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AUTHOR George, Yvetta; And Others  
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ABSTRACT

Using the Peaceful Solutions Peer Mediation Training Program, a study sought to understand self-efficacy as it relates to conflict resolution, and the effects of sex and socioeconomic status on training in conflict resolution. Two trained adult mediators conducted 13.5 hours of training at each of 7 elementary schools. Each training group had between 26 and 28 students. Results showed that children participating in the training increased their peer mediation vocabulary and knowledge, and developed a greater sense of self-efficacy. Results on differences between girls and boys in this area, as they interact with SES, were inconclusive. (JW)

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**EFFECT OF PEACEFUL SOLUTIONS PEER MEDIATION TRAINING ON KNOWLEDGE  
AND SKILLS OF ELEMENTARY STUDENTS**

**Yvetta George, Nova Southeastern University**

**Joel Keiter, Nova Southeastern University**

**Glennelle Halpin, Auburn University**

**Donna Dagnese, Broward County Florida Public Schools**

**Gerald Halpin, Auburn University**

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## Effect of Peaceful Solutions Peer Mediation Training on Knowledge and Skills of Elementary Students

Conflict is a natural phenomenon which may be dealt with in various ways. Denial or avoidance are approaches sometimes used, but these tactics usually prove to be ineffective. Although problem solving would be more beneficial, physical or verbal confrontation appears to be the prevalent response to conflicts in schools. One way to help students learn to resolve conflicts peacefully is through peer mediation.

According to Stomfay-Stitz (1994), the theoretical base for such an approach includes the work of Piaget, Vygotsky, and Bandura. Because Piaget's cognitive development theory is based on how children assimilate and accommodate new experiences into ones previously learned, having students interact with their peers to help resolve conflicts enhances the cognitive development process. Applying Vygotsky's theories on "scaffolding" learning from a peer or an adult, the peer mediation process in which children share the problem solving process would help to develop language and thought. In line with Bandura's theory on modeling, having students observe conflict resolution via peer mediation in which a conflict is resolved with disputants being able to "save face" and continue on with their school lives should result in similar behaviors.

A number of conflict resolution peer mediation programs are being implemented in schools. However, a review of the

literature indicates that "many conflict resolution programs, if not the majority, are based on intuitive insights rather than on research evidence and have undergone no systemic evaluation" (Cutrona & Guerin, 1994, p. 102). One exception is a pilot program in Minnesota in which the reported frequency of student-student conflicts dropped 80%, while conflicts referred to the principal were reduced to zero (Johnson, Johnson, Dudley, & Burnett, 1992).

There are several national organizations such as the National Association for Mediation in Education (NAME); the Consortium for Peace, Research, Education, and Development (COPRED); the National Institute for Dispute Resolution (NIDR); and the Children's Creative Response to Conflict (CCRC), all of which are working to enhance knowledge and research on conflict resolution and peer mediation. Posner (1994), however, has raised some troubling questions about violence prevention programs. One important question: "Are these programs doing more harm than good?"

Cohen and colleagues (cited in Posner, 1994) found that fewer than half of the 51 programs reviewed even claimed to have reduced levels of violence and few had data to back up assumptions that the programs had even created awareness in the community. Posner suggested that responsibility for reducing violence should not be put solely on the shoulders of educators. Help is also needed from parents and law enforcement agencies as well as medical, public health, and social service personnel.

In a collaborative effort to give teachers and parents a tool to help children ages 5 through 12 settle conflicts in a positive manner, the National Crime Prevention Council and the National Association of Elementary School Principals developed *Helping Kids Handle Conflict: A Guide for Those Teaching Children* (1995). This publication covers a variety of topics related to conflicts such as gender bias, cultural diversity, media influence, and weapons. Using Scruff's steps for managing conflicts, the mediation process is laid out in a manner that children can easily follow. However, there is no research available to document its effectiveness. Another conflict resolution program, *Peaceworks*, reviewed by Stomfay-Stitz (1994), develops interpersonal and communication skills for students in kindergarten through Grade 12 but is also lacking research. Still another training program is *Peaceful Solutions Peer Mediation Training Program* developed by George and Keiter (1993). To date, this program has not been subjected to a systematic study of its effectiveness.

The present study was developed to reduce the gap in research on peer mediation programs with the focus being on the *Peaceful Solutions* program. Research questions for this peer mediation study were:

1. During a 13 1/2 hour training program, will elementary students (a) learn peer mediation vocabulary?  
(b) gain knowledge related to the peer mediation process?

- (c) acquire an understanding of peer mediation so as to have a stronger sense of self-efficacy with regard to the resolution of conflicts?
2. Will sex and/or socioeconomic status interact with training to yield differential effects for (a) boys and girls and/or (b) low, medium, or high socioeconomic status (SES)?

Following are null hypotheses tested:

1. There will be no significant change in students' knowledge of peer mediation vocabulary, process, or self-efficacy following 13 1/2 hours of training.
2. There will be no significant sex or socioeconomic interactions with training.

#### Method

Using the Peaceful Solutions Peer Mediation Training Program, two trained adult mediators (one state licensed) conducted 13 1/2 hours of training (six 2 1/4 hour sessions) at seven elementary schools with 26 to 28 students per school in Grades 3 through 5. During training the students practiced skills related to mediation (vocabulary, listening, paraphrasing, questioning, problem solving). The trainees role-played conducting a mediation session, taking turns as disputants and mediators. During the last training session, the trainees were videotaped mediating a simulated conflict.

The Peaceful Solutions Peer Mediation Training Program is designed to present an overview of the peer conflict mediation process with particular emphasis on the following:

- an understanding of the concepts underlying human behavior,
- an application of effective mediation skills,
- a knowledge of the procedural and logistical considerations,
- suggested lesson plans,
- student activities,
- conflict scenarios, and
- acknowledgements. (George & Keiter, 1993, p. ii)

Prior to participation in the training programs, the students were administered a 20-item pretest assessing peer mediation knowledge of vocabulary (10 items), process (5 items), and self-efficacy (5 items). The same instrument was administered as a posttest at the conclusion of the training.

Multivariate and univariate analyses of variance were used to answer the research questions/test the null hypotheses. In a 2 x 2 x 3 design, the independent variables were time (pretest and posttest), sex (boys and girls), and socioeconomic status (low, medium, and high). (See Table 1 for frequencies.)

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Insert Table 1 about here

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The dependent variables were vocabulary, knowledge of process, and self-efficacy. Significant results from the univariate

analyses were interpreted only when the multivariate results were significant.

### Results

The multivariate analyses of variance yielded significant Wilks values for time [ $F(3, 141) = 192.32, p < .001$ ]; for sex [ $F(3, 141) = 6.78, p < .001$ ]; for socioeconomic status [ $F(6, 282) = 4.44, p < .001$ ]; and for Time X Socioeconomic Status [ $F(6, 282) = 4.22, p < .001$ ]. With these significant multivariate results, the associated univariate results can be considered meaningful.

Reported in Tables 2, 3, and 4 are results of the univariate

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Insert Tables 2, 3, and 4 about here  
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analyses of variance for vocabulary, knowledge of process, and self-efficacy respectively. As can be seen in Table 2, the main effects for time, sex, and socioeconomic status were significant with vocabulary as the dependent variable. Means increased as socioeconomic status went from low (7.22) to medium (7.63) to high (8.17). The mean (7.96) for the girls was higher than the mean for the boys (7.14). The posttest mean (8.44) was higher than the pretest mean (6.83).

Seen in Table 3 are significant main effects for time and sex with knowledge of process as the dependent variable. The mean for the girls (3.33) was higher than the mean for the boys (2.97). The posttest mean (4.42) was higher than the pretest mean (1.95).



In Table 4 are seen significant main effects for time, socioeconomic status, and sex and a significant Time X Socioeconomic Status interaction with self-efficacy as the dependent variable. Overall, means increased from low (3.65) to medium (3.86) to high (4.24) socioeconomic status. However, the significant interaction suggests that this progression is not the same for the pretest and posttest. The pretest means did increase respectively for low (2.98), medium (3.67), and high (4.02) socioeconomic status. However, posttest means [low (4.31); medium (4.04); high (4.46)] were not as orderly. The mean for the girls (4.06) was higher than the mean for the boys (3.64). The posttest mean (4.28) was higher than the pretest mean (3.51).

#### Discussion

Based upon the results of the analyses, the null hypotheses can be rejected. Students who participated in the Peaceful Solutions training program significantly increased their peer mediation vocabulary, knowledge, and self-efficacy. These results lend credibility to this program as a means of helping boys and girls learn how to resolve conflicts through peer mediation. Research support such as that provided by this study is needed for any peer mediation program offered as a means through which youngsters can learn to resolve their differences. As earlier indicated, far too many of the programs being implemented lack the necessary research and evaluation.

Future research with the Peaceful Solutions Peer Mediation Program may need to focus more closely on the sex and socioeconomic status differences found in this study. Are girls more adept at resolving conflicts? Why? What is the basis for the apparent relationship between peer mediation and socioeconomic status? Is training especially helpful for low socioeconomic boys and girls as the interactions indicated? What impact would results such as these have on the planning and delivery of future conflict resolution peer mediation training programs? The questions are numerous. More research is needed to answer them.

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Table 1

Frequencies of Subjects by Sex and Socioeconomic Status

Sex	<u>Socioeconomic Status</u>		
	Low	Medium	High
Boy	22	22	15
Girl	36	23	31

Table 2  
Time, Sex, and Socioeconomic Status Main Effects and Interactions  
for Vocabulary

Variable	Hypothesis SS	Error SS	df	F	P
Time (T)	180.62	253.36	1,143	101.94	.000
Sex (S)	42.04	490.05	1,143	12.24	.001
SES	43.95	490.95	2,143	6.40	.002
T x S	1.09	253.36	1,143	.62	.434
T x SES	4.30	253.36	2,143	1.21	.300
S x SES	1.68	490.95	2,143	.24	.784
T x S x SES	8.67	253.36	2,143	2.45	.090

Table 3

Time, Sex, and Socioeconomic Status Main Effects and Interactions  
for Knowledge of Process

Variable	Hypothesis SS	Error SS	df	F	P
Time (T)	415.30	131.97	1,143	450.00	.000
Sex (S)	7.41	176.72	1,143	6.00	.016
SES	6.14	176.72	2,143	2.48	.087
T x S	.24	131.97	1,143	.26	.612
T x SES	1.79	131.97	2,143	.97	.382
S x SES	7.93	176.72	2,143	3.21	.043
T x S x SES	5.89	131.97	2,143	3.19	.044

Table 4

Time, Sex, and Socioeconomic Status Main Effects and Interactions  
for Self-Efficacy

Variable	Hypothesis SS	Error SS	df	F	P
Time (T)	32.13	90.85	1,143	50.57	.000
Sex (S)	11.00	146.33	1,143	10.75	.001
SES	15.48	146.33	2,143	7.56	.001
T x S	1.48	90.85	1,143	2.32	.130
T x SES	14.25	90.85	2,143	11.21	.000
S x SES	6.42	146.33	2,143	3.14	.046
T x S x SES	.04	90.85	2,143	.030	.971