School Psychology Quarterly

1045-3830/18/$12.00

2018, Vol. 33, No. 2, 223–234
http://dx.doi.org/10.1037/spq0000249

Bullying Involvement, Teacher–Student Relationships, and Psychosocial Outcomes

Francis L. Huang, Crystal Lewis, Daniel R. Cohen, Sara Prewett, and Keith Herman
University of Missouri

Students involved in bullying experience mental health issues and negative psychosocial outcomes. Few studies have investigated how teacher–student relationships (TSRs) may buffer the negative outcomes experienced by students involved in bullying. To investigate the moderating role of TSRs with bullying involvement status and psychosocial outcomes, we used data from 691 middle school students, 85 teachers, and 6 schools in one urban district. We used both student- and teacher-reported outcomes and regression models included baseline measures (i.e., depression, concentration problems, emotional regulation problems, behavioral engagement) taken 8 months earlier. Regardless of bullying involvement, student-reported TSR had a beneficial association for all outcomes controlling for baseline measures and student demographic variables. However, bully/victims with low TSRs experienced a heightened risk for depressive symptoms suggesting increased attention to this subgroup of students.

Impact and Implications

Although teacher–student relationships (TSRs) have shown a beneficial relationship with various academic outcomes, improved TSRs are also associated with a reduction in problematic psychosocial outcomes for students. However, student-reported TSRs may also vary by a student's bullying involvement with bullies having poorer relationships with their teachers. Bully victims with low TSRs experience an increased risk of depression and warrant further attention. Given the variability of how much training teachers receive on the provision of social support for students (Pavri, 2004), administrators and school psychologists should consider coordinated efforts that foster a school culture that supports the importance of TSRs.

Keywords: teacher–student relationships, bullying depression, concentration problems, bully/victims

Supplemental materials: http://dx.doi.org/10.1037/spq0000249.supp

School bullying is generally defined as chronic, intentional acts of aggression directed toward a student who has less status or power (Espelage & Swearer, 2003; Olweus, 1993). Based on the School Crime Supplement to the National Crime Victimization Survey, 22% of students ages 12 through 18 in the U.S. have been victims of some form of bullying (Lessne & Cidade, 2015). Bullying is recognized as a serious concern for educators, parents, and students as a result of a host of risk factors and long lasting detrimental effects associated with being a bully and/or a victim (Hawker & Boulton, 2000; Nansel et al., 2001).

Based on their bullying involvement status, adolescents can be classified as bullies, victims, bully/victims, and noninvolved[1] students with each involved group sharing varied psychosocial adjustment difficulties (Espelage & Swearer, 2003; Forero, McLellan, Rissel, & Bauman, 1999; Veenstra et al., 2005). Considerable evidence has shown that bullying victimization is associated with lower school engagement (Mehta, Cornell, Fan, & Gregory, 2013), academic achievement (Nansel et al., 2001; Strøm, Thoresen, Wentzel-Larsen, & Dyb, 2013), greater levels of depression (Bond, Carlin, Thomas, Rubin, & Patton, 2001; Fekkes, Pijpers, Fredriks, Vogels, & Verloove-Vanhorick, 2006), higher levels of suicide ideation (Copeland et al., 2013; Brunstein Klomek, Marrocco, Kleinman, Schonfeld, & Gould, 2007), and poorer mental and physical health (Benedict, Vivier, & Gjelsvik, 2014; Rigby, 2000, 2001; Slee, 1995). Students who bully others have generally shown higher levels of truancy (Forero et al., 1999) and lower levels of school bonding (Haynie et al., 2001). Individuals cate-

Francis L. Huang, Crystal Lewis, Daniel R. Cohen, Sara Prewett, and Keith Herman, Department of Educational, School, and Counseling Psychology, University of Missouri.

This research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305A130143 to the University of Missouri (PI: Keith Herman). The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.

Correspondence concerning this article should be addressed to Francis L. Huang, Department of Educational, School, and Counseling Psychology, University of Missouri, 16 Hill Hall, Columbia, MO 65211. E-mail: huangf@missouri.edu

[1] Some make a distinction between bystanders who witness bullying and noninvolved students (Haynie et al., 2001; C. Wang et al., 2015).

gorized as both bullies and victims (e.g., bully/victims or aggressive victims) represent a high risk group who exhibit increased levels of conduct problems, school disengagement, concentration problems, and a large number of (if not the most severe) psychological and psychosomatic symptoms (Forero et al., 1999; Juvonen, Graham, & Schuster, 2003; Kumpulainen, Räsänen, & Puura, 2001). Bully/victims are also characterized by higher rates of problem behavior, depressive symptoms, lower self-control and social competence, and poorer school functioning compared with other students (Haynie et al., 2001).

The challenges faced by students involved in bullying are well recognized (Hawker & Boulton, 2000) though less research has been conducted with regard to the potential benefits of positive teacher–student relationships (TSRs) in relation to these negative outcomes. Over the years, various studies have shown the benefits of positive TSRs with academic achievement, affective/behavioral outcomes, and engagement (Cornelius-White, 2007; Roorda, Koomen, Spilt, & Oort, 2011). Although a supportive classroom environment and positive TSRs have been shown to be associated with reduced bullying involvement (Di Stasio, Savage, & Burgos, 2016; Gregory et al., 2010), less has been written about its potential to serve as a buffer or protective factor with regard to negative psychosocial outcomes brought about by bullying involvement (Rigby, 2000). Protective factors refer to influences (e.g., TSRs) that may modify or ameliorate an individual's response to some risk factor (e.g., bullying involvement) that leads to a negative outcome (e.g., depression; Rutter, 1985). Teacher–student relationships thus have the potential to offset some of the stressors experienced by students involved with bullying.

Teacher–Student Relationships and Bullying Involvement

Teachers play a critical role creating a supportive environment by engaging students, establishing relationships, managing the classroom, serving as positive role models for prosocial behaviors, and enforcing school rules (Di Stasio et al., 2016; LaRusso, Romer, & Selman, 2008). Teachers set the overall tone of the classroom and other than the students themselves, teachers are a school's key resource against bullying and victimization (Rodkin & Hodges, 2003). When teachers are able to establish positive relationships with students who are difficult to teach and exhibit behavior problems, those students tend to have reduced aggressive behaviors and greater school engagement (Doumen, Buyse, Colpin, & Verschueren, 2011).

A few recent studies have shown that positive TSRs were associated with less victimization related to bullying and peer aggression (Di Stasio et al., 2016; Elledge et al., 2016; Murray-Harvey & Slee, 2010; Obsuth et al., 2016; Troop-Gordon & Kopp, 2011). In addition, a negative environment marked by poor or highly conflictual TSRs, may promote peer aggression (Doumen et al., 2011; Reavis, Keane, & Calkins, 2010; Troop-Gordon & Kopp, 2011) and students with low TSRs may also be more vulnerable to bullying (Shin & Kim, 2008). Although several studies have focused on bullying prevention (Ttofi & Farrington, 2011) and some have focused on whether TSRs may buffer children from the risk of peer aggression (Elledge et al., 2016; Troop-Gordon & Kopp, 2011), fewer studies have investigated factors (e.g., social supports) that may reduce the negative effects of bullying itself (Baldry & Farrington, 2005; Rothon, Head, Klineberg, & Stansfeld, 2011).

Teacher–Student Relationships and Psychosocial Outcomes

Supportive relationships with adults and peers may moderate the effects of bullying with regard to academic achievement (Konishi, Hymel, Zumbo, & Li, 2010; Rothon et al., 2011; Strøm et al., 2013), yet little research has investigated this effect with regard to bullying involvement, TSRs, and psychosocial outcomes. The majority of TSR studies have focused on academically oriented measures rather than psychosocial outcomes (e.g., O'Connor, Collins, & Supplee, 2012; Reddy, Rhodes, & Mulhall, 2003). Psychosocial outcomes (e.g., engagement, emotional regulation, ability to concentrate) are important in themselves and are directly linked to academic achievement, grade promotion, and may protect against future academic failure (Cornelius-White, 2007; Duncan et al., 2007; Gregory & Korth, 2016; Li-Grining, Votruba-Drzal, Maldonado-Carreño, & Haas, 2010; Stipek & Miles, 2008; Willson & Hughes, 2009).

Positive TSRs may protect against several forms of psychosocial maladjustment (e.g., depression, low self-esteem, disruptive behavior, and anxiety) which students involved in bullying often experience (e.g., Haynie et al., 2001; Juvonen et al., 2003; Yen et al., 2010). Psychosocial maladjustments may lead to poor school engagement and lower academic outcomes (Graham, Bellmore, & Mize, 2006).

Students who struggle with internalizing problems (e.g., depression) often show a greater dependency on their teachers compared to their peers (Henricsson & Rydell, 2004) and students who are overly dependent on their teachers have an increased likelihood of being bullied (Troop-Gordon & Kopp, 2011). However, strong teacher support has been associated with reductions in depression (Colarossi & Eccles, 2003; Murray & Greenberg, 2000) and other forms of internalizing behavior (Pianta & Stuhlman, 2004; Rueger, Malecki, & Demaray, 2008). Students who perceived greater support from their teachers were less depressed and had lower misconduct problems (Reddy et al., 2003). A safe and supportive school environment may function as a protective factor for students at risk for depression (Langille, Rasic, Kisely, Flowerdew, & Cobbett, 2012).

Positive TSRs are also associated with decreases in teacher-reported externalizing behavior and aggression (Benhorin & McMahon, 2008; Murray & Greenberg, 2000). Nurmi and Kiuru (2015) emphasized that child characteristics and behaviors could evoke certain responses from their teachers and when teachers and students have a conflictual relationship, students' disruptive behaviors are likely to persist though positive TSRs may reduce disruptive behaviors and improve prosocial behaviors(Nurmi & Kiuru, 2015). Additionally, adolescents with a history of teacher conflict showed lower incidences of maladaptive behavior patterns when they perceived a positive, trustworthy relationship with their teacher (Gregory & Ripski, 2008). Students with positive TSRs tended to be more engaged in school, have higher academic achievement, and were more motivated (Gregory & Korth, 2016; Roorda et al., 2011; M. T. Wang & Eccles, 2013; Wentzel, Battle, Russell, & Looney, 2010). Teacher–student relationships then may

ameliorate some of the negative outcomes associated with bullying involvement.

The Current Study

Given that students involved in bullying experience various negative psychosocial outcomes (e.g., Haynie et al., 2001) and positive TSRs are associated with improved psychosocial outcomes (e.g., Reddy et al., 2003; Roorda et al., 2011), we investigated the moderating role of TSRs using a longitudinal sample of middle school students. We used a 9-month cohort study with baseline measurements taken in the fall with follow-up measurements in the spring. We specifically asked:

1. Are there differences in TSRs based on student bullying involvement?
2. Do students involved in bullying (i.e., victims, bullies, bully/victims) have poorer psychosocial outcomes in the spring (i.e., depression, concentration problems, emotional regulation problems, behavioral engagement) compared with noninvolved students while controlling for baseline (fall) measures?
3. Is the quality of teacher–student relationship associated with beneficial psychosocial outcomes for all students (e.g., higher TSRs is associated with a reduction in depression)?
4. Are the negative outcomes experienced by students involved in bullying moderated by the quality of TSRs (e.g., higher TSR is associated with a greater reduction in depression for students involved in bullying)?

Given the focus on TSRs and bullying, answering the initial question if students involved in bullying differed on TSRs is important as bullies and bully/victims tend to have poorer TSRs (Cohen's $d \sim 0.40$ to 0.50) compared with victims, bystanders, and noninvolved students (C. Wang, Swearer, Lembeck, Collins, & Berry, 2015). The current study is distinct in several ways. First, even though a large number of studies have been conducted on the association of bullying with mental health measures using cross sectional data (see Rothon et al., 2011 for a list of studies), few studies have used data spanning more than one time period (e.g., Bond et al., 2001; Fekkes et al., 2006; Kumpulainen, Räsänen, & Henttonen, 1999; Troop-Gordon & Kopp, 2011) raising the issue of the directionality of effects (e.g., Does bullying cause depression or are depressed students bullied?). Second, we focus not only on victims of bullying but also on the bullies and bully/victims, together with TSR, as prior research does not support the view that adolescents can simply be classified as victims or bullies (Espelage & Swearer, 2003; Veenstra et al., 2005). The bully/victims in particular represent a particularly high-risk population and often have psychiatric problems, demonstrated poor adjustment across social/emotional dimensions, and remain involved with bullying for longer periods of time (Kumpulainen et al., 1999; Nansel et al., 2001). Third, we focus on the potential of TSRs as a moderator of adverse psychosocial outcomes related to bullying involvement. A protective factor acts as compensatory factor or a moderator which changes the intensity of the effect risk factor for a set of outcomes (Fraser, Kirby, & Smokowski, 2004). The presence of supportive adults has been shown to strongly predict a child's emotional well-being and school-based relationships have been shown to be more important than familiar support in middle childhood (Oberle, Schonert-Reichl, Guhn, Zumbo, & Hertzman, 2014). Additionally, although TSRs are dyadic in nature, where both students and teachers have their own valid perception of the relationship (Brinkworth, McIntyre, Juraschek, & Gehlbach, 2017), we focused on the students' perception of their relationship with their teachers because their point of view was important considering we were investigating student psychosocial outcomes. Finally, we focused on middle school students and the middle school years mark a particularly vulnerable time for youth (Akos, Rose, & Orthner, 2015; Feldlaufer, Midgley, & Eccles, 1988) with an increasing number of students being bullied (Bradshaw, Sawyer, & O'Brennan, 2007; Nansel et al., 2001). Changes in school characteristics from primary to middle school (e.g., larger, impersonal classes) may contribute to increased bullying victimization (Pellegrini, 2002; Wigfield, Lutz, & Laurel Wagner, 2005) and a decline in school engagement (Busteed, 2013). Although TSRs are important at all points in a student's education, middle schools are often structured in a way that impedes the formation of strong ties with teachers (Reddy et al., 2003) and the quality of TSRs often declines in middle school (Lynch & Cicchetti, 1997).

Method

Participants

The study utilized data collected as part of a 9-month long cluster randomized control trial (CRCT) evaluating the effects of a classroom management program in middle school classrooms. The current sample represented the first three of four annual cohorts that will be recruited by the end of the study. Six schools (all the middle schools from one urban school district) were recruited to participate in the study and all math and reading teachers were invited to participate. Approximately 73% of teachers were recruited and 27% declined citing lack of time as a reason for nonparticipation. Each teacher selected one of their classrooms, typically their most challenging classroom in terms of behavior management, as the target of the study and all students in the class were invited to participate. Data were provided only for students who provided parent consent and child assent. Seventy-six percent of parents consented and 100% of students assented to participate.

Participants were drawn from a total of 939 students (who were present for the entire school year) and 86 teachers (sixth to eighth grade) from six schools in an urban Missouri school district. Students (female = 50%, Grade 6 = 40%, Grade 7 = 35%, Grade 8 = 25%) were 67% Black, 17% White, and 16% identified as some other race/ethnicity. Teachers were primarily female (80%) and 71% White and 26% Black (with 3% reporting another race/ethnicity). The six schools had an average enrollment size of approximately 700 students (*range* = 412 to 885), with an average of 66% of students eligible for free or reduced price lunch (FRPL; a commonly used proxy for socioeconomic status), and had a predominantly Black student enrollment (M = 76%). The race/ethnicity breakdown of the student sample was representative of the school district as a whole in 2015.

Of the 939 students, 14% (n = 135) appeared in the dataset more than once (e.g., in the succeeding school year, the student was with another teacher in the next grade level who was also participating in the study). To avoid issues of sample nonindependence where the same student's data is analyzed more than once, we used a random number generator to select only one case from the duplicates to be included in the analytic sample.

As part of the CRCT, teachers rated each of the participating students on several measures which included two items indicating student bullying involvement in the fall and spring of the school year (see Procedures and Measures sections). We selected only students who were not involved in bullying in the fall (i.e., neither a bully nor a victim) to form our analytic sample, similar to what was done by Fekkes et al. (2006), which resulted in a reduced sample of 718 students.[2] By limiting the sample to the noninvolved students in the fall, we can assess the change in psychosocial outcomes that may result from bullying involvement in the spring. Compared with the original sample, the analytic sample had slightly more girls (female = 54%) and fewer Black students (64%). Of the 718 students, 60% were eligible for FRPL, 10% were identified as gifted and talented, and 8% were identified as having a disability (see Table 1).

Procedures

The study was completed with approval from the University of Missouri Institutional Review Board. Data were collected in October (fall) and May (spring) of each school year from both students and teachers. Teachers completed online survey ratings for each student whereas students completed paper self-assessments.

Table 1
Descriptive Statistics (n = 691)

Variable	*n*	%	*M*	*SD*	Range
Bullying status (S)					
Noninvolved	563	81.5			
Victim	32	4.6			
Bully	77	11.1			
Bully/victim	19	2.8			
Race/ethnicity					
White	155	22.4			
Black	503	72.8			
Other race/ethnicity	33	4.8			
Female	377	45.4			
Eligible for FRPL	416	60.2			
With a disability	54	7.8			
Identified as gifted/talented	72	10.4			
Grade level					
6	297	43.0			
7	243	35.2			
8	151	21.9			
Scales					
Student teacher relationship (S)			3.66	.95	1 to 5
Depression (F)			5.35	4.85	0 to 24
Depression (S)			5.52	5.01	0 to 24
Concentration problems (F)			2.60	1.16	1 to 6
Concentration problems (S)			2.60	1.26	1 to 5.6
Emotional regulation (F)			1.98	.85	1 to 5.4
Emotional regulation (S)			2.14	.92	1 to 5.2
Behavioral engagement (F)			3.47	.47	1 to 4
Behavioral engagement (S)			3.38	.49	1 to 4

Note. FRPL = free or reduced price lunch; (S) = taken in the spring; (F) = taken in the fall.

Measures

Dependent and independent variables consisted of both student and teacher reported scales and were collected in the fall and spring of each school year. Reliabilities of the scales in the spring are presented using coefficient omega which overcomes many of the issues related to using Cronbach's alphas (Dunn, Baguley, & Brunsden, 2014). All student demographic data were obtained from the school district (see Table 1 for descriptives).

Depression (student reported). Eight of the nine questions of the Patient Health Questionnaire (PHQ9) for Teens (Kroenke, Spitzer, & Williams, 2001) scale were asked. One question deemed sensitive was excluded (i.e., "Thoughts that you would be better off dead, or of hurting yourself in some way?"). Responses on this scale ranged from 0 = *not at all* to 4 = *nearly every day*. This measure had an internal consistency score of ω = .82.

Concentration problems (teacher reported). This scale from Teacher Observation of Classroom Adaptation-Checklist (TOCA-C; Koth, Bradshaw, & Leaf, 2009) was composed of the mean of teacher-reported responses from the TOCA-C subscale comprised of seven items such as "Student pays attention" and "Completes assignments." Response options ranged from 1 = *almost always* to 6 = *never* and certain items were reverse coded so that higher scores reflected more negative outcomes. The internal consistency of the scale was ω = .97.

Emotional regulation problems (teacher reported). This scale was composed of the mean of teacher-reported responses from the TOCA-C (Koth et al., 2009) subscale comprised of five items such as "impulsive" and "easily frustrated". Response options ranged from 1 = *almost always* to 6 = *never*. The internal consistency of the scale was ω = .87.

Behavioral engagement (student reported). The scale (Skinner, Furrer, Marchand, & Kindermann, 2008) was composed of the mean of five items including items such as "When I'm in class, I listen very carefully" and "I try hard to do well in class." Response options ranged from 1 = *not at all true* to 4 = *very true*. The internal consistency of the scale was ω = .78.

Student engagement in bullying (teacher reported). In both fall and spring, as part of the TOCA-C (Koth et al., 2009), teachers were asked to indicate for students in their class if a student bullied others and if a student was bullied by others. Response options for both items ranged from 1 = *never* to 6 = *almost always*. Students who received a rating of *never* or *rarely* (1 or 2) were classified as not bullies or not victims following guidelines of Solberg and Olweus (2003) which considers the frequency of occurrence of the activity. As a result, a student bullying involvement status variable was formed consisting of victims of bullying, bullies, bully/victims, and not involved students (i.e., student was neither a bully nor bullied). In the spring, the majority of students were not involved (82%), with 11% categorized as bullies, 5% as victims, and 3% as bully/victims.

[2] As a check, we also ran the analyses with all the students, regardless of bullying involvement status at Time 1 (n = 894). Results, available in the online appendix, were consistent with the results presented.

Although the identification of bullying involvement was obtained through the use of single items without a presentation of a formal definition of bullying, other surveys, such as the nationally representative and commonly cited Youth Risk Behavioral Surveillance System (Centers for Disease Control & Prevention [CDC], 2015) also use a single item, answerable by a yes or a no, to measure bullying involvement and without providing a bullying definition based on the frequency of occurrence. Frequency is an important aspect of bullying and as noted by the CDC (2017) itself, bullying is not an isolated incident and is repeated multiple times or is highly likely to be repeated. A study by Rønning et al. (2009), which specifically compared teacher, student, and parent reports of bullying, indicated that teacher-reported frequent bullying (compared with only sometimes bullied and reports from other informants) was the strongest predictor of future psychiatric caseness, a marker for major depressive episodes (Østergaard et al., 2010). With regard to the use of definitions, two large experimental studies have also shown that the presence or absence of a definition did not affect bullying prevalence in both reports of students in middle (Huang & Cornell, 2016) and high (Huang & Cornell, 2015) school.

Previous studies have indicated that teachers can be a valid source of a student's bullying behavior (Card & Hodges, 2008; Leff, Patterson, Kupersmidt, & Power, 1999; Pellegrini & Bartini, 2000). In a systematic review of 26 school-based interventions to prevent bullying, Vreeman and Carroll (2007) identified several studies that used teacher-reported bullying measures as evaluation outcomes. Some studies also focused on adolescent behavior such as teacher-rated aggression or student social interactions (Fast, Fanelli, & Salen, 2003; Tierney & Dowd, 2000). More recently, a large (n = 12,344) randomized control effectiveness trial (Waasdorp, Bradshaw, & Leaf, 2012), with support from the Institute of Education Sciences, the National Institute of Mental Health, and the CDC, used teacher-reports of bullying behavior using the TOCA-C. Another study noted a "substantial overlap" (Jansen et al., 2014, p. 475) between teacher- and student-reported victimization (~75% agreement) though noted differences may be due to the perspectives of the reporters (Rønning et al., 2009). Even when comparing victimization in adolescents using self-reports, diaries, and peer nominations, the agreement of the different reporting methods vary as each method was likely tapping into a different aspect of bullying victimization (Pouwels, Lansu, & Cillessen, 2016).

In a large, statewide study conducted in 2017 with 85,762 middle schoolers and 12,661 teachers in 410 public schools (Cornell et al., 2017), both teachers and students were asked to assess bullying at their school using the prevalence of teasing and bullying (PTB) scale (Konold et al., 2014). Teachers and staff tended to report that bullying was less of a problem (36%) at school compared with students (46%) and the correlation between student- and teacher-reported school-level PTB was r = .69. Another statewide study, but with high school students, has shown that the correspondence with teacher and student bullying reports was r = .61–.65 (Cornell, 2014). Though teacher-report measures may not be sensitive to certain types of bullying (e.g., relational bullying, playground bullying), teacher reports provide a different but valid perspective of a student's bullying involvement (Leff, Freedman, Macevoy, & Power, 2011).

Perceived teacher–student relationship scale (student reported). The scale (Roeser, Midgley, & Urdan, 1996) was composed of five items (e.g., "The teacher really cares about students as individuals," "The teacher treats students with respect") which asked students about their relationship with their teacher. Responses ranged from 1 = *not at all true* to 5 = *very true* and were averaged to form the scale. Scale score reliability was ω = .88. The scale contained items that corresponded to student perceptions of trust, caring, and regard for adolescent perspectives (Brinkworth et al., 2017).

Covariates. We also included gender, race/ethnicity (i.e., White, Black, Other), and grade level as dummy-code variables (with White, boys, and the sixth grade as the reference groups). In addition, a student's FRPL status, disability status, and gifted education status were included as dummy codes. Although not the focus of the study, a dummy coded intervention status variable (1 = treatment, 0 = control) was added to account for differences that may have resulted from the random assignment of teachers to the primary study conditions.[3]

Analytic Strategy

Of the 718 students in the analytic sample, only a small fraction had some missing data (3.8%) resulting in a reduced sample size of 691 students with complete data. The variables with the largest proportion of missing data were for behavioral engagement (2.4%) and teacher–student relationships (2.0%) in the spring. To test if data were missing completely at random (MCAR), we used Little's (1988) MCAR test. Results indicated that missing data were MCAR, $\chi^2(203) = 163.3$, $p = .98$, allowing the use of listwise deletion which would not bias results.

To answer the first question investigating differences in TSRs by bullying involvement status, we used a teacher-fixed effect (Murnane & Willett, 2011) regression model using cluster robust standard errors. Although ANOVAs are typically used to detect group differences with continuous outcome variables, our analysis accounted for observation nonindependence due to the clustering of observations which can lead to misestimated standard errors (F. Huang, 2016). To account for the possibility of inflated Type I errors due to multiple comparisons, we used a Benjamini-Hochberg (1995) correction procedure as suggested by the What Works Clearinghouse (Institute of Education Sciences, 2014).

For the psychosocial outcomes, a series of multiple linear regression models were used to assess the association of the dummy-coded bullying involvement variable (with not involved students as the reference group) with the outcome measures (i.e., depression, concentration problems, emotional regulation problems, and behavioral engagement) in the spring. All outcomes measures were transformed to z scores so that the bullying involvement coefficients could be interpreted as standardized mean differences using Cohen's (1992) effect size guidelines (i.e., 0.20 = small, 0.50 = medium, 0.80 = large).

The first set of models included the bullying status variable in the spring while controlling for commonly used student demo-

[3] This variable was included in all models but was not statistically significant for any model and is not shown.

graphic variables (i.e., gender, race/ethnicity, grade level, disability status, FRPL status, and gifted education status). In addition, a baseline psychosocial measure taken in the fall was included which accounted for preexisting conditions. The models answered the second research question if there were differences in psychosocial outcomes associated with bullying involvement while controlling for a host of covariates including baseline scores. The second set of models include the standardized measure of the student-rated perceived TSR scale allowing the interpretation of the regression coefficients as standardized betas. Statistically significant student-reported TSRs which result in improved psychosocial outcomes would indicate the main/promotive effects of TSRs (i.e., the benefit is for all student groups regardless of bullying involvement status). The final set of models added an interaction term using the TSR scale and bullying involvement status. A statistically significant interaction term would indicate a differential effect of TSRs (i.e., a protective factor or a buffering effect) depending on the bullying involvement status of the student.

All models investigating psychosocial outcomes included school fixed effects to account for the clustering of respondents within schools. Unlike multilevel models, the fixed effects model completely accounted for all observed and unobserved group-level variables that may bias results (F. Huang, 2016; Murnane & Willett, 2011). A cohort fixed effect was also included to account for any differences that may be attributed to the different school years in which the data were collected. Cluster robust standard errors (Cameron & Miller, 2015) at the teacher level were used to properly estimate standard errors and to account for any additional nesting effects. Regression diagnostics were performed and no influential observations (Cohen, Cohen, West, & Aiken, 2003) were detected, multicollinearity was not a problem, and residuals for all models were approximately normally distributed (all |skewness| < 1). All data management and analyses were done using R 3.4 (R Core Team, 2017).

Results

Difference in TSR by Bullying Involvement

Descriptively, comparison of TSR mean scores in the spring (see Figure 1) by bullying involvement status indicates that bullies ($n = 77$) and bully/victims ($n = 19$) had the lowest TSRs ($Ms = 3.34$) compared with victims ($n = 32$; $M = 3.69$) and noninvolved students ($n = 563$; $M = 3.72$). However, among all the comparisons (which accounted for the nesting and multiple contrasts), only the mean difference between bullies and noninvolved students was statistically significant ($p < .01$) reflecting a small to moderate effect size ($d = 0.36$).

Difference in Psychosocial Outcomes by Bullying Involvement

Based on regression models using the four spring psychosocial outcomes (see Table 2) and including the measures taken in the fall as covariates (Time 1 measure) for depression, concentration problems, emotional regulation problems, and behavioral engagement, victims of bullying had higher concentration ($d = 0.29$, $p < .05$) and emotional regulation problems ($d = 0.40$, $p < .001$) compared with the noninvolved group. Bullies also had higher concentration problems ($d = 0.51$, $p < .001$), emotional regulation problems ($d = 0.74$, $p < .001$), and lower behavioral engagement ($d = -0.33$, $p < .01$) compared with the reference group. Finally, the bully victim had high levels of concentration ($d = 0.71$, $p < .001$) and emotional regulation problems ($d = 1.36$, $p < .001$) when compared with the students who were not involved in bullying. For all groups, the differences in the depression outcome were not statistically significant (all $ps > .05$). Model R^2s ranged from .34 (for behavioral engagement) to .60 for concentration problems.

The Association of Teacher–Student Relationships and Psychosocial Outcomes

Adding the student-reported TSR variable in the next sets of models indicated how much TSRs contributed to the outcomes over and above all the other variables already included in the model (see Table 2). For depression, concentration problems, and emotional regulation problems, the association of TSR was statistically significant with higher TSRs associated with better outcomes ($\beta = -0.09$, $ps < .01$) with small improvements in R^2. The coefficient of TSR for behavioral engagement was larger and statistically significant ($\beta = 0.27$, $p < .001$) with a sizable increase in R^2 ($R^2_{change} = .07$).

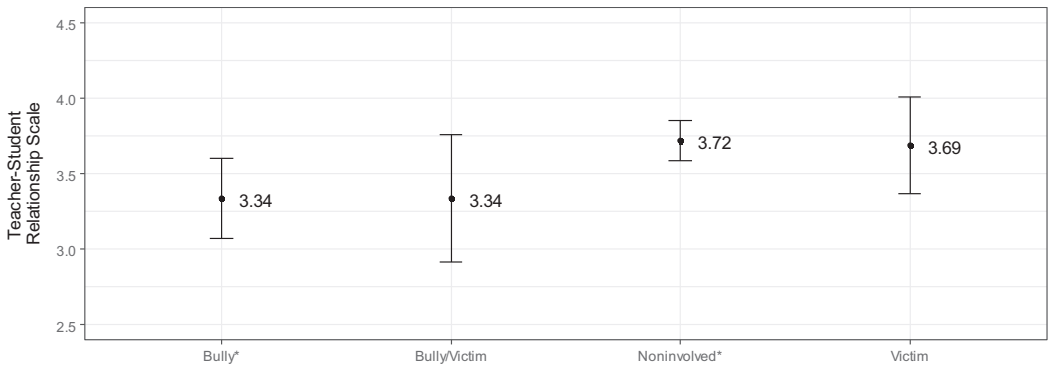

Figure 1. Comparison of spring teacher-student relationship scores by bullying involvement status ($n = 691$). *Only the difference between the bully and noninvolved groups are statistically significant ($p < .01$). Error bars represent the 95% confidence interval. Analysis accounting for clustering and multiple comparisons.

Table 2
Regression Results for Spring Psychosocial Outcomes (n = 691)

Variables	Depression		Concentration problems		Emotional regulation problems		Behavioral engagement	
	w/T1	w/TSR	w/T1	w/TSR	w/T1	w/TSR	w/T1	w/TSR
Victims[1]	.02 (.11)	.01 (.11)	.29* (.12)	.29* (.12)	.40*** (.12)	.40*** (.12)	.05 (.12)	.09 (.12)
Bullies[1]	.05 (.11)	.02 (.12)	.51*** (.08)	.47*** (.08)	.74*** (.10)	.70*** (.10)	−.33** (.12)	−.24* (.12)
Bully/victims[1]	.20 (.16)	.17 (.15)	.71*** (.20)	.68*** (.21)	1.36*** (.21)	1.33*** (.21)	−.05 (.21)	.04 (.18)
Fall measure	.12*** (.01)	.11*** (.01)	.56*** (.03)	.55*** (.03)	.65*** (.04)	.65*** (.04)	1.16*** (.08)	1.01*** (.08)
Female	.13 (.07)	.12 (.07)	−.07 (.05)	−.09 (.05)	.04 (.05)	.02 (.05)	.07 (.07)	.12 (.06)
Black[2]	−.11 (.08)	−.12 (.08)	.19** (.06)	.19** (.06)	.06 (.08)	.05 (.08)	.08 (.10)	.11 (.09)
Other race[2]	.05 (.15)	.04 (.15)	.06 (.09)	.06 (.08)	.01 (.11)	.01 (.11)	−.17 (.18)	−.15 (.17)
With a disability	.00 (.10)	.03 (.11)	−.05 (.09)	−.02 (.09)	.1 (.10)	.12 (.10)	.03 (.12)	−.03 (.11)
Identified as gifted	−.03 (.08)	−.03 (.08)	−.05 (.06)	−.06 (.06)	−.17* (.07)	−.17* (.07)	.06 (.10)	.05 (.10)
Eligible for FRPL	.04 (.07)	.03 (.08)	.02 (.05)	.01 (.05)	−.05 (.05)	−.07 (.05)	−.17* (.07)	−.13* (.06)
Grade 7[3]	−.04 (.08)	−.04 (.08)	.01 (.08)	.00 (.08)	.05 (.10)	.04 (.09)	−.02 (.07)	−.01 (.07)
Grade 8[3]	−.08 (.06)	−.09 (.06)	.07 (.09)	.07 (.09)	.08 (.09)	.08 (.09)	−.12 (.09)	−.13 (.08)
TSR scale		−.09*** (.03)		−.09** (.03)		−.09** (.03)		.27*** (.04)
R^2	.35	.36	.60	.61	.55	.56	.34	.41

Note. All outcomes and TSR scale are standardized. Cluster robust standard errors in parenthesis. Models accounted for school and time fixed effects. Intervention status included as a predictor. T1 = time 1 variable (baseline) of the outcome measure taken in the fall; FRPL = free or reduce price lunch; TSR = teacher–student relationship scale.
[1] Noninvolved students = reference group. [2] White = reference group. [3] Grade 6 = reference group.
* $p < .05$. ** $p < .01$. *** $p < .001$.

The Moderating Role of TSR and Psychosocial Outcomes

For the final set of models, the interaction terms between TSR and bullying involvement status were added to test for the moderating relationship. For three out of the four outcomes, the additional variables did not result in an improvement in model fit nor were any of the added coefficients statistically significant (all *p*s > .05, not shown). For depression, statistically significant interaction terms were found (see Table 3). As coefficients for interactions are challenging to interpret on their own, we present the results of the moderation effects visually in Figure 2.

As seen in Figure 2, depression decreased for both victims and noninvolved students as TSR increased indicating the beneficial association of TSR. In contrast, the slope for bullies is almost flat suggesting virtually no association of TSR and depression for bullies. The relationship however of TSR with bully/victims is much more pronounced and TSR functions as a protective factor for bully/victims. However, bully/victims with poor TSR may also be at risk for higher levels of depression.

Table 3
Moderating Role of Teacher–Student Relationships and Bullying Status With Depression (n = 691)

Variables	Depression
Victims[1]	.01 (.11)
Bullies[1]	.08 (.11)
Bully/victims[1]	.06 (.16)
Fall measure	.11*** (.01)
TSR scale	−.12*** (.03)
Victim × TSR	.06 (.11)
Bully × TSR	.21* (.10)
Bully/victim × TSR	−.29* (.12)
R^2	.36

Note. TSR = teacher–student relationship scale. Model includes all prior covariates used (not shown). All outcomes and TSR scale are standardized. Cluster robust standard errors in parenthesis. Models accounted for school and time fixed effects. Intervention status included as a predictor.
[1] Noninvolved students = reference group.
* $p < .05$. *** $p < .001$.

Discussion

Although studies have investigated the role of TSRs in relation to bullying involvement and peer aggression (e.g., Elledge et al., 2016; Troop-Gordon & Kopp, 2011), studies have generally not investigated the potential of TSRs in reducing the negative outcomes associated with bullying itself. Descriptively, our results suggest that bullies and bully/victims had the poorest relationships with teachers and results were similar to another middle school study that compared TSRs among bullying-involved students (C. Wang et al., 2015). However, in our study, only student-reported TSR differences of bullies versus noninvolved students were statistically significant, probably as a result of the large standard errors that bully/victims had with TSRs (see Figure 1) due to the smaller number of bully/victims in our sample.

Teachers should be cognizant that TSRs perceived by students as being positive may function as both a protective and promotive factor as it relates to psychosocial outcomes. Teachers may have a harder time developing relationships with challenging students who pick on or victimize other students (as indicated by having the lowest TSR scores), however, the bullies and the bully/victims, not just the victims, may benefit from better TSRs. As Nurmi and Kiuru (2015) have illustrated, when students develop good relationships with their teachers, the level of student disruptive behaviors tended to decrease and prosocial behaviors increased.

Study results also indicated that compared with noninvolved individuals, students with bullying involvement had more concentration and emotion regulation problems, and lower engagement. This is consistent with previous findings that detail the psycho-

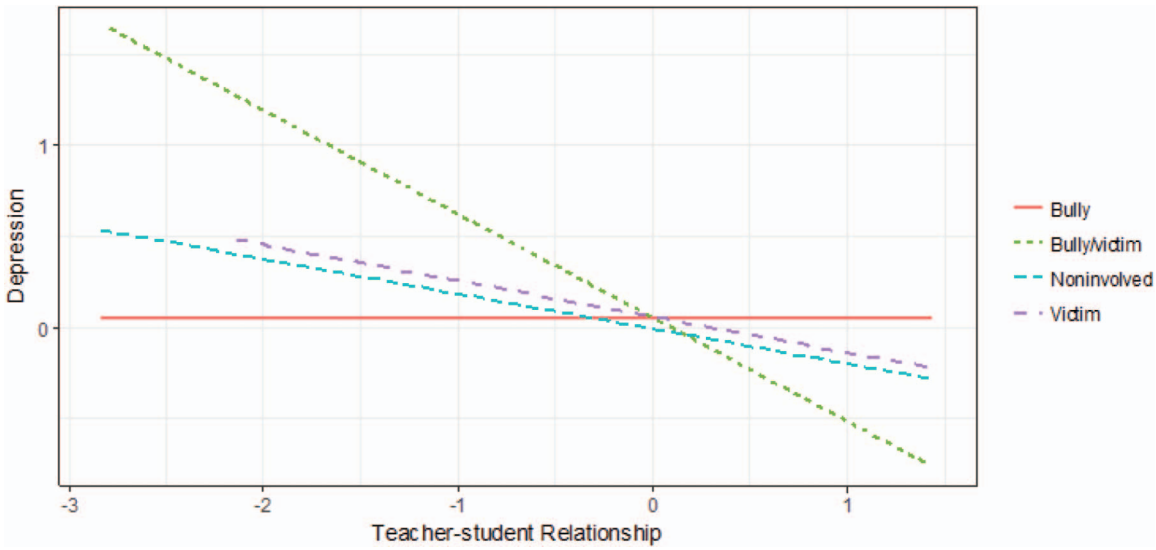

Figure 2. Moderating relationship of teacher-student relationships and bullying status with depression (n = 691). Both depression and teacher-student relationships are shown in standard deviation units. See the online article for the color version of this figure.

logical, social, and behavioral consequences of bullying involvement not just for the victims (Copeland et al., 2013; Haynie et al., 2001). These psychosocial outcomes, though highly relevant on their own, have a strong predictive relationship with future academic success and warrant considerable attention (Duncan et al., 2007; Li-Grining et al., 2010). Not surprisingly as many other studies have noted the benefits of TSR and engagement (Roorda et al., 2011), the behavioral engagement outcome had the strongest relationship with TSR. As bullies had lower behavioral engagement compared with noninvolved students, positive TSRs may help reduce this risk as positive TSRs may raise engagement levels for all students. This is also especially salient in middle schools, regardless of bullying involvement status, where engagement has been known to wane (Busteed, 2013).

Our finding that the quality of student-reported TSRs acted as a moderator for self-reported depression is particularly notable. TSRs moderated depressive symptomatology for bully/victims; specifically, as positive TSR increased, depressive symptoms decreased more sharply for students in the bully/victim category compared to all other students (see Figure 2). However, depression symptoms were much higher for bully/victims with poor TSRs. A possible reason may be that bully/victims are at greater risk for poorer psychosocial outcomes and existing literature supports this notion (Copeland et al., 2013; Holt et al., 2015; Kumpulainen et al., 1999; Swearer, Song, Cary, Eagle, & Mickelson, 2001) which may make them more amenable to the effects of having a positive relationship with their teacher.

These findings and previous literature describing the beneficial association of positive TSRs with various outcomes (e.g., Roorda et al., 2011) suggest that the enhancement of relationships between teachers and students may be meaningful for students experiencing a variety of psychosocial risk factors. As risk factors increase, access to positive TSRs may be particularly critical. If teachers have a better awareness of TSR and are provided support for building positive relationships with challenging students, teachers may better perform their role in reducing bullying and the maladaptive outcomes related to it.

Several interventions, some relatively simple (e.g., Gehlbach et al., 2016) and some more intensive (e.g., Anderson, Christenson, Sinclair, & Lehr, 2004; Mikami, Gregory, Allen, Pianta, & Lun, 2011) show promise in fostering better relationships between students and teachers. For example, MyTeachingPartner-Secondary (Mikami et al., 2011), a teacher professional development program, is designed to promote TSRs among middle and high school students. With MTP-S, teachers are coached to inquire about students' extracurricular interests (to build relationships) and teachers are encouraged to incorporate these interests in their teaching material to improve engagement. Although MTP-S is an intensive intervention, Gehlbach et al.'s (2016) brief treatment (used with ninth graders) focuses on highlighting similarities between student and teacher interests (with information collected through a get-to-know-you survey) as a means of building positive relationships.

Limitations

Several limitations should be kept in mind when interpreting results. First, our sample consisted primarily of Black students with a high level of students eligible for FRPL. Thus, the study findings may not generalize to the broader public but focuses on disadvantaged students. Second, the use of teacher reports in middle school may underestimate prevalence rates as teachers may not observe bullying behaviors that may occur in other classes (Craig, Henderson, & Murphy, 2000) or in other places (e.g., bathrooms, school cafeteria, playground) where there may be less adult supervision (Pellegrini & Bartini, 2000). Although other methods of bullying involvement identification have been suggested (Cornell & Huang, 2015), there is no existing gold standard with regard to the measurement of bullying involvement (F. L. Huang & Cornell, 2016; Ladd & Kochenderfer-Ladd, 2002). However, our results are consistent with the pattern of identification of

bullies and victims suggested by Wienke Totura, Green, Karver, and Gesten (2009) where teachers may report more bullies and less victims compared with student reports. Third, specific modalities of bullying (e.g., social, verbal) were not explored and the relationship of TSR and psychosocial outcomes may differ based on the type of bullying. In addition, teachers may not observe other covert forms of bullying such as cyberbullying (Card & Hodges, 2008). Fourth, we consider TSRs from the point of view of the student, considering that student outcomes were of primary interest. Teachers themselves may have their own view of their relationship with their students which do not necessarily have to match a student's perception. Finally, though our primary interest was on student relationships with teachers, support from other adults such as parents (which we did not have data for) have also shown to function as a protective factor for middle school students (Rueger, Chen, Jenkins, & Choe, 2014).

Conclusion and Implications

The current study found differences in both teacher–student relationships as well as psychosocial outcomes for students that were classified as bullies, victims, and bully/victims compared with those with no involvement in bullying. In addition, results indicated that for bully/victims, student-reported TSRs functioned as a protective factor for depressive symptomatology and TSR had a promotive association for emotional regulation, behavioral engagement, and concentration problems. These findings highlight the need to include efforts to support positive relationships between teachers and students as a means to facilitate the social and emotional well being of students, particularly for those at greater risk. Given the variability in how much training teachers receive on the provision of social supports for students (Pavri, 2004), administrators, school psychologists, school social workers, counselors, and other school personnel charged with supporting the psychosocial well-being of students should consider coordinated efforts to foster a school culture that places greater value on the importance of TSRs, especially in secondary schools.

References

Akos, P., Rose, R. A., & Orthner, D. (2015). Sociodemographic moderators of middle school transition effects on academic achievement. *The Journal of Early Adolescence, 35,* 170–198. http://dx.doi.org/10.1177/0272431614529367

Anderson, A. R., Christenson, S. L., Sinclair, M. F., & Lehr, C. A. (2004). Check & Connect: The importance of relationships for promoting engagement with school. *Journal of School Psychology, 42,* 95–113. http://dx.doi.org/10.1016/j.jsp.2004.01.002

Baldry, A. C., & Farrington, D. P. (2005). Protective factors as moderators of risk factors in adolescence bullying. *Social Psychology of Education, 8,* 263–284. http://dx.doi.org/10.1007/s11218-005-5866-5

Benedict, F. T., Vivier, P. M., & Gjelsvik, A. (2014). Mental health and bullying in the United States among children aged 6 to 17 years. *Journal of Interpersonal Violence, 30,* 782–795. http://dx.doi.org/10.1177/0886260514536279

Benhorin, S., & McMahon, S. D. (2008). Exposure to violence and aggression: Protective roles of social support among urban African American youth. *Journal of Community Psychology, 36,* 723–743. http://dx.doi.org/10.1002/jcop.20252

Benjamini, Y., & Hochberg, Y. (1995). Controlling the false discovery rate: A practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society Series B*. Methodological, *57,* 289–300.

Bond, L., Carlin, J. B., Thomas, L., Rubin, K., & Patton, G. (2001). Does bullying cause emotional problems? A prospective study of young teenagers. *British Medical Journal, 323,* 480–484. http://dx.doi.org/10.1136/bmj.323.7311.480

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.

Brinkworth, M. E., McIntyre, J., Juraschek, A. D., & Gehlbach, H. (2017). Teacher–student relationships: The positives and negatives of assessing both perspectives. *Journal of Applied Developmental Psychology*. Advance online publication. http://dx.doi.org/10.1016/j.appdev.2017.09.002

Brunstein Klomek, A., Marrocco, F., Kleinman, M., Schonfeld, I. S., & Gould, M. S. (2007). Bullying, depression, and suicidality in adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 46,* 40–49. http://dx.doi.org/10.1097/01.chi.0000242237.84925.18

Busteed, B. (2013). *The school cliff: Student engagement drops with each school year*. Retrieved from http://www.gallup.com/opinion/gallup/170525/school-cliff-student-engagement-drops-school-year.aspx

Cameron, A. C., & Miller, D. L. (2015). A practitioner's guide to cluster-robust inference. *The Journal of Human Resources, 50,* 317–372. http://dx.doi.org/10.3368/jhr.50.2.317

Card, N. A., & Hodges, E. V. E. (2008). Peer victimization among schoolchildren: Correlations, causes, consequences, and considerations in assessment and intervention. *School Psychology Quarterly, 23,* 451–461. http://dx.doi.org/10.1037/a0012769

Centers for Disease Control. (2017). *Featured topic: Bullying Research*. Retrieved from https://www.cdc.gov/violenceprevention/youthviolence/bullyingresearch/index.html

Centers for Disease Control and Prevention. (2015). *Youth risk behavior surveillance system*. Retrieved from http://www.cdc.gov/healthyyouth/data/yrbs/index.htm

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112,* 155–159. http://dx.doi.org/10.1037/0033-2909.112.1.155

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*. Mahwah, NJ: Erlbaum.

Colarossi, L. G., & Eccles, J. S. (2003). Differential effects of support providers on adolescents' mental health. *Social Work Research, 27,* 19–30. http://dx.doi.org/10.1093/swr/27.1.19

Copeland, W. E., Wolke, D., Angold, A., Costello, E. J., Copeland, W. E., Angold, A., & Wolke, D. (2013). Adult psychiatric outcomes of bullying and being bullied by peers in childhood and adolescence. *Journal of the American Medical Association Psychiatry, 70,* 419–426. http://dx.doi.org/10.1001/jamapsychiatry.2013.504

Cornelius-White, J. (2007). Learner-centered teacher–student relationships are effective: A meta-analysis. *Review of Educational Research, 77,* 113–143. http://dx.doi.org/10.3102/003465430298563

Cornell, D. (2014, December). *School climate and safety in Virginia high schools: Perceptions of students and teachers*. Keynote presentation for Strengthening Connections Climate Forum. Virginia Center for School and Campus Safety, Midlothian, VA.

Cornell, D., & Huang, F. (2015). School counselor use of peer nominations to identify victims of bullying. *Professional School Counseling, 18,* 191–205. http://dx.doi.org/10.5330/2156-759X-18.1.191

Cornell, D., Huang, F., Konold, T., Jia, Y., Malone, M., Burnette, A., . . . Meyer, J. P. (2017). *Tech. Rep. No. of the Virginia Secondary School Climate Survey 2017: Results for 6th, 7th, and 8th grade students and teachers*. Charlottesville, VA: University of Virginia.

Craig, W. M., Henderson, K., & Murphy, J. G. (2000). Prospective teachers' attitudes toward bullying and victimization. *School Psychology International, 21,* 5–21. http://dx.doi.org/10.1177/0143034300211001

Di Stasio, M. R., Savage, R., & Burgos, G. (2016). Social comparison, competition and teacher–student relationships in junior high school

classrooms predicts bullying and victimization. *Journal of Adolescence, 53,* 207–216. http://dx.doi.org/10.1016/j.adolescence.2016.10.002

Doumen, S., Buyse, E., Colpin, H., & Verschueren, K. (2011). Teacher–child conflict and aggressive behaviour in first grade: The intervening role of children's self-esteem. *Infant and Child Development, 20,* 449–465. http://dx.doi.org/10.1002/icd.725

Duncan, G. J., Dowsett, C. J., Claessens, A., Magnuson, K., Huston, A. C., Klebanov, P., . . . Japel, C. (2007). School readiness and later achievement. *Developmental Psychology, 43,* 1428–1446. http://dx.doi.org/10.1037/0012-1649.43.6.1428

Dunn, T. J., Baguley, T., & Brunsden, V. (2014). From alpha to omega: A practical solution to the pervasive problem of internal consistency estimation. *British Journal of Psychology, 105,* 399–412. http://dx.doi.org/10.1111/bjop.12046

Elledge, L. C., Elledge, A. R., Newgent, R. A., Cavell, T. A., Newgent, R. A., Elledge, L. C., & Elledge, A. R. (2016). Social risk and peer victimization in elementary school children: The protective role of teacher–student relationships. *Journal of Abnormal Child Psychology, 44,* 691–703. http://dx.doi.org/10.1007/s10802-015-0074-z

Espelage, D., & Swearer, S. (2003). Research on bullying and victimization: What have we learned and where do we go from here? *School Psychology Review, 32,* 365–383.

Fast, J., Fanelli, F., & Salen, L. (2003). How becoming mediators affects aggressive students. *Children & Schools, 25,* 161–171. http://dx.doi.org/10.1093/cs/25.3.161

Fekkes, M., Pijpers, F. I. M., Fredriks, A. M., Vogels, T., & Verloove-Vanhorick, S. P. (2006). Do bullied children get ill, or do ill children get bullied? A prospective cohort study on the relationship between bullying and health-related symptoms. *Pediatrics, 117,* 1568–1574. http://dx.doi.org/10.1542/peds.2005-0187

Feldlaufer, H., Midgley, C., & Eccles, J. S. (1988). Student, teacher, and observer perceptions of the classroom environment before and after the transition to junior high school. *The Journal of Early Adolescence, 8,* 133–156.

Forero, R., McLellan, L., Rissel, C., & Bauman, A. (1999). Bullying behaviour and psychosocial health among school students in New South Wales, Australia: Cross sectional survey. *British Medical Journal, 319,* 344–348.

Fraser, M., Kirby, L., & Smokowski, P. (2004). Risk and resilience in childhood. In M. Fraser (Ed.), *Risk and resiliency in childhood: An ecological perspective* (pp. 13–66). Washington, DC: NASW Press.

Gehlbach, H., Brinkworth, M. E., King, A. M., Hsu, L. M., McIntyre, J., & Rogers, T. (2016). Creating birds of similar feathers: Leveraging similarity to improve teacher–student relationships and academic achievement. *Journal of Educational Psychology, 108,* 342–352. http://dx.doi.org/10.1037/edu0000042

Graham, S., Bellmore, A. D., & Mize, J. (2006). Peer victimization, aggression, and their co-occurrence in middle school: Pathways to adjustment problems. *Journal of Abnormal Child Psychology, 34,* 363–378. http://dx.doi.org/10.1007/s10802-006-9030-2

Gregory, A., Cornell, D., Fan, X., Sheras, P., Shih, T.-H., & Huang, F. (2010). Authoritative school discipline: High school practices associated with lower bullying and victimization. *Journal of Educational Psychology, 102,* 483–496.

Gregory, A., & Korth, J. (2016). Teacher–student relationships and behavioral engagement in the classroom. In K. Wentzel and G. Ramani (Eds.), *Handbook of social influences in school contexts: Social-emotional, motivation, and cognitive outcomes* (pp. 178–191). Boca Raton, Florida: CRC Press, Taylor & Francis Group.

Gregory, A., & Ripski, M. B. (2008). Adolescent trust in teachers: Implications for behavior in the high school classroom. *School Psychology Review, 37,* 337–353.

Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry, 41,* 441–455. http://dx.doi.org/10.1111/1469-7610.00629

Haynie, D. L., Nansel, T., Eitel, P., Crump, A. D., Saylor, K., Yu, K., & Simons-Morton, B. (2001). Bullies, victims, and bully/victims: Distinct groups of at-risk youth. *The Journal of Early Adolescence, 21,* 29–49. http://dx.doi.org/10.1177/0272431601021001002

Henricsson, L., & Rydell, A.-M. (2004). Elementary school children with behavior problems: Teacher-child relations and self-perception. A prospective study. *Merrill-Palmer Quarterly, 50,* 111–138. http://dx.doi.org/10.1353/mpq.2004.0012

Holt, M. K., Vivolo-Kantor, A. M., Polanin, J. R., Holland, K. M., DeGue, S., Matjasko, J. L., . . . Reid, G. (2015). Bullying and suicidal ideation and behaviors: A meta-analysis. *Pediatrics, 135,* e496–e509. http://dx.doi.org/10.1542/peds.2014-1864

Huang, F. (2016). Alternatives to multilevel modeling for the analysis of clustered data. *Journal of Experimental Education, 84,* 175–196. http://dx.doi.org/10.1080/00220973.2014.952397

Huang, F. L., & Cornell, D. G. (2015). The impact of definition and question order on the prevalence of bullying victimization using student self-reports. *Psychological Assessment, 27,* 1484–1493. http://dx.doi.org/10.1037/pas0000149

Huang, F. L., & Cornell, D. G. (2016). Question order affects the measurement of bullying victimization among middle school students. *Educational and Psychological Measurement, 76,* 724–740. http://dx.doi.org/10.1177/0013164415622664

Institute of Education Sciences. (2014). *WWC procedures and standards handbook: What Works Clearinghouse*. Retrieved from http://ies.ed.gov/ncee/wwc/documentsum.aspx?sid=

Jansen, P. W., Verlinden, M., Berkel, A. D., Mieloo, C. L., Raat, H., Hofman, A., . . . Tiemeier, H. (2014). Teacher and peer reports of overweight and bullying among young primary school children. *Pediatrics*. Advance online publication. http://dx.doi.org/10.1542/peds.2013-3274

Juvonen, J., Graham, S., & Schuster, M. A. (2003). Bullying among young adolescents: The strong, the weak, and the troubled. *Pediatrics, 112,* 1231–1237. http://dx.doi.org/10.1542/peds.112.6.1231

Konishi, C., Hymel, S., Zumbo, B. D., & Li, Z. (2010). Do school bullying and student-teacher relationships matter for academic achievement? A multilevel analysis. *Canadian Journal of School Psychology, 25,* 19–39. http://dx.doi.org/10.1177/0829573509357550

Konold, T., Cornell, D., Huang, F., Meyer, P., Lacey, A., Nekvasil, E., . . . Shukla, K. (2014). Multilevel multi-informant structure of the authoritative school climate survey. *School Psychology Quarterly, 29,* 238–255. http://dx.doi.org/10.1037/spq0000062

Koth, C. W., Bradshaw, C. P., & Leaf, P. J. (2009). Teacher Observation of Classroom Adaptation-Checklist: Development and factor Structure. *Measurement & Evaluation in Counseling & Development, 42,* 15–30. http://dx.doi.org/10.1177/0748175609333560

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16,* 606–613. http://dx.doi.org/10.1046/j.1525-1497.2001.016009606.x

Kumpulainen, K., Räsänen, E., & Henttonen, I. (1999). Children involved in bullying: Psychological disturbance and the persistence of the involvement. *Child Abuse & Neglect: The International Journal, 23,* 1253–1262. http://dx.doi.org/10.1016/S0145-2134(99)00098-8

Kumpulainen, K., Räsänen, E., & Puura, K. (2001). Psychiatric disorders and the use of mental health services among children involved in bullying. *Aggressive Behavior, 27,* 102–110. http://dx.doi.org/10.1002/ab.3

Ladd, G. W., & Kochenderfer-Ladd, B. (2002). Identifying victims of peer aggression from early to middle childhood: Analysis of cross-informant data for concordance, estimation of relational adjustment, prevalence of

victimization, and characteristics of identified victims. *Psychological Assessment, 14,* 74–96. http://dx.doi.org/10.1037/1040-3590.14.1.74

Langille, D., Rasic, D., Kisely, S., Flowerdew, G., & Cobbett, S. (2012). Protective associations of school connectedness with risk of depression in Nova Scotia adolescents. *Canadian Journal of Psychiatry, 57,* 759–764. http://dx.doi.org/10.1177/070674371205701208

LaRusso, M., Romer, D., & Selman, R. (2008). Teachers as builders of respectful school climates: Implications for adolescent drug use norms and depressive symptoms in high school. *Journal of Youth and Adolescence, 38,* 386–398. http://dx.doi.org/10.1007/s10964-007-9212-4

Leff, S., Freedman, M., Macevoy, J., & Power, T. (2011). Considerations when measuring outcomes to assess for the effectiveness of bullying-and aggression-prevention programs in the schools. In D. Espelage & S. Swearer (Eds.), *Bullying in American schools: A social-ecological perspective on prevention and intervention* (Vol. 2, pp. 205–223). New York, NY: Routledge.

Leff, S. S., Patterson, C. J., Kupersmidt, J. B., & Power, T. J. (1999). Factors influencing teacher identification of peer bullies and victims. *School Psychology Review, 28,* 505.

Lessne, D., & Cidade, D. (2015). *Student reports of bullying and cyber-bullying: Results from the 2013 School Crime Supplement to the National Crime Victimization Survey*. Washington, DC: U.S. Department of Education, National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2015056

Li-Grining, C. P., Votruba-Drzal, E., Maldonado-Carreño, C., & Haas, K. (2010). Children's early approaches to learning and academic trajectories through fifth grade. *Developmental Psychology, 46,* 1062–1077. http://dx.doi.org/10.1037/a0020066

Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83,* 1198–1202. http://dx.doi.org/10.1080/01621459.1988.10478722

Lynch, M., & Cicchetti, D. (1997). Children's relationships with adults and peers: An examination of elementary and junior high school students. *Journal of School Psychology, 35,* 81–99. http://dx.doi.org/10.1016/S0022-4405(96)00031-3

Mehta, S. B., Cornell, D., Fan, X., & Gregory, A. (2013). Bullying climate and school engagement in ninth-grade students. *The Journal of School Health, 83,* 45–52. http://dx.doi.org/10.1111/j.1746-1561.2012.00746.x

Mikami, A. Y., Gregory, A., Allen, J. P., Pianta, R. C., & Lun, J. (2011). Effects of a teacher professional development intervention on peer relationships in secondary classrooms. *School Psychology Review, 40,* 367–385.

Murnane, R. J., & Willett, J. B. (2011). *Methods matter: Improving causal inference in educational and social science research*. New York, NY: Oxford University Press.

Murray, C., & Greenberg, M. T. (2000). Children's relationship with teachers and bonds with school an investigation of patterns and correlates in middle childhood. *Journal of School Psychology, 38,* 423–445. http://dx.doi.org/10.1016/S0022-4405(00)00034-0

Murray-Harvey, R., & Slee, P. T. (2010). School and home relationships and their impact on school bullying. *School Psychology International, 31,* 271–295. http://dx.doi.org/10.1177/0143034310366206

Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among U.S. youth: Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association, 285,* 2094–2100. http://dx.doi.org/10.1001/jama.285.16.2094

Nurmi, J.-E., & Kiuru, N. (2015). Students' evocative impact on teacher instruction and teacher–child relationships: Theoretical background and an overview of previous research. *International Journal of Behavioral Development, 39,* 445–457. http://dx.doi.org/10.1177/0165025415592514

Oberle, E., Schonert-Reichl, K. A., Guhn, M., Zumbo, B. D., & Hertzman, C. (2014). The role of supportive adults in promoting positive development in middle childhood: A population-based study. *Canadian Journal of School Psychology, 29,* 296–316. http://dx.doi.org/10.1177/0829573514540116

Obsuth, I., Murray, A. L., Malti, T., Sulger, P., Ribeaud, D., Eisner, M., . . . Ribeaud, D. (2016). A non-bipartite propensity score analysis of the effects of teacher–student relationships on adolescent problem and prosocial behavior. *Journal of Youth and Adolescence, 46,* 1661–1687.

O'Connor, E. E., Collins, B. A., & Supplee, L. (2012). Behavior problems in late childhood: The roles of early maternal attachment and teacher-child relationship trajectories. *Attachment & Human Development, 14,* 265–288. http://dx.doi.org/10.1080/14616734.2012.672280

Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Oxford, UK: Blackwell Publishing.

Østergaard, S. D., Foldager, L., Allgulander, C., Dahl, A. A., Huuhtanen, M.-T., Rasmussen, I., & Munk-Jørgensen, P. (2010). Psychiatric caseness is a marker of major depressive episode in general practice. *Scandinavian Journal of Primary Health Care, 28,* 211–215. http://dx.doi.org/10.3109/02813432.2010.501235

Pavri, S. (2004). General and special education teachers' preparation needs in providing social support: A needs assessment. *Teacher Education and Special Education, 27,* 433–443. http://dx.doi.org/10.1177/088840640402700410

Pellegrini, A. D. (2002). Bullying, victimization, and sexual harassment during the transition to middle school. *Educational Psychologist, 37,* 151–163. http://dx.doi.org/10.1207/S15326985EP3703_2

Pellegrini, A. D., & Bartini, M. (2000). An empirical comparison of methods of sampling aggression and victimization in school settings. *Journal of Educational Psychology, 92,* 360–366. http://dx.doi.org/10.1037/0022-0663.92.2.360

Pianta, R. C., & Stuhlman, M. W. (2004). Teacher-child relationships and children's success in the first years of school. *School Psychology Review, 33,* 444–458.

Pouwels, J. L., Lansu, T. A. M., & Cillessen, A. H. N. (2016). Peer victimization in adolescence: Concordance between measures and associations with global and daily internalizing problems. *Journal of Adolescence, 53,* 195–206. http://dx.doi.org/10.1016/j.adolescence.2016.10.004

R Core Team. (2017). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from http://www.R-project.org/

Reavis, R. D., Keane, S. P., & Calkins, S. D. (2010). Trajectories of peer victimization: The role of multiple relationships. *Merrill-Palmer Quarterly, 56,* 303–332. http://dx.doi.org/10.1353/mpq.0.0055

Reddy, R., Rhodes, J. E., & Mulhall, P. (2003). The influence of teacher support on student adjustment in the middle school years: A latent growth curve study. *Development and Psychopathology, 15,* 119–138. http://dx.doi.org/10.1017/S0954579403000075

Rigby, K. (2000). Effects of peer victimization in schools and perceived social support on adolescent well-being. *Journal of Adolescence, 23,* 57–68. http://dx.doi.org/10.1006/jado.1999.0289

Rigby, K. (2001). Health consequences of bullying and its prevention. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 310–331). New York, NY: Guilford Press.

Rodkin, P. C., & Hodges, E. V. (2003). Bullies and victims in the peer ecology: Four questions for psychologists and school professionals. *School Psychology Review, 32,* 384–400.

Roeser, R. W., Midgley, C., & Urdan, T. C. (1996). Perceptions of the school psychological environment and early adolescents' psychological and behavioral functioning in school: The mediating role of goals and belonging. *Journal of Educational Psychology, 88,* 408–422. http://dx.doi.org/10.1037/0022-0663.88.3.408

Rønning, J. A., Sourander, A., Kumpulainen, K., Tamminen, T., Niemelä, S., Moilanen, I., . . . Almqvist, F. (2009). Cross-informant agreement about bullying and victimization among eight-year-olds: Whose information best predicts psychiatric caseness 10–15 years later? *Social Psychiatry and Psychiatric Epidemiology, 44,* 15–22. http://dx.doi.org/10.1007/s00127-008-0395-0

Roorda, D. L., Koomen, H. M. Y., Spilt, J. L., & Oort, F. J. (2011). The influence of affective teacher–student relationships on students' school engagement and achievement: A meta-analytic approach. *Review of Educational Research, 81,* 493–529.

Rothon, C., Head, J., Klineberg, E., & Stansfeld, S. (2011). Can social support protect bullied adolescents from adverse outcomes? A prospective study on the effects of bullying on the educational achievement and mental health of adolescents at secondary schools in East London. *Journal of Adolescence, 34,* 579–588. http://dx.doi.org/10.1016/j.adolescence.2010.02.007

Rueger, S. Y., Chen, P., Jenkins, L. N., & Choe, H. J. (2014). Effects of perceived support from mothers, fathers, and teachers on depressive symptoms during the transition to middle school. *Journal of Youth and Adolescence, 43,* 655–670. http://dx.doi.org/10.1007/s10964-013-0039-x

Rueger, S. Y., Malecki, C. K., & Demaray, M. K. (2008). Gender differences in the relationship between perceived social support and student adjustment during early adolescence. *School Psychology Quarterly, 23,* 496–514. http://dx.doi.org/10.1037/1045-3830.23.4.496

Rutter, M. (1985). Resilience in the face of adversity. Protective factors and resistance to psychiatric disorder. *The British Journal of Psychiatry, 147,* 598–611. http://dx.doi.org/10.1192/bjp.147.6.598

Shin, Y., & Kim, H. Y. (2008). Peer victimization in Korean preschool children: The effects of child characteristics, parenting behaviors and teacher-child relationships. *School Psychology International, 29,* 590–605. http://dx.doi.org/10.1177/0143034308099203

Skinner, E., Furrer, C., Marchand, G., & Kindermann, T. (2008). Engagement and disaffection in the classroom: Part of a larger motivational dynamic? *Journal of Educational Psychology, 100,* 765–781. http://dx.doi.org/10.1037/a0012840

Slee, P. T. (1995). Peer victimization and its relationship to depression among Australian primary school students. *Personality and Individual Differences, 18,* 57–62. http://dx.doi.org/10.1016/0191-8869(94)00114-8

Solberg, M. E., & Olweus, D. (2003). Prevalence estimation of school bullying with the Olweus Bully/Victim Questionnaire. *Aggressive Behavior, 29,* 239–268. http://dx.doi.org/10.1002/ab.10047

Stipek, D., & Miles, S. (2008). Effects of aggression on achievement: Does conflict with the teacher make it worse? *Child Development, 79,* 1721–1735. http://dx.doi.org/10.1111/j.1467-8624.2008.01221.x

Strøm, I. F., Thoresen, S., Wentzel-Larsen, T., & Dyb, G. (2013). Violence, bullying and academic achievement: A study of 15-year-old adolescents and their school environment. *Child Abuse & Neglect, 37,* 243–251. http://dx.doi.org/10.1016/j.chiabu.2012.10.010

Swearer, S. M., Song, S. Y., Cary, P. T., Eagle, J. W., & Mickelson, W. T. (2001). Psychosocial correlates in bullying and victimization: The relationship between depression, anxiety, and bully/victim status. *Journal of Emotional Abuse, 2,* 95–121. http://dx.doi.org/10.1300/J135v02n02_07

Tierney, T., & Dowd, R. (2000). Use of social skills groups to support girls with emotional difficulties in secondary schools. *Support for Learning, 15,* 82–85. http://dx.doi.org/10.1111/1467-9604.00151

Troop-Gordon, W., & Kopp, J. (2011). Teacher-child relationship quality and children's peer victimization and aggressive behavior in late childhood. *Social Development, 20,* 536–561. http://dx.doi.org/10.1111/j.1467-9507.2011.00604.x

Ttofi, M. M., & Farrington, D. P. (2011). Effectiveness of school-based programs to reduce bullying: A systematic and meta-analytic review. *Journal of Experimental Criminology, 7,* 27–56. http://dx.doi.org/10.1007/s11292-010-9109-1

Veenstra, R., Lindenberg, S., Oldehinkel, A. J., De Winter, A. F., Verhulst, F. C., & Ormel, J. (2005). Bullying and victimization in elementary schools: A comparison of bullies, victims, bully/victims, and uninvolved preadolescents. *Developmental Psychology, 41,* 672–682. http://dx.doi.org/10.1037/0012-1649.41.4.672

Vreeman, R. C., & Carroll, A. E. (2007). A systematic review of school-based interventions to prevent bullying. *Archives of Pediatrics & Adolescent Medicine, 161,* 78–88. http://dx.doi.org/10.1001/archpedi.161.1.78

Waasdorp, T. E., Bradshaw, C. P., & Leaf, P. J. (2012). The impact ofschoolwide positive behavioral interventions and supports on bullyingand peer rejection: A randomized controlled effectiveness trial. *Archivesof Pediatrics & Adolescent Medicine, 166,* 149–156. http://dx.doi.org/10.1001/archpediatrics.2011.755

Wang, C., Swearer, S. M., Lembeck, P., Collins, A., & Berry, B. (2015). Teachers matter: An examination of student-teacher relationships, attitudes toward bullying, and bullying behavior. *Journal of Applied School Psychology, 31,* 219–238. http://dx.doi.org/10.1080/15377903.2015.1056923

Wang, M. T., & Eccles, J. S. (2013). School context, achievement motivation, and academic engagement: A longitudinal study of school engagement using a multidimensional perspective. *Learning and Instruction, 28,* 12–23. http://dx.doi.org/10.1016/j.learninstruc.2013.04.002

Wentzel, K. R., Battle, A., Russell, S. L., & Looney, L. B. (2010). Social supports from teachers and peers as predictors of academic and social motivation. *Contemporary Educational Psychology, 35,* 193–202. http://dx.doi.org/10.1016/j.cedpsych.2010.03.002

Wienke Totura, C. M., Green, A. E., Karver, M. S., & Gesten, E. L. (2009). Multiple informants in the assessment of psychological, behavioral, and academic correlates of bullying and victimization in middle school. *Journal of Adolescence, 32,* 193–211. http://dx.doi.org/10.1016/j.adolescence.2008.04.005

Wigfield, A., Lutz, S., & Laurel Wagner, A. (2005). Early adolescents' development across the middle school years: Implications for school counselors. *Professional School Counseling, 9,* 112–119. http://dx.doi.org/10.5330/prsc.9.2.2484n0j255vpm302

Willson, V. L., & Hughes, J. N. (2009). Who is retained in first grade? A psychosocial perspective. *The Elementary School Journal, 109,* 251–266. http://dx.doi.org/10.1086/592306

Yen, C.-F., Ko, C.-H., Yen, J.-Y., Tang, T.-C., Chang, Y.-P., & Cheng, C.-P. (2010). Internalizing and externalizing problems in adolescent aggression perpetrators, victims, and perpetrator-victims. *Comprehensive Psychiatry, 51,* 42–48. http://dx.doi.org/10.1016/j.comppsych.2009.03.002

Received September 1, 2017
Revision received October 30, 2017
Accepted December 22, 2017 ■