of this assumption is that the distribution of scores in the society is assumed to be normal, and achieving any skewness or kurtosis in the sample group is due to the random selection. The Kolmogorov Smirnov

test is used to test this hypothesis. The results of this test for the research hypotheses are presented in Table 3.

The covariance analysis results of post-test scores of anxiety scores in both experimental and control groups showed significant differences ( $P: 0.001$ ). ACT with Islamic approach has a remarkable effect on reduce anxiety in type II diabetes ( $P < 0.001$ ).

There is a significant difference between the adjusted mean of depression scores of the participants in terms of group membership (two experimental and control groups ( $P < 0.001$ ) after removing the effect of the pre-test variable and considering the calculated coefficient F. So, this hypothesis is confirmed. The effectiveness amount of the intervention was about 55%. Therefore, the ACT with Islamic approach has a remarkable effect on reduce depression behaviors of individuals with type II diabetes. The statistical power of 1 and the significant demanded level ( $P < 0.001$ ) show the relatively high accuracy of the test and the adequacy of the sample size.

### Conclusion

The results showed that ACT with Islamic approach is effective on reducing anxiety rate

**Table 1. Mean and standard deviation of pre-test and post-test scores of anxiety in both experimental and control groups**

Group	Pre-test		Post-test	
	Mean	Standard deviation	Mean	Standard deviation
Control group	12.65	8.12	13.25	8.9
Experimental group	13.45	1.04	8.5	7.59

**Table 2. The mean and standard deviation of pre-test and post-test depression scores in both studied groups**

Group	Pre-test		Post-test	
	Mean	Standard deviation	Mean	Standard deviation
Control group	14.15	7.94	15.45	9.13
Experimental group	16.75	1.09	11.6	8.36

**Table 4. The results of the Kolmogorov Smirnov test about the assumption of the normal distribution of scores in two groups**

Variables	Indicators Groups	Shapiro-wilk test statistics	P-value
Anxiety	Experiment	0.832	0.494
	Control	0.490	0.970
Depression	Experiment	0.799	0.546
	Control	0.627	0.827

and depression of type 2 diabetic people. The similar studies (22-24) found that participations in the intervention group ACT showed significant reduction in believes and credibility and abundance of negative thoughts. Also, the treatment effectiveness ACT on diabetes patients and acceptance and awareness skills has evaluated thought control and negative feelings related to diabetes. In a general explanation about effectiveness of this treatment, it can be said that treatment based on acceptance and commitment with Islamic approach is based on this principle that acceptance is the suffering of a person, it is the main step towards freedom, means satisfactory official. This approach seeks to actively and consciously accept the unpleasant experiences of life without the person unduly trying to change their living conditions or trying to endure the unpleasant situations. So, according to the results of this study, when the six components of acceptance and commitment-based treatment are consistent with the relevant concepts in Islamic sources, namely, acceptance with the philosophy of suffering and reciprocity, cognitive error with asceticism, self-actualization as a field of human creativity, relationship with the present By mentioning and meditating, the values of nature and the Qur'an and the practical patterns of the Ahl-e-Bayt (PBUH) and the obligatory

act of God's servitude and servitude were used in group therapy for people with type 2 diabetes, lead to anxiety and depression in people with type 2 diabetes.

### Acknowledgments

This study was conducted as a part of a master thesis. We thank Dr. Nasim Namiranian and Fateme Sadat Haghighi from Yazd Diabetes Research Center to help us in the conducting of this study.

### Funding

The study costs have been provided by the authors and there was no external funding.

### Conflict of Interest

No potential conflict of interest was reported by the authors.

### Authors' contributions

All authors have accepted responsibility for the entire content of this manuscript and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved and approved the version to be published.

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