



Effectiveness of the Clinical Creativity Therapy Model on Reduction of Anxiety and Depression in Iran's High School Students

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Abstract: The present study explores the effectiveness of the clinical creativity therapy model on reducing anxiety and depression in first-grade high school male students. The statistical population included all first-grade high school male students in Najafabad, Iran, in the academic year 2018-2020, among whom 30 students were selected through convenience sampling purposively. Beck Anxiety and Depression questionnaires were employed as a pre-test for all participants. Then, the participants in the treatment group were subjected to the clinical creativity therapy model in 8 sessions, while the control group did not receive any intervention. The above questionnaires were executed again for both groups as post-test. The finding was analyzed using ANCOVA and MANCOVA covariance analysis. The results of MANCOVA analysis revealed that there is a significant difference between the mean of post-test scores of anxiety and depression in both treatment and control groups ($p < 0.01$, $F = 7.93$). Similarly, the results of ANCOVA analysis showed that there is a significant difference between the mean of post-test scores of anxieties ($p < 0.01$, $F = 8.06$) and depression ($p < 0.01$, $F = 11.79$) in treatment and control groups. According to these results, the clinical creativity therapy model significantly reduces anxiety and depression in first-grade high school male students. Indeed, creativity is a type of mental efficiency that can modify an inefficient mentality and decrease students' anxiety and depression. This study provides an opportunity for emotional evacuation, acceptability, altruism, refining, belonging, sympathy, interaction, reality testing, and many other advantages related to group treatment for the clients. Therefore, it can increase emotional and social support resources and decrease anxiety and depression.

Keywords: Anxiety, depression, clinical creativity therapy model, students

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INTRODUCTION

Anxiety is the most common psychological problem, especially during adolescence. If it is not eliminated, it will be led to repetitive absenteeism from school, inability to complete education, reduction of self-confidence, drug abuse, a disorder in interpersonal relations, and anxiety disorders in adulthood. Prevalence of various kinds of anxiety disorders in adolescents has been reported between 10 and 20 percent (Kendall et al., 2010). Patients who suffer from anxiety disorders often have symptoms of other psychopathy disorders, particularly mood disorders. The national study of

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simultaneous disorders shows that there are simultaneity and overlap of anxiety and depression in more than 60 percent of those who suffer from a major depressive disorder, and anxiety is common and prevalent before a major depressive disorder is developed (Marko, Tuomas, & Jaakko, 2011; Wang et al., 2020). Perhaps, one of the actions that can be taken to confront anxiety and depression and prevent its damages is to promote the creativity level in students, since those who suffer from anxiety appeal to one strategy that is mainly avoidance and suffice to it. On the other hand, the negative mood in depressed patients will decrease the ability of problem-solving in them. Thus, they use repetitive behavioral patterns and incompatible coping strategies in facing the problems and avoid using other solutions seriously. This can be a sign of repressing the creativity in these people and justifies the necessity of training the clinical creativity therapy model for such people. The hopeful point is that all humans enjoy creativity and have a system in their mind, known as the “reative system”. They just do not know how to use this good resource (Glasser, 1995). Therefore, this study intends to explore the role of creativity in the reduction of anxiety and depression in the first-grade high school male students through the clinical creativity therapy model.

Theoretical Principles

The clinical creativity therapy model deals with practices and homework with the purpose of the creative mind and personality in order to pass the borders of normality and positive and excellent movements. If it is used accurately, it can have preventive and even effective therapeutic dimensions (Pirkhaefi, 2012). The difference between creativity therapy and other models is that creativity has a unique status in it, and it is mentioned as an important factor which manages internal changes. The clinical creativity therapy model controls activation in cognitive (intellectual), emotional (motivational), and personality (behavioral) fields. It includes five main components and 16 operational sections. In the components section, meta-cognitive, oral, motivational, and personality components and body language can be named. At the operational level, this model contains a stream of consciousness, flexibility, improvement of thought and comprehension, mind design, solution-finding, decision building, motivational orientation, persistence, self-confidence, courage, risk-taking, improvement and perceptive extension of the word, an extension of metaphorical and semantic meaning, verbal relations, motor behaviors and body language. There are some pieces of evidence on the effectiveness and the use of clinical creativity therapy model in various grounds, such as the significant internal relationship between variables of creativity, self-efficacy, and coming to terms with mental health as well as the effect of the clinical creativity therapy model on the reduction of anxiety and depression symptoms in women after childbirth (Haghiri & Pirkhaefi, 2016). Creative thinking protects the individual against social and environmental damages and pressures due to cognitive strategies (such as problem-solving, mental flexibility, situation analysis, realistic understanding, taking the initiative and mental tolerance threshold). In fact, creative people have various personality traits through which they can better accept new experiences and are less subjected to anxiety and depression (Simonton, 2012). Generally speaking, the clinical creativity therapy model seeks to increase creativity and thus, self-efficacy and coping suitably with mental pressures by relying on modern therapeutic techniques through creating dynamism in problem-solving and decision-making processes. It seems that it will be effective in the improved mental health of students. However, as the clinical creativity therapy model is a modern therapeutic approach, the studies have proposed contradictory results about the effectiveness of this therapy on students’ depression (Monazah & Pirkhaefi, 2017). The present study aims to achieve more accurate pieces of evidence in this field and improve scientific support of the clinical creativity therapy model to answer this question: can the clinical creativity therapy model have a significant effect on the reduction of anxiety and depression in the first-grade high school male students?

LITERATURE REVIEW

Pirkhaefi (2018) conducted a survey to explore the effectiveness of the clinical creativity therapy model on the enhancement of executive functions and reduction of depression in depressed patients in one of the psychiatric centers in Tehran. The results of this survey indicated that the clinical creativity therapy model could enhance executive functions and reduce depression in such patients.

Godini, Pirkhaefi, and Hosseini (2017) carried out a study to explore effectiveness of the clinical creativity therapy model on physical symptoms, anxiety, depression and social function on forty third-grade middle school male students in Bushehr. The research findings revealed that the clinical creativity therapy model could decrease the scores of physical complaints, anxiety and disorder in the social function of students significantly. However, these results were not significant for the depression component.

Monazah and Pirkhaefi (2017) conducted a study to examine the effectiveness of the clinical creativity therapy model on enhanced motivation and academic performance of thirty first-grade high school male students in Tehran who had the lowest academic performance during the first semester. The results showed that the clinical creativity therapy model could create a significant increase in intrinsic motivation and academic performance of the students in the treatment group.

Ashkezari and Pirkhaefi (2015) carried out a study to examine the effectiveness of the clinical creativity therapy model on the reduction of depression and aggressive behaviors on thirty high-school girl students in Tehran. The results of this study indicated that training the clinical creativity therapy model has a significant effect on the reduction of depression and aggression of these girls.

In order to explore the effectiveness of the clinical creativity therapy model on the level of conflicts and marital satisfaction, Naghlbari (2014) showed that there is a significant difference between the treatment and control groups in all subscales of conflicts and satisfaction. In other words, the clinical creativity therapy model could decrease marital conflicts and increase marital satisfaction in the treatment group.

Fancourt and Steptoe (2018) conducted a longitudinal study to investigate the effect of creativity on modification of social and behavioral incompatibilities on 7,558 seven-year-old children. The results showed that 11-year-old children had less social and behavioral instability (depression, isolationism and restlessness). Also, children's involvement with creative activities can decrease the instability and incompatibility levels in adolescence.

In order to determine the role of creativity in vulnerability toward mental disorders, Parnas, Sandsten, Vestergaard, and Nordgaard (2019) explored the outbreak of schizophrenia and bipolar disorder in relatives of creative people (scholars). The results revealed that the outbreak of such disorders in relatives of creative people is significantly higher than the common community.

Cantu and Fleuriet (2017) conducted a survey to explore the effect of creativity as an action to improve health on older adults by nursing students who were training a professional program. In this survey, 138 nursing students performed creative practices such as painting, creative writing and narratives for older adults. The results of their interventions showed that the use of creative programs could be effective on increased concentration and improved health of older adults.

Burns, Zhang, Wieth, and Touyz (2017) conducted an exploratory study on 112 participants to investigate the relationship between creativity and eating disorders. The results of logistic regression analysis showed that among the creativity components, only low flexibility could predict high scores in eating disorder.

Taylor (2017) explored the results of previous studies on the relationship between creativity and mood disorders in a review article using a meta-analysis. The results of his study showed that there is a relationship between creativity and mood disorders; so, negative mood has been accompanied by creativity decrease, and positive mood has been accompanied by creativity increase in most studies. Moreover, several studies have been conducted about clinical creativity therapy model and the reduction of anxiety and depression, among which, those of (Chiang, Reid-Varley, & Fan, 2019; Fancourt & Steptoe, 2018; Singh & Singh Tung, 2015; Papagiannaki & Shinebourne, 2016) can be mentioned.

This study aims to explore the effectiveness of the clinical creativity therapy model on the reduction of pains related to depression and anxiety in students. For this purpose, the research hypothesis is formulated as below: the clinical creativity therapy model is effective on reduction of depression and anxiety in the first-grade high school male students.

RESEARCH METHODOLOGY

This study is semi-experimental with pre-test and post-test designs and a control group. The statistical population included all first-grade high school male students in Najafabad, Iran in the academic year 2018-2020, among whom 30 students were selected via convenience sampling purposively. First, all first-grade high school male students were selected randomly. Then, the depression and anxiety inventories were distributed among the students, and 30 students who obtained above average test scores in anxiety (greater than 25) and depression (greater than 29) inventories were selected purposively and were divided into control and treatment groups via simple random sampling.

Research Tools

The data related to the literature has been collected via historical study. To evaluate the effectiveness of the clinical creativity therapy model on the reduction of anxiety and depression, Beck Anxiety Inventory (BAI-II) and Beck

Depression Inventory (BDI-II) have been utilized.

Validity and reliability of the Beck anxiety scale were measured in an Iranian patient and non-patient population (Beck Anxiety Inventory). The results showed that validity and reliability of Beck Anxiety Inventory are equal to 0.72 and 0.83, respectively. In the same vein, its internal consistency is equal to 0.92.

Reliability of Beck depression inventory was obtained equal to 0.87 (Stanley & Beck, 1998). The results of meta-analysis revealed that the internal consistency coefficient is between 0.73 and 0.93, and its mean is equal to 0.86. Reliability coefficients of the retest in terms of the interval between times of its implementing and type of population are in the range of 0.48 and 0.86 (Fathi Ashtiani & Dastani, 2012).

Structure of the sessions for the clinical creativity therapy model: The clinical creativity therapy model is a 16-hour course that is held in 8 sessions, and each session lasts two hours. In each session, the executor proposes some exercises for the implementation of programs in individual and group forms besides explaining the executive and therapeutic process. One part of these exercises is considered as homework in order to preserve the continuity of therapeutic plans. Moreover, participants will make a relation with it well. Besides oral explanations to implement this course, educational films and slides are shown, too.

RESULTS AND DISCUSSION

Mean and standard deviation of anxiety and depression variables are presented in Table 1; the testing stage and group membership are separated.

Table 1 Mean and Standard Deviation of Anxiety and Depression Variables

Variable	Stage	Control Group		Treatment Group	
		Mean	SD	Mean	SD
Anxiety	Pre-test	38.20	4.01	38.53	3.33
	Post-test	38.73	3.89	36.46	2.53
Depression	Pre-test	42.26	3.36	41.53	3.52
	Post-test	41.86	3.88	38.20	3.38

Given the results of Table 1, the participants' mean score in the post-test has been decreased in comparison with the control group.

In order to test the hypothesis, MANCOVA analysis is used. First, it is necessary to examine the required statistical presumptions.

The results of Box's test have been presented in Table 2 to explore equality of variance-covariance matrices.

Table 2 Results of 'Box's Test for the Research Variables

Variable	'Box's test	Degree of Freedom 1	Degree of Freedom 2	F	p
Anxiety and depression	2.54	3	141120	0.78	0.50

Results of 'Box's test show that the Box statistic is not significant for the research variables ($p > 0.05$). Thus, it is concluded that equality of variance-covariance matrices is held.

The results the Levin test to examine the presumption of variances' similarity for students' anxiety and depression scores are represented in Table 3.

The results of the Levin test show that the Levin statistic is not significant for the students' anxiety and depression scores ($p > 0.05$). Thus, the presumption of variances' similarity has been observed. Given that the required statistical presumptions are established, MANCOVA analysis is used to test the first hypothesis.

Table 4 shows the results of MANCOVA analysis to compare the students' anxiety and depression scores in the post-test between the treatment and control groups by modifying the effect of the pre-test.

Table 3 Results of 'Levin's Test for Students' Anxiety and Depression Scores

Variable	Degree of Freedom 1	Degree of Freedom 2	F	p
Anxiety	1	28	2.75	0.10
Depression	1	28	1.46	0.23

Table 4 Results of MANCOVA Analysis to Compare the Students' Anxiety and Depression Scores in the Post-Test

Test	Value	F	df Hypothesis	df Error	p	Eta Squared	Test Power
Pillai's Trace	0.38	7.93	2	25	0.01	0.38	0.92
Wilks Lambda	0.61	7.93	2	25	0.01	0.38	0.92
Hotelling's Trace	0.63	7.93	2	25	0.01	0.38	0.92
Roy's Largest Root	0.63	7.93	2	25	0.01	0.38	0.92

The results of four different tests of MANCOVA analysis demonstrate that there is a significant difference between the students' anxiety and depression scores ($p < 0.01$, $F = 7.93$) in the treatment and control groups after modifying the covariate trace of pre-test so that 38 percent of the difference in the scores of the research variables in the post-test is due to group membership (the effect of clinical creativity therapy model). The test power is at a favorable level (0.92). As a result, the first hypothesis is confirmed.

CONCLUSION AND IMPLICATIONS

Effectiveness of the clinical creativity therapy model on the reduction of anxiety and depression in the first-grade high school male students in Najafabad, Iran has been explored in this study.

The results of multi-variable covariance analysis for testing the hypothesis showed that the clinical creativity therapy model has a significant effect on the students' anxiety and depression scores. In other words, the use of clinical creativity therapy model can decrease students' anxiety and depression. These results are consistent with the studies done by [Cantu and Fleuriet \(2017\)](#); [Fancourt and Steptoe \(2018\)](#) and [Haghiri and Pirkhaefi \(2016\)](#).

Therefore, responsibility, showing enthusiasm for developing the individual's possibilities and interests, the ability to adopt a personal decision, showing enthusiasm for work, self-confidence, purposefulness, individuality and unity, flexibility and openness, individual adequacy and self-control, suitable decision-making, finding new and constructive ways and so on are the characteristics of creative people. In fact, people take the initiative through creativity training and gaining special skills in various fields and creating adequate motivation in daily life. Hence, they will disclose their internal powers and talents and use them to solve the problems and advance the living affairs ([Yamada et al., 2012](#)). This will decrease anxiety and depression. From the viewpoint of [Young, Klosko, and Weishaar \(2003\)](#), creativity is a type of mental efficiency that inefficient mentality can be modified and improved through its reinforcement. Creativity therapy provides the opportunity for the clients to overcome their inefficient and destructive habits and use their own imagination to create appropriate solutions by active participation in the process of treatment. In such a state, the individual's capabilities will be organized in a new way rather than being served commonly ([Borjali & Pirkhaefi, 2012](#)).

Creativity is the ability to create major and consistent ideas, and a creative person looks for new and heuristic solutions in facing the problems. Through this, the individual solves the problems without any psychological consequences and problems ([Menati, Alimohammadi, Menati, Niyazi, & Kasaei, 2010](#)). In the process of creativity therapy, programs for the stream of consciousness and flexibility played an important role in decreasing the students' anxiety. They employ various solutions in facing the problems and eliminate stagnation and inactiveness of the mind. In this way, they can have different, dynamic and constructive reactions toward the problems through the limited possibilities they have. While in depression, they just think about their lack of possibilities and limitations and expect an external factor to change their situation. They ignore their capability in changing the situation and creating new opportunities. According to the clinical creativity therapy model, a depressed person shapes his/her belief in life due to frequent use of

negative verbal cues which are expressed in relations with others and will become an obstacle for making effective and constructive relations. Implementing linguistic components (like making verbal communication, controlling emotional movements, etc.) helped the students to be a good listener and behave more suitably in transferring their internal emotions and feelings besides reinforcing the verbal skill. In exercising the story writing, they found out that the use of positive words instead of the words with negative meaning can be effective in their change of feelings and improve their negative mood. Similarly, exercising incomplete situations helped them understand that they have no role in creating a stressful situation but can change these situations in the best manner through self-confidence, courage and risk-taking. Finally, one of the important factors that can be taken into account in explaining these results is the manner of group intervention in the clinical creativity therapy model. Besides its cost-effectiveness, it provides an opportunity for emotional evacuation, acceptability, altruism, refining, belonging, sympathy, interaction, reality testing and many other advantages related to group treatment for the clients. Therefore, it can be effective in increasing the emotional and social support resources and will decrease anxiety and depression.

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