

## The Effects of Anger Management Education on Adolescents' Manner of Displaying Anger and Self-Esteem: A Randomized Controlled Trial



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### Introduction

Adolescence, one of the key stages of development, is a period when many fundamental physical and psychological changes occur. Adolescents must cope with a higher number of the biopsychosocial changes compared to children. They may have difficulties in managing their emotions and behavior because they still do not have sufficient levels effective coping experience (Blakemore & Mills, 2014; Holder & Blaustein, 2014). One of the keys to a trouble-free adolescence is to recognize the emotions intensely felt during this period and to control the behaviors displayed because of these emotions (Kidwell, Van Dyk, Guenther, & Nelson, 2016). Anger is one of the common feelings with potentially destructive consequences experienced by everyone at one time or another in daily life (Berkowitz & Harmon-Jones, 2004). Anger is a constructive force when it is used to solve problems, correct an injustice or a mistake, or restore self-esteem and pride. Although anger is a natural, healthy, appropriate, life-enhancing emotion, it nonetheless may be destructive to a child's psychological and physical well-being if not appropriately managed (Ayebeami & Janet, 2017; Modrcin-McCarthy, Pullen, Barnes, & Alpert, 1998).

Anger is an important emotion expressed by adolescents as it is in all age groups, and so is the way they express their anger. Anger and the way it is expressed represent a major public health problem for adolescents today. It may cause physical, psychological, and social problems for adolescents if not expressed in an appropriate manner (Starner & Peters, 2004). Prevalence reports show that anger-related problems, such as oppositional behavior, verbal and physical aggression, and violence, are some of the more common reasons children are referred for mental health services (Blake & Hamrin, 2007). If adolescents do not learn how to manage their anger, future problems are inevitable for them. Anger can be destructive if it rages out of control and can cause problems in school, social life, personal relationships and the overall quality of one's life (Cui, Morris, Criss, Houlberg, & Silk, 2014; Down, Willner, Watts, & Griffiths, 2011; Hoogsteder et al., 2015; Shahbazi et al., 2017). People may feel compelled to move away when anger is not expressed in an appropriate manner. This may make the angry person have a negative self-perceptions and a low level of self-

esteem, and feel guilty (Albayrak & Kutlu, 2009; Edwards, 2013; Özmen, Özmen, Çetinkaya, & Akil, 2016).

When adolescents become able to cope with the controversial and problematic situations, their self-perception improves and matures. Anger affects self-perception because it is displayed in a situation where individuals are restrained or challenged. An adolescent's reaction toward anger is largely related to his/her personal characteristics, experiences, and expectations from previous experiences, and thus, to the concept of self-perception. Meta-analyses have found that adolescents' anger is related to constant anxiety, depression, stress, exposure to violence, hostility, low self-esteem, and insufficient social support (Mahon, Yarcheski, Yarcheski, & Hanks, 2010). Anger enables people to maintain the borders of self-perception and self-esteem, and to advocate for themselves (Kernis, Grannemann, & Barclay, 1989; Papps & O'Carroll, 1998). Self-esteem reflects individuals' positive and negative attitudes about themselves. It can be defined as an individual's perception of his or her own worth (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995).

When people see their rights are violated, receive threats, or face an unbearable accusation, anger enables them to feel right or approved, and ensures them to maintain their self-esteem (Arslan, 2009). A study that examined the relationship between the psychosocial variances and anger in adolescents found a positive relationship between anger and negative experiences, anxiety, drug use, depressive symptoms (Puskar, Ren, Bernardo, Haley, & Stark, 2008). However, it showed that optimism had a negative relationship with the family support perceived by the adolescent and their self-esteem (Puskar et al., 2008).

Adolescence is a period when people search for their identities. Therefore, self-perception gains importance during this period. Self-perceptions closely related to how people regard themselves: who they are, and how they think and feel about themselves. A person may feel either esteemed or worthless because of his/her self-perception. D'zurilla, Chang, and Sanna (2003) reported that low self-esteem was related to anger and hostility. Adolescents with a low level of self-esteem may have mental problems, including anxiety and depression (Klemanski, Curtiss, McLaughlin, & Nolen-Hoeksema, 2016; Orth, Robins, & Roberts, 2008).

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Numerous behavioral intervention programs have been developed to help adolescents cope with anger. Anger management interventions aim to develop an awareness of the types, functions and meaning of anger, its physical and psychological effects, and its expression (Deffenbacher, Oetting, & DiGiuseppe, 2002; Feindler & Engel, 2011; Yılmaz & Ersever, 2015). The meta-analysis conducted by Candelaria, Fedewa, and Ahn (2012) indicated that anger management interventions teach coping-skills to adolescents, and that emotional awareness, relaxation techniques, problem-solving cognitive-behavioral approaches, and coping skill training are successfully used in these interventions. Commonly used therapeutic techniques for managing anger include affective education, relaxation training, cognitive restructuring, problem-solving skills, social skills training, and conflict resolution. These techniques, adapted to the needs of the adolescent, can foster anger management and adolescents' psychological and physical well-being (Blake & Hamrin, 2007).

Maintaining and enhancing health is a fundamental part of nursing care. Nurse practitioners working with adolescents who show the above-mentioned symptoms should consider anger as a possible precursor of the symptomatology (Mahon et al., 2010). Mental health nurses can play a pivotal role in fostering change in the social climate of schools and helping youth to achieve better anger management (Thomas & Smith, 2004). Psychiatric-mental health nurses are responsible for identifying at-risk adolescent during health assessment. They are well-qualified to provide this psychoeducational intervention (Thomas, 2001). Furthermore, as part of their health promotion and health education practices in schools or community, psychiatric-mental health nurses and primary care nursing specialists can easily teach adaptive coping skills to adolescents to regulate their anger (Puskar, Ren, & McFadden, 2015). Teaching adolescents the adaptive coping skills for anger is an important nursing intervention.

Schools are the most appropriate places where adolescents can recognize their anger and learn how to display this feeling in the best possible way. Therefore, comprehensive curricula are needed to teach adolescents how to properly recognize and display their emotions (Adana & Arslantaş, 2011). Practices related to the anger management program within the nursing department of schools can be carried out under the leadership and supervision of the psychiatric mental health nurse. Considering the anger-related issues and the number of Turkish adolescents who have anger problems, it is clear that an easily applicable and effective anger management program should be implemented. The improved anger management program aims to help students become competent in anger management. Systematic, planned and continuous anger management programs have yet to be implemented in Turkey to improve the adolescents' ability to cope with anger. This study aims to develop and implement an effective anger management program, to examine the effects of this program on senior students' manner of expressing their anger and self-esteem and the relationship between them, and to popularize this program in schools.

### Study aims and hypotheses

This study aims to examine the effects of anger management education provided to adolescents on the manner they display their anger and self-esteem.

**Hypothesis 1a.** The intervention and control groups will obtain significantly different mean scores on the anger symptoms subdimension of the multi-dimensional anger scale.

**Hypothesis 1b.** The intervention and control groups will obtain significantly different mean scores on the situations causing anger subdimension of the multi-dimensional anger scale.

**Hypothesis 1c.** The intervention and control groups will obtain significantly different mean scores on the anger-related ideas subdimension of the multi-dimensional anger scale.

**Hypothesis 1d.** The intervention and control groups will obtain significantly different mean scores on the anger-related behavior subdimension of the multi-dimensional anger scale.

**Hypothesis 1e.** The intervention and control groups will obtain significantly different mean scores on the interpersonal anger subdimension of the multi-dimensional anger scale.

**Hypothesis 2.** The intervention and control groups will obtain significantly different mean scores on the Rosenberg Self-Esteem Scale.

## Methods

### Design and Sample of Study

This experimental pretest-posttest study was designed as a single blind, randomized controlled trial. It was conducted in a secondary school in Kepez county of Antalya, Turkey. The study population consisted of all final-year students in this school. Sample size calculations revealed that 56 participants were required to significantly test effects sized  $d = 0.78$ , when the alpha- and beta-error margins were accepted to be lower than 0.05 and 0.2, respectively. Accordingly, the study sample consisted of 60 students: 30 in the experimental group and 30 in the control group. The inclusion criteria were being voluntary to participate, obtaining parents' approval, obtaining specified scores on the multi-dimensional anger scale (35 points from the first section, 105 from the second, 75 from the third, 115 from the fourth, and 65 from the fifth), having low or medium levels of self-esteem according to the Rosenberg self-esteem scale, and participating in all sessions. The exclusion criteria were any emotional disabilities and failure to participate in two or more than two sessions. Independent variables of the study were anger management education and sociodemographic characteristics, and the dependent variables included the manner of displaying anger and the level of solving interpersonal problems.

### Measurements

The data were collected using a students' sociodemographic information form, the Multi-Dimensional Anger Scale (MDAS), and the Rosenberg Self-Esteem Scale.

### Multi-Dimensional Anger Scale (MDAS)

The Multi-Dimensional Anger Scale aims to determine anger-related emotions, ideas, and behaviors. It consists of five sections with Likert type items which are scored between 1 and 5, corresponding to the answers of "never", "seldom", "occasionally", "frequently", and "always". High scores indicate that the relevant dimension is considered or used frequently. The scale was developed by Balkaya and Sahin (2003) at the end of pilot studies, and its sections are: the First Section, "Anger-Related Symptoms" (14 items) ( $r = 0.84$ ); the Second Section, "Situations Causing Anger" (41 items) ( $r = 0.83$ ); the Third Section, "Anger-Related Ideas" (30 items) ( $r = 0.68$ ); the Fourth Section, "Anger-Related Behaviors" (47 items) ( $r = 0.68$ ); and the Fifth Section, "Interpersonal Anger" (26 items) ( $r = 0.64$ ) [15]. In this study, the Cronbach's alpha values of these five sections were found to be  $r = 0.79$ ,  $r = 0.83$ ,  $r = 0.73$ ,  $r = 0.86$ , and  $r = 0.72$ , respectively.

### Rosenberg Self-Esteem Scale

This scale, used to measure self-esteem of particularly adolescents, was developed by Morris Rosenberg in 1963. It has been used in many studies after reliability and validity study was conducted for this scale in the United States of America. The Turkish validity and reliability study of the scale was conducted by Çuhadaroğlu, who found the validity coefficient to be  $r = 0.71$  and the reliability coefficient to be

$r = 0.75$ , using the test-retest reliability method. The Rosenberg Self-Esteem Scale consists of 63 items in 11 subscales including self-esteem, sustainability of the term “self”, trusting people, sensitivity to criticism, depressive affection, imagining, perceiving threat in interpersonal relation, level of participating in discussions, psychic isolation, psychosomatic symptoms, and parental care. The self-esteem subscale includes ten items with positive and negative answers: items 1, 2, 4, 6, and 7 question the positive self-evaluation, and items 3, 5, 8, 9 and 10 questions the negative self-evaluation. The scores of 0 to 1 indicate high, 2 to 4 indicate medium, and 5 to 6 indicate low levels of self-esteem. Higher scores indicate low levels of self-esteem. Cronbach's alpha was found to be  $r = 0.73$  for this scale in the present study.

**Randomization**

All students were evaluated based on the inclusion and exclusion criteria. Blinding was not used in this study since a single researcher collected the pretest and posttest data and conducted the “Anger Control Training”. Fig. 2 shows the “Consort Scheme” of the study. The participants were assigned to the intervention or control group using the simple randomization method. This process was performed using the following web page:<http://www.randomizer.org/form.htm>. Fig. 1 illustrates the randomization process in the study.

**Intervention**

Anger management education was prepared based on the literature (Adana & Arslantaş, 2011; Arslan, 2009; Candelaria et al., 2012; Feindler & Engel, 2011; Starner & Peters, 2004; Sukhodolsky, Smith, McCauley, Ibrahim, & Piasecka, 2016). It was organized considering the educational status of students and consisted of six sessions (Table 1). The first, second and sixth sessions of the education lasted for 45 min on average. The third, fourth and fifth sessions, which focused on improving the participants' coping skills, lasted for 60 min. The intervention group to whom the education was provided included five groups, with six participants in each group. Ten-minute breaks were taken between the education sessions administered to each group. The weekly education sessions of all groups were completed in one day. No intervention was planned for the control group. The intervention group did not interact with the control group during the activities. The students in the experiment and control groups were not randomly distributed and therefore not in the same class. The two groups were not

aware of each other when the anger control program was practiced when the students were idle. For this reason, they were not affected by each other.

**Data Collection**

The pre- and post-test data were collected by the researchers from the voluntary student who have permission of their parents to participate in the study in a classroom.

**Statistical Analysis**

Statistical analysis was performed using the SPSS 18.0 (IBM, Armonk, USA). Continuous data were presented as median (inter quartile range), while categorical data were shown as counts and percentages. The researchers used descriptive statistics including numbers, percentages, means and standard deviation. The Mann Whitney *U* test was used to compare the pretest-posttest mean scores of the intervention and control groups. The Wilcoxon signed rank test was used to assess the pretest and posttest data of the intervention and control groups within themselves. The procedure described by Benjamini and Hochberg was used to correct p-values for multiple testing.

**Ethical Procedures**

Ethical approval was obtained from the Ethics Committee of Antalya Training and Research Hospital. An approval was also obtained from the school administration. All participants were informed about the title, duration and procedure of the study, and were asked to read the consent form. Thereby, they were assisted to understand the purpose and scope of the study. A written informed consent was obtained from each participant. Data collection process and intervention began after obtaining the participants' consent. All details about the intervention were explained to the intervention group.

**Results**

No statistically significant difference was found between the socio-demographic characteristics of the experimental and control groups ( $p > 0.05$ ).

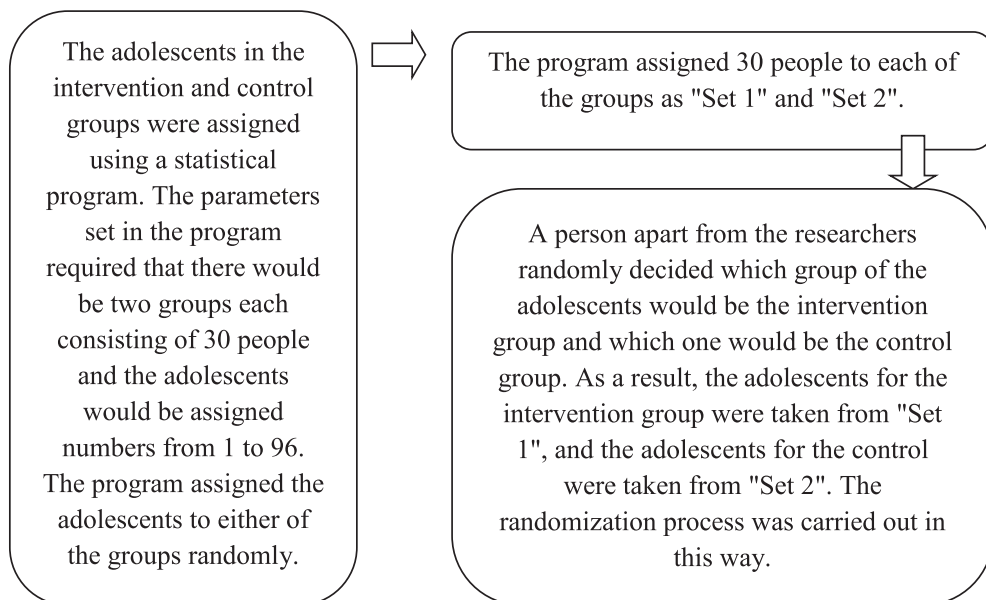
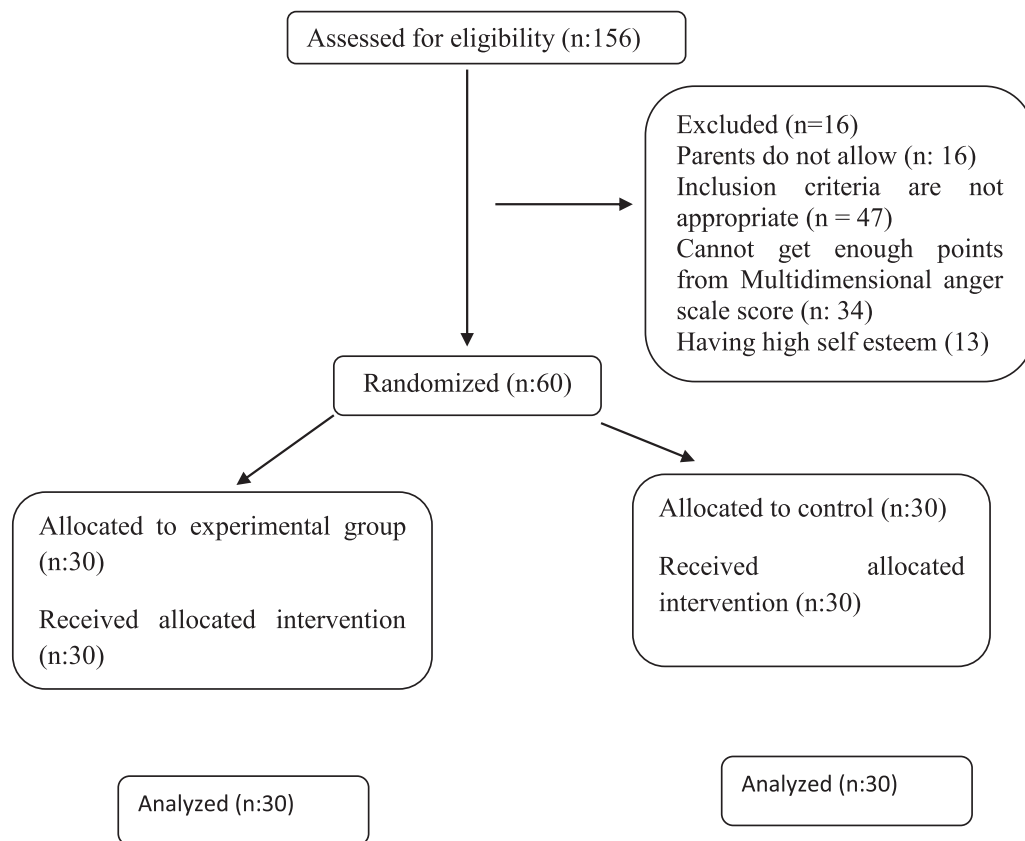


Fig. 1. Determination of the randomization.

Fig. 2. Consort.



*Findings of the Adolescents' Self-Esteem Levels*

Self-esteem levels of the adolescents in the experimental group were found to significantly increase after the program ( $p < 0.05$ ). No significant difference was found in the self-esteem levels of the adolescents in the control group before and after the program ( $p > 0.05$ ). No difference was found between the self-esteem levels of the experimental and control groups during the pre-test measurements ( $p > 0.05$ ); however, a significant difference was found during the post-test measurements ( $p < 0.05$ ) (Table 2).

*Findings of the Adolescents' Anger Levels*

The Multi-Dimensional Anger Scale was administered before and after anger management education, and the difference between anger

**Table 1**  
Anger management education.

Sessions	Session objectives
Session 1: Meeting	Objective: Giving details about anger management education (Objectives: Providing information on the details of the program, explaining the rules, and administering a pre-test)
Session 2: Recognizing anger	Objective: Recognizing the reasons and symptoms for anger (Objectives: Acquiring the ability to describe personal feelings, feelings of anger, the reasons behind the anger, and the physical and emotional symptoms of anger)
Session 3: Controlling anger - breathing and relaxing exercises	Objective: Learning how to control and cope with anger (developing physical coping skills) (Objectives: Knowing the methods of coping with stress and acquiring the ability to apply at least one of them)
Session 4: Controlling anger - (changing mind, solving problems)	Objective: Learning how to control and cope with anger (developing emotional and ideal coping skills) (Objectives: Acquiring the ability to define the situations that cause anger and to cope with anger, and performing a case study)
Session 5: Controlling anger - (moving away from the place, letting off steam)	Objective: Learning how to control and cope with anger (developing emotional and ideal coping skills) (Objectives: Acquiring the ability to define the situations that cause anger and to cope with anger, and performing a case study, coping)
Session 6: General evaluation	Objective: Evaluating the anger management program (Objective: General evaluation, recommendations and ending)

**Table 2**  
Comparing the pre- and post-test results related to self-esteem of the adolescents.

RBSO	Experimental group (n:30) Median (%25–%75)	Control group (n:30) Median (%25–%75)	U	p
Baseline	2.30 (1.50–3.80)	2.20 (1.40–3.70)	43.500	0.75
Post intervention	4.60 (3.30–5.90)	2.30 (1.60–3.90)	11.700	0.001
Z value	0.260	5.399		
p	$p < 0.001$	0.795		

Z = Wilcoxon Analysis, d.f. (“degree of freedom”):2, U = Mann Whitney U.

**Table 3**  
Comparing the pre- and post-test results related to anger levels of the adolescents.

Multi-Dimensional Anger Scale (MDAS)	Experimental group (n:40) Median (%25–%75)	Control group (n:40) Median (%25–%75)	U <sup>a</sup>	p
<b>Anger-related symptoms</b>				
Baseline	50.60 (43.00–57.50)	48.00 (42.00–51.00)	33.500	0.23
Post intervention	33.50 (22.00–44.50)	47.00 (44.50–49.00)	94.500	0.003
Z value <sup>a</sup>	0.959	1.656		
p	p < 0.001	0.10		
<b>Situations causing anger</b>				
Baseline	153.00(145.00–161.00)	146.50 (122.00–170.00)	41.700	0.98
Post intervention	123.50 (115.50–131.50)	52.00 (43.50–55.50)	85.750	0.012
Z value <sup>a</sup>	0.706	9.603		
p	p < 0.001	0.38		
<b>Anger-related ideas</b>				
Baseline	120.00 (105.50–135.50)	118.50 (108.50–128.50)	448.500	0.28
Post intervention	100.00 (84.50–115.50)	120.00 (110.00–130.50)	417.00	0.017
Z value <sup>a</sup>	0.654	2.552		
p	p < 0.001	0.80		
<b>Interpersonal reactions toward anger</b>				
Baseline	160.00 (140.50–180.50)	37.00 (29.50–39.50)	563.500	0.22
Post intervention	135.00 (105.50–165.50)	35.00 (29.50–37.50)	82.500	0.024
Z value <sup>a</sup>	3.426	4.349		
p	0.01	0.42		
<b>Anger-related behaviors</b>				
Baseline	186.00 (166.50–206.50)	179.00 (166.50–192.50)	156.500	0.42
Post intervention	142.00 (122.50–162.50)	176.00 (167.00–185.50)	683.500	0.028
Z value <sup>a</sup>	5.231	9.467		
p	0.02	0.53		

<sup>a</sup> Z = Wilcoxon Analysis, d.f. (“degree of freedom”):2, U = Mann Whitney U.

levels was examined (Table 3).

#### Anger-related Symptoms

The scores experimental group on the anger-related symptoms subdimension was found to significantly reduce after the program ( $p < 0.05$ ). On the other hand, the scores of the control group did not significantly change after the program ( $p > 0.05$ ). No significant difference was found between the pre-test mean scores of the experimental and control groups on the anger-related symptoms subdimension ( $p > 0.05$ ). However, a significant difference was found between their post-test mean scores ( $p < 0.05$ ) (Table 3).

#### Situations Causing Anger

The scores experimental group on the situations causing anger subdimension was found to significantly reduce after the program ( $p < 0.05$ ). On the other hand, the scores of the control group did not significantly change after the program ( $p > 0.05$ ). No significant difference was found between the pre-test mean scores of the experimental and control groups on the situations causing anger subdimension ( $p > 0.05$ ). However, a significant difference was found between their post-test mean scores ( $p < 0.05$ ) (Table 3).

#### Anger-related Ideas

The scores experimental group on the anger-related ideas subdimension was found to significantly reduce after the program ( $p < 0.05$ ). On the other hand, the scores of the control group did not significantly change after the program ( $p > 0.05$ ). No significant difference was found between the pre-test mean scores of the experimental and control groups on the anger-related ideas subdimension ( $p > 0.05$ ). However, a significant difference was found between their post-test mean scores ( $p < 0.05$ ) (Table 3).

#### Interpersonal Reactions Toward Anger

The scores experimental group on the interpersonal reactions toward anger subdimension was found to significantly reduce after the program ( $p < 0.05$ ). On the other hand, the scores of the control group did not significantly change after the program ( $p > 0.05$ ). No significant difference was found between the pre-test mean scores of the experimental and control groups on the interpersonal reactions toward anger subdimension ( $p > 0.05$ ). However, a significant difference was found between their post-test mean scores ( $p < 0.05$ ) (Table 3).

#### Anger-related Behaviors

The scores experimental group on the anger-related behaviors subdimension was found to significantly reduce after the program ( $p < 0.05$ ). On the other hand, the scores of the control group did not significantly change after the program ( $p > 0.05$ ). No significant difference was found between the pre-test mean scores of the experimental and control groups on the anger-related behaviors subdimension ( $p > 0.05$ ). However, a significant difference was found between their post-test mean scores ( $p < 0.05$ ) (Table 3).

#### Discussion

This study showed that anger management education positively affected adolescents' manner of displaying anger and self-esteem. A significant reduction was seen in the adolescents' anger that arise due to being neglected, facing injustice, and being negatively criticized. Adolescence is a sensitive period during which biopsychosocial changes occur (Suldo, Shaunessy, & Hardesty, 2008). This means that both physical changes, such as the changes in height and body weight, the skeletal development and the hormonal changes, and psychosocial changes are observed in this period. These changes can engender many problems. The stress caused by the rapid development and changes, combined with a lack of knowledge and experience, makes it difficult

for adolescents to comply with the governing social order and rules. This situation may create certain problematic issues, such as seeking for autonomy, conflicts with parents, and defiance to comply with the social environment. In effect, these issues and others like them may make adolescents more vulnerable, angry and even aggressive (Mahon et al., 2010; Musante & Treiber, 2000). Although anger is a common and natural feeling, or an internal event, problems associated with inappropriate expression of anger is one of the most serious concerns of parents, educators, and the mental health community (Feindler & Engel, 2011). Therefore, people should learn the methods of coping with short temper and anger. A meta-analysis that examined the effectiveness of anger management programs also reported that these programs were effective (Candelaria et al., 2012).

One of the expected results of the anger management education is the positive changes in the emotions and behaviors displayed after an experience that elicits anger. Since the recognition and management of the symptoms of anger are generally related to cognitive and behavioral learning, treatment strategies should include a learning method (Flanagan, Allen, & Henry, 2010). Sessions of anger management education developed in this study about the recognition and reasons of anger, and the anger-related symptoms were effective in acquiring sufficient knowledge and skills to cope with the anger-related symptoms.

The anger-related ideas subdimension of the multi-dimensional anger scale examines the adolescents' anger-related ideas about themselves, other people, and the world. The participants' negative anger-related ideas significantly reduced after the education. Anger is expressed by actions or overt behaviors, but it also has a notable cognitive component. Cognition should not be underestimated because it can play significant roles in the development of anger and its overt expression, as well as anger control (Flanagan et al., 2010; Kerr & Schneider, 2008). Cognitive processes occur when anger is expressed, as opposed to being managed. The anger management education raised the adolescents' awareness; and positive changes occurred in adolescents' cognitive processes related to anger. Studies on anger management have reported a change in the opinions about anger (Deffenbacher et al., 2002; Feindler & Engel, 2011; Yılmaz & Ersever, 2015). They have particularly indicated that the adolescents who attended the education programs on anger gained greater awareness of the type, function and meaning of anger, acquired information about the physical and psychological effects and expression of anger, and became able to control their anger after the education (Deffenbacher et al., 2002; Feindler & Engel, 2011; Yılmaz & Ersever, 2015).

The participants' scores on the interpersonal anger subdimensions, including revenge reactions, passive and aggressive reactions, introverted reactions, and careless reactions, significantly reduced after the education. Thomas (2001) also reported that by gaining the ability to control the anger, interpersonal relationships improved. In addition, significant reductions were observed in the scores of the participants on the subdimensions about anger management education, anger-related aggressive behaviors, calm behaviors, and anxious behaviors. Psychoeducational programs have been shown to lead to reductions in the symptoms of anger, hostility, and depression, and to increased self-efficacy for the management of behavioral problems (Glancy & Saini, 2005). Previous studies have indicated that anger management programs were effective in reducing students' aggressive behavior and anxiety levels and in increasing their level of anger control (Deffenbacher et al., 2002; Glancy & Saini, 2005; Sukhodolsky, Kassinove, & Gorman, 2004; Thomas, 2001). This may be attributed to adolescents' learning how to display and control their anger during the anger management education. Another study that analyzed the effectiveness of an anger control program similarly showed that the program reduced students' mean scores associated with anxiety, depression, aggressive behaviors, negative self-perception and hostility (Avci & Kelleci, 2016). Uncontrolled anger is a predictor of many psychiatric disorders, and unexpressed, continuous and intense anger is

particularly known to have an important role in the development of depression and anxiety (Gresham, Melvin, & Gullone, 2016).

The present study showed a significant increase in the participants' self-esteem. A previous study reported that self-esteem was related to anger (Kernis et al., 1989). Another study indicated that anger was related to adolescents' low self-esteem (D'zurilla et al., 2003). Finally, a study showed that higher self-esteem led to a lower level of trait anger and a higher level of anger control (Arslan, 2009). Therefore, enhancing the adolescents' self-esteem is an effective method of helping them cope with anger. This study indicated that the anger management education enabled the control of anger and increased self-esteem levels.

### Limitations

The limitation of this study is the participation of only the final-year students of a secondary school in Kepez county of Antalya who were open to communication.

### Conclusion

This study contributes to the existing literature by showing the benefits of preventive interventions for adolescent offenders. The anger management education was found to reduce Turkish adolescents' anger and increase their self-esteem. The anger management program used in this study was developed to provide primary and secondary prevention for aggressive adolescents. Based on the results of this study, it is recommended that group studies and events be organized in schools in order to teach anger management skills. In addition, health promotion programs conducted by psychiatric nurses can target the self-esteem symptoms and promote anger management for adolescents.

### Relevance for Community Mental Health

The anger management education provided to adolescents is effective in helping them both cope with anger and enhance their self-esteem. Schools need to have comprehensive curricula to teach adolescents how to properly recognize and display their emotions. Practices related to the anger management program can be carried out within the school nursing departments under the leadership and supervision of the psychiatric mental health nurse. Psychiatric mental health nurses can play a key role in increasing awareness about anger, the interventions available to address anger issues and the associated psychosocial factors, which can be achieved through community education, early assessment and intervention, in collaboration with other healthcare providers and school health officials.

### Conflict of interest

No conflict of interest has been declared by the authors.

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