BULlying and victimization: school climate matters

By Jennifer L. Elstrom

Bullying at school is prevalent in the United States and worldwide, but little is known about the relationship between students’ experiences with bullying and their perceptions of school climate. This study investigated the link between bullying and three elements of school climate—social support from teachers, social support from peers, and school connectedness. The study used MANOVA analyses to confirm differences between students categorized as bullies, victims, bully-victims, and bystanders. Findings indicate that students who are not directly involved in bullying perceive more social support and school connectedness than all other students. Students who are bullied perceive less social support from peers than other students, while students who bully perceive less social support from teachers and connection to school than other students. Findings from this study support strategies to increase social support and school connectedness, as well as the meaningful involvement of both teachers and students in bullying prevention efforts.
BULLYING AND VICTIMIZATION:
SCHOOL CLIMATE MATTERS

A Thesis

Submitted to the
Faculty of Miami University
In partial fulfillment of
The requirements for the degree of
Masters of Arts
Department of Psychology
by
Jennifer L. Elfstrom
Miami University
Oxford, OH
2007

Advisor: _______________________________
Paul D. Flaspholzer, PhD

Reader: _______________________________
Carl E. Paternite, PhD

Reader: _______________________________
Zachary Birchmeier, PhD
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I would like to express my tremendous appreciation to my advisor, Dr. Paul Flaspohler, for his guidance and support throughout the process of completing this project, and over the past two years. I also gratefully acknowledge my committee members, Dr. Carl Paternite and Dr. Zak Birchmeier, for their encouragement and valuable feedback. Additionally, I appreciate the guidance Zak Birchmeier provided during the process of data analysis. I wish to acknowledge the contributions of all the fellow MUSCRATs and undergraduate research assistants who are collaborators on the Olweus Project and were an integral part of data collection. I would also like to express thanks to the fellow graduate students whose support has meant so much to me over the past two years. Finally, I would like to thank my family. I thank my sister, brother, and grandparents for all the love and encouragement they have given me over the years. I also thank Brad Gibson, for his love and support, which guides me through each day. I am especially grateful to my parents, Gary and Kathy Elfstrom, for always telling me they are proud of me, and giving me the strength to pursue my dreams.
Introduction

Students spend approximately seven hours a day in school. Their experiences while at school and the relationships they form within the school building are important contributors to academic and general success. Witnessing or being involved in bullying at school is a common experience that is associated with a host of negative outcomes (Nansel et al., 2001; Olweus, 1993a, 1993b, 1995; Whitney & Smith, 1994). In contrast, experiencing a school climate characterized by social support and feelings of school connectedness is often conceptualized as a protective factor and associated with positive outcomes (Resnick et. al., 1997; Cohen & Wills, 1985; Blum & Libbey, 2004). School climate and bullying are related negatively to one another, and school climate can improve as a result of bullying prevention efforts (Olweus, 1993a, 1995).

Researchers have begun to question whether students’ perceptions of school climate are related to the behaviors they typically exhibit in bullying situations. Although research in this area is limited, studies have provided initial support for the idea that children’s perceptions of certain aspects of school climate, such as feelings of being supported by teachers and peers and connected to school, are related to experiences with bullying (Demaray & Malecki, 2003; Haynie et al., 2001). The purpose of this study was to investigate the link between bullying and students’ perceptions of three specific aspects of school climate—social support from teacher, social support from peers, and school connectedness. Based on previous findings, this study sought to verify that perceptions of social support from teachers, social support from peers, and school connectedness differ for students categorized as bystanders, bullies, victims, and bully-victims.

Bullying

Bullying can be differentiated from other behaviors, such as fighting, rough and tumble play, and friendly teasing by three primary elements, (a) The action occurs repeatedly over time, (b) The action is negative in nature and can take several different forms, and (c) The action involves an imbalance of social or physical power. A frequently used definition encompasses all three elements;

- Bullying can be commonly defined as repeatedly (not just once or twice) harming others. This can be done by physical attack or by hurting others’ feelings through words, actions, or social exclusion. Bullying may be done by one person or by a group. It is an unfair match since the bully is either physically, verbally and/or socially stronger than the victim (Hazler, 1996, p. 6).
Similarly, Olweus (1995) describes the repeated and negative nature of bullying, asserting that a child is being bullied “When he or she is exposed, repeatedly and over time, to negative actions” (p. 197). Rigby and Slee (1993) depict the imbalance of power between bully and victim, stating, “Someone is deliberately hurting or frightening someone weaker than themselves…it is not bullying when two people of about the same strength have the odd fight or quarrel” (Peer Relations Questionnaire). These three primary elements of bullying allow for the differentiation of bullying from other types of aggression, and for the study of bullying as a distinct pattern of behavior.

Bullying in schools has become a topic of much attention both in the United States and in countries around the world. Governmental agencies and school districts alike are beginning to recognize that bullying is more than simply a harmless childhood behavior, and are attempting to decrease the incidence of bullying through policy and practice. The U.S. government has launched The National Bullying Prevention Campaign, through Health Resources and Services Administration’s Maternal and Child Health Bureau (U.S. Department of Health and Human Services, 2007). In addition, several states have passed legislation and created practice guidelines that pertain to schools’ responsibilities in the prevention of bullying and school violence (U.S. Department of Health and Human Services, 2004). While legislative action to prevent bullying is a relatively new development in the U.S., other countries such as Sweden, Norway and the United Kingdom responded to bullying with national policy as early as 1994 (Olweus, 2001a). The impact of these policies is yet to be known as large-scale, national studies of bullying prevalence have not been conducted since policies were put in place.

The most recent large-scale studies indicate that the prevalence of bullying ranges from 18% to 30% of students involved as either a bully, a victim, or both (Nansel et al., 2001; Olweus 1993a). Variability in prevalence rates might be a result sampling, efforts to address bullying, measurement, and/or the method of categorization. In the Netherlands, The Bully/Victim Questionnaire was administered to students in 700 schools and approximately 18% of all students were found to be involved in bullying as a bully, a victim, or both (Olweus, 1993a). A modified version of The Bully/Victim Questionnaire was used in England with 6,758 students. In this sample, 27% to students ages eight to eleven reported being bullied, while the same was true for 10% of students ages eleven to sixteen. Twelve percent of students ages eight to eleven reported bullying others, while 6% of students ages eleven to sixteen reported the same (Whitney
In the United States, Nansel and colleagues (2001) found that in a sample of 15,686 students 29.9% reported moderate or high involvement as a bully, victim, or both on the World Health Behaviour in School-aged Children Survey. Despite variability, these studies indicate that a substantial population bully and/or are bullied.

Previous research suggests widespread, negative outcomes associated with bullying. Victims of bullying have lower peer acceptance, poorer relationships with their classmates, fewer friends, higher rates of loneliness, lower self-esteem, and poorer social self-concept when compared to non-victimized peers (Olweus, 1993a; Hawker & Bolton, 2000; Perren & Alasker, 2006; Perren & Hornung, 2005). Victims have poorer mental health, including somatic complaints, anxiety, and depression (Hawker & Boulton, 2000; Nansel, et al., 2001; Perren & Hornung, 2005, Rigby, 2000). The effects of victimization endure into adulthood. Adult former victims are more likely to be depressed and have lower self-esteem than their non-victim peers (Olweus, 1993b, 1994). These findings suggest that victimization is related to negative outcomes across multiple domains and that some of these outcomes are long-term.

Bullies also experience negative outcomes. In comparison to their peers, bullies are more aggressive, more likely to be involved in violent delinquency, more likely to use alcohol and cigarettes, and less likely to demonstrate high academic achievement (Atlas & Pepler, 1998; Nansel et al., 2001; Perren & Alasker, 2006; Perren & Hornung, 2005). Bullies are less popular than the average student, and their popularity tends to decrease as they progress through school (Olweus, 1993a). Childhood bullying behavior has been linked with more serious criminal offenses later in life. Thirty-five to 40% of male, middle school bullies will be convicted of at least three crimes by age 24, while this is true of only 10% of non-bullies. Furthermore, 60% of former bullies will be charged with at least one crime in early adulthood (Olweus, 1993a). Children who bully are an at-risk group whose pattern of aggressive behavior is linked to multiple negative outcomes both in childhood and adulthood.

Examining only the roles of bully and victim neglects that fact that other students play a role in and are affected by bullying. A frequently seen categorization system identifies students as bullies, victim, bystanders, and bully-victims. Bystanders (also known as the “uninvolved”) are those children who are never or seldom bullies or victims, but might witness or even encourage bullying behavior (Carney & Merrell, 2001; Perren & Alasker, 2006). Bully-victims (also known as “aggressive victims”; Pellegrini, 1998) are those children who both bully others
and are also bullied by others. These children demonstrate reactive aggression, picking on others in response to being picked on themselves (Atlas & Pepler, 1998; Haynie et al., 2001; Olweus, 1993a; Pellegrini, 1998; Perren & Alasker, 2006). In the U.S., Nansel and colleagues (2001) found 70.1% of students to be bystanders, 13% to be victims, 10.6% to bullies, and 6.3% to be bully-victims. Although, research has primarily focused on those children who are bullies or victims, evidence suggests bystanders are also affected by bullying, and that bully-victims suffer the worst outcomes of all students.

With regard to bystanders, negative outcomes are a result of witnessing bullying rather than direct involvement. Often these individuals allow the bullying to continue and encourage or even join in the behavior, contributing to a climate of acceptance and support for bullies (Hazler, 1996; Olweus, 1993a; Smith & Shu, 2000). Bystanders might be fearful of being bullied, or fear that their action might lead to other problems if they intervene. Self-respect and self-confidence can be damaged when bystanders choose not to intervene (Hazler, 1996). Bystanders might empathize with the victims and feel a covert sense of powerlessness as a result of witnessing the victim’s lack of defense and their own inaction (Carney, 2000). These findings suggest that observing bullying might provoke fear and anxiety in bystanders, making school a troubling place to be.

Sparse research suggests that bully-victims are a particularly at-risk group of children and in need of support. These children are more aggressive than bullies (Perren & Alasker, 2006). Bully-victims are at the highest risk for negative psychosocial and behavioral outcomes including cigarette use, depression, low self-control, poor social competence, poor relationships with classmates, loneliness, poor school functioning, and low academic achievement (Haynie et al., 2001; Nansel et al., 2001). Heightened risk for these negative outcomes might result from the combination of bullying behavior and victimization. More research is warranted on these children, and how playing the role of bully and victim effects their school and more general functioning.

Previous research has demonstrated that school characteristics are associated with bullying. For instance, studies examining school size and level of supervision have found that large schools and schools with higher levels of adult supervision have lower rates of bullying than both small schools and schools with poor supervision (Olweus, 1993a; Xin, 2001). While knowledge of these relatively concrete school-level variables is useful, there is a notable lack of
research investigating the relationship between bullying and aspects of the school environment that are not directly observable—such as the climate (Xin, Stewin & Mah, 2001; Yoneyama & Naito, 2003). Little is known about how school climate contributes to or is affected by bullying, however, bullying prevention interventions can significantly alter school climate (Olweus, 1995). Clearly, more research on the factors underlying the success of programs that link of school climate with bullying is warranted.

**School Climate**

School climate is a quality of the school environment that is created by and has an effect on students and school staff. Tagiuri (1968) defined climate as, “Some feature or characteristic of the environment that has consequences for the behavior of an individual or group…when everything else is held constant except the climate, behavior differs” (p. 18). Haynes, Emmons and Ben-Avie (1997) define school climate as “The quality and consistency of interpersonal interactions within the school community that influences children’s cognitive, social, and psychological development” (p. 322). Other authors have discussed climate as the “internal life” of the school, which is created as a result of the feelings that students and staff have about their school and their relationships with one another (Haynes et al., 1997; Kasen, Johnson & Cohen; 1990; Peterson & Skiba, 2001). Combining these definitions, school climate can be thought of as an intangible aspect of the environment, which is influenced by feelings about school and relationships with members of the school community, and influences behaviors, thoughts, feelings, and relationships.

School climate has been linked to academic and behavioral outcomes. Research indicates that poor school climate is associated with problematic acting-out behavior, and might contribute more to variance in school achievement than personal factors (Comer, 1981; Haynes & Comer, 1993; Kasen et al., 1990; Kuperminc, Leadbeater, Emmons & Blatt, 1997; Wilson, 2004). McVoy & Welker (2000) assert that, “Antisocial behavior and academic failure are context specific; each occurs within a climate in which conditions can be identified that reasonably predict problematic behavior and can be modified to reduce such behavior.” (p. 130). Climate is amenable to change, and at least one bullying prevention program has demonstrated the ability to improve school climate (Olweus, 1993a). Olweus (1993a) found that the presence of a bullying prevention program not only decreased bullying by 50% or more, but also contributed to marked improvement in school climate, including more positive social
relationships, more positive attitudes toward school and schoolwork, and increased student satisfaction with school life. Further investigation is needed of those aspects of school climate that were changed as a result of Olweus’ bullying prevention program and how they are related to bullying. This study focuses on social support, as an indicator of positive social relationships, and school connectedness, which includes attitude toward school and schoolwork, and satisfaction with school.

Social Support

Social support is important both in maintaining optimal day-to-day functioning and also in decreasing the likelihood of negative outcomes when individuals experience stressful life events. Cobb (1976) emphasized the day-to-day positive influence of social support in a classic description of social support as the feelings of belonging, being loved, and being valued/esteemed that can vary in different relationships and environments. Social support also is conceptualized frequently as a “buffer”, with the social support network functioning as a resource or asset that is accessed to help individuals cope with stress (Cohen & Wills, 1985; Vedder, Boekaerts, & Seegers, 2005). Malecki, Demaray and Elliott (2004) describe social support as, “an individual’s general support or specific support behaviors (available or enacted upon) from people in the social network, which enhances their functioning and/or may buffer them from adverse outcomes” (p. 3). This definition encompasses both conceptualizations of social support and aptly describes its dual nature as protective and reactive.

Social support can affect success at school. Students who report high social support from parents, friends and teachers exhibit a range of positive school-related outcomes, including high school engagement, and academic achievement (Brewster & Bowen, 2004; Chen, 2005). Low levels of social support are associated with a host of negative psychological, social, and academic outcomes, such as internalizing and externalizing behaviors, and lower school engagement, social skills, self-concept, and adaptive skills than peers (Brewster & Bowen, 2004; Demaray and Malecki, 2002). Teachers and peers are the individuals most likely to be a core part of a child’s social support network at school. As such, this study specifically examines social support from teachers and peers.

Social Support from Teachers

Social support from teachers is a valuable resource that contributes to students’ academic and social success. Compared with support from parents and peers, teacher support demonstrates
the greatest influence on academic achievement, even after controlling for academic engagement (Chen, 2005). Social support from teachers also has been shown to contribute to school engagement and reports of well-being in the classroom (Brewster & Bowen, 2004; Vedder, Boekaerts & Seegers, 2005). Emotional support from teachers, in particular, has been linked to students’ academic competence and school maladjustment (Malecki & Demaray, 2003). Students also report highly valuing motivational and informational forms of support from their teachers (Smokowski, Reynolds, & Bezruczko, 1999). Although the majority of research on social support from teachers has focused on school-related outcomes, teacher support also is an important contributor to mental health and has been linked negatively to depression, and positively to self-esteem and social skills (Colarossi & Eccles, 2003; Malecki & Demaray, 2003). If students perceive their teacher as fair and as caring about them they are less likely to initiate a range of health compromising behaviors, including smoking cigarettes, consuming alcohol, using marijuana, engaging in violence, engaging in sexual activity, and contemplating or attempting suicide (McNeely & Falci, 2004). These findings substantiate the importance of supportive relationships between teachers and their students.

Social Support from Peers

Like teachers, peers are an important source of social support and can contribute to positive or negative outcomes in multiple domains. In regard to academics, peer social support was related to school achievement in a sample of Polish adolescents (Domagala-Zysk, 2006). In the domain of mental health, peer social support has been linked negatively to depression and positively to self-esteem in adolescents (Colarossi & Eccles, 2003). For children who have been abused, peer social support has been related negatively to self and parent reports of depression and anxiety (Ezzell, Swenson & Brondino, 2000). Although girls tend to report more peer social support and more satisfaction with their social support than do boys (Colarossi & Eccles, 2000; Colarossi & Eccles, 2003), both genders report more somatic complaints, such as headaches and dizziness, if they experience low levels of social support from peers (Torsheim & Wold, 2001). In terms the ability to buffer from negative outcomes, Wasserstein and LaGreca (1996) found that social support from friends moderated the negative impact of family discord on children’s problem behaviors. Social support from peers is clearly an important school-based source of support.
School Connectedness

There is variation in students’ attitude toward school, which results from thoughts and feelings about school, and effects behavior. Differences in attitude toward school are captured by the concept school connectedness, which can be defined as the positive feelings of attachment, commitment and belonging students feel as a result of believing their school community cares about their learning and individual well-being (Blum, 2005; Blum & Libbey, 2004, Catalano, Haggerty, Oesterle, Fleming & Hawkins, 2004; Wilson, 2004). Connectedness is reciprocal, in that it depends on feeling cared for, and also caring for and feeling close to others at school and to the school as an entity in itself (Whitlock, 2006). Feeling connected or school is believed to be a protective factor and has been linked to positive behavioral outcomes (Blum & Libbey, 2004; Bonny, Britto, Klostermann, Hornung & Slap, 2000; Catalano et al., 2004; Resnick et al., 1997).

Attention to school connectedness is growing, as evidenced by the Wingspread Declaration (Wingspread Conference, 2004), a statement of the importance of school connectedness for student success, and a special issue of the Journal of School Health (JSH; Pigg, 2004) on the topic of school connectedness. Research in the special issues of JSH and elsewhere indicates that school connectedness is negatively related to several problem behaviors, including aggression, violence, cigarette use, alcohol use, marijuana use, gang membership, sexual activity, suicide ideation, grade repetition, and school dropout (Bonny et al., 2000; Catalano et al., 2004; Resnick et al., 1997). In addition, low levels of school connectedness have been associated with poor social and emotional functioning and poor physical health (Bonny et al., 2000; Murray & Greenberg, 2000; Resnick et al., 1997). High school connectedness is conceptualized consistently as a protective factor in the lives of children and adolescents, and has been associated positively with academic performance, school adjustment, social skills, and involvement in extracurricular activities (Blum & Libbey, 2004; Bonny et al., 2000; Catalano et al., 2004; Resnick et al., 1997). The importance of increasing students’ feelings of school connectedness is evident in the findings of these studies, and might have implications for efforts to decrease problem behaviors, including bullying.

Linking Bullying with Social Support and School Connectedness

Previous research indicates that bullying is associated with a host of negative outcomes (Olweus, 1993a, 1993b), while social support and school connectedness have a positive
influence on the behaviors and social-emotional health of children (Resnick et. al., 1997; Cohen & Wills, 1985; Blum & Libbey, 2004). As such, it is important to examine whether there is a relationship between bullying and these aspects of school climate, and to begin to explore the potential for social support and school connectedness to decrease and prevent bullying.

Emerging findings indicate that students categorized as bystanders, bullies, victims, and bullying victims have different perceptions of social support and school connectedness. Those students who bully and/or are bullied are less likely to experience high levels of social support from teachers, social support from peers, and connectedness than those students who are not directly involved in bullying (Demaray & Malecki, 2003; Haynie et al., 2001).

In regard to teacher and peer social support, Demaray and Malecki (2003) found that bystanders perceive a significantly higher frequency of teacher support than do bullies, while both bystanders and bullies report significantly higher frequencies of peer support than victims and bully-victims. This finding is supported by additional research showing that victims and bully-victims are nearly twice as likely as non-victims to report that there isn’t a teacher who they can talk to about their problems, and that they exhibit poor peer relationships characterized by low peer acceptance, reciprocity and friendship (Furlong & Chung, 2005; Perren & Alasker, 2006; Perren & Hornung, 2005). Similarly, Rigby (2000) found that, for both boys and girls, peer victimization was correlated negatively with perceived peer social support, while for girls there was a significantly negative correlation between victimization and social support from teachers. It appears that those students who are bystanders experience the most social support from teachers and peers at school. However, more research is needed, specifically regarding the social support experienced by children who bully.

Bystanders feel more connected to school than other students. Haynie and colleagues (2001) found that bystanders report the highest levels of school connectedness, followed by victims, bullies, and finally bully-victims. Likewise, Wilson (2004) found that students who reported high school connectedness were less likely to be the perpetrators of the victims of physical or relational aggression than their peers with low school connectedness. Compared to peers, bullies exhibit higher school alienation, as measured by negative feelings about schoolwork and the overall school experience, compared to peers (Natvig, Albrektsen, & Qvarnstrom, 2001). However, Glew, Fan, Katon, Rivera and Kernic (2005) found that victims were most likely to feel they do not belong at school, followed by bully-victims, bystanders, and
lastly bullies. These seemingly contradicting findings warrant further investigation of the relationship of connectedness to bullying.

Collectively, the above findings provide initial evidence that social support from teachers, social support from peers, and school connectedness are associated with bullying. However, the Demaray and Malecki (2003) and Haynie and colleagues (2001) studies are the only investigations that examine differences in perceptions of social support and school connectedness for students categorized as bystanders, bullies, victims, and bully-victims. Further examination of social support and school connectedness, as perceived by these categories of students, is needed to support and expand upon preliminary findings.

Goals and Hypotheses of the Study

The purpose of the present study was to increase understanding of the relationship between bullying and three aspects of school climate—social support from teachers, social support from peers, and school connectedness. The previous research linking social support and school connectedness with bullying primarily focuses on comparing the victims of bullying to bystanders, with little research examining the perceptions of social support and school connectedness of bullies or bully-victims. In addition to supporting and expanding upon past findings, this study is unique in that it examined both social support and school connectedness with the same sample of children. No previous studies could be found that examined both these elements of school climate together to investigate associations between the patterns of students’ reports of support and connectedness.

Based on previous findings, it was anticipated that bullies, victims, bully-victims and bystanders would perceive significantly different amounts of teacher support, peer support, and school connectedness. First, it was hypothesized that bystanders would report more perceived social support from teachers, social support from peers, and school connectedness than all other students. Second, it was hypothesized that bully-victims would report less social support from teachers, social support from peers, and school connectedness than all other students. Third, it was hypothesized that bullies and victims would report less perceived social support from teachers, social support from peers, and school connectedness than bystanders, but more than bully-victims. Further, consistent with extant research, it was predicted that victims would report more perceived social support from teachers and school connectedness than bullies, while bullies would report more perceived social support from peers than victims. Fourth, it was hypothesized
that the findings regarding social support from teachers and school connectedness would be similar, in that bystander would report the most social support from teachers and school connectedness, followed by victims, bullies and finally bully-victim. It was believed that such a similarity would provide tentative evidence that social support from teachers and school connectedness are associated with one another.

Method

Participants

Participants in the current study were drawn from archival data collected in 2005-2006 as part of implementation of the Olweus Bullying Prevention Program (OBPP). These data were collected, with help from Miami University, by nine elementary and middle schools. Table 1 contains demographic information for the schools.

A total of 4,331 students in grades three through eight participated in this study. Participants were generally well proportioned across grade level, with 11.1% to 17.6% of the total sample in each grade, except for the fifth grade, which contained 28.3% of the total sample. This occurred because eight of the nine schools participating in this study surveyed their fifth grade students, including the school contributing the largest number of students to the sample. Slightly more than half (50.8%) of the participants were male. Almost 80% of participants attended schools located in geographic areas classified as urban/suburban, while approximately 7% attended schools in areas identified as urban, and 13% attended school located in areas classified as rural/small town. A slight majority, approximately 55% of the participants, attended schools that were preparing for implementation of the OBPP, while approximately 23% of participants attended schools in their first year of OBPP implementation, and approximately 22% of participants attended school in their second year of OBPP implementation.1

School policy determined parental notification and consent procedures. Students were told that participation was optional and asked for assent to participate. Teacher written reports of survey administration indicate that across the nine participating schools a total of 161 students did not take the survey. Based on these written reports it was determined that the percentage of eligible students from each school not taking the survey ranged from 1.6% to 6.81%, with the average across all nine schools being 3.72% of eligible students not participating. It is unclear

1 Analyses of data that included an independent variable for whether or not the school was implementing the Olweus Bullying Prevention Program did not result in a significant interaction between the implementation variable and bullying status or victim status.
whether these students elected not to take the survey or were simply absent on the day that the survey was administered. Because the number of eligible students in each school who did not take the survey is small, the students who did take the survey are considered representative of the schools’ populations.

**Measures**

Participants completed a survey packet designed to aid schools implementing the Olweus Bullying Prevention Program with program planning. The survey packet consisted of the complete Olweus Bully/Victim Questionnaire (Olweus, 1996), twelve representative items from the teacher and peers subsections of the Child and Adolescent Social Support Scale (Malecki, Demaray & Elliot, 2000), and the complete school-bonding subscale of the People In My Life scale (Cook, Greenberg & Kusche, 1995).

**Bullying**

The Bully/Victim Questionnaire (Olweus, 1996) is a 39-item questionnaire measuring various aspects of bullying in schools. Items on the questionnaire assess students’ exposure to bullying, where bullying occurs in their school, pro-bully and pro-victim attitudes, and the extent to which others are informed of and respond to bullying behavior. Students respond to each question by choosing from a response set consisting of two to six possible options. Previous statistical tests, using large representative samples of more than 5,000 students, found the Bully/Victim Questionnaire to have internal consistency reliabilities (Cronbach’s alpha) for individual students that are generally in the .80 range or higher. When the school is the unit of analysis, and all students are included, the consistency of results across items is even higher, generally in the .90 range. In addition, the questionnaire has construct validity (Olweus, 2001b).

Students were classified into four categories (bully, victim, bully-victim, and bystander) based on their responses on two questions from the Bully/Victim Questionnaire. The first question assessed victim status, while the second assessed bully status. Students were categorized as bullies if they answered “2 or 3 times a month”, “about once a week”, or “several times a week” to the question “How often have you taken part in bullying another student(s) at school in the past couple months?” Those students who responded to this question by selecting the response options “I haven’t bullied another student(s) at school in the past couple months” or “It has only happened once or twice” were not classified as bullies. Students were categorized as victims using the same criteria for their response to the question “How often have you been
bullied at school in the past couple months?” Bully-victims were those students whose responses to both the question about bullying and the question about victimization were above the cut-off. Bystanders were those students who did not reach the cut-off for either a bully or a victim. This is consistent with past use of the Olweus Bully/Victim Questionnaire to determine role in bullying (Glew et al, 2005; Solberg & Olweus, 2003). Sixty-eight percent (n=2950) of students in the sample were categorized as bystanders, 8.8% (n=382) as bullies, 18.9% (n=817) as victims, and 4.2% (n=182) as bully-victims.

Social Support from Teachers and Peers

Items measuring teacher social support and peer social support were drawn from The Child and Adolescent Social Support Scale (CASSS; Malecki, Demaray & Elliott, 2000). The CASSS is a 60-item scale consisting of five subscales that measure social support from parents, teachers, classmates, close friends, and school. Twelve representative items, six regarding teachers and six regarding peers, were selected from the 24 CASSS items measuring teacher and peer social support. Students responded to items by providing a frequency rating on a six-point interval scale ranging from 1 (Never) to 6 (Always). The teacher and peer subscales of the CASSS have internal consistency reliabilities (Cronbach’s alpha) all higher than .88, test-retest reliability, and construct validity (Malecki & Demaray, 2002; Malecki & Demaray, 2003; Malecki, Demaray & Elliot, 2004).

School Connectedness

Items measuring school connectedness were drawn from The People In My Life (PIML) scale (Cook, Greenberg & Kusche, 1995), a 78-item scale measuring children’s representations of their relationships with parents, peers, and teachers, as well as feelings of affiliation to school and neighborhood. The School Bond subscale of the PIML, which consists of eight items, was used in the present study to measure students’ feelings of school connectedness. School connectedness and school bond are analogous in the literature (Wingspread Conference, 2004). In the current study, students responded on a six-point interval scale ranging from 1 (Never) to 6 (Always). The school bond subscale of the PIML has an internal consistency reliability (Cronbach’s alpha) of .80, and construct validity (Murray & Greenberg, 2000; Murray & Greenberg, 2001).
Procedures

All surveys were administered by school staff, in the school building, to a classroom or to a group of classrooms. In some instances schools chose to administer the survey to several small classrooms in the same grade at once. Students in the third through fifth grade who agreed to participate were read the questions and response choices aloud by a school staff person. The survey was read to students in the sixth, seventh and eighth grade if they required additional assistance.

Analysis Strategy

To evaluate the hypothesis that bullies, victims, bully-victims and bystanders significantly differ in their perceptions of social support from teachers, social support from peers, and school connectedness, MANOVAs were conducted using role in bullying as the independent variable, and social support from teachers, social support from peers and school connectedness as dependent variables. This method was chosen over ANOVAs because it protects against inflated family-wise error that occurs when conducting multiple tests of the dependent variables, and is appropriate for moderately-correlated dependent variables (Tabachnick & Fiddell, 2001). When the overall test was significant, univariate ANOVAs were used for each dependent variable. Subsequently, those dependent variables that had a significant main effect or interaction were subjected to planned comparisons to determine which differences in group means were significant. It was expected that all differences between means would be significant.

Results

Prior to analyses all variables were screened for missing values. A total of 476 of the 4331 cases (11%) were missing values. These values were missing at random and expected values were imputed\(^2\). In addition, all variables were normalized using PRELIS (Jöreskog & Sörbom, 2003) and standard scores were computed using the normalized scores.

Preliminary Analyses

Internal consistency reliabilities were computed, using Cronbach’s alpha, for the measures of the three school climate variables used in this study. The measures of school connectedness (\( \alpha = .84 \)), social support from teachers (\( \alpha = .89 \)), and social support from peer (\( \alpha =

\(^2\) Analyses of data with imputed values yielded similar results to analyses of data that excluded cases with missing values.
.90) have high internal consistency. Additionally, Pearson Product Moment Correlations were computed, and are presented in Table 2. There are significant, positive correlations between scores on the school connectedness measure, social support from teachers measure, and social support from peers measure.

Analysis of Variance

In order to test for the hypothesized differences in perceived social support from teachers, social support from peers, and school connectedness between bystanders, bullies, victims, and bully-victims a series or MANOVA and ANOVA were calculated.

Bullying and Victimization

To assess whether bullies, victims, bully-victims and bystanders report differences in social support from teacher, social support from peers, and school connectedness a 2(Bully Status: Yes or No) X 2(Victim Status: Yes or No) MANOVA was calculated. A main effect of victim status was found, $\lambda = .969, F(3, 4325) = 46.37, p < .001$, partial $\eta^2 = .031$, indicating that victim status had a significant effect on the combined dependent variables. A main effect of bully status also was found, $\lambda = .966, F(3, 4325) = 51.40, p < .001$, partial $\eta^2 = .034$, indicating that bully status had a significant effect on the combined dependent variables. A multivariate interaction of victim and bully status also was observed, $\lambda = .997, F(3, 4325) = 3.76, p = .01$, partial $\eta^2 = .003$.

To investigate the impact of each main effect on the individual dependent variables, univariate ANOVAs were performed. The results indicate that victims and non-victims differ in their reports of peer support, $F(1, 4327) = 117.58, p < .001$, partial $\eta^2 = .026$, teacher support, $F(1, 4327) = 15.50, p < .001$, partial $\eta^2 = .004$, and school connectedness, $F(1, 4327) = 14.128, p < .001$, partial $\eta^2 = .003$. Victims reported significantly lower peer support, teacher support, and school connectedness than non-victims. In addition, bullies and non-bullies differ in their reports of peer support, $F(1, 4327) = 21.84, p < .001$, partial $\eta^2 = .005$, teacher support, $F(1, 4327) = 89.979, p < .001$, partial $\eta^2 = .020$, and school connectedness, $F(1, 4327) = 134.35, p < .001$, partial $\eta^2 = .030$. Bullies reported significantly lower peer support, teacher support, and school connectedness than non-bullies. Regarding the interaction between victim status and bully status, there are significant interactions for peer support, $F(1, 4327) = 6.22, p < .05$, partial $\eta^2 = .001$, teacher support, $F(1, 4327) = 10.95, p = .001$, partial $\eta^2 = .003$, and school connectedness $F(1, 4327) = 5.73, p < .05$, partial $\eta^2 = .001$. 

15
Bystanders, Bully-Victims, Bullies, & Victims

Post hoc comparisons were conducted to evaluate the pattern of simple effects for peer support, teacher support and school connectedness. The roles of bystander, bully, victim, and bully-victim were used for these analyses because of the significant interaction between bully and victim status for each of the dependent variables. Levene’s test revealed that there was equal variance across groups for the dependent variables of teacher support and school connectedness. However, there was not equal variance across groups for peer support. In addition, there was inequality in group size, with bystanders composing approximately 68%, victims 19%, bullies 9%, and bully-victims 4% of the total sample. As such, Scheffe post-hoc tests were used to evaluate the pattern of simple effects for teacher support and school connectedness, while Games-Howell post-hoc tests were used to correct for heterogeneity of variance in evaluation of the pattern of simple effects for peer support. Table 3 contains means and standard deviations, and Figures 1-3 display confidence intervals by role in bullying.

Bystanders

It was hypothesized that bystanders would report significantly higher social support from teacher, social support from peers, and school connectedness than victims, bullies, and bully-victims. Results indicate that bystanders did report higher teacher support than victims (MD = .27, SE = .03, p < .001), bullies (MD = .47, SE = .04, p < .001), and bully victims (MD = .49, SE = .06, p < .001). Similarly, bystanders reported higher peer support than all other groups, including, victims (MD = .50, SE = .03, p < .001), bullies (MD = .27, SE = .04, p < .001), and bully victims (MD = .58, SE = .06, p < .001). They also reported higher school connectedness than victims (MD = .21, SE = .03, p < .001), bullies (MD = .47, SE = .04, p < .001), and bully-victims (MD = .52, SE = .05, p < .001).

Bully-Victims

Post-hoc comparisons were also used to assess differences between bully-victims and the other groups of students. It was anticipated that bully-victims would report lower social support from teachers, social support from peers, and school connectedness than bystanders, victims, and bullies. As described above, bully-victims reported lower social support from teachers, social support from peers, and school connectedness than bystanders. Additionally, results indicate that bully-victims reported lower teacher support than victims (MD = .22, SE = .06, p < .01), but did not differ from bullies (MD = .02, SE = .07, p > .05). With regard to peer support, bully-victims
reported lower levels than bullies ($MD = .31, SE = .07, p < .001$), but did not differ from victims ($MD = .31, SE = .07, p < .001$). Similar to the findings for teacher support, bully-victims reported significantly lower school connectedness than victims ($MD = .31, SE = .06, p < .001$), but were no different from bullies ($MD = .05, SE = .06, p > .05$).

**Bullies & Victims**

Bullies and victims were hypothesized to report lower perceived social support from teachers, social support from peers, and school connectedness than bystanders, but higher than bully-victims. Bullies were anticipated to report higher social support from peers than victims, while victims were anticipated to report higher social support from teachers and school connectedness than bullies. In addition to the findings outlined above, results indicate that bullies did report higher peer support than victims ($MD = .23, SE = .05, p < .001$), while victims reported higher social support from teachers ($MD = .20, SE = .05, p < .001$) and school connectedness ($MD = .26, SE = .04, p < .001$) than bullies.

**Social Support from Teachers and School Connectedness**

Additionally, it was anticipated that students’ reports of social support from teachers and school connectedness would show the same pattern, with bystanders reporting the highest, followed by victims, and then by bullies and bully-victims. This pattern did emerge for social support from teachers and school connectedness, although there was no significant difference between bullies and bully-victims for either variable.

**Discussion**

The aim of this study was to increase understanding of the relationship between students’ experiences of bullying and their perceptions of school climate. The findings from this study confirm that students differ in their perceptions of three element of school climate—social support from teachers, social support from peers, and connectedness to school—based on their experience of acting as a bystander, bully, victim, or bully-victim. Three findings emerged as the most important. First, bystanders experience more social support from teachers, social support from peers, and school connectedness than all other students. This finding indicates that social support and school connectedness may be protective against bullying and victimization. Additionally, this finding indicates that bystanders possess social resources that could be used to take an active role in bullying prevention efforts. Second, bullies and bully-victims perceive the lowest levels of social support from teachers and school connectedness, while victims and bully-
victims perceive the lowest levels of social support from peers. Furthermore, bully-victims do not perceive more social support or school connectedness than any other students. These findings indicted the need for strategies to increase social support and school connectedness in an effort to reduce bullying and victimization. Bully-victims, in particular, might benefit from increased support and connectedness. Third, the findings from this study also provide tentative evidence that social support from teachers and school connectedness may not be distinct elements of school climate, but that social support from teachers may contribute to students’ feelings of school connectedness. An implication of this finding is that schools might be able to achieve a range of desired outcomes by simply implementing interventions aimed at building positive teacher-student relationships.

As predicted in the first hypothesis, the study revealed that bystanders have the most supportive relationships with teachers and peers and highest feelings of connection to their school of all students. In other words, students who are not directly involved in bullying experience their school and the relationships they form at school as more positive than do students directly involved in bullying. This is consistent with past research showing that bystanders are more likely to feel that there is a teacher at school they can talk to about their problems, and peers with whom they are engaged in reciprocal friendships (Furlong & Chung, 2005; Perren & Alasker, 2006; Perren & Hornung, 2005). One implication of this finding is that if all students experienced high levels of social support and school connectedness, there might be fewer students directly involved in bullying. Social support and school connectedness might serve as protective factors that reduce the likelihood of exhibiting bullying behavior and/or victimization. To prevent and reduce bullying, schools might consider strategies to increase social support and school connectedness.

A second implication is that high social support and school connectedness can be thought of as resources that bystanders could use to take an active role in bullying prevention. Because bystanders have strong relationships with teachers and peers, and feel connected to their school, they have a degree of influence and social capital that other students do not. As a result, it might be that these students feel more comfortable reporting bullying to a trusted teacher, intervening to stop bullying, or acting supportively towards a victimized peer. Schools might benefit from instituting bullying prevention strategies that teach bystanders how they can help stop bullying. In addition, bystanders’ high teacher support, peers support and school connectedness indicate
that they are capable of collaborating with teachers, representing their peers, and taking an active role in school-wide activities. As such, bystanders could be effective members of a student anti-bullying committee, playing a role in planning, implementing, and evaluating school-wide bullying prevention efforts. Future research should examine whether bullying prevention interventions that actively engage bystanders show positive results beyond those reported for interventions that are solely involve school staff or other adults.

The second hypothesis, regarding the low social support from teachers, social support from peers, and school connectedness of bully-victims was partially supported. Bully-victims have less supportive relationships with teachers and feel less connected to their school than bystanders and victims, and have less supportive relationships with peers than bullies. Bully-victims do not differ from bullies with regard to low social support from teachers or school connectedness, and do not differ from victims in their feelings of low peer support. The lack of difference between the two groups reporting the lowest levels of social support from teachers, social support from peers, and school connectedness leads to the question: What do these groups have in common that could be related to their perceived lack of support and connectedness?

The obvious commonality between bullies and bully-victims is that they both act aggressively by bullying other students. A possible implication is that increasing support from teachers and school connectedness might decrease bullying behavior. This study has shown that bullies have strong peer relationships. In addition, students who bully often need to feel powerful and in-control (Olweus, 1993a). The low levels of support from teachers and connection to school experienced by bullies and bully-victims could be disempowering, leading them to seek power and control at school through using their peer influence to bully. To decrease the need to seek power and control, schools could implement strategies to increase the likelihood that relationships with teachers and experiences at school are seen as positive and empowering.

For victims and bully-victims, the obvious commonality is that they both experience victimization. As such, a possible implication is that increasing support from peers might decrease victimization. It could be that having low support from peers makes students who are victimized easy targets for bullies. Increasing peer support might reduce the likelihood of being alone during less-structured parts of the school day, which has been associated with victimization (Perren & Alasker, 2006). Increasing peer support could also increase the chances that a peer
would stand-up for the student when victimized. Schools might want to consider integrating practices that build positive peer relationships. For example, classroom meetings are one strategy for promoting positive peer relationships between all students in a classroom, and are central to the Olweus Bullying Prevention Program (Olweus, 1993a).

Interestingly, although bully-victims do not have lower teacher support and school connectedness than bullies, or lower peer support than victims, they also do not have higher support from teacher and peers, or connectedness, than any other students. In this respect, they fare the worst of all the groups, with regard to their experience of school climate. Unlike bullies, they do not have the peer support that might be protective against victimization. Unlike victims, bully-victims not to have the teacher support and school connectedness that might be necessary to seek help when bullied. The sparse extant research that has examined bully-victims indicates that they are reactively aggressive, responding to being bullied by bullying others (Atlas & Pepler, 1998; Haynie et al., 2001; Olweus, 1993a; Pellegrini, 1998; Perren & Alasker, 2006). Bully-victims’ reactively aggressive behavior, lashing back at their aggressor and others, might be a way for them to cope with being a target of bullying. Future research should investigate bully-victims, and whether a lack of social support and school connectedness might lead them to display reactive aggression. Perhaps increasing the social support and school connectedness of bully-victim could mitigate their aggression.

Consistent with the fourth hypothesis, the same pattern of differences between groups emerged for social support from teachers and school connectedness. Bystanders experience more social support from teachers than all other students. Victims experience more social support from teachers than bullies and bully-victims. The same pattern was found with regard to school connectedness, with bystanders reporting feeling the most connected to school, followed by victims, and then bullies and bully-victims. This concordance might be tentative evidence for a relationship between social support from teachers and school connectedness, in which they both tap into a single underlying construct.

In several past studies, the scales used to assess school connectedness have included items about social support from teachers. Some studies have even operationalized students’ relationship with school as their relationship with their teachers (Libbey, 2004). It might be that students cannot feel safe and comfortable at school if they do not also feel supported by teachers. If this is in fact the case, school connectedness could be increased by increasing students’ social
support from teachers. Given the emerging findings regarding the benefits of feeling connected to school (Blum & Libbey, 2004; Bonny et al., 2000; Catalano et al., 2004; Resnick et al., 1997), and the benefits associated with social support from teachers (Brewster & Bowen, 2004; Chen, 2005; Malecki & Demaray, 2003; McNeely & Falci, 2004; Vedder, Boekaerts & Seegers, 2005) schools might be in a position to achieve a range of desired outcomes by implementing interventions aimed at building positive teacher-student relationships. Additionally, in order to gain clarity regarding the nature of these constructs, future research should examine the relationship between teacher support and school connectedness.

Limitations

It should be noted that this study has several limitations. First, although the sample used was fairly large and diverse, the extent to which it generalizes to participants in areas of the country other than the Midwest or children younger or older than elementary and middle school age is limited. Second, the measures used to assess social support and school connectedness were modified from their original version. The number of items used to measure social support was reduced, while the scale on which students reported school connectedness was expanded. These changes from the original format of these measures might affect their validity. Third, the survey packet which students completed was rather lengthy, taking approximately 45 minutes to complete. This might have led to fatigue or irritability in some students, affecting their responses. Lastly, the measure used to assess social support and school connectedness were comprised of all positively worded items, such as “My teacher understands me,” that participant could respond to on a scale ranging from always to never. There were no negatively worded items assessing negative perceptions of teachers, peers, or school. This might have restricted participants from reporting the extent to which they felt unsupported by teachers and peers, or disconnected from school. As such, a floor effect might have contributed to the lack of differentiation between bully-victim and other groups of students.

Conclusion

This study aimed to increase understanding of the relationship between students’ experience of bullying and their perceptions of school climate through investigated how students who act as bullies, victims, bully-victims, and bystanders differ in their perceptions of social support from teachers, social support from peers, and feelings of connectedness to school. Findings from this study reveal that those students who are bystanders experience more social
support and school connectedness than all other students. Those students who exhibit bullying behavior experience less social support from teachers and connection to school than other students, while those students who are victimized experience less social support from peers than other students. In addition, this study offers tentative support for a relationship between social support from teachers and school connectedness. This study has implications for school-based bullying prevention, and points to the utility of involving teachers and students in efforts to decrease and prevent bullying. It also supports the need for further research, specifically on the reactive aggression of bully-victims, the effectiveness of student involvement in bullying prevention interventions, and the relationship between social support from teachers and school connectedness.
References


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<th>% Non-White Students</th>
<th>Average Daily Enrollment</th>
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Table 1 (continued)
Demographic Characteristics of the Schools

The data on percent economically disadvantaged, percent non-white students, and average daily enrollment are from “State/Local Report Cards and Resources” by the Ohio Department of Education (2006, November), Retrieved July 26th, 2007, from http://webapp2.ode.state.oh.us/reportcard/archives/Default.asp.
Table 2

Correlations between Social Support from Teachers, Social Support from Peers, and School Connectedness

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*Note. *p < .01.*
Table 3
Mean and Standard Deviation of Social Support from Teachers, Social Support from Peers, and School Connectedness by Bully/Victim Status

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FIGURE CAPTIONS

Figure 1: Mean Peer Support by Victim Status and Bully Status

Figure 2: Mean Teacher Support by Victim Status and Bully Status

Figure 3: Mean School Connectedness by Victim Status and Bully Status
Victim Status

Mean Teacher Support

Bully Status
- Non-Bully
- Bully

Error bars: 95% CI