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Social Anxiety in Students with Learning Disability: Benefits of Acceptance and Commitment Therapy

Mohammad Rostami [1], Nasrollah Veisi [2*], Fatemeh Jafarian Dehkordi [3], Emad Alkasir [4]

1. PhD Student in Counseling Rehabilitation, Department of Counselling , University of Social Welfare and Rehabilitation Sciences, Tehran, Iran.
2. MA in Psychology & Education of Exceptional Children, Allameh Tabataba'i University, Tehran, Iran.
3. MA Student in Clinical Psychology, University of Mohaghegh Ardabili, Ardabil, Iran.
4. MA Student in Clinical Psychology, Department of Clinical Psychology University of Social Welfare and Rehabilitation Sciences, Tehran, Iran.

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ABSTRACT

Objective: The present study was conducted to examine the effectiveness of 'Acceptance and Commitment Therapy' (ACT) on reducing social anxiety in students with learning disability.

Method: In this experimental research, pretest-posttest and control group were utilized. Population of this study included all the middle-school male students with learning disability in Koohdasht City (2013-2014). The sample included 40 male students with learning disability who were randomly selected after structured clinical interview. Subjects were randomly put into experimental group and control group (20 individuals each). Instruments of this research included structured clinical interview, Raven IQ Test (1962), and Watson & Friend's Anxiety Scale (1969). Pretest and posttest were administered for both groups. Experimental group received acceptance and commitment therapy model for 10 1-hour sessions, while the control group received no intervention. To analyze the data, Multivariate Analysis of Variance test (MANOVA) was used. Statistical Package for Social Science 16 (SPSS 16) program was used for statistical analysis.

Results: the results of MANOVA showed that acceptance and commitment therapy model training has been effective on decreasing social anxiety in students with learning disability ($P < 0.001$). The findings also showed that there is a significant difference in social anxiety between control group and experimental group.

Conclusion: According to the findings of this study, acceptance and commitment therapy model training reduces social anxiety in students with learning disability and it is possible to make use of this model as a suitable intervention method.

Keywords:

Acceptance and commitment Therapy model, Social anxiety, Learning disability, Students

1. Introduction

According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders, learning disability is a general term referring to disorders causing problems in academic achievement or daily function. Generally, learning disability includes conditions such as perceptual disability, brain problems, partial dysfunction of brain, and developmental aphasia (Snowling & Hulme, 2012). Research has shown many relational and psychological problems in these individuals. For example, students with learning disability have more problems with reading, calculating, social cognition, and social anxiety compared to their normal peers (Willcutt et al., 2011). These individuals also have higher emotional dysfunction, poor social interactions, depression, negative affect, and violent behaviors compared to their normal peers (Eisenberg et al., 2001).

Social anxiety is one of the problems the students with learning disability struggle with. Social anxiety has been

*** Corresponding Author:**
Nasrollah Veisi, MA
***Address:** Dehkade Olampic, Department of clinical psychology, Faculty of psychology, Allameh Tabataba'i, University, Tehran, Iran.*
***Tel.**: +98 (937)1802066*
***E-mail:** veisiy.1364@yahoo.com*

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defined as a discomfort or fear during social interaction (Arrindell et al., 1990). Cognitive theories suggest that selective attention to threats intensifies anxiety and distorts the judgment in social events (C. T. Taylor, Bomyea, & Amir, 2010). Research shows that individuals with learning disability are described by their peers as nonsocial, worried, anxious, angry, and distressed (Taklavi, 2011). In another study, researchers found that students with learning disability have higher levels of general anxiety, depression (14% to 36%), aggression, and interpersonal relationship problems and lower level of social competence compared to students without these disorders (Maag & Reid, 2006).

Acceptance and Commitment Therapy (ACT) model may be one of the ways to decrease social anxiety in students with learning disability; but researchers have not paid attention to this model yet. ACT aims at mental flexibility; namely, creating the ability of choosing the appropriate action among different alternatives and not to do an action to avoid disturbing thoughts, memories, feelings, and attitudes (O'Donohue & Fisher, 2009). Empirical evidence about effectiveness of this therapeutic method is increasing. For instance, the efficiency of this method has been confirmed for disorders like depression (Kanter, Baruch, & Gaynor, 2006), psychosis (Bach & Hayes, 2002), drug abuse and dependency (Gifford et al., 2004; Hayes, Strosahl, & Wilson, 1999), burnout (Bond & Bunce, 2003), chronic pain (Dahl, Wilson, & Nilsson, 2004) and dyscalculia (Narimani, Abbasi, Abolqasemi, & Ahadi, 2013). Experiential avoidance (attempts to change the content or duration of the unwanted experiences) is one of the major problems in social anxiety and other mental disorders (Gifford et al., 2004). Experiential avoidance appears in two forms; behavioral suppression or actions to escape the unpleasant experiences or staying away from conditions related to those mental experiences. Although experiential avoidance temporarily decreases anxiety and its symptoms, its constant use leads to long-term negative social, mental, and physical effects (Hayes, 2004). In ACT, for treating individuals with social anxiety, it is necessary to encourage them to actively encounter with threatening mental experiences, to change behavior, and to develop motives for a more social life style.

A few researches have directly dealt with examining the effectiveness of ACT on social anxiety in students with learning disability. However, some similar studies have shown the effectiveness of this approach. For example, research showed that acceptance and commitment are related to psychological well-being and improvement of social relationships in these students; and this issue is related to high self-consciousness (Hayes, 2004). This study also showed that mindfulness skills (one of the components of acceptance and commitment training) predict self-regulation and positive emotional states. Another research examined the effectiveness of this method on individuals diagnosed with social anxiety and showed that the symptoms of avoidance and anxiety significantly decreased in subjects and this effect was consistent after 3-month follow-up (Ossman, Wilson, Storaasli, & McNeill, 2006). In another study, it was shown that ACT is effective on social anxiety among university students (Block & Wulfert, 2000). Also other researches show that the third wave of cognitive behavioral interventions such as ACT, dialectical behavior therapy, and mindfulness are effective on learning, self-control, responsibility, feeling expression, accepting oneself and others, improving social skills and self-esteem, and decreasing depression and anxiety (Baggerly & Parker, 2005; Christensen et al., 2004; Christensen, Atkins, Yi, Baucom, & George, 2006).

In a nut shell, because of the major advantage of this method over other psychotherapies (simultaneously regarding motivational and cognitive aspects), the effectiveness of therapy is more consistent. As this is a new method of therapy, it seems necessary to study its effectiveness on different mental disorders. Investigations may cause evolutions in psychotherapy. Because of the prevalence of social anxiety, depression, and weak social interactions in students with learning disability, the present study examined the effectiveness of acceptance and commitment therapy group training on reducing social anxiety in students with learning disability.

2. Methods

In this experimental research, pretest-posttest and control group were utilized. Effectiveness of an independent variable (acceptance and commitment therapy group training) on dependent variable (social anxiety) has been assessed. Population of this study consisted of all middle-school male students with learning disability in Koohdasht City (2013-2014). Simple random sampling method was used in this study in a way that 5 schools were selected out of all Koohdasht middle schools by drawing method. Then, the teachers of these schools were interviewed.

Consulting the criterion of DSM-IV, students with learning disability were recognized (90 individuals). According to the inclusion criteria, 40 people were selected by simple random sampling method and drawing method (20 individuals per each group). By experimen-

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tal method, each group should include at least 15 subjects (Delavar, 2001). In this study, 20 individuals were considered for each group in order to have a real representative of population and a higher external reliability. Consulting reports of student's profile (intelligence tests, diagnostic tests, and teachers' reports), and structured clinical interview, inclusion and exclusion criteria were observed. Inclusion criteria included diagnosis of learning disability, being 12 to 16 years old, having average intelligence quotient in colored progressive matrices test, and lacking neurological disability. Exclusion criteria included having simultaneous extreme disorders such as ADHD, ODD, and depression and having an intelligence quotient of lower than 85 in colored progressive matrices test.

Structured Clinical Interview based on DSM-IV: SCID is a semi-structured clinical interview used for diagnosing the first Axis disorders based on DSM. The potential usages of SCID in mental health clinics have been examined in a research. Findings of this study showed that SCID can guarantee a reliable diagnosis (MohammadKhani, Jahani, & Far, 2005).

Raven Intelligence test: Raven (Abbaszadeh, Ganji, & Shirzad, 2003) developed this instrument to measure intelligence in age group of 9 to 18 years old. It includes 60 items (5 sets of 12 items). Internal consistency (Cronbach α) of this instrument has been calculated 0.90 and its test-retest reliability has been reported 0.82. This instrument has a higher correlation with non-verbal tests. In the present study, individuals with intelligence quotient of 90 and higher were selected.

Social Anxiety Scale (FNE, SAD): This instrument has been developed by Watson and Friend (Watson & Friend, 1969). It includes 58 items and two components: 'social avoidance and distress,' and 'fear of negative evaluation'. Twenty-eight items of this scale is related to social avoidance and 30 items to fear of negative evaluation. In social avoidance subscale, 15 items have positive answer and 13 items negative answer. Higher scores indicate higher social avoidance and distress. Total score results from adding true answers for items 2-5-8-10-11-13-14-16-18-19-20-21-23-24-26 and false answers for remaining items. In fear of negative evaluation subscale, 17 items have positive answer and 13 items negative answer. Higher scores indicate higher fear of negative evaluation. Total score results from adding true answers for items 30, 31, 33, 35, 37, 39, 41, 42, 45, 47, 48, 50, 52, 53, 56, 57, 58 and false answers for remaining items. Continuum of answers has been rated based on true and false; zero and one scores are specified, respectively for each response (Shafieinejad, 2003). Watson and Friend (Watson & Friend, 1969) reported test-retest reliability of this instrument as 0.68 for social avoidance and 0.78 for fear of negative evaluation. Using Taylor's Manifest Anxiety Scale (J. A. Taylor, 1953), they also examine the reliability of social avoidance and distress and fear of negative evaluation questionnaire. Correlation coefficients for these two subscales were reported 0.60 and 0.54, respectively. Total validity of this instrument is 0.78.

Identification, interview, and diagnosis were done on the students after getting permission from Koohdasht Education Organization, parents, and participants. The subjects (40 people randomly selected from 90 students with learning disability) were randomly put into experimental group and control group. First, the objective of the study was explained for them and the pretest was distributed among them so that they can fill in the questionnaire carefully and completely. The subjects were assured that they can quit the study whenever they want. The confidentiality of the names, identities, and findings was also explained for them. Experimental group was divided into two groups of 10 so that it becomes possible to monitor them in training sessions. Additionally, two assistants were employed for better control. Both experimental groups received ACT model training. Control group received no intervention (control group received only the regular school education). Intervention included 10 one-hour group sessions that were held once per week in a fixed place. After termination of the training sessions, posttest was administered to the groups. To analyze the data, multivariate analysis of variance test (MANOVA) was used Statistical package for social science 16.0 (SPSS 16) program was used for statistical analysis. There was no missing subject in groups. ACT model training package was conducted in 10 sessions by two masters of clinical psychology. Sessions were held on Fridays since schools were closed then.

Acceptance and Commitment Therapy Group Training Package (ACT):

Ten 60-minute sessions of acceptance and commitment therapy group training (Forman & Herbert, 2008) were as follows:

First session: Preliminary explanations; conceptualizing the problem; making students ready; administering the pretest; listing the entertaining activities to be inserted into the program. Second and Third sessions: becoming acquainted with therapeutic concepts of ACT (psychological flexibility, acceptance, cognitive fusion,

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Table1. Mean scores and standard deviation of social anxiety components in members of control group and experimental group (comparing pretest and posttest)

Variable	Components	Experimental				Control			
		Pretest		Posttest		Pretest		Posttest	
		M	SD	M	SD	M	SD	M	SD
Social anxiety	Social avoidance	11.40	1.86	6.93	1.40	10.63	1.95	9.43	1.55
	Distress	10.83	1.64	5.43	1.23	12.56	2	11.24	1.89
	General social anxiety	22.23	3.5	12.36	2.36	23.19	3.95	20.67	3.44

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being present, self as context, personal narrative, values, and committed action):

At first, individual's psychological acceptance about mental experiences (thoughts, feelings, etc.) should be increased and unfruitful controlling actions are reduced. Students are taught that any action to avoid or control these mental experiences is in vain and intensifies these experiences; it is a must to completely accept these experiences without any internal or external reaction.

Individual's mental consciousness increases in the present moment; namely, individual becomes aware of all his mental states, thoughts, and behaviors in the present moment. The individual is taught to detach himself from these mental experiences (Cognitive Fusion) in a way that he can act independent from these experiences.

Attempts to reduce the extreme concentration on self as context or personal narrative. Helping individual know and specify his main personal values and convert them into specific behavioral goals (clarifying the values).

Developing motivation for committed action; namely, acting toward goals and values while accepting mental experiences. Fourth and fifth sessions: Mindfulness training (emotional knowing and rational knowing); educating the clients about skills that are observed and described, how skills are not judged, and how they work.

Sixth and Seventh sessions: First, mental consciousness is focused on. Then, individuals are taught about proper coping with mental experiences, developing social goals and life style, and committed action.

Eight session: Distress tolerance training (skills for stability in crisis, distraction, soothing oneself by using six senses, and consciousness training), Reviewing previous sessions and providing feedbacks.

Ninth session: Emotion regulation training (goals of emotion regulation training; knowing why the emotions are important; distinguishing the emotion; reducing emotional suffering; increasing positive emotion); changing affects through contrastive action; practicing the lesions; providing feedbacks.

Tenth session: enhancing interpersonal efficacy (maintaining healthy relationships, interest, etc.); important interpersonal skills training (describing and stating, assertiveness, manifest trust, negotiation, self-esteem); warping up; administering posttest.

Table 2. Testing the hypothesis for normal distribution in pretest and past-test

Variable	Shapiro–Wilk test			
	Scale	W	df	P
Pretest (experimental)	Social avoidance	0.964	40	0.344
	Distress	0.928	40	0.219
	General social anxiety	0.925	40	0.242
Posttest(control)	Social avoidance	0.944	40	0.282
	Distress	0.922	40	0.218
	General social anxiety	0.926	40	0.222

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Table 3. Results of box's test and levene's test regarding the equality of variances

Variable	df[1]	df[2]	F	P
Social avoidance	1	38	0.819	0.458
Distress	1	38	1.254	0.3236
General social anxiety	1	38	2.187	0.104

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3.Results

According to Table 1, in pretest stage, mean and standard deviation of social anxiety total score are 22.23 and 3.5, respectively for experimental group and 23.1920 and 3.95, respectively for the control group. In posttest stage, mean and standard deviation of social anxiety total score is 12.36 and 2.36, respectively for experimental group and 20.67 and 3.44, respectively for control group. In other words, experimental group members experience lower social anxiety after receiving ACT group training.

According to table 2, null hypothesis for normal distributions of scores in social anxiety scale is confirmed. In other words, the scores of the two groups in social anxiety scale have a normal distribution in pretest stage.

To meet the requirements of MANOVA, Box's test and Levene's test were used. As Box's test was not significant for any of variables (BOX=4.121, F=1.192, P=0.451), condition of homogeneity of variance/covariance matrices has been met properly. And as Levene 's test was not significant for any of the variables, condition of homogeneity of intergroup variances has been met too.

According to table 4, ACT model has significantly affected the components of 'Social Avoidance and Distress,' 'Fear of Negative Evaluation,' and 'Total Social Anxiety' [F(31,3)=3.254, P < 0.001]. In other words, the hypothesis indicating that ACT model reduces social anxiety in students with learning disability is confirmed (P < 0.001).

According to the results of MANOVA test, ACT model group training significantly affects 'Social Avoidance and Distress' [F(35,1)=19.221, P<0.001], 'Fear of Negative Evaluation' [F(35,1)=23.324, P<0.001], and 'total Social Anxiety' [F(35,1)=36.765, P<0.001] since there is a significant difference between mean scores of experimental group and control group in these components. In other words, these findings suggest a decrease in social anxiety level of experimental group members as compared to the control group. Powers of this effect on 'Social Avoidance' and 'Distress, Fear of Negative Evaluation,' and 'total Social Anxiety' are 0.635, 0.680, and 0.698, respectively. Therefore, 63%, 68%, and 69% of variance in posttest scores are related to ACT model group training.

4. Discussion

The present study was conducted to examine the effectiveness of ACT on reducing social anxiety in students with learning disability. According to the findings of this study, ACT model training reduces social anxiety in students with learning disability. In comparison to control group, experimental group (who had received acceptance and commitment therapy model training) showed a consistent and significant change in the dependent variable. These findings are consistent with some previous studies (Baggerly & Parker, 2005; Block & Wulfert, 2000; Christensen et al., 2006; Ossman et al., 2006). To interpret these results, it is possible to say that ACT model is awareness of thoughts in the present time and without judgment, and in this method, thoughts, feelings, and senses are accepted as they are (Aldao, Nolen-Hoeksema, & Schweizer, 2010). On the other hand, in this method, individuals learn to increase their mental acceptance about internal experiences (thoughts, feelings, etc)

Table 4. Measures of multivariate analysis of variance (MANOVA)

Test	Value	Hypothesis df	Error df	F	P	Eta	Sig.
Pillai's Trace	0.721	3	33	3.254	P ≤ 0.001	0.721	1.00
Wilks' Lambda	0.123	3	33	3.254	P ≤ 0.001	0.721	1.00
Hotelling's Trace	14.254	3	33	3.254	P ≤ 0.001	0.721	1.00
Roy's Largest Root	14.254	3	33	3.254	P ≤ 0.001	0.721	1.00

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Table 5. Results of multivariate analysis of variance (MANOVA) for scores of social anxiety components in experimental groups (ACT model group training) and control group

variable	Components	SS	DF			TOMS	F	P	Eta	Sig.
			G	E	T					
Social anxiety	Social avoidance	129.631	1	35	40	129.631	19.221	P≤ 0.001	0.635	1.00
	Distress	156.254	1	35	40	156.254	23.324	P≤ 0.001	0.680	1.00
	General social anxiety	235.421	1	35	40	235.421	36.765	P≤ 0.001	0.698	1.00

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and to cope with their problem through developing more social goals be committed to them. In fact, active and effective coping with thoughts and feelings, avoiding avoidance, changing the view of self, reviewing values and goals, and commitment to a more social goal are the basic factors in this therapeutic method (Omran, 2011).

In this method, the therapist helps patient know about harmfulness of these behaviors and clarifies why disruptive behaviors should be stopped. Therefore, the patients should commit to change themselves. They should also accept that these behaviors exist in them; and only they are able to change these behaviors. Patient and therapist discuss the problem and focus on solutions for experiencing new affects. This method gives the individual the opportunity of observing, explaining, and describing emotional states without a judgmental view. Most of the therapist's focus is dedicated to guide the patient to complete awareness of his (patient's) own responsibility. Therapist encourages the patient to fully experience the thoughts and emotions related to a thought, feeling, and behavior without any suppression, judgment, and secondary emotions (such as shame and feelings of guilt) (Forman & Herbert, 2008).

Participating in ACT group sessions helped students with learning disability accept their problems and cope with them logically. Expression of successful and unsuccessful experiences in the presence of people having many common characteristics with the individual probably gives the people the feeling of intimacy, accountability, and self-efficacy. Perhaps, ACT training has provided the children with the opportunity of believing in their skills to create enjoyable communication. Additionally, this training has led students to think because it was based on question and thinking. Students were asked not to answer quickly and carelessly. On the other hand, decrease in withdrawing behaviors and increase in problem solving behaviors may lie on the fact that verbal and practical participation of individuals for finding solutions has been accentuated in group sessions; desired behaviors and responses of students have also been encouraged (Latifi, Amiri, Malekpour, & Molavi, 2009). This may have resulted in positive experience and improvement of student's view to others, improvement of interpersonal relationships, and decrease in social anxiety. Cognitive strategy is a step toward correcting child's cognition and helps him come out of underdog role. Choosing inappropriate social goals such as withdrawing from group activities, may suggest that children have been neglected (Forman & Herbert, 2008).

Limitations of this study are as follows: 1) Sample appertained to Koohdasht City. So, generalization of findings is limited. 2) The sample included only the middle school male students. Therefore, generalization of findings to female students is challenged. 3) This study has not separated the type of disability. 4) Lacking follow-up stage for assessing the consistency of intervention. 5) Small sample size 6) Not comparing the method with other psychotherapies.

According to the frequency of these disabilities in children and adolescents, more psychological investigations may contribute to identification and treatment of the patients' mental problems. It is recommended to use ACT model in schools and clinics in order to improve interpersonal relationships and reduce social anxiety in students with learning disability.

It is recommended to conduct such studies in larger samples and with follow-up stage, and to compare this method with other therapeutic methods. It is also recommended to apply this therapeutic package for comorbid disorders such as conduct disorder, oppositional defiant disorder, and ADHD.

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