

Comparing the Effectiveness of Therapy Based on Acceptance and Commitment and Reality Therapy in a Group Way on Students' Academic Anxiety

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Abstract

Introduction: Academic anxiety is one of the important emotional factors in education, which is ambiguous and complicated for many students, so this research was conducted with the aim of comparing the effectiveness of therapy based on acceptance and commitment and reality therapy in a group way on students' academic anxiety.

Research method: The research method was semi-experimental with a pre-test-post-test design with a control group. The research population included all the male secondary school students of the 2nd district of Hamedan city who were studying in the academic year of 2022-2023. From these, 3 groups of 20 people were selected by multi-stage cluster sampling method and randomly divided into experimental and control groups and answered the Phillips (1978) academic anxiety questionnaire in two pre- and post-test sessions. The subjects of the experimental group were treated with the approach of treatment based on acceptance and commitment and reality therapy, during 8 sessions, 1 session of 60 minutes per week, but no training was given to the control group. The data were statistically analyzed with SPSS software and using the analysis of covariance test and a significant level of $p < 0.05$.

Findings: The results showed that there is a significant difference between the mean of the post-test of the group treated by the acceptance and commitment method and the mean of the post-test of the group treated by the reality therapy method in a group way ($t = -13.75$, $sig = 0.01$). Therefore, it can be said with 99% certainty: The effect of the treatment method based on acceptance and commitment is more than the effect of the group-based reality therapy method on academic anxiety in students.

Conclusion: According to the results of this research, it can be said that the effect of the treatment method based on acceptance and commitment is more than the effect of the group-based reality therapy method on academic anxiety in students.

Keywords: Acceptance and Commitment Therapy, Academic Anxiety, Reality Therapy, Students

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Introduction:

Many factors are involved in the educational process and academic field, one of which is anxiety (1). Anxiety is considered as an emotional arousal and in recent decades it was considered as one of the most important factors of academic failure (2). Since then, researches have been conducted in this field and researchers have started research in this field and investigated the effect of anxiety on various variables (3). One of the types of anxiety that many students are dealing with is academic anxiety. It can also be said that academic anxiety is one of the important emotional factors in education, which is ambiguous and complicated for many students (4). Therefore, many students experience anxiety during exams (5).

Borlig (6) defines academic anxiety as a feeling of tension that hinders the functioning of cognitive factors in exams and solving problems, and the result of this emotional interference is forgetting the required information and losing self-confidence. Also, academic anxiety is said to be a feeling of increasing need for knowledge and at the same time, a person's perception of not having enough time to acquire that knowledge.

In addition, Freire, Faradas, Nunge, Wall and Walljo (7) in defining academic anxiety pointed to the individual's evaluation based on the experience of inconsistency between situational demands and their intrapersonal resources. Although anxiety, competition is a positive stimulus for the development of teenagers, but if this anxiety intensifies or continues, it can affect the mental health and well-being of people, especially teenage girl (8).

Ang, Huan and Braman (9) consider the pressures related to education as the most important source of anxiety faced by learners. Educational activities are very important in most cultures. If academic anxiety becomes severe or continues, it creates problems for people in the field of mental health and well-being (10). Research shows the relationship between high academic expectations and academic anxiety among learners (11).

The study of academic anxiety has shown that 67% of students consider educational pressures as the biggest anxiety in their lives (12). In relation to academic anxiety, emphasis is placed on five anxiety-causing factors (failures, conflicts, pressures, changes and self-imposed anxiety) and four reactions (physiological, behavioral, cognitive, and emotional) to these factors (13).

Evidence has shown that academic problems are one of the most conventional sources of anxiety (14), according to the concept of academic performance, another dimension called agency has recently been added to it, which refers to the active participation of the learner in the course of education, which In this participation, a person achieves social cognition, and this social cognition itself is one of the basic dimensions of the theory of mind (15) and due to its importance, the need for an educational approach is felt.

Treatment based on acceptance and commitment, as one of the newly emerging treatments of the third wave, uses a combination of mindfulness along with behavioral principles and a person's correct perception of his personal values in order to increase the psychological flexibility of the person. The main components of this treatment include six core processes that lead to psychological flexibility (16). In fact, what is important in this treatment is to achieve a general process called the improvement of the parent-child relationship, which makes the person as a

person aware of his thoughts and feelings, fully in touch with the present and performing the behaviors that will lead him in the path of life. It moves towards values and introduces commitment to these values (17). Therapy based on acceptance and commitment seems to be suitable for Iranian parents due to its combination with eastern techniques (18). Previous studies have shown that this treatment improves symptoms and parent-child communication in children and adolescents (19) and regulates emotions (20), increases mindfulness and reduces conflicts between parents and adolescents (21), reduces psychological distress (22) and increases well-being. Psychological of parents (23) is effective.

The effectiveness of treatment based on acceptance and commitment in this research is on the parent-child relationship with an emphasis on metaphor and simile of experimental exercises to free oneself from verbal content and create more connection with the continuity of experience in the present. In this treatment, instead of making a change in cognition and conflict with them, the effort is to improve the psychological connection of the person with his feelings and thoughts (24) and lead to the improvement of relationships with others.

Among other positive treatment and behavioral third wave, we can mention reality therapy, which is a counseling and psychotherapy method and was founded by Glaser (25). The reality of therapy is in the explanation of an educational theory (prevention) and treatment (26). This theory has different functions such as: home, school and medical centers (27). The main goal of reality therapy is to change the person's unsuccessful identity and create responsible behaviors, because these behaviors cause discomfort and anxiety in humans, and as a result, the parent-child relationship is inappropriate (28). According to Glaser, people are motivated by internal stimuli more than they are motivated by external stimuli and motivation (29).

In fact, all the behavior of a person is to satisfy the five needs. The appearance of any kind of incompatible behavior in a person is an effort that a person makes in order to control his perceptions and control his life. This means that anxiety, depression, and aggression are caused by the person personally. By making wrong and ignorant choices, he brings fruit to himself in order to overcome anger and loneliness and benefit from the support and help of others (30), therefore, it can be concluded that these two treatments are third wave in terms of They have a lot of emphasis on action instead of thinking, as well as their emphasis on moral values and intelligent planning, but the first difference is that, in contrast to reality therapy, which considers the main problem to be the effort of humans to control other people. and emphasizes on the interpersonal world (30), treatment based on acceptance and commitment considers the root of problems within the individual and tries to fight or deny and eliminate unpleasant thoughts and feelings and control them at any cost. 25). Second, according to their theoretical basis, reality therapy focuses a large part of its training on teaching people to satisfy their five needs with high responsibility and away from control (31), but the therapy of acceptance and commitment to people It teaches them to move toward effective value-oriented behaviors by emphasizing values and using fault, acceptance, and mindfulness (24). Now the question arises for the researchers, which approach is more capable in solving the problems that are considered as the dependent variable of this research. Therefore, in this study, an attempt is made to answer the question whether the effectiveness of

reality therapy and therapy based on acceptance and commitment on the parent-child relationship of male students in the second secondary level is different or not?

Research Method:

The research method was semi-experimental with a pre-test-post-test design with a control group. The research population included all the male secondary school students of the 2nd district of Hamedan city who were studying in the academic year of 2022-2023. Sample selection using multi-stage cluster sampling and the number of samples based on similar studies, such as the research of Linehan and Dimf et al. 10%, 20 people were calculated for each group, which were randomly assigned, 20 people in the first experimental group (therapy based on acceptance and commitment), 20 people in the second experimental group (reality therapy) and 20 people in the control group and divided into They answered the parent-child relationship evaluation questionnaire in 2 stages. Entry criteria include: 1. male students; 2. Second high school students; 3. Students of the 2nd district of Hamadan city and the criteria for leaving the research included having more than two sessions of absenteeism, non-cooperation and not doing the specified assignments in the class and unwillingness to continue participating in the research process.

The treatment group based on acceptance and commitment during 8 sessions (1 session of 60 minutes per week) as a group based on the therapy protocol according to the method of Hayes et al. (32) and the experimental group of reality therapy based on the protocol of Glaser et al. 8 sessions of 60 minutes were scheduled and the control group did not receive training.

The research tool was the **Phillips Academic Anxiety Questionnaire**: this questionnaire has 74 items that measure 4 areas, fear of self-expression, test anxiety, lack of self-confidence and physiological reactions (34). Abul Maali et al. (35) have reduced the number of questions by 52 items in a research titled (Establishment, Validation and Normization of Academic Anxiety Scale). Each yes answer gets 3 marks, sometimes 2 marks and no 1 mark. Abol-Maali et al. (35) have confirmed the validity of this test and calculated its reliability to be 93% according to the three evidences of face validity, simultaneous criterion and structure. In this research, the retest method was used to calculate the reliability and the total reliability was 80%. Also, by using Cronbach's alpha, the reliability of each of the sub-tests was determined, respectively, fear of self-expression was 80%, test anxiety was 87%, lack of self-confidence was 70%, and physiological reaction was 78% reliable. In this study, the reliability of exam anxiety was 89%, fear of self-expression was 89%, lack of self-confidence was 85%, and physiological reaction was 83% through Cronbach's alpha. The validity of this test has been calculated by the methods of factorial validity, simultaneous criterion validity and face validity.

Acceptance and Commitment Therapy: In the present study, a therapy protocol was developed based on the method of Hayes and his colleagues in 2006 (32). This program was implemented by the therapist in 1 session of 60 minutes every week for 8 weeks.

Table 1. Subjects of acceptance and commitment training sessions (32)

meetings	The content of the meetings
First session	Establishing a therapeutic relationship, concluding a therapeutic contract, psychological training
second session	Discussing experiences and evaluating them, efficiency as a measure, generating creative frustration
third session	Articulating control as a problem, introducing desire as another response, engaging in purposeful actions
fourth Session	The use of cognitive breakdown techniques, interfering with the functioning of problematic language chains, weakening one's alliance with thoughts and emotions
fifth meeting	Viewing self as context, undermining self-concept and self-expression as observer, showing separation between self, inner experiences, and behavior.
The sixth session	Application of mental techniques, patterning of leaving the mind, training to see inner experiences as a process
The seventh session	Introducing value, showing the dangers of focusing on results, discovering the practical values of life
The eighth session	Understanding the nature of desire and commitment, determining action patterns in accordance with values

Reality Therapy: In the present study, a therapeutic protocol was developed based on the method of Glaser et al.'s protocol (33) this program was implemented by the therapist in 1 session of 60 minutes every week for 8 weeks.

Table 2. Description of the Reality Therapy package (33)

meetings	The content of the meetings
First session	Introduction, determining group rules with the cooperation of members, examining the importance and role of communication skills, familiarizing group members with each other and establishing a relationship based on trust between members and communicating group rules.
second session	Teaching the concepts and theories of reality therapy, introducing how and why people behave, focusing on the members' awareness and knowledge of themselves and the way this knowledge affects the person and others, identifying strengths and weaknesses and trying to achieve a successful identity, helping Members to learn more about themselves and their basic needs [recognizing the 5 main human needs, listing the members' basic needs with their own efforts and checking the importance of meeting these needs]
third session	Getting feedback from the last meeting, asking for an explanation about the general view of the members related to their current employment and common life, and examining the reasons for the attitude of the group members about the current life situation. Examining people's goals for their lives and determining their

	purposefulness, introducing behavior and familiarizing members with the four components of general behavior: thinking, feeling, action and physiology, teaching decision-making skills and interpreting changes in thoughts, feelings, actions, physiological in time now.
fourth Session	Introducing and defining the four conflicts and forced behaviors, determining the level of access or failure of the group members to use the behavior and action in the present time in order to be employed and checking how their current behavior can help the members reach their goals and needs.
fifth meeting	Helping members to recognize their behavior and feelings in the present, showing less importance of the past compared to today's behaviors and emphasizing internal control compared to employment, introducing members to emotions such as anxiety and depression from the perspective of reality therapy and body skill training. Calmness in order to control and regulate emotions, to show the importance of planning to do things faster and better, to use time properly and to teach proper planning to achieve other goals in common life.
sixth session	Acquainting members with their responsibilities and helping them accept responsibilities and increase responsibility for their behavior choices and solutions that cause the tendency to despair and decrease happiness in employment. Introducing and explaining destructive and constructive behaviors in relationships and teaching how to live in the moment.
seventh session	Teaching the ten principles and concepts of the selection approach, accepting responsibilities for behavior, getting to know the issues of change and commitment, and doing even very little homework, based on increasing self-esteem, valuable self-concept until the next meeting, and getting a written commitment letter from the members in order to implement That and not making any excuses.
eighth session	Getting feedback from previous meetings, reviewing them and summarizing, reviewing and re-emphasizing to accept responsibility by members, helping people to use internal control, facing reality, making moral judgments about the rightness or wrongness of behavior, living in this the moment and ultimately the process of change that reduces anxiety and increases positive emotions.

The data were statistically analyzed using analysis of covariance and a significance level of $P < 0.05$ and using SPSS software version 23.

Findings:

In this chapter, the statistical status of the respondents has been described first, then the research hypotheses have been tested statistically.

Table 3. Table 3. Students' academic anxiety in pre-test and post-test

Groups	Number	Pre test		posttest	
		M	SD	M	SD
ACT	20	107.65	13.873	74.25	9.72
Reality Therapy	20	108.35	13.8	88	13.56
Control Groups	20	108.95	13.82	109.4	16.98

In this research, the effectiveness of the therapy based on acceptance and commitment and reality therapy in a group manner on academic anxiety in students has been investigated and compared. For this purpose, analysis of covariance test was used. Before conducting the test, using the multivariate analysis of variance test, it was ensured that the three groups were equal in the pre-test, and the existence of prerequisites for the implementation of the covariance analysis test, such as the normality of the data, the linearity of the relationship between the variables of the pre-test and the post-test. Homogeneity of variances, homogeneity of covariances, and the assumption of multiple non-collinearities between dependent variables were examined.

Table 4. Multivariate analysis of variance test

effect		value	F	df of the hypothesis	df of the significance	sig
group	Lambda Wilkes	0.96	0.31	8	108	0.96

According to the data in Table No. 4, the value of Wilkes' lambda is [$f = 0.31$ and $\text{sig} = 0.96$], therefore there is no significant difference between the studied groups in the pre-test, therefore it can be said that the three groups are equal in the pre-test.

Table 5. Comparison of the subscales of the three groups in the pre-test

Sources Change	The sum of the squares	df	mean square	f	sig
group effect	16.933	2	8.467	0.044	0.96
error	10908.05	57	191.369		
Total	6493731	60			
Corrected sum	81260.5832	59			

According to the data in table number 5, the test values (f and sig) obtained are anxiety ($f = 0.044$ and $\text{sig} = 0.96$), which shows that the group did not have a significant effect on any of the variables in the pre-test and the three groups were equal in the pre-test.

A- Examining compliance with the assumptions of covariance analysis test: In this section, the conditions of data normality, linearity of the relationship between variables, equality of variances and equality of covariances, non-collinearity between dependent variables are examined.

1. **Condition of normality of the data:** To know the normality of the data, non-parametric Kolmogorov Smirnov (K-S) test is used, Table No. 5 reports the result of the analysis.

Table 6. Kolmogorov Smirnov (K-S) test to check the normality of the test data

Test steps	Statistical values	ACT	reality therapy	control group
pre-exam	K-S	0.58	0.49	0.41
	sig	0.88	0.96	0.99
	K-S	0.44	0.66	0.76
	sig	0.81	0.76	0.61
post-exam	K-S	0.58	0.49	0.41
	sig	0.88	0.96	0.99
	K-S	0.64	0.67	0.76
	sig	0.81	0.76	0.61

According to the values (K-S) and value (sig) for each of the tests, the data distribution is normal and the normality of the data is confirmed.

2. Investigating the linearity of the relationship between the variables using a scatter diagram: using a scatter diagram, the father-child relationship and the mother-child relationship of three groups have been studied, and the relationship between those variables is linear and has the necessary prerequisites.

3. Hypothesis of multiple non-collinearities between dependent variables: Pearson's correlation coefficient was used to verify the absence of multiple collinearities between pre-test data of father-child relationship and mother-child relationship of three groups. The results are presented in table number 6.

Table 7. Correlation coefficient of the pre-test scores of the studied groups

Variables	Academic Anxiety	
	r	p
Academic Anxiety	1	0

The results of the correlation coefficient between the variables father-child relationship, mother-child relationship of three groups in the pre-test show that there is no linear relationship between the variables before the implementation of the plan.

4. The condition of equality of variances with Levon's test: Levon's test was used to check the condition of equality of variances. The relevant data are given in Table 8.

Table 8. Lon's test to check the equality of variances

Dependent variables	f	Df1	Df2	sig
After the academic anxiety test	1.28	2	57	0.29

According to the data in Table 8 and the values of F and sig, the variance of the dependent variables of the three groups are not significantly different from each other, and the condition of equality of variances is confirmed. Due to the existence of presuppositions required for covariance analysis, using this test, the effectiveness of therapy based on acceptance and commitment and reality therapy in a group manner on academic anxiety in students is investigated.

Table 9. Covariance test

	effect	value	F	df of the hypothesis	df of the significance	sig
group	Lambda Wilkes	0.182	18.14	8	108	0.0001

According to the data in table 9, the value of Wilkes' lambda ($f=18.14$ and $\text{sig}=0.0001$) of the group had a significant effect on the dependent variables, so it can be said: between the effectiveness of the two treatment methods based on There is a difference in acceptance and commitment and reality therapy in group and control group, on parent-child relationship among students. The comparison of the impact of the mentioned methods on each of the variables of the parent-child relationship has been made according to Table 10 and Shefe's post hoc test. Table No. 10 has been used to examine the effect of project implementation on each of the dependent variables.

Table 10. Summary table of analysis of covariance for intergroup effect

Sources of change	sum of squares	df	mean square	f	sig	Effect size
group effect	12550.3	2	6275.15	33.18	0.0001	0.54
error	10778.55	57	189.097			
plural	515287	60				
Corrected sum	2332.85	59				

According to the data in table number 10, the statistical values related to the effect of the group on academic anxiety were ($f=33.18$ and $\text{sig}=0.0001$), which indicates that the group had a significant effect on academic anxiety, so it can be said: The use of treatment methods based on acceptance and commitment and reality therapy in a group and control manner has an effect on academic anxiety in students.

Table 11. Scheffe's test to compare the effect of treatment based on acceptance and commitment on academic anxiety

	Group	Control
ACT	difference(i-j)	-35.15
	Significance level	0.0001
Reality Therapy	difference(i-j)	-21.4
	Significance level	0.0001

According to the data in Table 11, the average post-test of the group treated with the method of acceptance and commitment on students' academic anxiety is 35.15 lower than the control group, so it can be said that the treatment based on acceptance and commitment has an effect on students' academic anxiety and has caused a decrease in the anxiety level of experiment 1 group ($i-j=-35.15$, $\text{sig}=0.0001$).

The average post-test of the group treated with reality therapy in a group way on students' academic anxiety is 21.4, lower than the control group, so it can be said: treatment based on reality therapy in a group way has an effect on students' academic anxiety and It has reduced the level of anxiety of experiment 2 group ($i-j=21.4$, $\text{sig}=0.0001$).

Discussion and Conclusion:

The results showed that there is a significant difference between the mean of the post-test of the group treated by the acceptance and commitment method and the mean of the post-test of the group treated by the reality therapy method in a group way ($t=-13.75$, $p=0.01$). Therefore, it can be said with 99% certainty: The effect of the treatment method based on acceptance and commitment is more than the effect of the group-based reality therapy method on academic anxiety in students. The result of this finding is in line with the findings of Habibi, Ahmadi and Zaharakar (37) and Joshenposh, Fadzalepour and Rahmati (38). In their research, Quinney and Thompson (39) showed that therapy based on acceptance and commitment leads to a reduction in experiential avoidance; and this means that any attempt to control internal experiences is reduced. Its consequence is the increase in the acceptance of the content of the mind through the techniques related to faulting, which has led to a decrease in the amount of conflict between mothers and teenage children. In addition, one of the causes of academic anxiety conflict is parents' concern about their children's academic future. Since in the approach based on acceptance and commitment, one of the causes of psychopathology is the lack of focus on the present, through the use of this approach, the focus on the present has increased, and as a result, the amount of conflict has also decreased.

Bakhtiarpour (40) reported in his research that parent-child relationships have an effect on all functional and developmental aspects of adolescents, especially their academic performance, in such a way that a disturbance in it provides the basis for the occurrence of any disorder in the adolescent's performance. Nowrozi et al. (41) also concluded in a research that the therapeutic approach based on acceptance and commitment through increasing the level of acceptance and functional commitment to each other and clarifying communication values, has an effective role in improving the quality of interpersonal relationships and solving problems in this format is related. Rezapour Mirsaleh, Esmail Beigi and Delavari (42) in a research titled "Evaluation of the effectiveness of the intervention based on acceptance and commitment on the academic engagement of students with learning disabilities" showed that the intervention based on acceptance and commitment has a positive effect on improving the academic strategies of students with learning disabilities. And it has meaning

In explaining the findings of this research, it can be said that treatment based on acceptance and commitment, targeting the way of dealing with problems, can have a positive effect on academic motivation strategies. Because these parents receive inappropriate feedback from the teacher regarding their child's academic performance, which is very stressful and difficult for them, on the other hand, many of these students are anxious in learning due to society's biased attitudes and communication problems. They are insecure, resistant to accepting the law, aggressive and rebellious. These behaviours may be related to a sense of insecurity and lack of acceptance by parents.

Since conflict resolution strategies are rooted in parents' beliefs, opinions, and behaviour, acceptance and commitment therapy with its therapeutic components such as acceptance, flexibility, and positive orientation teaches parents of teenage children that they need to communicate effectively with their children. Pay attention to all the weaknesses and strengths of

your child. It also teaches them to avoid black and white double thoughts and to accept their child with all their problems and shortcomings (27). By changing the way these parents respond to their children's problems, including academic problems, disorganization, extreme attention-seeking behaviour and stress, this treatment reduces their conflict with their children and teaches them to interact and accept their child's problems and avoid responses such as extreme reactions, ruminations, active and passive avoidance, and any response that does not help to solve their problems in relation to their child (26).

Based on the findings of this research, it can be concluded that an intervention based on acceptance and commitment can be used to improve the educational conditions of teenage children. Therefore, it is suggested that formal educational programs for teaching skills based on acceptance and commitment to students be compiled by relevant organizations, including education.

According to the results of this research, it can be said that therapy based on acceptance and commitment and therapy based on reality therapy led to the improvement of father-child relationship.

Compliance with ethical guidelines: The current research is taken from the doctoral thesis of the first author in the field of psychology and has been approved by the specialized research council with the code of ethics IR.IAU.B.SDJ.REC.1401.096 of Islamic Azad University Sanandaj branch.

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