

# The Effect of Group-Based Psychodrama Therapy on Decreasing the Level of Aggression in Adolescents

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## Abstract

*Purpose:* This study aimed to examine the effect of group-based psychodrama therapy on the level aggression in adolescents.

*Method:* The study included 23 students from Nezihe Yalvac Anatolian Vocational High School of Hotel Management and Tourism that had high aggression scores. Eleven of the participants (6 female, 5 male) constituted the experimental group and 12 (6 male, 6 female) were in the control group. The 34-item Aggression Scale was used to measure level of aggression. We utilized mixed pattern design including experiment-control, pre-test and post test and follow up. The experimental group participated in group-based psychodrama therapy once a week for 90 minutes, for 14 weeks in total. The Aggression Scale was administered to the experimental and control groups before and after treatment; it was additionally administered to the experimental group 16 weeks after treatment. Data were analyzed using ANCOVA and dependent samples t tests.

*Results:* Our analysis shows that group-based psychodrama had an effect on the experimental group in terms of total aggression, anger, hostility, and indirect aggression scores ( $F = 65.109$ ,  $F = 20.175$ ,  $F = 18.593$ ,  $F = 40.987$ , respectively,  $P < .001$ ). There was no effect of the group-based treatment on verbal or physical aggression scores. Follow-up indicated that the effect of the therapy was still measureable 16 weeks after the cessation of the therapy.

*Discussion:* Results of the present study indicate that group-based psychodrama therapy decreased the level of aggression in the experimental group. Current findings are discussed with reference to the literature. Recommendations for further research and for psychiatric counselors are provided.

*Key Words:* Aggression, Psychodrama, Adolescent

## INTRODUCTION

Aggression is a state characterized by intentionally harmful behavior and attitudes towards other people, physically and emotionally (Ballard et al., 2004). The definition of aggression changes with regard to whether or not aggression is controllable, and whether it is personally derived or it depends on environmental cues. According to emotional definitions, aggression is a behavior that originates with anger. According to motivational definitions, intentions indicate the characteristics of behaviors, whether they are aggressive or not. Only

behaviors that intentionally cause harm can be described as aggressive. According to behavioral definitions, the intentions of behaviors are not important and all behaviors that cause physical and/or psychological damage are considered aggressive (Erkuş, 1994).

Considered within this context, aggression has increased in recent years among adolescents in Turkey and this increase has also been observed in schools. Adolescents that cannot express themselves and cannot be understood at home, among their friends, or at school frequently choose aggression as a style of self-express-

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sion. They might argue with their teachers, sometimes resulting in assaults to teachers, which adolescents regret in later times. This causes serious problems at schools. As such, aggression is one of the most serious problems encountered at schools.

Psychodrama is a therapeutic method that helps participants to reanimate their psychological and social problems, rather than just talking about them (Blatner, 2002). The present study aimed to help aggressive adolescents achieve catharsis, gain insight, test reality, and develop more rational thoughts with the use of psychodrama, with the ultimate goal of a behavioral change (Dökmen, 2005).

Research on adolescent violence and aggression conducted in Turkey and other countries indicates that adolescents have difficulty appropriately expressing their emotions and coping with their anger and aggression. They also cannot realize the relation between their thought process and negative emotions, like anger. In order to cope more effectively with anger and aggression group study, psychoeducational groups, and experimental techniques are effective (Bilge, 1996; Mundy, 1997; Aytekin, 1999; Bundy, 2001; Lavalle et al., 2002; Bundy, 2003; Cenkseven, 2003; Duy, 2003; Hermann and McWhirter, 2003; Rollin et al., 2003; Tarazon, 2003; Duran and Eldeleklioglu, 2005; Tekinsav-Sütçü, 2006; Akdeniz, 2007).

Studies of psychodrama show that it improves self-expression skills (Hecker, 1978; Milosević, 2000). In addition, studies on psychodrama, and anger and dysfunctional beliefs report similar results (Hamamcı, 2002; Coşkun and Çakmak, 2005; Smeijsters and Cleven, 2006; Hamamcı, 2006; Fong, 2006; Reis et al., 2008). The present study shows that psychodrama effective in a group of adolescents. Psychodrama helps adolescents to cope with anger management problems and to deal puberty related difficulties with healthy and comfortable solutions. The present study aimed to investigate the effectiveness of short-term psychodrama therapy in decreasing aggressive attitudes and behaviors in adolescences at school.

This study is important, because to the best of our knowledge it is the first study to examine the effect of psychodrama on aggressive adolescents in Turkey.

The purpose of the present study was to investigate the short- and long-term effects of group-based psychodrama, and to decrease the level of aggression in adolescents by helping them to control their anger. The study tested the following hypotheses:

1. There would be a statistically significant decrease in corrected measurements of students that participated in psychodrama, in terms of total aggression score, and physical and verbal aggression, anger, hostility, and indirect aggression scores, as compared to the control group and baseline measurements

2. There would not be a statistical difference between final test scores and follow-up scores measured 16 weeks after the end of the psychodrama therapy, in terms of total aggression score, and physical and verbal aggression, anger, hostility, and indirect aggression scores. Moreover, the participants evaluated the psychodrama therapy and themselves post-therapy. These findings are presented in the results section.

## METHOD

### Research Pattern

This quasi-experimental study examined the effects of group-based psychodrama on decreasing the level of aggression in adolescences. The study utilized a pre-test-post-test design and a control group, which is a complex and widely used design (Büyükoztürk, 2007).

Accordingly, the Aggression Scale was administered to the participants in the experimental and control groups as a pre-test. Afterwards, group-based psychodrama (14 sessions) was applied to the experimental group. The control group did not receive any treatment. One week after the end of the 14-session therapy, the Aggression Scale was administered as post-test to both groups. The scale was then administered once again to the experimental group 16 weeks after the cessation of the therapy.

### Participants

Participants were selected from among 9th grade students at Nezihe Yalvac Anatolian Vocational High School of Hotel Management and Tourism in Adana during the 2006-2007 school year. The Aggression Scale was administered to all 9th grade students (120 male, 80 female); 70 students (45 male, 25 female) scored  $\geq 111$  (cut off point for high-level aggression). In all, 12 (6 male, 6 female) of the 70 students were randomly selected and assigned to the experimental group. From among the students that scored  $< 111$ , 12 (6 male, 6 female) were randomly selected and assigned to the control group. One student that had a low aggression score and was considered a positive role model for other students by the school administration and teachers was assigned to the experimental group. This student's data were not included in our analysis.

Random sampling was used for group assignment. The idea of assigning 12 students to each group was adopted from Jacob et al. (2002), who reported that the optimum group size for conducting group studies with adolescents is 10-12. Volcan-Acar (2006) also reported that group studies based on volunteer participation should contain groups of no more than 13 people.

Students that volunteered for study participation were identified. The families of these students were contacted to provide permission for their child's participation in the study. In order to not influence the study, students, parents, and teachers were not given information concerning which group students were assigned to. At the beginning of the therapy, information about the content and method was provided. After the assessment and therapy periods, students in the control group were offered psychodrama for ethical reasons.

### Instrument

Aggression Scale: Can's (2002) Turkish adaptation of the Aggression Scale that was developed by Buss and Perry and improved by Buss and Warren was used in this study. The scale consists of 34 items and 5 subscales (physical aggression, verbal aggression, anger, hostility, and indirect aggression). Scores  $\leq 58$  indicate low-level aggression, scores between 59 and 110 indicate normal aggression, and scores  $\geq 111$  indicate high-level aggression (Can, 2002; Buss and Warren 2000). The scale was administered to 300 healthy volunteers without any DMS IV diagnoses. The scale's reliability was analyzed and Cronbach's coefficient was  $r = .832$  for the total measure. For subscales Cronbach's alpha coefficients were, respectively,  $r = .832$ ,  $r = .599$ ,  $r = .728$ ,  $r = .740$ , and  $r = .539$ . Correlations between subscale scores ranged from  $r = .546$  to  $r = .728$ ; correlations between total score and subscale scores ranged from  $r = .745$  to  $r = .874$ , indicating good internal reliability. Pearson's correlation analysis was used to determine the scale's test-retest reliability after 1 week and the results were significant for the 5 subscale scores (respectively,  $r = .847$ ,  $r = .696$ ,  $r = .746$ ,  $r = .81$ , and  $r = .743$ ) and for total score ( $r = .857$  (Can, 2002).

Concurrent validity was measured with Spielberger's State-Trait Anger Scale in order to test the validity of the scale. Trait anger (TA), internalizing anger (IA), and externalizing anger (EA) were significantly correlated with physical aggression ( $r = .696$ ), verbal aggression ( $r = .580$ ), anger ( $r = .730$ ), hostility ( $r = .552$ ), indirect aggression ( $r = .563$ ), and total aggression scores ( $r = .746$ ).

A significant negative correlation was observed between anger management and aggression subscale scores, and total aggression score ( $r = -0.304$ ) (Can, 2002).

Within the context of this study, the scale's validity and reliability were tested with 500 9th-11th grade students from Seyhan Ibrahim Atalı High School and Yüreğir Dadaloğlu High School during the 2006-2007 school year. Because 17 students did not complete the form, the study was conducted with 483 students (248 female, 235 male). The scale's internal consistency was analyzed with Cronbach's alpha coefficient. The internal consistency was  $r = .894$  for the total scale (indicating high reliability), and  $r = .838$  (physical aggression),  $r = .626$  (verbal aggression),  $r = .584$  (anger),  $r = .676$  (hostility), and  $r = .542$  (indirect aggression) for the subscales, respectively. Correlations between subscales ranged between  $r = .459$  and  $r = .635$ ; total score correlated with subscale scores between  $r = .741$  and  $r = .845$ . Test-retest reliability was calculated with Pearson's product-moment correlation analysis, which was performed during 2 consecutive months, and was  $r = .80$  for total score and  $r = .81$  (for physical aggression),  $r = .65$  (for verbal aggression),  $r = .65$  (anger),  $r = .73$  (hostility), and  $r = .65$  (indirect aggression) for the subscales. The *Guttman split-half* coefficient of the scale was .83. The alpha value for first half was .86 and for second half it was .77, indicating the scale's reliability. To analyze the concurrent validity of the scale, the State-Trait Anger Scale that was developed by Spielberger and translated into Turkish by Özer (1994) was used (Savaşır and Şahin, 1997). Both scales were given to 487 students and both scales were significantly correlated ( $r = .66$ ,  $P < 0.001$ )

### Data Collection

Two hundred 9th grade students (120 male, 80 female) were administered the Aggression Scale during the 2006-2007 school year. Twenty male and 12 female students were selected randomly from among 70 students (45 male, 25 female) that had high aggression scores. These students were randomly assigned to the control or experimental groups. Data for 1 student that had a normal aggression score and was assigned to experimental group were not included in the analysis.

### Experimental Application

Group-based psychodrama was applied to the experimental group. No therapy was given to the control group. The study began in March 2007. One student left the experimental group because they left the school;

therefore, the psychodrama group continued with 11 students. The experimental group received psychodrama therapy once per week (total: 14 sessions), for 90-120 min.

Psychodrama sessions consisted of 3 sections: warm-up, enactment (game), and sharing. During warm-up group members were prepared for the day's session with the help of several warm up games. Enactment is a group-based or protagonist-based activity (also called game section). Sharing was composed of 2 sections: role feedback and identification feedback. It is not possible to configure psychodrama sessions because psychodrama is spontaneous—everything develops naturally. If some of the group members have nothing to add to the group, the group director may suggest some warm-up games for them. In the first session the rules and structure of the therapy were explained. In the subsequent sessions the following warm-up games were played, respectively: imagery relaxation, best emotion expression, meeting of angers, relaxation, anger machine-love machine, black box, opposites, unfinished businesses, our worries, obstacle game, positive personality characteristics, and our emotions (Altınay, 2003). Additionally, writing and playing games, including anger and aggression, fable drama, group picture, and group tree were used. Following all warm-up games, role feedback and identification feedback were given.

In the second section, gaining insight and awareness were worked on with protagonist members. After protagonist-centered games, role feedback and identification feedback were also given. After the 14 sessions were completed, a group study evaluation form that consisted of 4 questions was given to the participants. Subjects' evaluations about the therapy and themselves are summarized in the results section.

The group director (ZK) and assistant therapists (GG) were educated for 10 years at a national psychodrama institute, which has memberships with international psychodrama institutes. They completed their preliminary and basic education, and specialist certification. Our other assistant (ZG) is an experienced therapist on group therapies. Education manager (BKŞ) of the institute provided supervision to the therapists after each session

### Statistical Analysis

The assumption that the groups had equal variances was initially tested with Levene's test in order to determine if parametric tests could be used for measures. The

result of Levine's test was non-significant, .867, confirming the assumption that the variance of the groups was homogeneous. Levene's test of equality of error variances tests the assumption of the equality of variance between groups of dependent variances. If the P (significance) value is  $> 0.05$ , the equality of variance for a given dependent variable is achieved (homogenous variance) (Kalaycı, 2006). Moreover, deviance and kurtosis of aggression pretest scores in the control and experimental groups were analyzed. Distribution was leptokurtic and deviated to the left, but it did not deviate much from normal distribution. Group variance, and arithmetic mean and median values of the scales in the control and experimental groups were similar. According to these results, parametric tests could be used in the present study. Data were analyzed with the SPSS v.11.0 for Windows statistical package program. During data analysis, data of one subject who left the school and hence did not participate groups was not included in the analysis; therefore, analysis was performed with the pretest scores, test scores, and follow-up scores of 11 subjects in the psychodrama group and 12 subjects in the control group. Test scores in the control and experimental groups were compared with ANCOVA to determine the effectiveness of the therapy. Test scores and follow-up scores of the groups were compared with dependent groups t test in order to determine if the effects of psychodrama therapy were still in effect 16 weeks after the end of the therapy. The level of significance was accepted as  $P = 0.05$ .

## RESULTS

### 1. Results According To the Hypotheses

Aggression Scale total aggression score and all sub-scale scores, arithmetic mean, standard deviation values, and final test median score (a value that was corrected according to pretest scores) are presented in Table 1.

Mean total aggression score in the experimental group based on the final test (99.27) was lower than control group's mean final test score (119.50). Mean physical aggression score in the experimental group based on the final test (24.72) was lower than control group's mean final test score (27.91). Mean physical aggression score in the experimental group based on the final test (24.72) was lower than the control group's mean final test score (27.91). Mean verbal aggression score in the experimental group based on the final test (15.36) was lower than the control group's mean final test score (16.16). Mean anger score in the experimental group based on the final test (23.63) was lower than the control group's mean fi-

TABLE 1. Aggression Scale total aggression score and subscale scores corrected according to the pretest.

	Experimental Group			Control Group		
	N	Mean	SD	N	Mean	SD
<b>Total Aggression</b>						
Pretest	11	119.45	6.86	12	115.50	5.53
Final test	11	99.27	9.37	12	119.50	7.41
Final test corrected	11	97.49		12	121.13	
<b>Physical Aggression</b>						
Pretest	11	26.36	3.32	12	27.25	5.34
Final test	11	24.72	2.49	12	27.91	5.10
Final test corrected	11	24.94		12	27.72	
<b>Verbal Aggression</b>						
Pretest	11	19.54	2.46	12	17.16	4.83
Final test	11	15.36	2.54	12	16.16	3.56
Final test corrected	11	14.90		12	16.59	
<b>Anger</b>						
Pretest	11	27.90	3.67	12	26.91	4.60
Final test	11	23.63	3.95	12	28.16	3.51
Final test corrected	11	23.31		12	28.46	
<b>Hostility</b>						
Pretest	11	26.00	3.66	12	24.75	4.33
Final test	11	20.27	3.79	12	26.25	3.49
Final test corrected	11	20.07		12	26.44	
<b>Indirect Aggression</b>						
Pretest	11	19.63	3.38	12	19.58	3.39
Final test	11	15.27	2.32	12	21.00	1.85
Final test corrected	11	15.27		12	21.00	

nal test score (28.16). Mean hostility score in the experimental group based on the final test (20.27) was lower than the control group's mean final test score (25). Mean indirect aggression score in the experimental group based on the final test (15.27) was lower than control group's mean final test average score (21.00). (Table1) Covariant analysis was used to determine if these differences were meaningful; the results are presented in Table 2.

The difference between the final test aggression score in the control and experimental groups, which was corrected according to pretest total scores, was statistically significant ( $F = 65.109, P < 0.001$ ). This result shows that psychodrama therapy resulted in a decrease in total aggression score (Table2). The final test's mean aggression scores, corrected according to the pretest, were 97.49 in the experimental group and 121.13 in the control group (Table 1). Mean total aggression score in the experimental group decreased significantly, as compared to the control group. This finding supports the study's hypothesis that total score in the experimental group would decrease, as compared to the control group.

The difference between final test physical aggression

scores in the control and experimental groups, which were corrected according to pretest scores, was statistically significant ( $F = 3.376, P > 0.05$ ). The difference between final test verbal aggression scores in the control and experimental groups, which were corrected according to pretest scores, wasn't statistically significant ( $F = 1.854, P > 0.05$ ) (Table 2). Mean physical and verbal aggression scores in the experimental group decreased significantly, as compared to the control group. These findings support the study's hypothesis that verbal and physical aggression scores in the experimental group would decrease, as compared to the control group.

The difference between final test anger scores in the control and experimental groups, which were corrected according to pretest scores, was statistically significant ( $F = 20.174, P < 0.001$ ) (Table 2). This shows that psychodrama therapy resulted in a meaningful decrease in anger score in the experimental group. The final test mean anger score corrected according to the pretest was 23.31 in the experimental group and 28.46 in the control group (Table 1). Mean anger score in the experimental group decreased significantly, as compared to the control group. This finding supports the study hypothesis that

TABLE 2. Covariant analysis results of aggression scores in the experimental and control groups.

Aggression Scale Subscales	Main Effect of Grouping				
	Sum of Squares	df	Mean Square	F	Sig.
Total Aggression (controlled variable total aggression, pre- measurement)	2883.672	1	2883.672	65.109	.000
Physical Aggression (controlled variable total physical aggression, pre- measurement)	44.077	1	44.077	3.376	.081
Verbal Aggression (controlled variable total verbal aggression, pre- measurement)	14.844	1	14.844	1.854	.188
Anger (controlled variable total anger, pre-measurement)	149.932	1	149.932	20.174	.000
Hostility (controlled variable total hostility, pre- measurement)	227.119	1	227.119	18.593	.000
Indirect Aggression (controlled variable total indirect aggression, pre- measurement)	188.357	1	188.357	40.987	.000

anger subscale score in the experimental group would decrease, as compared to the control group.

The difference between final test hostility scores in the control and experimental groups, which were corrected according to pretest scores, was statistically significant ( $F = 18.593$ ,  $P < 0.001$ ) (Table 2). This shows that psychodrama therapy resulted in a meaningful decrease in hostility score in the experimental group. The final test mean hostility score corrected according to pretest—was 20.07 in the experimental group and 26.44 in the control group (Table 1). Mean hostility score in the experimental group decreased significantly, as compared to the control group. This finding supports the study hypothesis that hostility subscale scores in the experimental group would decrease, as compared to the control group.

The difference between final test indirect aggression scores in the control and experimental groups—corrected according to pretest scores—was statistically significant ( $F = 40.987$ ,  $P < 0.001$ ) (Table 2). This shows that psychodrama therapy resulted in a meaningful decrease in indirect aggression score in the experimental group. Final test mean indirect aggression score—corrected according to pretest—was 15.27 in the experimental group and 21.00 in the control group (Table 1). Mean indirect aggression score in the experimental group decreased significantly, as compared to the control group. This finding supports the study hypothesis that indirect aggression subscale score in the experimental group would decrease, as compared to the control group.

## 2. Results According to the Hypotheses

Results of the statistical analysis of dependent groups t test with regard to the second hypothesis are presented

in Table 3. The arithmetic mean to all subscales of the Aggression Scale final test and follow-up test were very similar. When the results of the dependent groups t test were examined significant differences between final test and follow-up test were not observed. This shows that the effects of group-based psychodrama were still in effect 16 weeks after the final test

### Results of Self-Evaluations before and after the Treatment

Expectations in the experimental group of the therapy were as follows: increased self-knowledge, ability to control anger, establishment of good relations with other people, and a decrease in the number of problems with family and friends.

Self-evaluations in the experimental group following the therapy were as follows: their participation was sufficient, their belief that they could control their anger increased, they began to establish better relationships with their friends and families, they attempted to understand other people, and they became more optimistic about their lives.

Participants in the experimental group reported that they began know themselves better, they were less pessimistic because they were able to express their feelings, they understood the causes of their problems, and they understood their own reactions during the therapeutic games they played.

The experimental group's evaluation of how they felt since the first psychodrama session and of the benefits of the therapy shows that they found the group work effective and that they achieved positive outcomes; in particular, they learned how to control and manage their anger.

TABLE 3. T-test results of final-test and follow-up test scores for all subscales of the Aggression Scale (experimental group).

	N	Mean	SD	df	t	Sig.
<b>Total Aggression</b>						
Final test	11	99.27	9.37	10	-.479	.642
Follow-up	11	99.81	7.49			
<b>Physical Aggression</b>						
Final test	11	24.72	2.49	10	.760	.465
Follow-up	11	24.45	2.62			
<b>Verbal Aggression</b>						
Final test	11	15.36	2.54	10	.363	.724
Follow-up	11	15.27	2.45			
<b>Anger</b>						
Final test	11	23.63	3.95	10	-.740	.476
Follow-up	11	24.00	4.33			
<b>Hostility</b>						
Final test	11	20.27	3.79	10	-.000	.647
Follow-up	11	20.81	3.78			
<b>Indirect Aggression</b>						
Final test	11	15.27	2.32	10	-1.067	.998
Follow-up	11	15.28	2.45			

Follow-up = Follow-up measurement.

## DISCUSSION

The results of the present study show that group-based psychodrama had a positive effect on total aggression score, and anger, hostility, and indirect aggression scores, but had no effect on physical and verbal aggression scores. There was no difference between the final test results and follow-up test results obtained 16 weeks after the final test, indicating the effects of therapy persisted over time.

The study's first hypothesis was that the level of awareness in the students in the experimental group concerning their problems' origins would increase. Additionally, they would become more relaxed and would not display aggression after learning how to control their anger. When the students evaluated their 14 sessions of psychodrama therapy and themselves, they reported that they learned how to control their anger and began to exhibit less anger. These evaluations were confirmed with analysis of the Aggression Scale subscale scores, except for the physical and verbal aggression subscale scores.

The psychodrama therapy might not have been effective on physical and verbal aggression scores because particularly verbal aggression (e.g. slanging) is a common phenomenon in the daily life of these adolescents. Even during the group sessions, it was observed that they sometimes used abusive words to other students. In these occasions, therapists reminded them the setting

and group process and worked on this problem by playing suitable plays.

Another reason the physical and verbal aggression scores did not change might be the frequent use of discipline penalties at the school the students attended; a number of the students in the experimental group had received disciplinary punishment several times. Some studies have reported that the use of psychodrama is effective in reducing aggression (Hecker, 1978; Milosevic, 2000) and anger (Coşkun and Çakmak, 2005; Fong, 2006; Smeijsters and Cleven, 2006; Reis et al., 2008). Additionally, Ucak-Simsek (2003) reported that the role exchange technique increased optimism and rational thoughts, and Kipper (2002) reported that psychodrama integrated with cognitive techniques reduces irrational thoughts.

Another hypothesis of the study was that there would be no differences in total aggression, physical aggression, verbal aggression, anger, hostility, and indirect aggression scores between the final test and follow-up test administered 16 weeks after final test. Fourteen week group applications were aimed to enhance students' understanding about themselves in general via warm-up games and their awareness on feelings and thoughts of protagonists.

Our analysis shows that there were no differences between the final test and follow-up test scores in terms of

total aggression, and physical aggression, verbal aggression, anger, hostility, and indirect aggression scores. This proves is the positive effects of psychodrama therapy were still in effect 16 weeks after the therapy ended. These results show that appropriate interventions can control aggression and anger in adolescents over time. Based on follow-up testing after psychodrama therapy, Hamamcı (2002) and Reis et al. (2008) confirmed that the process has long-term effects

The present study included only 9th grade students at Nezihe Yalvac Anatolian Hotel Management and Tourism high school in Adana during the 2006-2007 school year and the control group did not receive any treatment—these are considered limitations of the present study.

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