# A Comparative Investigation of the Effects of Cognitive-Behavioral Group Practices and Psychodrama on Adolescent Aggression

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#### Abstract

The aim of this research is to investigate whether cognitive-behavioral group practices and psychodrama decrease adolescent aggression. This is a quasi-experimental, pre-post and follow up study with two experiments and one control group. The Aggression Scale (Buss & Warren, 2000) adapted to Turkish by Can (2002) was administered as a pretest to 9th grade students of Nezihe Yalvaç Anatolian Hotel and Tourism Vocational High School in Adana. After the administration and assessment of the scale, 36 students who had the highest aggression levels were selected and were randomly divided into three groups. The experimental and control groups each included 12 students. Cognitive behavioral techniques were applied to the first experimental group in 10 sessions, psychodrama techniques were applied to the second experimental group in 14 sessions. No application has been done to the control group. After the groups ended, the Aggression Scale was readministered to all groups as a post test. 16 weeks after ending the groups, the scale was administered one mor time to the experimental groups as a follow up test. Findings were analyzed with ANCOVA and t test for dependent samples. Findings have showed that cognitive-behavioral approach was effective in decreasing aggression scores, except verbal aggression and psychodrama approach was effective in decreasing all aggression scores except verbal physical aggression. ANCOVA analyses showed that cognitive-behavioral approach was more effective in decreasing total aggression, physical aggression, and anger than psychodrama. Follow up test results showed that the effects of group practices on both experimental groups were lasting even 16 weeks later.

#### **Key Words**

Aggression, Violence, Cognitive Behavioral Therapy, Psychodrama.

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Aggression is a state characterized by intentionally harmful physical and emotional behavior and attitudes towards other people (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).

According to the Turkish National Assembly research commission (TBMM Araştırma Komisyonu, 2007), aggression among adolescents has increased in recent years in Turkey and this increase can be seenclearly in schools.

Psychological group counseling is a professional helping process which aims at developing interpersonal relationships. In psychological group counseling, the behavioral aims of every member are tried to be achieved and the members' emotions, ethics, and behaviors are taken in consideration (Voltan – Acar, 2005).

Cognitive-behavioral therapy is a treatment approach which focuses on the interaction of thought, emotion and behavior of individuals (White-Freeman, 2000).

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 indicate that adolescents have difficulty in 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, psycho educational groups and experimental techniques are effective (Akdeniz, 2007; Aytek, 1999; Bundy, 2001;

Bundy, 2003; Cenkseven, 2003; Duran and Eldeleklioğlu, 2005; Duy, 2003; Hermann and McWhirter, 2003; Lavalle, Grenyer and Graham, 2002; Mundy 1997; Rollin, Ulrey-Kaiser, Potts and Creason, 2003; Tekinsav-Sütçü, 2006)

Studies of psychodrama show that psychodrama improves self-expression skills (Hecker, 1978; Miloseviç, 2000). In addition, studies on psychodrama, anger, and dysfunctional beliefs report similar results (Coşkun and Çakmak, 2005; Fong, 2006; Hamamcı, 2002; Hamamcı, 2006; Reis, Quayle, Brett and Meux, 2008; Smeijsters and Cleven, 2006; Uçak-Şimşek, 2003). The above mentioned studies show that psychodrama is effective in adolescents. Psychodrama helps adolescents cope with anger management problems and deal puberty-related difficulties with healthy and comfortable solutions.

## **Purpose**

The present study aimed to investigate the comparative effectiveness of psychodrama and cognitive behavioral therapy in decreasing aggressive attitudes and behaviors in adolescences at school.

# Hypothesis

The following hypothesis will be tested in the border of this research.

- There would be a statistically significant decrease corrected according to pre test in post test of students that participated in cognitive behavioral therapy, in terms of total aggression score, and physical and verbal aggression, anger, hostility, and indirect aggression scores, as compared to the control group.
- There would be a statistically significant decrease corrected according to pre test in post test 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.
- -Psychological group counseling based on cognitive-behavioral techniques would be more effective in decreasing aggression when compared to psychodrama techniques.
- There would not be a statistical difference between post test scores and follow-up scores measured 16 weeks after the end of the cognitive be-

havioral therapy, in terms of total aggression score, and physical and verbal aggression, anger, hostility, and indirect aggression scores of the students who participate in psychological group counseling applications.

- There would not be a statistical difference between post test scores and follow-up scores measured 16 weeks after the end of the psychodrama, in terms of total aggression score, and physical and verbal aggression, anger, hostility, and indirect aggression scores of the students who participate in psychodrama group applications.

#### Method

## **Investigation Design**

This quasi-experimental study examined the effect of group-based cognitive behavioral therapy and psychodrama on 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 (Büyüköztürk, 2007). Accordingly, the Aggression Scale was administered to the participants in two experimental and one control groups as a pre-test. Afterwards, group-based cognitive behavioral therapy (10 sessions) was applied to the first experimental group and group-based psychodrama (14 sessions) was applied to the second experimental group. The control group did not receive any treatment. One week after the end of treatment, the Aggression Scale was re-administered as post-test to groups. The scale was then administered once again to the two experimental groups 16 weeks after the cessation of the therapy.

# **The 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 ≥ 111 (cut off point for high-level aggression). In all, 12 of the 70 students were randomly selected and assigned to the experimental groups. From among the students that scored > 111, 12 were randomly selected and assigned to the control group. One each 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 both experimental groups. These students' 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 (2005) also reported that group studies based on volunteer participation should contain groups of no more than 13 people.

#### Instrument

The 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 ≤ 58 indicate low-level aggression, scores between 59 and 110 indicate normal aggression, and scores ≥ 111 indicate high-level aggression (Buss and Warren 2000; Can, 2002). To analyze the concurrent validity of the Aggression Scale, the State-Trait Anger Scale that was developed by Spielberger and translated into Turkish by Özer (1994) was used (Savaşır and Şahin, 1997).

#### **Data Collection**

The Aggression Scale was administered to two hundred 9th grade students (120 male, 80 female) during the 2006-2007 school year. 23 male and 13 female students were selected randomly from among 70 students (45 male, 25 female) who had high aggression scores. These students were randomly assigned to the control or experimental groups. Data for two students who had normal aggression scores and were assigned to experimental group were not included in the analysis.

# **Experimental Application**

Group-based psychodrama and cognitive behavioral therapy were applied to the experimental groups. No treatment was given to the control group. The study began in March 2007. One student left the psychodrama group because he left the school; therefore, the psychodrama group continued with 11 students. The experimental groups received cognitive behavioral therapy (total: 10 sessions) and psychodrama therapy (total: 14 sessions), once per week, for 90-120 minutes. Cognitive behavioral groups used cognitive behavioral therapy and group techniques from Corey (2005), Cormier and Cormier (1998), James and Gilliland (2003), Nelson-Jones (1995), White and Freeman (2000) and Voltan-

Acar (2005). Psychodrama session 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, 2001; 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.

## **Statistical Analysis**

The assumption that the groups had equal variances was initially tested with Levene's test in order to determine whether parametric tests could be used for measures. The result of Levene's test was non-significant, .88, which confirms 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, skewness and kurtosis of aggression pretest scores in the control and experimental groups were analyzed. Distribution was leptokurtic and skewed to the left, but it did not deviate much from the 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 participated groups was not included in the analysis; therefore, analysis was performed with the pretest scores, post test scores, and follow-up scores of 11 subjects in the psychodrama group and 12 subjects in the cognitive behavioral group and control group. Test scores in the control and experimental groups and two experimental groups were compared with ANCOVA to determine the effectiveness of the therapy. Post test scores and follow-up scores of the groups were compared with dependent t test. The level of significance was accepted as p = 0.05.

## **Findings**

# The Findings Regarding the First Hypotheses

The difference between the post test total aggression score in the control and experimental groups, which was corrected according to pretest total scores, was statistically significant (F=117.092, p<.05). The difference between post test physical aggression scores in the control and experimental groups, which were corrected according to pretest scores, was statistically significant (F=37.738, p<.05). The difference between post test anger scores in the control and experimental groups, which were corrected according to pretest scores, was statistically significant (F=50.041, p<.05). The difference between post test hostility scores in the control and experimental groups, which were corrected according to pretest scores, was statistically significant (F=27.233, p<.05). The difference between post test indirect aggression scores in the control and experimental groups corrected according to pretest scores was statistically significant (F=24.037, p<.05). These show that cognitive behavioral therapy resulted in a meaningful decrease in total aggression, physical aggression, anger, hostility and indirect aggression score in the experimental group. Findings support the study hypothesis that total aggression, physical aggression, anger, hostility and indirect aggression subscale score in the experimental group would decrease, as compared to the control group.

# The Findings Regarding the Second Hypotheses

The difference between the post test aggression score in the control and experimental groups, which was corrected according to pretest total scores, was statistically significant (F=65.109, p<.05). The difference between post test anger scores in the control and experimental groups, which were corrected according to pretest scores, was statistically significant (F=20.174, p<.05). The difference between post test hostility scores in the control and experimental groups, which were corrected according to pretest scores, was statistically significant (F=18.593, p<.05). The difference between post test indirect aggression scores in the control and experimental groups corrected according to pretest scores was statistically significant (F=40.987, p<.05). These results show that psychodrama therapy resulted in a meaningful decrease in total aggression, anger, hostility and indirect aggression score in the experimental group. Findings support the study hypothesis that total aggression, anger, hostility and indirect aggression subscale score in the experimental group would decrease, as compared to the control group.

## The Findings Regarding the Third Hypotheses

Statistically meaningful differences have been found in total aggression, psychical aggression and anger sub-scales in favor of cognitive behavioral group, as compared to the psychodrama group when the AN-COVA scores are examined. (F = 15.216, F= 28.022, F= 10.666, p<.05).

## The Findings Regarding the Fourth Hypotheses

The arithmetic mean of all subscales of the Aggression Scale post test and follow-up test were very similar. When the results of the dependent groups t test were examined significant differences between post test and follow-up test were not observed. This shows that the effects of group-based cognitive behavioral therapy were still in effect 16 weeks after the post test (t = -1.067, t = -0.609, t = 1.301, t = 0.390, t = -0.352, t = 1.483; p > 0.05, t = 0.352, t = 0.483; t = 0.352, t =

## The Findings Regarding the Fifth Hypotheses

The arithmetic mean of 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 post 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 post test (t= -.479, t=.760, t=.363, t=-.740, t=-.000, t=-1.067; p>.05, DF=10).

#### Discussion

The results of the present study show that group-based cognitive behavioral therapy had a positive effect on total aggression score, and physical aggression, anger, hostility, and indirect aggression scores, but had no effect on verbal aggression score. Some studies have reported that the use of cognitive behavioral therapy is effective on aggression (Bundy, 2001; Bundy, 2003; Cenkseven, 2003; Herrmann and McWhirter, 2003). The results of the present study show that group-based psychodrama also 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. Some studies have reported that the use of psychodrama is effective in reducing aggression (Fong, 2006; Hecker, 1978; Milosevic, 2000; Smeijsters and Cleven, 2006).

Another result of the research is that when the post-test scores of the students who attended the groups that are formed by the cognitive behavioral techniques and psychodrama techniques are compared, the group counseling which is done by using cognitive behavioral techniques is more effective on total aggression, psychical aggression and anger scores and there are no significant difference in the other subscales. Hamamcı (2006) has examined such questions, and she could not find significant differences when she compared the effect of the cognitive behavioral therapy and psychodrama which has been integrated by cognitive behavioral techniques on depression, automatic thoughts and non-functional behaviors.

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 post test and follow-up test administered 16 weeks after post test. Our analysis shows that there were no differences between the post test and follow-up test scores in terms of total aggression, and physical aggression, verbal aggression, anger, hostility, and indirect aggression scores. This proves that the positive effects of psychodrama therapy and cognitive behavioral 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 study after psychodrama therapy, Hamamcı (2002) and Reis et al. (2008) confirmed that the process has long-term effects. Based on follow-up study after cognitive behavior therapy, Bundy (2003), Cenkseven (2003), Hermann and McWhirter (2003) confirmed that the process has long-term effects.

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