Original Article

The Effect of Psychodrama Group Intervention on the Anxiety Levels of Adolescents Preparing for the University Exams

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Abstract

Background: Anxiety about examinations has long been recognized as a pervasive and serious problem. Highly test anxious students report poorer mental health.

Aim: This study aimed to determine the effect of psychodrama group intervention on the anxiety levels of adolescents preparing for the university exam.

Material and Method: The study was a pretest, posttest intervention study with a control group. In the intervention group, 8 of the students were female and four were male, and in the control group, 10 of them were female and 4 were male. The intervention group received a 12-week psychodrama group sessions and the control group received no intervention. Data were collected by using three major tools before and after the intervention period; Information Form Exam Anxiety Inventory, State and Trait Anxiety Inventory and Subjective Evaluation of Anxiety.

Resuts: The difference was found to be statistically significant in the intervention group after the psychodrama group study in the perception score of state anxiety and test anxiety (p<0.001). The interaction effect is significant for the test anxiety total score of the scale (p <0.05). In the control group, it is seen that there is an increase in points against time and the experiment group there is a decrease. The effect size of this change is large ($\eta2=0.227$).

Conclusion: After the psychodrama group ended in the intervention group, students' subjective evaluation of anxiety and state anxiety decreased meaningfully.

**Keywords*:* Adolescence, Anxiety, Intervention

Introduction

The examinations to be placed in a university program put both young people and their families under great pressure in Turkey. Appearing as a result of this pressure, the management of test anxiety is impressively important as it affects the preparation of university examinations and the success to catch career opportunities (Peleg-Popko, 2004). It has been estimated that between 10% and 40% of all students suffer from various levels of test anxiety (Gregor, 2005).

Among the reasons for the test anxiety, past experiences and beliefs (Mc Donald, 2001; Kavakci, Yildirim and Kugu, 2010; Guler and Cakir, 2013), family attitudes (Genc, 2016), perceptions towards the course and time management skills (Sansgiry and Sail, 2006) were often stated. The test anxiety was made in two main dimensions. The dimension which expresses the cognitive aspect of the test anxiety usually refers to the individual's negative evaluations and thoughts about self.

The sensory dimension usually refers to physiological aspect of the test anxiety such as increased heart rate, sweating, flushing of the face, nausea, irritability, tension (Oner, 1990; Kucuk, 2010). It is also seen that exam anxiety prevents students from realizing their existing potential in school environment, negatively affects their goals and professional preferences and causes mismatch (DordiNejad et al., 2011; Ozbas, Sayin and

Cosar, 2012). Exam anxiety can harm students' performance and become a social and clinical problem (McDonald, 2001; Cassady and Johnson, 2002). They are more likely to abuse alcohol and use prescription stimulants for non-medical reasons than their low-test-anxious peers, and test anxiety is associated with non-suicidal self-injury (Sattler and Wiegel, 2013; Tektas, Paulsen, and Sel, 2013; Kiekens et al., 2016; Ne'Eman-Haviv and Bonny-Noach, 2019).

One of the best ways to eliminate these obstacles caused by exam anxiety is to embody anxiety with psychodrama methods (Demirbas, 2009). Psychodrama is a form of psychotherapy that uses action/role-playing to solve individual's problems. Role-playing, if steered targeting a therapeutic change, can help individuals to gain a new perspective and insight into their behavior and to assume more acceptable roles in their relationships (Kalkan-Oguzhanoglu, 2013; Altinay, 2015). During each psychodrama session, participants reenact specific scenes and experiences with guidance from a therapist. These scenes may include past situations, dreams and preparations for future events. In a group setting, other participants play the roles of significant others or the audience, offering support and bringing to the surface underlying beliefs and issues. In this study, it was aimed to evaluate the effect of psychodrama group intervention on reducing or proper managing of exam anxiety, which might have state or trait components, in adolescents preparing for university exam.

Study Hypotheses

H_01: There is no difference between exam anxiety of students before and after psychodrama group intervention.
H_02: There is no difference between state anxiety of students before and after psychodrama group intervention.
H_03: There is no difference between trait anxiety of students before and after psychodrama group intervention.
H_04: There is no difference between subjective perception of exam anxiety of students before and after psychodrama group intervention.

Material and Method: In this study, consisting of an intervention and a control group, the sample was selected among adolescents attending classes to prepare university exams, in a youth center. As a start point, an announcement containing brief information about the study was communicated to all of the students, and the first 20 volunteer applicants were included in the intervention group. People with a severe psychiatric diagnosis, taking medications for anxiety and having a recent major life event that might cause anxiety out of the examination were excluded from the study. The control group consisted of 14 students who were attending the same classes with and similar to the intervention group in the same center in terms of examination (educational status, age, exam expectation, etc.) and in terms of inclusion/exclusion criteria. They were selected among the same volunteer group, but they were registered after the first 20 students (intervention group) and were included in the waiting list for the latter psychodrama groups.

Procedure: Psychodrama group sessions, designed to reduce the anxiety of the exam, were conducted with the intervention group, which consisted of 12 sessions, lasting approximately 3 hours once in a week. During the group sessions, the manager conducted warming games and protagonist-centered scenes developed spontaneously during the study within the framework of a semi-structured program. Along with the different warming games of psychodrama such as letter to the future, the worst scenarios and building up the group picture, possible situations after the exam and the process of progress of the group from the beginning to the end was staged. At the end of each session, the sharing phase consisting of feedback on role and identifications was realized. The control group did not receive any written, verbal or behavioral intervention for change but time. To make comparisons, data collection tools were applied to the intervention and control groups at the beginning and the end of 12 sessions.

Data Collection Tools: *Information Form:* It is a form consisting of 4 questions, including the descriptive characteristics of the students (age, gender, family structure, place of residence) in which the similarity of the students in the intervention and control groups is evaluated.

Exam Anxiety Inventory: It is a quadratic Likert type psychometric scale based on the

self-evaluation of individuals, developed by Spielberger et al. In 1987 and adapted to Turkish by Oner in 1990. It consists of two dimensions as delusion and affectivity. The score that can be obtained from the delusional dimension is between 8-32 and the affective dimension is between 12-48. The high scores of the scale indicate the high levels of test anxiety and delusion and affective dimensions (Oner, 1989).

State and Trait Anxiety Inventory: It is a four-degree Likert-type scale that measures state anxiety (excitatory reactions with sudden changes) and persistent anxiety (continuity of anxiety that the person tends to live with) with 20 questions. The total score obtained from both scales ranged from 20 to 80. High scores indicate high anxiety levels and low scores indicate low anxiety levels. It was developed by Spielberger et al. in1970 and widely used later. Adaptation of the scale to Turkish was carried out by Le Compte and Oner (1976), who also assessed the validity and reliability of the scale (Oner and Le Compte, 1982).

Subjective Evaluation of Anxiety: The students' perceptions of exam anxiety were determined by a simple subjective assessment tool created by the researcher. Using this assessment tool, students were asked to give a value between 0-10 points to perceived test anxiety; "0" means the lowest test anxiety and "10" means the highest test anxiety. Subjective assessment tools are frequently used in psychodrama group sessions.

Statistical Evaluation of Data: Percentage and mean-standard deviation were used in the evaluation of the data and the evaluation of the findings of the descriptive characteristics of the students. In analyzing students' perception of test anxiety, test anxiety inventory and state-trait anxiety scores of the two measures, was used Wilcoxon test and Mann-Whitney U test. Repeated measures analysis of variance were used to assess the effect size of the program. Effect size values were calculated for Cohen (1988) that has provided benchmarks to define small ($\eta2 = 0.01$), medium ($\eta2 = 0.06$), and large ($\eta2 = 0.14$) effects (Lakens, 2013) . The results were tested at $p < 0.05$ significance level.

Results

After the introductory session, four of the 20 students in the intervention group reported that they could not participate because of the obstacles in their personal lives, regarding transportation and timing issues. Two members decided to leave at the end of the fourth session and two at the end of the fifth session. The reason for those last four dropouts was choosing to take additional academic support from another center for the exam and time would be a problem to continue the groups. Six of the 20 students in the control group could not be reached in the last measurement. In the intervention group, 8 of the students were female and four were male, and in the control group, 10 of them were female and 4 were male. In both groups, the ages ranged from 17 to 19 years old, all living with their families and having a nuclear family structure.

The results are summarized in Table 1, which presents the effects of psychodrama group sessions on test anxiety, state-continuity anxiety and test anxiety perception, and the comparison of intervention and control groups. The difference was found to be statistically significant in the intervention group after the psychodrama group study in the perception score of state anxiety and test anxiety ($p<0.001$). Also, there was no change in test anxiety total score, mean scores of delusion and affectivity and trait anxiety scores ($p>0.05$). Contrary to the intervention group, there was an increase in the subjective perception of exam anxiety in the control group ($p=0,025$). Although there was no change in the trait anxiety scores of the control group students ($p=0.165$), there was a slight increase in state anxiety ($p= 0.001$). It was also found that there was an increase in the average scores of test anxiety ($p=157$), delusion ($p=0.023$), and affective scores ($p=0.003$) of the students in the control group.

The time * group interaction of the measurements obtained in the study was evaluated by two-way analysis of variance in repeated measures. The effects of exam anxiety scale and its sub-dimensions based on time and group are meaningless ($p> 0.05$). The interaction effect is significant for the total score of the scale ($p <0.05$). In the control group, it is seen that there is an increase in points against time and the experiment group there is a decrease. The effect size of this change is large ($\eta2=0.227$).

State anxiety and perceived exam anxiety are the main effects. Similarly, while there was an increase in the control group against time, the experimental group experienced decreased points ($p<0.05$). It is seen that the intervention applied for these values has a very high effect size ($\eta2=0,749$; $\eta2=0,710$). In the state anxiety, the main and interaction effect seems to be meaningless ($p>0.05$) (Table 2). At the end of the group studies, it was observed that there was an improvement in students' self-evaluation, awareness, and ability to express their feelings and thoughts.

In addition, the students' evaluation statements regarding the group process of "there are those who are more anxious than me," "we can overcome some obstacles," "perseverance is required for success," "there are others like me," I should believe that I will succeed," " everything ends in my brain".

Discussion

Psychodrama is an effective method in eliminating behavioral and adjustment problems and many psychiatric symptoms in children and adolescents. Functions such as providing catharsis and developing insight, facing and testing the facts, and having a broader repertoire of roles and behaviour changes in psychodrama can be used as therapeutic. In this study, the effect of psychodrama group sessions on test anxiety, state and trait anxiety was revealed.

At the end of the psychodrama group sessions, there was a meaningful decrease in the subjective perception of exam anxiety among the intervention group (Table 1). Psychodrama is an important technique and therapy method in the development of individual awareness. Psychodrama aims to create alternative solutions to these problems by showing the problems in the lives of the group members at the stage, increasing insight and awareness (Ulupinar-Alici, 2008). It can be assumed that re-enacting an stressful life experience has brought the pupils in contact with painful emotions, and this seems to be a crucial step to make corrective emotional experiences (Gassmann and Grawe, 2006).

Regarding the evaluation of the ingroup interactions in this study, it is thought that psychodrama sessions help adolescents to develop awareness about themselves, their emotions and perceptions, and as a result of sharing, they had the opportunity to encounter other members experiencing similar problems, and this results in a decrease in students' perception of exam anxiety.

At the end of the psychodrama group sessions, the state anxiety average of the students in the intervention group decreased significantly. In addition, there was no change in test anxiety total score, mean scores of delusion and affectivity and trait anxiety scores (Table 1).

Psychodrama groups were found to be highly effective, especially on students' state anxiety and exam anxiety (Table 2). Similar results have been found in the literature (Under, 2006; Sen, 2007; Senkal, 2007; Aslan Dikme, 2008). Kipper and Giladi (1978) evaluated the effect of structured psychodrama and systematic desensitization studies on 36 students' test anxiety and concluded that both treatments significantly reduced anxiety scores, that there was a similar effect in reducing anxiety between the two methods, and that structured psychodrama was as effective as systematic desensitization in the treatment of test anxiety.

Dorothea (2016) presented treatment results of short-term, single case psychodrama therapy in a 19-year-old female student who was concerned about mathematics anxiety and found significant differences positively in problematic areas after treatment.

Taspinar-Govec and Basgul (2017), comparing the effects of cognitive-behavioral group psychotherapy and psychodrama in reducing test anxiety, found that cognitive-behavioral group psychotherapy was reducing students' test anxiety and did not reduce continuous and state anxiety. It is stated that psychodrama was more effective than cognitive-behavioral group psychotherapy on exam anxiety and state anxiety.

Another study conducted by Yucel and Iren-Akbiyik (2016) with students preparing for university exams reveals that psychodrama is a very effective method in adolescents to cope with the exam anxiety. The severity and duration of the state anxiety are related to the amount of perceived threat. It is thought that the decrease in the perception of exam anxiety after psychodrama group sessions is effective in decreasing the state anxiety.

Table 1. The change of the text exam anxiety, state and trait anxiety and subjective perception of exam anxiety of the students in the intervention and control groups according of the first and last measurement

SCALES		Grup	First Measurement			Final Measurement			Test Value	Significance
			Min.	Max.	x±SD Q2(Q1-Q3)	Min.	Max.	x±SD Q2(Q1-Q3)		
Subscales	Delusion	Intervention	10	28	18.08±5.78 18(13-25)	9	23	16.17±5.15 14(13-23)	z=-1.063	p=0.288
		Control	10	28	17.50±5.93 16(13-22)	10	28	18.07±5.74 18(13-22)	z=-2.271	**p=0.023**
	Test Value and Significance		MW=80.500 p=0.857			MW =70.000 p=0.469				
	Affective	Intervention	13	36	27.33±7.55 27(22-25)	14	40	27.00±8.01 27(20-33)	z=-0.079	p=0.937
		Control	21	44	29.50±7.22 27(24-36)	23	46	30.93±7.45 28(26-38)	z=-2.979	**p=0.003**
	Test Value and Significance		MW =67.500 p=0.394			MW =61.000 p=0.236				
Exam Anxiety Total Score		Intervention	25	64	45.42±12.78 48(41-55)	23	63	43.17±12.68 42(34-55)	z=-1.769	p=0.077
		Control	32	72	47.00±12.69 45(35-56)	33	74	49.00±12.71 44(38-58)	z=-1.414	p=0.157
Test Value and Significance			MW =69.000 p=0.440			MW =66.500 p=0.367				
State Anxiety		Intervention	32	58	44.33±7.43 45(39-50)	21	47	31.33±8.58 30(23-38)	z=-3.065	**p<0.001**
		Control	27	69	46.21±13.71 45(35-56)	30	68	47.14±12.60 45(39-59)	z=-1.436	p=0.151

Test Value and Significance		MW =80.500 p=0.857			MW =25.000 **p=0.002**				
Trait Anxiety	Intervention	35	65	48.42±8.74 44(35-58)	23	63	43.17±12.68 39(31-45)	z=-1.531	p=0.126
	Control	30	64	46.50±11.35 41(37-58)	30	64	46.79±11.19 44(40-60)	z=-3.210	**p=0.001**
Test Value and Significance		MW =74.500 p=0.625			MW =48.500 p=0.068				
Subjective Perception of Exam Anxiety	Intervention	4	10	7.33±1.68 8(6-8)	0	6	3.50±2.11 4(1-5)	z=-3.066	**p=0.002**
	Control	3	9	6.71±1.73 7(6-8)	4	9	7.07±1.44 7(6-8)	z=-2.236	**p=0.025**
Test Value and Significance		MW =60.000 p=0.348			MW =12.000 **p<0.001**				

Table 2. Test Exam Anxiety and subscales. State Anxiety. Trait Anxiety and Subjective Perception of Exam Anxiety by group over time

Scales			Grups	Time	Grups x Time
Subscales	Delusion	F-value	0.096	1.078	3.687
		p	0.760	0.310	0.067
		η2	0.004	0.043	0.133
	Affective	F-value	1.089	1.081	2.797
		p	0.307	0.309	0.107
		η2	0.043	0.043	0.104
Exam AnxietyTotal Score		F-value	1.414	1.608	7.030
		p	0.246	0.217	**0.014**
		η2	0.056	0.063	**0.227**
State Anxiety		F-value	4.245	53.685	71.475
		p	**0.050**	**0.000**	**0.000**
		η2	**0.150**	**0.691**	**0.749**
Trait Anxiety		F-value	0.041	4.044	5.028
		p	0.841	0.056	0.034
		η2	0.002	0.144	0.173
Subjective Perception of Exam Anxiety		F-value	5.506	40.403	58.713
		p	**0.028**	**0.000**	**0.000**
		η2	**0.187**	**0.627**	**0.710**

* 95% confidence interval of partial η2

Discussion contin.

There was an increase in the subjective perception of exam anxiety, state anxiety, delusion and effective scores in the control group (Table 1). This situation is thought to be related to the increase in exam anxiety as the exam date approaches. In addition, it is stated that cognitive negative schemes and environmental factors are effective in the formation of test anxiety (Boyacioglu and Kucuk, 2011). It is stated that the reason for excessive test anxiety in students is having unrealistic beliefs such as personality are measured in the test instead of knowledge (Koruklu, Oner and Oktaylar, 2006). Young (2016) stated that not to cause any frustration in the family, feeling under pressure from the social environment, high expectations of the families, shortage of time in the exam, and not being prepared enough for the exam were the factors that increased the anxiety of the students preparing for the university exam. Ozbas, Sayin and Cosar (2012) found that students with schemas that negatively affect self-esteem, cause feeling alone, give excessive importance to the opinions of others and prevent individualization, have a high level of anxiety. Guler and Cakir (2013) found that irrational beliefs were the most potent factor in their study in which they examined the variables that caused exam anxiety. The increase in exam anxiety in the control group in the last measurement as the exam time approaches shows the importance of intervention (Table 2). It was obvious that evaluating all of those mentioned predisposing variables for exam anxiety during the psychodrama sessions and

structuring the scenes regarding those increased the success of the technique.

This study limitations; (1) comparing a larger number of groups and different managers could also relatively eliminate differences arising from intra-group interactions, (2) working with a small group of people makes it impossible to generalize our results to all students. But this is inevitable in such studies.

Conclusion: The psychodrama technique, similar to most of the previous studies, was found to cause an apparent decrease in students' perception of exam anxiety and state anxiety. In this respect, the use of psychodrama group sessions at schools and youth centers by regular participation of students is recommended to cope with the exam anxiety and to promote wellness in terms of mental health. Further studies should compare the different techniques of intervention with psychodrama or develop different role-playing actions on psychodrama scenes for better mental health of those adolescents who are under the risk of exam anxiety.

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