

## Peace Education's Effects on Aggression: A Mixed Method Study

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### Abstract

*Problem Statement:* Literature reviews clearly document that students still show a tendency to use violence in resolving interpersonal conflicts in school. Results from various research conducted in Turkey suggest that violence, aggression, and bullying behaviors are still rampant in the primary and high schools. Studies conducted in primary and middle schools toward decreasing aggression and preventing violence focus on programs such as violence prevention, conflict resolution, and peer mediation. While these programs are mainly based on peacemaking strategy, prevention programs based on positive peace and peacebuilding strategy with tested effectiveness are rather limited. Thus, a peace education program based on positive peace and peacebuilding strategy was developed and its effects on aggression levels of sixth grade students were investigated.

*Purpose of the Study:* The purpose of this study was to investigate the effects of peace education program on sixth grade students' aggression. Furthermore, students' perspectives and experiences related to peace education program were examined.

*Method:* In the research conducted in two low-SES middle schools, an embedded mixed method design was used. The qualitative study was embedded within a pretest-posttest control group using a quasi-

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experimental design to learn more about the experiences of students who receive peace education training. The peace education program was applied on experimental group, while the control group has not been provided any treatment related to the research topic. The experimental group included 84 girls (53.85%), 72 boys (46.15%), and 156 students (59.54%) in total. The control group included 54 girls (50.94%), 52 boys (49.06%), and 106 students (40.46%) in total. The Aggression Questionnaire was used to gather quantitative data. After the experimental treatment process was completed, a total of 20 students were interviewed and their perspectives and experiences related to the peace education program were examined. A semi-structured interview form was used to obtain qualitative data.

*Findings and Results:* Research results indicated that aggression levels of the experimental group were significantly reduced compared to the control group students. Analyses of qualitative data provided evidence that the peace education program led to positive changes in student behaviors and improved relationships among and between students and teachers.

*Conclusions and Recommendations:* In the research, it was determined that the peace education program was effective in decreasing aggression levels of the sixth grade students. The findings in this study are parallel with the findings of previous experimental studies. Thus, the research validated the assumptions that implementing peace education programs in schools will enable students to gain fundamental life skills to constructively resolve interpersonal conflicts.

*Keywords:* Interpersonal conflict, violence, conflict resolution, negotiation, reconciliation.

## Introduction

Schools, with their structural opportunities and educational goals, have a favorable environment in which an individual can obtain abilities to establish, manage, and sustain interpersonal relationships, which is very important in a student's life. Unfortunately, in these environments that could provide children and youth with fundamental life skills, there is a solid focus on providing academic knowledge, and the importance of gaining social skills has been undermined. Therefore, in the school environment where gaining social skills is not sufficiently supported and students with different personal, societal, and cultural knowledge, skills, attitudes, and values come together, observing destructive conflict resolution methods becomes inevitable.

Literature reviews clearly document that students still show a tendency to use violence in resolving their interpersonal conflicts in school. Results from various research conducted in Turkey (see Alikasifoglu et al., 2004; Erginoz et al., 2013; Kartal

& Bilgin, 2009; Kaya, Bilgin, & Singer, 2012) suggest that violence, aggression, and bullying behaviors are still rampant in the primary and high schools. In particular, the research of Turnuklu and Sahin (2004) investigating middle school students' (seventh and eighth grades) conflict resolution strategies within Turkish culture indicated that students prefer to use destructive conflict resolution strategies more often than cooperative and constructive conflict resolution strategies. In line with this finding, Kapci (2004) determined the prevalence of children who have been exposed to physical, verbal, emotional, and sexual bullying in primary schools (fourth and fifth grades) was 40%. These findings can be interpreted as evidence for the prevalence of aggressive behaviors in Turkish primary and middle schools.

Aggression, defined as intentional behavior to damage someone or something (Anderson & Bushman, 2002) can be observed in various forms, such as physical or relational and in various functions such as reactive and proactive (Vitaro, Brendgen, & Barker, 2006). When perceived from a functional perspective, reactive aggression expresses impulsive behavior conducted only to react to and damage the person without thinking or planning in any threatening situation; proactive aggression expresses instrumental behavior the individual carries out to reach his/her own target rather than to hurt the other person (Crick & Dodge, 1996; Dodge, 1991; Dodge & Coie, 1987; Vitaro et al., 2006). While reactive aggression is based on a frustration-aggression hypothesis (Berkowitz, 1993), proactive aggression is based on Bandura's (1973) social cognitive learning theory. Researchers (Vitaro et al., 2006) have observed that in early childhood reactive aggression peaks, but later it gradually decreases and proactive aggression is observed to increase starting in adolescence. Fite, Colder, Lochman, and Wells (2008), in their longitudinal study, observed the students' reactive and proactive aggression development trajectories from the fifth grade to the ninth grade and determined that the fifth and sixth grades, which are the transition period from primary to middle school, reactive and proactive aggression reach their peak, and decline after the sixth grade. Card and Little (2006) reviewed the research findings from studies that analyzed relationships between reactive and proactive aggression in childhood and adolescence and psychosocial adaptation using a meta-analysis method and found that there is a relationship between reactive aggression and proactive aggression. This relationship increases linearly with age; reactive and proactive aggression have significant relationships with psychosocial adaptation indicators, such as attention deficiency and hyperactivity symptoms, delinquent behavior, peer victimization, low prosocial behavior, and low social preference by peers and rejection by peers. In addition to these findings, reactive aggression has a significant relationship with internalization issues and low peer acceptance but proactive aggression does not. Furthermore, reactive aggression has a stronger relationship with negative psychosocial adaptation than proactive aggression. Research results (Fite, Wimsatt, Elkins, & Grassetti, 2012) indicate that reactive and proactive aggression can also be affected from an environmental context, and that these aggression types and negative life events have a negative relationship. Findings from longitudinal research (Fite, Raine, Stouthamer-Loeber, Loeber, & Pardini, 2010) show that reactive aggression is related to negative feelings such as anxiety and depression; proactive aggression is related to

antisocial behaviors and there is a relationship between both reactive and proactive aggression and substance abuse. Therefore, during the preparation of early intervention programs in schools to reduce risk factors and increase protective factors, it is important to be aware of the forms of aggression observed and the functions which they serve.

Research (e.g., Atici & Cekici, 2009; Siyez, 2009) indicates that when confronted with students' misbehaviors, teachers generally state that they respond with appropriate reactions, yet they also use negative responses, such as yelling, anger, and advising. Research findings show that the teachers feel themselves inadequate in dealing with students' misbehaviors (Siyez, 2009), and there are no programs in effect to provide the students with necessary social skills and experience (Atici & Cekici, 2009). Against such a phenomenon that poses a serious risk to child and adolescence development, the responsibility of the school counseling departments is to execute preventive and developmental guidance services (Korkut, 2012). Thus, it is clear that counseling professionals should work more proactively and collaboratively in the schools to provide students with the opportunity to gain fundamental life skills and master them in a safe school environment.

In the literature, three different strategies are emphasized in preventing violence and establishing peace (Harris & Morrison, 2003; Johnson & Johnson, 2005): (i) Peacekeeping strategy (ending conflicts and violence through strength), (ii) peacemaking strategy (the parties resolving their conflicts in a constructive manner), and (iii) peacebuilding strategy (building a culture of peace). In the schools, the use of power, pressure, and solid disciplinary rules by educators represents peacekeeping strategy; providing students with conflict resolution and negotiation skills represents peacemaking strategy; transforming the culture of violence in the schools into a culture of peace represents the peacebuilding strategy (Harris & Morrison, 2003; Johnson & Johnson, 2005). Therefore, it can be deduced that instead of simply focusing on preventing violence, educators and practitioners should make use of peacemaking and peacebuilding strategies in order to establish a permanent and sustainable culture of peace in the schools.

Peace education is defined as "transmission of knowledge about requirements of, the obstacles to, and possibilities for achieving and maintaining peace; training in skills for interpreting the knowledge; and the development of reflective and participatory capacities for applying the knowledge to overcome problems and achieve possibilities" (Reardon, 2000, p. 399). In peace education, students are provided with knowledge regarding the nature of violence and peace, skills toward constructive conflict resolution, attitudes and values regarding optimism, self-regulation, and self-sufficiency (Johnson & Johnson, 2005). Peace education does not solely focus on directly preventing acts of violence [*negative peace*]; rather, it aims at creating a culture of peace in which structural violence is prevented and social justice is established [*positive peace*] (Galtung, 1983). When the literature is reviewed, it is apparent that the content and scope of peace education programs may differ with respect to the structure of the specific regional acts of violence. Furthermore, these studies can be defined by titles such as "human rights education," "environmental

education," "international education," "conflict resolution education," and "development education" as well (Harris & Morrison, 2003). Despite all these variables, it is possible to say that the main purpose of peace education is to create an environment transforming the culture of violence into a culture of peace.

It is observed that in studies conducted in the primary and middle school institutions toward decreasing aggression and preventing violence, the focus is rather on prevention programs, such as violence prevention (Diken, Cavkaytar, Batu, Bozkurt, & Kurtilmaz, 2011), conflict resolution (Akgun & Araz, 2014), and peer mediation (Turk & Turnuklu, 2016; Turnuklu et al., 2010; Turnuklu, Kacmaz, Sunbul, & Ergul, 2009; Yildiz et al., 2016), and that these programs are effective in preventing violence and decreasing aggression. While these programs are mainly based on peacemaking strategy, prevention programs based on positive peace and peacebuilding strategy and whose effectiveness is tested are rather limited (e.g., Damirchi & Bilge, 2014; Topcu Kabasakal, Sagkal, & Turnuklu, 2015). Thus, a peace education program based on positive peace and peacebuilding strategy was developed and its effects on aggression levels of sixth grade students were investigated. Specifically, it was hypothesized that (i) the level of aggression of the experimental group students participated in the peace education program will decrease significantly when compared with the control group students who did not participate in this training program; (ii) the level of aggression of the female experimental group students participated in the peace education program will decrease significantly when compared with the female control group students who did not participate in this training program; and (iii) the level of aggression of the male experimental group students participated in the peace education program will decrease significantly when compared with the male control group students who did not participate in this training program. In addition to testing the hypotheses of experimental research, researchers also conducted semi-structured interviews with students who participated in experimental group in this study. The central qualitative research question of the study is as follows: How does the peace education program influence sixth grade students' behaviors and interpersonal relationships?

## Method

### *Research Design*

An embedded mixed method design (Creswell & Plano Clark, 2011) was used in this research. The qualitative study was embedded within a larger quantitative study, namely, pretest-posttest control group quasi-experimental research. Firstly, it was aimed at obtaining larger statistical, quantitative results from the sample and follow up with a few participants to explore the results in more depth. Since it is difficult to assign students randomly into the groups in school environments (Gay, Mills, & Airasian, 2005), two middle schools located in a lower socio-economic region were chosen. All of the sixth grade classes from one school were used as the experimental group, and all of the sixth grade classes from the other school were

determined to be the control group. The peace education program, consisting of 24 sessions, was conducted with the experimental group for two hours each week, lasting a total of 12 weeks. On the other hand, the control group was not provided any treatment. In the second phase, researchers focused on qualitative interviews to collect detailed views from participants. Upon completion of the treatment process, students participating in the peace education program were interviewed about their perspectives and experiences related to the training process using a semi-structured interview form.

#### *Research Sample*

The study was conducted in two middle schools in the lower socio-economical region of Izmir (a western city in Turkey) in schools that frequently experienced violent and aggressive behaviors among the students. All of the sixth grade students in the school in which the first author worked as a school counselor were chosen as the experimental group; and all the sixth grade students in the other school were chosen as the control group. The reason for choosing separate schools for the experimental and control groups was to minimize the interaction between the groups during the experimental treatment process and to increase internal validity (Gay et al., 2005). In the experimental group, there were 84 girls (53.85%), 72 boys (46.15%), and a total of 156 students (59.54%). In the control group, there were 54 girls (50.94%), 52 boys (49.06%), and a total of 106 students (40.46%). In this research, in order to examine students' perspectives and experiences in the experimental group through qualitative data, a semi-structured interview form was used. As a purposive sampling method, extreme or deviant cases sampling technique was used in order to get more in-depth understanding of students' perspectives and experiences after attending the peace education program. The criteria used for determining extreme or deviant cases in this research was to study with ten students whose aggression scores decreased most and least in the end of experimental process. A total of 20 (11 girls, 9 boys) students were interviewed in the study.

#### *Research Instruments and Procedure*

*Aggression Scale.* In this study, the Aggression Scale developed by Gultekin (2008) consisting of 15 items and a single dimension was used. Aggression can be separated into two dimensions as reactive aggression, which is shaped by the student's reaction due to a threatening situation and proactive aggression, the student's aggressive behavior toward a goal (Crick & Dodge, 1996; Dodge & Coie, 1987; Griffin & Gross, 2004). The items in the Aggression Scale show that they can be grouped under these two dimensions. The items considered to be labeled under reactive and proactive aggression dimensions were tested with confirmatory factor analysis to prove the hypothesis model. In other words, the two-factor model of the Aggression Scale that is thought to be theoretically evaluated in two subscales was confirmed ( $\chi^2= 136.89$ ,  $df= 89$ ,  $\chi^2/df= 1.54$ ,  $NFI= .94$ ,  $CFI= .98$ ,  $IFI= .98$ ,  $RFI= .92$ ,  $GFI= .93$ ,  $AGFI= .91$ ,  $RMR= .053$ ,  $RMSEA= .035$ ). Cronbach's alpha coefficients were .71, .77, and .84 for reactive aggression, proactive aggression, and total scale, respectively.

*Interview form.* A semi-structured interview form was developed by researchers in order to examine students' perspectives and experiences related to receiving the peace education program. Some of the open-ended questions asked in the interview were as follows: (i) What sort of changes in your behaviors did you observe after receiving peace education training? (ii) What impact did the peace education program have on your friendship relations? and (iii) What impact did the peace education program have on student-teacher relationships? Before conducting actual interviews, the interview form was tested on three students to determine whether students easily understood and responded to the questions. After revising the interview form, actual interviews with students were conducted. The students' responses were digitally recorded in order to prevent missing data and increase effective listening. Prior to interviews, the researcher asked for the informed consent of participants.

*Independent variable.* The independent variable of the research was the peace education program. While developing the program, (i) the needs and cultural characteristics of the region in which the research was conducted were considered, (ii) national (e.g., Kurt & Sertel, 2006; Turnuklu, Kacmaz, Ikiz, & Balci, 2009) and international (e.g., Kreidler, 1997; Schrupf, Crawford, & Bodine, 2007) literature was combined to utilize the previously developed conflict resolution, peer mediation, and peace education program sessions. The 24-class-hour peace education program was composed of the following four parts: (i) Understanding the nature of peace and violence (7 hours), (ii) elements that prevent and support peace (5 hours), (iii) fundamental skills for a peaceful individual (7 hours), and (iv) negotiation as a conflict resolution method (5 hours). As the independent variable of this study, the 24-class-hour peace education program was applied on the experimental group two hours a week, for a total of 12 weeks. While conducting peace education program sessions, many techniques, such as discussion, pair and group work, and role-playing were used to involve the students.

*Procedure.* The study was conducted with the ethical board approval of Dokuz Eylul University Institute of Educational Sciences and by the legal approval of Izmir Provincial Directorate of National Education. The purpose, content, scope, and application process of the peace education program were shared through seminars with the administrators, teachers and personnel of the school defined as the experimental group. Furthermore, seminars were provided for parents and their informed consent was obtained. Pretests were given to the experimental and control group students before the experimental treatment, and posttests were given after the program was finalized. Furthermore, by using extreme or deviant cases sampling technique, semi-structured interviews were held with 20 students (11 girls, 9 boys) in the experimental group. In order to prevent disturbances in the interviewing process, researchers preferred to use out-of-course hours. Interviews were held in the school counseling and guidance service counseling rooms and took approximately five to ten minutes. The experimental treatment and semi-structured interviews were applied by the first author who worked as the school counselor of the experimental group.

*Data Analysis*

This research used structural equation modeling to analyze the significance of the experimental treatment as an alternative to covariance analysis (Arbuckle, 2010). The following model proposed by Bentler and Woodward (1979), which may yield valid results by preventing systematic measurement errors despite the random choosing of the groups, was used (see Figure 1).

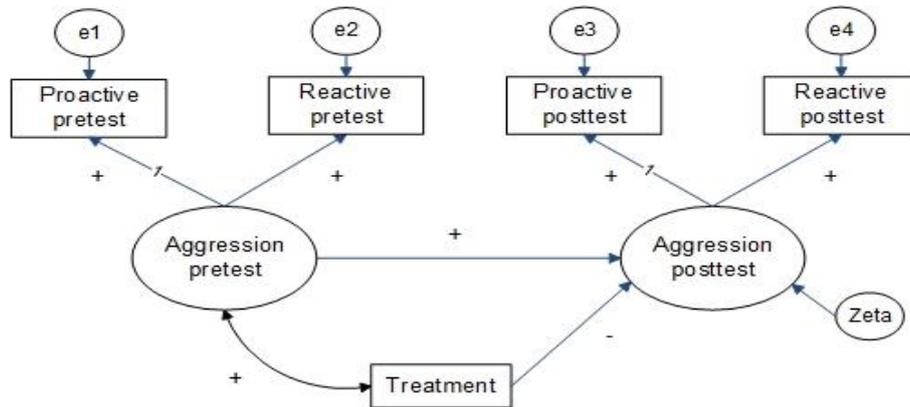


Figure 1. Hypothesis structural equation model

While the two variables in the hypothesis model, the proactive pretest and the reactive pretest measures, were the observed variables of the Aggression pretest measurements, proactive posttest and reactive posttest measurements were defined as the observed variables of the Aggression posttest measurement. Aggression pretest and posttest measurements were indicated as latent variables in the hypothesis model. The experimental and control groups were defined with the treatment variable. While the students who were subjected to the experimental procedure in the treatment variable were coded 1, the students in the control group were coded 0. It was assumed that the Aggression pretest was the positive predictor of the Aggression posttest and there was a positive relationship with the treatment variable. As the experimental procedure was thought to decrease the aggression levels of the students, it was assumed that a significant negative regression coefficient will be reached that is upper than 0 after the Aggression posttest. The AMOS 21 package program was used in the review of the model.

In order to analyze qualitative data obtained through a semi-structured interview form, content analysis technique was used. Firstly, all the data were transformed into written text and read repeatedly by the researchers. Secondly, researchers developed an initial list of coding categories. Thirdly, researchers combined related categories into more general categories. Fourthly, researchers reread each form and classified the responses into the appropriate categories. Lastly, data collected through interview forms were quantified as to frequencies and percentages and presented by

sample student statements. In order to check coding consistency (Miles & Huberman, 1994, p. 64), responses were coded by the same researcher twice, one week apart and intra-rater reliability was determined as .94.

## Results

### Quantitative Findings

In this research, the effect of peace education on the aggression levels of the students was analyzed by the covariance analysis model that was proposed by Bentler and Woodward (1979). The assumptions for the covariance analysis and the binary relations between the variables prior to the analysis were analyzed. Firstly, the correlations between the measurements in the treatment and Aggression pretest and Aggression posttest were computed. Furthermore, means and the standard deviations regarding the variables were calculated (see Table 1).

**Table 1.**

*The Correlations Between the Aggression Pretest and Aggression Posttest Scores for the Experimental and Control Groups, Their Means and Standard Deviations, and the Number of Participants*

Variables	1	2	3	4	Mean	sd	n
Proactive pretest [1]	-	-	-	-	12.31	2.84	262
Proactive posttest [2]	.50*	-	-	-	11.31	2.23	262
Reactive pretest [3]	.64*	.35*	-	-	9.55	1.96	262
Reactive posttest [4]	.40*	.64*	.42*	-	8.93	2.09	262

\*  $p < .05$

The relation between experimental and control groups' Aggression pretest and posttest scores were analyzed with Pearson's product-moment correlation coefficients. The obtained results showed that the correlations between proactive pretest and posttest was .50, reactive pretest and posttest was .42, and all these correlations were significant. Without separating the groups, according to the average points, while a 1-point decrease in the proactive aggression pretest and posttest measurements was observed, a .62 point decrease in reactive aggression was determined. Additionally, the descriptive statistics of the proactive and reactive pretest and posttest measurements per groups were analyzed separately (see Table 2).

**Table 2.***Descriptive Statistics of the Pretest and Posttest Aggression Measurements per Groups*

Groups	Scales	Tests	<i>n</i>	Mean	<i>sd</i>
Experimental group	Proactive aggression	Pretest	156	12.41	2.77
		Posttest	156	10.49	1.62
	Reactive aggression	Pretest	156	9.78	1.92
		Posttest	156	8.28	1.82
	Total aggression	Pretest	156	22.19	4.26
		Posttest	156	18.77	3.03
Control group	Proactive aggression	Pretest	106	12.14	2.93
		Posttest	106	12.50	2.44
	Reactive aggression	Pretest	106	9.19	1.95
		Posttest	106	9.88	2.09
	Total aggression	Pretest	106	21.33	4.44
		Posttest	106	22.38	4.06

According to the average scores in the aggression pretest and posttest measurements, from the pretest measurements to the posttest measurements, it was observed that for the experimental group there had been a decrease of 2 points in the proactive aggression field and 1.5 points in the reactive aggression field, and this meant a 3.5 points decrease in the general aggression total. For the control group, the posttest measurements showed .36 average point increase in the proactive field and .69 increase in the reactive field, and this meant a little over 1-point increase in the general aggression level. In the next step, covariance analysis was conducted in the structural equation modeling to observe the effects of the peace education on the students' aggression levels (see Figure 2).

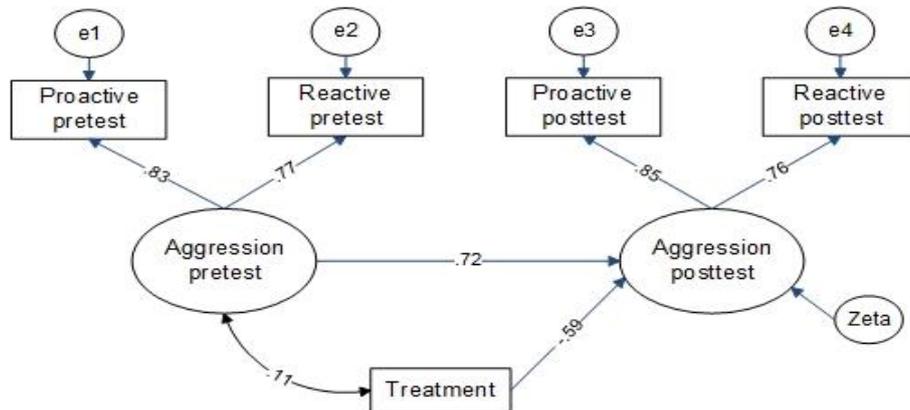


Figure 2. The covariance model outcome toward peace education's effects on decreasing aggression

In the covariance analysis conducted to analyze the effectiveness of the experimental procedure, the pretest average was fixed as a covariant. As a result of the analysis, proactive pretest (.83) and reactive pretest (.77) variables were found to show sufficiency in explaining the Aggression pretest and similarly for the

Aggression posttest, proactive posttest (.85) and reactive posttest (.76) measurements were found to be significant predictor. It was determined that the Aggression pretest measurement was a positive predictor for the Aggression posttest measurement (.72), and it was positively related to treatment as well (.11). In addition, on the path from the treatment to the Aggression posttest, it was found to be negatively significant (-.59). However, when the chi-square test of the hypothesis model was calculated, it was found to be significant ( $\chi^2= 17.29$ ,  $df= 3$ ,  $p= .001$ ). This result pointed to an unacceptable model fit. Therefore, modification indices suggested associating the e1 and e3 that are the error terms for the proactive pretest and proactive posttest variables. By revising the hypothesis model, the following model was created (see Figure 3).

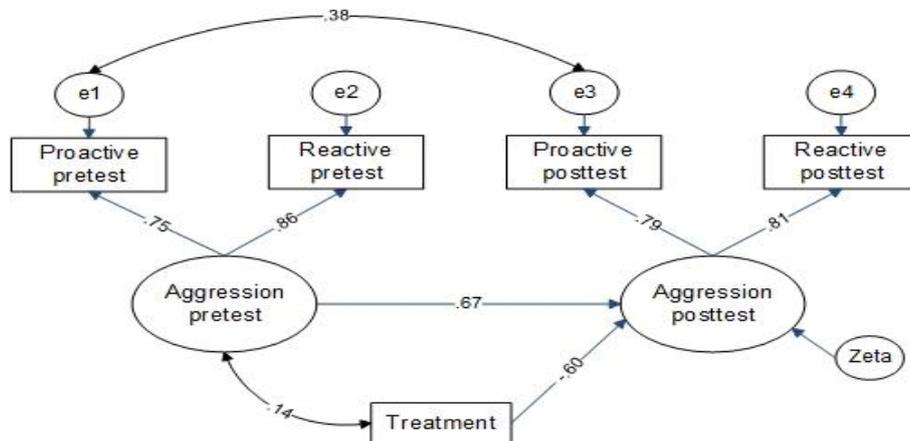


Figure 3. The modified covariance model output toward the decreasing effect of peace education on aggression

As a result of adding error covariance between proactive Aggression pretest and proactive Aggression posttest, it was observed that there had been significant decrease in the chi-square values and acceptable model fit indices were obtained ( $\chi^2= 4.93$ ,  $df= 2$ ,  $p= .085$ ,  $\chi^2/df= 2.46$ ,  $GFI= .99$ ,  $CFI= .99$ ,  $RFI= .95$ ,  $IFI= .99$ ,  $TLI= .97$ ,  $RMSEA= .07$ ). The regression weight on the path that Aggression posttest was dependent on the treatment was equated to 0 and the analysis was repeated. When the regression coefficient was made 0 on the path from treatment to the Aggression posttest, it was determined that the model was significant ( $\chi^2= 118.64$ ,  $df= 3$ ,  $p= .000$ ). The chi-square difference between the two models was 113.71 (118.64 - 4.93), and the hypothesis model was confirmed. As seen in Table 3, as a result of the covariance analysis, all of the parameter estimates were statistically significant. The results pointed out that the proactive pretest (.75) and reactive pretest (.86) were sufficient to indicate the Aggression pretest; the proactive posttest (.79) and reactive posttest (.81) were sufficient to indicate the Aggression posttest as latent variables. It was found out that the aggression pretest as a latent variable can predict the Aggression posttest measurement positively (.67) as well as the associated treatment positively in a significant level (.14). When the effects of the peace education program on aggression

(the main focus of the study) were analyzed, from the treatment to the aggression posttest, it was found to be negatively significant (-.60) (see Table 3).

**Table 3.**

*The Regression Weights of Parameters, Outputs Regarding the Covariance and Variances in the Model*

<i>Regression Weights/Covariances/Variances</i>	<i>Estimate</i>	<i>s.e.</i>	<i>C.R.</i>	<i>p</i>
Aggression posttest $\leftarrow$ Aggression pretest	.541	.054	9.943	***
Aggression posttest $\leftarrow$ Treatment	-2.130	.196	-10.885	***
Proactive aggression pretest $\leftarrow$ Aggression pretest	1.000			
Reactive aggression pretest $\leftarrow$ Aggression pretest	.781	.085	9.153	***
Proactive aggression posttest $\leftarrow$ Aggression posttest	1.000			
Reactive aggression posttest $\leftarrow$ Aggression posttest	.963	.082	11.682	***
Aggression pretest $\leftrightarrow$ Treatment	.150	.074	2.032	.042
e1 $\leftrightarrow$ e3	.959	.262	3.658	***
Aggression pretest	4.588	.761	6.029	***
Treatment	.241	.021	11.424	***
Zeta	.942	.201	4.682	***
e1	3.582	.535	6.699	***
e2	.997	.280	3.555	***
e3	1.807	.256	7.060	***
e4	1.526	.230	6.621	***

Consequently, it was determined that the peace education program is an effective method to decrease students' aggression levels. To see whether this outcome occurred by chance, a cross-validation was conducted. In the cross-validation, the covariance analysis built in the structural equation model was repeated for the girl and boy student groups. The obtained outcome showed that after adding error covariances between proactive Aggression pretest and proactive Aggression posttest in the hypothesis model for girls, the model fit was adequate ( $\chi^2= 2.28$ ,  $df= 2$ ,  $p= .319$ ,  $\chi^2/df= 1.14$ , GFI= .99, CFI= .99, RFI= .95, IFI= .99, TLI= .99, RMSEA= .03). On the path from treatment to Aggression posttest, equating regression coefficient to 0 shows a significant chi-square ( $\chi^2= 65.95$ ,  $df= 3$ ,  $p= .000$ ). The chi-square difference between the two models was calculated to be 63.67 (65.95-2.28). For the boys, the adjusted hypothesis was found to be validated ( $\chi^2= 3.73$ ,  $df= 2$ ,  $p= .155$ ,  $\chi^2/df= 1.87$ , GFI= .99, CFI= .99, RFI= .91, IFI= .91, TLI= .95, RMSEA= .08). When the path from the treatment to Aggression posttest was equated to 0, chi-square was significant ( $\chi^2= 55.04$ ,  $df= 3$ ,  $p= .000$ ). The chi-square difference for the boys was calculated to be 51.31 (55.04 - 3.73). Consequently, it was understood that the covariance model for both girls and boys was sufficiently coherent. In other words, the model was consistent for the two different groups, and it was concluded that the peace education program has a significant effect in decreasing aggression scores.

In order to collect qualitative data related to perspectives and experiences of experimental group students, researchers in this study conducted semi-structured interviews. Qualitative data collected in this study were analyzed through content analysis. As students provided in-depth information of relevance to the research question, frequencies for some categories exceeded the total number of participants (20) interviewed.

Student statements regarding behavioral changes after receiving peace education training were grouped into seven main categories: positive change in behaviors, better problem solving skills, better anger management skills, improved psychological resilience, better communication with family members, better relationships with teachers, and increased course engagement (see Table 4). The prevalent change in the statements of both Group 1 (students whose aggression scores decreased mostly after experimental treatment) and Group 2 (students whose aggression scores decreased least after experimental treatment) was a "positive change in behaviors." Students stated that they were not using behaviors, such as teasing, yelling, fighting, hitting or pulling hair anymore. Student statements indicated that they began to use destructive conflict resolution methods less frequently after receiving peace education training. In addition, the other most prevalent categories were "better problem solving skills" and "better anger management skills." Students claimed that they began to use anger management techniques and try to solve their problem face-to-face in conflict situations. Furthermore, while some statements of a student in Group 1 indicated that peace education program increased his/her psychological resilience, Group 2's perspectives showed that communication with family members and teachers improved and course engagement increased.

**Table 4.***The Effects of Peace Education Program on Student Behaviors*

Categories	G <sub>1</sub> *	%	G <sub>2</sub> **	%	Student Statements
1. Positive change in behaviors	22	54	13	45	I am not yelling at other people / In the past, I used to fight a lot, but now it is rare / When I feel resentful or angry, I do not hit other people / When somebody hits me or told me bad words, I am not hitting them back
2. Better problem solving skills	9	22	5	17	I am trying to reach win-win solutions / When I have gotten into conflict with my sister or friends either at school or at home, I am solving my problems face-to-face
3. Better anger management skills	6	15	5	17	I began to control my anger / When I become angry, I am counting to ten / I began to control myself
4. Improved psychological resilience	1	2	-	-	I am not feeling resentful easily
5. Better communication with family members	-	-	2	7	I used to argue with my mother a lot but now it is rare / In the past, when my sibling took my property, I was very angry; but now instead of getting angry with him, I am expressing my thoughts and emotions
6. Better relationships with teachers	3	7	1	4	I am respecting my teachers / I am not disturbing my teachers / I am not spoiled in the class anymore / I am talking to teachers about my problems
7. Increased course engagement	-	-	3	10	In the past, I did not use to raise my hand in the courses. But now, I am raising my hand and engaging in the courses
Total	41	100	29	100	

\* Group 1: Students whose aggression scores decreased mostly after treatment.

\*\* Group 2: Students whose aggression scores decreased least after treatment.

Student statements related to the effects of peace education program on students' friendship relations were grouped into seven main categories: positive change in behaviors, better anger management skills, better communication skills, change in perception and perspectives, better problem solving skills, better interpersonal relationships, and positive change in attitudes (see Table 5). The most prevalent categories for both groups' statements were "better interpersonal relationships" and "positive change in behaviors." Students' expressions showed that after receiving peace education program they were caring, respectful, and getting along well with

each other more frequently than before. In addition, it was also determined that communication, problem solving, and anger management skills of students improved after attending the peace education program. It is also meaningful to see that there was a change in perception, perspectives, and attitudes of students related to the nature of friendships.

**Table 5.**

*The Effects of Peace Education Program on Students' Friendship Relations*

Categories	G <sub>1</sub> *	%	G <sub>2</sub> **	%	Student Statements
1. Positive change in behaviors	11	26	8	29	In order to create a peaceful atmosphere, I am not fighting with my friends anymore / We are not yelling at each other / There are still fights, but now it is rare / We are not teasing each other after peace education / We are showing respect and care to each other
2. Better anger management skills	2	5	3	11	I am able to control my anger
3. Better communication skills	5	12	4	14	I began to understand my friends / By empathizing, I began to understand my friends' thoughts / We are using I-language
4. Change in perception and perspectives	1	2	2	7	We left the past behind and made a new beginning
5. Better problem solving skills	4	10	3	11	I am not fighting with my friends; instead I am talking to them / We are solving our problems easily / We are solving our problems face-to-face and individually
6. Better interpersonal relationships	14	33	6	21	We are spending time together / I am getting on well with my friends / There are not quarrels or resentments anymore / We are apologizing to each other
7. Positive change in attitudes	5	12	2	7	I am more tolerant / I am respecting my friends' thoughts
Total	42	100	28	100	

\* Group 1: Students whose aggression scores decreased mostly after treatment.

\*\* Group 2: Students whose aggression scores decreased least after treatment.

Results of the analysis of student statements regarding the effects of the peace education program on student-teacher relationships were grouped into seven main categories: no change, change in perception and perspectives, positive change in behaviors toward teachers, better communication skills, change in emotions, course engagement, and positive change in relationships (see Table 6). The prevalent categories among the student statements regarding the effects of peace education

program on student-teacher relationships were “change in perception and perspectives,” “positive change in behaviors toward teachers,” “change in emotions,” and “positive change in relationships.” Student statements indicated that they began to get along better with their teachers, relationships with teachers improved, and by empathizing students are now able to understand teachers’ perspectives. While students in Group 1 emphasized improved communication skills, students in Group 2 claimed that they were engaging in the courses more frequently. Just one student, in Group 2, stated that his/her relationships with teachers had been good before and it remained the same. When all student statements are taken into consideration, we can argue that the peace education program may contribute to positive changes in student behaviors and also improve relationships among and between students and teachers.

**Table 6.**

*The Effects of Peace Education Program on Student -Teacher Relationships*

Categories	G <sub>1</sub> *	%	G <sub>2</sub> **	%	Student Statements
1. No change	-	-	1	3	I used to get on well with my teachers before and now it is the same.
2. Change in perception and perspectives	10	29	3	11	I understood how our teachers spend so much effort for us / When I notice it is my fault, I am apologizing to my teachers
3. Positive change in behaviors toward teachers	7	20	6	22	I am behaving honestly toward teachers / I feel more respect and compassion toward my teachers / I am not acting spoiled toward my teachers
4. Better communication skills	6	17	2	7	I am trying to understand my teachers / By empathizing, I understand my teacher / I used to be shy to talk to teachers but now it has changed
5. Change in emotions	6	17	5	19	I am not feeling angry with my teachers / When teachers become angry with me, I am not becoming resentful / I do not feel hateful toward teachers
6. Course engagement	-	-	5	19	I am engaging in courses / I am raising my hand more often / I am listening to the lectures
7. Positive change in relationships	6	17	5	19	My relationships with teachers improved / I am getting on well with my teachers
Total	35	100	27	100	

\* Group 1: Students whose aggression scores decreased mostly after treatment.

\*\* Group 2: Students whose aggression scores decreased least after treatment.

## Discussion and Conclusions

This study confirmed a decrease in the reactive and proactive Aggression posttest scores of the experimental group. For students in the control group, posttest results were slightly higher than the pretest results. When the groups were compared, significant decreases were observed in the reactive and proactive aggression levels in favor of the experimental group due to the experimental intervention (the peace education program). When a comparison was made among gender groups, both girls' and boys' reactive and proactive aggression levels in the experimental group significantly decreased. Finally there was a significant relationship between the reactive and proactive aggression scores in all measurements. Moreover, content analysis of qualitative data collected through semi-structured interviews indicated that peace education program had led to positive change in student behaviors and improved relationships among and between students and teachers.

From a general standpoint, it was determined that the peace education program is effective in decreasing the reactive and proactive aggression levels of the sixth grade students. The findings in this study are parallel with the findings of previous experimental studies in the literature (e.g., Akgun & Araz, 2014; Damirchi & Bilge, 2014; Topcu Kabasakal et al., 2015; Turk & Turnuklu, 2016; Turnuklu et al., 2010). From a gender perspective, it was concluded that the reactive and proactive aggression levels decreased for both girls and boys. From this perspective, it was determined that unlike the study (Turnuklu et al., 2010) in which only male students' aggression levels decreased, the peace education program applied in this study was effective in reducing aggression scores for both female and male students. Furthermore, the significant relationships determined between the reactive and proactive aggression in the pretests and posttests are consistent with the previous studies (see Card & Little, 2006, meta-analysis study). Furthermore, the effects of the peace education program implemented in a Turkish middle school were investigated through the perspectives of participating students. When asked how the program had impacted their behavior and interpersonal relationships, students provided noteworthy responses. In general, students stated that the peace education program had led to a positive change in behaviors, better problem solving skills, better anger management skills, better communication skills, increased course engagement, and positive changes in interpersonal relationships. Student statements clearly showed that participants began to use constructive and peaceful conflict resolution methods more frequently after attending peace education program. Within the limitations of the study, it is possible to claim that the peace education program may contribute to the social and emotional development of middle school students.

The schools are the indicators of the society and they help form the adults and parents of the future. To be successful in this endeavor, it should be required to implement primary prevention programs from preschool and primary school years and beyond to change the perception that violence is in human nature and unavoidable, and provide the children with knowledge, skills, attitudes, and values regarding alternative constructive, peaceful conflict resolution techniques (Crawford, 2005; Johnson & Johnson, 2004; Weigert, 1989). Applying the peace education

programs in schools will not only decrease violence and aggressive behavior [*negative peace*], but will also strengthen social justice and interpersonal relationships and facilitate the creation of a democracy, tolerance, and peace culture [*positive peace*] (Galtung, 1983). The goal of peace education is not just to prevent violence but also to establish a culture of nonviolence in the school and the society in the long run (Harris & Morrison, 2003).

There are certain limitations regarding the findings of this research. First of all, the findings are limited to the implementation in two middle schools located in a lower socio-economic region in the city of Izmir. Furthermore, as random assignment of students in the schools that will also require some students to change their classes was not realized, a quasi-experimental research design was used instead of a true experimental design. Moreover, the lack of a placebo group to control the Hawthorne effect, also known as the expectation effect, and the lack of follow-up tests to determine the permanency in gaining scores are among the methodological limitations of this study. Lastly, it can be said that in this study, pretest and posttest measures of latent variables had two indicator variables, reactive and proactive aggression, in which a model may be converged but the parameter estimates can be biased.

It is considered beneficial to provide certain suggestions for future studies that will be conducted in the light of the findings from this study. Firstly, this study was conducted in two lower socio-economic region middle schools located in the city of Izmir. Testing the effectiveness of the peace education program in schools located in different socio-economical regions could be beneficial. In this study, the peace education program relevant to a sixth grade level was developed and tested. Developing peace education programs for different age groups and applying them concurrently should be considered. In this study, a total body approach for sixth grade level was used and interpersonal negotiation skills were provided as conflict resolution technique. In future studies, a cadre approach to train certain students chosen with respect to certain criteria can be followed, and they can be provided with peacemaking skills. In this study with a total body approach, the first author who worked as the school counselor spent one-third of the weekly working hours on these applications during the experimental treatment process. However, in schools with more students and classes, using the total body approach may not be appropriate and efficient for the researchers and the practitioners. Therefore, it is considered that using the cadre approach and testing its effectiveness may be beneficial for researchers and practitioners.

Taken together, findings of this research have several crucial implications for future research and practitioners. By using an embedded mixed method design in this study, the peace education program's effectiveness was tested not only quantitatively but also qualitatively. Embedding qualitative study within a larger experimental study complemented and supported quantitative datasets. These research findings empirically validated the assumptions that implementing peace education programs in schools will enable students to gain fundamental life skills to cope with daily problems and interpersonal conflicts. It is also noteworthy to

mention that all of the positive outcomes of the research were obtained by the efforts and successful implementation of the psychological counselor of the experimental school. Thus, it can be said that the peace education program developed in this research has applicability to other school counselors as well.

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### **Barış Eğitiminin Saldırganlık Üzerindeki Etkileri: Karma Yöntem Bir Çalışma**

#### **Atıf:**

- Sagkal, A. S., Turnuklu, A., & Totan, T. (2016). Peace education's effects on aggression: A mixed method study. *Eurasian Journal of Educational Research*, 64, 45-68, http://dx.doi.org/10.14689/ejer.2016.64.3

#### **Özet**

*Problem Durumu:* Okullar yapısal olanakları ve eğitim hedefleriyle bireyin yaşamında önemli bir yer tutan kişilerarası ilişkiler kurma, yönetme ve sürdürme becerilerinin kazandırılabilmesi elverişli ortamlardan birine sahiptir. Çocuklara ve gençlere temel yaşam becerilerinin de kazandırılabilmesi bu ortamlarda ne yazık ki daha çok akademik bilgi ve beceriler kazandırılmaya çalışılmakta; sosyal beceri kazandırmanın önemi göz ardı edilmektedir. Dolayısıyla sosyal beceri kazanımının yeterince desteklenmediği; farklı kişisel, toplumsal ve kültürel bilgi, beceri, tutum ve değerlere sahip öğrencilerin bir araya geldiği okullarda yıkıcı anlaşmazlık çözüm yöntemlerine başvurulması kaçınılmaz bir hal almaktadır. Alan yazın

incelendiğinde, şiddet olgusunun eğitim sisteminin tüm üyeleri için halen önemini ve ciddiyetini koruduğu görülmektedir. Ülkemizin çeşitli bölgelerinde son beş yıl içerisinde yürütülen araştırma sonuçları incelendiğinde, ilkökul, ortaokul ve liselerde şiddet, saldırganlık ve zorbalık gibi davranışların halen yaygın olduğu görülmektedir. İlkokul ve ortaokullarda saldırganlığı azaltmaya ve şiddeti önlemeye yönelik yürütülen çalışmalarda, daha çok şiddeti önleme, çatışma çözme ve akran arabuluculuk gibi önleme programları üzerinde durulmaktadır. Bu programlar ağırlıklı olarak barışyapma stratejileri üzerine temellendirilirken; olumlu barış ve barış inşa etme stratejisine dayalı olarak geliştirilen ve etkililiği test edilen önleme programlarının daha sınırlı düzeyde olduğu görülmektedir. Bu nedenle, bu çalışmada olumlu barış kavramı ve barış inşa etme stratejisine dayalı bir barış eğitimi programı geliştirilmiş ve etkililiği incelenmiştir.

*Araştırmanın Amacı:* Bu çalışmanın amacı, barış eğitimi programının altıncı sınıf öğrencilerinin saldırganlık düzeyleri üzerindeki etkisini incelemektir. Ayrıca, öğrencilerin barış eğitimi programıyla ilgili perspektifleri ve deneyimleri araştırılmıştır.

*Araştırmanın Yöntemi:* Alt sosyo-ekonomik düzey iki ortaokulda yürütülen çalışmada, iç içe karma desen kullanılmıştır. Barış eğitimi programına katılan öğrencilerin deneyimlerini ve perspektiflerini ortaya çıkarmak için nitel çalışma, öntest-sontest kontrol gruplu yarı deneysel desenin içine gömülmüştür. Öncelikle, öntest-sontest kontrol gruplu yarı deneysel desen uygulanmıştır. Deney grubuna Barış Eğitimi Programı uygulanırken; kontrol grubuna araştırma konusuyla ilgili herhangi bir işlem yapılmamıştır. Deney grubu, 84 kız (%53.85) ve 72 erkek (%46.15) olmak üzere toplam 156 öğrenciyi (%59.54) içerirken; kontrol grubu 54 kız (%50.94) ve 52 erkek (%49.06) olmak üzere toplam 106 öğrenciyi (%40.46) içermiştir. Araştırmanın bağımsız değişkeni, deney grubuna uygulanan "Barış Eğitimi Programı"dır. Barış eğitimi programı, (i) barış ve şiddetin doğasının anlaşılması (barış, şiddet, dünya ve Türk kültüründe barışın öncüleri), (ii) barışı engelleyen ve destekleyen unsurlar (kalıpyargılar, önyargılar, farklılıklar, etik ikilemler ve hoşgörü), (iii) barışçıl bir birey için temel beceriler (etkin dinleme, duyguların farkına varma ve ifade etme, ben dili, empati ve öfke yönetimi) ve (iv) anlaşmazlık çözüm yöntemi olarak müzakere (müzakere ilkeleri, kişilerarası müzakere ve müzakere uygulamaları) başlıklı dört ana bölümden oluşmuştur. Deneysel işlem haftada iki ders saati olmak üzere toplam 24 oturumda ve 12 haftalık bir sürede tamamlanmıştır. Nicel verilerin toplanmasında Saldırganlık Ölçeği kullanılmıştır. İkinci aşamada, deneysel işlem tamamlandıktan sonra, toplam 20 öğrenciyle görüşmeler gerçekleştirilmiş ve öğrencilerin barış eğitimi programıyla ilgili perspektifleri ve deneyimleri incelenmiştir. Nitel verilerin toplanmasında Yarı Yapılandırılmış Görüşme Formu kullanılmıştır.

*Araştırmanın Bulguları:* Analiz sonuçları, deney grubunda yer alan öğrencilerin saldırganlık düzeylerinin, kontrol grubundaki öğrencilere göre, anlamlı düzeyde azaldığını göstermiştir. Nitel veri analizleri, barış eğitimi programının öğrenci davranışlarında olumlu bir değişim sağladığını, öğrenci-öğrenci ve öğrenci-öğretmen ilişkilerini geliştirdiğini göstermiştir.

*Araştırmanın Sonuçları ve Önerileri:* Bu araştırmada, barış eğitimi programının öğrencilerin saldırganlık düzeylerinin azalmasında, davranışlarının olumlu yönde dönüşmesinde, öğrencilerin arkadaşlarıyla ve öğretmenleriyle olan ilişkilerinin gelişmesinde etkili olduğu sonucuna ulaşılmıştır. Araştırmada elde edilen bu sonuçlar ışığında, toplumun göstergesi olan, geleceğin yetişkinlerini, hatta ebeveynlerini yetiştiren okullarda, birincil önleme programlarının okulöncesi ve ilkökul yıllarından itibaren uygulanması, şiddetin insanın doğasında ve kaçınılmaz olduğu algısının değiştirilmesi ve çocuklara alternatif yapıcı-barışçıl çatışma çözme tekniklerine ilişkin bilgiler, beceriler, tutumlar ve değerler kazandırılması gerektiği söylenebilir. Öte yandan, araştırmada elde edilen bulgulara yönelik birtakım sınırlılıklar da bulunmaktadır. Öncelikle araştırmada elde edilen bulgular İzmir ilinde alt sosyo-ekonomik düzey bir bölgede yer alan iki ortaokulda gerçekleştirilen uygulamalarla sınırlıdır. Ayrıca eğitim ortamlarında öğrencilerin var olan sınıflarının değiştirilmesini gerektiren yansız atamanın yapılamaması nedeniyle gerçek deneysel desen yerine yarı deneysel desenin kullanılmış olması; beklenti etkisi olarak da bilinen Hawthorne etkisini kontrol etmek amacıyla plasebo grubunun oluşturulmuş ve kalıcılık etkisini belirlemek için izleme ölçümlerinin yapılmaması bu araştırmanın yöntemsel sınırlılıkları arasında yer almaktadır. Bu çalışmada elde edilen bulguların ışığında gelecekte yapılacak çalışmalar için araştırmacılara ve uygulayıcılara birtakım önerilerde bulunulmasının da faydalı olacağı düşünülmektedir. Öncelikle, bu çalışma İzmir ilinde alt sosyo-ekonomik düzey bir bölgede yer alan iki ayrı ortaokulda yürütülmüştür. Barış eğitimi programının etkililiğinin farklı sosyo-ekonomik düzey bölgelerde yer alan okullarda da sınanmasının faydalı olacağı düşünülmektedir. Bu çalışmada, sadece altıncı sınıf düzeyine uygun barış eğitimi programı geliştirilmiş ve etkililiği sınanmıştır. Farklı yaş gruplarına özgü barış eğitimi programlarının geliştirilip, uygulamalarda sürekliliğin sağlanması da düşünülebilir. Bu çalışmada, altıncı sınıf düzeyinde tüm okul/öğrenci yaklaşımı (total body approach) izlenmiş ve sorun çözme yöntemi olarak kişilerarası müzakere becerileri kazandırılmıştır. Gelecekte yapılacak çalışmalarda, belirli ölçütlere göre seçilen öğrencilerin eğitime alındığı bir yaklaşım (cadre approach) izlenerek, bu öğrencilere anlaşmazlıkların çözümüne yönelik barışyapıcılık/arabuluculuk becerileri kazandırılabilir. Tüm okul/öğrenci yaklaşımının izlendiği bu çalışmada, araştırmanın yürütüldüğü sırada okul psikolojik danışmanı olarak görev yapmakta olan birinci yazar, deneysel işlem sürecinde haftalık zorunlu çalışma saatinin 1/3'lük kısmını uygulamalara ayırmıştır. Fakat öğrenci ve şube sayısının fazla olduğu okullarda tüm okul/öğrenci yaklaşımının uygulanması araştırmacı ve uygulayıcılar için çoğu zaman uygun ve ekonomik olmayabilir. Dolayısıyla araştırmacı ve uygulayıcılar için ekonomik bir kolaylık sağlayacak kadre yaklaşımının izlenmesinin ve etkililiğinin test edilmesinin yararlı olacağı düşünülmektedir.

*Anahtar Kelimeler:* Kişilerarası anlaşmazlık, şiddet, çatışma çözme, müzakere, uzlaş.