

Evaluation of the Second Step Violence Prevention Program at a Rural Elementary School

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Abstract. The Second Step Violence Prevention Program was implemented in a rural elementary school with a population of mostly poor, white students. A year-long longitudinal evaluation with students in the third through sixth grades was conducted to assess the effectiveness of the intervention. For comparison, data were also gathered from students in a nearby school without such an intervention. Results on teacher ratings on the School Social Behavior Scales (Merrell, 1993) indicated that there were significant improvements in ratings of social competence ($p < .01$) and antisocial behaviors ($p < .05$) at the intervention school when compared with students at the nonintervention school. Independent behavioral observations also showed improvements in some prosocial behaviors, such as engaging appropriately with peers. Observations did not find the same improvement in antisocial behaviors at the intervention school. Results and implications are discussed.

Introduction

Although recent events in the media have brought the issue of violent youth behaviors to the fore, there remain more questions than answers about what can help to prevent such behaviors. For some high-risk children, an identifiable pattern of excessive aggression and impulsive behavior emerges as early as age 3 (Chamberlain & Nader, 1971). Yet tragedies in Littleton, Colorado and elsewhere have highlighted the fact that youth violent behaviors are not necessarily perpetrated by children who are targeted early on as “problem” children.

It has been estimated that 25–30% of school-aged children exhibit general behavior problems (Cowen et al., 1975). Community studies have shown that between 4% and 17% of children in the general population meet crite-

ria for serious emotional disturbance (Costello, Messer, Bird, Cohen, & Reinherz, 1998), and about 10% of the school-aged population qualify for a DSM-III-R diagnosis (Angold, Costello, Farmer, Burns, & Erkanli, 1999).

What do we know about the early indicators of aggressive behavior? Poking and pushing other children in the elementary school years, negative and defiant behavior (Spivak & Cianci, 1987), and self-centered verbal responses to others such as interrupting and blurt-ing out thoughts (Dodge, Pettit, McClaskey, & Brown, 1986) have been identified as some of the early warning signs of later aggressive and impulsive behavior. Such children are also more likely to be neglected by their peers, to be the victims of bullying by other children, to have low self-confidence, to underachieve in school, and to exhibit social withdrawal (Coie, Dodge, & Kupersmidt, 1990).

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Concern about youth violence has led to the development and implementation of a number of violence prevention programs in schools throughout the country. The vast majority of these programs take place in urban, inner-city neighborhoods, and most of these programs focus on adolescents. Far fewer interventions have been aimed at young children, even though many of the undesirable behaviors and accompanying attitudes are evident long before adolescence. For instance, one large scale survey indicated that children in Grades 3 through 5 reported that during the past week, 15% had been sent to the office for disciplinary problems, 13% tried to start a fight, 27% hit someone, and 12% reported being threatened with a gun or knife (Embry, Flannery, Vazsonyi, Powell, & Atha, 1996). By the time children get to middle school, large numbers have engaged in aggressive, risky, or bullying behaviors (Bosworth, Espelage, DuBay, Dahlberg, & Daytner, 1996).

Research indicates that aggressive children have deficits in social skills knowledge and are more likely to respond impulsively when confronted with social problems (Dodge et al., 1986). Preliminary research has found intervention programs to be effective in increasing social skills knowledge, improving social behavior, and preventing declines in social behavior (e.g., Hudley & Graham, 1993; Reid, Eddy, Bank, & Fetrow, 1994; Slaby & Guerra, 1988).

The Second Step program attempts to improve children's social competence by developing student skills in the areas of perspective taking, social problem solving, impulse control, and anger management. The Second Step Violence Prevention Curriculum (Beland, 1992) is a school-based social skills curriculum available through the Committee for Children in Seattle, Washington. Second Step is a primarily classroom-based program for preschool through junior high students that teaches children to change the attitudes and behaviors that contribute to violence. The curriculum teaches social skills to reduce impulsive and aggressive behavior in children and increase their level of social competence (Sylvester & Frey, 1994). The curriculum draws upon the

growing body of research regarding the social skill deficits that often accompany aggression, as well as the research regarding the correcting or prevention of these deficits. The Second Step lessons employ the techniques of modeling, rehearsal, role play, and verbal mediation that have been shown to be effective in teaching the skills of perspective taking (empathy) (Feshbach, 1989), impulse control (e.g., Spivack & Shure, 1982), and anger management (Novaco, 1975). The content of the lessons varies according to the grade level, and the skills targeted for practice are designed to be developmentally appropriate. At all grade levels, Second Step provides opportunities for modeling, practice, and reinforcement of the new skills. The Second Step curricula for preschool and elementary students consist of three kits: Preschool/Kindergarten, Grades 1–3, and Grades 4–5. In these kits, the main lesson format employs an 11-inch by 17-inch photo lesson card.

Preliminary research in urban and suburban areas indicated that after participation in Second Step, children's perspective taking and social problem-solving abilities improved significantly when compared with controls (Sylvester & Frey, 1994). This research, however, did not assess changes in children's behavior after the intervention. In another study, a large scale randomized controlled trial of Second Step was conducted in six urban schools. The researchers found modest reductions in levels of observed aggressive behavior and increases in neutral and prosocial behavior, especially in the playground and cafeteria settings, among second and third graders (Grossman et al., 1997). They did not find changes in teacher-reported antisocial or prosocial behavior or in parent-reported aggressive behavior among the intervention group when compared with controls.

This project investigated whether the Second Step curriculum can improve or prevent declines in social behavior in a rural elementary school, with an ethnically homogeneous, mostly white sample with a high proportion of children from low-income families. No research to date has examined this curricu-

lum or other similar ones with a primarily rural, poor population.

Method

Participants

The participants involved in the evaluation at the intervention school were 54 students in Grades 3 through 5. All of the children in the intervention school received the Second Step program. Evaluation information was not collected for students in Grades 1 and 2 because another, unrelated social skills intervention was taking place concurrently, which could potentially confound the results of the Second Step program. Sixth graders were not part of initial data collection because they would be moving on to middle school the following year.

For this study, half the children in Grades 3, 4, and 5 were selected to participate in the evaluation. To reduce the burden on school staff and increase ease of tracking and evaluation, one of the classrooms in each grade was chosen at random for the study. All of the students in the randomly chosen classrooms were invited to participate in the evaluation. Passive consent was obtained via letters sent home to parents explaining the risks and benefits of their child's participation in the project. Consent was obtained for all but one invited student. Fifty-four students had consent to participate in the study. Of these 54 students who participated in the initial wave of data collection, 18 were in the third grade, 26 in the fourth grade, and 10 were in the fifth grade. Eighty-one percent ($N = 44$) of those students were present for all three data collection points. Ten students moved during the course of the evaluation and were lost to follow-up.

At the comparison school, one classroom for each of Grades 3, 4, and 5 was selected randomly for participation, to reduce burden on school staff. As this school has only split grade classrooms, students from one 3/4 classroom and the fifth graders from one 5/6 classroom were selected for the initial study. Thirty-three students at the comparison school participated in the initial wave of data collection. Of these, 8 were in the third grade, 13 were in the fourth grade, and 12 were in the fifth grade. Eighty-five percent

($N = 28$) of the initial participants were present for all three data collection points. Five students had moved during the course of the evaluation and were therefore lost to follow-up.

Setting

The intervention school involved in this study was located in a rural community in New England. The intervention school had 289 students enrolled in Grades 1–6. There were two classrooms per grade, with an average of 20 students per classroom. Forty percent of the students in this school were eligible for free or reduced lunch, an indicator of low SES.

To locate a comparison site, all elementary schools within 15 miles of the intervention school were contacted regarding the study. Of the 12 schools contacted, one agreed to participate. This school was similar to the intervention school in that it was located nearby in the same rural area, had a similar total enrollment (331), the same average class size (20), and a similar proportion of students eligible for free or reduced lunch (37% for the comparison school).

Intervention Procedures

The Committee for Children (1998) has outlined a number of steps for successful implementation of the Second Step curriculum. The intervention school followed these steps as outlined. Lessons were delivered by classroom teachers for approximately 30 minutes per day, twice a week. The teacher showed the relevant photo card to the class and followed the lesson outline on the reverse of the card. The instructional techniques included discussion, teacher modeling of the skills, and role play (Sylvester & Frey, 1994, 1997).

The intervention school implemented the Second Step curriculum in all school classrooms, with the intention of making the program a permanent part of the school curriculum for all students in the school. Second Step was to be integrated into the culture of the school, and was expected to become a permanent part of the curriculum.

Administrative support and funding at the intervention school were available prior to

implementation. The school's guidance counselor and one teacher attended the "Training for Trainers" 2-day workshop given by the designers of the Second Step curriculum. The intent of this workshop was to train staff to return to their own school to conduct their own staff trainings in the program. The workshop included written materials, videotapes of teachers giving the lessons in classrooms, and hands-on instruction in delivery of the program. After attending the workshop, the guidance counselor and teacher gave at least 6 hours of instruction to all of the teachers in the school in delivery of the intervention, following the guidelines from the trainers' workshop they had attended. Workshop materials, including videos, were used as part of the school staff training.

The school's administration helped the teachers build time into their weekly class schedules to deliver the intervention. As recommended by the Committee for Children, the trainers and the principal served as the support team for the other school staff when implementing the program. As the support team, these staff members provided support to teachers during implementation and as needed once the program was being delivered. For example, the principal of the school gave Second Step lessons in each classroom to model for the teachers how to deliver the intervention. The guidance counselor had regular, ongoing contact with teachers as needed to discuss questions or concerns about delivery of the intervention. Implementation and ongoing delivery of the intervention went smoothly. Per the reports of the support team, Second Step continued to be delivered as intended by the program's designers: twice a week, at least 30 minutes each lesson, in all school classrooms, throughout the duration of this evaluation. Although the support team members observed some lessons to see how the program was being implemented in classrooms, no formal data were collected to verify the fidelity of the teachers' implementation of the curriculum.

Data Collection

Data collection took place during three time periods, each lasting approximately 2

weeks. The first data collection period (Time 1) was in January 1996, just prior to the start of the intervention. The second data collection period (Time 2) took place prior to the end of the school year in May 1996. The third data collection period (Time 3) took place one year after the implementation of the intervention in January 1997.

Measures

School Social Behavior Scale. The School Social Behavior Scale (SSBS) (Merrell, 1992, 1993) was completed by teachers for each student at each of the three data collection times. The SSBS is a 65-item questionnaire that assesses Social Competence (e.g., follows classroom rules, has good leadership skills, remains calm when problems arise) and Anti-social Behavior (e.g., gets into fights, is easily irritated, whines and complains). Teachers rate each item on a 1-5 scale from *Never* to *Frequently*. The SSBS takes approximately 5–10 minutes to complete. It has construct validity, a sound factor structure, strong internal consistency (Cronbach's alpha $>.95$), good test-retest reliability (Merrell, 1993), and good interrater reliability (Merrell, 1993).

The SSBS was completed by classroom teachers at each time point. For Time 1 and Time 2, teachers received \$25 for completion of forms for all participating students in their classes. In the first year of the program, students were chosen to participate by classroom. In the second year, at Time 3, students had different teachers, and they were distributed in classrooms across the schools. Teachers had between 2 and 18 participating students in their classrooms at Time 3. Teachers received \$1.50 per completed form at Time 3, to reflect the time spent completing forms.

Behavioral observations. Each child was observed for fifteen 90-second (60 seconds observe, 30 seconds record) partial interval recording sessions at each data collection point. Observed behaviors that related to the goals of the Second Step program included three social competency or prosocial behaviors: responds to directions from adults, engages appropriately with peers, and follows

Table 1
Behavioral Observation Coding Definitions

Coding Item	Definitions
Engages appropriately with peers	<p>YES: Student talks to, works with, plays with, or otherwise engages with other students in a respectful manner.</p> <p>NO: Student is bossy with peers, displays a negative tone of voice when speaking with peers, or hurts, bothers, teases, makes fun of, or otherwise harasses peers.</p>
Responds to directions from adults in an appropriate manner	<p>YES: When any directions are given from staff or teachers, the student does what was requested.</p> <p>NO: When given a verbal direction, the student talks back, ignores, asks irrelevant or extraneous questions.</p>
Fights/argues with peers	<p>YES: Student physically or verbally fights or argues with one or more peers during the observation period (includes hitting, pushing, or shoving).</p> <p>NO: Student does not fight or argue.</p>
Follows classroom rules	<p>YES: All classroom rules, as posted on the board, are obeyed for the duration of the observation period (1 minute).</p> <p>NO: Any classroom rule (except "looks directly at speaker") is disobeyed at any point during the observation period.</p>
Bothers/annoys/distracts other students	<p>YES: Student pokes, prods, or verbally distracts other student(s) <i>without</i> fighting or arguing with them.</p> <p>NO: Student does not engage in the above behavior during the observation period.</p>

classroom rules; and two antisocial or negative behaviors: bothers/annoys/distracts other students and fights/argues with peers. All behaviors were operationally defined (see Table 1). The 15 recording intervals at each data collection point took place on at least two different days, in a variety of classroom settings (e.g., structured classroom activity, gym or music class) over each 2-week data collection period. Observers were the project coordinator and trained undergraduate assistants. All observers were trained for a minimum of fifty 90-second coding intervals (a total of 75 minutes) prior to beginning observations for the study.

Frequencies were computed for each observed behavior by dividing the number of times the behavior was observed by the number of total observations of that behavior. To assess interrater reliability, each trained ob-

server conducted simultaneous observations on the same child as the project evaluator for at least thirty 90-second coding intervals, for a total of at least 45 minutes, and at least 270 observed behaviors. Across all the simultaneous coding intervals, interrater reliability was fair to good (Cohen's kappa = .61-.91) for the five trained observers. Additional training was given to the one observer who had interrater reliability below .8. This observer continued to have low interrater reliability, and was subsequently given project tasks other than behavioral observation. There was good interrater reliability (Cohen's kappa = .81-.91) for the four observers who conducted behavioral classroom observations for use in this study.

Behavioral observations were completed during the same 2-week intervals as the SSBS. All observations were completed in the class-

Table 2
Analysis of Variance for SSBS Social Competence and
Antisocial Behavior Ratings

Source	Sum of Squares	<i>df</i>	Mean Squares	<i>F</i> Ratio
Within subjects—Social Competence				
Time	5167.99	2	2584.00	19.80***
School x Time	1728.34	2	864.17	6.62**
Error	17744.93	136	130.48	
Within subjects—Antisocial				
Time	705.78	2	352.89	2.27
School x Time	1370.16	2	685.08	4.41*
Error	20801.95	134	155.24	

* $p < .05$. ** $p < .01$. *** $p < .001$.

room during the course of students' class activities. This was because the intervention was designed to effect students' classroom behavior, as the intervention focused on classroom interactions and was taught by the classroom teachers.

Results

Teacher Ratings

A repeated measures 2 x 3 ANOVA was used to assess if there was a significant change in Social Competence on the SSBS from pre-

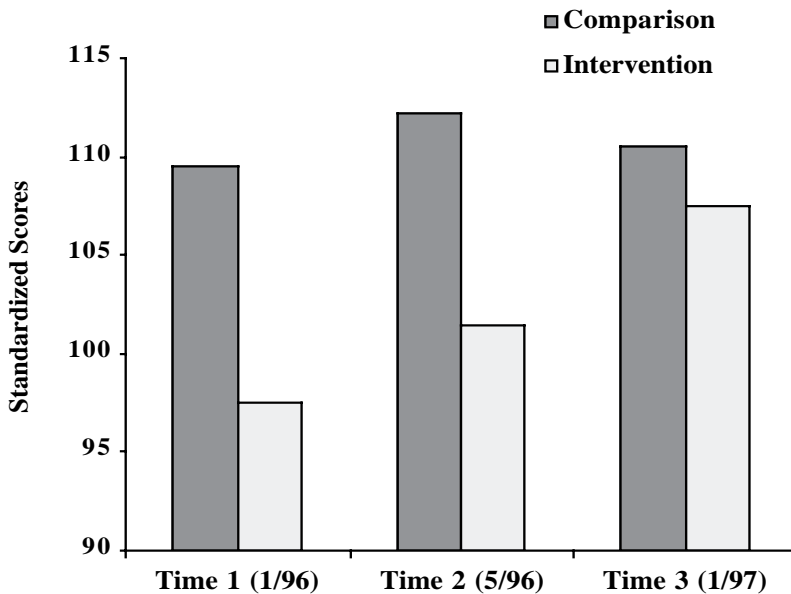


Figure 1. Teacher ratings of Social Competency on the School Social Behavior Scale.

Table 3
Percentage (Weighted) Of Time Students Engaged In Behaviors

		Intervention School Mean (<i>SD</i>)	Comparison School Mean (<i>SD</i>)
Bothers/Annoys other children	Time 1	7.5% (8.7%)	10.3% (10.8%)
	Time 2	5.8 (7.2)	12.7 (14.2)
	Time 3	7.7 (9.5)	11.8 (14.5)
Follows Directions (unweighted)	Time 1	39.5 (20.4)	25.6 (13.8)
	Time 2	36.1 (16.1)	31.6 (17.5)
	Time 3	22.6 (13.7)	13.9 (10.6)
Engages appropriately with peers	Time 1	52.3 (21.7)	36.4 (22.0)
	Time 2	46.4 (20.7)	37.8 (23.5)
	Time 3	44.3 (20.9)	38.9 (17.2)
Follows classroom rules	Time 1	96.7 (6.9)	92.3 (10.1)
	Time 2	90.3 (12.8)	95.4 (7.4)
	Time 3	91.7 (10.8)	96.0 (7.3)

test (January 1996), to follow-up (May 1996 and January 1997). Full data sets were available for 70 children ($n = 44$ for the intervention school; $n = 26$ for the comparison school) for these analyses. There was a significant time by school effect, $F(2, 136) = 6.62, p < .01$ (see Table 2). As can be seen in Figure 1, the experimental children were rated as much less socially competent than the children in the comparison school before the start of the intervention. One year later, the children in the two schools were rated similarly by their teachers, as a result of improvement in the intervention group. Subsequent analyses did not reveal any interaction effects for gender or grade level.

Teacher ratings on the Antisocial Behavior scale of the SSBS were also assessed with a 2×3 repeated measures ANOVA by school. Full data sets were available for 69 children ($n = 43$ for the intervention school; $n = 26$ for the comparison school) for these analyses. Using an alpha level of .05, results indicated a significant time by school effect, $F(2, 134) = 4.41,$

$p < .05$ (see Table 2). These results are due to the combined effects of a slight decrease in antisocial behavior at the intervention school and an increase in antisocial behavior at the comparison school. Results can be seen in Figure 2. Subsequent analyses did not reveal any unique effects for gender or grade level.

Behavioral Observations

Ratios were computed for the proportion of time each target behavior was seen during the total time of observation for each child at each of the three time points. For example, if a child was observed for 15 coding intervals, and performed a behavior during 5 of the intervals, the frequency for that behavior for that child was 33%. Children did not always have the opportunity to perform some of the observed behaviors in every coding interval. For example, if an adult did not issue a directive to the child or the class during 5 of the 15 observed intervals, the ratio was weighted accordingly. In this case, the number of possible intervals during which the child could perform

the behavior was divided by the number of intervals the behavior was observed.

Two by three repeated measures ANOVAs were performed for each of the four following observed behaviors: Bothers/Annoys Other Children, Follows Directions From Adults, Engages Appropriately With Peers, and Follows Classroom Rules. The observed behavior, Fights or Argues With Other Children, could not be analyzed because it did not occur with enough frequency. Table 3 summarizes the mean percentages of these observed behaviors in each school at each time point. Two of the four analyzed observed behavior variables were statistically significant using an alpha level of $p < .05$: Engages Appropriately With Peers ($F [2, 142] = 5.58, p < .01$) and Follows Directions From Adults ($F [2, 142] = 7.92, p < .001$). Engages Appropriately With Peers was significant on the repeated measures analysis primarily due to an improvement at Time 2 in the comparison school on this behavior, and a decline at the intervention school at Time 2. There was little change from Time 1 to Time 3

on this variable with Time 2 eliminated from the analyses, $F [1, 71] = 0.77, p > .10$. Looking again at the change from Time 1 to Time 3 (with Time 2 eliminated) the variable Follows Directions From Adults remained significant in the expected direction ($F [1, 71] = 5.83, p < .05$). Although both of these prosocial behaviors were observed with less frequency at Time 3 than at Time 1, the decline was smaller in the intervention school than in the comparison school. The observed behavior, Follows Classroom Rules, showed a trend towards significance ($F [2, 142] = 2.95, p = .056$). See Table 4 for summaries of these ANOVAs. Graphs of all four of these observed behaviors at each time point can be seen in Figures 3, 4, 5, and 6.

Discussion

Reducing violence in schools is a topic currently receiving a good deal of attention. Although a great number of programs have been implemented in schools to reduce violence and promote healthy social behavior, few

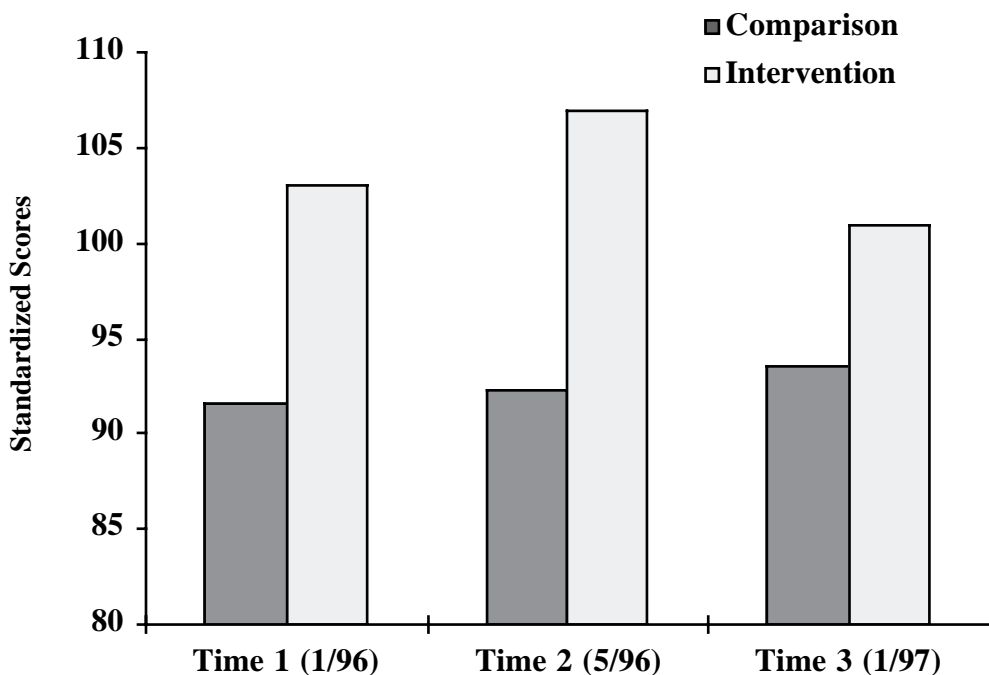


Figure 2. Teacher ratings of Antisocial Behavior on the School Social Behavior Scale.

Table 4
Analysis of Variance for Observed Behaviors

Source	Sum of Squares	<i>df</i>	Mean Squares	<i>F</i> Ratio
Within subjects—Engages Appropriately with Peers				
Time	.01	2	.04	.27
School x Time	.46	2	.01	5.58**
Error	5.86	142	.23	
Within subjects—Follows Directions				
Time	.51	2	.25	10.57***
School x Time	.38	2	.19	7.92***
Error	3.41	142	.02	
Within subjects—Bothers Other Students				
Time	.00	2	.00	.24
School x Time	.01	2	.00	.34
Error	1.28	142	.01	
Within subjects—Follows Classroom Rules				
Time	.06	2	.03	3.17*
School x Time	.05	2	.03	2.95^
Error	1.26	142	.01	

^ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$

programs have received a thorough evaluation to assess if they are effective in meeting these goals (Tolan & Guerra, 1994). Further, a review of the literature reveals that most such programs are aimed at students in middle and high schools, and are typically implemented in schools that are experiencing problems with fighting and violence among the students. Fewer programs have been aimed at bolstering problem solving and prosocial competencies among younger children in preventive efforts. Even fewer have targeted entire school populations, as opposed to singling out a few “problem children” for social skills training. In addition, virtually every program evaluation of violence prevention programs in schools has

been done in urban settings with children of diverse ethnic backgrounds.

This evaluation of the Second Step Violence Prevention Program was an effort to ascertain if a social skills building program that is solidly grounded in the empirical literature would be effective in increasing social skills and decreasing antisocial behavior in a rural setting with a high proportion of low SES students and a fairly homogenous, white population.

Results from the teacher report data in the current study were more encouraging than in previous evaluations, especially in the area of Social Competence. Students in the intervention school were rated higher in Social

Competence after a year of the Second Step program, and were no longer significantly lower than their peers in the comparison school.

Results from the Antisocial scale of the teacher-rated SSBS were not quite as clear. Although the change over time was statistically significant, this change may not be large enough to be practically meaningful. Whereas students at both schools gained prosocial skills from Time 1 to Time 2, they also increased their display of antisocial behaviors in the same time period. There are several possible explanations for this increase from January to May, which was seen at both schools. One is that children may display more disruptive behaviors towards the end of the school year. They may be eager for school to end, or excited to enjoy the pleasant spring weather of the northeastern U.S. Another possibility is that the intervention had little effect on antisocial behaviors in the first semester of implementation. As Robins (1992) explained, prevention will involve both the increase in protective factors

as well as the decrease of risk factors. In the present program, the acquisition of prosocial behaviors (protective factors) might need to precede a decrease in aggressive behaviors (risk factors). Because students already possess knowledge of antisocial ways of dealing with conflict, students must first be exposed to new, more prosocial, ways of solving interpersonal disputes. Over time, and with practice, students should then come to prefer the prosocial methods and use them in place of, rather than in addition to, the old methods. Although many programs have shown simultaneous increases in prosocial behavior and decreases in aggressive behavior, other programs have shown only the former (Kirschenbaum, 1979; Weissberg et al., 1981).

By Time 3, however, this trend had changed. Whereas the students at the comparison school were still rated as slightly higher on antisocial behaviors than their Time 2 ratings by teachers, the students at the intervention school were rated slightly below where

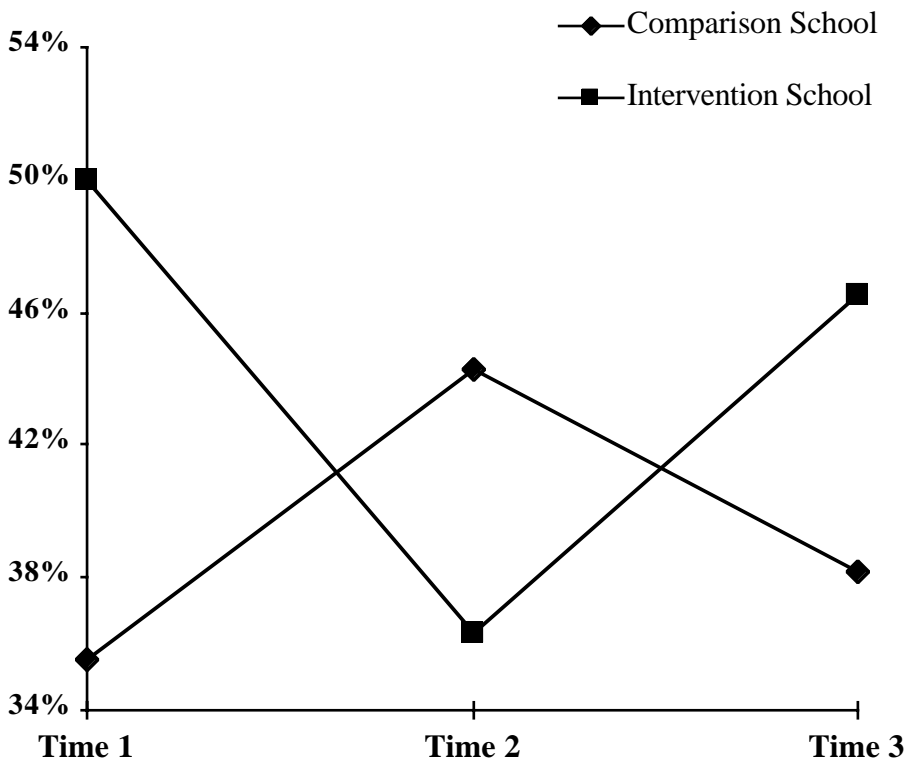


Figure 3. Behavioral observations of students engaging appropriately with peers.

they had been one year prior. Although the students at the intervention school were rated as significantly more antisocial than their comparison peers, this difference was less pronounced than before the intervention.

These findings make sense when considering that it is easier to acquire new skills and habits than it is to extinguish old ones. Over the first year of this program, the students in the intervention school were gaining prosocial skills in the classroom, but were not necessarily showing fewer antisocial behaviors. It may be that the slight decline in antisocial behavior from Time 1 to Time 3 represents the beginning of replacement of some antisocial behaviors with more positive ones in the classroom. Given that no positive change in antisocial behavior took place after one semester of intervention, and some positive change was evident in the next semester, it is reasonable to hypothesize that such slow and steady change might continue as the intervention is delivered over several semesters. More follow-up would

be needed to ascertain if this program is ultimately successful in that arena.

The findings from the independent behavioral observations yielded some changes over time, but the results were somewhat less clear than for the teacher rating scales. Two of the four observed behaviors (Following Classroom Directions and Engaging Appropriately With Peers) showed significant changes over time. One of the behaviors that did not show significant change was Following Classroom Rules. This was operationally defined by the particular rules that were posted in the classrooms. Although rules were posted in every classroom, there was variation between classrooms. Such variation was not a factor in the other observed behaviors. This could be a factor influencing these particular results. The other behavior that did not show a significant difference was Bothers or Annoys Other Students. It is consistent with the teacher observations that there was change in the observed prosocial peer behavior (Engages Appropriately

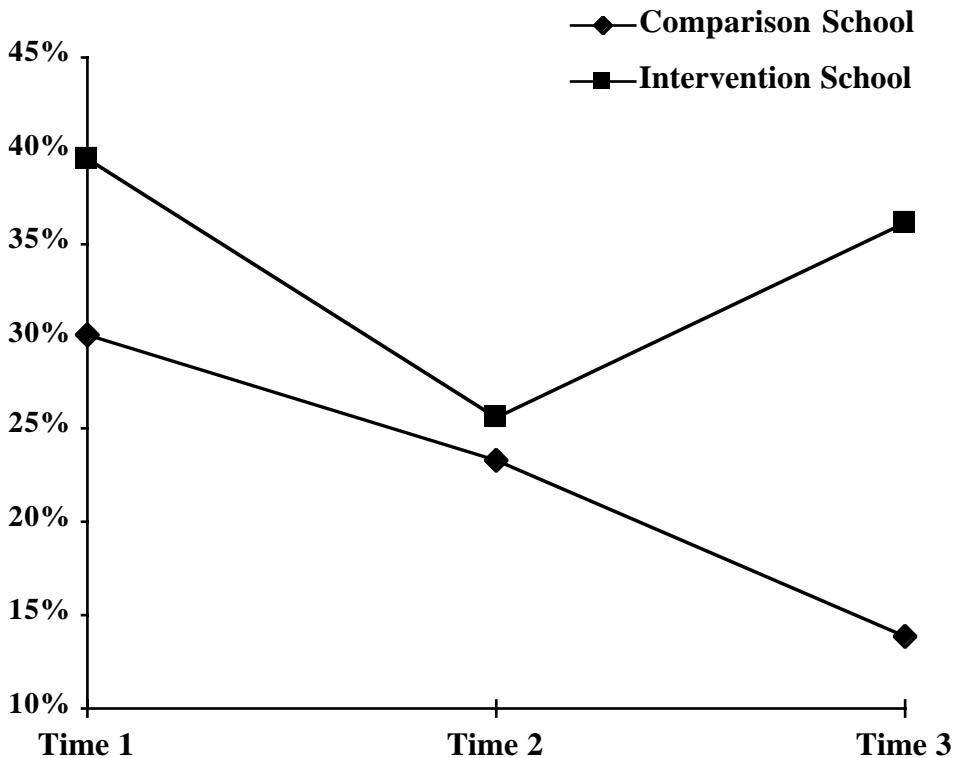


Figure 4. Behavioral observations of students following directions from adults.

ately With Peers), but not with the antisocial one (Bothers or Annoys Other Students). As with the teachers' ratings, it may be that the observations were reflective of the students' acquisition of new skills while still practicing the old behaviors.

Independent observations are helpful in that they can provide an objective view of a child's behavior. When a teacher knows a student well, the teacher may be more likely to interpret the student's behaviors in light of other information she knows about the child, whereas an independent observer is less likely to do that. However, the observations in this study were constrained in that they were limited to only 15 minutes per child per follow-up period, and they were limited to the classroom only. At the same time, the behaviors targeted by this intervention are ones that are more likely to be performed when children are in settings less closely supervised by adults, such

as on the playground (Grossman et al., 1997). It is possible that independent behavioral observations in this study were not an adequate sample of the children's relevant behavior. Still, the observations corroborated teacher reports that there was an increase in the Second Step students' acquisition and usage of prosocial behaviors with peers, without a decrease in their antisocial behaviors.

One strength of this study is the longitudinal nature of the evaluation. The students were followed for a full year after the intervention took place. This allowed time for the intervention to become a part of the culture of the school, which is one important aspect of the Second Step curriculum, as it has been designed. Another strength in this evaluation design is that most of the students had different teachers from one year to the next. This provided multiple raters of the same children, and decreased the chances of bias of a particular

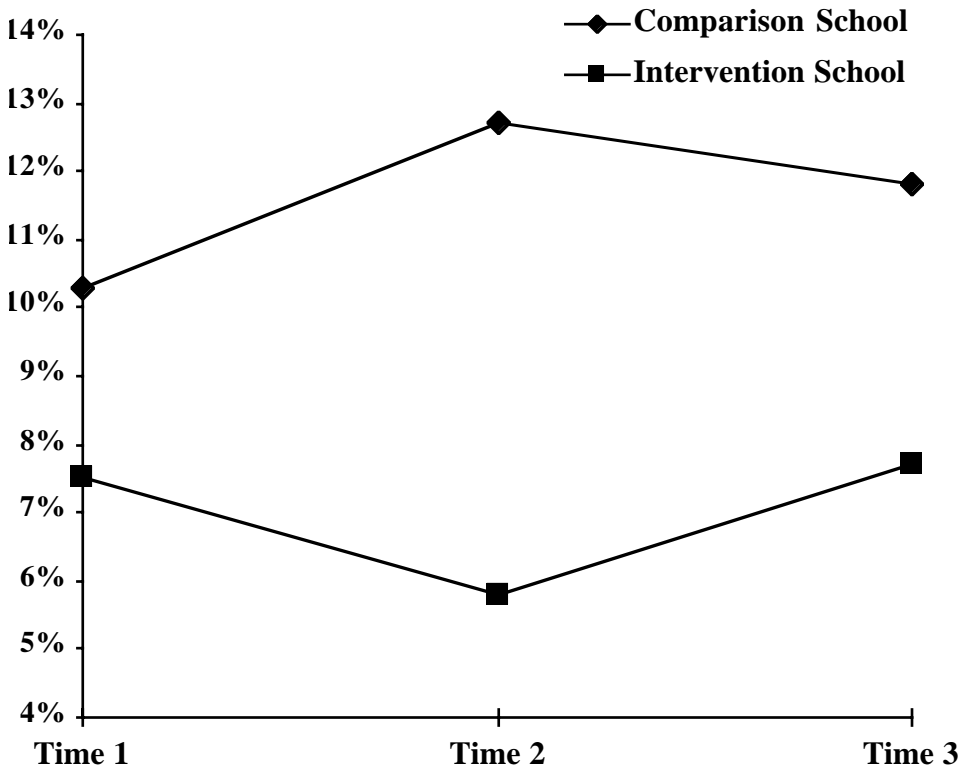


Figure 5. Behavioral observations of students bothering or annoying other students in class.

teacher’s ratings. Given that this study has such a small sample size, this is especially important in maintaining the integrity of the data.

This study adds to a growing body of work on school-based interventions designed to improve students’ behavior at school. Overall, this evaluation of the Second Step Violence Prevention program yielded some encouraging results. For a rural elementary school that showed concern about the behavior of its students, and a staff committed to trying out a new program, the program appears to have yielded some positive changes in the acquisition of prosocial behavior for a relatively small financial investment. Still, Second Step is not a “quick fix.” The school in this study made a commitment to try the intervention in all classrooms in the school, over a period of more than one school year. The school’s commitment to implementing the program as intended may also be an important factor in the improvements shown here.

There are some limitations to this study, notably that this was not a randomized con-

trolled trial. The intervention was implemented at the target school due to the school counselor’s concerns about student behavior. Time 1 teacher ratings certainly confirm that the teachers were noticing behaviors in the children that were of concern, which were not seen at the comparison school.

This program was implemented in the manner intended by the program’s designers. The school first established support and “buy-in” from staff, the school had staff attend the “Train the Trainers” workshop, and those staff then trained other school personnel. A support team was established, whose members served as program monitors and resources. As this was a school-driven intervention (and not a tightly controlled empirical project), there were no formal, systematic measures of treatment fidelity. This was assessed in a more informal manner consistent with a nonresearch intervention; the support team members attended lessons periodically and helped to monitor the program’s delivery. This may mean that the program was delivered somewhat differently

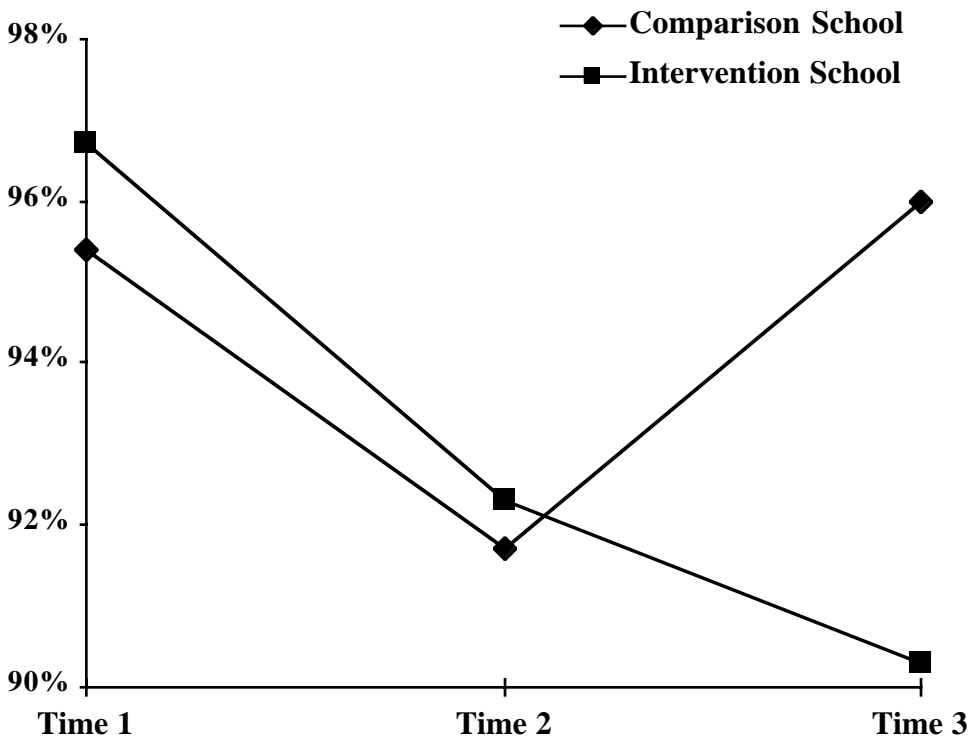


Figure 6. Behavioral observations of students following classroom rules.

across teachers, probably much in the same way that a specific fourth grade reading curriculum, for example, may be delivered somewhat differently by different teachers in different fourth grade classrooms working on the same material.

Measuring the effects of prevention programs in schools does not lend itself to the laboratory. Other similar studies (e.g., Grossman et al., 1997), as well as the present study, share a quasi-experimental design. Conducting such research in naturalistic settings contains its own unique challenges and benefits. To ascertain the effects of such a program, a comparison site must be used. The comparison site, ideally, will be similar in demographics such as socio-economic status of its students, class size, ethnic breakdown, and so on. Even when sites are so matched, each school still has its own unique climate and culture that cannot be replicated. As such, it will never be completely clear if a given program would work the same way in another setting. There are also challenges in enlisting comparison sites to participate in a study of a program that is taking place elsewhere. School staff typically feel overburdened by the paperwork required for their jobs, and are often not eager to complete additional paperwork when they do not see the benefit to their school or their students. As was the case in enlisting a comparison site for this study, principals and teachers can be reluctant to participate in a study in which their students and school do not directly benefit. They may be concerned that their school will be viewed in an unfavorable light, if it is being compared with another school. Such challenges can contribute to making such a study difficult to do, and may also contribute to limitations of the inferences that can be made from the findings.

Another limitation is that no one involved in this evaluation was blind to condition. This could have created expectancy effects such that the teachers at the intervention school were expecting their students to improve in the areas targeted by the intervention. Given that the teachers at the intervention school rated their students more highly on both social competence and antisocial behavior at Time 2 than at Time 1, it does not appear to be

the case. One would expect if it were the case, teachers would have also rated their students as having improved in both areas. However, the effects that participants' and evaluators' awareness of the intervention may have had on the outcomes remain unclear.

Although the commitment of the school staff to training and implementation likely influenced the success of the program, the results of this evaluation suggest that the Second Step Violence Prevention Program had a modest positive effect in the school where it was implemented. Although this program requires an initial cost of program materials and staff training, it appears to be portable, user-friendly, and effective at enhancing students' social competence and increasing their use of prosocial behavior.

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