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Participants' Perceptions of a Violence Prevention Curriculum for Middle School Students: Was it Relevant and Useful?

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Abstract

School-based youth violence prevention programs, particularly those focused on middle school students, have generally had limited effects that are often not sustained over time. Although many interventions focus on teaching social-cognitive skills, few studies have explored the extent to which students master these skills, actually use them, and find them effective in dealing with problem situations. This study examined these issues based on interviews with 141 students attending one county and two urban middle schools in classrooms where the Second Step violence prevention program had been implemented. We coded interviews to assess participants' general reactions to the interventions, use of skills, and effectiveness of skills. We also asked participants to describe outcomes they experienced when they used specific skills taught in the intervention in response to problem situations. Participants had generally positive reactions to the intervention. Their suggestions for improving the intervention primarily concerned improving its relevance. Participants described changes they had made based on the intervention, particularly controlling anger and improving relations with others. Their responses indicated that they sometimes misunderstood or misused specific intervention skills, especially problem solving and empathy. Students' descriptions of the outcomes they experienced when using intervention skills were not uniformly positive. This was especially true for situations involving peers such as peer pressure and bullying. These results underscore the need for more intensive efforts to ensure that students master intervention skills and are able to use them correctly. In addition, interventions should address the broader social context (e.g., peers, school) to maximize the effectiveness of skills.

Keywords

Violence prevention; Program evaluation; Second Step; Adolescence; Bullying

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Youth violence is a significant public health concern (United States Department of Health and Human Services, 2001). A national survey indicated that over half of children and adolescents have witnessed or experienced violence victimization in the past year (e.g., Finkelhor, Turner, Ormrod, & Hamby, 2009). Adolescents, in particular, are disproportionately likely to commit violent crimes as compared to adults (e.g., Centers for Disease Control and Prevention [CDC], 2007). Adolescence is also a critical time for interventions designed to prevent both the escalation of risk and increases in the initiation and frequency of violence (e.g., Moffitt, 1993). Efforts to address youth violence have frequently focused on developing universal prevention programs for implementation in school settings (CDC, 2007; Farrell & Camou, 2006; Howard, Flora, & Griffin, 1999). These programs have generally had rather limited success, particularly those designed for middle school students (Matjasko et al., 2012). Although a key focus of many of these interventions has been on teaching participants social-cognitive skills (Boxer & Dubow, 2002), there is limited evidence to support the notion that participants master these skills, choose to apply them in real-life situations, and find them effective when they do. The current study used a mixed-methods approach to investigate participants' perceptions of the Second Step middle school violence prevention curriculum (Committee for Children, 1997b). More specifically, we focused on participants' overall evaluation of the intervention, their ability to recall the skills taught in the intervention, the extent to which they used these skills to help them deal with problem situations, and the degree to which they found the skills useful.

Meta-analyses have concluded that the majority of universal violence prevention programs have fairly limited effects. Matjasko et al. (2012) recently conducted a review of meta-analyses of violence prevention programs and found that approximately one half of these meta-analyses reported moderate intervention effects, a quarter reported weak effects, and only a tenth found strong effects. Similarly, a meta-analysis by Ferguson, San Miguel, Kilburn, and Sanchez (2007) concluded that bullying prevention programs generally produce little discernible effects on participants. Others have noted that even in cases where initial post-intervention effects are found, they are typically not sustained over time (Farrell & Flannery, 2006; Mytton, DiGuiseppi, Gough, Taylor, & Logan, 2002; Wilson, Lipsey, & Derzon, 2003). In addition to examining overall effects, meta-analyses have also identified factors that moderate the impact of violence prevention programs. Ttofi and Farrington (2011), for example, found smaller effects for school-based bully prevention programs implemented in the U.S. than in Europe. Farrell, Henry, and Bettencourt (2013) also found variability in intervention effects in their review that identified individual-, school-, and community-level factors that moderated the effects of school-based violence prevention programs. These findings highlight the need for further work to improve the relevance of violence prevention programs for specific groups of adolescents.

A major focus of school-based violence prevention programs has been to address social and emotional skills related to aggression (Smith & Low, 2013). This approach is exemplified by Second Step, a universal school-based violence prevention program that includes curricula for elementary (Committee for Children, 1997a) and middle school students (Committee for Children, 1997b) that focus on three areas of social-emotional competency – empathy

and perspective-taking, social problem solving, and anger management (Frey, Hirschstein, & Guzzo, 2000). The middle school curriculum includes five units spanning 15 lessons that cover topics including interpersonal conflicts, empathy and perspective-taking, anger management, problem-solving, and applying skills to make a complaint, address peer and gang pressure and bullying situations, and diffuse a fight (Committee for Children, 1997b). The U.S. Department of Education, the U.S. Department of Health and Human Services, and Communities that Care have recognized Second Step as a “best practice” or “model” program, and it has been implemented in schools across the U.S. (Cooke et al., 2007).

Although evaluations of Second Step have reported some encouraging effects, the vast majority of this work has been conducted with elementary school students (e.g., Brown, Jimerson, Dowdy, Gonzales, & Stewart, 2012; Frey, Nolen, Van Schoiak Edstrom, & Hirchstein, 2005; Grossman et al., 1997). Studies evaluating its impact with middle school students have reported somewhat mixed findings. Orpinas, Parcel, McAlister, and Frankowski (1995) compared outcomes for students in six classrooms in which they implemented Second Step to outcomes for students in four control classrooms. Second Step resulted in significant reductions in aggression, but these effects were not maintained at a three-month follow-up. In 2000, Orpinas and colleagues conducted a randomized trial in which they randomly assigned eight middle schools to a control condition or to an intervention in which they implemented Second Step as part of a comprehensive approach. They found no significant effects across several indicators of aggression. McMahon and Washburn (2003) evaluated the impact of the Second Step curriculum in two Chicago schools and found no consistent effects on measures of aggression or impulse control. Although they found significant increases in regards to knowledge and skills related to the intervention and to self-reported empathy, these findings were difficult to interpret because of the lack of a control group. Espelage, Low, Polanin, and Brown (2013) conducted a cluster randomized trial in which they randomly assigned middle schools within 18 matched pairs to the Second Step curriculum or a control condition. They found significant intervention effects at an initial posttest on self-reported measures of physical aggression, but did not find effects on either verbal or relational aggression, peer victimization, homophobic teasing or sexual violence.

Sullivan, Sutherland, Farrell, and Taylor (2014) recently evaluated the impact of the Second Step curriculum (Committee for Children, 1997b) in a study in which they randomized to either an intervention or control condition 28 sixth-grade classrooms in two urban middle schools and a school in a neighboring county. They assessed outcomes at pretest, at the end of the school year, and at the beginning and end of the subsequent school year. Although analyses of pretest to posttest changes did not indicate any main effects for the intervention, several variables moderated intervention effects. Special education status moderated effects on several outcomes. Students without special education status in intervention classrooms reported significant reductions in their frequency of overt aggression at the six-month follow-up relative to controls ($d = -.33$). In contrast, special education students in intervention classrooms reported greater reductions in teacher ratings of relational victimization at the initial posttest relative to those in control classrooms ($d = -.58$). Results also included gender-moderated intervention effects in terms of significant posttest reductions related to teacher ratings of overt aggression at the initial posttest

for boys (d =−.25), and reductions in self-reported frequency of relational aggression at the six-month posttest for girls (d = −.33). Although Sullivan and colleagues reported some encouraging results, intervention effects on specific outcomes (e.g., overt aggression, relational aggression) were not consistent across student and teacher ratings and not all effects were sustained at the 12-month follow-up assessment.

The effectiveness of interventions that focus on reducing participants' aggression by improving their social competence and emotion regulation skills rests on several key assumptions. First, such interventions assume that participants will learn and understand how to apply the skills targeted by the intervention. Second, they assume that participants will recall the skills and correctly implement them when confronted with a problem situation. Third, the skills must be effective or result in more desirable outcomes than participants' normal behavior in order to increase the likelihood they will use the skills again in similar situations. Few attempts have been made to test these basic assumptions. Little is currently known about the extent to which participants in violence prevention programs master the skills targeted by the programs, actually use them, and find them effective if they do. Indeed, a pilot study implementing an intervention in four schools found that in the school with the smallest intervention effects, one-third of boys and one-half of girls reported not knowing what the intervention was (Orpinas et al., 1995).

Multiple studies have found intervention effects on knowledge of the psychosocial skills taught in violence prevention programs (e.g., Shapiro, Burgoon, Welker, & Clough, 2002; Van Schoiack Edstrom, Frey, & Beland, 2002), but these effects are often not linked to actual aggressive behavior. For example, Farrell, Meyer, and White (2001) reported that participants' knowledge of intervention skills improved due to the intervention, but did not find changes in participants' endorsement of aggressive responses to hypothetical situations or self-reported rates of aggression. This suggests that factors beyond simple knowledge of intervention skills play an integral role in adolescents' decisions to use prosocial skills. Few studies have examined the extent to which adolescents apply the skills targeted by violence prevention programs to real-life situations. Aber, Jones, Brown, Chandry, and Samples (1998) assessed the effectiveness of a violence prevention program by asking students to generate responses to hypothetical problem situations. Their findings indicated that although children receiving a high intervention dose experienced no change in their ability to generate competent interpersonal strategies, control children demonstrated decreases in interpersonal competence. Similarly, children receiving a high dosage of the intervention experienced a slower increase in aggressive interpersonal strategies than did control children. However, the investigators found no mean or trajectory differences in conduct problems across groups, suggesting that factors other than ability to generate competent strategies are related to aggression. Bosworth , Espelage, DuBay, Daytner, and Karageorge (2000) found that a universal violence prevention program was related to a decrease in beliefs supporting violence and an increase in intentions to use nonviolent strategies. The majority of students indicated that they were more aware of how to solve conflicts and better able to identify their triggers for anger. Despite these effects, there were no changes on measures of aggressive behavior.

Students may learn the skills targeted by interventions, but choose not to use them. For example, Edwards, Hunt, Meyers, Grogg, and Jarrett (2005) interviewed fourth and fifth grade students in an urban school district where Second Step was implemented. Eleven percent of the students reported that they either did not learn or chose not to use the skills in real-life situations. Only 22% were able to give an example of when they used the skills, with students most frequently indicating that they used the skills at home. Few studies identified in our review of the current literature assessed whether students used the skills targeted by violence prevention interventions, and we could not find any that examined the extent to which students found the skills effective. In a qualitative study of a universal prevention program implemented in an elementary school conducted by Hervey and Kornblum (2006), students were able to describe how they used an intervention skill in a real-life situation. They did not, however, indicate the effectiveness of the skills or discuss the extent to which they used other skills targeted by the intervention. Edwards and colleagues (2005) conducted open-ended interviews in which they asked fourth and fifth grade students who participated in Second Step to describe what skills they used, where they used the skills, and what they liked and disliked about the intervention. Again, students did not report on all skills, and they did not evaluate the effectiveness of skills. Finally, Grumm, Hein, and Fingerle (2012) assessed the social validity of a German adaptation of Second Step with fourth grade students. The interviewers asked students how they liked the intervention, whether what they learned was useful, the extent to which they used the skills in arguments and conflict situations, and which methods they liked and disliked. The majority of the students' statements indicated that the intervention was useful and provided examples of how they used the skills. However, some statements indicated that students did not perceive the intervention to be useful or that the students thought the intervention was useful but were unable to provide examples of using the skills. The investigators concluded that assessing the social validity of interventions could improve their effectiveness by teaching skills that students would perceive to be useful and using strategies that they found acceptable and liked.

Given the substantial resources devoted to developing and implementing school-based violence prevention programs, there is a clear need to determine why these programs appear to have such limited effectiveness and how they might better meet the needs of specific populations of youth (Ferguson et al., 2007). We used a mixed methods approach to explore the experiences of a subsample of adolescents from classrooms in which Sullivan and colleagues (2014) implemented the Second Step intervention as part of an outcome study. Specifically, we conducted post-intervention interviews to explore participants' general reactions to the intervention, their behavior changes as a result of the intervention, their use of intervention skills in problem situations, their understanding and appropriate use of intervention skills, and their perceptions of the effectiveness of these skills. Our overall goal was to determine the relevance of the intervention and to identify factors that could improve its effectiveness.

Method

Settings and Participants

We conducted this study at two middle schools in the public school system of a large city in the Southeastern U.S. and a middle school in an adjoining county. The university's institutional review board approved all procedures. We recruited participants from a sample of sixth grade students in intervention classrooms who completed pretest measures for Sullivan and colleagues' (2014) study and who were present on at least half of the days the Second Step intervention was taught. The Sullivan et al. sample represented 82% of the students in the two urban schools and 75% of students in the county school who provided both parental consent and student assent.

The urban schools served a predominantly African American student population. The majority of students (i.e., 83%) were eligible for the federally subsidized school lunch program. We recruited 91 students (41 from one school and 50 from the other) from all 102 students that met the study's selection criteria. The final sample included a slightly higher percentage of boys (54%) than girls. The average age was 11.8 (SD = 0.58). The majority (83%) identified themselves as Black or African American, and 12% identified themselves as representing more than one race. Only one student self-identified as Hispanic or Latino. Most participants described their family structure as two-parent (24%), single mother without other adult (20%), single mother with stepfather (19%), single mother with adult other than grandparent (9%) single mother with grandparent (8%), or grandparent without father or mother (6%).

The county school was in a rural setting, classified as "Rural Fringe" by the Census Bureau, which was in close proximity to the urban area. Twenty-two percent of the students were eligible for the federally subsidized school lunch program. We recruited 50 students from a random of 66 students that met the study's selection criteria. The final sample included a slightly higher percentage of boys (54%). The average age was 11.9 (SD=0.78). The county sample was more diverse than the urban sample, with 52% identifying themselves as White, 32% as Black or African American, and 12% as more than one race. None identified themselves as Hispanic or Latino. Most students in the county schools described their family structure as two-parent (58%), single mother without other adult (19%), or single mother with stepfather (10%).

Intervention

Sullivan et al. (2014) implemented Second Step during the 2008-09 school year as part of a randomized trial. This universal school-based violence prevention curriculum was designed for middle and junior high school students, and focuses on decreasing aggression by enhancing adolescents' social and emotional competencies (Committee for Children, 1997b). The curriculum includes 15 lessons that cover interpersonal conflicts, empathy and perspective-taking, anger management, and problem-solving. Lessons also address applying these skills to make a complaint (i.e., talking to someone when they did something that bothered or hurt the student), address peer and gang pressure and bullying situations, and diffuse a fight. Sullivan and colleagues (2014) included an additional lesson on prosocial

behavior and social networks, and incorporated problem situations for role plays derived from prior qualitative work to identify relevant problem situations encountered by urban youth (Farrell et al., 2006, 2007). Implementation training for project staff addressed both the curriculum and best practices for effective classroom instruction. Sullivan and colleagues encouraged teachers to be present to assist with the lessons. Fidelity of implementation was high based on observers ratings of a random sample of each interventionist's lessons (see Sullivan et al, 2014 for details).

Interview Procedure

We interviewed students during the same school year in which the curriculum was implemented ($N = 42$) if they were in classrooms in the urban schools where the intervention was completed during the first half of the school year. We interviewed students during the following school year if they were in classrooms in which the curriculum was completed during the second half of the school year ($N = 49$ students in the urban schools and 50 in the county school). Research staff conducted the interviews at participants' schools, typically in the media center or in unoccupied classrooms. Interviews were semi-structured, lasted about an hour, and were organized into four parts (see Table 1). During Phase 1, interviewers asked participants open-ended questions about their general reactions to the intervention. In Phase 2 interviewers asked participants to describe a problem situation they had encountered with a peer and to respond to a series of questions about any experience they had in which they attempted to apply something they learned from the intervention. In Phase 3 interviewers asked participants about their reactions to and experiences attempting to apply each of eight key skills targeted by the intervention. In Phase 4 they asked participants to rate specific aspects of the intervention, and to discuss their general reactions to it. For the protocol used during the spring of 2009, interviewers asked participants to describe experienced or anticipated outcomes for each of the eight intervention skills, and to rate these outcomes on a five-point scale from 1 (*terrible*) to 5 (*great*).

The 13 interviewers had bachelors or masters degrees, with the exception of one undergraduate senior in the honors program. We trained interviewers with a combination of group meetings and individual supervision. Supervisors listened to audio recordings and provided written and verbal feedback for at least two practice interviews for each interviewer. Interviewers practiced conducting interviews with their supervisors and did not conduct interviews in the schools until their supervisors had confidence in their proficiency. Supervisors provided written feedback on each interviewer's first three interviews. In cases where supervisors noted any significant issues, we required interviewers to practice the interview again. African American women conducted 58% of the interviews, European American women 26% of interviews, European American men 13% of interviews, and a Latino American woman 3% of the interviews. Female interviewers interviewed both boys and girls, but male interviewers only interviewed boys. Research assistants transcribed the interviews. For the first wave of data collection, research assistants reviewed 36% of transcriptions randomly selected for accuracy. For the second wave, they reviewed all transcriptions for accuracy. Although 141 students completed interviews, three could not be transcribed due to faulty recording equipment.

Coding of Interview Transcripts

We conducted a qualitative analysis of interview transcripts to identify themes related to participants' general reactions to the intervention, descriptions of any intervention skills or changes in behavior they made following the intervention, and their perceived outcomes from use of the skills. Coding was an iterative process in which we generated and refined themes based on multiple passes through the transcripts. We began with open coding wherein two investigators independently read approximately 25% of the transcripts from the first wave of interviews and identified themes. This led to an initial set of codes and preliminary definitions with associated examples from the transcripts. We further refined themes and definitions based on consensus coding by the same two investigators, who reviewed the full set of 42 interviews collected during the first year. We conducted consensus coding using NVivo 7 qualitative coding software to generate documents that included all of the text we coded for each theme. During a third stage of coding, three different investigators read through these documents and identified subthemes within each category. We used the resulting themes with definitions and examples to create a preliminary coding manual. For one question in which we asked how students handled a problem situation, we established codes *a priori*. We assumed that students would describe one of the intervention skills, a prosocial response consistent with the intervention, or an antisocial or aggressive response.

During the fourth stage of coding, a team of five investigators coded all 138 interview transcripts based on the preliminary coding manual. They organized themes into five groups representing higher order categories (e.g., general reactions to the intervention, changes in behavior, outcomes) and we assigned a pair of coders to each group. As part of the training process, each coder independently coded ten randomly selected transcripts. We then compared their codes and discussed any discrepancies until the coders reached consensus. In some cases this led to further revisions to the definitions that we incorporated into the coding manual. During this process it became evident that the *a priori* codes for behavior change did not effectively capture the participants' responses. We therefore created new codes using the iterative process described previously. We compared codes for three transcripts halfway through the coding to address potential coder drift. Each pair of coders reached consensus on these transcripts. We assessed intercoder reliability by overlapping the two coders on a randomly selected subset of 28 interviews (i.e., 20%). We also identified and defined subthemes for outcomes that were initially coded into broad heterogeneous categories (e.g., "Positive Outcomes of Using Skill).

Although inter-coder reliability for coding of themes was fairly high, there were several exceptions. Several categories that included themes that did not fit into more specific categories (e.g., Other Positive Reactions) had acceptable percentages of agreement (i.e., 88% to 95%), but low base rates that resulted in low kappa coefficients. Agreement across coders as to whether students misused or misunderstood a skill was also acceptable in terms of percentage agreement (i.e., 89% to 93%), but low base rates again resulted in low kappa coefficients. We addressed this issue by having two investigators independently code the transcripts, and then discuss and resolve any discrepancies. For all other themes kappa

coefficients ranged from .43 to 1.00, and percentages of agreement ranged from 76% to 100% (see Tables 2 and 3).

Results

General Reactions to the Intervention

Participants' overall reactions to the intervention were generally quite favorable evidenced by ratings of 4 or 5 on each of the five-point scales assessing their perceptions of different aspects of the intervention (see Table 4). The majority (76%) rated the intervention as "pretty good" or "great," indicated that what they learned in the intervention would work "pretty well" or "great" in solving or avoiding conflict (69%), that they found the intervention "pretty useful" or "really very useful" for addressing problems (71%), and that they would recommend the intervention to other students (87%). The great majority of participants (87%) also reported that they had used something they learned in the intervention at least once in the past month, and 76% indicated that using the skills helped them get what they wanted. Ratings on the six scales did not differ across sites (i.e., urban versus county schools) at $p < .05$.

When asked to explain their ratings, nearly all participants (99%) made at least one positive comment (see Table 2). These were typically general comments indicating that the intervention helped them stay out of trouble, prevented or reduced fights and other problem behavior, or would help them with future decisions and problems. For example, a male student at one of the urban schools indicated that the lessons "kept us out of problem instead of always goin' around fightin' and doin' different things like that." Some participants (55%) discussed learning a specific skill they found useful. For example, one female student in an urban school stated that "it helped me think it out. When I get angry, think it out before I like make a wrong decision." Some participants (24%) reported that they found the intervention interesting or enjoyable. The percentage of interviews in which each positive theme was coded did not differ across sites at $p < .05$.

The great majority of participants (79%) also identified at least one thing they did not like about the intervention. Almost two-thirds (64%) said that some aspects were not helpful or useful. Comments focused on the relevance of the intervention ("I really don't need 'em") and on the perceived ineffectiveness of certain aspects of it. One female student at an urban school pointed out that one aspect of the intervention was ignoring provocative behavior and said, "If you ignore them, all they do is want to mess with you." Some students (16%) said that they found the intervention boring. One male student in a county school explained, "They kept saying the same thing like over and over again." There was one significant site difference in the percentage of codes for negative reactions. A higher percentage of students in the county school made negative comments that did not fit into a specific theme (50% versus 18%; $\chi^2(1) = 15.79$, $p < .001$). These comments generally indicated that the lessons were too long, that they cut into health class or gym time, or that other students didn't listen to or like the lessons. Less frequent comments were that the students did not like to have to talk about "stuff" or that the students didn't understand aspects of the intervention.

Interviewers also asked participants about their friends' reactions to the intervention. Thirty-eight percent identified positive reactions, such as finding the intervention useful or fun. A male student at one of the urban schools reported that one of his friends "really liked it because it calms his anger down." Forty-two percent of participants identified negative reactions by friends. These included statements that their friends found the intervention boring, were frustrated that the intervention cut into their gym time, did not pay attention during class, or continued to fight regardless of the intervention. A female student in an urban school provided the following insight into her friends' perspectives: "Some people don't like sitting down and talking to some adults about things, about problems and issues because they think it's kind of punkish." There were no significant site differences in the percentage of students who reported positive or negative friends' reactions at $p < .05$.

Participants offered several suggestions for ways to improve the intervention. Twenty percent suggested that the intervention could be improved by making it more fun or adding activities. For example, a female student in an urban school said, "Like make it fun and not just, you know, sitting in the seats all the time, like do different games and stuff." Others (14%) emphasized the need to discuss a wider variety of problems and include more relevant situations. For example, a female student in one of the urban schools stated that "a lot of the people there, they don't have problems like what they had on they, um, scenario." Another female student at one of the urban schools suggested that interventionists ask students to identify problem situations before teaching skills: "Ask children, like before you start, asking kids what they going through and see what they going through and then you make a list of things that they going through and go, and then you see how they will handle it." Others responded that they would like the lessons to go into more depth. As one male student at an urban school explained:

> I think y'all should really get more deeper into the lessons 'cause I don't think they explained a lot to me… 'Cause we is in middle school, on our way to high school. And in high school, there is a lot of peer pressure, fights, gangs, people who won't like you… y'all should get deep enough into the conversations.

There were no site differences across categories in the percentage of students who made suggestions for improving the intervention at $p < .05$.

Participants' Efforts to Apply What They Learned in the Intervention

During the initial stage of the interview, interviewers asked students if they had done anything differently because of what they learned in the intervention. The majority of participants (59%) identified one or more changes they made following the intervention (see Table 3). The most frequent (22%) concerned controlling anger. For example, one female student at an urban school reported that she "calmed down a little bit when something made me mad." Participants also described efforts to improve relations with others (19%). One male student at an urban school explained, "Instead of getting ready to get into a fight, we talked it out." A female students at an urban school said, "I've started respecting more people." Participants also indicated decreasing their involvement in problem behaviors (12%), such as giving into peer pressure, talking back to teachers, or (more vaguely) getting into trouble. One male student at an urban school reported, "Last year I was getting a lot

of referrals, but this year I ain't got not one referral." Participants also reported decreasing their aggressive behavior (11%). For example, one female student at the county school said, "I've stopped gossiping about people, I've stopped being a bully." Students in the urban schools were more likely than those in the county school (i.e., 13% versus 0%) to report that they decreased other negative behaviors ($\chi^2[1] = 7.01$, $p < .008$). There were no other site differences in these codes at $p < .05$.

During the second phase of the interview, interviewers asked participants to identify a problem they recently had with a peer or at school to provide a more specific context for discussing their use of the skills taught in Second Step. The majority of participants (80%) described at least one way in which they used something they learned in the lessons to help them deal with the situation (see Table 3). The most frequently mentioned theme (43%) was improving communication or relations with others. Examples included efforts to talk it out with the other person, asking the other person to stop the provocation, and taking responsibility for their own actions. One male student at an urban school said, "I just apologized to him…and told him I didn't really mean it." When a male student at an urban school had an electronic item broken by another student, he explained, "I talked to him and told him that he would have to give me another one, but usually…I would've gotten mad."

Another frequently described change (i.e., 39% of participants) involved ignoring the provocation or walking away from problem situations. For example, one female student at an urban school said, "I ain't say nothing back. I just walked away." A male student at an urban school explained that he was able to ignore the provocation: "[he] just come up to me and like say something. I ain't even worried about it." Other students (21%) reported that they handled the situation by controlling their anger. For example, a female student in an urban school reported, "I, um, calmed down and then I took them deep breaths and I count back and then I just moved away from her." Still others (12%) explained that they avoided making aggressive responses. One student at an urban school said that she handled the situation differently by "learning to use my mind instead of my fist." A male student in an urban school said, "I didn't fight him because if I would have it could have caused trouble." Some participants (11%) stated that they sought support from parents, teachers, or friends. For example, one female student in an urban school said, "I went to go talk to my teacher and worked it out with the other person." A student in the county school noted that she was able to "just breathe and go talk to…friends about it." A few students reported that they changed their behavior by thinking before acting. Another female student in the county school said, "I was probably thinking before I acted, or thinking before I said anything." There were no site differences in the percentage of students identifying themes within these categories at $p < .05$.

Interviewers asked those students who were interviewed the year following the intervention to rate how well using what they learned in the lessons worked out for them. The mean of these ratings was 3.7 ($SD = 0.75$) which falls between *ok* and *pretty good* on the scale of 1 to 5. Mean ratings did not differ across sites ($t[83] = 0.28$, *ns*). Very few participants (i.e., 2) assigned ratings of 2 or lower, corresponding to "terrible" or "pretty bad."

Use of Specific Intervention Skills

During the third phase of the interview, interviewers asked participants about their use of the eight skills that constituted the focus of the intervention. Interviewers asked participants: if they had used each skill, to describe how they had used it, and to rate how well things worked out. On average, participants reported using 4.6 skills ($SD = 1.8$). The mean number of skills used did not differ across sites ($t[139] = 1.01$, *ns*). The percentage of participants who reported using each skill ranged from 13% for resisting gang pressure to 82% for anger management. With the exception of resisting gang pressure, at least half of the participants reported using each skill (see Figure 1). Results of a repeated measures logistic regression analysis indicated that there were significant differences in rates of use across skills, ($\chi^2[7] = 138.72$, $p < .001$). Contrasts comparing each skill to the average indicated that a higher percentage of participants reported using anger management, empathy, making a complaint, and diffusing a fight, and a lower percentage reported resisting gang pressure (all ps $< .05$). There were significant differences in patterns of skills used across sites, ($\chi^2[7] = 24.39$, $p < .001$). Follow-up analyses revealed that compared to students at urban schools, those in the county schools were less likely to report using anger management (70% versus 88%; $\chi^2[1] = 6.88$, $p = .012$), and diffusing a fight (52% versus 70%; $\chi^2[1] = 4.70$, $p = .043$), but were more likely to report making a complaint (76% versus 57%; $\chi^2[1] = 4.97$, $p = .029$).

For each skill participants used, interviewers asked them to describe how they used it. Although their descriptions generally did not provide a sufficient basis for determining the degree to which they made appropriate use of skills, there were some cases in which it was quite evident that they did not use a skill correctly. Coders coded these as a misuse of a skill when they reached a consensus that the students' descriptions made it clear that they used it inappropriately. Inappropriate use of skills included descriptions of antisocial, aggressive, or clearly ineffective responses, and when participants described use of a different skill (e.g., explained how they ignored someone when asked to describe how they used problem solving). Close to half the sample (45%) gave a description of using at least one skill that clearly suggested they misused it. This percentage did not differ across sites ($\chi^2[1] = 1.12$, *ns*). Across the skills, the percentage of the total sample whose descriptions suggested they used a skill incorrectly ranged from 1% for resisting gang pressure to 18% for making a complaint (see Figure 1). These percentages ranged from 4% to 23% when based on the percentage of students who reported using each skill rather the percentage of the total sample. Misusing a skill was most common with making a complaint. We defined making a complaint as talking to someone when they did something that bothered or hurt the student, but many students seemed to understand the skill as simply complaining. For example, one female student in the county school said, "Well, I always complain in gym about when we have to go outside." A male student in an urban school explained how he used dealing with peer pressure when his mother told him to do his chores: "When I about to lay down, I have to do my chores and stuff like, I be like, oh, Lord, help me." When discussing empathy, one student in an urban school described how she noticed her friend looking worried, and discovered that her friend was going to be banked (i.e., physically attacked) by a group of children after school. She told her friend, "If they bank you, I'll help you [fight]." Compared to students in the county school, students in the urban schools were more likely to misuse problem solving (27.3% vs. 4.0%; $\chi^2[1] = 5.82$, $p = .016$).

When asked why they did not use a specific skill, 32% of the sample gave at least one description that indicated that they did not understand it. In some cases, students' responses suggested that they were confused, but it was not clear whether they misunderstood the skill or the question we asked. The percentage misunderstanding specific skills ranged from 3% for dealing with bullying to 24% for empathy (see Table 5). As with misuse of skills, some students confused making a complaint with complaining. Others misinterpreted resisting gang pressure to mean joining a gang. Similarly, some students misunderstood the skills for dealing with bullying to mean bullying other students. Students interpreted empathy in several different ways. For example, when discussing empathy, one student in a county school explained that he would not use empathy because "I actually do think about people but I don't really feel like I should like try to be like them." A higher percentage of students at the urban schools misunderstood at least one of the skills (38.9% versus 18.8%, $\chi^2[1] = 5.85$, $p = .021$). This was largely due to a higher percentage of students in the urban schools not understanding the use of making a complaint (13.5% vs. 2.1%; $\chi^2[1] = 4.72$, $p = .033$), and resisting gang pressure (10.1% vs. 0.0%; $\chi^2[1] = 5.20$, $p = .027$).

Some students (i.e., 12%) did not remember one or more of the skills or could not recall learning about a specific skill even when shown handouts from the intervention. The percentage of students not remembering a skill ranged from 2% for dealing with bullying to 10% for empathy (see Table 5). One student in an urban school explained that he did not use empathy because "we learned about it, but I forgot about it." Other students explained that they did not remember a skill because they were probably not in class that day, or that the teacher never covered it. One student in the county school indicated that he had not remembered a skill because of the time lag between the intervention and the interview: "I might have, like, did it, but it may have been like last year and lot of stuff's happened since last year."

Outcomes of Using Intervention Skills

Participants who used a specific skill rated how well it worked for them and how confident they were that they could use it. Those who did not use the skill rated how well they thought it would work and their confidence that they could use it if they wanted to. Comparisons of effectiveness and self-confidence ratings across skills revealed several significant differences between those who reported using and not using skills. Compared to participants who reported not using, those who reported using problem solving and making a complaint rated the effectiveness of these skills higher ($d = .47$, $p = .018$; and $d = .62$, $p < .001$, respectively). They also rated their self-efficacy higher for problem-solving ($d = .43$, $p = .01$) and for empathy ($d = .38$, $p = .049$). We pooled data from users and non-users to allow comparison across skills. Mean ratings of individual skills showed little variation, ranging from 3.73 to 3.90 and did not differ across skills ($F[7, 616] < 1$, or sites, $F[1, 88] < 1$), and there was no Skill x Site interaction, ($F[7, 616] < 1$). Ratings of self-efficacy ranged from 3.69 to 3.94, did not differ across skills ($F[7, 917] < 1$, or sites, $F[1, 131] < 1$), and there was again no Skill x Site interaction ($F[7, 917] = 1.22$, *ns*). This suggests that most participants felt the skills would produce positive outcomes and were fairly confident that they could use each of them.

In addition to rating how well the skill worked for them, we asked students who used a specific skill to explain why they gave that rating. The majority of students (59% to 86%) who used a specific skill identified at least one desirable outcome. These included experiencing a positive outcome (29% to 76% across skills; see Figure 2). For example, when describing how she used anger management, one female student in an urban school said, “I was calm for the rest of the day.” When discussing empathy, most students said that using the skill helped them to maintain existing relationships or create new relationships. One male student in an urban school explained, “Seein’ how mad he was, was like, kinda like makin’ me feel like I did somethin’ wrong so it was like, I needed to calm down for what I did and apologize.” One student in a county school explained how problem-solving helped her: “Me and her like actually solved the problem together, and we apologized, and I told her that I was like really sorry for what happened.” Participants also described how using a specific skill helped them avoid negative outcomes, especially getting in trouble (7% to 36% across skills; see Figure 2). This theme emerged most frequently in regards to anger management, diffusing a fight, and dealing with peer pressure. For example, one male student in an urban school explained that using anger management “kept me from sayin’ stuff that would get me in even more trouble.” In discussing their use of diffusing a fight, most students mentioned that using the skill prevented them or their friends from fighting or getting into trouble. One student in an urban school described negative outcomes that he avoided: “if I would’ve fought him I would’ve probably still got, like, in trouble and…he like, you know how when you fight somebody and say if they lose or something they’ll just keep on wanting to fight you and fight you until they win.” Negative outcomes that students avoided by using skills for dealing with peer pressure primarily included getting into trouble and bodily harm. As one male student in an urban school so aptly put it, “I’m not [going to] steal from no store and go to Juvy [i.e., juvenile detention] with all them bad children.”

Participants also identified some negative outcomes they experienced from using specific skills. The percentage of students using a skill who identified negative outcomes ranged from 34% to 53% across skills (see Figure 2). Some participants reported experiencing general negative outcomes, including finding the skill ineffective, experiencing negative reactions from others involved in the interaction, and other negative outcomes, such as continued or increased provocation from other students. Skills for which participants most frequently identified negative outcomes involved dealing with peer pressure (41%), resisting gang pressure (53%), and dealing with bullying (48%). Some participants who used skills for dealing with bullying or dealing with peer pressure described how their peers’ provocation continued or reported that the other person in the interaction became angrier. For example, one female student in an urban school said, “he just kept trying to beat me up and stuff.” When one student in an urban school resisted peer pressure, he said the students who wanted him to skip class “was like, calling me a little punk.”

Interviewers also asked participants about the reactions of peers not directly involved in the problem situation. Some participants (6% to 14% across skills) stated that their peers had positive reactions (see Table 5) such as helping or encouraging participants to use the skills or approving participants’ use of the skills after the fact. One student in an urban school who used anger management said: “Some of my friend was happy because they ain’t want to see me get in trouble.” Another student in an urban school described how his friends encouraged

him to use anger management. “They just said, ‘Calm down, sit in the chair, let’s don’t…just ignore her,’ stuff like that.” Some participants noted that their friends would have done the same thing in their situation. Participants also identified negative reactions from students not directly involved in the situation (9% to 22% across skills; see Table 5). This theme occurred most often when students used skills that involved diffusing a fight (22%), dealing with peer pressure (11%), or anger management (9%). In general, participants who identified negative peer reactions stated that using the skills disappointed other students who wanted to see a fight, or damaged participants’ reputation or social status. For example, when discussing diffusing a fight, one female participant in an urban school said that bystanders “wanted to boost [the fight] up more.” A female student in the county school noted that other students “were a little mad because they wanted to see a fight that day.” When describing her use of anger management, one female student in an urban school said, “the other ones looked at me like I was, like, scared of her or something. They looked like they was getting ready to laugh at me.”

Discussion

This study examined middle school students’ perceptions of the Second Step curriculum to determine their general reactions to the intervention, the extent to which they changed their behavior as a result of the intervention, whether they used the skills addressed by the intervention in problem situations, and if so, whether they found them effective. Participants were generally positive about their overall impressions of the intervention. This was evident in their ratings and responses to open-ended questions. Most said they learned something from the intervention and found it useful. Some expressed concerns about its relevance and identified aspects of the intervention they did not find as useful. Some participants also suggested ways the intervention could be improved; for example, that it needed to include more engaging activities. Participants also raised concerns about the relevance of the intervention for addressing the types of problem situations they were likely to encounter. Although Sullivan and colleagues made efforts to incorporate situations identified from previous qualitative studies of urban middle school students into role plays (Farrell et al., 2006), further work may be needed to improve its relevance to address the concerns of participants in specific settings. It is possible that having instructors elicit problem situations from their students and facilitating a discussion of how intervention skills could be applied to those situations could increase both adolescents’ self-efficacy for dealing with problems situations and their motivation to use intervention skills. It is important to note that Sullivan and colleagues implemented the intervention using outside staff rather than by means of classroom teachers, who might have had a better understanding of problems within the school and their students’ conflicts.

Many participants indicated they had made some changes after participating in the intervention, but they described these in fairly general terms. More specific changes related to controlling anger and improving relations with others. Our findings provided support for the potential relevance of the skills included in the curriculum in that many students reported efforts to use skills such as anger management, empathy, making a complaint, and diffusing a fight. These skills are not unique to Second Step, but are the focus of many other interventions that attempt to address deficits in social-information processing skills (Boxer

& Dubow, 2002). Participants reported using resisting gang pressure less frequently. The use of highly specific skills such as resisting gang pressure may vary by the extent to which gangs are present. This finding suggests the need to tailor interventions based on variability in the presence of specific environmental risk factors. In support of this, participants' suggestions for how to improve the intervention included making it more relevant.

Although we found support for the relevance of most of the skills targeted by the intervention, it was evident that not all participants successfully mastered them. This was reflected in general comments in which participants noted the need for the intervention to address topics in more depth. In some prevention programs, a specific skill (e.g., anger management) receives only a lesson or two. This clearly may not be enough time to fully master the skill. This was reflected in the percentage of participants whose descriptions of how they used a specific skill made it clear that they did not know how to apply it correctly and by those who reported not using specific skills because they did not remember them or whose descriptions suggested they did not understand them. This was particularly evident for empathy and problem solving. These are fairly complex skills and intensive efforts may be needed to ensure that participants adequately master them. This finding suggests the need for booster sessions designed to reinforce the use of intervention skills and address new challenges adolescents encounter as they progress in their development (Meyer & Farrell, 1998). It may also be useful to teach fewer skills, and allocate more time to teach and promote mastery of those skills that adolescents judged to be most relevant.

There is also a need for efforts to identify instructional techniques that promote student engagement in the intervention. This may include more experiential activities and opportunities to practice skills in meaningful ways outside of the specific lesson delivery until they are mastered. Adolescents may need considerable support in their early attempts to apply new skills as their initial efforts may not be successful (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Intervention developers cannot simply assume that participants will be able to apply these skills when they encounter difficult situations in the real world, but may need to make efforts to determine the extent to which participants adequately master the skills and provide remediation when appropriate. For example, Sutherland, Wright, and Sullivan (2010) suggested that curriculum-based measurement be incorporated into violence prevention programs. This involves the regular administration of brief measures that assess students' mastery of social, emotional, and behavioral skills during the intervention. The results can then be used to pinpoint specific areas in need of more intensive efforts to ensure that students successfully master these skills. More generally, it is important that interventions include measures of skill mastery within their outcome batteries. This provides a basis for testing the intervention's action theory and how the program affects mediating variables, and the conceptual theory and how mediating variables are related to key outcomes (MacKinnon, Taborga, & Morgan-Lopez, 2002). It may be that failure to adequately master these critical skills may be reducing the effectiveness of current interventions.

Even if students master skills, it is unlikely they will use them if they do not believe they will be effective. Participants' ratings of the outcomes they experienced when using skills were generally positive. They identified a variety of desirable outcomes including

experiencing positive outcomes and avoiding negative outcomes. However, they also identified some negative consequences from using skills. These were particularly evident in their efforts to apply skills in situations involving peers such as peer pressure, gang pressure, and bullying. Participants also reported negative peer reactions to their use of these skills. One important factor in participants' negative experiences in using the skills may be that the research design for the Sullivan and colleagues' (2014) study used classroom-level randomization. Thus, a student might be trying to use a skill in a situation involving a student at the same school who had not received the intervention and who thus might not recognize or support that attempt. Because the investigators implemented the intervention with only a subset of the sixth grade classrooms, it may not have been sufficient to make changes in the peer or overall school climate critical to supporting its success.

A somewhat surprising finding was the degree of consistency in reactions to the intervention across the two sites. Although they were quite different in terms of students' demographic characteristics and settings, there were very few significant differences in participants' overall reactions to the intervention, their use of the skills, and their ratings of the skills' effectiveness. This suggests that the findings may be fairly robust across settings. A few setting differences did emerge related to reported use of specific skills (i.e., anger management, diffusing a fight, and making a complaint) and apparent difficulties using problem solving to address problems. Differences were, however, more the exception than the rule. Moreover, because the two sites differed across multiple characteristics including race, ethnicity, family income, family structure, and setting, it is not possible to attribute these differences to any single variable. Future work examining these effects across a broader sample of settings is needed to provide a stronger test of the influence of contextual factors on the relevance of an intervention.

Limitations

This study has several key limitations. We asked students to provide retrospective accounts of their efforts to apply the skills addressed by the intervention. Observing their behavior *in-vivo* would provide a better test of their use of skills, but this would be difficult to do unobtrusively and raises ethical concerns related to privacy. More generally, the study focused primarily on participants' reactions to the intervention, and their reports may have been biased by efforts to tell interviewers what they assumed they wanted to hear. We attempted to minimize this potential bias by means of a thorough interviewer training process that emphasized neutral verbal and nonverbal responses to comments and open-ended questions. This appears to have been at least partially successful, in that many participants freely identified negative reactions to various aspects of the intervention, described negative consequences of their efforts to apply the skills taught in the intervention, and admitted that they did not remember specific skills. Nonetheless, it is not clear that all participants were totally candid in their discussion of the intervention. Another study limitation is that we interviewed participants from three specific schools in two different settings. It is not known how well these findings might generalize to students in other settings. The study also focused on a specific implementation of the Second Step curriculum. It therefore cannot be assumed that the findings would generalize to other violence prevention curricula, to other implementations of Second Step, or to the version

of Second Step (Committee for Children, 2008) that became available after we initiated this study. However, as previously noted, many of the skills targeted by the intervention are also addressed by other interventions, which suggests some generalizability. Finally, students interviewed in this study participated in the intervention as part of a larger study that randomized classrooms within each school to intervention and control conditions. The fact that some classrooms of sixth grade students and students in other grades did not receive the intervention may have reduced its effectiveness by not fully addressing peer influences and other factors operating within the school's climate.

Future Directions

Interventions must ensure that adolescents master the skills they are taught, so that they can use them correctly and effectively in the real world. Research suggests that multiple-choice responses and knowledge tests may not capture adolescents' abilities to use the skills in real-life situations (e.g., Howard et al., 1999). Other efforts may be needed to provide students with additional opportunities to apply the skills they learn within the intervention. This could include capitalizing on "teachable moments" in the classroom when interpersonal problems occur to apply emotion regulation, empathy, and problem-solving strategies. The challenges to using this strategy include teachers' varying degrees of comfort and competency in observing these issues and skillfully and effectively helping adolescents to walk through a prosocial alternative to conflict. Despite the difficulty, this may be the best way for adolescents to master skills and understand their application to real-life problems.

Another important goal for future violence prevention programs is to optimize their relevance to adolescents. In the case of this implementation of Second Step, Sullivan and colleagues (2014) used prior qualitative studies of urban adolescents to identify difficult problem situations, and created a menu of potential role-plays and discussions based on those situations. Despite these efforts, some adolescents (14%) questioned the relevance of the intervention. Researchers should consider intervention development an iterative process in which adolescents' concerns are incorporated as the intervention progresses. During the discussion of specific skills, adolescents are likely to raise objections to the content if it doesn't appear relevant. For example, adolescents may feel that walking away from provocation is not effective (e.g., if the person follows them, or if that response hurts their reputation or social status). For change to occur, adolescents must buy into the idea that using the skills taught is better than their current behaviors. Interventionists should be prepared to identify current problem situations at the school or among particular adolescents, and discuss how intervention skills may relate to those situations. Interventionists should be prepared and able to involve adolescents in a discussion of the pros and cons of using a skill in a particular situation and whether it leads to more desirable outcomes than alternatives. This might include discussing situational factors that could impact how it is applied and influence its likelihood of success. This also highlights the need to better understand potential adaptations to prevention programs, for example, by using a problem situation generated by a class of students on the spot in lieu of following specific problem situations outlined in the lessons. There is some evidence that local adaptations to prevention programs that do not alter the integrity of the intervention may enhance youth outcomes (Berkel, Mauricio, Schoenfelder, & Sandler, 2011).

Mastering the skills taught by an intervention will not ensure that they are used unless adolescents are motivated to change their behavior. Interventions that teach socio-emotional skills might benefit by incorporating techniques that directly address adolescents' underlying beliefs and values. For example, techniques such as motivational interviewing might help adolescents prioritize their goals and think through their conflicting values. Interventions such as Second Step, which focus primarily on individual-level factors, may also need to incorporate strategies that attempt to alter the overall school environment (e.g., Smith, Schneider, Smith, & Ananiadou, 2004). Peer factors, in particular, may discourage the use of skills taught by an intervention. Adolescents are unlikely to change their behavior if they believe it will result in negative peer reactions or damage their social standing (Farrell et al. 2010). Broader contextual factors such as bystander influences may also make it difficult for adolescents to use nonviolent skills in situations where they are confronted by peers. A key focus will be to alter not only the peer climate, but perceptions of the peer climate based on prior research that has found that adolescents tend to overestimate peer support for aggressive behavior and underestimate support for nonviolent responses (Henry et al., 2013). Changing the school culture will likely increase adolescents' use of intervention skills if it supports prosocial conflict resolution, includes negative consequences for aggression and if peers provide models of prosocial behavior. Prior work has also supported the influence of parents, particularly the messages they may convey that actively support aggression (Farrell et al., 2010). In short, interventions that focus on promoting individual level skills may best be viewed as one part of a more comprehensive effort to address multiple factors that influence adolescents' aggressive behavior (Farrell & Camou, 2006).

Although considerable progress has been made in developing interventions to reduce adolescents' involvement in aggression, further efforts are needed to improve their effectiveness. Universal school-based interventions that focus on enhancing social and cognitive skills appear to have particular promise (Boxer & Dubow, 2002), but it cannot simply be assumed that participants in these interventions will successfully master these skills, use them, or find them effective when they do so. Adolescents encounter many challenges in their efforts to apply these skills outside of the classroom (Farrell et al., 2010). As such, they represent an important source of information that can help developers of interventions determine how best to address these challenges. This underscores the potential value of qualitative efforts such as the current study as part of the iterative process of improving the efficacy of violence prevention programs and enhancing their relevance for specific groups of adolescents.

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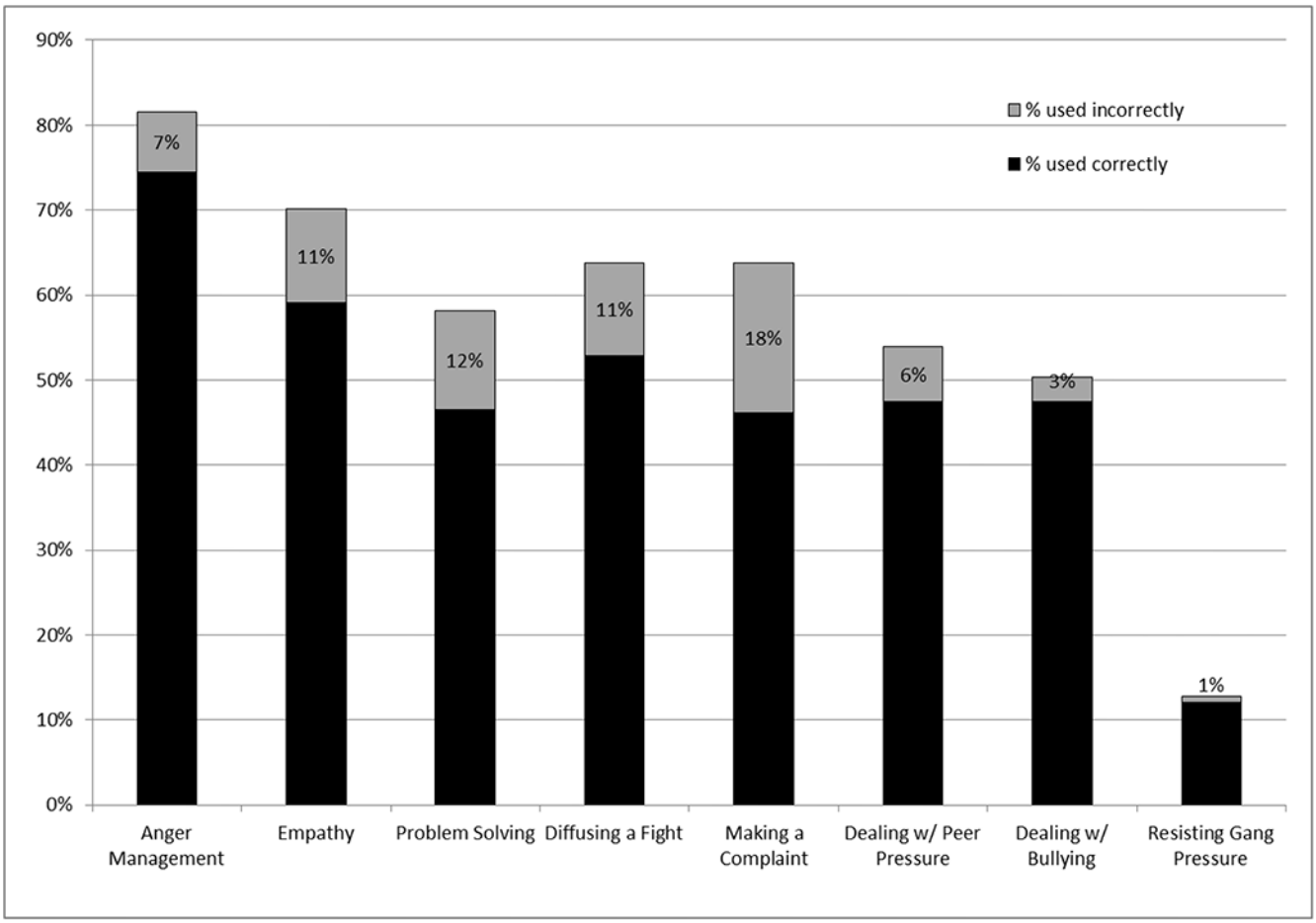

Figure 1.

Percentage of participants who reported using each intervention skill. Figure includes the percentage of those whose descriptions indicated that they did not use the skill correctly. $N = 141$.

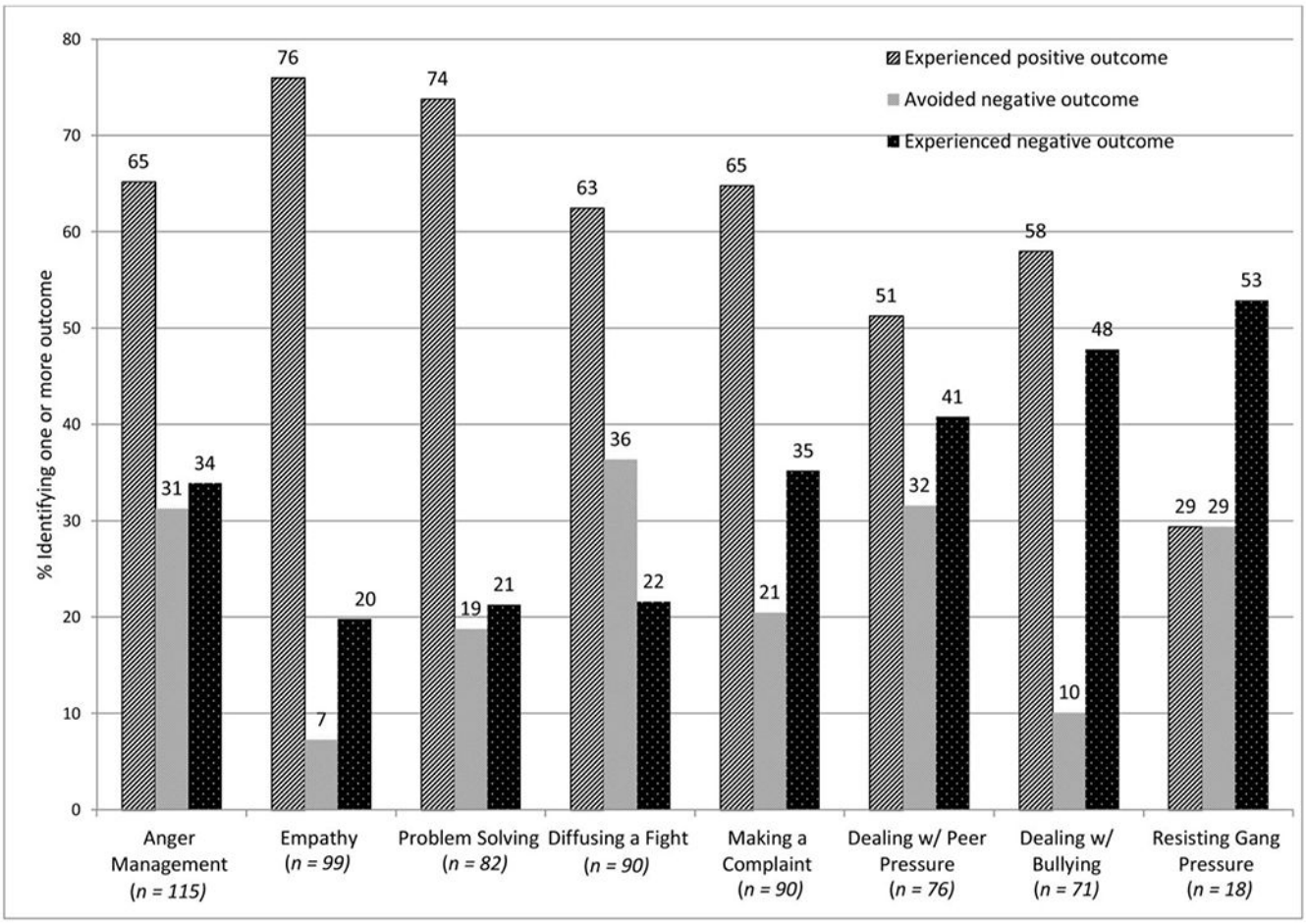

Figure 2.

Percentage of participants using each skill who identified one or more outcome related to achieving desired outcome, avoiding negative outcome, and experiencing negative outcome. Total *N* = 141. The denominator for percentages varied across skills and reflects the number of students who reported using each skill (values in parentheses).

Table 1

Outline of Debriefing Interview

Phase 1: General Reactions to the Intervention

Interviewers gave participants prompts to remind them about the intervention (e.g., teacher's name, period in which it was taught) and asked them about:

1. Their general opinions about the intervention, what was useful, what was not useful.
2. Their friends' reactions.
3. If they have done anything differently because of what they learned.

a) If yes, interviewers asked them to describe what they've done differently.

b) If not, interviewers asked them why not.

Phase 2: Recall and Application of Skills

Interviewers showed participants cards describing common examples of peer problem situations. Interviewers next asked participants to describe a similar situation they encountered since the intervention (or a hypothetical situation if they have not encountered any of the situations). Interviewers then asked participants:

1. If they handled the situation differently because of the intervention.

a) If yes – they asked participants what they did, asked them to rate how well things worked out on a 5-point scale (1 = *terrible,* 2 = *pretty bad*, 3 = *ok*, 4 = *pretty good,* and 5 = *great*), and asked them to list positive and negative outcomes and others' reactions.

b) If no –asked them why not.

2. To identify any other situations they handled differently because of the intervention using the same follow-up questions that were asked for the first situation they described.

Phase 3: Reactions to and Application of Specific Skills

Interviewers showed participants eight worksheets drawn from the intervention curriculum that represent the major skill areas. For each skill interviewers asked participants if they ever tried using it.

1. If they indicated that they used the skill, interviewers asked participants:

a) To describe how they used it and how things worked out.

b) To rate how well using the skill worked out for them on a 5-point scale (1 = *terrible,* 2 = *pretty bad*, 3 = *ok*, 4 = *pretty good,* and 5 = *great*) and to explain why they gave that rating.

c) To rate how confident they were that they could do it on a 5-point scale (1 = *not at all*, 2 = *not very*, 3 = *middle*, 4 = *pretty*, 5 = *very*) and to explain why they gave that rating.

d) To describe how others in the situation reacted.

e) To identify factors that made it easy and factors that made it hard to use the skill

f) To describe any other times they used the skill and what happened.

g) If they would ever use the skill in the future and to explain why or why not.

2. Interviewers asked participants who stated they had not used the skill to explain why not and to provide ratings and responses to a similar set of questions as under '1' regarding their perceptions of the skill.

3. Interviewers asked participants to indicate which skills they use most often and which they use least often and to explain why.

Phase 4: General Reactions to the Intervention

Interviewers concluded the interview by asking participants to rate the following on 5-point anchored scales:

1. What did you think of the "lessons" overall?

1 = *not at all useful,* 2 = *pretty useful,* 3 = *a little useful,* 4 = *pretty useful,* 5 = *really very useful.*

2. How well do you think what was taught in the lessons would work in solving or avoiding conflict?

1 = *wouldn't work at all, might make things worse,* 2 = *would probably not work,* 3= *would work ok,* 4 = *would work pretty well*, 5 = *would work great.*

3. How useful were the lessons to problems you have in real life?

1 = *not at all useful*, 2 = *not very useful*, 3 = *a little useful*, 4 = *pretty useful*, 5 = *really very useful.*

4. How often have you used what you learned in the lessons in some way in the past month?

1 = *never*, 2 = *once or twice*, 3 = *3 or 4 times*, 4 = *5 or 6 times*, 5 = *more than 7 times.*

5. For those skills that you have tried, how much do you think they helped you get what you wanted

   1 = *did not help at all, probably made things worse*, 2 = *did not help much*, 3 = *not sure*, 4 = *helped some*, 5 = *helped a lot.*

6. Would you recommend the Second Step lessons to other students?

   1 = *definitely would not*, 2 = *probably would not,* 3 = *not sure*, 4 = *probably would*, 5 = *definitely would.*

Table 2

Reliability of Themes and Number (and %) of Participants Who Identified One or More Themes Reflecting Positive and Negative Reactions to the Intervention

Theme	*n*	%	Kappa	Percentage agreement
Participants who identified one or more positive reactions to the intervention	137	99	*a*	*a*
Experienced general benefit	135	98	.61	91
Learned specific skill	76	55	.78	89
Found it interesting or enjoyable	33	24	.69	95
Other positive reactions	18	13	.16	88
Positive friends' reaction	53	38	.94	98
Participants who identified one or more negative reactions to the intervention	109	79	a	a
Intervention was not helpful or useful	88	64	.67	84
Intervention was boring	22	16	.73	96
Other negative reactions	40	29	.85	93
Negative friends' reactions	58	42	.80	93

Note. $N = 138$ due to audio problems with 3 participants' recordings.

[a] = Kappa not calculated for aggregate score.

Table 3

Reliability of Themes and Number (and %) of Participants Who Identified Themes Reflecting Changes They Made After Participating in the Intervention

	n	%	Kappa	% agreement
What participants have done differently				
Made one or more changes	82	59	*a*	*a*
Controlled their anger	31	22	1	100
Improved their relations with others	26	19	.83	95
Reduced their involvement in problem situations	16	12	.79	98
Decreased their aggression	15	11	.92	98
Decreased other negative behaviors	12	9	.53	93
Made other change consistent with the intervention	8	6	.22	88
How they handled a specific situation differently				
Handled the situation differently because of intervention	111	80	a	a
Improved their communications or relations with others	60	43	.51	76
Walked away or ignored provocation	54	39	.52	83
Controlled their anger	29	21	.82	93
Avoided fighting or violence	17	12	.62	90
Sought support from peers or adults	15	11	.54	90
Made other prosocial behavior change	6	4	−.03	95

Note. $N = 138$ due to audio problems with 3 participants' recordings.

[a] = Kappa not calculated for aggregate score.

Table 4

Means and SDs for Participants' Ratings of Their Overall Reactions to the Intervention

	M	*SD*	% positive
Overall rating of the intervention	4.06	0.77	76.4[a]
Effectiveness for solving or avoiding conflict	3.82	0.82	68.6[a]
Usefulness for real life problems	3.96	0.95	71.2[a]
Frequency of using what was learned in the past month	2.74	1.15	87.1[b]
How well using skills helped you get what you wanted	3.99	0.84	75.5[a]
Would recommend to other students	4.40	0.79	87.1[a]

Note. $N = 141$. Ratings ranged from 1 to 5 (see Table 1 for scale anchors).

[a]% with ratings of 4 or higher.

[b]% who indicated that they used something they learned from the intervention at least once in the past month.

Table 5

Percentage of Participants Who Misunderstood, Did Not Remember, and Reported Positive and Negative Peer Reactions to Individual Skills.

Skill	Misunderstood	Did not remember	Positive peer reactions	Negative peer reactions
Anger management	4.3	3.6	13.0	8.7
Empathy	23.8	10.2	6.3	5.2
Problem solving	5.3	5.1	10.0	3.8
Diffusing a fight	12.0	5.1	13.6	21.6
Making a complaint	16.0	9.5	11.4	3.4
Dealing w/ peer pressure	6.5	3.6	10.5	10.7
Dealing w/ bullying	2.9	2.2	13.0	11.6
Resisting gang pressure	6.7	6.6	11.8	11.8

Note. $N = 138$.