Bully Busters Abbreviated: Evaluation of a Group-Based Bully Intervention and Prevention Program

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The present study sought to examine the efficacy of an abbreviated version of the Bully Busters program, a psychoeducationally based group intervention and prevention program designed to increase teacher's knowledge and use of bullying intervention skills, as well as teacher self-efficacy in intervening with bullying so as to subsequently effect change in the school climate. Teacher-participants attended seven group sessions designed to provide them with exposure to the didactics of the model, as well as to engage them in active learning, role-playing, and cognitive and emotional processing of their experiences of the impact of bullying behaviors on their teaching efficacy as well as the school climate. Materials and experiences from these groups were then taken to the classroom and implemented with the student-participants vis-à-vis classroom exercises. The findings suggest that an abbreviated group-based version of the Bully Busters program can have positive effect on teacher reports of efficacy in intervening with bullying behaviors.

Keywords: bullying, aggression, violence prevention, middle school, group interventions

Despite statistics that indicate that school violence is diminishing (Glasser, 2000), even the slightest potential or threat of violence comes with a price no one should ever have to pay. Recent school shootings, such as those at Columbine in 2000 and Virginia Tech in 2007 provide tragic support. Though we are understandably shocked by such incidents as these, we should not be surprised; a 2006 report indicates that as many as 6% of high school students admit to carrying a weapon (a gun, knife, or club) to school (Eaton et al., 2006).

Even when the violence is not as starkly expressed as in the above examples, the problem of violence and aggression still regularly challenges our children. For example, the CDC's Youth Risk Behavior Survey indicates that 43% of boys and 28% of girls have been in fights; that 30% of students in Grades 6–10 have been involved in a bully–victim dyad (Whitted & Dupper, 2005). Such high percentages indicate that students at a young age are introduced to a culture of violence via the social interactions of bully victim dyads in their schools (Espalage & Holt, 2001; Hoover, Oliver, & Hazler, 1992; Newman-Carlson & Horne, 2004).

From the perspective of the perpetrators, the World Health Organization's Bullying Survey (Nansal et al., 2001), which assessed the bullying experiences of more than 15,000 school-aged youth in the public school system of the United States, indicates that 53% of boys and 37% of girls report having participated in bullying, adding that 12% of the boys report having participated in bullying on a weekly basis. These percentages are similar to those reported by Grunbaum et al. (2004) who, utilizing the Youth Risk Behavior Surveillance (YRBS) with a comparably sized (~12,000) sample of school-aged youth, reports that 41% of boys and 25% of girls had been in a physical fight. Additionally, the YRBS determined that 9% of boys and 3% of girls also reported carrying a weapon to school.

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Similarly, a survey of the experiences of more than 9,000 students as part of the Students For Peace Program (Orpinas et al., 2000), reported that in 1 week's time, 60% of students had engaged in name-calling, 55% had made fun of others, 44% had pushed another student, 39% had hit or kicked another student, and 36% of students had threatened another with violence.

From the perspective of the victims, the work of Nansel et al. (2001) reports that 47% of boys and 36% of girls had been the victims of bullying behavior, and that 11% of boys and 6% of girls were bullied weekly. Similar findings were reported by Kockendorfer and Ladd (1996), who indicate that 51% of young children reported being teased, and 43% reported regularly being the target of low-level violence. Most alarmingly, it was reported that 6% of boys and 5% of girls reported feeling that they were too unsafe to attend classes (Grunbaum et al., 2004). When determining the number of students who miss school because of fear, a 1993 report by the National Association of School Psychologists (NASP) and the United States Department of Justice (USDJ), puts estimates at over 160,000 (Lee, 1993).

Development of Group-Based Bully Reduction Programs

By virtue of the fact that bullying occurs within a relational context, it is vital to identify the various systems in which a child or adolescent lives, as well as to also understand the various risk and protective factors which operate in each of those systems. Thus, a number of programs have been developed over the last few decades that attempt to reduce and/or prevent the effects of bullying and aggression (Horne, Orpinas, Newman-Carlson, & Bartolomucci, 2004). Though programs have been developed that target the problem of bullying and victimization from an individual treatment perspective (Hazler, 1996), the most frequently employed interventions in school settings approach the problem from a systems perspective with a focus on both aggression reduction and prevention. Group models appear to be an efficient and cost-effective means for effecting change in the school system.

Moreover, Whitted and Dupper (2005) indicate that the most successful primary interventions address (in some form or other) the following: (1) the interventions are designed to positively impact school climate, (2) the interventions are designed to positively impact the teachers ability to intervene in bully victim dyads (also known as teacher efficacy), and (3) the interventions are designed to positively impact the bullies and victims themselves. Thus, the best practices for preventing or reducing bullying behaviors in schools involve a multilevel and comprehensive approach that impacts the school and classroom climate, the teachers, and the students (Whitted & Dupper, 2005).

The Bully Busters program (Newman, Horne, & Bartolomucci, 2000) is a group-based, teacher-targeted bullying reduction program that has been developed to more effectively meet the educational, cultural, and fiscal needs of the school systems in the United States. The Bully Busters program model is predicated on the fact that aggression and bullying are behaviors borne of social skills deficits; and that the most effective means of reducing aggression and bullying behaviors in the school is through increasing the awareness, knowledge, and efficacy of teachers regarding how they deal with school-based aggression and bullying (Newman-Carlson & Horne, 2004). Specifically, this is done through a psychoeducationally based curriculum which the school counseling personnel deliver to the teachers. The Bully Busters intervention is designed to increase teacher knowledge and use of bullying intervention skills, teacher self-efficacy in intervening with bullying, and subsequently effect change in the school climate by: (1) increasing their students' exposure to strong social models who can effectively and benevolently manage bullying behaviors, (2) reduce exposure to aggressive and bullying behaviors as the school climate changes in response to the new culture which is being established by the teacher, (3) provide the teachers and students with materials and activities to facilitate classroom discussions related to the factors and effects of bullying and victimization, and (4) offer controlled exposure to basic social skills related to managing conflict. Although the materials can be implemented in a lecture-discussion format, most commonly the intervention is disseminated in a group format.

While the Bully Busters program (Newman, Horne, & Bartolomucci, 2000) program has

been shown by Newman-Carlson and Horne (2004) and others (Browning, Cooker, & Sullivan, 2005; Howard, Horne, & Jolliff, 2001; Orpinas, Horne, & Staniszewski, 2003) to be an effective teacher-targeted awareness- and skills-based bullying reduction program, they note that there is still a dearth of research examining the effectiveness of this program, and versions of it, in school systems across the United States. In the present study an abbreviated version was undertaken because the full version had experienced several evaluations and teachers and administrators had requested a less intrusive, more focused implementation that would provide teachers with the background and understanding of the program, but would implement fewer specific activities and events. This was in part a function of schools having to provide increased focus on classroom-focused instruction to address high stakes testing demands for increased academic performance. This implementation was developed to determine whether an abbreviated version would be successful in less time and with fewer activities.

Thus, the present study examined the effectiveness of a group-based, abbreviated Bully Busters program model. Specifically, this study attempted to determine the efficacy of a year-long, abbreviated, psychoeducationally based, teacher-targeted group intervention conducted at a middle school in the Southeastern United States. The study examined the following research questions:

1. Does a psychoeducationally based Teacher Support Group effect the teacher-participant s' self-efficacy as it relates to successfully intervening in a bully victim conflict?

2. Does a psychoeducationally based Teacher Support Group effect the teacher-participants' perceptions of the risk factors in the school and classroom climates that are associated with bully victim conflict?

3. Do teacher-led, in-class activities effect the student-participants' perceptions of the risk factors in the school and classroom climates that are associated with bully victim conflict?

Method

Participants

This study examined the effects of the group-based, abbreviated intervention on teachers and students in a public middle school in the Southeastern United States. The middle school is located in a suburban/rural area adjacent to a small city. During the 2005–2006 school year, 89% of the student population received free or reduced price meals, and 10% were considered to have limited English proficiency. With regard to race/ethnicity, 64% of students were African American, 12% were White, and 24% were identified as Multiracial or Other; 22% of students were Hispanic.

Teachers are considered the primary sample, as they had the most direct exposure to the bullying reduction intervention. Students are considered the secondary sample, as they had less-direct exposure to the intervention; student's exposure to the bullying reduction intervention came through the in-class activities presented by their teachers.

Teachers. The teacher sample consisted of 52 teachers (75% of the teacher population) across all grades (i.e., 6, 7, 8) who completed the pre- and posttest measures. Because of an expressed concern about anonymity by the school's administration, no identifying or other demographic information was collected on the teacher-participants.

Students. The student sample consisted of 488 students (73% of the student population; 53% girls; 57% African American, 12% White, 24% Hispanic) who completed the pre- and posttest measures. Of the sample, 52.6% were female. Students ranged in age from 10 to 16 ($M = 12.4$, $SD = .96$) and were approximately evenly divided across grades.

Intervention. The treatment program implemented in this study was an abbreviated version of the school-wide and year-long intervention that is presented in *Bully Busters: A Teacher's Manual for Helping Bullies, Victims, and Bystanders* (Newman, Horne, & Bartolomucci, 2000). The program's goals are (1) increasing teachers' awareness and understating of bullying behaviors, (2) increasing teachers' effective use (both perceived and actual) of bullying interventions, (3) increasing students'

awareness and understanding of bullying behaviors, (4) increasing students' effective use (both perceived and actual) of bullying interventions. The program (referred to as Bully Busters) has been empirically supported (Newman-Carlson & Horne, 2004, p. 259).

The intervention included in-service training for all teachers, providing them with the background of the program as well as the elements that had been implemented during previous and similar interventions. The rationale for the program, the core elements of reducing bullying in classrooms, and specific exercises were given to teachers, and they received a copy of the full Bully Busters manual with all activities available. Following the in-service training, teachers met six times with the researchers to engage in teacher support groups during which time activities were reviewed, role-plays occurred, and teachers provided examples of classroom events that were going well and those that were problematic. The group was used as a support and problem-solving event addressing bullying problems. For each session, teachers were instructed in the implementation of an activity from the total program. The original program consists of six modules and the teachers met six times and were instructed on the use of one activity from the full program. The six activities selected had been implemented in the full program previously and teachers had indicated that the modules selected were particularly impactful in their classes (a complete listing of the selected activities is available from the first author). Teachers in the present study had the option of implementing additional activities from each of the six modules if they chose to do so; most did not because of time limitations. Materials were available in Spanish for students unfamiliar with English.

Procedure

The abbreviated intervention utilized in the present study was developed over a series of meetings with the administrators and counselors at the middle school site for which it was intended. The administrators and counselors indicated an interest in the application of the bullying reduction program; however, they had concerns regarding the amount of in-class time that they were able to devote to the program's implementation. Because of these concerns, the program was modified so that it could be implemented in the time allowed.

The program obtained approval from the Institutional Review Board at the University of Georgia and the school district where the school was located. All students and teachers participated in the Bully Busters lessons as part of the universal curriculum of the school. Teachers received continuing education credit hours for participating in the program. Teacher and student participation in the pre- and posttest surveys was voluntary. To maintain anonymity, written consent was not obtained; however, all participants were informed that there would be no negative consequences if they did not complete the survey. Active parental consent was not obtained but parents were informed of the program, and they could elect to have their children not participate in the program without consequences. None withheld permission.

The study was comprised of four parts: an initial 2-hr meeting, seven teacher support groups, seven classroom activities, and a concluding meeting. The pretest was administered during the initial meeting, which included all of the teachers in the school. This meeting provided an overview of the need for and purpose of a bullying reduction intervention, and the schedule for the teacher support groups. Each teacher was provided with a copy of *Bully Busters: A Teacher's Manual for Helping Bullies, Victims, and Bystanders* (Newman, Horne, & Bartolomucci, 2000).

Throughout the school year, teachers attended seven monthly psychoeducationally based teacher support groups (TSGs). The TSGs met once a month from October to May. Two TSGs were formed for each grade level (i.e., Connections, 6th, 7th, and 8th grade), and teachers were allowed to self-select their particular group's membership. Once group membership was decided, teachers were asked to remain in their selected group for the duration of the intervention. TSG membership typically consisted of 6 to 10 teachers from a single grade, and two to three group facilitators (masters' and doctoral-level counseling psychology students). The facilitators attended instructional, training, and supervision meetings throughout the study. Teachers received continuing education credit for attending.

Each of the seven TSG sessions lasted 45 min and covered a module (i.e., chapter) of the Bully Busters program. Each module focuses on a specific topic: (1) increasing awareness of bullying, (2) recognizing the bully, (3) recognizing the victim, (4) interventions for bullying behavior, (5) recommendations and interventions for helping victims, (6) the role of prevention, and (7) relaxation and coping skills. Student activities for teachers to use in their classroom accompany each module. After each session, every teacher conducted the accompanying activity in their classroom at a convenient time. In total, seven in-class activities were conducted throughout the course of the year, and every student in the school, barring absence, was exposed to these activities.

The TSGs were structured according to the following sequence: (1) 5–10 min discussing the successes and failures of the previous week's in-class activity, (2) 10–15 min presenting the conceptual content of that session's assigned module, (3) 5–10 min introducing and discussing the upcoming week's in-class activity, and (4) 5–10 min discussing possible factors contributing to success and failure regarding the upcoming week's in-class activity.

At the end of the school year, a wrap up meeting was conducted with all teachers whereby a posttest was administered. Students took pre- and posttests in the classroom with teachers facilitating the process.

Measures

Pre- and posttest surveys were collected from all students and teachers at the school who were present on the day of the administration and who were willing to take the survey. Four additional teachers were present to take the survey at posttest. Fewer students were present to take the survey at posttest, likely because of greater absenteeism at the end of the school year. Furthermore, not all participants completed the survey; therefore, samples sizes differed across scales. Analyses were based on summed scale scores, therefore, scale scores could not be obtained for participants who did not answer every item on the scale and listwise deletion was therefore used. Additionally, the data were screened for invalid data (i.e., out of bounds responses), and no other cases were deleted.

Teacher survey. Teachers were assessed at pre- and posttest on self-efficacy for addressing bullying problems and perceptions of school climate/safety.

Teacher self-efficacy was measured with two scales. The Teacher Sense of Efficacy Scale (TSES; Tschaannen-Moran and Hoy, 2001) is a 24 item (9-point ordered response) scale that measures how much teachers believe they are able to maintain a positive classroom environment (item anchors: *none at all* to *a great deal*). The scale score is the sum of the item scores, and high scores indicate more self-efficacy. Internal consistency as reported by the developers is good ($\alpha = .94$). The Teacher Expectation and Efficacy Measure (TEEM; Multisite Violence Prevention Project [MVPP], 2004) is a 22 item (5-point Likert) survey designed to measure teacher's expectations for adaptive behavior in their students and self-efficacy for working with students who exhibit bullying or victimization behaviors. The TEEM is comprised of two vignettes: one describing a perpetrator of aggressive behavior, and one describing a victim of aggressive behavior. Each item consists of either a statement about the expected behavior of the student (i.e., Expectation subscale; item anchors: *completely disagree, completely agree*) or one's confidence in responding positively to the student (Efficacy subscale; item anchors: *not confident, very confident*). The scale score is the sum of the item scores, and high scores indicate higher expectations/self-efficacy. Internal consistency as reported by the developers is good (For the subscales, Expectations-Victim, Self-Efficacy-Victim, Expectations-Perpetrator, Self-Efficacy-Perpetrator, $\alpha = .85, .93, .81, .93$, respectively).

Teacher perceptions of school climate and safety problems were measured with two scales. The School Safety Problems-Teacher (SSP-T; MVPP, 2005) is an 18 item (4-point Likert) survey designed to measure teacher reports of problem behaviors in the school. Items consist of statements about school safety problems (item anchors: *serious problem, not a problem*). The scale score is the sum of the item scores, and high scores indicate more safety problems. Internal consistency as reported by the developers is good ($\alpha = .83$ to $.88$; MVPP et al., 2005). The Teacher Classroom Climate (TCC; MVPP,

2004) is a 24 item (4-point Likert) survey designed to measure teacher's perceptions of classroom climate with regard to student-student relationships, student-teacher relationships, and student's awareness and reporting of aggressive behavior. The survey was adapted from Vessel's School Climate Survey (Vessels, 1998). Items consist of positive statements about classroom climate (item anchors: *strongly agree*, *strongly disagree*). The scale score is the sum of the item scores, and high scores indicate better classroom climate. Internal consistency as reported by the developers is fair ($\alpha = .64$, .74, .75 for the subscales, respectively; MVPP, 2004).

Student survey.   Students were assessed at pre- and posttest on perceptions of school climate/safety. The Student Classroom Climate, (SCC; MVPP, 2004) is an 18 item (4-point Likert) survey designed to measure student's perceptions of their classroom climate with regard to student-student relationships, student-teacher relationships, and awareness and reporting of aggressive behavior. Items consist of positive statements about classroom climate (item anchors: *strongly agree*, *strongly disagree*). The survey was adapted from Vessel's School Climate Survey (Vessels, 1998). The scale score is the sum of the item scores, and high scores indicate better classroom climate. Internal consistency as reported by the developers is fair ($\alpha = .61$, .66, .63 for the subscales, respectively; MVPP, 2004).

The Problem Behavior Frequency Scales (PBFS; MVPP, 2004) is a 51 item (6-point Likert) survey designed to measure the frequency of problem behaviors experienced by students. The behaviors are grouped into the seven scales: (1) Physical aggression, (2) Nonphysical aggression, (3) Relational aggression, (4) Overt victimization, (5) Relational victimization, (6) Drug use, and (7) Delinquent behaviors. The scales were modeled after the Center for Disease Control's Youth Risk Survey (Douglas et al., 1997). Each item asks about the number of times in the past week a behavior occurred (item anchors: *0 times*, *6 + times*). At the request of the school administrators, the Drug use and Delinquency scales were excluded. The scale score is the sum of the item scores, and high scores indicate more perpetration/victimization. Internal consistency as reported by the developers is fair ($\alpha = .80$, .79,

.72, .84, .84, .84, .84, .76 for each subscale, respectively; MMVP, 2004).

The School Safety Problems-Student (SSP-S; MVPP, 2004) is a 9 item (4-point Likert) survey designed to measure student reports of problem behaviors in the school (item anchors: *serious problem*, *not a problem*). The scale score is the sum of the item scores, and high scores indicate more safety problem. Internal consistency as reported by the developers is good ($\alpha = .89$; MVPP et al., 2005).

Research Design

A quasi-experimental pretest/posttest design was implemented (see Table 1). There were two treatment groups. The primary treatment group consisted of all middle school teachers and the secondary treatment group consisted of all middle school students at the school who were enrolled in classes taught by the middle school teachers. The program was implemented as a whole-school.

Results.   Three research questions and nine null hypotheses were developed to test the efficacy of this intervention. The statistical procedure utilized to test these hypotheses was two-step in nature: (1) means and *SD*s were determined for each of the pre- and posttest scales scores; 2) a two-tailed *t* test was conducted to determine if there was a significant difference between the pre- and posttest scales scores. Results for each of the analyses are summarized below.

> *Research Question 1:* Does a psychoeducationally based Teacher Support Group effect teacher self-efficacy and expectancy as it relates to successfully intervening in a bully victim conflict?

Table 1
Timeline of Research Design

Group	Pretest	Intervention	Posttest
Teacher-Participants	TSES TEEM SSP TCC	Psychoeducational Intervention	TSES TEEM SSP TCC
Student-Participants	SCC PBF-V PBF-P SSP	In-class Activities	SCC PBF-V PBF-P SSP

For Research Question 1, two of the three tests were significant in the correct direction. After the intervention, teachers reported (1) significantly higher sense of efficacy as it relates to ability to effect behavioral outcomes in students as measured by the TEEM-Efficacy Scale, and (2) significantly higher expectations for adaptive behavior in aggressing and victimized students as measured by the TEEM-Expectancy Scale. Therefore, null hypotheses 1a and 1b were rejected. There was not a significant difference from pre to post in teacher sense of self-efficacy as measured by the Teacher Sense of Efficacy Scale (TSES). Null Hypothesis 1c was retained. Results are summarized in Table 2.

Research Question 2: Does a psychoeducationally based Teacher Support Group effect teacher's perceptions of the risk factors in the school and classroom climates that are associated with bully victim conflict?

Teacher awareness of problem behaviors in the school environment (i.e., SSP-T) and reported perceptions of classroom climate (i.e., TCC) did not significantly change from pretest to posttest, and null Hypotheses 2a and 2b were retained. Results are summarized in Table 2.

Research Question 3: Does a teacher-led series of in-class activities effect students'

perceptions of the risk factors in the school and classroom climates that are associated with bully victim conflict?

Student's reported perceptions of classroom climate (i.e., SCC), reported levels of victimization (i.e., PBFS-V) and school safety problems (i.e., SSP) did not significantly change from pretest to posttest. Null Hypotheses 3a, 3b, and 3c were retained. Reported levels of perpetration (i.e., PBFS-P) significantly increased from pretest to posttest. Null Hypothesis 3d was rejected. Results are summarized in Table 2.

Discussion

Though it appears that bullying and aggressive behaviors in our schools have reached a "leveling off" point, it is evident that the incidence and prevalence of these types of destructive risk behaviors far exceed what is reasonable for a culture with resources such as ours in the United States. As has been noted, current levels of bullying and aggression in our schools are still alarmingly high, and thus it is the noblesse oblige of researchers and clinicians to develop interventions to reduce these problems.

A considerable body of literature has examined the efficacy of various types of bullying reduction and prevention programs that have been developed over the course of the past few

Table 2
Summary of Research Results

Measure	Pretest			Posttest			t	df	p	d
	n	M	SD	n	M	SD				
TEEM—Efficacy Scale	50	48.46	13	54	54.69	10.69	2.623**	102	0.010	0.5148
TEEM—Expectation Scale	50	24.9	8.24	54	27.81	6.31	2.016*	102	0.046	0.3957
Teacher Sense of Efficacy Scale (TSES)	52	163.73	19.94	58	165.69	30.06	0.395	108	0.694	0.0754
School Safety Problems-Teacher (SSP-T)	52	43.73	7.05	58	46.07	10.57	1.378	108	0.171	0.2632
Teacher Classroom Climate (TCC)	52	57.5	6.33	58	55.87	8.85	−1.119	108	0.266	−0.214
Student Classroom Climate (SCC)	477	47.22	11.53	305	46.39	11.7	−0.975	780	0.330	−0.071
Problem Behavior Frequency-Victim (PBF-V)	442	26.95	15.13	297	29.15	16.5	1.837	737	0.067	0.1378
Problem Behavior Frequency-Perpetrator (PBF-P)	442	24.3	13.42	297	27.41	15	2.863**	737	0.004	0.2148
School Safety Problems-Student (SSP-S)	417	20.59	8.23	280	21.81	8.57	1.872	695	0.062	0.1446

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

decades. These interventions have approached the problem of bullying from the perspective of the individual, the small group, and broader systems in which the individuals in groups function (e.g., school system). Despite this body of literature, many questions remain as to what is the most appropriate primary (universal and preventative) intervention for a school system to employ. Thus, this study sought to examine the efficacy of an abbreviated bully reduction program which concentrated on teacher-efficacy (as related to intervening in bully victim interactions), and school climate (both from the teacher-participants and student-participants perspective).

Teacher Efficacy and the Reduction of Bullying Behaviors

Teacher efficacy has been shown to be an important component for effectively reaching those students who have been labeled as "difficult to teach" (Hoover, Oliver, & Hazler, 1992; Soodak & Powdell, 1994; Weber & Omotani, 1994). As has been noted, teacher efficacy consists of the two core components, the general ability of a teacher to convey content as well as the ability to impact their students' behavior and manage the classroom.

Teacher efficacy was measured by several different scales before and upon completion of the intervention. All scales indicated increases in reported teacher-efficacy, though only two of the three indicated positive change.

Increasingly, teachers are faced with students who have more challenging behaviors beyond the "typical" academic problem (i.e., attention-deficit/hyperactivity disorder or conduct disorders). Concerning these students, teachers report even lower levels of efficacy. And, as is often the case with students who exhibit bullying behaviors, teachers tend not to intervene unless they believe that they will be effective in their actions (Howard, Horne, & Jolliff, 2001). As such, bullying reduction programs that effectively increase levels of teacher-efficacy are considered to be setting a standard for practice (Whitted & Drupper, 2005). Though the abbreviated version of the Bully Busters program employed in the present study is not a "standard for practice," its positive effects on teacher self-efficacy are notable, especially considering the limited nature of the intervention.

Teacher and Student Perceptions of School Climate

Teacher-participant and student-participant perception of school climate was measured by several different scales before and upon completion of the intervention. The various scales yielded an inconsistent profile of the school climate at the end of the intervention. By and large, teacher-participants tended to report slight decreases in bullying behaviors, whereas student-participants indicated both increases and decreases in bullying behaviors.

There are several possible reasons for these inconstancies. With regard to the teacher-participants report of slight decreases in bullying behaviors, there are at least two possible explanations. First, the teacher-participants actively engaged in a year-long and school-wide campaign against bullying. This campaign involved support from the school counselors, administration, and external consultants. These teacher-participants were given information on bullying reduction, both in the form of a hard-copy manual and in the form of brief psycho-educational group experiences. As such, it is plausible to believe that the teacher-participants experienced mild to moderate gains in their self-efficacy in working with bully victim interactions and that these gains enabled them to more effectively intervene in such interactions. This is to say that decreases in bullying behaviors may have occurred as a result of teacher-participants intervening in a more effective manner.

Second, the teachers could have experienced a sort of cognitive dissonance; or, more aptly the "Emperor wears no clothes" effect. Again, the entire administration was hoping to implement an effective bullying reduction campaign. It would certainly behoove the teacher-participants to report (whether they believe it or not) reduced incidences of bullying behaviors. Not only does a belief in, and report of, reduced incidences of bullying behaviors come with the external incentive of pleasing those in a seat of privilege, but an internal incentive (i.e., as it relates to efficacy) is present as well.

Third, and most likely, a subtle combination of the above factors (as well as others) worked synergistically to produce the nonsignificant

data trend. And, as always, it could simply have been a statistical artifact.

The student-participants reported both increases and decreases in bullying behaviors at the completion of the intervention. Again, there are several possible reasons for these inconstancies. First, students could be disingenuously reporting increases in negative behaviors at the end of a school year. This could be motivated by a desire to alter the outcome of the intervention to make the administration or teacher appear ineffective. Second, bully victim dyadic relationships have likely become rather fixed by the end of the academic year. Thus, a more robust intervention than this abbreviated model may have the potential to alter these more intractable, and therefore recognizable, bullying problems.

Despite these factors, the abbreviated intervention did appear to have some effect, and considering the relatively minimal cost of the intervention, the schools bullying reduction campaign was efficacious.

Limitations

There are several limitations of this study that, though implied elsewhere, will now be made explicit. First, this study employed a design of necessity. There was no control school available for comparison, nor an ability to match pre- and posttest scores across participants. Because of this, there were increased threats to internal and external validity; statistical tests were limited to independent sample *t* tests, as opposed to the more robust ANCOVA.

Second, because of myriad factors, some of them undoubtedly significant, there were unequal sample sizes on the pre- and posttest measurements. This was most prevalent among the student-participants. A decrease in the number of students participating in the posttest is concerning due to the fact that there is a high likelihood that these students may not have been present because of bullying problems, both as perpetrators (i.e., suspended, truant) or as victims (i.e., avoiding school, transferred).

Third, the teacher-participants participated in this study: (1) as part of an administration-initiated school-wide bullying reduction campaign, and (2) as a means to fulfill their con-

tinuing education credit requirement. Thus, generalization of these findings to populations of teachers whose participation is voluntary or uncompensated is questionable.

Fourth, no objective measure of aggression or bullying behaviors was made available to the researchers. A list of well-coded office or counselor behavioral referrals would have enabled the research group a point of comparison from which to view the self-report measures of school climate and problem behaviors.

Fifth, despite the indication that this was to be a "school-wide" and "year-long" bullying reduction campaign, it is likely that there were differing levels of investment in the process and content of the Bully Busters program, among teachers, counselors, administrators, and students alike. This would be problematic if, for example, materials were disseminated to the primary-participant s (i.e., teachers during small groups), but were not similarly disseminated to the secondary-participant s (i.e., students during class time). There was no way to measure the actual extent of implementation of the activities by teachers.

Lastly, though training and supervision was provided for the group facilitators, there was no true oversight as to program fidelity; that is, there was no means to insure that each group was covering the same material in precisely the same manner. Though a flexible approach is a positive attribute in group work, it can obviously complicate research designs. There appears to be evidence that a few groups assumed an "oppositional" stance toward the materials and the cofacilitators. It is likely that the intervention these groups received differed significantly from the more "treatment-compliant" groups.

Conclusions and Recommendations for Future Research

It is clear that future studies should continue to investigate the complexities of effectively intervening in the school environment for the purposes of reducing bullying and victimization. Barriers to effective intervention, such as those mentioned above, should be taken into consideration. Additionally, at the heart of effective bullying reduction intervention rests the question of the most effective means for assessing or measuring the

problem. It is recommended that this question be pursued from a number of perspectives. This would include developing better measures of subjective reports (i.e., school behavior and problem behaviors, efficacy—both teacher and student), objective reports (i.e., creating effective universal means of tracking/coding behaviors), as well as indirect indices of bullying problems (i.e., teacher burnout, student socioemotional symptom checklists, parent-school involvement).

Ultimately, it is hoped by these researchers that a comprehensive assessment of all the stakeholders in a given system would yield an "indicated" or "prescribed" intervention that would be matched to the precise bullying problem profile determined by the assessment.

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