ID Design Press, Skopje, Republic of Macedonia
Open Access Macedonian Journal of Medical Sciences. 2018 Feb 15; 6(2):410-415.
https://doi.org/10.3889/oamjms.2018.064
eISSN: 1857-9655
***Public Health***

# Effectiveness of Acceptance and Commitment Therapy on Anxiety and Depression of Razi Psychiatric Center Staff

Mostafa Heydari[1], Saideh Masafi[1], Mehdi Jafari[2], Seyed Hassan Saadat[3*], Shima Shahyad[4]

*[1]Department of Psychology, Kish International Branch, Islamic Azad University, Kish Island, Iran; [2]Health Psychology, Department of Clinical Psychology, Taleghani Educational Hospital, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran; [3]Behavioral Sciences Research Center, Lifestyle Institute, Baqiyatallah University of Medical Sciences, Tehran, Iran; [4]Neuroscience Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran*

**Citation:** Heydari M, Masafi S, Jafari M, Saadat SH, Shahyad S. Effectiveness of Acceptance and Commitment Therapy on Anxiety and Depression of Razi Psychiatric Center Staff. Open Access Maced J Med Sci. 2018 Feb 15; 6(2):410-415. https://doi.org/10.3889/oamjms.2018.064

**Keywords:** Acceptance and Commitment Therapy; Anxiety; Depression

***Correspondence:** Seyed Hassan Saadat. Behavioral Sciences Research Center, Lifestyle Institute, Baqiyatallah University of Medical Sciences, Tehran, Iran. Tel: +98-9125832937. E-mail: saadat350@gmail.com

**Received:** 18-Aug-2017; **Revised:** 01-Dec-2017; **Accepted:** 02-Dec-2017; **Online first:** 08-Feb-2018



**Funding:** This research did not receive any financial support

**Competing Interests:** The authors have declared that no competing interests exist

**Abstract**

**AIM:** Considering the key role of human resources as the main operator of organisations, the present research aimed to determine the effectiveness of acceptance and commitment therapy for anxiety and depression of Razi Psychiatric Center staff.

**MATERIALS AND METHODS:** This research follows a quasi-experimental type with pre-test, post-test plans, and control group. Accordingly, 30 people were selected through volunteered sampling among Razi Psychiatric Center staff. Then, they were randomly placed into two groups of 15 (experimental and control) and evaluated using research tools. Research tools consisted of Beck Anxiety and Depression Inventories whose reliability and validity have been confirmed in several studies. Research data were analysed using the analysis of covariance (ANCOVA).

**Results:** The statistical analysis confirmed the difference in the components of anxiety and depression in the experimental group, which had received acceptance and commitment therapy compared to the group that had not received any therapy in this regard (control group) ($p < 0.05$).

**CONCLUSION:** Acceptance and commitment therapy reduces anxiety and depression.

## Introduction

With the increasing complexity of modern societies, the mission of organisations and institutions to meet the expectations of society becomes more sensitive and more important. Therefore, it can be acknowledged that our world is the world of organisations. What is now believed by the experts and consensus is the fundamental role of human resources as the main operators of organizations. In other words, the human gives organisations the life. Undoubtedly, the efficient and motivated workforce can have the most effectiveness to grow, develop, and achieve the planned objectives [1]. Work is an important part of the life of an individual. On the one hand, it can satisfy some basic human needs such as the physical and mental growing, social communication, creating a sense of worth, confidence, and competence, but on the other hand, it can be a major source of stress [2].

Some events during working days are interpreted as an extent of the threat to the physical and psychological well - being. The events that are perceived as stressful factors follow negative emotional responses, particularly anger or anxiety. Thus, these excitements cause behavioural and physical stresses. These pressures also increase the blood pressure, heart rate, and stress hormone secretion such as adrenaline by psychological arousal. Physiological changes in the short term can lead to physical symptoms such as a headache or stomachache. Finally, the continuous high heart rate and blood pressure will also cause heart disease. People must think well to be able to work properly and must be healthy to think well. Therefore, physical and

mental health can have a major impact on human resources productivity. Anxiety and depression are the important psychological issues that can cause physical and mental fatigue. Different interventions have been used to treat depression and anxiety. The point that should be considered is that interventions do not always have a positive effect and sometimes their effectiveness have been limited. Sometimes the interventions have been effective on some people and ineffective for others. Moreover, the new interventions regarding the occupation issues were less considered in Iran.

One of the interventions used in the field of depression and anxiety burnout is acceptance and commitment therapy. This therapy is one of the third wave interventions, which is based on universal consciousness (mindfulness) [3]. In this approach, the universal consciousness is the conscious awareness to experience here and now, with openness, interest, and acceptance. Pervasive consciousness includes living here and now, busy with work in progress and not getting distracted by thoughts. Also, in pervasive consciousness, the person allows thoughts and feelings to come and go what they are without trying to control. When we observe private experience (thoughts and feelings) with openness and acceptance, even the most painful of them are less threatening, and they seem more tolerable [4]. In acceptance and commitment therapy, depression conceptualisation is emotions related to past events such as death or losing something, which prevents normal reactions and adaptation to stressful life events. In above approach, the content of depressed person negative thoughts is not considered. The tendency to behave based on the content of thoughts is called "cognitive fusion", in which it is tried to eliminate the causes of depression that may not be helpful. "Defusion" is against the cognitive fusion, which mediates the consequences of depression, in which the visitors learn to clear their thoughts and make their actions are based on values [5].

According to what was said this study aims to investigate the effectiveness of Acceptance and Commitment Therapy on Anxiety and Depression of Razi Psychiatric Center staff.

## Materials and Methods

The present research is quasi-experimental, and the applied plan in the research is pretest-posttest plans with two groups. Pretest and posttest plan was composed of the control group from the experimental group and the control group. Both groups were measured twice. The first measurement was performed by a pretest before the intervention, and the second measurement was performed after the end of required interventions. Table 1 shows the content of ACT sessions.

**Table 1: Summary of contents in sessions based on acceptance and commitment therapy**

| Session | Description of session activities |
|---|---|
| First | Therapeutic relationship, the people acquaintance with the matter of therapy sessions and treatment contract |
| Second | Discovering and assessing inefficient strategies used in members to reduce anxiety and depression in different positions and evaluation of their effects, discussion of temporary and ineffective methods of using analogies, feedback and providing assignments |
| Third | Assisting people to accept painful personal events without conflict with them using analogies, feedback and providing assignments |
| Fourth | Explain to avoid painful experiences and knowledge of its consequences, training acceptance steps, changing language concepts using the of analogies, relaxation training, feedback and providing assignments |
| Fifth | The introduction of three - dimensional behavioural model to express the common communication behaviour/emotions, psychological and visible behavioural functions and discussion of trying to change behaviour based on them, feedback and providing assignments |
| Sixth | Explaining the concepts of roles and terms, viewing themselves as a context and contacting by analogies, understand the different sensory perceptions and mental separation, feedback and providing assignments |
| Seventh | Explaining the concept of values, creating motivation and empowering people for a better life, concentration exercises, feedback and providing assignments |
| Eighth | Training commitment to action, identifying behavioural patterns by values and commitment to act, summing up meetings, implementation after testing |

### *The statistical population, sample, and sampling*

The statistical population of the present research included all Razi psychiatric centre staff who have worked in 2015 - 16. The sample was selected through the voluntarily sampling method and randomly divided into two groups, the experimental group, and the control group. The number of people in each of two groups was 15 people.

The experimental group members participate in eight 90 minutes' sessions per week. No intervention was done in the control group.

### *Inclusion criteria*

- The work experience of samples was considered five years and over in Razi psychiatric centre, with a Bachelor's degree level and above, in both sexes.
- The rate of burnout was evaluated using the Maslach Burnout Inventory at medium to high level.
- The sample must not have any history of mental illness.

### *Beck Anxiety Inventory*

Beck Anxiety Inventory includes 21 items that there are four options for every phrase to answer. Each phrase reflects one of the symptoms of anxiety that usually people experience who are clinically anxious or are in a state of apprehension. The subjects sign their suffering from symptoms of anxiety last week in a column. Scoring includes not at all zero score, low one score, medium two scores, and severe

three scores. The anxiety scores range is from zero to 63.

Beck et al. (1988) expressed the reliability of the questionnaire in 1988 as much as 0.75 through retesting on 83 outpatients within a week. Federikh et al. (1992) reported an alpha coefficient as much as 0.94 for 40 outpatients. In a study on Iranian population, the Cronbach's alpha coefficient was 0.90 [6]. Also, the validity, reliability and internal consistency of the Beck Anxiety Inventory on Iranian population recorded as 0.72, 0.83, and 0.92, respectively [7].

### *Beck Depression Inventory*

The inventory was first developed by Beck et al. (1961) [8]. BDI-II is a 21 - item self - report inventory, which is the revised form of BDI. It is applied to determine the severity of depression and depressive symptoms in psychiatric patients and determining depression in the general population. The scores of the inventory are placed up to 3 based on four options (0 - 3) for the absence of the specific indication to the highest degree of the sign in the scope.

Beck el al. reviewed studies that had used this tool and found that its reliability coefficient using retesting varied from 0.48 to 0.86 according to the distance between the frequency and the running. Beck el al. (1996) once again obtained retest reliability coefficient within one week as much as 0.93. Several studies have been conducted in Iran to measure the psychometric properties of BDI - II which its reliability was 0.78 and its validity were varied from 0.70 to 0.90 [9][10].

### *Research method*

The anxiety and depression questionnaire was distributed among Razi psychiatric centre staff after preparation of research tools. People who have a moderate to high anxiety and depression were selected. Then, they completed Beck Depression and Anxiety Inventory. Among them, 30 people who have a moderate to high depression and anxiety were selected and randomly divided into two experimental and control groups of 15 people (This questionnaire was considered as a pretest for both groups). Those in the experimental group received Acceptance and Commitment therapy, but the control group did not receive this treatment. The method of treatment for the experimental group was eight 90 minutes' sessions per week. At the end of the weekly sessions (8 sessions), the questionnaires were given to the group again and anxiety and depression rate was recorded (post-test). Two months after the end of the session, a meeting was conducted on two groups, and their anxiety and depression were measured and recorded. The obtained scores by the pre-test and post-test scores as well as follow-up meeting scores to assess the effectiveness of the independent variables were analysed in the group. It is worth mentioning that intervention sessions are formed as a group that the summary of the content of each session is as follows:

## Results

The descriptive findings of anxiety and depression are given in Table 2.

**Table 2: The descriptive findings related to depression in the experimental and control groups in the pre-test, post-test, and follow - up**

| | | Experiment | Control |
|---|---|---|---|
| Depression | Pre-test (n = 15) | 21 ± 3.4 | 21.3 ± 3.0 |
| | Post-test (n = 15) | 17 ± 3.4 | 20.8 ± 2.8 |
| | Follow-up (n = 15) | 16.8 ± 3.0 | 20.3 ± 2.9 |
| Anxiety | Pre-test (n = 15) | 21.7 ± 1.2 | 22.6 ± 1.9 |
| | Post-test (n = 15) | 14.5 ± 1.9 | 21.7 ± 2.9 |
| | Follow-up (n = 15) | 14.0 ± 2.1 | 20.9 ± 2.2 |

Analysis of covariance was used to investigate this hypothesis according to the two-level class independent variable (experimental group and control group), the continuous dependent variable (anxiety and depression posttest scores) and independent variable (anxiety and depression pretest scores). Surveying data for the analysis of covariance showed that most of the assumptions are confirmed. Only the homogeneity of variances in some of the components was outside the criteria for which they have considered the alpha as much as 0.025. Covariance analysis results are reported below.

**Table 3: Results of covariance analysis on the post-test anxiety scores in the experimental and control groups by controlling the pretest**

| Dependent variable | Source | Sum of squares | Df | Mean Square | F | Significance level | Impact rate |
|---|---|---|---|---|---|---|---|
| Anxiety posttest | Pretest | 32.039 | 1 | 32.039 | 12.532 | 0.001 | 0.317 |
| | Group | 306.675 | 1 | 306.675 | 119.955 | 0.000 | 0.816 |
| | Error | 69.028 | 27 | 2.557 | | | |
| | Total | 10282.000 | 30 | | | | |
| Anxiety follow up | Pretest | 39.414 | 0 | 39.414 | 11.782 | 0.002 | 0.304 |
| | Group | 271.201 | 1 | 271.201 | 81.072 | 0.000 | 0.750 |
| | Error | 90.320 | 27 | 3.345 | | | |
| | Total | 9601.000 | 30 | | | | |

According to the above table results, there is a significant difference in the experimental and control

groups among anxiety (p = 0.000, F = 119.955). This table shows that there is a significant difference in posttest by removing the effect of pre-test scores among the adjusted average based on the group. In general, it can be said that acceptance and commitment therapy in post-test reduces anxiety. Given the size of this effect, the rate is significant. The follow - up results showed that treatment was stable by eliminating the effect of pretest (p = 0.000, F = 81.072). Therefore, it can be said that acceptance and commitment therapy significantly reduces anxiety in the long term.

**Table 4: Results of covariance analysis on depression scores in the experimental group and control group by controlling the pre-test**

| Dependent variable | Source | Sum of squares | Df | Mean Square | F | Significance level | Impact rate |
|---|---|---|---|---|---|---|---|
| Depression posttest | Pretest | 255.683 | 1 | 255.683 | 412.950 | 0.000 | 0.939 |
| | Group | 94.299 | 1 | 94.299 | 152.302 | 0.000 | 0.849 |
| | Error | 16.717 | 27 | 0.619 | | | |
| | Total | 11097.000 | 30 | | | | |
| Depression follow up posttest | Pretest | 176.253 | 1 | 176.253 | 64.764 | 0.000 | 0.706 |
| | Group | 82.767 | 1 | 82.767 | 30.413 | 0.000 | 0.530 |
| | Error | 73.480 | 27 | 2.721 | | | |
| | Total | 10685.000 | 30 | | | | |

According to the results, it can be said that there is a significant difference in the experimental and control groups among depression (p = 0.000, F = 152.302). This table shows that there is a significant difference in post-test by removing the effect of pre-test scores among the adjusted average based on the group. In general, it can be said that acceptance and commitment therapy in post-test reduces depression. Given the size of this effect, the rate is significant. The follow-up results showed that treatment was stable by eliminating the effect of pretest (p = 0.000, F = 30.413). Therefore, it can be said that acceptance and commitment therapy significantly reduces depression in the long term.

## Discussion

In the current study, the effectiveness of Acceptance and Commitment Therapy on Anxiety and Depression was investigated and finding demonstrates that Acceptance and Commitment Therapy could reduce anxiety and depression. These results are consistent with findings of previous studies [16][11]. Nariman et al. showed that Acceptance/ Commitment Training have a positive effect on decreasing the social anxiety in students with specific learning disorder (SLD) [11]. Hosseinaei et al. demonstrated Group acceptance and commitment therapy (ACT) - based training decreases job stress but has no considerable effect on job burnout [12]. In the study, Lang et al. evaluated the efficacy of Acceptance and commitment therapy (ACT) for emotional distress among veterans of the conflicts in Iraq and Afghanistan. They found improvement following treatment in the whole sample across a variety of measures, including general distress and functioning and moderate to high levels of satisfaction with treatment [13].

Acceptance and Commitment Therapy has several basic components that are emphasising them at the different steps makes individuals accepting their problems and perceiving less anxiety and stress, which improves the health. This method is the limit range of mental flexibility, i.e. creating the ability for a practical choice among the various options that are more relevant rather than a practice, which is merely imposed to avoid thoughts, feelings, and disturbing memories [17]. In this therapy, it is initially tried to increase the subjects' psychological acceptance of subjective experiences (thoughts, feelings) and to reduce ineffective control practices mutually.

The patient is taught that any action to prevent or control these unwanted mental experiences are ineffective or inversed, which exacerbate them. The experience should be completely accepted without any internal or external reaction to remove them. The mental experience in patients includes things such as emotional ambivalence, frustration, chronic sadness, loneliness, loss of hope and a sense of continuity of generations, embarrassment, shame, guilt, and anger. Therefore, participants in the first step learned to accept the feelings without a reaction at first. In the second step, the psychological knowledge of subjects is added. This means that the individuals are aware of all mental states, thoughts, and behaviour in the present moment. In the third stage, the individuals are taught to separate themselves from the subjective experiences (cognitive isolation) so that they can act independently of the experience.

Fourth are the efforts to reduce the excessive focus on visualisation or personal story (as victims) that the individuals have made for themselves. Fifth is helping the individuals to understand their basic personal values and identify them to convert to specific behavioural goals (to clarify the values). Finally, motivating them to act responsibly towards the goals and values of the activities identified with the adoption of mental experiences. Finally, motivating them to act responsibly towards the goals and values of the activities identified with the adoption of mental experiences.

These thoughts can be subjective experiences related to events (trauma), or social anxiety and concerns. Thus, in the final stage, it is observed that participants accept their subjective experiences and they can act responsibly. The first direct consequence of accepting the feelings and emotions is reducing the negative thoughts, and responsible behaviour leads to an effective action instead of an anxious reaction.

To explain depression, it can be said that Acceptance and Commitment Therapy according to theorists is an important factor in creating and maintaining psychological trauma and increasing depression is an experimental avoiding. This means the exaggerated negative assessment of internal experiences (such as thoughts, feelings, and emotions) and the lack of willingness to experience, which leads to attempts to control or escape from them and can intervene in individual performance [17].

People who are more experimental avoiding experience, positive emotional experiences and lower mental health and feel that their lives are meaningless. However, the purpose of acceptance and commitment therapy is reducing the experimental avoiding and increasing psychological flexibility through accepting the inevitable distressing and unpleasant feelings, mindfulness cultivating to neutralise the excessive involvement by recognising and identifying personal values related to behavioural goals. Participants are encouraged to communicate with their experiences fully and without resistance while in motion toward worthy goals and accept them without judging their truth or falsity when the emergence.

This increases motivation to change despite obstacles and encourages individuals to achieve worthy goals in life. This will lead to depression improvement, especially in the field of psychology. Psychological flexibility and acceptance could improve the health status of people in different fields and help them to promote meaningful aspects of life and to increase valuable activities to help to improve the depression. Acceptance of thoughts as thoughts, feelings as feelings, and emotions as emotions (as they are, no more and no less), leads to weakening the cognitive fusions. Also, the adoption of internal events, when the individuals conflict with depressions and disturbances, allow them to develop their behavioural coffers. They can spend the obtained time to do targeted and valuable activities. Thus, depression is improved in this way.

This study has some limitations that restricted its application and generalisations. First, these findings are based on self - reporting of people. Secondly, the lack of large sample size of the population could be mention as other potential limitation. In the end, further studies with larger sample sizes are suggested to clarify the results of this study, additionally analyses the pattern of all aspects of the Acceptance and Commitment Therapy on anxiety and depression is recommended.

It can be said that Acceptance and Commitment Therapy could reduce anxiety and depression.

## Acknowledgments

The authors of this article express their full appreciation to Razi Psychiatric Center management and staff for their perfect cooperation to advance this work as a thesis no. 61920709941007.

## References

1. Lotfinia H, Mohseninia H, [An assessment of the relationship between personality characteristics and job burnout among primary school teachers of Tabriz], Amouzesh VA Arzyabi. 2010; 11: 93-106. (Persian).

2. Hoseini SM, Fat'hiAshtiani A, [The relationship between marital satisfaction and marriage duration among students of Imam Khomeini Training and Research Center], Ravanshenasi va Din. 2010; 3 (4): 127-145. (Persian).

3. Zettle RD, Hayes SC. Brief ACT treatment of depression. In: Bond F, Dryden W. Editors. Handbook of brief cognitive behaviour therapy. West Sussex: John Wiley & Sons ltd., 2004.

4. Hayes SC, Luoma JB, Bond FW, Masuda A, Lillis J. Acceptance and commitment therapy: model, processes and outcomes. Behav Res Ther. 2006; 44(1):1-25. https://doi.org/10.1016/j.brat.2005.06.006 PMid:16300724

5. Zettle RD. ACT for depression: A clinician's guide to using acceptance & commitment therapy in treating depression. 1st ed. Oakland CA: New Harbinger Publications, 2007: 215-30.

6. Akbari MA, Ebachizadeh K, Khayyamzadeh M, Tabatabaei M, Asnaashari, FJ, et al., Cancer in Iran, 1st edition, Qom, Darolfekr Publications, 2008.

7. Rajabi S, Yazdkhasti F, [The effectiveness of acceptance and commitment therapy on anxiety and depression among women with MS]. Ravanshenasi Balini. 2004; 21: 29-38 (Persian).

8. Marnat Gary Gras. Handbook of Psychological Assessment, Hasan Pasha Sharifi and Mohammad Nikkhoo. Tehran, Sokhan Publication, 2005.

9. Mehryar AH, Yousefi F, Tashakkori A. [Application of human drawing test among a group of primary school students in Shiraz], Olum Ejtemari va Ensani Daneshgah-e-Shiraz. 1986; 5:19-37. (Persian).

10. Azkhosh M. Application of psychological tests and clinical diagnosis. Tehran, Ravan Publication, 3rd edition, 2008: 224-226. (Persian).

11. Narimani M, Pourabdol S, Bashirpour S. [Effectiveness of training based on the acceptance / commitment to improving the social well-being of students with specific learning disorder], Quarterly of Pajooheshhaye-Ravenshenasi Ejtemaei. 2004; 16: 107. (Persian).

12. Hoseinaei A, Ahadi H, Fati L, Heidari AR, Mazaheri MM, [Impact of acceptance and commitment therapy based group training on job stress and job burnout], Ravanpezeshki va ranashenasi-e-balinie Iran. 2013; 19(2): 109-120.

13. Lang AJ, Schnurr PP, Jain S, He F, Walser RD, Bolton E, et al., Randomized Controlled Trial of Acceptance and Commitment Therapy for Distress and Impairment in OEF/OIF/OND Veterans. Psychol Trauma. 2016. [Epub ahead of print]. http://www.ncbi.nlm.nih.gov/pubmed/27322609

14. McCracken LM, Vowles KE, Eccleston C, Acceptance-based treatment for persons with complex, long-standing chronic pain: A preliminary analysis of treatment outcome in comparison to a waiting phase. Behavior Research and Therapy. Behav Res Ther. 2007; 43(10):1335-46. https://doi.org/10.1016/j.brat.2004.10.003

PMid:16086984

15. Scott W, Daly A, Yu L, McCracken LM. Treatment of Chronic Pain for Adults 65 and Over: Analyses of Outcomes and Changes in Psychological Flexibility Following Interdisciplinary Acceptance and Commitment Therapy (ACT). 2016; [Epub ahead of print]. http://www.ncbi.nlm.nih.gov/pubmed/27245628

16. Crosby JM, Twohig MP. Acceptance and Commitment Therapy for Problematic Internet Pornography Use: A Randomized Trial. Behav Ther. 2016; 47(3):355-66. https://doi.org/10.1016/j.beth.2016.02.001 PMid:27157029

17. Teasdale JD, Segal ZV, Williams JMG, Ridgeway VA, Soulsby JM, Iau MA, Prevention of relapse/recurrence in major depression by mindfulness-based cognitive therapy, Journal of Consulting & Clinical Psychology. 2000; 68: 615-623. https://doi.org/10.1037/0022-006X.68.4.615 PMid:10965637