

# The effectiveness of acceptance and commitment therapy in reducing depression symptoms and occupational stress of the teachers of exceptional school

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## ABSTRACT

The study was conducted to determine the effectiveness of acceptance and commitment therapy (ACT) on reducing symptoms of depression and occupational stress (OS) among teachers of exceptional schools. The method was applied with semi-experimental design (pretest - posttest) and a control group. The population was all the teachers of exceptional schools of... in the second half of 2017. Twenty-four subjects were selected using purposive sampling and randomly assigned to experimental and control groups considering inclusion and exclusion criteria. The experimental group underwent 8 sessions of ACT, and both groups were evaluated at the beginning and the end of the intervention by OS questionnaires of the United Kingdom Health and Safety Organization and Beck's Second Depression Inventory. Descriptive (mean and standard deviation) and inferential statistics (covariance analysis for testing hypotheses) were used to analyze the data. It has to be noted that the data were analyzed using SPSS-21. The results showed that ACT has significant effectiveness in reduction of depression symptoms and OS. It is recommended that the results of this study should be used in designing therapeutic programs and counseling of exceptional school teachers.

**Keywords:** OS, ACT, depression symptoms, teachers.

## Introduction

Employment in the education sector, as the base for the progress of each society and nation, is of great significance <sup>[1]</sup>. If those working in education, especially the teachers, with a critical role in this field suffer from physical and emotional problems, the product of the organization - the students as the future prospects of the country - will not be flawless either <sup>[2]</sup>. One of the problems the teachers might face is OS <sup>[3]</sup>. Teachers suffering from OS are emotionally tired, their motivation is low, they have little energy, and passion for conducting tasks. OS affects not only teachers' professional lives, but also their personal and social life as well <sup>[4]</sup>.

Depression disorder has high prevalence in this stratum along a variety of occupational and personal outcomes and disabilities. Depression is a mental illness that causes the feelings of constant sadness and loss of interest. Most people sometimes feel sad, depressed and down. Feeling depressed and sad are the natural reactions of the body to life problems and the loss of things and those, in whom we are interested. However, if this deep sadness, hopelessness, helplessness, and feeling valueless takes more than a few days or a few weeks, it is serious <sup>[5]</sup>. Depression entails a wide range of disorders and underlying causes that are persistent and cause a wide range of problems, psychological disorders, and medical problems. Given the issues discussed above, depression and OS can affect many aspects of teachers' lives. Thus, the adoption of approaches to improve depression and OS should be a priority in the services of psychological centers. One of the approaches that can be so helpful is (ACT).

The purpose of ACT is to create a rich and meaningful life while the individual accepts the inevitable suffering. ACT (meaning action) is an interesting acronym because it is about acting effectively, which is guided by our deepest values, especially when we are fully prepared and committed. It is only through

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vigilant action that we can make a meaningful life. However, upon starting our efforts to make such a life, we will face all kinds of barriers in the form of unwanted and undesirable internal experiences (thoughts, imaginations, emotions, body feelings, impulses, and memories). ACT teaches us to focus on these inner experiences of effective skills [6]. ACT has six central processes bringing about psychological flexibility. These six processes are acceptance, diffusion, values, and contact with the present moment, self-as-context, and committed action [7]. ACT is an approach to psychological interventions defined not by specific techniques but by certain theoretical processes. Based on the theoretical concepts, ACT is a psychological intervention based on modern behavioral psychology that incorporates communication framework theory, in which awareness, acceptance, and commitment processes and behavior change processes are used to reach psychological flexibility [8].

OS is an emotional and physical response happening if the job requirements are not coordinated with the capabilities, resources or requirements of the worker. Nowadays, different treatments are used to solve these problems, one of which is ACT. This treatment was developed by the American psychologist Steven Hayes in the eighties, where an eclectic mixture of metaphors, paradoxical sentences and attention-aware skills and a wide range of empiricist exercises and behavioral interventions driven by values are used. The effectiveness of ACT has been identified in a wide range of clinical states like depression, obsessive-compulsive disorder, OS, terminal cancer stress, anxiety, post-traumatic stress disorder, mental anorexia, heroin abuse, schizophrenia, smoking cessation and diabetes management and borderline personality disorder (BPD). One study showed that only 4-hour implementation of ACT leads to a 50% reduction in the rate of return to hospital for schizophrenia [9]. Teachers face many problems given their nature of their job; problems such as high work volume, insufficient salaries and benefits, lack of interest of students to study, ignoring their needs by educational institutions, crowded classes, promotion issues, and contradictions related to the role, all of which can all affect their mental health and with their continuation, increase their vulnerability, and ultimately lead to stress and exhaustion among them [10]. Besides the negative psychological, physiological and psychosocial effects that affect the teacher, OS affects the students and the educational system. On the other hand, research evidence suggests that OS is associated with frequent absences, early retiring, inappropriate performance, and poor quality of teaching, low self-esteem, and psychological depression symptoms [1].

Teachers are the pillars of the educational institutions and the cause of the effectiveness and success of this institution. Hence, the mental health of these people is important in improving the educational environment and educational achievements. As the education organization has a significant responsibility, it is important that the productivity of human resources in this organization is doubled compared to other organizations and the conditions should be provided to improve the effectiveness of

the organization's human resources. Given the significance of these variables and the limitations in the generalization of overseas researches given the cultural differences, the present study is an effort to address this lack and research limitation, which emphasizes the effectiveness of ACT in reducing symptoms of depression and OS for exceptional schools teachers.

## Methods

The method was applied with semi-experimental design (pretest - posttest) and a control group. The population was all teachers of exceptional schools of... in the second half of 2017. Twenty-four subjects were selected using purposive sampling and randomly assigned to experimental and control groups considering inclusion and exclusion criteria, which were physical illness, non-use of psychiatric drugs and informed consent of entering the study. The experimental group underwent 8 sessions of ACT, and the control group did not receive any psychological intervention during this period. Both groups were evaluated at the beginning and end of the treatment with the research questionnaires. Descriptive (mean and standard deviation) and inferential statistics (covariance analysis for testing hypotheses) were used to analyze the data. It has to be noted that the data were analyzed using SPSS-21.

## The Applied Tools

UK Occupational Health and Safety (HSE) Inventory: this 35-item questionnaire was compiled by the British Institute of Health and Safety in seven areas in the late 1990s to measure OS of British workers and employees. These seven areas are demand, control, and support of authorities, support of colleagues, communication, role, and changes. Of the benefits of this questionnaire are various studies to obtain the content of the questionnaire, as well as a variety of areas and the number of low items of this questionnaire compared to its rival questionnaires. The Cronbach's Alpha coefficient for the whole questionnaire is reported to be 0.78, showing the desirable reliability of this instrument. Moreover, for the subscales, the Cronbach's alpha coefficient has been reported in the range from 0.88 to 0.77 [11].

Beck's Depression Inventory (BDI-II): This is a revised version of the Beck Depression Inventory designed to measure the severity of depression. The questionnaire has 21 items, where the respondents are asked to rank the severity of the symptoms on a scale from zero to three [12]. The internal consistency of this tool is from 73% to 92% with a mean of 86%, and the Cronbach's alpha coefficient for the patient groups is 86% and 81% for non-patient [13]. Fati (2003) reported its Cronbach's alpha coefficient as 0.91 and the coefficient of test re-test reliability within a week interval was 0.94 by using it in Iran. Ghasemzadeh et al. (2005) in validation of the Persian form of the questionnaire in a sample of 125 students, reported the high internal consistency of 0.87 and satisfactory reliability of 0.74 for the Persian version of the second questionnaire [14]. They

stated that the correlation coefficient between the questionnaire and the Persian form of the questionnaire was 0.81.

ACT: In this study, ACT is an 8-day admission and commitment-training program implemented for 8 weeks, once every week and for 12 hours for the experimental group. The following is the 8-week protocol of ACT according to the prominent psychologist in this area, Hayes.

ACT Sessions Protocol	
Session 1	Welcoming and getting to know the group members with the therapist and with each other, expressing the feelings of the people before attending the meeting, the reason for attending the meeting and the expectations of the attending sessions, expressing the similar experiences as before, the expression of the rules they are bound to observe in the group.
Session 2	Explaining the principle of why psychological interventions are felt? Creating hope and predicting treatment in reducing these pressures, expressing the principle of accepting and recognizing emotions and thoughts about problems, raising awareness in this regard to accept thought as thoughts, emotions as emotions and memories as so, presenting an assignment in the context of self-acceptance and emotions caused by the disease
Session 3	Checking the homework of the previous sessions, speaking about the group's feelings and thoughts, training the members to accept them without judging their good thoughts or emotions, training and recognizing emotions and their differences with thoughts and feelings, stating that we accept our emotions and how much we accept others and their feelings
Session 4	Checking the homework, presenting mindfulness and focus on breathing technique, presenting the technique of presence in the moment and stopping the thought, emphasizing the principle of acceptance in the recognition of feelings and thoughts, stressing the recognition of emotions and thoughts in a different way Assignments: to see life events (annoying) in another way and do not consider the problems as the end and see them as only a temporary and challenging step
Session 5	Checking homework; teaching and knowing about the difference between admission and submission and the awareness that we cannot change them, knowing the subject of judgment and encouraging members to not judge their emotions, presenting mind of consciousness homework with admission without judgment
Session 6	Presenting feedback and short survey of the education process, asking the team members to burst their emotions and excitement about the assignments of the previous session, teaching and presenting the principle of commitment and its necessity in the process of education and treatment (Learning commitment to action means after choosing a valuable and correct way of achieving peace, or accepting any event in life, to do it and have commitment for doing it); presenting a selective attention technique for more relaxation at the start of negative self-thoughts, re-training mindfulness along with body scan
Session 7	Presenting feedback and solving unsolved problems in group members, identifying behavioral plans for accepted affairs and creating a commitment to act, making the ability to select between different options so that to be more proper than practical

Session 8	Checking the homework: summarizing the contents, obtaining commitment from members to complete post-graduate assignments, presenting feedback to members of the group, appreciating and thanking for their attendance at meetings, administering post-tests
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## Results

The mean age of the experimental group was 30.07 with a standard deviation of 7.11 and the mean age of the control group was 31.13 with a standard deviation of 6.03. Both groups were females. Table 1 shows the descriptive educational outcomes of the subjects.

**Table 1: Frequency distribution and percentage of subjects in terms of education**

Educational degree	Experimental group	Control group
	Frequency (percentage)	Frequency (percentage)
Bachelor's	9 (0.75)	8 (0.66)
Master's	3 (0.25)	3 (0.25)
PhD	0 (0.0)	1 (0.9)
Total	12 (100)	12 (100)

The descriptive results of the variables in the experimental and control groups are presented.

**Table 2: Mean and standard deviation of depression and OS and its components in the experimental and control groups in the pre-test and post-test steps**

Variable	Pre-test		Post-test	
	Experimental Group Mean (standard deviation)	Control Group Mean (standard deviation)	Experimental Group Mean (standard deviation)	Control Group Mean (standard deviation)
<b>Demand</b>	(4.87) 26.41	(5.93) 28.58	(4.77) 14.58	(2.13) 27.50
<b>Control</b>	(2.84) 25.21	(3.41) 23.06	(1.97) 10.50	(2.07) 22.08
<b>Authority support</b>	(1.62) 8.19	(1.46) 9.93	(2.77) 19.75	(2.54) 10.54
<b>Colleagues support</b>	(2.54) 9.41	(3.52) 10.12	(3.51) 17.49	(1.23) 9.66
<b>Relationship</b>	(1.44) 16.50	(1.77) 15.86	(3.43) 8.34	(2.32) 17.45
<b>Role</b>	(3.45) 10.53	(2.35) 11.34	(3.34) 20.54	(2.11) 10.13
<b>Changes</b>	(2.23) 7.08	(1.45) 6.41	(1.34) 13.50	(2.45) 6.98
<b>Total score</b>	(5.56) 98.56	(8.56) 102.43	(25.54) 109.56	(37.59) 103.34
<b>Depression</b>	(3.79) 20.83	(2.43) 21.53	(2.13) 9.08	(3.13) 19.16

As can be seen in Table 2, the mean scores of the experimental group from pre-test to post-test in OS components including

demand, control and communication, and in depression scores have decreased. This trend is not seen in the control group. Additionally, the scores of the experimental group from pre-test to post-test in OS components including support from authorities, support partners, roles, changes, and the total OS score increased, which is not seen in the control group. For testing this hypothesis, multivariate covariance analysis was used. Prior to examining covariance analysis, the assumptions of this test were examined and the results are as follows.

**Table 3: Levine test results on the equality of variance of the scores variables in the two groups**

Variable	F	First degree of freedom	Second degree of freedom	Sig.
<b>Demand</b>	0.768	1	22	0.385
<b>Control</b>	0.006	1	22	0.940
<b>Authority support</b>	1.375	1	22	0.254
<b>Colleagues support</b>	0.024	1	22	0.876
<b>Relationship</b>	3.610	1	22	0.071
<b>Role</b>	0.325	1	22	0.574
<b>Changes</b>	3.274	1	22	0.084
<b>Total score</b>	1.106	1	22	0.748
<b>Depression</b>	0.627	1	22	0.437

As is seen in Table 3, the values of Levine test are insignificant. In other words, the null hypothesis of “equality of variances in two groups” is confirmed. The results of F interactions are presented in Table 4-5 for the homogeneity of the regression of variables in this study.

**Table 4: test results of the hypothesis of the regression homogeneity of slopes of the research variables of the two groups**

Variable	Interaction change sources	Level: Pre-test post-test	
		(Interaction) F	Sig.
<b>Demand</b>	Group *pre-test	0.040	0.844
<b>Control</b>	Group *pre-test	0.070	0.793
<b>Authority support</b>	Group *pre-test	2.567	0.123
<b>Colleagues support</b>	Group *pre-test	1.175	0.291
<b>Relationship</b>	Group *pre-test	0.273	0.607
<b>Role</b>	Group *pre-test	3.548	0.074
<b>Changes</b>	Group *pre-test	1.645	0.218
<b>Total score</b>	Group *pre-test	2.129	0.723
<b>Depression</b>	Group *pre-test	0.93	0.346

As is seen in Table 4, F-value of interaction for OS and depression is insignificant. Thus, the assumption of regression homogeneity is confirmed. The covariance analysis test is presented in table 5.

**Table 5: the results of multivariate covariance analysis of the effect of ACT on depression and OS**

Resources	Sum of squares	Degree of freedom	Mean squares	F	Sig.	Eta square
Pre-test Demand	530.596	1	530.596	111.274	0.000	0.756
Group Demand	30.949	1	30.949	6.941	0.019	0.245
Error Demand	95.367	20	4.746			
Pre-test Control	5.393	1	5.393	1.405	0.240	0.066
Group Control	5.936	1	5.936	1.277	0.227	0.060
Error Control	84.516	20	4.226			
Pre-test Authority support	2.347	1	2.347	0.494	0.490	0.024
Group Authority support	0.001	1	0.001	0.000	0.989	0.012
Error Authority support	100.149	20	5.007			
Pre-test Colleagues support	10.804	1	10.804	7.232	0.014	0.266
Group Colleagues support	5.560	1	5.560	3.382	0.041	0.176
Error Colleagues support	29.887	20	1.494			
Pre-test Relationship	16.435	1	16.435	9.346	0.001	0.497
Group Relationship	9.206	1	9.206	6.286	0.023	0.282
Error Relationship	23.790	20	2.982			
Pre-test Role	4.066	1	4.066	1.645	0.013	0.135
Group Role	45.452	1	45.452	18.465	0.000	0.480
Error Role	49.174	20	2.459			
Pre-test Changes	6.902	1	6.902	7.557	0.012	0.275
Group Changes	5.924	1	5.924	6.498	0.019	0.245
Error Changes	18.235	20	0.912			
Pre-test Total score	476.948	1	476.948	21.394	0.000	0.497
Group Total score	47.206	1	47.206	6.286	0.023	0.282
Error Total score	446.790	20	22.987			
Pre-test Depression	109.950	1	109.950	13.543	0.001	0.404
Group Depression	23.352	1	23.352	5.186	0.037	0.245
Error Depression	162.481	20	8.124			

As is seen in Table 55, the difference between the two groups is significant in the rate of depression in the post-test step, so one can conclude that ACT is effective in reducing depression, as well as OS and its components. Thus, one can conclude that ACT leads to a reduction in the depression and OS of teachers.

## Discussion and Conclusion

Data analysis showed that ACT has a significant effect on reducing the symptoms of depression in exceptional school teachers. This is in line with the studies by Rezaei et al. (2016), Anonizatia et al. (2016), Walser, Garvert, Karlin, Trockel, Ryu et al. (2015), Thekiso, Murphy, Milnes, Lambe Curtin (2015) and Walser, Karlin, Trockel, Mazina & Barr (2013) [15-19].

In explaining the effects of ACT in reducing depression, one can state that in ACT, the individuals are given the chance to view their thoughts and feelings without judgment and see them as simple mental events that are transient that come and go and should not consider them as part of themselves or a reflection of reality. This kind of attitude towards depression-related knowledge prevents the aggravation of negative thoughts and rumination<sup>[20]</sup>. Our minds interpret and infer what is happening and cause persistent reactions and feelings, and those who are prone to depression constantly focus on inconvenient and negative thoughts, which in turn lead to more depression<sup>[19]</sup>. ACT helps people understand themselves better and lead to a non-judgmental, receptive with confident, patient and kind attitudinal experience, which makes people aware of the relationships with others. Then their social contacts increase, and somehow affect interpersonal behaviors<sup>[21]</sup>.

Based on the acceptance of unpleasant thoughts and various emotional states, ACT dramatically increases the person's ability to control the effect of his thoughts and emotions and allows him to experience a range of thoughts and emotions without emotional disturbance in the mind<sup>[22]</sup>. Additionally, ACT with high capability, which focuses on reducing anxiety and stress, increases the ability of the person to deal with thoughts - which, if they have an emotional load, become recurring thoughts – and maintain the emotional stability, and not think about overwhelming disturbance but watch the thought pass by. This ability enables their thoughts not create more intellectual work than previously created for the individual and do not become ruminant<sup>[8]</sup>.

Moreover, the results of the data analysis showed that ACT is significantly effective in reducing the stress of teachers in exceptional schools. This is consistent with the studies by Hossainai et al. (2013), Bond, Flaxman, Veldhoven & Biron (2010)<sup>[23, 24]</sup>.

According to Hayes & Strosahl (2010), with the individual entry into the process of ACT and being engaged in negative verbal-subjective processes (stress as an attitude structure, is heavily affected by these verbal-subjective processes) focusing on themselves and others, is being gradually reformed<sup>[25]</sup>. ACT, can be effective to reduce stress in a great way by the following: the processes such as release from the anxiety and worries that keep people in their negative attitudes toward the workplace and the work environment; release from themselves as a context that increases depression and stress in depression; release from the past and bitter experiences and living at the present time and emphasizing on values and committed. By focusing on acceptance, diffusion, values, contact with the present moment, self-as-context, committed action and acceptance of therapy, the function of linguistic regulation, and the function of behavioral activation aimed at reducing OS can be considered as the purpose of the focus. Moreover, the underlying idea of ACT is to accept what is out of our control and our will and instead of consuming our energy in a path that does not result in a positive and constructive change, should use it in what is valuable and important for life<sup>[26]</sup>.

In ACT processes, the likelihood is so high that a person simultaneously pursues a committed and worthwhile pursuit of life in a variety of areas<sup>[25]</sup>. From this point of view, with the involvement of a person in acceptance therapy and commitment that focuses on the gradual resolution of the sources of OS caused by the disability to overcome the avoidance of experience and psychological inflexibility, the individual can increase attitude and level of satisfaction with personal characteristics, work relationships, conflict resolution, financial management, leisure activities, sexual relation, children's affairs, family and friends and general religious orientation. Another explanation about the mechanism involved in the effect of ACT on OS is related to the potential and lasting potential of this type of treatment in increasing the psychological flexibility. As the results of many studies have shown, in the first place, many stresses are created by the inflexible behavioral and psychological stress of the individuals<sup>[27]</sup>.

ACT encourages people to connect and engage with real life values. From ACT view, avoiding the experiences of the process of injury creates the spread of OS. OS is the stress that a certain person experiences in a particular job. ACT can assist the individual to experience less stress by increasing attention on self and self-control. ACT can prevent further stress. OS can be described in the individual domain associated with non-acceptance, judgment, and inflexibility. All of the cases that are the opposite of ACT are taught in ACT to solve the problems of work with more acceptance, non-judgment, lack of intellectual conflict and cognitive and behavioral flexibility<sup>[28]</sup>. According to the results of the study, it is recommended that ACT should be used to improve the depression and OS of exceptional school teachers. Of the limitations of the study, one can cite the single-gender samples, examining the effect of demographic factors, and measurement tools that is suggested to be examined in future studies.

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