

BULLY-VICTIMIZATION, DEPRESSION, AND SCHOOL CONNECTEDNESS IN
EARLY ADOLESCENT STUDENTS

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A Thesis Presented to

The Faculty of Humboldt State University

In Partial Fulfillment of the Requirements for the Degree

Master of Arts in Psychology: Academic Research

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December 2019

Abstract

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During early adolescence, schools play a significant role in the development of students. An issue that continues to be a serious concern for students, parents, teachers, and school officials in the U.S. and around the world is bullying. The primary purpose of this study was to examine school connectedness as a mediator between bully-victimization and depressive symptomatology in early adolescence. The secondary purpose of the study was to explore how gender and bullying classification groups (i.e., bully, victim, bully-victim, and non-involved) may relate to levels of reported school connectedness. The current study found low school connectedness partially mediated the relationship between bully victimization and depressive symptoms. Results also showed non-involved youth reported higher levels of school connectedness compared to bullies, victims, and bully-victim. The present study sought to expand literature of bullying, depression, and school connectedness in early adolescence with the aim of informing prevention, intervention and policy initiatives.

Acknowledgements

I would like to thank Dr. William M. Reynolds for his unconditional support and guidance during this process. I would like to thank the rest of my committee, Dr. Carrie J. Aigner and Dr. Frank DeMatteo. As a first-generation student, I was not very informed how higher education or graduate school worked. I was very privileged to have the mentorship of Dr. Aigner and Dr. Reynolds who introduced me to the world of research. Through their encouragement I applied to the graduate program with no idea about what I was doing. I also want to thank other faculty that were impactful in my learning experience: Dr. Tasha R. Howe, Dr. Sangwon Kim, Dr. Christopher Aberson, Dr. Amber Gaffney, Dr. Benjamin Graham, and Dr. Maria I. Iturbide.

Thankfully, I had an amazing and supportive cohort that I could rely on in times of need. Nena McGath and Kali Williams were the instrumental in keeping me grounded whenever I panicked. To those friends that became family and kept me motivated: Santa, Stephanie, Tamara, and the list goes on.

I would like to thank my mother, Luz, who has literally been my light. Without her work and dedication, I would not be where I am today without her continuous support. Even though most of my family did not understand why I was still going to school, they were there for me. I am very grateful to my siblings (especially Esme),

nephews, nieces, and other family members that checked up on me. I really appreciate everyone who has been part of this journey, I did not do this alone.

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Chapter One: Introduction

During early adolescence, schools play a significant role because of the relationships that are developed during that time. An issue that continues to be a serious concern for students, parents, teachers, and school officials in the U.S. and around the world is bullying. According to the most recent report from the National Center for Education Statistics, an estimated 20.2% of students ages 12 through 18 reported being bullied at school in 2017 (Seldin & Yanez, 2019) a similar finding to that of 20.8% in 2015 (Lessne & Yanez, 2017). A meta-analysis of 80 studies analyzing bullying involvement rates (i.e., bully and victims) of students ages 12 through 18 reported a mean prevalence rate of 35% for both perpetration and victimization (Modecki, Minchin, Harbaugh, Guerra, & Runions, 2014). However, as this meta-analysis highlights rates of bullying vary (from 9% and up to 98% in some cases). Inconsistencies in the definition and measurement of bullying behaviors have contributed to the variability in rates (Gladden, Vivolo-Kantor, Hamburger, & Lumpkin, 2014).

Bullying behaviors tend to vary among boys and girls depending on the type of behavior being assessed (Archer, 2004; Espelage, Low, Rao, Hong, & Little, 2013; Nansel, Overpeck, Pilla, Ruan, Simons-Morton, & Scheidt, 2001; Underwood, & Rosen, 2011). Boys tend to report higher rates of victimization when physical aggression is involved. Girls tend to report higher levels of victimization if the issue involves relational aggression, rumor spreading, or comments on their physical appearance. Experience with bullying tends to increase somewhat during early childhood (roughly around ages 7-9),

peak during early adolescence (roughly around ages 10-13) and decline slightly during the late adolescent years, roughly around ages 14-18 (Nansel et al., 2001; Reynolds, 2008).

Bullying has serious consequences for those involved (i.e., bullies, victims, and bully-victims) since it has been found that it affects academic achievement, physical health, and psychological well-being (Hawker & Boulton, 2000; Juvonen, Graham, & Schuster, 2003; Pepler, Jiang, Craig, & Connolly, 2008). Adverse school interactions such those experienced when bullying is involved can be detrimental for developing feelings of connectedness to the school and can contribute to an increase of depressive symptoms (Bradshaw, 2015; Lee, Kim, & Kim, 2005; Merrell, Gueldner, Ross, & Isava, 2008; Pepler et al., 2006; Pepler, Craig, O'Connell, 2010).

Depression is one of the most prevalent mental health problems in adults and is a significant problem in children, both internationally and in the United States (Gibb, 2014). Community surveys in the United States find up to 20% of adults and 50% of children and adolescents report depressive symptoms during the last week to 6 months (Kessler & Bromet, 2013). Depressed children and adolescents tend to exhibit significant impairment in family, school, and other settings (Klein, Goldstein, & Finsaas, 2017).

Earlier onset of depression is associated with psychosocial, physical, and academic challenges and worse clinical outcomes during adulthood (Birmaher et al., 1996; Gibb, 2014; Kessler Avenevoli, & Merikangas, 2001; Rao et al., 1995). A recent meta-analysis of 42 randomized controlled trials (RCTs) evaluating evidence-based (EB) psychosocial treatments for children and adolescents found weak evidence for child

treatments compared to adolescent treatments, with no child treatments achieving well-established status (Weersing, Jeffreys, Do, Schwartz, & Bolano, 2017). While children experience high levels of depressive symptoms, they tend to be undertreated. This is alarming considering the high prevalence of symptoms. More specifically, the association between bully-victimization and depressive symptomatology appears to be reciprocal (Prinstein, Borrelli, Cheah, Simon, & Aikins 2005). Children who are victims of bullying are more likely to feel depressed and to some extent children who are depressed tend to be bullied.

Like bullying, definitions of school connectedness vary across research. School connectedness refers to the extent to which students feel like they belong and are part of the school with more complex definitions including perceptions that the school and the individuals (e.g., teachers, peers, school administrators, etc.) inside the school care about the student's academic achievement, health and general wellbeing (e.g., Blum & Libbey, 2004; Jimerson, Campos, & Greif, 2003; Libbey, 2004; Maddox & Prinz, 2003; O'Farrell & Morrison, 2003). The topic of school connectedness has been of importance that in 2004, an interdisciplinary group of education leaders gathered to summarize findings on the concept of school connectedness to inform school policies. In the declaration, researchers recommend ways school connectedness can be promoted such as high academic expectations, positive adult-child relationships, increased feelings of safety and support from others in school (Wingspread Conference, 2004). The declaration highlights the potential harms to student's wellbeing when students do not feel connected to their school.

Research suggest that promoting school connectedness can have a positive impact in a variety of academic and psychosocial outcomes (Bradshaw, 2015; Lee, et al., 2005; Merrell et al., 2008; Pepler et al., 2006; Pepler et al., 2010). Research show problems of bullying encompass more than the individuals involved (i.e., bully, victim) it affects other relationships in the school such as: teachers, peer groups, and school administrators (Pepler et al., 2006; Parker, Rubin, Erath, Wojslawowicz, & Buskirk, 2006). If positive interpersonal interactions are essential for healthy peer relationships, then interventions for bullying should focus on shifting these dynamics to promote positive interactions in school. Schools involvement is important for implementing policies that promote healthy relationships (e.g., peer, student-teacher, and student-administrator relationships) and contribute to better mental health. As described by Bronfenbrenner (1979), interactions at multiple levels (e.g., microsystem, macrosystem, exosystem, etc.) play an important role in the development of individuals. It is also important to consider how the relationships between people within the school contribute to feeling of connectedness and safety.

This study examined the mediating role of school connectedness between the relationship of bullying victimization and depressive symptoms. Additionally, the study explored if level of school connectedness differed based on gender and bullying victimization classification group (i.e., bully, victim, bully-victim, and non-involved).

For purposes of this study the variables investigated are defined below (more in-depth descriptions can be found in Chapter 2 and Chapter 4): Bullying categories were created through cutoff scores on a bullying scale. A bully is characterized as someone who perpetrates repeated acts of aggression against a less dominant individual for the

intentional purpose of inflicting harm (Reynolds, 2008). A victim is the target of the aggression from a more dominant individual. A bully-victim is an individual that is both the aggressor and the receiver of aggression. A non-involved individual is an individual that is not the direct aggressor or the receiver of aggression, they might have a slight experience with bullying behavior but not to the same level as a bully, victim, or bully-victim. A non-involved individual might be a bystander of bullying. Depression was measured based on diagnostic criteria from the DSM-III, a *T* score of 61 and above (raw score = 26-40) are indicative of clinical levels of depression symptoms. School connectedness was measured based on student's perceptions of connectedness with teachers, peers, and school in general.

Chapter Two: Literature Review

The literature review begins by describing the developmental changes that occur during early adolescence and how these changes relate to students experience with bullying victimization, depression and school connectedness. A description of the current literature on bullying behaviors and outcomes is presented based on bullying classification group (e.g., bully, victim, bully-victim). Also included is a review of the literature in depressive symptomology in early adolescence. Lastly, there is a description of what school connectedness is and the relevance of examining this construct in the present study.

Early Adolescence

During early adolescence (roughly around ages 10-13), children experience biological, cognitive, and social changes (Steinberg, 2008). These multidimensional changes are happening simultaneously interacting and influencing each other. From an ecological perspective, we cannot understand these developmental changes without examining the context and setting in which they occur (Bronfenbrenner, 1979).

Biological Changes. One of the most notable changes that occur during adolescence is the onset of puberty. Puberty is the developmental period in which physical changes are most noticeable and the transition from childhood into adulthood (Steinberg, 2008). Puberty has three major physical changes: a rapid acceleration in growth, the development of primary, and secondary sex characteristics (Steinberg, 2008).

During the onset of puberty, gender differences become more visible with boys typically developing muscle mass and girls developing body fat (Kirchengast, 2010; Weber, Leonard, & Zemel, 2012). These physical changes can be a concern for many students especially as they begin socializing with more peers and engage in more adult-like behaviors such as dating, which increases pressures related to gender role expectations (Jones & Smolak, 2011). Traditional gender roles associate femininity with investment in appearance and thinness, while masculinity is associated with strength and muscularity. In general, body dissatisfaction during this developmental period is a risk factor for both bullying behaviors and symptoms of depression (Goldfield et al., 2010; Paxton, Neumark-Sztainer, Hannan, & Eisenberg, 2006).

Cognitive Changes. During this period, there is a heightened awareness of self-identity and the evaluation of others (Calson Jones, 2004; Jones, & Smolak, 2011). Peer relationships are an important contributor to the self-evaluation and body image of students (Parker et al., 2006). The integration of body image into one's identity and self-evaluation are a normative developmental task. Body dissatisfaction has been a prospective predictor of depression, eating disorders, body dysmorphia, and low self-esteem among others (Jones, & Smolak, 2011). The cognitive advancements that occur during this period are important in understanding how students respond to their environment.

Social Changes. The psychosocial adjustment problems known to be associated with bullying and victimization may, in part, stem from the difficulty of students to successfully transition the ecological shift from elementary school to middle school or

from middle school to high school (Farmer et al., 2015; Parker et al., 2006; Waters, Cross, & Runions, 2009). During those social transitions, students must learn how to navigate each setting and adapt to the new rules and expectations. Students who find the transition to middle school stressful may face greater difficulties finding a safe place among their peers and building supportive networks in school (Waters, Cross, & Shaw, 2010). Students are known to use various forms of peer aggression as a way to establish power and popularity status of establishing a clear identity and peer affiliations within the social context of middle school (Pellegrini & Bartini, 2000). It is important to examine how school connection relates to bullying behaviors and depressive symptoms.

Bullying

Bullying is generally defined in the literature as the repeated acts of aggression by a dominant peer against a less dominant individual for the intentional purpose of inflicting harm (Olweus, 1994). These behaviors can vary in severity (i.e., spreading rumors to physical aggression) and frequency (i.e., how many times the incidents happens a day). For purposes of this study, bullying refers to the use of physical, psychological, or verbal abuse to cause intentional physical or psychological distress to others either individually or in group (Reynolds, 2003). Bullies tend to possess greater power (i.e., physical, social, other) over the victim that are used inappropriately to cause distress to others.

Bully. Estimates of the prevalence of bullying behaviors are complex given the large variability in methods of assessment as well as how researchers operationalize

bullying. In addition to different measures using different respondents (e.g., self-report, teacher report, peer report) and what constitutes enough bullying behavior to be considered bullying varies across surveys. Most of the research has focused mainly on bullying behaviors has used peer report and self-report methods, with some researchers now implementing other respondents (e.g., teacher reports, parent reports, etc.).

One of the largest nationally representative samples examined in the United States, surveyed ($N = 15,686$) students in grades 6-10 to describe their experience with bullying (Nansel et al., 2001). Bullying was assessed by their response to two questions regarding the frequency they bullied in school and outside of school during the current academic year, with further questions examining the nature of the bullying behaviors (e.g., physical, verbal). Students reported being perpetrators of bullying at the following rates 55.7% none, 25% once or twice, 10.6% sometimes, and 8.8% weekly. These results varied by gender, 12.9% of boys and 5.2% of girls reported bullying others on a weekly basis. Bullying was more frequent in the lower grades 6-8 than in grades 9 and 10. A limitation to this study was that only two questions were used to identify children into bullying status (i.e., bully, victim, bully-victim).

Victimization. Victims of bullying are an at-risk group because of the increased risk for mental health problems and distress, as well as long term effects of victimization. The term victim means a student has experienced a clinically significant level of bullying by another student or students (Reynolds, 2008). The term includes those who may be bullies, more commonly referred as bully-victims. The definition and operationalization of bullying victimization varies across research. To some extent, this is dependent of how

bullying is defined, because the victim is most typically the recipient of the bullying behavior. In many studies, the classification of victimization relies on the frequency of behaviors (e.g., “*Sometimes*”, “*Once a Week*”). Victimization has been found to be related to a wide range of internalizing and externalizing disorders (Ttofi, Bowes, Farrington, Lösel, & Loeber, 2011).

In Nansel et al. (2001), 58.9% reported not being bullied, 24.2% reported being victimized once or twice, 8.5% sometimes, and 8.4% reported weekly victimization. Overall, rates of victimization tended to be slightly higher for boys compared to girls (10.8% vs 6.4%). Approximately 26.1% of boys compared to 22.5% of girls reported being victimized once or twice, 9.9% compared to 7.3% sometimes, and 10.8% compared to 6.4% weekly. Rates tended to be higher for 6th graders were 26.2% once or twice, 10.9% sometimes, and 13.3% weekly compared to 10th graders who reported 18.8% once or twice, 4.6% sometimes, and 4.8% weekly. Being bullied was associated with poor psychological adjustments. Findings suggest that students who are socially isolated may also lack social skills, which puts them at risk of being bullied. Similarly, youth who are bullied may be avoided by peers who fear being bullied or losing their social status among other children.

Bully-Victim. There has been a widespread recognition that students can be both bullies and victims. The rates of students who fit this classification varies by study because different criteria have been applied to what constitutes bullying and victimization. Commonly, this category has been applied to those students who report moderate to severe levels of bullying and victimization. Nansel et al. (2001) found that

approximately 30% of their total sample in grades 6-10 reported moderate to frequent involvement in some form of bullying or victimization. Of these, 6.3% of the fit the designation of bully-victims. Because these students experience both internalizing and externalizing symptoms, research suggest they might be at greater risk of developing psychosocial, behavioral, and academic problems (Haynie et al., 2001; Nansel et al, 2001; Sourander et al., 2007; Veenstra et al., 2005).

Ivarsson, Broberg, Arvidsson, and Gillberg (2005) investigated a wide range of psychiatric symptoms (e.g, depression, suicidality, suicide attempts) and self-reported experience with bullying (i.e., bullies, victims, bully-victims, and non-involved). Adolescents ($N = 208$) were asked in the frequency of whether they had ever been bullied or if they had ever bullied others (e.g., *Never, Sometimes, Often* or *Very often*). Results showed adolescents classified in the bully-victims group reported more psychiatric symptoms followed by victims, bullies, and non-involved group. A major strength of the study was that it incorporated different sources of information (i.e., school staff).

Gender differences. Studies examining gender differences in bullying have found different behavior patterns for boys and girls. In general, research shows boys report higher rates of bullying behaviors compared to girls (Reynolds, 2008). Depending on how bullying is accessed boys in general are more likely to engage in physical aggression and bullying perpetration than girls. Boys are socialized and engage in physical aggression at an earlier age than girls (Espelage, Mebane, & Swearer, 2004). Girls are socialized to use rumor spreading and calling people names among actions that can hurt or jeopardize the social status of their peers (Wang, Iannotti, & Nansel, 2009).

Depression

Psychopathology can be viewed as a distortion, disturbance, or deviation of normative functioning. Internalizing disorders refers to an empirically derived cluster of symptoms that indicate problems in regulating emotions and moods, the most common being anxiety and depression. Individuals with internalizing disorders such as depression tend to experience symptoms that are not outwardly shown. Typical symptoms of depression include reduced affect, loneliness, social withdrawal, sadness, self-harm, low self-worth, irritability, loss of interest, and helplessness (Reynolds, 2008).

Gender differences. Research suggest that youth in late adolescence are at greater of depressive symptoms compared to children (Thapar, Collishaw, Pine, & Thapar, 2012). Additionally, one of the most established findings in depression literature is that depressive symptoms rates are similar for boys and girls in childhood but begin to significantly increase in girls starting early adolescence (Anderman, 2002; Leadbeater, Kuperminc, Blatt, & Hertzog, 1999; Shochet, Dadds, Ham, & Montague, 2006). These gender differences have been explained in terms of biological, cognitive, and social changes during this developmental period (Steinberg, 2008).

There is support for the role of biological changes (e.g., hormones, physical changes, etc.) in the development of depression in relation to other factors. A longitudinal study of ($N = 1,283$) adolescent girls age 9-15, found that high levels of estrogen and testosterone were associated with increased rates of depression (Angold, Costello, Erkanli, Worthman, 1999; Angold & Worthman, 1993). These biological changes

contribute to physical changes that interact with other social factors contributing to the increased rate of depressive symptoms in girls (Stice, Hayward, Cameron, Killen, & Taylor, 2000). Girls who go through puberty at an early age are at a high risk for depression due to peer stress associated with expectations, pressures, and reactions they are not developmentally ready to handle (Conley, Rudolph, and Bryant, 2012; Copeland et al., 2010).

Bullying and depression. Slee (1995) examined the relationship between bullying and depression in a sample of 353 Australian elementary school students from a low to middle class urban area. Students completed a measure with 20 statements on a four-point scale indicating the frequency of the following behaviors (i.e., tendency to bully, tendency to be victimized, tendency to be prosocial). The 18-item Depression Self Rating Scale (DSRS) was used to measure depressive symptoms. The tendency of being a victim of bullying was significantly associated to depression for boys ($b^* = .41, r = .48, p < .001$) and girls ($b^* = .65, r = .53, p < .001$). The tendency to bully was significantly associated to depression for boys ($b^* = .19, r = .36, p < .01$) but not for girls ($b^* = -.13, r = .25$). These students reported being unhappy and disliking school. This study suggests that both victims and bullies show depressive symptomatology.

Craig (1998) examined the emotional adjustment (i.e., depression, anxiety) in bullies, victims, and bully-victims. Participants were ($N = 546$) Canadian children grades 5-8 from five schools in a middle-class area. The sample was predominantly White (67%), Asian (16%), Black (11%), and a portion did not report their ethnic background (6%). The bullying scale was adapted from a shortened version of a student questionnaire

used by Olweus. The bullying scale contained four-items total with two-items from the bully scale and two from the victimization scale. Students indicated the frequency they were bullies or victims of bullying since the beginning of the term and during the last five days. Students completed the Children's Depression Inventory, a 26-item scale on a three-point scale asking about the frequency of depressive behaviors. There was a significant main effect of group, $F(3,541) = 4.22$, $p < .01$. Rates of depression differed by groups with victims ($M = 25.76$, $SD = 8.90$) reporting higher rates followed by bullies ($M = 24.47$, $SD = 10.26$), bully-victims ($M = 24.31$, $SD = 9.13$), and non-involved students ($M = 21.38$, $SD = 7.97$).

In a longitudinal study, Schwartz, Lansford, Dodge, Pettit, and Bates (2015) examined the experience of bullying victimization of a sub-sample of 388 students from Indiana and Tennessee (original sample, $N = 585$). These students were recruited prior to enrolling in kindergarten and followed-up during adolescence. Bullying victimization was measured by peer rankings where students were asked to identify classmates who they thought were victimized. Depressive symptoms were assessed using mothers' ratings from the Child Behavior Checklist (CBCL) and self-report ratings from the Youth Self-Report (YSR) using a 3-point scale (0 = *Not true* to 2 = *Very often true*). A logistic regression showed students who were victims of bullying were almost twice as likely to meet diagnostic criteria for a depressive disorder during late adolescence, $OR = 1.41$, 95% CI [1.06, 1.86], $p < .05$.

A meta-analysis by Hawker and Boulton (2000) reviewed cross-sectional studies, published between 1978 to 1997, on the association of bullying victimization and

psychosocial outcomes (e.g, depression, loneliness, generalized and social anxiety, and global and social self-worth). This meta-analysis included 23 studies from English-speaking or Scandinavian countries such as: Britain, Australia, Canada, Ireland, Norway, Sweden, Finland and United States except for two studies with French speaking children. Results suggest that victimization was positively associated with depression with correlations ranging from $r = .23$ to $r = .81$. Effect size were bigger when victimization and depression were assessed using the same method (i.e., self-report) than when two or more methods were used, mean effect size was $r = .29$ vs $r = .45$.

A meta-analysis by Reijntjes, Kamphuis, Prinzie, and Telch (2010) examined the directionality of bullying victimization and psychological maladjustment in longitudinal studies ranging from six months to two years. The first aim was to assess how much peer victimization predicted internalizing problems. A total of 15 longitudinal studies were reviewed, all controlling for initial levels of internalizing problems ($N = 12,361$). Peer victimization association with internalizing problems ranged from $r = .04$ to $r = .41$. The second aim was to assess how much internalizing problems predicted peer victimization. Internalizing problems predicting changes in peer victimization ranged from $r = -.05$ to $r = .20$. The model with peer victimization predicting internalizing problems was stronger in magnitude than the reverse model ($r = .18$ vs $r = .08$), while the difference was not significant. This study suggests a bi-directional relationship where being a victim of bullying contributes to internalizing problems and vice versa. It seems like identifying a peer as depressed contributes to them being harassment by their peers, and being harassed contributes to feelings of depression. Depressed children and adolescents tend to have

difficulties with peer relationships. It might be that feeling depressed makes children keep to themselves making it difficult to initiate friendship and developing social skills for future relationships.

Similarly, Prinstein et al. (2005) report peer relationships and depression appear to be reciprocal and transactional. Interpersonal difficulties may play a role in depression during early adolescence because of the increasing salience of peer relationships during this time (Brendgen, Lamarche, Wanner, & Vitaro, 2010). There are other variables that contribute to victimization and the development of psychopathology (e.g., adverse home environment, unsafe school environment). However, studies tend to focus on factors that contribute to psychological maladjustment (risk factors approach) in victimized children and not so much on what factors that can be enhanced to promote a positive development (protective factors approach).

School Connectedness

The concept of school connectedness refers to the perceptions by students that individuals (e.g. teachers, peers, school administration) in their school care about their education, well-being, and about them as individuals (Blum & Libbey, 2004). The past literature has defined and measured school connectedness in various ways. Some researchers use related terms, these terms might or might not defined the same, have the same elements, or theoretical framework. Some of the most common terms used to describe school connectedness include: school belongingness, school attachment, school bonding, school engagement, school climate, school involvement, and school support

(e.g. Blum & Libbey, 2004; Goodenow, 1993; Jimerson et al., 2003; Maddox & Prinz, 2003; O'Farrell & Morrison, 2003). Given the increased evidence supporting school connectedness as an important protective factor for adolescent development a convention was convened in June 2003 at the Wingspread Conference Center in Racine, Wisconsin. The goal was to synthesize the research on school connectedness to provide guidelines to promote school connectedness in schools. In the executive summary the authors outlined elements to increase school connectedness such as the increasing school bonding, increasing student expectations, increasing support for all students, increasing student safety, increasing classroom engagement, increasing involvement of school community (i.e., parents, teachers, and administrators), and facilitating relationships where students feel connected to at least one member of the school staff (Blum & Libbey, 2004).

Based on findings from government, educational, and health sectors school connectedness seems to be a protective factor for a variety of outcomes (Blum & Libbey, 2004). For example, when students report lower levels of school connectedness they are more likely to engage in maladaptive behaviors such substance use (Bonny, Britto, Klostermann, Hornung, & Slap, 2000), early sexual intercourse, aggressive behaviors (Brookmeyer, Fanti, & Henrich, 2006; Henrich, Brookmeyer, & Shahar, 2005), and suicidal behaviors (Kaltiala-Heino, Rimpelä, Marttunen, Rimpelä, & Rantanen, 1999; Langille, Asbridge, Cragg, & Rasic, 2015; Resnick et al., 1997; Resnick, Harris, & Blum, 1993) among many other psychological difficulties (Shochet, Smith, Furlong, & Homel, 2011). Additionally, high levels of school connectedness are associated with better academic outcomes (Anderman, 2002; Goodenow, 1993; Klem & Connell, 2007),

increased participation in extracurricular activities (Bonny et al., 2000; Thompson, Iachan, Overpeck, Ross, & Gross, 2006; Whitlock, 2006) and greater school retention (Bond et al., 2007; Klem & Connell, 2004; Miltich Hunt, & Meyers, 2004; Resnick et al., 1993). Students also report better physical health and psychological health (Anderman, 2002; Lester, Waters, & Cross, 2013; Loukas, Cance, & Batanova, 2013; Loukas, Ripperger-Suhler, & Horton, 2009; Resnick et al., 1993; Resnick et al., 1997; Shochet et al., 2006).

School connectedness and depression. In the National Longitudinal Study of Adolescent Health, Anderman (2002) examined how school composition contributes to feelings of school belongingness and other outcomes (e.g., psychological health and academic achievement). Within this larger investigation, Study 2 examined the relationship between school belongingness and psychological health outcomes across different types of schools (e.g., urban, rural, large, small). The sample included ($N = 20,745$) American students from 132 schools from 7-12th grade. Four items on a five-point response (1 = *Strongly disagree* and 5 = *Strongly agree*) were used to measure school belonging. School belonging was assessed in two ways as a school-wide concept were students rated their schools on their general perception of belongingness and individual students own perception of belonging to their school. Depressive symptoms were measured with nine items on a four-point response format (0 = *Never or rarely*, 1 = *Sometimes*, 2 = *A lot of the time*, and 3 = *Most of the time or all the time*). The individual measure of school belonging was inversely related to depression ($r = -.28, p < .01$). The school belonging slope was negatively related to depression ($\gamma = -.12, p < .01$). Results

showed schools with high perception of connectedness, with students reporting low level of school connectedness experienced more psychosocial difficulties such as depression.

Bond and colleagues (2007) examined how school connectedness and social engagement in middle school related to mental health, substance use, and educational achievement in a longitudinal study. Participants were Australian 8th grade students ($N = 2,678$, $M_{age} = 14$) involved in the Gatehouse Project, a randomized controlled trial intervention aimed at increasing students' school connectedness. School connectedness was measured with a 20-item scale which included the following components: school commitment, student-teacher relationships, peer relationships, student involvement, and perceived belongingness. Students were grouped by level of school connectedness from very high to very low. Depressive symptoms were evaluated using a computerized version of the Clinical Interview Schedule-Revised with scores above 12, reflecting a level of clinical concern. Like Anderman (2002) this study found that students with low levels of school connectedness reported higher symptoms of depression in 8th grade (OR = 1.27, $p = .208$) and 10th grade (OR = .41, $p < .05$).

School connectedness and bullying. Skues, Cunningham, and Pokharel (2005) examined the relation of bullying victimization, school connectedness and self-esteem ($N = 975$) Australian students in 7-12th grade. Students completed a 23-item questionnaire assessing perceptions of themselves and the school environment. The questionnaire included 3 items about their sense of school connectedness to their school and 4 items examining their experience with bullying. Results showed students who experienced bullying more frequently, a lot ($M = 2.35$, $SD = 0.93$) compared to rarely ($M = 3.00$, $SD =$

.89) reported lower levels of school connectedness, $d = 0.71$. Bullied students reported lower levels of connectedness to their peers, teachers and school.

Eisenberg, Neumark-Sztainer, and Perry (2003) explored the relationship among peer harassment, school connectedness, and academic achievement. Participants were 4,746 American students in 7-12th grade at 31 public schools. Sample was ethnically and socioeconomically diverse from urban and suburban school districts in Minnesota. Five items were used to measure peer harassment where students were asked to indicate the frequency of peer harassment on a five-point scale (e.g. “*Never*” to “*At least once a week*”). School connectedness was assessed with one item indicating how student’s felt about school, on a five-point scale ranging from “*I don’t like school at all*” to “*I like school all the time*”. Results showed students who endorsed liking school all the time were less likely to experience peer harassment than those who disliked school ($F = 22.05$, $df = 4$, $p < .001$). Findings highlight that being a victim of peer harassment might influence the perceptions of liking school potentially leading to decreased feelings of school connectedness. While the study included a large and diverse sample, the scales used in the study had no psychometric validation.

You et al. (2008) examined the role of school connectedness in mediating the relation between students sense of hope and life satisfaction for three groups: bullied-victims (victimization with power imbalance), peer victims (meaning students who experienced victimization, with no perceived power imbalance), and non-victims. Participants were students ($N = 866$) in 5th to 12th grade from four school located in central California. Students completed the California Bully/Victim Scale, School

Connectedness Scale, Children's Hope Scale, and Students' Life Satisfaction Scale. The School Connectedness Scale (SCS; Resnick et al., 1997) was modified five-item scale measuring school connectedness. Results showed school connectedness partially mediated the relation between hope and life satisfaction for the non-victims only ($b^* = .25, p < .001$) compared to peer victims ($b^* = .25$) and bully victim ($b^* = .25$) group. Those who were peer victims ($z = 2.43, d = .21, p < .01$) tended to report lower levels of school connectedness than non-victims ($z = 4.72, d = .32, p < .001$).

Hatchel, Espelage, and Huang (2018) examined the associations among sexual harassment victimization, school belonging, and depressive symptoms in LGBTQ students using structural equation modeling. Data was collected longitudinal in three waves, participants were ($N = 404$) public high school students in the Midwest. Students completed a shortened nine-item version of the Psychological Sense of School Membership (Goodenow, 1993) using a 4-point scale (1 = *Strongly disagree* to 4 = *Strongly agree*) with higher scores reflecting a higher sense of school belongingness (measured similar to school connectedness on this study). Depressive symptoms were assessed eight-item version of the Orpinas Modified Depression Scale, reporting the frequency (1 = *Never* to 4 = *Almost always*) of depressive symptoms in the last 30 days. Results showed school belonging was the mediator between sexual harassment victimization and depressive symptoms, $\chi^2(319, N = 404) = 1,365.41$, all effects were $p < .001$. Perceptions of belonging may be a mechanism connecting the effects of victimization with depressive symptoms.

Summary

As the literature suggests the school environment plays a very important role in the development of adolescents. Bullying impacts the school climate by interfering with peer relationships and other adult relationships in school. This creates a hostile environment that makes it difficult to create a connection to school, which has an impact on psychosocial outcomes like depression. Some of the studies reviewed used scales to measure bullying, school connectedness, and depression with no previous validation or very brief scales (e.g., on item scale). Literature seems to suggest that bully-victims might experience lower levels of school connectedness compared to victims, bullies, and non-involved students (You et al., 2008). Harassed students by their peers are more likely to miss school, which might contribute to missing out on the potential benefits of school connectedness (Eisenberg et al., 2003). Skues et al. (2005) reported those students who experienced bullying were less connected to their school and their school community.

School connectedness was reported a partial mediator between parental attachment and depressive symptoms (Shochet et al., 2006; Shochet, Homel, Cockshaw, & Montgomery, 2008), social skills and depressive symptoms (Ross, Shochet, & Bellair, 2010), hope and life satisfaction for student's victim of bullying (You et al., 2008). In a similar study to the current study, Hatchel et al. (2018) found school belonging was a mediator between sexual harassment victimization and depressive symptoms among LGBTQ adolescents. These studies provide support for the testing of school connectedness as an important mediating variable. As such, the current study aims to

explore the mediating effects of school connectedness between bullying victimization and depressive symptoms. Additionally, the question remains as to how level of school connectedness differs based on gender and bullying classification group (i.e., bully, victim, bully-victim, and non-involved).

Chapter Three: Statement of the Problem

The issue of bullying continues to be a significant public health problem in the United States that affects adolescents functioning in multiple domains (e.g. academic, physical health, and psychological health). More specifically, adolescents who experience bullying (i.e. both perpetrator or victim) report higher rates of depressive symptoms compared to non-involved youth (King, Vidourek, Davis, & McClellan, 2002; Salmon, James, & Smith, 1998; Ttofi, Farrington, Lösel, & Loeber, 2011). In this study, depressive symptoms will be examined as one of the factors associated with bullying in early adolescence.

Early adolescence is a period in development that involves biological, cognitive, and social changes (Steinberg, 2008). During this time, students are transitioning from elementary school to middle school or from middle school to high school. The combination of these changes makes this developmental period especially susceptible to bully victimization behaviors compared to other developmental periods (Parker et al., 2006). Research suggest bullying behaviors increase throughout elementary school, peaks in middle school, and then slowly decline in high school (Espelage & Swearer, 2003; Nansel et al, 2001). Bullying behaviors vary in form depending on the developmental stage. For example, older children and adolescents report higher incidence of indirect and relational aggression compared to young children who report a higher incidence in physical aggression (Nansel et al., 2001; Reynolds, 2008).

It is important to examine the protective factors that may prevent or reduce the adverse effects associated with bullying. School connectedness has been reported to relate to a variety of academic and psychosocial outcomes such as improved grades, less psychological concerns, less substance use, and better physical health (Anderman, 2002; Bond et al., 2007; Catalano, Oesterle, Fleming, & Hawkins, 2004). Several studies have found youth who experience bullying feel less connected to their school (Holt, Green, Tsay-Vogel, Davidson, & Brown, 2016; Wilson, 2004). A growing body of research suggest that school connectedness may be a promising protective factor that can be important for promoting positive outcomes for students (Blum & Libbey, 2004; Bonny et al., 2000; Fredericks, Blumenfeld, & Paris, 2004). Hatchel et al. (2018) found a significant indirect effect showing school belonging mediated the association between sexual harassment victimization and depressive symptoms among LGBTQ adolescents.

The primary purpose of this study was to examine school connectedness as a mediator between bully-victimization and depressive symptomatology in early adolescence. This study expands on bullying research during early adolescents, by incorporating a novel factor by testing school connectedness as a mediator. The secondary purpose of the study was to explore how gender and bully victimization classification groups (i.e., bully, victim, bully-victim, and non-involved) may relate to levels of reported school connectedness. Lower levels of school connectedness have been reported in victims compared to bully-victims, bullies, and non-involved youth (You et al., 2008). Several studies suggest that girls tend to report more school connectedness

than boys (Anderman, 2002). Figure 1 displays the conceptual model of mediation for the current study.

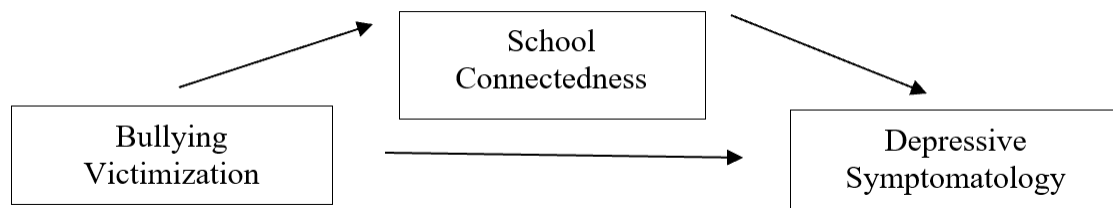


Figure 1. Conceptual model of the study variables such that bullying victimization is the primary independent variable, depression symptomatology is the dependent variable, and school connectedness is the hypothesized mediating variable.

Hypothesis and Research Question

Hypothesis. It was hypothesized that school connectedness mediated the relationship between bully-victimization and depressive symptomatology.

Several studies have examined the relationship between bullying victimization and depressive symptomatology, which demonstrate higher depressive symptoms in youth who have been victims of bullying (King et al., 2002; Salmon et al., 1998; Ttofi et al., 2011). Adolescents who experience bullying victimization feel less connected to their school than those who don't share such experience (Holt et al., 2016; Wilson, 2004). Students who indicate lower levels of school connectedness report higher levels depressive symptom compared to those who report higher levels of school connectedness (Lester et al., 2013; Loukas, & Pasch, 2013; Shochet et al., 2006).

Several studies report school connectedness partially mediated the relationship between parental attachment and depressive symptoms (Shochet et al., 2006; Shochet et al., 2008), between social skills and preadolescent depressive symptoms (Ross et al., 2010), and between hope and enhanced global life satisfaction for students who reported no victimization experiences (You et al, 2008). These studies provide support for the testing of school connectedness as an important mediating variable between various relationships. Hatchel et al. (2018) found school belonging mediated the association between sexual harassment victimization and depressive symptoms among LGBTQ adolescents. However, Loukas, Suzuki, and Horton (2006) found school connectedness did not mediate school climate (i.e., cohesion among students, friction among students)

and depressive symptoms. Very few published studies have examined the mediating role of school connectedness on bullying victimization and depressive symptoms. Studies have examined how these concepts relate separately, but not in the same study.

Research Question. Does level of school connectedness differ based on gender and bully victimization classification group (i.e., bully, victim, bully-victim and non-involved)?

Evidence is inconsistent regarding the role of gender in reported level of school connectedness. Some studies have shown girls tend to report higher levels of school connectedness than boys (Maddox & Prinz, 2003; Simons-Morton, Crump, Haynie, & Saylor, 1999). Other studies report no gender differences; however, these studies focus on older adolescents (Brookmeyer et al., 2006). Shochet et al. (2006), report that school connectedness effects vary across gender for some adjustment outcomes (i.e., depression, anxiety, general functioning), but not others. Additionally, how does the experience of bullying victimization relate to an individual's level of school connectedness? Since most bullying research focuses on the experience of the bully or victim, this study included the experience of youth who are bully-victims and non-involved.

Chapter Four: Methods

Participants

The sample consisted of 402 students in 4th through 8th grade from 8 schools in rural and semi-rural counties in Northern California. Participants ranged from 9 to 15.5 years of age ($M = 11.9$, $SD = 1.3$). There were 162 boys and 236 girls, with 58.5% of the sample being White, 13.7% were Hispanic, 7.2% were Bi-racial, 6% were Asian, 4.5% were Native American, 4 Other, 1.7% were African American, 1% were Pacific Islander, and 0.7% were checked multiple options. See Table 1, Table 2, and Table 3 for additional participant demographic information.

Instrumentation

Bullying. Bullying and victimization experience was measured using the Bully Victimization Scale (BVS; Reynolds, 2003). The BVS a 46-item self-report instrument written at a 3rd grade reading level with two subscales, the Bully Scale and the Victimization Scale. The Bully Scale (23 items) measures both overt and relational-type behaviors perpetrated against others. The Victimization Scale (23 items) also measures overt and relational-type bullying experienced by the individual. The response format of the RBVS uses a four-point response scale (0 = *never* and 3 = *five or more times*). Raw scores range from 0-69 for the Bully Scale and Victimization Scale.

Cutoff scores were created to assist in the identification of children and adolescents who endorse what may be viewed as a clinically relevant level of bullying

Table 1
Frequency and Percentage of Sample Characteristics by Age

Age	Boys (<i>n</i> = 162)	Girls (<i>n</i> = 236)	Total (<i>N</i> = 402)
9	4 (2.5%)	5 (2.1%)	9 (2.2%)
10	24 (14.8%)	25 (10.6%)	50 (12.4%)
11	46 (28.4%)	72 (30.5%)	118 (29.4%)
11.5	2 (1.2%)	-	2 (0.5%)
12	30 (18.5%)	35 (14.8%)	67 (16.7%)
12.5	-	2 (0.8%)	2 (0.5%)
13	39 (24.1%)	68 (28.8%)	108 (26.9%)
13.5	-	1 (0.4%)	1 (0.2%)
14	16 (9.9%)	26 (11.0%)	42 (10.4%)
15	1 (0.6%)	1 (0.4%)	2 (0.5%)
15.5	-	1 (0.4%)	1 (0.2%)

Note: Four students did not indicate gender.

Table 2

Frequency and Percentage of Sample Characteristics by Grade

Grade	Boys ($n = 162$)	Girls ($n = 236$)	Total ($N = 402$)
4	14 (8.6%)	12 (5.1%)	27 (6.7%)
5	24 (14.8%)	33 (14.0%)	57 (14.2%)
6	50 (30.9%)	71 (30.1%)	122 (30.3%)
7	25 (15.4%)	46 (19.5%)	72 (17.9%)
8	49 (30.2%)	74 (31.4%)	124 (30.8%)

Note: Four students did not indicate gender.

Table 3

Frequency and Percentage of Sample Characteristics by Ethnicity

Ethnicity	Boys (<i>n</i> = 162)	Girls (<i>n</i> = 236)	Total (<i>N</i> = 402)
Asian	8 (4.9%)	16 (6.8%)	24 (6%)
African American	3 (1.9%)	4 (1.7%)	7 (1.7%)
Native American	8 (4.9%)	10 (4.2%)	18 (4.5%)
Hispanic	21 (13.0%)	34 (14.4%)	55 (13.7%)
White	98 (60.5%)	136 (57.6%)	235 (58.5%)
Bi-racial	14 (8.6%)	14 (5.9%)	29 (7.2%)
Pacific Islander	1 (.6%)	3 (1.3%)	4 (1%)
Other	5 (3.1%)	11 (4.7%)	16 (4%)
Multiple checked	-	3 (1.3%)	3 (0.7%)

Note: Four students did not indicate gender.

others or victimization by bullies. The cutoff scores also allow for the identification of students who may be viewed as bully-victims, meaning they endorse clinically significant scores on both the Bully Scale and Victimization Scale. In the BVS Bullying Scale, *T* scores of 58-65 (raw score: 13-19) are considered to reflect clinically significant level of bullying behaviors. In the BVS Victimization Scale, *T* scores of 56-63 (raw score: 16-23) are considered to reflect clinically significant level of bullying victimization. Bully-victims are those students who score in the clinically significant to severe ranges on both the Bully Scale (*T* score above 58) and Victimization Scale (*T* score above 56).

The BVS has been found to be a viable method of group assessment to determine potential problem bullying and victimization behaviors in students ranging in age from 8 to 19 years (Reynolds, 2003). The psychometric properties of the BVS were rigorously tested using a large national sample of ($N = 2,405$) students from grades 3-12. The BVS demonstrates strong internal consistency for both the Bully Scale ($r_\alpha = .94$ for boys, and $r_\alpha = .89$ for girls) and the Victimization Scale ($r_\alpha = .93$ for both boys and girls). In the current study, the internal consistency for the Victimization Scale was $r_\alpha = .94$ and $r_\alpha = .92$ for the Bully Scale.

Depression. The Reynolds Adolescent Depression Scale-2: Short Form (RADS-2: SF; Reynolds, 2008) is an abbreviated version of the Reynolds Adolescent Depression Scale-2nd Edition (RADS-2), and items on the short form were selected from the original version. RADS-2: SF is a 10-item self-report instrument written at a 3rd grade reading level and takes several minutes to administer and complete. Items were based on the DSM-III diagnostic criteria for major depressive disorder and dysthymic disorder, along

with symptoms from the Research Diagnostic Criteria for Affective Disorders. Six critical items from the RADS-2 were included in the RADS-2: SF because of their excellent ability to discriminate clinically depressed from non-clinically depressed adolescents. The remaining four items were selected to reflect further on mood, loss of interest, and irritability/anger.

The response format of the RADS-2: SF is a four-point response scale (1 = *almost never* and 4 = *most of the time*). In the re-standardization of the RADS in 2002, cutoff scores were adjusted to provide a balanced outcome for decision making and maximize correct classification decisions. Based on the total standardization sample of 3,300 adolescents, a *T* score of 61 and above (raw score = 26-40) are indicative of clinical levels of depression. Reynolds (2008) reports internal consistency estimates for the RADS-2: SF ranging from $r_{\alpha} = .84$ for the total standardization sample ($N = 3,300$) to $r_{\alpha} = .86$ for the total school sample ($N = 9,052$). The internal consistency estimates for non-clinical samples ranged from .87 to .90 whereas the clinical sample ranged from .88 to .90. The test-retest reliability over a 2-week period was .82 for both the non-clinical sample and clinical sample, indicating moderately strong test-retest reliability. The internal consistency in the current study was $r_{\alpha} = .87$.

School Connectedness. The Psychological Sense of School Membership (PSSM; Goodenow, 1993) is an 18-item measure examining student's perceptions of connectedness with teachers, peers in school, and school in general. The PSSM was developed through testing with suburban ($N = 454$) and urban ($N = 301$) middle school and junior high school students in the Northeast. Participants grade level ranged from 5th

to 8th grade with age ranging from 9 to 16 years. Internal consistency reliabilities ranged from $r_\alpha = .77$ to $r_\alpha = .88$. In a study of ($N = 560$) Chilean students grades fifth to seventh the internal consistency was $r_\alpha = .84$ (Gaete, Rojas-Barahona, Olivares, & Araya, 2016). The PSSM was modified from a 5-point Likert format to a 4-point (1 = *not at all true* and 4 = *completely true*) response format. A high SCS score indicates greater feelings of connectedness, see Appendix C. The internal consistency in the current study was $r_\alpha = .90$.

Procedure

Data were obtained from seven elementary and middle schools in Northern California. The Institutional Review Board approved the collection of this data under approval number 08-102 (Dr. William M. Reynolds) and the analysis of the data for this study under approval number 18-207 (Irene Gonzalez-Herrera). Principals, superintendents, and school psychologists were contacted to request permission for participation in the study. Assent of the children and the permission of their parents or guardians was solicited and returned to the students' teachers. Each teacher was given a packet with detailed instructions for the study and the appropriate number of study consent forms for their classrooms. On the day of data collection, graduate students and research assistants went to school sites to administer the surveys.

Participants completed the questionnaires in areas designated by the school site principal: the cafeteria, gym, or classroom. In most schools, students went to the cafeteria or gym to complete the survey. Students in each school completed the survey at the same

time of day. Participants were informed that there were no right or wrong answers to the survey questions, and data would remain confidential. Students were asked to respond honestly to all items in the survey. Most students finished in less than 50 minutes. In some cases, some students were given more than time to complete the questionnaire. To encourage consent form return rates, pizza parties were held for classrooms at each school with the largest quantity of signed consent forms, regardless of permissive or negative consent.

Bullying classification groups were created using the recommended cutoffs by Reynolds (2003) in the Bully Victimization Scale manual. Students endorsing *T* scores of 58 or higher on the Bully Scale were considered bullies. Students endorsing *T* scores of 56 or higher on the Victimization Scale were considered victims of bullying. Students who endorsed *T* scores of 58 or higher on the Bully Scale and *T* scores of 56 or higher on the Victimization Scale were considered bully-victims. Lastly, students who reported *T* scores lower than 58 on the Bully Scale and lower than 56 on the Victimization Scale were considered non-involved in bullying.

Data Analyses

Descriptive statistics (e.g, means, standard deviations) were reported for the primary study variables. T-tests were used to assess the significance in mean group differences for boys and girls on all measures. To examine the study's main hypothesis, a mediation analysis was conducted to assess if school connectedness mediates the relationship between bully-victimization and depressive symptoms. Mediation analysis

were conducted using the computational tool PROCESS macro Version 3 (Hayes, 2013), which provides a path-analytic procedure for the examination of mediation with bias corrected bootstrap 95% confidence intervals (CI) for effect size estimation. PROCESS generates model coefficients, standard errors, t-values, p-values, CI, direct and indirect effects. The indirect effect was tested using bootstrapping procedures with 5,000 bootstrapped samples. Unstandardized indirect effects were computed for each of 5,000 bootstrapped samples, and the 95% confidence interval was computed by determining the indirect effects at the 2.5th and 97.5th percentiles.

To examine the research question, a 2x4 Analysis of Variance (ANOVA) was conducted. Factorial ANOVA's are used in research when one wants to analyze differences on a continuous dependent variable between two or more independent discrete grouping variables. In this analysis, level of school connectedness was compared by both gender (i.e., girls, boys) and bully-victimization classification group (i.e., bully, victim, bully-victim, and non-involved).

The results of the 2x4 ANOVA are presented in the form of main effects among study variables. The assumptions of normality and homogeneity of variance were assessed. All analyses were performed using SPSS statistical software.

Benefits and Potential Risks

Minimal risk was involved in the study. Answers were kept anonymous and confidential. Risks include possible fatigue or mild discomfort from completing questionnaire. There were no immediate benefits to the participants. Findings will

contribute to more knowledge on the topics of bullying, depression, and school connectedness.

Chapter Five: Results

Preliminary Analyses

Mean scores of each measure are listed on Table 4 for boys, girls, and total sample. Table 5 shows mean scores of each study measure for Students of Color (SoC), White students, and total sample. The Pearson correlations between study variables along with reliability coefficients in this study are shown on Table 6. As shown, low to moderate correlations were found between all study measures, $p < .001$. High internal consistency was found for the BVS Victimization ($\alpha = .94$), BVS Bullying ($\alpha = .92$), RADS-2: SF ($\alpha = .87$), and PMSS ($\alpha = .90$).

Primary Analyses

Hypothesis. Mediation analysis was used to investigate the hypothesis that school connectedness mediated the relationship between bullying-victimization and depressive symptoms. As Figure 2 illustrates, the standardized regression coefficient between bullying-victimization and depressive symptoms was statistically significant, as was the standardized regression coefficient between school connectedness and depressive symptoms. Results indicated that bully-victimization was a significant predictor of school connectedness ($\beta = -.34$, $SE = .04$, 95% CI $[-.43, -.26]$, $p < .001$). School connectedness was a significant predictor of depressive symptoms ($\beta = -.24$, $SE = .03$, 95% CI $[-.29, -.19]$, $p < .001$).

Table 4

Means Standard Deviations and T-Tests Between Boys and Girls

Measures	Boys		Girls		Total		<i>df</i>	<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
BVS Victimization Scale	52.19	11.98	50.57	10.47	51.14	11.10	396	1.43
BVS Bullying Scale	48.48	9.58	46.70	5.83	47.40	7.60	380	2.25*
RADS-2: SF	17.90	5.52	19.04	6.79	18.53	6.31	396	-1.77
PSSM	49.60	10.23	50.03	10.20	50.00	10.25	396	-0.42

Note: BVS = Bully Victimization Scale; RADS-2: SF = Reynolds Adolescent Depression

Scale-2: Short Form; PSSM = Psychological Sense of School Membership. * $p < .05$.

Table 5

Means, Standard Deviation, and T-Tests Between Students of Color and White Students

Measures	SoC		White		Total		<i>df</i>	<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
BVS Victimization Scale	50.65	11.19	51.50	10.76	51.14	11.10	389	0.75
BVS Bullying Scale	47.08	7.11	47.73	8.05	47.40	7.60	373	0.80
RADS-2: SF	19.09	6.40	18.18	6.16	18.53	6.31	389	-1.40
PSSM	48.15	10.55	51.03	9.80	50.00	10.25	389	2.76**

Note: BVS = Bully Victimization Scale; RADS-2: SF = Reynolds Adolescent Depression

Scale-2: Short Form; PSSM = Psychological Sense of School Membership; SoC =

Students of Color. ** $p < .01$.

Table 6

Correlations and Reliability Coefficient Between Study Measures

Measures	BVS-VS	BVS-BS	RADS-2: SF	PSSM
BVS Victimization Scale	(.94)	.31	.46	-.37
BVS Bullying Scale		(.92)	.23	-.20
RADS-2: SF			(.87)	-.51
PSSM				(.90)

Note: BVS = Bully Victimization Scale; RADS-2: SF = Reynolds

Adolescent Depression Scale-2: Short Form; PSSM = Psychological

Sense of School Membership. All correlations $p < .001$. Values in

parentheses are internal consistency reliability coefficients.

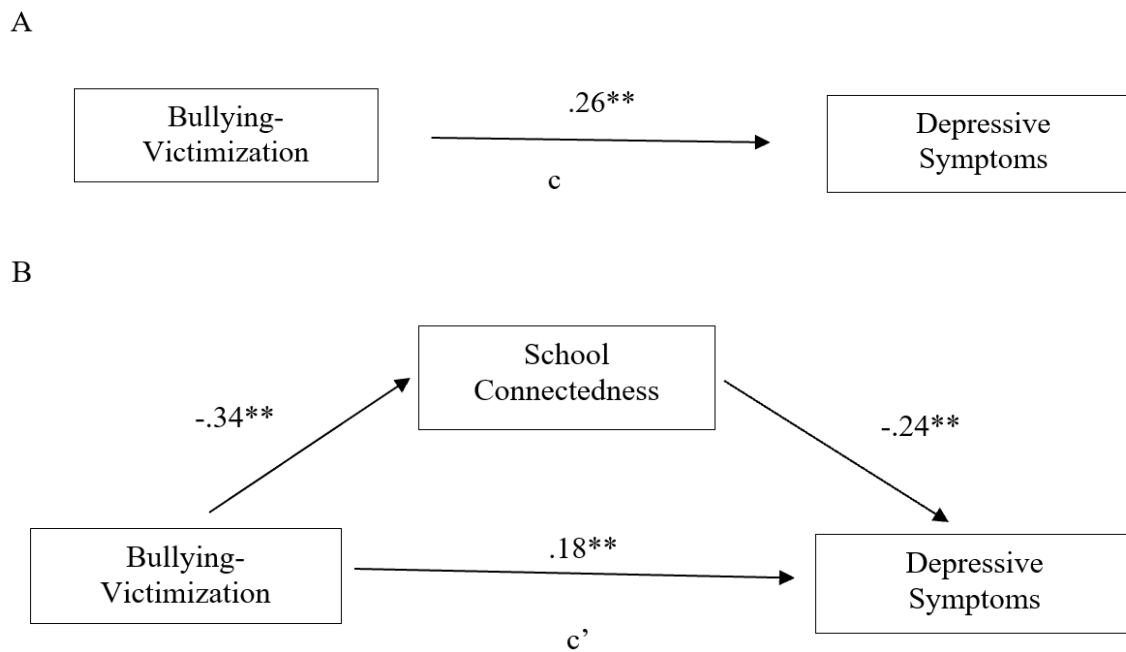


Figure 2. A: The direct effect model for bullying-victimization and depressive symptoms.

B: The mediation model with school connectedness as the mediator between bullying-victimization and depressive symptoms. Standardized path coefficients are shown. $N = 402$. $**p < .01$.

These results partially support the mediational hypothesis. Bully-victimization continued to be a significant predictor of depressive symptoms after controlling for school connectedness ($\beta = .18$, $SE = .02$, 95% CI [.13, .22], $p < .001$) and the indirect effect was $\beta = .08$, $SE = .08$, 95% CI [.05, .11], $p < .001$. Approximately 34% of the variance in depressive symptoms was accounted for by the predictors ($R^2 = .34$, $F[2, 400] = 104.76$, $p < .001$).

Research Question. A 2x4 Analysis of Variance (ANOVA) was conducted to examine school connectedness by gender (i.e., girls and boys) and bully-victimization classification group (i.e., bully, victim, bully-victim, and non-involved). Frequency and percentage of bully-victimization classification groups are shown on Table 7. Mean scores for school connectedness are shown on Table 8. The main effect of gender on school connectedness was not significant ($F(1,383) = 0.62$, $p = .43$, $\eta^2 = .002$); however, the main effect of bully-victimization classification group on school connectedness was significant ($F[3,383] = 15.35$, $p < .001$, $\eta^2 = .007$). Non-involved students had higher levels of school connectedness ($M = 51.99$, $SD = 9.80$, $p < .01$) than those in the bully group ($M = 44.49$, $SD = 9.30$), bully-victim group ($M = 44.06$, $SD = 9.80$), and victim group ($M = 44.00$, $SD = 8.73$). No significant interaction was found between gender and bully-victimization classification group on school connectedness, $F(3, 383) = 0.96$, $p = .410$.

Table 7

Frequency and Percentage of Bullying Classification Groups

Measures	Boys (<i>n</i> = 160)		Girls (<i>n</i> = 231)		Total (<i>N</i> = 395)	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Bully	31	19.1	43	18.2	74	18.4
Victim	9	5.6	6	2.5	15	3.7
Bully-victim	10	6.2	8	3.4	18	4.5
Non-involved	110	67.9	174	73.7	284	71.6

Table 8

Mean School Connectedness Score by Bullying Category and Gender

	Boys (<i>n</i> = 160)		Girls (<i>n</i> = 231)		Total (<i>N</i> = 395)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Bully	45.55	9.10	43.72	9.47	44.49	9.30
Victim	46.78	9.32	39.83	8.05	44.00	8.73
Bully-victim	42.90	11.69	45.50	7.29	44.06	9.80
Non-involved	51.74	9.92	52.14	9.75	51.99	9.80

Supplementary Analyses

Exploratory mediation analysis by gender. Separate regression analyses were used to examine school connectedness as the mediator between bullying-victimization and depressive symptoms for boys and girls. Results for boys indicated that bully-victimization was a significant predictor of school connectedness, ($\beta = -.30$, $SE = .06$, 95% CI [-.42, -.17], $p < .001$). School connectedness was a significant predictor of depressive symptoms, ($\beta = -.16$, $SE = .03$, 95% CI [-.23, -.09], $p < .001$). Bully-victimization was a significant predictor of depressive symptoms ($\beta = .27$, $SE = .03$, 95% CI [.22, .33], $p < .001$). These results partially support the mediational hypothesis. Bully-victimization continued to be a significant predictor of depressive symptoms after controlling for school connectedness, ($\beta = .22$, $SE = .03$, 95% CI [.16, .28], $p < .001$) and the indirect effect was $\beta = .05$, $SE = .02$, 95% CI [.02, .09], $p < .001$. Approximately 43% of the variance in depressive symptoms was accounted for by the predictors ($R^2 = .43$, $F[2, 159] = 59.38$, $p < .001$).

Results for girls indicated that bully-victimization was a significant predictor of school connectedness, ($\beta = -.37$, $SE = .06$, 95% CI [-.48, -.25], $p < .001$). School connectedness was a significant predictor of depressive symptoms, ($\beta = -.30$, $SE = .04$, 95% CI [-.38, -.22], $p < .001$). Bully-victimization was a significant predictor of depressive symptoms ($\beta = .26$, $SE = .04$, 95% CI [.18, .33], $p < .001$). These results partially support the mediational hypothesis. Bully-victimization continued to be a significant predictor of depressive symptoms after controlling for school connectedness,

($\beta = .15$, $SE = .04$, 95% CI [.07, .22], $p < .001$) and the indirect effect was $\beta = .11$, $SE = .02$, 95% CI [.07, .16], $p < .001$. Approximately 33% of the variance in depressive symptoms was accounted for by the predictors ($R^2 = .33$, $F[2, 233] = 58.20$, $p < .001$).

Exploratory mediation analysis by ethnicity. Results for students of color (SoC) indicated that bully-victimization was a significant predictor of school connectedness, ($\beta = -.33$, $SE = .07$, 95% CI [-.47, -.18], $p < .001$). School connectedness was a significant predictor of depressive symptoms, ($\beta = -.27$, $SE = .04$, 95% CI [-.35, -.18], $p < .001$). Bully-victimization was a significant predictor of depressive symptoms ($\beta = .21$, $SE = .04$, 95% CI [.13, .29], $p < .001$). These results partially support the mediational hypothesis. Bully-victimization continued to be a significant predictor of depressive symptoms after controlling for school connectedness, ($\beta = .12$, $SE = .04$, 95% CI [.04, .20], $p = .004$) and the indirect effect was $\beta = .09$, $SE = .03$, 95% CI [.05, .15], $p < .001$. Approximately 30% of the variance in depressive symptoms was accounted for by the predictors ($R^2 = .30$, $F[2, 153] = 33.42$, $p < .001$).

Results for White students indicated that bully-victimization was a significant predictor of school connectedness, ($\beta = -.34$, $SE = .06$, 95% CI [-.45, -.23], $p < .001$). School connectedness was a significant predictor of depressive symptoms, ($\beta = -.22$, $SE = .04$, 95% CI [-.29, -.15], $p < .001$). Bully-victimization was a significant predictor of depressive symptoms ($\beta = .28$, $SE = .04$, 95% CI [.22, .35], $p < .001$). These results partially support the mediational hypothesis. Bully-victimization continued to be a significant predictor of depressive symptoms after controlling for school connectedness,

($\beta = .21$, SE = .03, 95% CI [.14, .27], $p < .001$) and the indirect effect was $\beta = .07$, SE = .02, 95% CI [.04, .12], $p < .001$. Approximately 35% of the variance in depressive symptoms was accounted for by the predictors ($R^2 = .35$, $F[2, 232] = 62.41$, $p < .001$).

Chapter Six: Discussion

The present study sought to expand the literature on bullying, depression, and school connectedness in early adolescence. Schools play an important role in the development of children and adolescents. Students spend a significant amount of time in school compared to other settings, this where they begin forming relationships outside of their family system. Their relationships with peers, teachers, and other school staff become increasingly important in their development as they are beginning to explore their identity. Experiences with bullying can have a detrimental impact on student's wellbeing and sense of connectedness to school (Espelage, & Swearer, 2003; Espelage, Mebane, & Swearer, 2004; Hawker & Boulton, 2000; Juvonen, Graham, & Schuster, 2003; Pepler, Jiang, Craig, & Connolly, 2008; Skues, Cunningham, & Pokharel, 2005). When students are the victims of bullying, they feel rejected by peers and neglected by adults (Schwartz et al., 2015). The current study aimed to further research by examining the mediating role of school connectedness on the relationship between bully victimization and depressive symptoms in middle school students. Additionally, it examined if level of school connectedness differed based on sex and bullying victimization classification group (i.e., bully, victim, bully-victim, and non-involved).

Primary Study Results

Hypothesis. The association between school connectedness and symptoms of depression ($r = -.51$) was consistent with previous studies that report correlations ranging

from -.45 to -.71 (Anderman, 2002; Bond et al., 2007; Shochet et al., 2006; Shochet et al., 2008).

This investigation found that low school connectedness had a significant partial mediation effect on the relationship between bully-victimization and depression in early adolescent students. Contrary to what was hypothesized school connectedness was not a full mediator as bully-victimization continued to be a significant predictor of depressive symptoms after accounting for school connectedness. However, the results highlight school connectedness was a significant predictor with depressive symptoms. The independent variables (victimization and school connectedness) accounted for 34% of the variance in depression scores.

These findings are consistent with previous research suggesting school connectedness as partial mediator in various relationships (Shochet et al., 2008; Ross et al., 2010; You et al, 2008) in adolescents. For example, Shochet et al. (2008) found school connectedness partially mediated the relationship between parental attachment and depressive symptoms. Ross et al. (2010) found the inclusion of school connectedness increased the variance from 26% with social skills to 49% in predicting preadolescent depressive symptoms. You et al. (2008) found school connectedness between hope and enhanced global life satisfaction for students who reported no victimization experiences. Hatchel et al. (2018) found school belonging mediated the association between sexual harassment victimization and depressive symptoms among LGBTQ adolescents, the overall indirect effect was .04, ($p < .05$). However, Loukas et al. (2006) found school

connectedness did not mediate the relationship between school friction and depressive symptoms.

Research Question. Results did not find a significant interaction for gender and bullying categorization group, but there was a main effect for bullying categorization group with school connectedness. Students in the bully, victim, and bully-victim groups had similar low levels of school connectedness in comparison to non-involved students. As mentioned earlier, few studies have specifically explored the relation between bullying and school connectedness. Unfortunately, most research examining levels of school connectedness tends to focus on victims and bullies, but not so much on other student profiles (i.e. bully-victims, non-involved) limiting comparison with other studies (Veenstra et al., 2005). Skues et al. (2005) found that bullied students had lower self-esteem and were less socially connected to their peers and teachers than their non-bullied counterparts.

These studies show that lower levels of connectedness are associated with increased risk of bully-victimization (You et al, 2008). You et al. (2008) found similar results regarding levels of school connectedness with non-involved youth reporting more school connectedness than victims and bully-victims, bully group was not examined in that study. Students in the non-involved group reported higher scores in measures of hope, life satisfaction, and school connectedness followed by the victim and bully-victim group, respectively (You et al., 2008). However, like the current study victims and bully-victims had low levels of school connectedness compared non-involved youth. You and

colleagues (2008) did not include a bully group, so comparison of findings is limited to three groups instead of four using in this study.

Goldbach et al. (2018) examined the utility of a more complex bullying threshold that allowed for both low and high involvement in the three typical bullying roles (i.e., bully-only, victim-only, and bully-victim). This combination of frequency and intensity of involvement resulted in nine categories: bully-only-high, bully-high-victim-low, victim-only-high, bully-low-victim-high, bully-high-victim-high, bully-only-low, victim-only-low, bully-low-victim-low, and not involved. Higher levels of school bonding were significantly associated with lower odds of being a bully-only-low (AOR = 0.65, $p < .001$), bully-high-victim-low (AOR = 0.50, $p < .001$), bully-high-victim-high (AOR = 0.47, $p < .001$), and bully-only-high (AOR = 0.40, $p < .001$). These findings suggest that school connection levels vary according to the frequency and intensity of bullying experience. This study provides an additional way to explore bullying experience and how it impacts school bonding. However, non-involvement was used as a comparison to the other eight groups making comparisons across studies difficult.

Findings highlight the need to expand anti-bullying programs to target students in other categories besides victims (Bradshaw, 2015; Ttofi, & Farrington, 2011). In this study, not only were victims of bullying feeling less connected, but bullies and bully-victims reported similarly low levels of school connectedness. Research suggests that anti-bullying programs should incorporate support, services, and resources for students who are perpetrators of bullying as this is also an area of concern because these students are also experiencing difficulties (Ttofi, & Farrington, 2011). Often services are provided

to students with internalizing behaviors (e.g., depression, anxiety) and punishment is given to students who display externalizing behaviors (e.g., aggressive, conduct problems). Unfortunately, the acting out behavior is sometimes an indication that the student is struggling or having difficulties and that is the only way they can communicate the need for help.

Supplementary Analyses

Exploratory mediation analysis by gender. Somewhat different results were found between boys and girls. Approximately 43% of the variance in depressive symptoms was accounted for by the predictors (victimization and school connectedness) in boys compared to 33% in girls. This is an interesting finding as it seems school connectedness can better explain the variance in depression for boys than for girls. Though not statistically significant victimization was slightly higher for boys ($M = 52.19$) than for girls ($M = 50.57$), $p = .15$. When school connectedness was included as a mediator between bully-victimization and depression the standardized coefficient was $b = .22$ for boys compared to $b = .14$ for girls.

Mean scores for boys and girls were relatively similar in the victimization, depressive, and school connectedness scale. However, boys reported scored higher on the bullying scale compared to girls. This is consistent with findings from other studies that suggest boys engage in more bullying behaviors (Reynolds, 2008).

Exploratory mediation analysis by ethnicity. Results varied by ethnicity; school connectedness accounted 30% of the variance in depressive symptoms for SoC compared

to 35% to the variance of White students. As previously mentioned, levels of school connectedness were significantly higher for White students ($M = 51.03$ vs $M = 48.15$) than SoC. When school connectedness was included as a mediator between bully-victimization and depression the standardized coefficient was $b = .12$ for SoC and $b = .21$ for White students, compared to $b = .18$ for the total sample.

Mean scores were similar for students of color and White students in the victimization, bullying, and depressive scale. Students of color reported lower levels of school connectedness compared to White students. Similar to other studies where students of ethnic minority tend to report lower levels of school connectedness (Goodenow, 1993; McNeely, Nonnemaker, & Blum, 2002). Goodenow (1993) and McNeely et al. (2002) suggest when student's ethnicity matches with that of the school's majority ethnic composition, students feel more connected. McNeely et al. (2002) asserts that when a majority of the school's ethnic composition is the same, most of the students feel connected with the exception of the ethnic minority regardless of the ethnic group.

Limitations

These results need to be considered within the context of the cross-sectional design and limits on inference of causality. The role of school connectedness is likely only one of many factors that shape how these issues are related and our study was unable to control for various possible extraneous variables. Exploratory mediation analyses were used to describe the relationship for each group based on gender and ethnicity, therefore models were not compared to each other. Research designs with

multiple informants (e.g., teachers, peers, parents, and mental health professionals) may offer additional information than that obtained with self-report (Bradshaw, 2015).

The sample size for the victim (3.7%) and bully-victim (4.5%) groups were relatively small in comparison to the other group categories such as bully (18.4%) and non-involved (71.6%). Future studies can use power analysis to establish a group size for each group that is adequate to detect significant mean differences across groups which might have been a limitation to the research question.

Another limitation to this study was the lack of ethnic diversity across ethnic groups limiting generalizability of the results to specific ethnic groups. What the results suggest is that school connectedness should be studied in schools with a more diverse ethnic composition. As results from this study suggest, ethnic minorities might have more difficulty developing feelings of connectedness to a school that does not represent their ethnic background. School connectedness tends to be higher in schools that are ethnically segregated than in integrated school because most students are represented by the school ethnic composition (Goldbach et al, 2018). However, this creates a difficulty to those students not in the ethnic majority as they are less connected in comparison to their ethnic majority peers (Goodenow, 1993; McNeely et al., 2002). Despite these limitations, the findings of the present study provide valuable insight into factors that can protect those involved in bullying.

Future Directions

Findings have implications for clinical assessment, prevention, and treatment. Early and routine assessment of psychological symptoms and other school climate experiences should be implemented to screen for children. The assessment of these factors can be used to enhance school connectedness during individual treatments. When students lack school connectedness they are at a higher risk for a variety of psychological difficulties. Interventions should expand their focus from changing the school environment to smaller actions at the individual level.

One of the most well-known bullying prevention programs is the Olweus Bullying Prevention Program (Olweus, 2005), which is a multicomponent, schoolwide prevention program. This program addresses bullying by implementing components at different levels from the individual level to more general school-wide level. Components include: classroom activities and meetings, targeted interventions (i.e., those identified as bullies or victims), activities aimed to increase parent involvement, and activities that involve school staff. Some studies of the Olweus Bullying Prevention Program have reported significant reductions in students' reports of bullying, conduct problems, and other antisocial behaviors (e.g., fighting, truancy) and improvements in school climate (Olweus et al., 1999). However, other smaller scale studies of this program have produced mixed results (e.g., Hanewinkel, 2004). Using some components of the Olweus Bullying Prevention Program have demonstrated promising at reducing bullying in North

American schools (e.g., Bradshaw, 2015; Pepler, Craig, O'Connell, Atlas, & Charach, 2004), while it seems these programs were generally more effective in European schools.

Another promising program is the Finish KiVa Program, which similar to the Olweus Bullying Prevention Program provides school-wide (i.e., school staff and parents are provided with information about bullying and efficacy to intervene and prevent it) and individual instruction (i.e., encouraging students to support victimized peers instead of providing social rewards to the bullies) for anti-bullying program implementation (Salmivalli, Poskiparta, Ahtola, & Haataja, 2013). Results showed KiVa significantly reduced 30% of victimization and 17% of bullying. Other beneficial outcomes that went beyond the initially intended reductions in bullying and victimization such as: a reduction in students' internalizing symptoms (e.g., anxiety and depression), improving peer interactions, increased school satisfaction, and academic performance among students in KiVa schools (compared to control schools).

Many bullying prevention programs can have components to improve school connectedness by informing and equipping teachers with skills and strategies to foster school connectedness could complement interventions that address other individual risk factors for depression and other adolescent problems (Bradshaw, 2015; Ttofi, & Farrington, 2011). There is a large body of literature discussing and evaluating factors that promote school connectedness (e.g. Anderman & Freeman, 2004; Blum & Libbey, 2004; Klem & Connell, 2004). Common themes include involving students in classroom decisions, avoiding any form of discrimination, rewarding effort rather than achievement, building strong relationships with peers and other adults in the school. Enhancing

individual skills, such as social skills, emotion regulation, and other strategies to help students deal with difficult situations in school and outside of school (Ross et al., 2010).

Future research should focus on developing and evaluating interventions to assist in achieving these objectives. Attention to this issue could also be reflected in staff recruitment, training, and compensation for mental health trainings for school staff. Research suggests that a significant proportion of the differences in school connectedness can be predicted by classroom management and inclusion in extracurricular school activity (McNeely et al., 2002). Interventions encouraging teachers to promote a climate of warmth, acceptance, inclusion, and equity may indeed prove successful, particularly in the prevention of future depressive and other mental health symptoms. Research should explore school's composition (e.g., class size, school policies, school safety) and the potential ways schools can improve student well-being (Waters et al., 2009). As highlighted by previous research school connectedness is lower in schools where classroom management is a problem (McNeely et al, 2002).

In terms of policy, results suggest that mental health promotion should certainly start in elementary schools. Such interventions need to be multifaceted and interdisciplinary working with multiple professionals to make sure students are receiving the support for their education and mental health (Brookmeyer, Fanti, & Henrich, 2006). Policymakers need to be aware that connectedness to individuals and social systems such as schools play an important role in mental health outcomes (Bond et al., 2007). Creating an environment where all children can thrive will be an investment for the future of many generations.

Previous research indicates that school-based programs have the potential to increase connectedness and decrease adolescent risk-taking behaviors (Chapman, Buckley, Reveruzzi, Sheehan, 2014; Chapman, Buckley, Sheehan, & Shochet, 2013). Our results suggest that efforts should expand from services not only to victims of bullying, but any other students involved in bullying such as bullies and bully-victims. Given that school connectedness decreases as youth age (Whitlock, 2004), efforts aimed at enhancing school connectedness could ensure that youth have an additional support avenue through the challenges of adolescence. Policy efforts have been taking momentum to increase funding for school-based mental health as policymakers are realizing the benefits to increase mental health services in schools where many children and families spend time (Moore, Hurt, & Shore, 2015).

The Centers for Disease Control and Prevention (CDC, 2009) report on school connectedness offers six strategies to increase the school connectedness. The first strategy involves creating decision-making processes that facilitate engagement (e.g., student, family, and community). The second strategy involves providing educational opportunities to enable families to be actively involved in their children's academic and school life (e.g., having family dinners, information nights). Third, providing students with the skills necessary to be actively engaged in school (i.e., academic, emotional, and social). Fourth, using effective classroom management and teaching methods to foster a positive learning environment (e.g., classroom rules and code of conduct informed by student feedback). Fifth, provide professional development and support for teachers and other school staff (i.e., trainings to enable them to meet the diverse cognitive, emotional,

and social needs of students). Sixth, create trusting and caring relationships that promote open communication among adults involved in students' lives (e.g., administrators, teachers, staff, students, families, and community members). These recommendations to increase school connectedness are in line with suggestions for anti-bullying programs (Bradshaw, 2015; Ttofi, & Farrington, 2011).

Conclusions

Recent acts of violence in American schools remind us of the importance of addressing mental health concerns in our school system (Bradshaw, 2015). Bullying continues to be an issue of concern to many students, parents, teachers, school officials, and policy stakeholders. The current study found low levels of school connectedness partially mediated the relationship between bully victimization and depressive symptoms. These findings add to the emerging evidence of a link between school connectedness and depressive symptoms. Results show school connectedness is not only a correlate, but a predictor of depressive symptoms in early adolescence. This study also suggests that other factors might be important predictors in the relationship between school connectedness and depressive symptoms. Results also showed non-involved youth reported higher levels of school connectedness compared to bullies, victims, and bully-victim. However, future studies should examine group size that insures statistical power to significantly detect meaningful group differences.

Recommendations for preventing bullying suggest multicomponent programming where interventions are provided in a multitiered system such that when students are not

responding to a level of intervention (e.g., Tier 1) they receive increasingly more intensive interventions until the symptoms are reduced (Bradshaw, 2015). Additionally, schools should address their school climate and other ecological factors (e.g. safety, school engagement, policies) that would translate to reductions in bullying (Shochet et al., 2011; Swearer, Espelage, Vaillancourt, & Hymel, 2010; Waters et al., 2009). The identification of interpersonal and organizational aspects of the school environment that targets acts of aggression such as bullying and promote prosocial behaviors from students and those around them can be beneficial. Creating a school environment where students feel autonomous, competent, and connected can lead to improved health and well-being for students. Consistent with the ecological framework of addressing bullying engaging families and the whole community in these efforts will contribute to better outcomes at reducing bullying and other related issues (Waters et al., 2009).

Increasing school connectedness could provide opportunities for students to ask for help and seek support from others at school. Students who feel more connected to their school may be more comfortable reaching out to peers, teachers, or other school staff when they are struggling or when they feel unsafe in their school environment (CDC, 2009). Children and adolescents are establishing patterns of behavior and making lifestyle choices that affect both their current and future health. Families, schools, and communities all need to work together to create an environment that facilitates healthy development of children and adolescents. Research has shown that students who feel more connected to school are more likely to have positive health and education outcomes (Blum & Libbey, 2004; CDC, 2009; Lester et al., 2013; Waters et al., 2009; Waters et al.,

2010). In combination with evidence-based programs, strategies such as these can help schools have the greatest impact on the health and education outcomes of their students (Waters et al., 2009).

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Appendix A

Bully Victimization Scale

Due to copyright laws, copies of the Bully Victimization Scale will not be included here.

A copy of the scale was available for committee members to view at the thesis proposal and defense. Also, sample questions are included in the Methods section.

Appendix B

Reynolds Adolescent Depression Scale-2: Short Form

Due to copyright laws, copies of the Reynolds Adolescent Depression Scale-2: Short Form will not be included here. A copy of the scale was available for committee members to view at the thesis proposal and defense. Also, sample questions are included in the Methods section.

Appendix C

Psychological Sense of School Membership

SC

Please circle the number to indicate how true you believe the statement to be.	Not at All True	Somewhat True	Mostly True	Completely True
1. I feel like a real part of my school.	1	2	3	4
2. People here notice when I am good at something.	1	2	3	4
3. It is hard for people like me to be accepted here.	1	2	3	4
4. Other students in the school take my opinions seriously.	1	2	3	4
5. Most teachers at my school are interested in me.	1	2	3	4
6. Sometimes I feel as if I don't belong here.	1	2	3	4
7. There's at least one teacher or other adult in this school I can talk to if I have a problem.	1	2	3	4
8. People at this school are friendly to me.	1	2	3	4
9. Teachers here are not interested in people like me.	1	2	3	4
10. I am included in lots of activities at my school.	1	2	3	4
11. I am treated with as much respect as other students	1	2	3	4
12. I feel very different from most other students here.	1	2	3	4
13. I can really be myself at this school.	1	2	3	4
14. The teachers here respect me.	1	2	3	4
15. People here know I can do good work.	1	2	3	4
16. I wish I were in a different school.	1	2	3	4
17. I feel proud of belonging to my school.	1	2	3	4
18. Other students here like me the way I am.	1	2	3	4