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Enhancing School Connectedness to Prevent Violence and Promote Wellbeing

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Final Manuscript

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Abstract

School connectedness is “the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment” (Goodenow, 1993, p. 80). It is an important predictor of school violence, as well as related outcomes such as health risk behaviors and mental health. Connectedness reduces initial incidents of violence, buffers the effect of violence exposure, and promotes an anti-bullying culture. School violence and bullying have also been associated with a subsequent decrease in school connectedness. Several theories contribute to our understanding of these relations but the construct, theoretical underpinnings, and pathways in and out of school connectedness require further examination. Despite numerous promising interventions, this line of research is in its infancy. Interventions harnessing this protective factor may have a ubiquitous positive impact on adolescent development.

Enhancing School Connectedness to Prevent Violence and Promote Wellbeing

School connectedness is associated with a remarkable range of child and adolescent outcomes, including psychological wellbeing, antisocial and health risk behaviors, academic motivation, and academic achievement (e.g., Anderman & Freeman, 2004; Blum, 2005; Loukas, Ripperger-Suhler, & Horton, 2009). Further, multiple forms of harm are associated with students becoming disconnected from school (Bond et al., 2007). This chapter examines the construct of school connectedness, with additional focus on its association with school violence. We will begin by defining school connectedness and school violence, followed by a review of the research investigating the relations between these constructs and the related outcomes of health risk behaviors and mental health. Likely theoretical underpinnings of these relations will then be discussed. Pathways in and out of school connectedness will be presented before briefly reviewing a number of interventions that have sought to enhance school connectedness. We conclude by proposing future research directions.

Definitions

School Connectedness

Within the literature investigating students' relationship to school, numerous terms overlap and are used differently by different researchers, including school connectedness, school attachment, school bonding, school engagement, school climate, school involvement, and sense of belonging (Jimerson, Campos, & Greif, 2003; Libbey, 2004; Loukas et al., 2009; Whitlock, 2006). There is limited theoretical consistency in the way these constructs are defined and measured, and different definitions have been attributed to the same terms (Libbey). Despite this, school connectedness tends to refer to the interpersonal or affective aspects of the school environment, indicating the extent to which students feel cared for within the school context and part of their school (Ozer, 2005; Resnick et al., 1997; Wilson, 2004). Goodenow's (1993) Psychological Sense of School Membership (PSSM) scale is one

measure of school connectedness and includes items such as, “I feel like a real part of this school”, “There’s at least one teacher or other adult in this school I can talk to if I have a problem”, and, “Other students here like me the way I am”. Although differing definitions of school connectedness exist, there is widespread consensus that school connectedness is a powerful predictor of significant child and adolescent outcomes, such as mental health and health-risk behaviors.

School Violence

School violence has been conceptualized as a spectrum of behaviors that interfere with a school’s objective to be free of aggression, drugs, weapons, disruptions, and disorder; or that violate a school’s educational goals or respectful climate (Miller & Kraus, 2008). Specific behaviors included in a definition of school violence include bullying, harassment, physical intimidation, and assaults (Furlong, Pavelski, & Saxton, 2002). Although bullying has been described as one of the most common and potentially serious forms of school violence (Elinoff, Chafouleas, & Sassu, 2004), others differentiate bullying from school violence (Orpinas & Horne, 2006). As such, we will consider bullying and school violence separately in this chapter, despite recognizing an overlap between these constructs.

Research Investigating the Link between School Connectedness and School Violence

The Effect of School Connectedness on School Violence

Numerous studies with cross-sectional designs have found an inverse association between school connectedness and engagement in violent behavior (Fong, Vogel, & Vogel, 2008; Resnick et al., 1997; Wilson, 2004). Several prospective studies have yielded similar findings, with school connectedness associated with lower rates of future violence commission (Dornbusch, Erickson, Laird, & Wong, 2001; Frey, Ruchkin, Martin, & Schwab-Stone, 2009; Henrich, Brookmeyer, & Shahar, 2005; Herrenkohl et al., 2003). For example, Resnick, Ireland, and Borowsky (2004) analyzed data from two waves (across 12 months) of

the National Longitudinal Study of Adolescent Health (Add Health), a large study conducted in the United States (US). A national probability sample comprising 14,738 seventh to twelfth graders completed in-home data collection. Results indicated that fewer students with higher levels of school connectedness engaged in violent behavior one year later (30% compared to 42% for boys; and 19% compared to 24% for girls), compared to students with lower levels of school connectedness. It also seems important to note that several prospective studies suggest that school connectedness is more strongly linked to deterrence from initial engagement in deviant behavior than a reduction following engagement in the behavior (Dornbusch et al.; Henrich et al.), which may have implications for the timing of interventions. Finally, the finding that school connectedness was a stronger protective factor in predicting future violence than both family connectedness and religious attendance (Blum & Ireland, 2004) highlights the magnitude of the relation between school connectedness and school violence.

The Effect of School Connectedness on the Outcomes of School Violence

Findings pertaining to the moderating role of school connectedness in the context of school violence exposure are mixed. In regards to the relation between violence exposure and future violence commission, some studies have found that despite a main effect, school connectedness did not moderate the relation between violence exposure and future violence commission (Dornbusch et al., 2001; Henrich et al., 2005). In contrast, Brookmeyer, Fanti, and Henrich (2006) found more promising results analyzing a sub-set of data from the Add Health study. A total of 6,397 students were included from this national probability sample in the US, completing in-home interviews and in-school surveys, across two waves (12 months apart). Results indicated that for students highly connected with both their school and parents, the relation between violence exposure and subsequent violent behavior was diminished. Further, when students were disconnected from their schools, connectedness

with their parents was unable to buffer the relation between violence exposure and subsequent violence commission. This finding suggests that school connectedness may be able to weaken the link between violence exposure and subsequent violence commission.

The moderating role of school connectedness in relation to the effects of violence on wellbeing has also been investigated, again with mixed results. As a main effect, school connectedness was found to be protective against numerous adverse wellbeing outcomes in adolescents exposed to violence (e.g. self and teacher-rated depressive symptoms, teacher-rated anxiety), yet it was unable to moderate the relation between violence exposure and psychological functioning (Ozer, 2005). Other studies have, however, demonstrated more promising results. Logan (2009) found that students abused by a peer were less likely to experience suicidal ideation if they were connected to school (16%) than if they did not report this protective factor (35%) (statistically controlling for other protective factors in the model). Flaspohler, Elfstrom, Vanderzee, Sink, and Birchmeier (2009) found that students with more positive perceptions of peer and teacher support exhibited a weaker association between victimization and subjective wellbeing. These studies suggest that school connectedness may be able to buffer the effects of school violence on wellbeing outcomes.

The Association Between School Connectedness and Bullying

It is also instructive to consider the relation between school connectedness and bullying. It appears that school connected peers may prosocially intervene to influence the outcomes of an incident of bullying (Salmivalli, 1999) and can help establish an anti-bullying culture in the school (Ahmed, 2008). As part of the Cross National School Behavior Research Project, Ahmed investigated the relation between school connectedness and bystanders' responses to bullying. Participants were 1,452 seventh to tenth graders from six secondary schools in the capital of Bangladesh, likely to represent a relatively wealthy sub-set of the Bangladeshi population. Participants observed videos depicting different kinds of

bullying before completing related questionnaires. Results indicated that students with a higher level of school connectedness were more likely to intervene in episodes of bullying ($r = .39; p < .001$). Ahmed conceptualized bystanders as “soft targets”, more easily moved by a sense of responsibility and collective guilt/shame than bullies who are considered “hard targets”. The potential impact school connectedness may have on bystanders appears to be particularly important as peers are more likely than teachers to witness bullying and often are more able to intervene (Ahmed).

Research on Poor School Connectedness as an Outcome of School Violence and Bullying

We have detailed how school connectedness may influence school violence and bullying, yet school violence and bullying may also lead to a subsequent decline in school connectedness. Skues, Cunningham, and Pokharel (2005) found that bullied students in grades 7 to 12 felt less connected to their peers, teachers, and school. You et al. (2008) found this relation may be particularly pertinent to certain groups of bullied students, with “bullied victims” (those who were bullied and perceived a power imbalance) having significantly lower levels of school connectedness than both non-victims and “peer victims” (those who were bullied but reported no perceived power imbalance). In relation to violence, several studies have found that both witnessing violence and being the victim of violence were adversely related to subsequent school connectedness (Janosz et al., 2008; Mrug & Windle, 2009). Perpetrators of violence may also be at risk of subsequent reductions in school connectedness, with engagement in violent behavior being found to predict between 6 and 13% of the variance in subsequent connectedness to teachers (Karcher, 2002). These studies highlight the adverse impact school violence and bullying can have on the school connectedness of all students those involved – perpetrators, victims, and bystanders.

Research Investigating the Link between School Connectedness, Health Risk Behaviors, and Wellbeing

Considerable evidence suggests that school connectedness is also an important predictor of a wide range of other health risk behaviors (e.g., Dornbusch et al., 2001; Resnick et al., 1997) and mental health outcomes (e.g., Anderman, 2002; Shochet, Dadds, Ham, & Montague, 2006). Given the substantial overlap in violence and engagement in health risk behaviors (e.g., Jessor, 1992), as well as the significant overlap between internalizing and externalizing problems during childhood and adolescence (e.g., Muratori, Salvadori, Picchi, & Milone, 2004), we will briefly examine the role school connectedness plays in inhibiting engagement in other health risk behaviors and its protective role in mental health problems.

Numerous studies have found school connectedness to be related to lower rates of health risk behaviors. School connectedness has been inversely associated with behaviors such as smoking cigarettes, drinking alcohol, other substance use, and delinquent behavior, in both cross-sectional (Simon-Morton, Crump, Haynie, & Saylor, 1999; Resnick et al., 1997) and prospective studies (Bond et al., 2007). Dornbusch et al. (2001) investigated the relation between school connectedness and a number of deviant behaviors using a longitudinal design (two waves, 12 months apart) and in-home data collection. This study utilized a national probability sample, comprising 13,568 seventh to twelfth graders (a sub-set of the Add Health data-set). Results indicated that school connectedness was associated with decreases in cigarette smoking ($r = -.17, p < .001$), alcohol use ($r = -.14, p < .001$), marijuana use ($r = -.17, p < .001$), and delinquency ($r = -.19, p < .001$), one year later.

Research also indicates that school connectedness is an important predictor of mental health. In one study, school connectedness was able to account for 49% of the variance in depressive symptoms in adolescents, whereas attachment to parents accounted for 28% of variance (Shochet, Homel, Cockshaw, & Montgomery, 2008). Other studies have also found

an association between depressive symptoms and school connectedness (Anderman, 2002; Jacobson & Rowe, 1999). Shochet et al. (2006) conducted a prospective study with 2,022 students aged 12 to 14 years, drawn from 14 public schools across three Australian states. This sample reflected the ethnic mix of the Australian population. Students completed a battery of questionnaires at two time points (12 months apart). Results indicated that not only was school connectedness significantly correlated with concurrent depression (covariation ranging from 38% to 55%), general functioning (covariation ranging from 26% to 46%), and anxiety symptoms (covariation ranging from 9% to 16%), but it was also able to predict depressive symptoms one year later for both boys and girls, anxiety symptoms one year later for girls, and general functioning one year later for boys, after controlling for initial symptoms. These studies highlight the magnitude of the relation between school connectedness and a number of important child and adolescent wellbeing outcomes.

Likely Theoretical Underpinnings

Having established a range of outcomes associated with school connectedness, it seems important to examine why this construct is so broadly important. Although widespread consensus on the theoretical underpinnings of school connectedness has not yet been established, several theories are useful in clarifying the reasons school connectedness is related to various student outcomes. In this section we present key theories that provide explanations for a link between school connectedness and school violence, as well as other health risk behaviors and mental health outcomes. Social control theory, social development theory, and sociometer theory will each be discussed.

Social Control Theory

Social control theory highlights how school connectedness may function as an informal control inhibiting engagement in problematic behavior (Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004). An individual's connection to society is purported to

control their behavior, with weak or non-existent bonds more likely to result in delinquent behavior (Hirschi, 2004). The connection between individual and school is one such important bond (Dornbusch et al., 2001). Four elements are implicated in this bond: attachment, commitment, involvement, and belief (Hirschi), and a deficit in any of these facets of bonding may contribute to an increased likelihood of delinquent behaviors, including school violence. Conversely, students bonded to their school are more likely to adopt anti-risk behavior and prosocial values (Hawkins, Guo, Hill, Battin-Pearson, & Abbott, 2001).

Social Development Model

The social development model extends these ideas, integrating elements of social learning theories in addition to control theories (Maddox & Prinz, 2003). In line with social control theory, it hypothesizes that a bond between the individual and the socializing unit reduces the likelihood of the individual behaving in ways inconsistent with the beliefs and practices of the unit (Catalano et al., 2004). However, this model also incorporates the premise that children and adolescents learn behavior from their social environment, whether prosocial or antisocial, and accordingly, an individual's behavior may be prosocial or antisocial depending upon the behaviors, norms, and values of those with whom they are bonded (Catalano et al.). McNeely and Falci (2004) use the labels *conventional* or *unconventional* to describe connections with those who engage in prosocial behavior and antisocial behavior respectively. While it is assumed that connections to adults in the school setting would be conventional, connections to peers may be either conventional or unconventional, depending on peer group norms (McNeely & Falci). Unconventional connectedness may account for findings of some studies that peer support was not associated with the same positive outcomes as was teacher support (e.g., McLellan, Rissel, Donnelly, & Bauman, 1999; McNeely & Falci).

Sociometer Theory

Sociometer theory (e.g., Leary, 2005) further adds to our understanding of the mechanisms underlying the relation between school connectedness, violence, and other wellbeing outcomes, tying together the importance of connectedness to self-worth, self and affect regulation, behavioral control, and emotional wellbeing. This theory emphasizes the importance of perceived relational value, suggesting that self-esteem serves as a “sociometer”, monitoring the social environment for any indication that relational value is low or decreasing (Leary). Individuals who perceive their relational value to be poor or in decline are more prone to various states of “negative affect” (e.g., anxiety, depression, hostility, loneliness) (Leary). The biological function of the sociometer is to ensure the individual continues to be included, supported, and therefore protected by the group (Leary).

Sociometer theory affords greater understanding of the complex and reciprocal relations between school connectedness, school violence, and mental health outcomes. Shochet, Smith, Furlong, and Homel (2010) suggested that low levels of school connectedness represent poor perceived relational value in the school setting. As students perceive their relational value within the school context to be low or declining, a number of aversive emotional outcomes may result (Leary, 2005), thus providing some explanation of the link between school connectedness and mental health outcomes and lack of affect regulation. Emotional outcomes such as hostility may lead to an increased likelihood of violent behavior. Indeed, significantly higher proportions of young people classified as violent (as compared to non-violent youth) did not perceive themselves to be liked by their peers (49% boys, 41% girls) (Thomas & Smith, 2004). School violence may also lead to decreased connectedness, as being the victim of bullying or violence may lead to concerns regards one’s relation value, and thus a sense of being less connected, with the perpetrator/s as well as peers/teachers who may not have intervened (Skues et al., 2005).

Pathways In and Out of School Connectedness

Research investigating the pathways in and out of school connectedness suggests that a range of predictors are important, from those functioning at a school-wide level to individual differences. On a broader scale, poorer school connectedness appears to be associated with a number of school environment factors such as problematic classroom climates and larger schools (McNeely, Nonnemaker, & Blum, 2002). Waters, Cross, and Shaw (2010) investigated predictors of school connectedness in a prospective study over one year, using a battery of questionnaires. The sample consisted of 5,159 eighth graders from 39 randomly selected secondary schools in Perth, Australia (including both government and non-government schools). Results indicated that approximately 25% of the variance in school connectedness was attributed to a number of between-school differences, including school size, socio-economic status, priority for pastoral care at the school, and schools' averages on state-wide standardized academic outcome measures. Staff variables also appear to have an impact upon school connectedness, with supportive school leadership, positive connectedness (Beets et al., 2008), and teachers' abilities to interact in a supportive and respectful manner with students (Juvonen, 2007) identified as important. School connectedness has also been found to be higher amongst students who participate in extracurricular activities, receive higher grades, and have high school attendance rates (McNeely et al.).

Individual differences are also relevant. Recent research suggests that social skills account for some of the individual differences in school connectedness (Ross, Shochet, & Bellair, 2010), as does parental attachment (Shochet, Smyth, & Homel, 2007) and family connectedness (Waters et al., 2010). Rejection sensitivity also seems an important factor that may influence one's sense of school connectedness (Shochet et al., 2010). Given the varied range of factors that may impact upon school connectedness, it seems the most effective school connectedness interventions will be integrative and multi-layered. Such interventions

target the school as an organization, as well as more directly focusing on teachers and individual students, thereby utilizing this array of pathways that lead to school connectedness.

Promoting School Connectedness

Although research on school connectedness and how best to enhance it is in the early stages, a number of interventions have been developed and implemented in an attempt to improve school connectedness and associated outcomes and benefit students and their schools via a range of pathways. We will briefly review several of these interventions, providing study results where available.

The *Gatehouse Project* was a school-based program aiming to enhance student engagement and promote mental health (Bond, Glover, Godfrey, Butler, & Patton, 2001). A total of 2678 Australian grade 8 students were involved, drawn from 26 secondary schools (12 intervention and 14 control). Government, independent, and Catholic schools were included, from both metropolitan and regional areas. The intervention involved the establishment of a school-based adolescent health team and the identification of risk and protective factors specific to each school, via student surveys. These data were then used to identify and implement appropriate strategies to address issues raised. Although results so far have not supported a significant impact upon school engagement, there appears to have been positive effects in relation to substance use (Bond et al., 2004).

Going Places was a problem behavior prevention project that aimed to improve school bonding, as well as promote greater participation in classroom and school activities, enhance social skills and competence, and develop more positive social norms (Simons-Morton, Crump, Haynie, & Saylor, 1999). It involved seven middle schools from one school district in the US, randomized into intervention or comparison conditions. Two successive cohorts of sixth grade students were recruited and followed until the beginning of grade 9 ($N = 1,320$). The program included a student directed intervention as well as parent education and school

environment components. Results so far indicate that the intervention has reduced rates of smoking but it does not appear to have influenced antisocial behavior or alcohol use (Simons-Morton, Haynie, Saylor, Crump, & Chen, 2005). The impact of this intervention on school connectedness has not been reported.

The *Resourceful Adolescent Program for Teachers* (RAP-T) is a teacher training program that was designed to educate teachers about the importance of school connectedness and to assist them in developing strategies to improve the connectedness of their students (Shochet & Wurfl, 2006). RAP-T is an Australian program that was developed with four main goals: increase teachers' recognition of the importance and value of school connectedness for students' educational functioning, mental health, and wellbeing; provide guidance on key elements of school connectedness and enhancement strategies for everyday teaching; assist teachers in stress management; and support them with resources and strategies (Shochet & Ham, 2004). Although the effectiveness of RAP-T is yet to be assessed, it has been utilized within a number of government secondary schools.

The *Child Development Project* was a whole-school intervention program that aimed to reduce risk and promote resilience amongst young people, through helping enhance schools' sense of community (Battistich, Schaps, & Wilson, 2004). It included an intensive classroom program as well as school-wide and family involvement components. Twenty-four elementary schools (12 intervention and 12 control) were included from six districts across the US, representing a range of city, suburban, and rural schools. Participants were 1,434 fifth and sixth graders. Battistich et al. found that students receiving the program were more engaged in and committed to school, more prosocial, and engaged in fewer problem behaviors (e.g., alcohol use, marijuana use, some forms of delinquency) than those attending comparison schools. Almost all of the program's effects were mediated by students' sense of the school as a community.

Although school connectedness programs are in their infancy, outcome results highlight the promising capacity of school connectedness to influence important child and adolescent outcomes. The diversity of the components included in these programs emphasize the multiple pathways through which school connectedness can be enhanced. With a growing evidence base on which to ground school connectedness interventions, these programs seem likely to become more effective in enhancing school connectedness and associated outcomes.

Future Research

While the current status of school connectedness research leaves us with little doubt that it is an important predictor of a broad range of child and adolescent outcomes (Anderman & Freeman, 2004), more research is necessary before this promising construct can be adequately understood and its potential fully utilized. There remain definitional issues surrounding school connectedness and the construct needs to be further developed to enable improved research and practice. For interventions to become more grounded in evidence and well linked to this construct, the field needs to better understand theory underlying school connectedness, pathways in and out of school connectedness, and its associations with many important child and adolescent outcomes.

With regard to the specific relation between school violence and school connectedness research should clarify developmental factors that can help define the optimal timing and nature of school connectedness based interventions in order to prevent the initiation of acts of school violence. Further, it seems necessary to clarify and enhance the usefulness of school connectedness based strategies once students have been exposed to violence, for perpetrators, victims, and bystanders. Further, studies that support a prospective link between more positive school connectedness and lower levels of school violence will support a case for investing in the development and implementation of school connectedness based interventions that promote student wellbeing.

Conclusion

School connectedness has emerged as an important predictor of a broad range of child and adolescent wellbeing outcomes, including school violence, as well as other health risk behaviors and mental health outcomes. It may influence school violence and bullying via a number of processes: through a main effect on rates of school violence; by moderating the impact of exposure to school violence on future violent behavior and wellbeing outcomes; and by promoting an anti-bullying culture. However, a reciprocal relationship appears to exist, with school violence and bullying related to subsequent decreases in school connectedness. Although numerous theories enhance our understanding of these relations, further research is needed to better understand both the theoretical basis and practical implications of this important construct. Interventions aimed at improving school connectedness appear promising, but again further research seems essential for optimal intervention design and implementation. While school connectedness is only part of the solution in targeting school violence (Wilson, 2004), it appears to be an important and promising construct with great potential to contribute towards reducing school violence and promoting student wellbeing.

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Table 1

Implications for Practice: School Connectedness, School Violence, and Student Wellbeing

Summary	Implications
1. School connectedness is associated with a range of child and adolescent outcomes, including school violence, health risk behaviors, and mental health.	<ul style="list-style-type: none"> ● In targeting school connectedness, interventions may positively influence a plethora of key adolescent outcomes, in addition to school violence.
2. School connectedness influences school violence and bullying via a number of pathways i.e. a direct effect, a moderation effect on the outcomes of school violence, and an effect on school culture	<ul style="list-style-type: none"> ● School connectedness interventions that aim to reduce school violence and bullying should target all students – perpetrators, victims, and bystanders.
3. The relation between school violence and school connectedness also appears reciprocal.	<ul style="list-style-type: none"> ● We need to consider the school connectedness of students who have been involved in incidents of school violence and intervene as indicated.
4. Social control theory, social development theory, and sociometer theory differentially add to our understanding of how school violence (and other outcome variables) is related to school connectedness, yet a firmer theoretical base needs to be established.	<ul style="list-style-type: none"> ● Further research is necessary in order to gain a firmer theoretical grasp of school connectedness and its relation to key child and adolescent outcomes.
5. The pathways in and out of school connectedness are varied, with both individual factors (e.g., parental attachment, social skills) and school environment factors (e.g., school size, disciplinary policies, staff variables) appearing relevant. However, these pathways are still not clearly understood and it is possible that additional pathways will be identified as research progresses in this field.	<ul style="list-style-type: none"> ● School connectedness interventions should be multi-layered, targeting the school at an organizational level as well as focusing on teachers and individual students. ● Interventions should also be integrative, considering a range of factors (e.g., disciplinary policies, staff training and culture, social skills of students). ● Further research is necessary before we can gain a clearer and more complete understanding of the pathways in and out of school connectedness.
6. Several school connectedness based interventions have shown promising results; however, more research is needed before interventions can be based on strong evidence that ensures optimal harnessing of this important construct.	<ul style="list-style-type: none"> ● Further research investigating the efficacy and effectiveness of school connectedness interventions is needed. ● This research should be prospective in design, and assess a range of key health risk and mental health outcomes.