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Acceptability and Student Outcomes of a Violence Prevention Curriculum

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Violence in schools and its prevention have become focal points for research, practice, and policy. This study investigated the effectiveness of the Second Step *violence prevention curriculum on all fourth and fifth grade students (N = 455) in one small urban school district. Scores on tests measuring knowledge of the curriculum increased significantly. Significant positive changes were also found for Behavior Assessment System for Children items reflecting student use of problem solving as well as report card items indicating respectful and cooperative behavior. Qualitative data from interviews with students provided in depth information about treatment acceptability and types of behavioral changes observed. Student interviews support the conclusion that the quantitative pre-post changes were directly connected to key components of the violence prevention curriculum. Implications for future research and practice are considered.*

Editors' Strategic Implications: *The authors present quantitative and qualitative data to suggest that a cognitive problem solving model represents a promising practice for school violence prevention efforts with urban, elementary school children. Longitudinal, experimental research will be necessary to draw any stronger conclusions.*

KEY WORDS: violence prevention; social skills; conflict resolution; elementary school students; *Second Step*; teacher interviews; program acceptability.

Violence among children and youth is still a concern of many. There was a 46 percent decrease in school violent crime victimization in the U.S. between 1992 and 2000, and this might suggest that we are doing something right. Yet,

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students between the ages of 12 and 18 were victims of 700,000 violent crimes in the year 2000 (DeVoe et al., 2002). In addition, homicide is the second leading cause of death for youth aged 10 to 19, and homicide is the number one cause of death among African American youth (aged 15–24) and the second leading cause of death for Latino youths (CDC, 2001). Another trend in youth violence is the lethality of the violence. Today, violent acts are more lethal, with a larger proportion of these acts resulting in injury or death (Elliott, 1994). In 1992, Koop and Lundberg declared antisocial behavior among children and youth a national health care issue. Obviously, there is still much preventive work needed to make our schools and communities safer.

Longitudinal and retrospective studies suggest that violent behavior patterns and school dropout are long-term and stable processes involving multiple levels of influence (Bronfenbrenner, 1989; Coie, Lochman, Terry, & Hyman, 1992; Finn, 1993; Grannis, 1991; Kazdin, 1985; Patterson, Capaldi, & Bank, 1991; Tolan & Guerra, 1994). The presence of such patterns in childhood predicts delinquency, substance abuse, depression, teen pregnancy, the failure to complete school, and incarceration as adults. Inadequate parenting, unresponsive schools, and academic underachievement are important causal factors (Cairns, Cairns, Neckerman, Ferguson, & Gariepy, 1989; Farrington, 1990; Tolan, Guerra, & Kendall, 1995).

Although our schools cannot be expected to solve these complex problems alone, schools provide an important context for intervention. Pirrello (1994) states that the "school is a logical place to actively teach and practice social skills because children are in regular contact with their peers in a learning environment" (p. 19). Teachers, both regular and special education, consistently indicate that they strongly believe social skills training should be integrated in the school curriculum (Fuller, Lewis, & Sugai, 1995). In our current school climate that continuously emphasizes strong academic achievement for all students, educators should consider the important role that social skills can play in academic performance, as students with poor social skills are likely to perform poorly in school (Brady, Tucker, & Harris, 1992; Hawkins, Farrington, & Catalano, 1998; McEvoy & Welker, 2000; Wentzel, 1993). Not only is the acquisition of academic knowledge and social skills interrelated, but the development of social skills is a key prerequisite to learning (Sugai & Lewis, 1996).

Second Step Program

Because "prevention requires promoting constructive behavior alternatives to aggression" (Frey, Hirschstein, & Guzzo, 2000, p. 102), schools must institute programs that teach prosocial skills to all children and demonstrate their ability to do so. According to Altman (1996), over 150 violence prevention/social skills instruction programs have been designed for schools (cited in McMahon, Washburn,

Felix, Yakin, & Childrey, 2000). Only a few programs "have been systematically evaluated, and even fewer have published findings of empirical support" such as those that have been published concerning the *I Can Problem Solve* (Shure, 1992) program (McMahon et al., 2000, p. 271). In addition, among those published studies regarding social skills programs, research with elementary and preschool children is rare (McMahon et al., 2000). Few studies involve interventions that are aimed at preventive goals by increasing problem solving and prosocial competencies in elementary children and little research includes entire school populations (Taub, 2002). To complicate things further, it appears there is no perfect violence prevention/social skills curriculum that fits all schools, all students, and addresses all social skills deficits. This suggests the need for local research on program efficacy (Sugai & Lewis, 1996).

Second Step (Beland, 1992) is a violence prevention curriculum based on a cognitive model. Similar to Shure's *I Can Problem Solve* program (Shure, 1992), this cognitive problem solving model teaches children how to solve social problems rather than teaching them specific behavioral responses. There is a substantial research base that documents the efficacy of the *I Can Problem Solve* curriculum and the conditions required to make it work, including long term preventive effects on children with either internalizing or externalizing behavior patterns (Shure, 1997; Shure & Spivack, 1982).

The *Second Step* program (Beland, 1992) was developed by Committee for Children, a non-profit organization whose goal is to increase the social skills competence of youth while reducing impulsive behavior. The *Second Step* program is a curriculum designed for Kindergarten—9th grade students and includes three units: "Empathy Training," "Impulse Control," and "Anger Management." The curriculum utilizes teaching strategies such as role playing, practice, feedback, and problem-solving activities. *Second Step* systematically and purposefully teaches skills that are needed to prevent children from being placed at risk for social, emotional and learning problems (Bogdan, Dye, Leitner, & Meersman, 1996).

The U.S. Department of Education lists *Second Step* (Beland, 1992) as an exemplary Safe, Disciplined, and Drug-Free Schools program, stating that there is evidence of efficacy (U.S. Department of Education, 2002). However, McMahon et al. (2000) state that whereas *Second Step* is widely used in schools, there have been few studies conducted on its effectiveness and no published studies using diverse samples of elementary school children from urban areas. This is critically important because aggressive behaviors are most common among poor urban children (Tolan & Henry, 1996).

One evaluation reported that misbehaviors of Kindergarten—5th grade students actually increased upon introduction of *Second Step* taught over a 5-month period (Madak & Bravi, 1992). Only students in the 4th and 6th grade had a report of decreased misbehaviors. The researchers suggested that the curriculum be instituted over a longer period of time to get a true picture of its effectiveness.

In a large scale randomized controlled trial involving six urban schools, Grossman et al. (1997) found moderate effectiveness in reducing observed aggressive behavior and increasing prosocial behavior in second- and third-grade students. However, parents' and teachers' ratings of student behavior did not show any differences between control and experimental groups. Additionally, Moore and Beland (1992) found increased violence prevention knowledge and skills in preschoolers and kindergartners as did Orpinas, Parcel, McAlister, and Frankowski (1995) in a sixth-grade population. McMahon et al. (2000) found that preschool and elementary students exposed to *Second Step* (Beland, 1992) demonstrated increased knowledge of nonviolent concepts and observed a decrease in problem behavior from pretest administration to post test. However, teacher, parent and child report data did not indicate behavior change. Taub (2002) found that after one year of *Second Step* intervention, third through fifth grade students in a rural setting, showed a gain in prosocial skills, but they did not show a decrease in antisocial behaviors. Overall, there is evidence that supports the use of *Second Step* in schools (Bullis, 2001; Center for the Study and Prevention of Violence, 1994; Frey & Sylvester, 1997); however, there have been different findings depending on who provided the researchers with data regarding student behavior.

Finally, although several investigations have reported on data reflecting teacher, parent, and/or child perceptions of effectiveness, no available research on *Second Step* (Beland, 1992) simultaneously examined child and teacher perceptions concerning the acceptability of this intervention. In other words, we could find no studies that looked at student outcomes from the perspectives of teachers and students *and* looked at the perceptions of teachers regarding the program in general. Prior research suggests that interventions are most likely to be implemented effectively with meaningful outcomes when the participants (i.e., students and teachers) believe that the intervention is practical to implement, is a reasonable intervention, and is likely to be effective (i.e., is acceptable; Elliott, Witt, & Kratochwill, 1991). As a result, the research reported in this paper uses a combination of data reflecting teacher and student perceptions of acceptability and efficacy as well as quantitative outcome data to evaluate the *Second Step* curriculum.

Purpose of Study

The purpose of the present study was to evaluate the efficacy of an adapted version of the *Second Step* (Beland, 1992) violence prevention curriculum implemented with fourth and fifth grade students in an effort to prevent the early risk behaviors for later violence and school dropout. The intervention was designed to divert children from an antisocial behavior path by facilitating the development of competencies needed to adjust to school, while promoting positive teacher and peer relationships.

METHODS

Research Design

This research evaluates the efficacy of the *Second Step* curriculum (Beland, 1992) that was presented to all fourth and fifth grade students in one small urban school district. Because all students were involved in the intervention, a pre-post design was used. In addition, a qualitative analysis of open-ended interviews was used to obtain student and teacher perceptions of the *Treatment Acceptability* and *Efficacy* of the violence prevention curriculum. Data on treatment acceptability and perceived efficacy are examined in relationship to the content of the curriculum and the outcome data to help determine whether the observed pre-post changes were a result of the intervention.

Context: School-Based Implementation of *Second Step*

An adapted version of the *Second Step* (Beland, 1992) curriculum was implemented in a small urban school district located in the Southeastern United States. At the time of the research, the population was divided about equally between African American (31%), Hispanic (32%), and White (30%) students. The Hispanic population included families with migrant workers. There were about 4,000 students distributed across five schools organized developmentally: high school (grades 9–12), middle school (grades 6–8), 4/5 Elementary school (grades 4 & 5), 2/3 Elementary School (grades 2 & 3), and K/1 Elementary School (grades K & 1). Seventy-one percent of the students received free or reduced lunch. Thirteen percent were in special education and 34% in remedial education.

Participants

Student Participants

The student participants in this research included 455 students (214 fourth graders; 241 fifth graders). Following procedures approved by the school district and the university's Institutional Review Board, all of these students had written parental permission to participate in the intervention and in the pre-post testing. Analyses for each measure had different numbers of participants depending on the number who had complete pre and post test data for each measure. Because the pre-testing and post-testing for content measures occurred at two different times for each of three measures, the number of participants completing all of the pre and post tests for all content tests was lower than for other measures. This difference is reflected in the statistical analyses. One hundred and twenty of the 455 students were randomly selected to participate in individual interviews. Due to absences, interview data were obtained and analyzed for 113 students.

Teacher Participants

All of the 24 teachers participating in this research were interviewed to determine their views of the strengths, weaknesses, and outcomes of the *Second Step* (Beland, 1992) curriculum.

Implementing the *Second Step* Curriculum

Bullying is an important factor in those who display violent behavior, and it has been neglected in many violence prevention programs (Connell & Farrington, 1996; Olweus, 1993). Therefore, we modified *Second Step* (Beland, 1992) to include strategies that reduce bullying (Garrity, Jens, Porter, Sager, & Short-Camili, 1996). The goals of the modified curriculum are to increase *empathy*, increase *impulse control*, develop *anger management* strategies and reduce *bullying*; it is designed to promote prosocial behaviors while preventing the development of violence in school children.

The curriculum was taught once per week in 45-minute class periods and this allowed the presentation of two lessons at a time. As a result the entire program was designed to be presented over a 17-week period. It was taught by the school counselor or a trained staff person from the university research project. Teachers stayed in the class to observe instruction and often participated in role plays. This helped teachers become familiar with what was being taught so that they could encourage children to use the skills that had been taught to resolve problems that occurred throughout the school day. This also helped teachers learn about the curriculum to facilitate efforts to train them as instructors for this curriculum in future years.

Additionally, the problem solving steps and anger management strategies from the curriculum were posted in the room where students were sent for discipline problems. When students were referred to this setting the educator in charge encouraged students to use the appropriate skills to solve their discipline problems. Further, in addition to consenting to their child's participation in this research, parents were sent home information associated with each week's lessons and were periodically asked to engage with their child in homework activities connected to the lessons.

Instruments

Subscales from the Behavior Assessment System for Children (BASC)

The BASC (Reynolds & Kamphaus, 1992) is a multidimensional approach to evaluating the behaviors of children aged 4–18 years. It contains a rating scale

for students that measures numerous aspects of behavior and personality, including positive or adaptive behaviors as well as negative or maladaptive dimensions including internalizing and externalizing behavior problems and school problems. The scales' composite scores have high internal consistency (averaging above .80) and test-retest reliability (median values of .89). In addition, there is a substantial data base supporting the validity of the BASC including strong evidence of concurrent and construct validity. Norms are based on large, representative samples and are differentiated according to age and gender (Reynolds & Kamphaus, 1992). Select subscales from the *BASC* were administered on a pre-post basis to evaluate the impact of our adapted version of *Second Step* (Beland, 1992). Rather than administering the entire instrument, certain subscales were selected because of the district's interest in minimizing the amount of time the children's day was interrupted for testing. The following subscales were selected because it was believed that their content might be directly related to the instruction provided through *Second Step*: Relations with Parents (Coefficient Alpha = .72; Test-Retest Reliability = .76), Anxiety (Coefficient Alpha = .87; Test-Retest Reliability = .77), Interpersonal Relations (Coefficient Alpha Reliability = .81; Test-Retest Reliability = .75), Sense of Inadequacy (Coefficient Alpha Reliability = .77; Test-Retest Reliability = .81) and Self-Reliance (Coefficeient Alpha = .71; Test-Retest Reliability = .64). Three items were used from the Self-Reliance Scale because these appeared to be directly related to the problem solving instruction provided through *Second Step*.

The Bully Survey

The *Bully Survey* with revisions by Jarrett (1998) is a 42-item revision of the Bully Survey developed by Garrity and colleagues (1996). Follow-up research on this instrument has demonstrated that it has adequate psychometric properties (Hunt, 2002). Based on Hunt's (2002) research, items loading on two factors ("positive coping skills" and "negative coping skills") were analyzed to examine the impact of the intervention. Positive coping included 13 items loading above .40 and had a reliability index of .83 (Coefficient Alpha). Negative Coping included 6 items loading above .40 and with a reliability index of .66 (Coefficient Alpha).

Second Step Content Tests: Empathy, Impulse Control, and Anger Management

The *Second Step* (Beland, 1992) curriculum includes 5 test items measuring the content of each of the three main sections of the curriculum (i.e., Empathy, Impulse Control, and Anger Management). Because reliability data for these instruments are not yet available, we sought to increase the reliability of these measures by adding five items to each of these tests to create three 10-item instruments to measure these three constructs. The original instruments provided

by the publisher of *Second Step* has demonstrated construct validity as an outcome measure in prior research on this curriculum (McMahon et al., 2000) and our revised versions of the instrument have face validity. These instruments were administered on a pre-post basis for each of these three sections during the session that immediately preceded and followed each of these sections of the curriculum. As a result these instruments were administered in six separate testing sessions. Analyses of the content test data were based on complete data sets for all three tests so that a repeated measures MANOVA could be run with these three dependent measures. This resulted in a reduced number of participants for these analyses compared to the remaining quantitative analyses.

Behavior Grades

Student report card grades were analyzed to examine teacher perceptions of social growth and development for the first and fourth quarters of the year. The first quarter grades were used as pre-test measures, and the fourth quarter grades were used as post-test measures. The following social growth and development grades were analyzed: Respects the Rights of Others, Listens and Follows Directions, Cooperates with Teacher, and Cooperates with Classmates. These dependent measures provided an important measure of teacher perceptions of school-based behavioral change.

Student Interviews

Open ended, semi-structured interviews were conducted individually with 113 of the participating students. These interviews were conducted in a quiet portion of the library. All responses were written by the interviewer on an interview form. Interviews were scheduled for 30 min resulting in a duration of 15–30 min per interview. Interviews sought to determine student perceptions of the acceptability and impact of the *Second Step* (Beland, 1992) curriculum. The following interview questions were asked: Should other students learn [the project] lessons? What skills have you used from [the project]? When did you use these skills? How have you changed the way you act at school because of things you learned from [the project]? Did your parents read the take-home letters? Did you talk about what you were learning? About what?

Teacher Interviews

Open ended, semi-structured interviews were conducted with the participating teachers and were scheduled for 30 min (range = 15–30 min). Teachers were asked to respond to the following questions. What worked best? What was problematic? What suggestions do you have for change? Have you seen instances of

students using concepts/skills from the curriculum? If so, please give an example. The interviewers wrote teacher responses on interview forms.

RESULTS

The results of quantitative analyses for the dependent variables are presented first (i.e., content tests, bullying survey, BASC scales, report card data). In each instance a multivariate analysis was conducted first to see if there were interactive effects between grade level and time (pre/post evaluation). In those cases that had significant interactions, those results are reported. For all others, we report only the multivariate analysis that combines all fourth and fifth graders into one group. Pre/post means, effect sizes (Partial Eta Squared) and significance levels are reported for each variable in Table I.

Content Tests

A repeated measures MANOVA was conducted with the three curriculum units as a three-level within subjects variable and with grade as a between subjects variable. There was a significant interaction between grade and pre post outcomes, Wilkes Lambda, $F(5, 155) = 4.65$, $p < .01$. Post-hoc analyses indicated a significant interaction between grade and pre post outcomes on the Anger Management unit only. Fifth grade students appeared to make significantly more gains on the

Table I. Means for Pre/Post Differences

Measure	Pre-Test	Post-Test	*N*	Partial η^2	*p*
Content tests					
Unit I: Empathy	7.38 (1.53)	8.11 (1.53)	159	.172	<.001
Unit II: Impulse control	5.86 (1.71)	6.91 (1.82)	159	.249	<.001
Unit III: Anger management	6.82 (2.15)	7.69 (1.81)	159	.171	<.001
Bully Survey					
Positive Coping	.798 (.221)	.844 (.181)	319	.042	<.001
Negative Coping	.246 (.262)	.192 (.239)	319	.039	<.001
BASC					
Relations with parents	.887 (.148)	.904 (.160)	318	.011	.067
Anxiety	.432 (.256)	.429 (.308)	318	.000	.850
Interpersonal relations	.841 (.201)	.850 (.228)	318	.002	.441
Sense of inadequacy	.237 (.208)	.219 (.219)	318	.009	.088
Self reliance[a]	.731 (.311)	.785 (.291)	318	.026	.004
Report card grades					
Respects the rights of others	1.99 (.50)	2.09 (.66)	399	.021	.003
Listens and follows directions	1.90 (.63)	1.97 (.75)	399	.009	.053
Cooperates with teacher	2.01 (.52)	2.11 (.72)	399	.021	.004
Cooperates with classmates	2.01 (.45)	2.09 (.63)	399	.015	.013

[a]Partial Scale.

content test measuring knowledge about Anger Management skills (5th grade pre-test mean = 6.29; post-test mean = 7.53) than fourth grade students (4th grade pre-test mean = 7.96; post-test mean = 8.02).

Because there was no significant interaction for empathy or impulse control, a repeated measures Multivariate Analysis of Variance (MANOVA) was conducted for the content tests combining all fourth and fifth grade students into one group. This analysis had only a within subjects analysis to examine pre-post effects. There were significant differences in the means for pre and post testing (Wilks Lambda, $F(3, 156) = 39.685$, $p < .001$). Univariate follow-up tests showed significance on the two remaining measures: Empathy, $F(1, 185) = 32.82$, $p < .001$, and Impulse Control/Problem Solving, $F(1, 158) = 52.33$, $p < .001$. The means and effect sizes describing these pre-post differences are reported in Table I. The effect sizes for the three content tests were low as Table I reveals a range from .171–.249.

Results for Bullying Survey

Mean scores for Positive Coping items and Negative Coping items were created based on principal components analysis of the scale (Hunt, 2002). A repeated measures MANOVA conducted on the mean scores for the Positive and Negative Coping items showed significance, Wilkes Lambda, $F(2, 317) = 9.88$, $p < .001$. Follow-up univariate analyses showed significance for both Positive and Negative Coping items, $F(1, 138) = 12.81$, $p < .001$ and $F(1, 138) = 13.92$, $p < .001$. An analysis of means indicated that negative coping decreased and positive coping increased from pre-testing to post-testing; however, the effect sizes (Partial Eta Squared) were very low (see Table I).

Results for Scales from the Behavior Assessment System for Children (BASC)

An analysis was conducted using pre and post testing with mean scores from selected items and scales from the BASC. The following scales and partial scales were included. A repeated measures MANOVA was conducted using the BASC subscales that were included in this research (Relations with Parents, Anxiety, Interpersonal Relations, Sense of Inadequacy and Self-Reliance) and this resulted in a significant Wilks Lambda $F(5, 313) = 2.28$, $p < .05$. Follow-up univariate tests showed significance for the partial Self-Reliance scale, $F(1, 317) = 8.38$, $p < .01$. However, the effect size for Self Reliance was very low (see Table I).

Behavior Grades from Report Card Data

A repeated measures MANOVA conducted with these items as dependent measures revealed overall significance, Wilks Lambda, $F(4, 395) = 2.53$,

$p < .05$. Post-hoc analyses indicates significance on the grades reflecting Respects the Rights of Others, Cooperates with Teacher, and Cooperates with Classmates, $F(1, 398) = 8.69$, $p < .01$, $F(1, 398) = 8.52$, $p < .01$ and $F(1, 398) = 6.22$, $p < .05$. Analysis of means indicated that all three items increased from quarter one (pre-testing) to quarter four (post-testing); however, the effect sizes (Partial Eta Squared) for these analyses were very low (see Table I).

Student Interview Data

What Skills Were Learned?

One interview question asked what students had learned from the curriculum. Overwhelmingly, students cited anger management skills most often. Almost 60% of the responses included skills within the Anger Management Unit, such as ignoring/walking away (12.7%), calming down (10.2%), breathing deeply (9.6%), and counting backward (9.6%). Almost 14% of students cited empathy skills, such as communicating, and identifying feelings (13.3%) and active listening (6%). Students also mentioned Problem Solving/Impulse Control skills (5.4%). Examples include brainstorming a solution (1.8%) and self-control (1.8%). Approximately 10% of students indicated learning bully-proofing skills, such as telling an adult (3.6%) and avoiding mean people (1.2%). Several students (10.8%) indicated that they either had not learned or had not used skills. Examples of statements made by students reflecting on their behavior changes include the following: "I learned how to deal with getting in a fight, how to talk it out and figure out how to be friends again." A student also said: "How to solve problems — She gave us steps to do. Take deep breaths, count backwards say good things to yourself and think about good times."

Where Skills Were Used?

Students indicated that they used skills from the intervention in a variety of places, and not just at school. Whereas a number of the responses indicated using skills at school (21.6%), others indicated using these skills at home (34.3%) and in their neighborhood or community (12.7%). Illustrative examples of these student responses included: "I was about to fight with somebody at recess. We were playing kickball. . .we were fussing about an out. This boy said something, I had my fists up. Then I stopped and listened instead." Another student reported: "I got mad at my sister. She took my CD and broke it. I calmed down and took three deep breaths and then I listened to another CD. I told her I felt mad when she broke my CD."

Examples of Skills

Students were asked to give examples of times they had used skills from the intervention. A majority of the examples included instances in which students used Anger Management skills (66.1%). Students also gave examples of using Empathy skills (14.5%) and Problem Solving/Impulse Control skills (5.6%). Several students (4%) indicated they could not provide an example of using skills from the intervention. The following are examples of student responses in this area: "When someone pushes me I get really mad and frustrated. I want to do it back. I think of what Ms. H [the school counselor] told us about impulsive thinking and take three deep breaths and it works out." A student also said: "When we were at recess boys kept calling me 'shorty' and I felt like fighting them. I took deep breaths and cooled down. My friends started cheering me up and I didn't fight the boys."

Parent Involvement

Several questions assessed whether students thought their parents read letters sent home about the curriculum, whether students discussed what they were learning with parents, and whether parents tried to help students use the skills. Most students (82.3%) thought that their parents read the letters. Most also indicated that they talked about what they were learning with parents (84.6%). Sixty-five percent of the students indicated that their parents helped them with the skills they had learned. Students indicated that parents most often reinforced what they were learning by talking about anger management skills (39%), bully-proofing skills (14.6%), empathy (12.2%), and problem solving/impulse control (4.9%). A number of students (29.3%) related that parents often helped reinforce skills by talking about or practicing the role plays. Illustrative examples of these responses included the following: "They did some role plays with me and they acted like they were the bully." Another student reported: "They said that next time somebody wants to fight with me that I should tell the teachers, so that is what I do." And, "My dad tells me to take deep breaths when I'm angry."

Acceptability Data from Student Interviews

Ninety-eight percent of students interviewed individually indicated that they thought other students should learn the lessons. The reasons cited most often included helping students avoid fights and knowing what to do when bullied. When asked what they liked best, students overwhelmingly indicated the role-playing (57%) was the thing they liked best. A number of students also indicated the activities/games (6%), the teacher (5.6%), and the movies (5.2%) as their favorite things. When asked what they liked least about the lessons, a number

of students (29.7%) indicated they could not think of anything they did not like. Several students indicated they did not like the content tests (23%), completing the surveys (10.5%), the movies (5.2%), and the discussions (4%). When asked what skills they learned, student most often indicated taking deep breaths (10.5%), how to calm down (9.3%), counting backwards (10.3%), and "I messages" (9.7%). Illustrative examples of student acceptability data were: "Because learning how to calm down can keep you from getting into fights." "They need to learn how not to be a bully. I don't want others to get bullied like I have." "Because everyone needs to learn how to control themselves." "The lessons help kids learn about making good decisions."

Teacher Interview Data

Teacher interviews revealed several findings that complement the data provided by students. Teachers indicated that the role plays, the anger management lessons, the problem solving steps and teaching children to read body language were particularly helpful. Most feedback suggesting potential ways to improve the implementation of *Second Step* (Beland, 1992) was focused on mechanics of implementation. For example, suggestions included starting the lessons earlier in the year, using materials in Spanish where appropriate, and doing less testing of the students. In addition teachers suggested that personnel teaching *Second Step* observe and intervene with students in settings outside of the classroom (i.e., playground), add video support materials and provide lessons in smaller groups. All but one of the teachers interviewed valued the *Second Step* lessons. Examples describing the positive outcomes of this curriculum included observable effects on students related to anger management skills, empathy, avoiding bullying, and solving their own problems rather than involving the teacher.

DISCUSSION

One important finding of this study is the significant gains found across several levels using different data sources in a racially diverse population of students. Based on content tests, significant gains were obtained from pre to post testing in the areas of empathy, anger management, impulse control, and bullyproofing, which is consistent with previous research. Students also showed significant gains from pre to post test data for the *Self Reliance* items on the BASC. The effect size data for the content tests provide support for the efficacy of this curriculum. However, the very low effect sizes for the other measures (BASC, Bullying Survey and Behavior Grades) suggest that the statistically significant findings for these variables were not meaningful.

Significant gains for the Social Growth and Development grades on student report cards were obtained between the first and fourth quarter grading periods.

Teachers gave students grades on behaviors such as Respects the Rights of Others, Listens and Follows Directions, Cooperates with Teacher, and Cooperates with Classmates. Significant gains occurred for all but Listens and Follows Directions; however, the very low effect sizes suggests that these significant findings were not meaningful.

The teacher interview data illustrated the teachers' belief in the effectiveness of the curriculum and this finding provides critical support for the curriculum given that teachers are likely to sustain a program if they believe that it is effective. Further indication of the program's high acceptability is evidenced by the school's decision to use the *Second Step* (Beland, 1992) curriculum, with the integrated bullyproofing lessons, as the school's state mandated character education program. In addition, two years following the first implementation of this program, the entire school district decided to implement *Second Step* (Beland, 1992) in all of its schools (K-8).

The lack of a control group makes it difficult to conclusively attribute changes in content test scores to the curriculum. However, the student interview data provide evidence that lend further support for the conclusion that this curriculum had an impact on students' content test scores. The types of behavioral changes described in student interviews supports the hypothesis that the quantitative pre-post changes in knowledge about empathy, anger management and impulse control (i.e., social problem solving skills) are connected to key components of the violence prevention curriculum (i.e., students provided detailed descriptions of their increased use of anger management skills, empathy, and social problem solving strategies from the curriculum).

The answers to student interview questions asking where skills were used and if they spoke with their parents about the lessons are particularly interesting given the authors' previous experience. One common complaint teachers give as to why school violence prevention programs will not be successful is that the skills will not generalize to the home nor will parents encourage their use in school. Several times the authors have heard teachers say things like "Why take the time to teach the skills of peaceful conflict resolution, when fighting is supported in the home?" or "Parents teach skills that are counterproductive in the school." Students interviewed suggest the opposite; students did use these skills at home and their parents did support the use of these newly learned skills/behaviors both at school and at home.

Implications for Future Research and Practice

Future research is needed to explore hypotheses that may help to explain the mixed results in this investigation. Several possibilities need to be explored. Some prior research has suggested that long periods of time are needed to observe generalization of effects to a range of behaviors in various environmental

circumstances and to see evidence of attitudinal and emotional changes that can result from *Second Step* (Beland, 1992; Madak & Bravi, 1992). This is congruent with research that found changes in knowledge about the content of the curriculum and/or behavior but no attitudinal or emotional changes as reflected by ratings by children, teachers or parents (Grossman et al., 1997; McMahon et al., 2000; Moore & Beland, 1992; Orpinas, Parcel, McAlister, & Frankowski, 1995). These findings, along with the current research, suggest the need for longitudinal research to investigate the comprehensive effects of this program with a focus on generalization of effects from knowledge of the curriculum content to behavior and attitudinal changes. Further, strong environmental supports may be needed to find comprehensive changes from this type of curriculum. Thus, future research may need to examine the interactions between the curriculum, environmental supports for using skills from the curriculum, and the time needed to solidify comprehensive changes. These factors may be particularly important in producing findings with meaningful effect sizes.

Another hypothesis that might explain these mixed findings is the quality of the measures used. A stronger evaluation might be obtained by: using the entire BASC rather than select subscales, using the recently revised bullying survey which has stronger psychometric support (Student Survey of Bullying Behavior; Hunt, 2002), developing content tests with better reliability and validity, and using teacher behavior rating scales with sound psychometric data instead of teacher behavior grades.

This investigation did not use a control group and future research offering this type of control might contribute to knowledge about the impact of this curriculum. However, it is underscored that naturalistic study of this type of school-based intervention is also important. In this case the school personnel and researchers were focused on developing a school-wide intervention. Given that this was the only elementary school in the district with fourth and fifth grade students, it was difficult to find a school that could serve as a meaningful control school. A strength of this investigation was its use of mixed methods with quantitative outcome data along with qualitative interviews with teachers and students to evaluate outcome and acceptability of this program. The use of qualitative interviews contributed to understanding the meaningful pre-post changes that were observed. Future research would enrich our knowledge in this area by expanding on this approach to mixed methodology.

It is important to see if the gains shown here are enduring. Weissberg, Caplan, and Sivo (1989) state that without program continuity, any benefits seen initially will not continue beyond six months. There must be continuous teaching of these skills and discussion of problem solving strategies. Tracking these students in middle and high school to see if they have retained their social skills is a viable option given that there are plans to implement the research project in all of the district's schools at elementary and secondary levels. A plan currently exists to

train teachers to use the *Second Step* program within the format of classroom meetings (Edwards & Mullis, 2003). This would allow for skills training and classroom and personal problem solving within the classroom setting. Strategies to get greater parent involvement are also suggested.

Additionally, it would be interesting to see the effect of peer teaching of the curriculum on student behavior. Given that the district's high school indicated that they wanted to participate in a violence prevention program, high school students could be trained to deliver the curriculum to younger students. There is potential for greater impact on generalizability of newly acquired skills in the neighborhood and community if the lessons are taught by near same age role models.

"Violence-prevention programs, although important for schools, are not their primary mission" (Kelder et al., 1996, p. 29). This view appears to be increasing, given the emphasis on nationwide academic testing. Therefore, it is critical to elicit the support of district personnel, administrators, and teachers. Implementing a violence prevention program that is empirically sound, evaluated locally and structured to fit the needs of the school is essential.

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