Peer Victimization and Loneliness: The Moderating Role of School Connectedness by Gender

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Abstract

School bullying has a detrimental impact on students, including sense of isolation and diminished school connectedness. The current study adopted social capital theory to examine the role of school connectedness as a moderator on the association between peer victimization and loneliness. A sample of 878 fourth- to sixth-grade elementary school students completed a self-report measure assessing peer victimization from school bullying, loneliness, and school connectedness. For data analyses, 834 cases (51.7% boys) were used after excluding cases with missing values. Data analyses included descriptive statistics, independent *t*-tests of peer victimization, loneliness, and school connectedness by gender, bivariate correlation analysis, and separate hierarchical linear regression analyses for boys and girls. Results supported existing literature revealing there was a significant mean difference in school connectedness by gender. School connectedness buffered the relationship between peer victimization and loneliness for girls as a moderator, whereas this moderating effect did not appear for boys. Implications for future research and practice are discussed.

Keywords: school connectedness, peer victimization, loneliness, school bullying, gender difference

Peer Victimization and Loneliness: The Moderating Role of School

Connectedness by Gender

School connectedness, or feeling socially connected to and valued by students, faculty, and staff, has a buffering effect on the impact of peer victimization and its corresponding depressive symptoms (Loukas & Pasch, 2013). Peer victimization, a situation in which a person or group maintains a power advantage over another in the form of persistent social, emotional, verbal, or physical actions (Carney & Hazler, 2016; Gladden, Vivolo-Kantor, Hamburger, & Lumpkin, 2014), increases the likelihood of students experiencing loneliness and its associated emotional challenges. (Acquah, Topalli, Wilson, Junttila, & Niemi, 2016; Brighi, Guarini, Melotti, Galli, & Genta, 2012). Loneliness, or feeling socially isolated from peers, teachers, and family, is associated with various internal as well as external problems such as increased levels of depression and anxiety (Hall-Lande, Eisenberg, Christenson, & Neumark-Sztainer, 2007).

Gender has emerged as a predictor of school connectedness levels, with girls having higher levels of connectedness (Loukas, Cance, & Batanova, 2016) and deeper senses of school belonging (Kosciw & Diaz, 2006). Gender has also been shown to interact with peer victimization, with boys being more likely to engage in direct victimizing behavior (Varjas, Henrich, & Meyers, 2009), while girls are more likely to experience indirect forms of peer victimization (Popp & Peguero, 2011). Girls are also more likely to experience psychological distress, such as anxiety and depression after experiencing peer victimization than boys (Popp, Peguero, Day, & Kahle, 2014).

Given gender's influence on these variables and the protective value of school connectedness, the purpose of this study was to examine the moderating role of school connectedness by gender on levels of peer victimization and loneliness with a sample of 836 suburban students in grades 4 through 6 using social capital theory as a guiding framework. Implications focus on how school practitioners can work to increase school connectedness and utilize it as a preventative and responsive measure for students who have experienced peer victimization and corresponding loneliness.

Social-Capital Theory

Social capital is defined as the relationships, social norms, and systemic influences that impact an individual's ability to perform and succeed (Coleman & Hoffer, 1987). The social capital theory postulates that individuals have access to social connections within their life that act as a form of capital or method by which advantageous situations, outcomes, or opportunities are made available (Coleman & Hoffer, 1987). Peer victimization is a complex issue occurring as a result of social interactions at the individual, group, and environmental levels (Espelage & Swearer, 2004), but limited literature exists regarding its influence on connectedness and peer victimization (Carney, Liu, & Hazler, 2018). Cappella, Kim, Neal, and Jackson (2013) found that positive peer relationships predicted student academic engagement and increased behavior management. Sentse, Krestchmer, and Salmivalli (2015) found that peer rejection after victimization, which can be thought of as a lack of social capital, led to peer victimizing behavior in students, especially boys. Perpetrators and victims of peer victimization report lower perceived levels of peer social support, indicating a

systemic relationship dynamic at play for both categories of participants (Demaray & Malecki, 2003).

Loneliness, being a lack of desired social relationships, can be described as a deficit of social capital. Research indicates that low levels of social relationships and experiencing loneliness has a greater impact upon girls than boys. Despite the fact that girls reported higher levels of school connectedness, Ang (2016) found that loneliness had a greater impact on girls, perhaps owing to the higher value girls place on social relationships. Girls report higher levels of loneliness and that their loneliness is more affected by social relationships (Ronka, Rautio, Koiranen, Sunnari, & Taanila., 2014). Betts, Houston, Steer, and Gardner (2017) found that trust in peers mediated the relationship between social victimization, depressive symptoms, social confidence, and loneliness for girls, illustrating the value of social capital and connectedness. These results indicated that a lack of social capital has an adverse impact on students and that girls may be more influenced by the available social capital in their lives.

School Connectedness

School connectedness refers to the "belief by students that adults and peers in the school care about their learning as well as about them as individuals" (Centers for Disease Control and Prevention [CDC], 2009, p.3). School connectedness is a predictor of students' immediate and long-term emotional difficulties (Loukas et al., 2016; Loukas, Ripperger-Suhler, & Horton, 2009). Findings from a longitudinal study of 2,678 eighth grade students found higher levels of school connectedness predicted lower levels of anxiety, depressive symptoms, and substance abuse challenges in later years (Bond et al., 2007). Levels of school connectedness also predicted levels of depression one year

later in a sample of more than 2,000 students (Shochet, Dadds, Ham, & Montague, 2006). Students who feel more connected to school report less behavioral and emotional challenges during adolescence (Loukas et al., 2016), while lower levels of school connectedness put students at risk of conflicts with teachers (Doumen et al., 2008) and rejection from peers (Pedersen, Vitaro, Barker, & Borge, 2007). A longitudinal study of 500 middle school students found levels of school connectedness predicted student conduct challenges one year later (Loukas et al., 2009).

School connectedness has been shown to have a buffering effect on the impact of bullying and its corresponding depressive symptoms (Loukas & Pasch, 2013). School connectedness also negatively correlates with levels of peer victimization and school violence (Duggins, Kuperminc, Henrich, Smalls-Glover, & Perilla, 2016), externalized problems (Loukas et al., 2016), and student mental health concerns (Joyce & Early, 2014; Lester, Waters, & Cross, 2013; Pate, Maras, Whitney, & Bradshaw, 2017). While school connectedness has demonstrated positive influences on student mood and success, there are few studies exploring school connectedness and its relation to levels to loneliness after experiencing bullying.

Baskin, Wampold, Quintana, and Enright (2010) found belongingness to buffer the impact of peer rejection on loneliness and reduce depressive symptoms in students who were lonely. Hall-Lande and colleagues (2007) found family and school connectedness to be buffers against levels of social isolation in students. These results highlighted the potential of school connectedness as a protective measure against the development and intensity of psychological challenges.

Higher school connectedness increases the likelihood of bystander intervention during bullying (Ahmed, 2008) as well as the likelihood of an individual seeking assistance after being bullied (Eliot, Cornell, Gregory, & Fan, 2010). These findings highlighted the protective role school connectedness plays regarding exposure to violence, bullying, and externalizing difficulties, making it an important aspect of student risk factors.

Gender predicts school connectedness levels and buffering effects where girls tend to have higher levels of school connectedness (Loukas et al., 2016), relatedness to their teachers (Furrer & Skinner, 2003), stronger perceived belief in teacher support (Rueger, Malecki, & Demaray, 2010; Wentzel, Battle, Russell, & Looney, 2010), and deeper senses of school belonging (Kosciw & Diaz, 2006). One study found girls have higher levels of school connectedness at the beginning of the school year, and that this correlated with less academic and behavioral challenges throughout the rest of the year (Niehaus, Rudasill, & Rakes, 2012). A study of over 28,000 high school students found student connectedness buffered the impact of internalizing problems on girls who had been victims of bullying, but not for boys (Morin, Bradshaw, & Berg, 2015). Another study found that boys with higher levels of school connectedness had lower levels of depression (Langille, Asbridge, Cragg, & Rasic, 2015). These results indicated that levels of school connectedness and its impact are mediated by gender.

Peer Victimization

Peer victimization occurs in several forms including direct (physical or verbal aggression), indirect (utilizing social relationships and rumors to harm victims), and cyberbullying occurring via electronic communication such as social media (Olweus,

2013). Stapinski, Araya, Heron, Montgomery, and Stallard (2015) found bullying increases both immediate and delayed elevations in anxiety and depression in a study of 5,030 students. Another study found that individuals who experienced bullying had a 74% increased likelihood of adult depression even after controlling for childhood risk factors (Ttofi, Farrington, Lösel, & Loeber, 2011). A study of 661 American students found that students who were bully victims experienced an increased risk of suicidal ideation and potential suicidal behavior (Espelage & Holt. 2013).

Students who experience peer victimization have higher levels of immediate and prolonged loneliness, while students with higher levels of loneliness are at higher risk of experiencing bullying (Acquah et al., 2016; Brighi et al., 2012). One study of 1,118 students in the Netherlands found that children with depressive symptoms were significantly more likely to be victimized by peers than students without a history of depression (Fekkes, Pijpers, Fredriks, Vogels, & Verloove-Vanhorick, 2006). Another study found that increased cases of cyberbullying correlated with rising levels of loneliness and depressive symptoms in students (Olenik-Shemesh, Heiman, & Eden, 2012). These studies indicate a potentially vicious cycle where loneliness puts students at risk of bullying while bullying increases levels of student loneliness, putting students at risk of facing the negative consequences of both domains.

Girls and boys have different connections to peer victimization and the resulting impact. Boys are more likely to engage in direct victimizing behavior (Varjas et al., 2009), while girls appear to be more frequently the victims of indirect peer victimization, highlighting the need to address bullying and its various forms with all students (Popp & Peguero, 2011). While studies have indicated that girls are more likely to be the victims

of peer victimization overall (Wang, Iannotti, & Nansel, 2009), others have concluded that boys are more likely to be the victims, especially in cases of physical peer victimization (Cook, Williams, Guerra, Kim, & Sadek, 2010). Girls have been shown to have higher levels of empathy for victims (Thornberg & Jungert, 2013) that leads to more defending behavior in girls than in boys (Lambe, Cioppa, Hong, & Craig, 2019).

The impact of peer victimization varies by gender, with girls having a greater likelihood of developing psychological distress such as anxiety and depression than boys (Popp et al., 2014). Girls are also more likely to seek social support after being victimized, while boys are more likely to try and distance themselves from the experience entirely (Hunter & Borg, 2006; Pozzoli & Gini, 2010). These results indicate that gender has an impact on how students experience and respond to incidences of peer victimization.

Loneliness

Loneliness is a negative emotion that reflects a discrepancy between desired and achieved levels of social contact and support. Students suffering from loneliness and social isolation are more likely to have higher levels of depression and anxiety (Hall-Lande et al., 2007), suicidal ideation (Lasgaard, Goossens, Bramsen, Trillingsgaard, & Elklit, 2007), and conduct problems and academic difficulties (Galanaki, Polychronopoulou, & Babalis, 2008). An eight-year longitudinal study of 296 elementary and middle school students found that levels of loneliness in childhood subsequently predicted levels of depressive symptoms in adolescents, with high loneliness corresponding to high depressive symptoms (Qualter, Brown, Munn, & Rotenberg, 2010). In a study of 1,009 Danish high school students, peer-related loneliness was a

predictor of forms of psychopathology such as anxiety, depression, and suicidal ideation (Lasgaard et al., 2011). Atik and Güneri (2013) found that loneliness increases the likelihood of a student being a victim of peer victimization in a study of middle school students. The short and long-term problems associated with loneliness after peer victimization make it a key facet to explore and study for student wellbeing.

There are mixed results regarding how loneliness and gender interact. A meta-analysis of thirty loneliness studies found that nineteen reported no relationship between loneliness and gender, while nine reported boys as lonelier, and two reported girls had higher levels of loneliness (Mahon, Yarcheski, Yarcheski, Cannella, & Hanks, 2006). Heinrich and Gullone (2006) found boys to be at greater risk for loneliness due to tendencies of spending more time alone and placing less value on close relationships. Loneliness had a greater impact on girls in another study even though they reported higher levels of connectedness, which speaks to how much they value social relationships (Ang, 2016). A longitudinal study with 7,014 Finish students reported that girls had higher levels of loneliness and their loneliness was more greatly affected by associated factors such as friendships, bullying, and emotional state (Ronka et al., 2014). Research indicates that gender interacts with this social phenomenon to student needs.

Study Purpose

The purpose of the current investigation was to determine the extent to which school connectedness buffers the impact of peer victimization on loneliness by gender. The aim of the investigation was to (a) identify existing gender differences in peer victimization, loneliness, and school connectedness, (b) examine how the research

variables are intercorrelated, and (c) analyze the moderating role of school connectedness by gender. Hierarchical multiple regression served as a primary analytical methodology of the current study to examine the buffer role of school connectedness. We hypothesized that there exists gender difference in the descriptive statistics of school connectedness. Based on past findings that school connectedness functions differently by gender, we hypothesized that gender differences will emerge through the extent to which school connectedness moderates the relationship between peer victimization and loneliness.

Method

The purpose of this study was to examine gender differences in victimization, loneliness, and school connectedness in mean scores, bivariate correlation, and a protective role of school connectedness in the relationship between victimization and loneliness. Hierarchical multiple regression served as a primary analytical methodology of the current study to examine the buffer role of school connectedness.

Participants

The present analyses are based on a sample of 836 children in a rural school district in the mid-Atlantic region. The initial sample included a total of 878 students, with 42 cases excluded due to missing values for gender because gender is a crucial variable in this study. Students ranged from the fourth to sixth grades (29,9% 4th, 32.5% 5th, and 36.0% 6th), and 432 students were boys (51.7%). The demographics presented a mainly European American population (77.4%) with minor ethnic diversity (5.3% African American, 3.1% Hispanic/Latino, 1.8% Native American, 0.8% Asian,

3.5% multiracial, and 7.5% others). Students took part in a series of surveys about their experience of peer victimization, loneliness, and school connectedness.

Procedure

Following university IRB approval, students were invited to participate in the survey and parents were sent a letter explaining the study. Teachers administered the surveys to their students following researchers' instruction.

Measures

Peer victimization. Peer victimization was assessed at baseline with a self-report question using the University of Illinois Victimization Scale (Espelage & Holt, 2001). The original scale was designed to measure both bullying behavior and the experience of victimization with 13 items (nine items for bullying and four items for victimization). Given that the study focused on the effects of having experienced victimization, the four items covering this were used. Students were asked how often in the past 30 days they experienced different types of victimization such as 'being picked on,' 'got hit and pushed by other students,' and 'being made fun of.' All items were rated on a five-point scales and response options included: (1) *never*, (2) *1 or 2 times*, (3) *3 or 4 times*, (4) *5 or 6 times*, and (5) *7 or more times*. The construct validity of this scale has been supported via exploratory and confirmatory factor analysis (Espelage & Holt, 2001). A Cronbach alpha coefficient of .90 was found for the current study overall (.89 for boys and .91 for girls), and the total score ranged from 4 to 20. (*M* = 1.60, SD = .97).

Loneliness. Loneliness was assessed by using four items from a revised version (Ladd & Kochenderfer, 1996) of the Loneliness and Social Dissatisfaction Questionnaire (LSDQ) by Cassidy and Asher (1992). LSDQ was originally a 24-item questionnaire, but

Ladd and Kochenderfer (1996) constructed a measure of loneliness, which was distinct from social dissatisfaction based on LSDQ items. Cronbach's alpha of the loneliness scale ranged from .75 to .78 over two measurement times in the Ladd and Kochenderfer study. All items were rated on a five-point scale ranging from (1) *never* to (5) *always*. Examples of the items include 'I'm lonely at school' and 'I felt left out of things at school.' Cronbach's alpha for the current study was the same as .88 for both boys and girls. The total score ranged from 4 to 20 ($M = 1.69$, SD = .83).

School Connectedness. School connectedness was measured with a combination of four items developed by Anderson-Butcher, Amorose, Iachini and Ball (2013). All items were rated on a five-point Likert Scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Each item addresses how children feel connected to school (e.g., 'I feel like I belong to my school and 'I enjoy coming to school') where higher total scores correspond to higher connectedness to school. Cronbach's alpha of .80 among 3436 elementary school students was reported by Anderson-Butcher et al. (2015) for students in grades 3 through 6. Their confirmatory factor analysis indicated that the single-factor model fit well and the factor loadings of the four items ranged from .57 to. 83. Another study of 3-6 graders found Cronbach's alpha was .83 for the school connectedness scores (Carney et al., 2018). Cronbach's alpha for the current study was .75 (.76 for boys and .74 for girls), and the total score ranged from 4 to 20 ($M = 3.99$, SD = .72).

Data Analysis

Data cleaning was conducted before analysis that included calculating reversed items and excluding incomplete cases. The results of the analyses consisted of three

stages. First, the descriptive statistics and independent *t*-tests were conducted by gender for three main variables; victimization, loneliness, and school connectedness. Second, bivariate correlation analysis for the research variables was implemented by gender again. Third, hierarchical linear regression was used to test the main and interaction effects of the predictors. Hierarchical regression is a widely used research design for testing specific and theory-based hypotheses (Hayes, 2017) and examining moderator effects when the independent variable and moderating variable are measured on a continuous scale (Aguinis, 1995). The results of hierarchical multiple regression were interpreted following three steps; (a) interpreting the effects of the predictor and moderator variables, (b) testing the significance of the moderator effect, and (c) presenting visual plots of significant moderator effects following Petrocelli (2003)'s suggestion.

Results

Descriptive statistics and gender differences

The mean scores of boys and girls were initially compared to determine whether they differed on the three main study variables of interest. For these analyses, independent *t*-tests by gender were implemented for each variable; victimization, loneliness, and school connectedness. As shown in Table 1, school connectedness presented a significant mean difference between boys and girls, whereas loneliness and victimization did not. Girls reported significantly higher school connectedness than boys. Considering this pre-existing gender difference, we continued to conduct separate bivariate correlations analysis and hierarchical regression analysis for boys and girls.

Table 1

*Gender Diffe*rе*nce in Victimization, Loneliness, and School Connectedness*

	Total		Boys		Girls		
Variable	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**t**
Victimization	1.59	.96	1.64	.99	1.54	.93	1.529
Loneliness	1.67	.82	1.65	.81	1.69	.84	-.638
School Connectedness	4.00	.71	3.84	.75	4.17	.63	-6.936***

*** $p<0.001$

Bivariate correlations

Pearson's correlation analyses were implemented separately for boys and girls and included students' grade levels. The magnitude of the correlations for boys ranged from -.26 to .48 and for girls from -.20 to .46. There were moderate levels of positive correlations between victimization and loneliness ($r = .48$ for boys and $r = .46$ for girls, $p < .001$). There were low levels of negative correlations between loneliness and school-connectedness ($r = -.26$ for boys and $r = -.20$ for girls, $p < .001$). Significantly low negative associations were identified between grade and school connectedness ($r = -.16$, $p < .01$ for boys and $r = -.20$, $p < .001$ for girls). One difference between boys and girls was identified in the bivariate correlations where boys showed a small negative correlation between victimization and school-connectedness ($r = -.13$, $p < .01$), while there was no significant relationship for girls ($r = -.04$).

Table 2

Bivariate Correlation Analysis for Boys (Below Diagonal) and Girls (Above Diagonal)

	1	2	3	4
1. Grade	-	-.05	-.05	-.20***
2. Victimization	-.08	-	.46***	-.04
3. Loneliness	-.04	.48***	-	-.20***
4. School-Connectedness	-.16**	-.13**	-.26***	-

** $p<0.01$ *** $p<0.001$

Regression analyses

The hypothesis of the regression analyses was that there would be a moderating role of school connectedness in the relationship between victimization from school bullying and loneliness. Hierarchical multiple regressions were conducted separately for boys and girls. All independent variables in the regression models were mean centered before all steps of the analyses.

The procedure recommended by Aiken and West (1991) was adopted for testing the school connectedness moderator. Victimization was entered as Step 1 for each of the two models and school connectedness was entered as Step 2. The moderating effects were examined in Step 3 by adding the interaction term of victimization and school connectedness. The interaction effect was analyzed in a separate step to avoid multicollinearity problems considering correlation coefficients. Statistical significance of interaction was interpreted by computing simple slopes for high and low values of the moderating variable (1 standard deviation above and below the mean respectively).

Table 3

Hierarchical Regression Analyses for Loneliness in Boys and Girls

Gender	Step	Predictor	b	SEb	β	R^2	ΔR^2
	1	VC	.359	.037	.443	.227	.227***
Boys	2	SC	-.215	.045	-.201	.268	.041***
	3	VC × SC	.015	.038	-.018	.268	.000
	1	VC	.425	.040	.470	.210	.210***
Girls	2	SC	-.233	.058	-.174	.245	.034***
	3	VC × SC	.124	.049	-.112	.257	.012*

Note. VC = Victimization, SC = School Connectedness
*p<0.05 *** p<0.001

Table 3 summarizes the results of hierarchical regression analyses that tested

the moderating role of school connectedness hypotheses for boys and girls. The overall

model of predicting loneliness was significant for boys, $F(3, 428) = 52.419$, $p < .001$.

Victimization, school connectedness, and an interaction term of victimization and school

connectedness were included in the model in a consecutive manner. Victimization

explained 22.7% of the variance in loneliness at step 1, and the final model accounted

for around 26.8% of the variance in loneliness without the presence of increased R^2 and

the significant interaction effect between victimization and school connectedness. These

results mean that school connectedness did not moderate the effect of victimization on

loneliness for boys.

A hierarchical regression analysis for girls was implemented following the same

procedure. At step 1, victimization contributed significantly (21%) to the explanation of

loneliness. Including school connectedness in step 2 increased the variance explained

to 24.5%. The final model for girls was significant, $F(3, 400) = 46.010$, $p < .001$,

explaining 25.7% of the variance. The interaction between victimization and school

connectedness was significant for girls explaining 1.2% in Step 3 ($\beta = -.112$, $p = .011$).

This result demonstrated that school connectedness moderated the relationship

between victimization and loneliness, thereby offering some protection for victimized girls from elevated loneliness. Both results for boys and girls are presented visually in Figures 1 and 2 using non-standardized regression coefficients for calculating the depicted slopes.
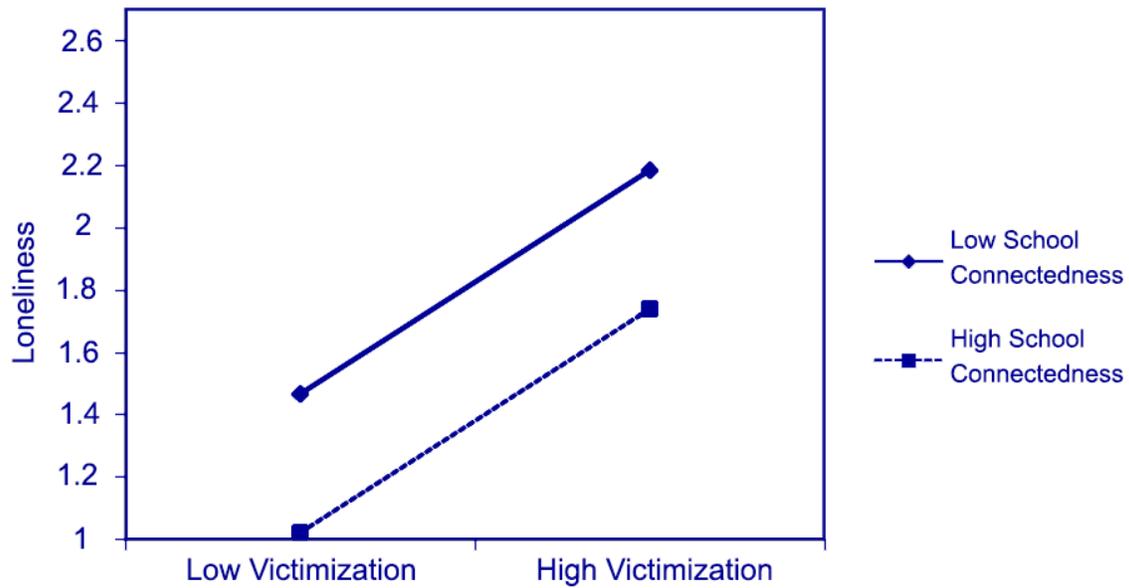

Figure 1. Relationship between victimization and loneliness for boys with a function of school connectedness
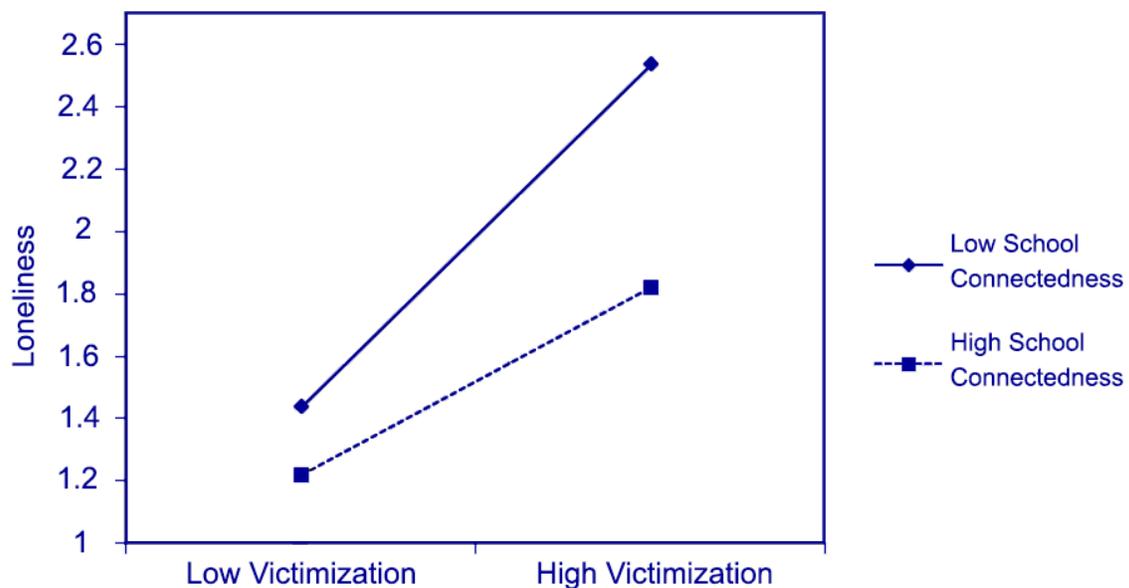

Figure 2. Relationship between victimization and loneliness for girls with a function of school connectedness

Discussion

The purpose of this study was to investigate the moderating role of school connectedness in the relationship between peer victimization and loneliness as well as the impact of gender on this moderation. School connectedness was hypothesized to buffer victimization and loneliness with its level varying by gender. This hypothesis was partially confirmed, with school connectedness acting as a buffer for girls, but not for boys. These results confirmed the hypothesis that gender would play a role in the buffering value of school connectedness; however, they were surprising in the fact that school connectedness did not appear to offer any buffering impact for boys. The results correspond with those of Loukas and Pasch (2013) regarding school connectedness as a moderator on the results of peer victimization. In their longitudinal study, results indicated adolescents with higher levels of school connectedness experienced less adjustment problems after experiencing peer victimization. The results from the current study build upon this by specifically finding loneliness to be reduced by students' levels of school connectedness.

The results indicated that gender plays a role in the effectiveness of school connectedness as a buffer from the impact of peer victimization following the results of (Morin et al., 2015). They found that school connectedness buffered the impact of internalizing problems on girls who had been victims, but not for boys. Similar results indicated school connectedness buffers the impact of overt victimization for girls only (Loukas & Pasch, 2013) and buffers the likelihood of girls having conduct problems (Loukas, Roalson, & Denise, 2010).

Research findings point to several explanations for reasons that girls experience more protective benefits from school connectedness than boys. Girls are more likely to confide stressful events to their peers and teachers (Rose & Rudolph, 2006), while boys are not likely to disclose their difficulties to teachers, believing that teachers are not willing to intervene in bullying situations (Rigby & Bagshaw, 2003). Boys are also more likely to receive protective benefits through emotional support from parents (Yeong & Leadbeater, 2010), friends (Hodges, Boivin, Vitaro, & Bukowski, 1999), and another adult figure (Waasdorp & Bradshaw, 2011) rather than seeking help from teacher.

Some studies revealed that boys are less likely to seek help overall under the threat of school violence. Williams and Cornell (2006) reported that middle school male students presented a lower willingness to seek help. Hunter, Boyle, and Warden (2004) also found that gender was the most significant contributor in predicting the frequency of reporting among nine to fourteen-year-old victims of peer-aggression, with boys less willing to seek out social support. It appears that, when victimized, the source and level of social support is differentiated by gender suggesting a need for differences in gender prevention and intervention approaches for school practitioners and researchers.

Limitations

Generalizability is limited because the students were from a single school district in the northeastern United States and there was limited diversity among the students. The self-report nature of the study that is susceptible to social desirability is another possible limitation, although this form of data collection is commonly used in bullying research (Loukas & Pasch, 2013). Lastly, the results are based on cross-sectional data, which was limited to measurement in a single wave. The collection of multiple waves

would be advantageous to examine more exact effects and associations among variables.

Implications

Interventions increasing school connectedness should be utilized both as preventative and responsive measures to combat the detrimental effects of peer victimization. Social capital theory emphasizes that supportive individual, group, and systemic influences positively impact the individual. It particularly emphasizes trustworthiness, fairness, and mutual support as core tenants of these principles (Coleman & Hoffer, 1987). Establishing social-system frameworks that promote and encourage support and togetherness is therefore important for increasing the amount and quality of students' relationships at the school, group, and individual level. This should then help reduce some of the negative impact of victimization such as loneliness examined in the current study.

Adult support is one aspect of promoting and increasing school connectedness (CDC, 2009) that includes fostering individuated relationships between staff and students to illustrate that staff care for students beyond the academic realm. This may be most attainable in small schools with lower student to teacher ratios (Cohen, Miller, Stonehill, & Geddes, 2000), but in larger schools, teams of school counselors, teachers, and staff can be formed to provide this type of outreach and mentoring service to students. This relationship building could include teachers acting as advisors to individual students providing another layer of social support for students when facing difficulties at school, only one of which is bullying.

Fostering positive and supportive peer groups is another aspect of increasing school connectedness (CDC, 2009). Increasing social capital and support can be developed using classroom relationship techniques such as those present in the responsive classroom management model (Rimm-Kaufman & Chiu, 2007). These activities center around student responsibility for classroom rules and values, bringing students together for a shared mission and cause, as well as daily morning meeting activities in which students share personal thoughts, feelings, and experiences that allow students to get to know each other on a deeper level (Rimm-Kaufman & Chiu, 2007). Similar sharing and team-building activities can be extrapolated to multiple school-wide events emphasizing these traits and student togetherness. Social skill/friendship building guidance lessons, small groups, programmatic activities, and after school teams and clubs can also be used to develop the supportive team/togetherness-based model for increasing student support.

Adult support, classroom management, and social togetherness are all aspects contributing to the school environment as another key facet for increasing school connectedness (CDC, 2009). Characteristics of positive school environments include less focus on disciplinary measures (McNeely, Nonnemaker, & Blum, 2002), strong interpersonal relationships between students and staff (Battistich & Hom, 1997), higher availability of extra-curricular activities (Blum, McNeely, & Rinehart, 2002), and a sense of community through a shared sense of norms and values (Wilson, 2004). These measures all increase students' access to social relationships, social capital, and connectedness. Schools can accomplish this by developing programs, norms, and

community partnerships to intentionally coordinate and upkeep connectedness efforts (CDC, 2009).

Further support includes reaching out to families and communities for events and continued coordination in working with and supporting individual students (CDC, 2009). Partnerships with families provide students with another level of support regarding school challenges and happenings. Based on social capital theory, these measures all increase the levels of social networks and support available to children at different levels and in different settings by providing multiple potential outlets for students to utilize when struggling from the ill-effects of bullying and loneliness.

While increasing school connectedness can positively impact students, gender should be considered when looking into bullying-response and loneliness prevention interventions. Girls feel higher levels of school connectedness (Loukas et al., 2016) and are more likely to reach out for school system supports than boys (Rose & Rudolph, 2006). Boys are more likely to reach out for social support from more immediate social contacts such as friends (Hodges et al., 1999) and parents (Yeong & Leadbeater, 2010). These differences in perceptions and seeking behaviors related to social capital demonstrate the need to develop and promote different sources of social support and connectedness for boys and girls.

Boys with lower levels of school connectedness are less willing to reach out to school authority figures and may benefit from connectedness interventions that focus on more individuated relationships. Some example interventions may include small group work with the students and friends, and coordination with a student's family to assist in responding to loneliness. Targeting boys for these prevention/intervention steps

encourage efforts that include more comfortable social options for boys rather than relying on the idea that they will reach out and access the global support services consistently in place. Intentional work with boys in small friendship/social support groups, athletic activities, and coordination with their family may more specifically increase their overall feelings of connectedness and less sense of loneliness.

Conversely, girls may benefit from more work within the traditional school environmental support networks. Girls' tendency to have higher levels of school connectedness and a deeper sense of school belonging (Kosciw & Diaz, 2006) can contrast with greater levels of loneliness when there are friendship conflicts and experiences with bullying (Ronka et al., 2014). This fits within the understanding that girls place higher values on social relationships (Ang, 2016) where challenges within these frameworks affect them more severely. A high value on social relationships increases the likelihood that girls will be more severely affected by bullying incidences but also makes them more likely to seek the support they need when experiencing loneliness. Emphasizing the supportive networks, programs, groups, activities, and faculty members at a school will allow girls many social support avenues to access and meet their needs.

Results of the current study holds several implications for future research regarding loneliness and social support by gender. Applying social capital theory to the willingness of students to access support systems (including by gender) could provide further insight to what interventions and responses best support student wellness. Differing willingness to access support for loneliness by gender may hold implications for boys and girls disclosing depressive feelings and suicidal ideations. Such research

could cover what types of programs and systems best outreach to boys and girls, and what preventive work can be done to assure individuals experiencing suicidal ideation get the assistance they need.

Conclusions

The results support school connectedness as a protective factor for girls' sense of loneliness after experiencing peer victimization. The findings provide additional evidence of school connectedness as a protective factor for the major emotional difficulty of children's loneliness in school contexts. Results point towards potential prevention and response methods to peer victimization, guided by the different levels of responses to school connectedness by boys and girls. Connections between the findings and the social capital theory indicate possible areas of research regarding willingness to access support by gender.

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