

TEACHERS' EXPECTATIONS AND SELF-EFFICACY FOR WORKING WITH BULLIES AND VICTIMS

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Bullying is a significant concern in schools, and both bullies and victims are at risk for negative outcomes. In this study, 239 sixth-grade teachers completed questionnaires about their perceptions of four components of school climate: high-risk student behaviors, school-wide barriers to learning, principal support, and cooperation among teachers. Teachers' expectations and self-efficacy for working effectively with both bullies and victims were assessed using case study vignettes. The results indicated that teachers' perceptions of principal support were significantly related to teachers' expectations and self-efficacy for working with bullies. A graduate degree was also related to greater self-efficacy for working with bullies. Administrators and school psychologists should consider the role of perceived principal support as an important factor in influencing teachers' expectations and beliefs in working with bullies. © 2013 Wiley Periodicals, Inc.

In the United States, elementary and secondary school students are frequently the perpetrators and/or the victims of bullying. Bullying occurs when a student is exposed to negative actions from one or more peers repeatedly and over time (Olweus, 1995). A large, nationally representative study found that 30% of U.S. sixth through 10th graders were involved in bullying, either as a bully or as a victim (Nansel et al., 2001). In a recent survey of 15,185 fourth- through 12th-grade students, 49% of the students reported being the victim of bullying, and more than 30% had bullied another student in the past month (Bradshaw, Sawyer, & O'Brennan, 2007). When "frequent" bullying was defined as bullying that occurred at least two times during the last month, 23% of students reported being a frequent victim of bullying, and 8% reported being a frequent bully.

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Both bullies and their victims are at risk for mental health problems, poor academic outcomes, and future criminal behavior. In a study of 2,342 ninth through 12th graders, children who were frequent victims of bullies were seven times more likely to be depressed than were nonvictims, and frequent bullies were three times more likely to be depressed than were nonbullies. (Gould, Klomek, Marrocco, Kleinman, & Schonfeld, 2007). School-related problems are also evident. In a 3-year study of middle-school students, higher levels of self-reported peer victimization predicted lower grade point averages and lower levels of teacher-reported academic engagement (Juvonen, Wang, & Espinoza, 2011). In another study with a nationally representative sample of 10th graders, researchers found that relative to nonvictims, victims of bullying had 52% greater odds of getting in-school suspensions, 65% greater odds of getting an out-of-school suspension, and 58% greater odds of being excessively absent from school (Gastic, 2008). Beyond the school-aged years, the effects of bullying can be long lasting and costly for individuals and society. In a longitudinal study of youth in London, bullying at age 14 predicted violent convictions between ages 15 and 20, self-reported violence at ages 15 to 18, and drug use at ages 27 to 32 (Farrington & Ttofi, 2011).

To lessen the long-term negative impacts of bullying and victimization, many schools are adopting school-wide anti-bullying interventions. These programs often use strategies to change school-wide student attitudes and behaviors and how teachers prevent and respond to bullying behavior (Carr et al., 2002; Nixon & Werner, 2010; Olweus, 1997). However, a recent review of research found mixed effects of anti-bullying programs (Swearer, Espelage, Vaillancourt, & Hymel, 2010). A meta-analysis examined 16 studies of school-based anti-bullying interventions published between 1980 and 2004 that used an experimental or quasi-experimental design (Merrell, Gueldner, Ross, & Isava, 2008). Some of the interventions examined in this meta-analysis positively affected outcomes, such as students' social competence, self-esteem, peer acceptance, and teachers' knowledge of effective practices and efficacy regarding their own intervention skills. However, no consistent pattern of findings emerged. The authors of a review of evaluation studies on school-wide anti-bullying interventions noted that differences in program implementation made it difficult to synthesize findings across studies (Smith, Schneider, Smith, & Ananiadou, 2004).

The effectiveness of bullying prevention programs may depend on school context (Bauer, Lozano, & Rivara, 2007). For example, teachers' beliefs and attitudes about the program may affect the quality of program implementation (Thorsen-Spano, 1996). Many anti-bullying programs fail to directly address the school ecology, which can limit their effectiveness (Swearer et al., 2010). Because bullying occurs within a context that involves multiple layers—individual, peer, and school—the most successful school-based interventions take a systems-level approach, involving both students and staff (Bell, Raczynski, & Horne, 2010; Orpinas, Horne, & Staniszewski, 2003). A review of effective anti-bullying interventions (Whitted & Dupper, 2005) indicates that such programs should include three components that address school climate (Atlas & Pepler, 1998; Garrity, Jens, Porter, Sager, & ShortCamilli, 1997), teacher efficacy for working with bullies and victims (Whitted & Dupper, 2005), and the bullies and victims directly (Atlas & Pepler, 1998; Garrity et al., 1997; Larson, Smith, & Furlong, 2002). Most research has examined the link between each component and bullying outcomes; less is known about the relations among these components. For example, it may be that school climate directly influences the teachers' sense of efficacy for working with bullies and victims.

SOCIAL-ECOLOGICAL MODEL

A social-ecological framework suggests a dynamic interplay between individuals and their contexts, such as the school, community, and societal culture (Bronfenbrenner & Morris, 1998) and can be particularly useful for understanding how to address bullying within the school context (Swearer et al., 2010). The school is considered one of the primary contexts (or microsystems)

that support children's development, along with the family and the community. As described by Bronfenbrenner (1986), the effect of the school environment on teachers' expectations, beliefs, and behaviors is a mesosystem in which the interplay between teachers and the school environment influences students. School climate factors that influence the teachers' ability to work with students may be important targets for any school-wide intervention that is implemented. Therefore, the current study used a social-ecological model to explore the relation between school climate factors and teachers' expectations and self-efficacy for working with bullies and victims. Identifying school climate factors that influence teachers' expectations and self-efficacy may provide direction for those developing preventive interventions.

SCHOOL CLIMATE

Although there are a variety of definitions of school climate, it can generally be thought of as the character and feeling of a school. School climate encompasses values and norms and includes school-level factors, such as safety and physical facilities (Zullig, Koopman, Patton, & Ubbe, 2010) as well as larger organizational patterns, such as whether or not the school shares a common vision or whether it is viewed as "healthy" or "unhealthy" (Cohen, McCabe, Michelli, & Pickeral, 2009). It also refers to the quality and consistency of relationships in the school setting that affect students (Haynes, Emmons, & BenAvie, 1997), such as those between children, between children and teachers, and between school personnel and parents.

In one area of school climate—relationships between children—school safety is paramount. High-risk behaviors that are disruptive, such as drug and alcohol use, student possession of weapons, and racial tension, contribute to an unhealthy school climate (U.S. Department of Education, 1999–2000). In a survey of 369 elementary school students, a negative school climate that included high-risk behaviors was related to high rates of bullying victimization (Giovazolias, Kourkoutas, Mitsopoulou, & Georgiadi, 2010). Other behaviors and conditions, such as frequent student absenteeism and tardiness, student apathy, and lack of parental involvement, are classified as barriers to learning and also contribute to a negative school climate (U.S. Department of Education, 1999–2000).

The relationships between school personnel and between adults and students also shape school climate. For example, schools with different levels of bullying differed on three staff-level dimensions of school climate: leadership, professional cooperation, and teacher consensus (Roland & Galloway, 2004). School climate was also impacted by levels of trust and cooperation among teachers, students, and staff (Rhodes, Camic, Milburn, & Lowe, 2009). In addition, principal leadership was found to be essential for developing support systems, such as parent involvement, teacher work orientation, and safety and order in the school (Sebring et al., 2006).

School climate is an important contextual factor that affects the behavior of students and teachers. Previous research has highlighted the link between social and emotional school climate and the prevalence of bullying (Espelage & Swearer, 2004; Meyer-Adams & Conner, 2008; Orpinas, Horne, & Multisite Violence Prevention Project, 2004b). For example, students who perceived the school environment as negative were more likely to act aggressively (Meyer-Adams & Conner, 2008). Additionally, as the social-ecological model suggests, teacher behaviors and attitudes may play a role in reducing student aggression because teacher behaviors are part of the school environment (Orpinas et al., 2004).

TEACHERS' EXPECTATIONS AND SELF-EFFICACY

Successful teacher interventions in bullying rely on two separate but related concepts: teachers' expectations for the student's positive future outcomes in the classroom ("Is this student capable of being successful at some future time?") and teachers' beliefs about how efficacious they will be in resolving bullying situations ("If I intervene, do I have the skills to improve the situation?").

Expectations can be communicated to students through differences in the teachers' behaviors, in teacher–student interactions, in educational opportunities, and in the emotional climate of the classroom (Harris & Rosenthal, 1985; Kuklinski & Weinstein, 2001). There is also evidence that students are aware of teachers' expectations, and this awareness may, in turn, influence students' self-perceptions and possibly future behavior (Rubie-Davies, 2006). Teachers' efficacy for addressing difficult situations—including behaviors of both bullies and victims—may also affect how they structure their classrooms and how they interact with students. Not surprisingly, teachers who report higher levels of self-efficacy for handling both bullying (Bradshaw et al., 2007) and victimization (Yoon, 2004) were more likely to intervene in and resolve bullying situations. Swearer and Doll (2001) suggest that the ways teachers and school administrators react to bullying situations are critical for creating a positive school environment.

Although related, high expectations of success for students in bullying situations and high levels of self-efficacy for intervening in bullying situations may not always go hand-in-hand. Teachers who report high levels of self-efficacy for working with bullies and victims of bullying are more willing to adopt new educational practices (Evers, Brouwers, & Tomic, 2002) and thus might be more likely to respond favorably to bullying prevention and intervention programs, but even teachers who express a high level of efficacy may have lowered expectations for children with behavioral and social problems. Teachers may attribute these lowered expectations to characteristics in the social ecology of the student, such as high levels of truancy or fighting at the school, rather than their own ability to reach these students. Therefore, this study includes measures of both teacher efficacy and expectations to explore how they are related to school climate factors. To our knowledge, this is the first study that examines how school climate variables contribute to teachers' expectations and self-efficacy for working with both bullies and victims.

RATIONALE FOR THE STUDY

Using a social-ecological framework, the current study examined four aspects of school climate and their relation to teachers' expectations and self-efficacy for working with bullies and victims: 1) school-wide high-risk behaviors, 2) school-wide barriers to learning, 3) principal support, and 4) cooperation among teachers. Identifying factors that influence teacher expectations for bullies and victims—as well as the teachers' perceived ability to deal effectively with them—may lead to the development of more effective interventions for addressing school bullying.

This study examined the following research questions:

1. Are teachers' perceptions of school climate factors, specifically, high-risk student behaviors, school-wide barriers to learning, principal support, and/or cooperation among teachers, related to *teachers' expectations* for the classroom success of bullies and victims?
2. Are teachers' perceptions of school climate factors, specifically, high-risk student behaviors, school-wide barriers to learning, principal support, and/or cooperation among teachers, related to *teachers' self-efficacy* for working with bullies and victims?

Based on the previous literature on school climate, we hypothesized that teachers with lower ratings of each of the school climate measures would be more likely to have lower expectations for the success of bullies and victims. Similarly, for the second research question, we hypothesized that teachers with lower ratings of each of the school climate measures would be more likely to report lower self-efficacy for working with bullies and victims.

METHOD

Participants

Study participants included 263 sixth-grade core academic (math, social studies, language arts, science) teachers from 37 schools in four communities (Durham, North Carolina; Chicago, Illinois; Athens, Georgia; and Richmond, Virginia). Although most of the schools were in urban or suburban areas, six schools in Georgia were in rural areas. The schools had relatively high rates of students who were eligible for free and reduced-price lunch, ranging from 42% to 96%. The teachers participated in the Multisite Violence Prevention Project's GREAT (Guiding Responsibility in Adolescents Today and Tomorrow) Schools and Families Project (Multisite Violence Prevention Project, 2004b). The project was a 5-year study comparing the effects of a universal intervention (all sixth-grade students and teachers) and a targeted intervention (families with high-risk children participating in a family program), with the goal of reducing violence and aggression among middle school students. More detailed information about the four communities, the schools, and the GREAT Schools and Families Project can be found in Multisite Violence Prevention Project (2004b).

Procedures

In 2001, prior to the intervention, teachers completed a written survey that took approximately 30 minutes. They were compensated \$25 for participation. The response rate was high, with 96% of eligible teachers returning the survey. The item completion rate was also high, with 91% of the sample (239/263) having no missing data. The analyses excluded surveys with missing data, leaving a final sample of 239 teachers. Eighty-two percent of the teachers in the sample were female, 57% were Caucasian, 37% were African American, and 3% were Hispanic. Thirty-six percent of the teachers held a graduate degree, and 26% had fewer than 4 years of teaching experience.

Measures

Four dependent variables were examined—teachers' expectations for bullies, teachers' expectations for victims, teachers' self-efficacy for working with bullies, and teachers' self-efficacy for working with victims—as measured by *The Teacher Expectation and Efficacy Measure* (TEEM). The TEEM measure was originally adapted by Howard, Horn, & Jolliff (2001) from TEAM (Teacher Efficacy and Attribution Measure; Horne, Socherman, & Dagley, 1998). Both vignettes used in TEEM contained descriptions of children based on cluster analytic results using normative data from the Behavior Assessment System for Children (Reynolds & Kamphaus, 1992). Confirmatory factor analyses supported the four-factor model described below (Multisite Violence Prevention Project, 2004a). These scales have also been used to gauge the effectiveness of teacher training and support models for reducing bullying (Bell et al., 2010; Howard et al., 2001).

Teachers were presented with two vignettes and then responded to questions about the fictional student. One vignette described a situation with a student who was a bully; the other vignette described a student who was a victim of bullying. The instructions and one of the vignettes follows:

Please read the descriptions below of two students you might see in your class. Then respond to the items that follow. Indicate the progress you would expect and your level of confidence in your ability to work with this student.

Taylor is a "master of misbehavior." Taylor often gets into trouble for bullying others and disobeying school and classroom rules. Taylor is known by most of the teachers and administrators for being difficult to manage. Taylor tends to be hostile, often lashes out at someone, and sometimes get into fights frequently. Taylor often excludes and isolates other students in school activities.

Teachers' responses were scored on four subscales. The first two subscales consisted of four items each for both bully and victim about the teachers' expectations for student success: 1) "The student will be able to participate in my class"; 2) "The student will be able to handle new situations well"; 3) "The student will be good at learning new skills"; and 4) "The student will be able to carry through on responsibilities." Teachers were asked to rate their agreement with each statement on a scale from 0 (*completely disagree*) to 4 (*completely agree*). The third and fourth subscales measured teachers' feelings of self-efficacy about being able to help each student manage his or her situation. These subscales consisted of seven items for each vignette. Teachers were asked to rate their level of confidence with the statement, from 0 (*not confident*) to 4 (*very confident*). Some of the statements included "I have the skills to direct the student's behavior in class," "I am capable of helping the student behave appropriately in my class," and "I know a variety of strategies to successfully manage the student's behavior." Each vignette (bully and victim) yielded an expectation score, which was the average of the four items on that subscale, and a self-efficacy score, which was an average of the seven self-efficacy items. Higher scores on each subscale reflected more positive expectations or greater self-efficacy in managing the behavior of and facilitating success for the student. Internal consistency was as follows: expectations-bully, .81; expectations-victim, .85; self-efficacy-bully, .93, and self-efficacy-victim, .93.

School climate was measured using four subscales from the Schools and Staffing Survey (SASS; U.S. Department of Education, 1999–2000). The SASS, the largest and most extensive national kindergarten-through-12th-grade survey, is administered every 3 to 5 years by the National Center for Education Statistics to collect data from public and private elementary and secondary schools throughout the United States (Tourkin et al., 2004). A fifth subscale from the SASS, Teacher Victimization, was included as a characteristic of teachers' experiences with students.

The first subscale, High Risk Behaviors (internal consistency, .87), was based on the average score for 11 items involving teachers' perceptions of the following occurring or existing on school grounds: robbery or theft, student use of alcohol, student possession of weapons, student drug use, racial tension or racism, gang activity, the presence of unsafe areas, teachers ignoring students who are threatening other students, teachers ignoring students who are teasing other students, teachers not knowing what students are up to, and inadequate student supervision. The second subscale, Barriers to Learning (internal consistency, .86), was created by averaging teacher ratings on seven items: student tardiness, student absenteeism, physical conflict among students, student disrespect for teachers, student apathy, lack of parental involvement, and students coming to school unprepared to learn. For each of these two subscales, teachers indicated whether the stated behavior was 0 (*not a problem*), 1 (*a minor problem*), 2 (*a moderate problem*), or 3 (*a serious problem*). These two subscales have been used as a measure of school climate in evaluations of the effectiveness of bullying prevention programs (Bell et al., 2010).

The third subscale, Principal Support, included six items regarding the teachers' perceptions of the principals' effectiveness at fostering a supportive school environment (internal consistency, .90). These items required teacher ratings of how well the principal lets staff members know what is expected of them, how supportive and encouraging the administration is toward the staff, how well the principal enforces school conduct rules and backs up the teachers when needed, how well the principal knows what kind of school he or she wants and how well that is communicated to the staff, how comfortable the teacher feels sharing his or her opinion with the principal, and to what degree the principal makes decisions using teacher input. Teachers responded on a 4-point scale where, 0 = strongly disagree and 3 = strongly agree.

The fourth subscale, Cooperation among Teachers, included three items that assessed teachers' perceptions of collaboration among teaching staff in effectively meeting work-related goals (internal consistency, .69). This subscale included the following items: "Rules for student behavior are

consistently enforced by teachers in this school, even for students who are not in their classes,” “Most of my colleagues share my beliefs and values about what the central mission of the school should be,” and “There is a great deal of cooperative effort among the staff members.” Response options were the same as those provided for the Principal Support scale.

Teacher Victimization, which was included as a characterization of teachers’ experiences with students, measured teachers’ reports of physical or verbal insults from students. The scale included two sets of items (*ever victimized* and *number of times victimized in the prior month*), each containing three items. On the first set of items, teachers answered yes or no regarding whether they had ever been victimized by student insults, threats, or physical attacks. The second set of items assessed how many times during the past 30 days teachers had been victimized in these ways. Item reliability from the follow-up analyses, using a single parameter item response theory (Rasch) model, was estimated at .99, ignoring the final item (“How many times in the last 30 days has a student physically attacked you?”), which did not fit the scale well. Scoring of the measure involved multiplying the remaining five items by various weights derived from a Rasch analysis and then summing to produce a total score (Multisite Violence Prevention Project, 2004a).

Our analysis also included covariates to control for teacher characteristics, such as race (“White” vs. “other” for the purposes of the analysis), gender, educational level (“graduate degree” vs. “less than a graduate degree”), and years of teaching experience (“less than 4 years” vs. “4 or more years”).

Analysis

Bivariate relationships between the dependent variables were examined by calculating pairwise Pearson product-moment correlation coefficients. Because our data came from a sample of teachers nested within schools, both teacher-level and school-level factors could explain variation in the dependent variables. Our analysis began by calculating an intraclass correlation coefficient (ICC) for each dependent variable. The ICC provides the percentage of the total variation that is attributable to between-school variation (Snijders & Bosker, 1999) and tests the null hypothesis that there were no between-school differences.

Each dependent variable was modeled as a function of teacher perceptions of school climate (high-risk behaviors, barriers to learning, principal support, and cooperation among fellow teachers) and controlled for teacher characteristics (years of teaching experience, race, gender, education level, and teacher victimization). School fixed-effects regression was used to correct for a violation of an ordinary least squares assumption that is created by the clustering of teachers within schools and because it controls for observable and unobservable heterogeneity across schools (Allison, 2009). Failing to control for school-level variables that were correlated with the observed variables and that also predicted variation in the dependent variable could bias the regression results.

One way to specify a fixed effects regression equation is

$$(Y_{ij} - \bar{Y}_j) = a + B(X_{ij} - \bar{X}_j) + (\epsilon_{ij} - \bar{\epsilon}_j).$$

The subscripts *i* and *j* denote teacher and school, respectively. *Y* is the dependent variable, *X* is a matrix of covariates (e.g., principal support, gender), and ϵ_{ij} is the residual error term. The constant term, *a*, is the average school mean of the dependent variable when the model covariates are set to zero. A school’s mean for a given variable is denoted with an over bar and the *j* subscript (e.g., \bar{Y}_j). For each teacher (*i*), the school mean is subtracted from his or her value; this is also known as group-mean centering. Variables that are constant within schools, such as average class size, do not need to be included in the model because they are differenced out (that is, $X_{ij} - \bar{X}_j$ would equal zero; Allison, 2009). The model was estimated in Stata version 11 using the procedure *xreg*, *fe* (StataCorp, 2009).

Table 1
Descriptive Statistics ($N = 239$)

Variable	Mean	Standard Deviation
<i>Expectations and Self-Efficacy</i>		
Expectations for Bullies ^a	2.14	0.83
Expectations for Victims ^a	2.68	0.79
Self-efficacy for Bullies ^a	2.63	0.81
Self-efficacy for Victims ^a	2.96	0.71
<i>Teacher Perceptions of School Climate</i>		
High-Risk Behaviors ^b	0.77	0.54
Barriers to Learning ^b	1.91	0.65
Principal Support ^b	2.45	0.65
Cooperation Among Teachers ^b	2.03	0.68
<i>Teacher Characteristics</i>		
Teacher Victimization ^c	4.57	8.70
Teachers Who Are White (Reference = Nonwhite)	.57	
Teachers Who Are Female (Reference = Male)	.82	
Teachers with a Graduate Degree (Reference = Bachelor's Degree)	.36	
Teachers with 0–3 Years of Experience (Reference = More Than 4 Years)	.26	

^aThe possible values for this scale range from 1–4. ^bThe possible values for this scale range from 0–3. ^cThe possible values for this scale are zero and higher.

RESULTS

Table 1 presents the means and standard deviations for each variable in the models. The bivariate correlation coefficient between each pair of dependent variables was statistically significantly greater than zero. Cohen (1992) suggests that a correlation of .10 is small, .30 is medium, and .50 is large. Using this guideline, there is a large correlation between teachers' expectations and self-efficacy for bullies (.54) and for victims (.63). There is also a large correlation between teachers' self-efficacy for bullies and their self-efficacy for victims (.56). The remaining correlations had a medium level of association (.33–.39).

The ICC for teacher expectations for bullies and for victims was 8% ($p = .02$) and 1% ($p = .40$), respectively. Similarly, the ICC for teacher self-efficacy for bullies and victims was 8% ($p = .04$) and 1% ($p = .35$), respectively. For bullies, we reject the null hypothesis that there is no variation between schools in teacher expectations for students and in their self-efficacy for working with students, although only 8% of the total variance was accounted for by between-school differences. However, for victims, we fail to reject the null hypothesis that between-school variance is zero. That is, there is no evidence that teacher expectations and self-efficacy for victims vary across schools.

Table 2 displays the results of the fixed effects regression analysis. Relative to their peers, teachers who perceived higher levels of principal support had higher expectations for bullies ($\beta = .30, p < .01$) and more self-efficacy for working with bullies ($\beta = .39, p < .01$). Relative to teachers with a bachelor's degree, teachers with a graduate degree reported higher levels of self-efficacy for working with bullies ($\beta = .49, p = .000$).

DISCUSSION

This study examined the relation between teachers' perceptions of school climate factors and teachers' expectations and self-efficacy for working with bullies and victims. Our first hypothesis that school climate factors would be related to teachers' expectations for the success of bullies

Table 2
Fixed Effects Regression Analysis ($N = 239$)

	Expectations				Self-Efficacy			
	Bullies		Victims		Bullies		Victims	
	Beta	SE	Beta	SE	Beta	SE	Beta	SE
High-Risk Behaviors	0.09	0.16	0.06	0.15	-0.08	0.15	-0.05	0.14
Barriers to Learning	0.03	0.13	-0.19	0.13	0.07	0.12	0.14	0.11
Principal Support	0.30*	0.12	0.12	0.12	0.39**	0.11	0.17	0.11
Teacher Cooperation	-0.07	0.1	0.09	0.1	-0.11	0.1	0.05	0.09
Teacher Victimization	0.00	0.01	0.00	0.01	0.01	0.01	0.00	0.01
Teacher is White (Reference = Nonwhite)	0.17	0.14	-0.14	0.14	-0.04	0.13	0.07	0.12
Teacher is Female (Reference = Male)	0.23	0.15	0.27	0.14	0.08	0.14	0.25	0.13
Teacher Has Graduate Degree (Reference = Bachelor's Degree)	0.16	0.13	0.26	0.13	0.49**	0.13	0.23	0.12
Teacher Has 0-3 Years of Experience (Reference = More Than 4 Years)	0.03	0.14	0.11	0.13	0.07	0.13	0	0.13
<i>Model Diagnostics</i>								
Overall R-sq	0.02		0.07		0.14		0.05	

Note. SE = standard error; R-sq = R-squared.

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

and victims was partially supported. Specifically, teachers' expectations for bullies were related to their perceptions of principal support. Our second hypothesis, that school climate factors would be related to teachers' self-efficacy, was also partially supported. We found that teachers' self-efficacy for working with bullies was also related to their perceptions of principal support and having a graduate degree.

Although previous research has shown that principals play a central role in influencing school climate (Hallinger, Bickman, & Davis, 1996; Leithwood & Jantzi, 1997), this is the first study known to demonstrate the link between perceived principal support and teachers' expectations and self-efficacy for working with bullies. Positive principal-teacher relationships have been found to positively affect school climate and teacher satisfaction (Rhodes et al., 2009), which may enhance teachers' ability to resolve challenging classroom situations. The current study extends the work of Hoy and Woolfolk (1993), who showed that organizational factors, including principal characteristics, increased teachers' confidence in their ability to "reach students." Although correlational in nature and based on self-report survey methodology, the results of the current study suggest that perceived principal support may be an important factor to consider in developing school-based programs to reduce bullying.

Teachers with a graduate degree were also more likely to report higher self-efficacy for working with bullies. Further research should examine whether graduate programs allow teachers to acquire additional skills that account for this difference or whether teachers with higher self-efficacy may be the ones who pursue graduate degrees.

The results of the current study suggest that teacher perception of principal support is an important social-ecological factor to consider when implementing school-wide bullying prevention programs. The relationship between principals and teachers may influence the level of implementation of school-wide prevention programs. As part of the implementation of school-wide behavioral

interventions, school psychologists are in the unique position of serving as consultants to both the teachers and school administrators (George, White, & Schlaffer, 2007; Reinke, Stormont, Herman, Puri, & Goel, 2011) and can facilitate positive relationships among the teachers and principals. In this study, however, the teacher–principal relationship does not appear to be functioning as a discrete school climate variable, but instead may be representative of a principal–teacher dyadic variable. In a recent study with 11,620 teacher–principal dyads using data from the 2003–2004 SASS, Price (2012) found that the individual attributes of principals (degree, training, experience) were not nearly as important for improving teacher satisfaction as was the strength of the relationship between the principal and teacher.

Unlike principal support, other measures of school climate, such as teacher perceptions of high-risk behaviors, barriers to learning, and cooperation among teachers, were not statistically significantly related to teacher self-efficacy or expectations for bullies or victims. It is possible that these school climate measures do affect teachers' self-efficacy and/or expectations but that this relationship was not observed in our sample with relatively few schools. In particular, our models focused on variation within schools because there was little between-school variation in the dependent variables (ICCs were between 0% and 8%). However, future research based on a larger sample of schools should consider revisiting the relationship between school climate and these outcomes.

Additional variables, such as principal support, may increase the effectiveness of school-wide prevention programs. In a recent study that aimed to modify relationships between teachers and administration, teacher perceptions of principal support increased when teachers were active participants in both identifying school-based problems and implementing solutions (Rhodes et al., 2009). Furthermore, increased perceptions of principal support positively affected teacher attitudes and student perceptions of school climate. Having a thorough understanding of the school from a social-ecological framework could help school psychologists address school climate issues—including the principal–teacher dyad—and support the development of effective prevention programs (Furlong, Morrison, & Pavelski, 2000).

Limitations

This study has several notable limitations. First, although the sample size was adequate, only sixth-grade teachers were included, and thus, the results may not represent the climate and perceptions of an entire middle school. Similarly, although the schools in this study were located in four communities in different geographic locations and had a mix of urban, rural, and suburban schools, they may not be representative of other U.S. schools. Although teachers were asked about barriers to learning in their schools, student perceptions on this measure were not included. It is also possible that teachers' perceptions of student absenteeism, physical conflict, and lack of parent involvement differ from objective measures of these barriers.

In addition, the vignettes used to assess expectations and self-efficacy included only a physically aggressive bully and a passive victim but did not consider other types of bullies and victims. As noted in previous research, bullies also include students who use relational aggression, and victims can also include the bully–victim, a student who is provocative in his or her response to verbal or physical aggression (Berger, 2007; Olweus, 1997). As Craig, Henderson, and Murphy (2000) noted, teachers report witnessing and intervening in bullying incidents less often than do students, so teachers' self-efficacy for working with bullies and victims may be skewed by their underestimating the frequency or severity of bullying. The dated and cross-sectional nature of the survey, the lack of information about teachers' prior experience with bullies or victims, and the lack of objective measures of school climate are also limitations.

Recommendations

Future research exploring the relation between school climate and teachers' expectations and self-efficacy for working with bullies should include a sample from multiple grades and should match teacher reports of bullying with student reports. In more clearly describing the role of teacher expectations, both direct and indirect effects on student behavior should be examined. Given the important relation between principal support and teacher expectations found in this study, future research should aim to illuminate the school processes that influence teacher perceptions of principal support. In particular, defining the essential elements of principal support that lead to improved self-efficacy and expectations for students will be important for incorporating these findings into new programs.

Our review of the literature revealed various suggestions for developing promising school-based interventions for bullying prevention (Newman-Carlson & Horne, 2004; Olweus, 1994; Orpinas et al., 2003). Although some suggestions addressed the need for a school-wide approach, principal support was only addressed tangentially as a key component of school-wide interventions. References are often made to school policy (O'Moore, 2000) and administrator involvement, but the importance of the principal-teacher dyadic relationship in developing programs aimed to reduce student behavior problems is rarely addressed. To improve effectiveness of interventions, future research should focus on isolating the mechanisms that improve a teacher's ability to work with bullies and victims.

REFERENCES

- Allison, P. D. (2009). *Fixed effects regression models* (Vol. 160). Los Angeles, CA: Sage Publications.
- Atlas, R. S., & Pepler, D. J. (1998). Observations of bullying in the classroom. *Journal of Educational Research*, 92, 86–99.
- Bauer, N. S., Lozano, P., & Rivara, F. P. (2007). The effectiveness of the Olweus Bullying Prevention Program in public middle schools: A controlled trial. *Journal of Adolescent Health*, 40, 266–274. doi: 10.1016/j.jadohealth.2006.10.005
- Bell, C. D., Raczynski, K. A., & Horne, A. M. (2010). Bully Busters abbreviated: Evaluation of a group-based bully intervention and prevention program. *Group Dynamics-Theory Research and Practice*, 14, 257–267. doi: 10.1037/a0020596
- Berger, K. S. (2007). Update on bullying at school: Science forgotten? *Developmental Review*, 27, 90–126. doi: 10.1016/J.Dr.2006.08.002
- Bradshaw, C. P., Sawyer, A. L., & O'Brennan, L. M. (2007). Bullying and peer victimization at school: Perceptual differences between students and school staff. *School Psychology Review*, 36, 361–382.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22, 723–742. doi: 10.1037/0012-1649.22.6.723
- Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (5th ed., pp. 993–1028): Hoboken, NJ: John Wiley & Sons.
- Carr, E. G., Dunlap, G., Horner, R. H., Koegel, R. L., Turnbull, A. P., Sailor, W., . . . Fox, L. (2002). Positive behavior support: Evolution of an applied science. *Journal of Positive Behavior Interventions*, 4, 4–16.
- Cohen, J. (1992). A power primer. *Quantitative Methods in Psychology*, 112, 155–159.
- Cohen, J., McCabe, E. M., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teachers College Record*, 111, 180–213.
- Craig, W. M., Henderson, K., & Murphy, J. G. (2000). Prospective teachers' attitudes toward bullying and victimization. *School Psychology International*, 21, 5–21.
- Espelage, D. L., & Swearer, S. M. (2004). Bullying in American Schools: A social-ecological perspective on prevention and intervention. Mahwah, NJ: Lawrence Erlbaum Associates.
- Evers, W. J. G., Brouwers, A., & Tomic, W. (2002). Burnout and self-efficacy: A study on teachers' beliefs when implementing an innovative educational system in the Netherlands. *British Journal of Educational Psychology*, 72, 227–243.
- Farrington, D. P., & Ttofi, M. (2011). Bullying as a predictor of offending, violence and later life outcomes. *Criminal Behaviour and Mental Health*, 21, 90–98.
- Furlong, M., Morrison, G., & Pavelski, R. (2000). Trends in school psychology for the 21st century: Influences of school violence on professional change. *Psychology in the Schools*, 37, 81–90.
- Garrity, C., Jens, K., Porter, W. W., Sager, N., & ShortCamilli, C. (1997). Bully proofing your school: Creating a positive climate. *Intervention in School and Clinic*, 32, 235–243.

- Gastic, B. (2008). School truancy and the disciplinary problems of bullying victims. *Educational Review*, 60, 391–404.
- George, M. P., White, G. P., & Schlaffer, J. J. (2007). Implementing school-wide behavior change: Lessons from the field. *Psychology in the Schools*, 44, 41–51. doi: 10.1002/pits.20204
- Giovazolias, T., Kourkoutas, E., Mitsopoulou, E., & Georgiadi, M. (2010). The relationship between perceived school climate and the prevalence of bullying behavior in Greek schools: Implications for preventive inclusive strategies. *Procedia Social and Behavioral Sciences*, 5, 2208–2215.
- Gould, M. S., Klomek, A. B., Marrocco, F., Kleinman, M., & Schonfeld, I. S. (2007). Bullying, depression, and suicidality in adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 46, 40–49. doi: 10.1097/01.chi.0000242237.84925.18
- Hallinger, P., Bickman, L., & Davis, K. (1996). School context, principal leadership, and student reading achievement. *Elementary School Journal*, 96, 527–549.
- Harris, M. J., & Rosenthal, R. (1985). Mediation of interpersonal expectancy effects: 31 meta-analyses. *Psychological Bulletin*, 9, 363–386.
- Haynes, N. M., Emmons, C., & BenAvie, M. (1997). School climate as a factor in student adjustment and achievement. *Journal of Educational and Psychological Consultation*, 8, 321–329.
- Horne, A. M., Socherman, R. E., & Dagley, J. (1998). Teacher efficacy and attribution: A construct validation. Unpublished manuscript, The University of Georgia, Athens.
- Howard, N. M., Horne, A. M., & Jolliff, D. (2001). Self-efficacy in a new training model for the prevention of bullying in schools. *Journal of Emotional Abuse*, 2, 181–191.
- Hoy, W. K., & Woolfolk, A. E. (1993). Teachers sense of efficacy and the organizational health of schools. *Elementary School Journal*, 93, 355–372.
- Juvonen, J., Wang, Y. Y., & Espinoza, G. (2011). Bullying experiences and compromised academic performance across middle school grades. *Journal of Early Adolescence*, 31, 152–173.
- Kuklinski, M. R., & Weinstein, R. S. (2001). Classroom and developmental differences in a path model of teacher expectancy effects. *Child Development*, 72, 1554–1578.
- Larson, J., Smith, D. C., & Furlong, M. J. (2002). Best practices in school violence prevention. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (4th ed., Vol. 2, pp. 1081–1097). Bethesda, MD: National Association of School Psychologists.
- Leithwood, K., & Jantzi, D. (1997). Explaining variation in teachers' perceptions of principals' leadership: A replication. *Journal of Educational Administration*, 35, 213–231.
- Merrell, K. W., Gueldner, B. A., Ross, S. W., & Isava, D. M. (2008). How effective are school bullying intervention programs? A meta-analysis of intervention research. *School Psychology Quarterly*, 23, 26–42.
- Meyer-Adams, N., & Conner, B. T. (2008). School violence: Bullying behaviors and the psychosocial school environment in middle schools. *Children & Schools*, 30, 211–221.
- Multisite Violence Prevention Project. (2004a). Great Schools and Families Description of Measures: Teacher Survey.
- Multisite Violence Prevention Project. (2004b). The Multisite Violence Prevention Project – background and overview. *American Journal of Preventive Medicine*, 26, 3–11. doi: 10.1016/j.amepre.2003.09.017
- Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth – Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association*, 285, 2094–2100.
- Newman-Carlson, D., & Horne, A. M. (2004). Bully Busters: A psychoeducational intervention for reducing bullying behavior in middle school students. *Journal of Counseling and Development*, 82, 259–267.
- Nixon, C. L., & Werner, N. E. (2010). Reducing adolescents' involvement with relational aggression: Evaluating the effectiveness of the Creating A Safe School (CASS) intervention. *Psychology in the Schools*, 47, 606–620. doi: 10.1002/pits.20494
- Olweus, D. (1994). Annotation: Bullying at school: Basic facts and effects of a school based intervention program. *Journal of Child Psychology and Psychiatry*, 35, 1171–1189.
- Olweus, D. (1995). Bullying or peer abuse at school: Facts and intervention. *Current Directions in Psychological Science*, 4, 196–200.
- Olweus, D. (1997). Bully/victim problems in school: Facts and intervention. *European Journal of Psychology of Education*, 12, 495–510.
- O'Moore, M. (2000). Critical issues for teacher training to counter bullying and victimisation in Ireland. *Aggressive Behavior*, 26, 99–111.
- Orpinas, P., Horne, A. M., & Multisite Violence Prevention Project. (2004). A teacher-focused approach to prevent and reduce students' aggressive behavior – The GREAT Teacher Program. *American Journal of Preventive Medicine*, 26, 29–38. doi: 10.1016/j.amepre.2003.09.016

- Orpinas, P., Horne, A. M., & Staniszewski, D. (2003). School bullying: Changing the problem by changing the school. *School Psychology Review*, 32, 431–444.
- Price, H. E. (2012). Principal-teacher interactions: How affective relationships shape principal and teacher attitudes. *Educational Administration Quarterly*, 48, 39–85. doi: 10.1177/0013161×11417126
- Reinke, W. M., Stormont, M., Herman, K. C., Puri, R., & Goel, N. (2011). Supporting children's mental health in schools: Teacher perceptions of needs, roles, and barriers. *School Psychology Quarterly*, 26, 1–13. doi: 10.1037/a0022714
- Reynolds, C. R., & Kamphaus, R. W. (1992). *Behavior Assessment System for Children (BASC)*. Circle Pines, MN: American Guidance Service.
- Rhodes, J. E., Camic, P. M., Milburn, M., & Lowe, S. R. (2009). Improving middle school climate through teacher-centered change. *Journal of Community Psychology*, 37, 711–724. doi: 10.1002/Jcop.20326
- Roland, E., & Galloway, D. (2004). Professional cultures in schools with high and low rates of bullying. *School Effectiveness and School Improvement*, 15, 241–260.
- Rubie-Davies, C. M. (2006). Teacher expectations and student self-perceptions: Exploring relationships. *Psychology in the Schools*, 43, 537–552. doi: 10.1002/Pits.20169
- Sebring, P. B., Allensworth, E., Bryk, A. S., Easton, J. Q., Luppescu, S., & Consortium on Chicago School Research, I. L. (2006). *The Essential Supports for School Improvement*. Chicago, IL: Consortium on Chicago School Research at the University of Chicago.
- Smith, J. D., Schneider, B. H., Smith, P. K., & Ananiadou, K. (2004). The effectiveness of whole-school antibullying programs: A synthesis of evaluation research. *School Psychology Review*, 33, 547–560.
- Snijders, T. A. B., & Bosker, R. J. (1999). *Statistical treatment of clustered data multilevel analysis: An introduction to basic and advanced multilevel modeling*. London, UK: Sage Publications.
- StataCorp. (2009). *Stata 11 base reference manual*. College Station, TX: Stata Press.
- Swearer, S. M., & Doll, B. (2001). Bullying in schools. *Journal of Emotional Abuse*, 2, 7–23. doi: 10.1300/J135v02n02_02
- Swearer, S. M., Espelage, D. L., Vaillancourt, T., & Hymel, S. (2010). What can be done about school bullying? Linking research to educational practice. *Educational Researcher*, 39, 38–47. doi: 10.3102/0013189×09357622
- Thorsen-Spano, L. (1996). A school conflict resolution program: Relationships among teacher attitude, program. *School Counselor*, 44, 19.
- Tourkin, S. C., Pugh, K. W., Fondelier, S. E., Parmer, R. J., Cole, C., Jackson, B., . . . Synectics for Management Decisions, I. A. V. A. (2004). *Schools and Staffing Survey (SASS) data file user's manual, 1999–2000 (NCES 2004–303)*. Washington, DC: National Center for Education Statistics.
- U.S. Department of Education. (1999–2000). *Public School Teacher Questionnaire: Schools and Staffing Survey – 1999–2000 School Year*. Retrieved from <http://nces.ed.gov/surveys/sass/questionnaire.asp>
- Whitted, K. S., & Dupper, D. R. (2005). Best practices for preventing or reducing bullying in schools. *Children & Schools*, 27, 167–175.
- Yoon, J. S. (2004). Predicting teacher interventions in bullying situations. *Education and Treatment of Children*, 27, 37–45.
- Zullig, K. J., Koopman, T. M., Patton, J. M., & Ubbes, V. A. (2010). School climate: Historical review, instrument development, and school assessment. *Journal of Psychoeducational Assessment*, 28, 139–152.