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BULLIES AND VICTIMS IN MIDDLE SCHOOL

by

JOSEPH J. ZAMBO

DISSERTATION

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

2010

MAJOR: EDUCATIONAL PSYCHOLOGY

Approved by:

Advisor

Date

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DEDICATION

To my wife, Karrie, who was there from the beginning.
And my daughter, Sofia, who I love with my whole heart.

Also to Dr. Joan Moriarty,
whose guidance and support was a light upon my path.

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CHAPTER I

Introduction

Background

Over the past decade, bully/victim behavior (i.e., bully, victim, bull-victim, non-bully/non-victim) among peers has gained increasing attention as a form of violence responsible for serious physical and/or emotional distress to its victims with implications for long-term negative consequences (Boulton, 1995; Nansel, Haynie, & Simons-Morton, 2003). Bullying has been defined as negative behavior that includes physical aggression or verbal statements, involving malicious intent, is repetitious over time, and involves a power differential (Espelage & Asida, 2001; O'Connell, Pepler, & Craig, 1999).

Children are victims of bullying when subjected to verbal aggression that is intended to hurt or make fun of them, through name calling and the like, as well as when boys or girls are isolated or shunned, such as in relational aggression (Rudolph, Troop-Gordon & Flynn, 2009), being deliberately excluded from play or other social interactions (Olweus, 1986). Further, victimization occurs when the behavior is not intended as playful teasing, involves malice, and occurs in the absence of equal status, power and size, including verbal and emotional harassment (Espelage et al., 2001). Victims of peer aggression include both males and females who often face repeated assault, and are unable to defend themselves (Olweus, 1996). Males tend to bully or are victimized through physical aggression (Boulton & Underwood, 1993), whereas females are more apt to bully or are victimized indirectly (e.g., exclusion and rumor

spreading) (Hatakeyama & Yamazaki, 2002; Olweus, 1978; Zhang, Gu, Wang, Wang, & Jones, 2000).

Yet, peer victimization is not unidirectional. Rather, as Ma (2001) noted, many children and adolescents who are victims of peer aggression also engage in bully behavior. In response to bullying, some children react with aggression, often out of frustration due to repeated antagonism from the bully (Camodecca, Goosens, Meerum Terwogt, & Schuengel, 2002). Additionally, it has been reported by Camodecca et al., that some victims perpetrate bully behavior toward their assailants in an effort to prevent further victimization, although this may actually undermine their initiative and “have the effect of making the bully more ruthless” (p. 341).

Socio-emotional abilities develop as people mature (Bandura, 1989). Flavell (1977) stated that social cognition and the evolution of mature relationships involves forming ideas about society and interpersonal motives, ideas about the self and other aspects of the environment. Consistent with this, Bandura (1986) ascribed a triadic reciprocal causation model for understanding human ontogeny. This model involves behavior/motivation, thought, emotion, personal factors, and environmental processes working in conjunction with each other. One of the mechanisms involved in personal development is self-efficacy (Bandura, 1986). As a mechanism for personal agency, self-efficacy beliefs are central to how an individual perceives his/her ability to assume charge of their lives and affect change (Bandura, 1989).

Human relationships evolve in the context of social environments, bullying and peer victimization notwithstanding (Wienke-Tortura, Mackinnon-Lewis, Gesten, Gadd, Divine, Dunham, & Kamboukos, 2009, Swearer & Doll, 2001). It is important to

consider ecological factors that contribute toward bully/victim behaviors (i.e., bully, victim, bully-victim, none). Borrowing from Bronfenbrenner's (1979) ecological systems theory, behavior along the bully/victim continuum can be understood as arising from various environmental and interpersonal influences within a social milieu. Ecological systems theory refers to the confluence of environmental factors and personal traits that is "characterized by a distinctive complex of evolving interrelated, dynamic capacities for thought, feeling, and action" (Bronfenbrenner, in Wozniak & Fischer, 1993, p. 7) involving family, peers, schools, and the broader community.

Description of Study Variables

Social-Information Processing

Whether resulting from overt or passive forms of peer aggression, or perpetrated by males or females, a wide range of human functioning, including cognitive, behavioral, and emotional processes, as well as environmental referents are involved in the development of victim behavior (Bandura, 1986; Eisenberg, Champion, & Ma, 2004; Fox & Boulton, 2003; Ryan & Patrick, 2001). Bandura (1986) lends support to understanding how one becomes a victim to bullying from a social/cognitive-processing perspective. Bandura (1986) reported that human learning is greatly enhanced by observing others.

Bandura (1986) also suggested that defensive aggression, frequently enacted by a subgroup of peer victims (bully-victims), is generally sustained by the expectation of consequences rather than immediate effects (i.e., maintaining the belief that through aggressive reaction, hostility directed toward them will cease). In addition, aggressive victims (i.e., those who utilize aggression to retaliate against bullies, rather than as

defensive strategies) may believe that by failing to engage in aggressive behavior, they will sustain further victimization and humiliation.

However, observation alone is insufficient to produce learning. As Bandura (1986) suggested, learning involves a combination of consciously observing and accurately perceiving salient aspects of modeled behavior. In the context of bully/victim behavior, modeling serves as a means by which people acquire patterns of behavior. Attending to stimuli facilitates selective observation of modeled events in order to make use of the most important aspects of that information. Crick and Dodge (1996) suggested that children's social behavior involves a series of steps whereby they process information, encode social cues, interpret social information, clarify goals, respond to this information or establish a plan of response, and enact a response to stimuli.

Emotion-Related Regulation

Just as cognitive/social-information processes can have a bearing on bully/victim behavior, affective states, particularly relative to emotion regulation, seem to contribute toward someone becoming a victim of bullying (Bacchini, Esposito, & Affuso, 2009). Bacchini et al. indicated that a large proportion of victims of bullying are students, especially bully-victims whose ability to regulate emotion is severely limited. This appears evident in the context of individual feeling states and external environments (Mahady-Wilton, Craig, & Pepler, 2000). The authors contend that emotions function as a tripartite system that organizes and motivates behavior collaboratively (e.g., neural processes, expressive displays, and subjective emotion experiences) to "facilitate adaptive responses to provocative stimuli" (p. 228), and reported that children who

experience difficulty modulating affective displays may enhance their likelihood of becoming victims, inadvertently reinforcing bully behavior. Eisenberg, Champion, and Ma (2004), in their investigation of the construct of emotion-related regulation, suggested that emotion regulation requires effort on the part of the individual, reporting that children who exhibit a more rigid style in their personality might experience difficulty controlling their responses to various stimuli.

Social Skills

Taken together, developmental pathways involve social information-processing, affect, and environmental influences each contributing toward the attainment of social skills. Relative to victimization, children who are rejected by their peers may not only lack the ability to process information socially or regulate their emotional responses in their environment but who also lack the ability to enact social behavior that would enable them to negotiate various social encounters. Children who have not attained positive social skills are often rejected by their peers, an outcome that “may be the transient product of a normal developmental sequence, or (that) may be an expression of a child’s failure on multiple levels to become engaged in normal social activity” (Cadwallader, 2000, p. 111). Conversely, children who possess the ability to attain and maintain positive peer relationships increase the likelihood of avoiding peer victimization, particularly if their friends possess positive social skills themselves (Hodges, Malone, & Perry, 1997).

School Climate

Associated with social information processing and emotional functioning, stressful environments appear to have some bearing on victimization (Bernstein &

Borchardt, 1991; Leff, 2007). One such stressful environment is school. It is an environment filled with complexity, and as Petillon (1993) indicated a negative climate at school (an environment that is unresponsive to students' socio-emotional needs) can become overwhelming to a child who lacks the ability to process social or emotional information sufficiently well or whose ability to regulate their emotional responses to negative or ambiguous stimuli is poor; this may lead to the child being ostracized or victimized by peers. Lane (1989) also reported that schools play a role in determining the outcome of bully/victim behavior, such that schools that promote positive social interaction could influence positive group cohesion with implications for increased individual maturation and prosocial behavior (Cadwallader, 2000), thereby reducing bully/victim behavior.

Yet, little research has been conducted in the area of how school climate influences or impacts bully/victim behavior (Leff, 2007). It was reported by Buckley, Storino, and Sebastiani (2003) in a study of 7th grade students that when school safety was lacking, heightened levels of victimization were perceived by students and teachers. Conversely, a significant correlation existed between lack of victimization when the school's appearance and supportiveness was also perceived by students and staff. As suggested by Buckley et al. (2003), for students to succeed academically and socially it is essential to foster an environment sensitive to the myriad needs of students within schools, and increase teachers' and students' awareness that their school is a caring and safe place.

As the U.S. Department of Education (Horner & Sugai, 2004) has recognized that students differ culturally, socioeconomically, intellectually, and come from families or

neighborhoods where violence is commonplace, it is encouraging local schools nationwide to develop positive supports within their respective institutions that will foster student success academically and socially. That this endeavor is being developed on a national level suggests that the school is no longer merely a place of academic learning, but one that has the capability and responsibility to increase students' success in multiple spheres by creating environments that emphasize positive social behavior while finding new ways to diminish aggressive behavior. Furthermore, the climate of the school is being directly targeted. Subsequently, the school environment can become a mediating agent in determining bully/victim (i.e., bully, victim, bully-victim, non-bully/non-victim) outcomes.

Purpose of the Study

The goal of the present study is to address the previously indicated psychological issues by incorporating variables previous researchers have found to be significant. This study seeks to determine the relative contribution of each of four predictor variables to the degree of bully/victim behavior (i.e., bully, victim, bully-victim, non-bully/non-victim). Specifically, the present study seeks to discover which predictor variables (i.e., social information processing, emotion-related regulation, social skills, and perceived school climate) make an individual more susceptible to becoming a victim of bullying, or facilitate the development of pro-social behaviors that buffer against victimization. It is expected that limitations in social-information processing, as well as emotion-related regulation will support victim status, as evidenced by poorer social functioning in the context of a perceived negative school climate.

Research Questions

1. Which demographic variables are most characteristic of bully/victim behavior (e.g., bully, victim, bully-victim, non-bully/non-victim)?
2. Do 6th and 7th grade students' social information processing abilities (hostile response, worried response, aggressive/competent response), emotion regulation (affiliation, aggression, depressive mood, frustration, perceptual sensitivity, shyness), and social skills (positive, negative) vary by bully/victim behavior (bully, victim, bully-victim, non-bully/non-victim)?
3. Which variables within social information processing (hostile response, worried response, aggressive/competent response), emotion regulation (affiliation, aggression, depressive mood, frustration, perceptual sensitivity, shyness), and social skills (positive, negative) and perceived school climate (positive, negative) are most predictive of bully/victim behavior (bully, victim, bully-victim, non-bully/non-victim)?
4. Does school climate mediate levels of bully/victim behavior (bully, victim, bully-victim, none)?

Significance of the Study

Research findings describe a number of different factors involved in bullying behavior and the development of victimization. Through extensive examination of theories on social-information processing, emotion-related regulation, social skills, and school environment, findings have contributed to the understanding of how adolescents acquire and maintain bully, victim, and bully-victim behavior (Haynie, Nansel, Eitel,

Curmp, Saylor, Yu, & Simons-Morton, 2001; Lane, 1989; Ma, 2001; Seals & Young, 2003).

Since adolescents mature along a continuum involving interpersonal skills, cognitive processes, and emotion-related regulation in the context of school settings, it will be important to discern how the four aforementioned variables (i.e., social information processes, emotion-related regulation, social skills, and school climate) contribute to bully, victim, bully-victim behaviors or conversely, pro-social tendencies that minimize that risk. This research will be beneficial in establishing a greater awareness of developmental pathways in peer victimization, lending support to the development of interventions that will strengthen healthy personal and interpersonal functioning.

Definition of Terms

- Bullying:** "Bullying occurs when a person says mean and hurtful things, makes fun of others, or calls a person mean and hurtful names. It is also considered bullying when a person completely ignores or excludes another from their group of friends or leaves others out of things on purpose. Bullying occurs when one hits, kicks, pushes, shoves around, or locks another inside a room. It is bullying when one tells lies or spreads false rumors about another or sends mean notes and tries to make other students dislike him or her, and other hurtful things like that. It is bullying when these things happen repeatedly, and it is difficult for the student being bullied to defend himself or herself. It is also bullying when a student is teased repeatedly in a mean and hurtful way.
- But it is not bullying when the teasing is done in a friendly and playful way. Also, it is not bullying when two students of about equal strength or power argue or fight" (Olweus, 1996).
- Victimization:** Children are victims of bullying when subjected to verbal aggression that is intended to hurt or make fun of them, through name calling and the like, as well as when boys or girls are isolated or shunned, such as in relational aggression (Rudolph, Troop-Gordon & Flynn, 2009), being deliberately excluded from play or other social interactions (Olweus, 1986). Further, victimization occurs when the behavior is not intended as playful teasing, involves malice, and occurs in the absence of equal status, power and size, including verbal and emotional harassment (Espelage et al., 2001). Victims of peer aggression include both males and females who often face repeated assault, and are unable to defend themselves (Olweus, 1996).
- Bully-Victims:** Bully-victims involve individuals who engage in retaliatory behavior to bullying or as a defense against perceived threat (Pellegrini, 1999).
- Non-Bullies/Non-Victims:** Individuals who are not involved in bully or victim behavior.

Social Information Processing:

Social information-processing pertains to the abilities of children as they notice, encode, and translate information gathered from social interactions that lead them to a form a conclusion and enact a social response (Crick & Dodge, 1994).

Emotion Related-Regulation:

Emotion related-regulation pertains to innate abilities to regulate affective states as well as the integration of emotional stimuli that influences how one will react interpersonally (Cohen & Strayer, 1996).

Social Skills:

Social skills pertain to behaviors that share a functional relationship to peer acceptance in adolescence (Inderbitzen & Foster, 1992); behavior that supports peer relationships (Demaray & Malecki, 2003)

School Climate:

School climate is described by Tagiuri (1968) as, “the total environmental quality within an organization” (cited in Espelage and Swearer, 2004).

CHAPTER II

Literature Review

Bully/victim behavior (i.e., victim, bully, bully-victim, and non-victim/non-bully) involves interpersonal relationships that develop within the context of a social-ecological system (Atlas & Pepler, 1998; Espelage, & Swearer, 2004; Slee, 1994; Rudolph et al., 2009; Spriggs, Iannotti, Nansel, & Haynie, 2007), and is affected by the school environment (Bacchini, Esposito, & Affuso, 2009; Espelage, 2004; Parault, Davis, & Pelligrini, 2007). Multiple influences contribute to bully/victim behavior, such as: 1) individual characteristics of the person that include social information-processing abilities (Crick & Dodge, 1996; Dodge, Lansford, Burks, Bates, Pettit, Fontaine & Price, 2003), and regulation of affective states or the ability to respond to emotionally charged social situations or environments (Craig, 1998; Halberstadt, Denham, & Dunsmore, 2001), 2) dynamic relational styles that increase the likelihood of becoming a victim of bullying, including social skills (Crick & Bigbee, 1998; Rigby, K., 2002; Onder, & Yurtal, 2008), 3) and whether peers or other adults (i.e., teachers) are present (Ellis, & Shute, 2007; Howard, Horne, & Jollif, 2001), that can serve as contextual factors influencing students' perception of the school environment (Bronfenbrenner, 1979; Dulmus, Sowers & Theriot, 2006; Hodges & Rodkin, 2003; Swearer et al., 2001).

Increasing attention has been given to the issue of bully/victim behavior in recent years (Espelage et al., 2004; Hatakeyama & Ymazaki, 2002; Haynie et al., 2001; Holt, et al., 2007; Ma, 2001; Olweus, 1991). Research by Olweus and others (Lane, 1989; Mahady-Wilton, Craig, & Pepler, 2000; Olweus & Bergen, 1995; Seals & Young, 2003) has indicated that many youth engage in or are victims of bullying. Olweus (2000)

asserted that during the course of a child's primary education between 7% and 34% of children are connected to some form of bullying, with 14% of students being victims of severe forms of bullying (Hoover, Oliver, & Hazler, 1992).

No apparent relationship has been identified between the relative amount of white and non-white students and the number of bullying incidences (Whitney & Smith, 1993). Relative to peer aggression, adolescents' bully/victim behavior assumes the form as bully, victim, or bully-victim (Haynie et al., 2001; Holt et al., 2007, Bradshaw, Sawyer, & O'Brennan, 2007).

The extant literature is abundant in further defining behavior consistent with bully/victim outcomes (Bandura, 1986, 1977; Fox et al., 2003; Haynie et al., 2001; Holt, Finkelhor, & Kaufman-Kantor, 2007; Hubbard, Dodge, Cillessen, Coie, & Schwartz, 2001; Lane, 1989; Ma, 2001; Mahady-Wilton et al., 2000; Seals et al., 2003). The results of questionnaires given to school-aged children suggest that bullying is a pervasive problem that plagues schools (Olweus, 1991) with enduring negative consequences for victims that can last for many years (Duncan, 2007; Nansel et al., 2001; Olweus, 2000), including self-reported symptoms of anxiety and depression (Bond, Carlin, Thomas, Rubin, & Patton, 2001; Holt et al., 2007).

Demographic Variables

Gender

According to Boulton et al. (1993), it is common for males to engage in bullying either as perpetrator or victim more than females. Furthermore, victims have reported experiencing approximately 65% of bullying at the hands of males, with 15% perpetrated by females, and 19% by males and females. Olweus (1991) reported that

60% of females in grades 5 through 7 were the target of bullying by males, with 15-20% of victims being bullied by males and females, and in excess of 80% of males bullying other males. Additionally, Craig and Pepler (1997) found that females are less likely than males to participate in bullying episodes, as males are more apt to be enticed by bullying behavior and actively participate in it. In a global school-based student health survey of middle school students from 19 low- and middle-income countries examining the relationship between bullying, mental health, and health behaviors, Fleming and Jacobsen (2009) reported that the prevalence for boys to engage in bullying was higher than that for girls.

Ethnicity

Spriggs, Iannotti, Nansel, and Haynie (2007) stated that black adolescents reported a significantly lower prevalence of victimization than Caucasian and Hispanic students in their 2001 study of health behaviors in school aged children (n = 11,033 adolescents in grades 6 through 10). The authors further asserted that school factors (i.e., school satisfaction and performance) were largely unrelated to bullying among black students. However, Peskin, Tortolero, and Markham, (2006), when studying the prevalence of bully/victim behavior among a sample of low socio-economic 6th to 12th grade black and Hispanic students by gender, grade level, and race/ethnicity, found that gender differences were non-significant. Yet, it was reported that the number of bullying incidents among black students was higher than that of Hispanic students, reaching the greater number of bullying episodes by 9th grade.

It was reported by DeVoe, Peter, Kaufman, Ruddy, Miller, Planty, Snyder, and Rand (2003) from their 1999 to 2001 U.S. national survey (n = 27,380,000) of

adolescents that while Hispanic, White, and other, non-Hispanic students' rates of bullying nearly doubled (i.e., from 4 to 8%, 5 to 9%, and 3 to 7% respectively), the percentage of black students (6%) who reported being involved in bullying incidents remained the same over that same period of time.

Grade Level

On average, 11.6% of students are victims of bullying in grades 2 through 6, whereas 5.4% of students in grades 7 through 9 are bullied; however, students who are in the lowest grade in the school are most vulnerable to bullying regardless of their age (Olweus (1991). Boulton et al. (1993) further stated that since younger students are generally of smaller stature and weaker, they are more likely to be bullied than older, stronger students. Fleming et al. (2009) reported that the incidence of bullying decreases as one increases in age.

Grade Average

Glew, Fan, Katon, and Rivara, (2008) studied 5,391 students in grades 7, 9, and 11 in an urban public school district and reported that for every one point increase in a student's grade average, the likelihood of becoming a victim of bullying rather than a bystander was 10% lower. In a study by Juvonen, Graham, and Schuster (2003), teacher reports of students with bully-victim tendencies reported that these students exhibited more negative behavior and were less engaged in school than students who were either solely victims or bullies. The academic abilities of bully-victims are not only compromised, but there is also evidence suggesting that these students tend to be low achievers (Glew, Fan, Katon, Rivara, & Kernic, 2005).

Special Education Status

When students become segregated from their peers because they are labeled based upon their level of academic functioning, or more precisely because they receive special education services, the result often leads to an environment that is supportive of bullying behavior, as well as the formation of cliques (Bruininks, 1978). Within the American education system, students are frequently assigned to different groups (i.e., based upon reading or mathematic aptitude) rather than groups that include students with a mix of academic and social abilities. This can be readily observed among students in special education.

Hoover and Stenhjem (2003) stated that for students who are labeled and separated because of their academic functioning, the school climate becomes turbulent in that they are likely to be bullied overtly or shunned. By design, schools in the U.S. are set up for the most part to label students and to assign them to different groups. Subsequently, it is their differences that are most noticeable and not what they share in common, particularly for students who have the most difficulty (i.e., academically, socially, athletically) (Hoover et al., 2003). Furthermore, Hoover et al. suggested that the school environment remains bereft of understanding and acceptance among all students as well as staff when students are segregated based upon ability.

Parent Level of Education

While there is a paucity of research pertaining to parent level of education and bully/victim outcomes, it has been reported by Dake, Price, and Telljohann (2003) that children of lower socioeconomic status families have been found to engage in or become victims of bullying. It is possible that children whose

parents have attained advanced academic degrees have acquired a higher socioeconomic status and therefore the risk of their children becoming ensconced in bully/victim behaviors is minimized.

Social Information-Processing

To a greater or lesser extent, individuals possess an inherent capacity to process information that aids in their personal development, the development of their environment (Crick & Dodge, 1994; Swearer et al., 2001) and interpersonal relationships (Salmivalli et al., 2005). Social information-processing abilities are initiated as children notice, encode, and translate information gleaned from social interactions that lead them to a competent conclusion (Crick et al., 1994). Social relationships raise individual awareness that people process information in different ways, since the experiences others have are distinct from one's own. With the existence of their increasing perceptibility, individuals receive new knowledge while contributing to the knowledge of others (Flavell, 1977).

Flavell (1977) suggested that the acquisition of social information follows a series of steps (i.e., existence, need, and inference). Existence is the awareness that people experience phenomena affectively. Need pertains to knowing that choices can be made whether or not to take action on any given event. Inference includes the awareness of other peoples' thoughts or experiences (existence) and the desire to assist the other person (need) that results in the selection of a plan or strategy to act. Hains and Ryan (1983) suggested that individuals perceive others' intentions through observation of their behavior. The child's increasing potential to integrate social information allows them to perceive how others think relative to the behavior they observe (Flavell, 1977).

Furthermore, this course of development diminishes egocentrism in the child while increasing socialization.

The healthy progression of cognitive abilities presupposes a desirable interaction between people; the need for healthy relationships appears necessary to ensure prosocial functioning later in life (Eisenberg & Miller, 1987). This involves modeling behavior in which a dynamic interaction between children and others occurs (Bandura, 1986). Crain (1980) also reported that new behavior, when acquired via observation, seems to be cognitive. Children, having reached the cognitive level of existence, are then able to extrapolate from behavior they observe and may incorporate modeled behaviors into their own behavioral repertoire (Bandura 1986, 1989).

In their study of tripartite beliefs regarding bully and victim behavior, Gottheil and Dubow (2001) examined cognitive processes and related behavior relative to self-efficacy beliefs pertaining to aggressive tendencies and the control of those impulses, as well as outcome expectancies when aggression is used to achieve a goal. Relative to victim behavior, the authors asserted that victims of bullying may be recipients of aggression without acting upon it. Rather, victims may receive bullying passively regardless of the thoughts they retain about their ability to defend against this type of aggression. Yet, the processing of social information is closely linked to victimization; as a child discontinues being a victim, their scores of social and global self-competence increase (Browning, Cohen, & Warman, 2003).

Hubbard et al. (2001) examined the relationship between male aggressive behavior enacted toward their peers and social cognitions to determine the relative contribution of the individual (i.e., as instigator), whether aggressive behavior was

partner driven or if it resulted from dyadic relationship factors. Hubbard and colleagues based their study upon previous findings that boys' aggressive tendencies are born within the context and types of aggressive dyadic relationships they share with each other. Further, that differences within the individual, relative to reactive aggression (i.e., "a defensive, retaliatory response to a perceived provocation from a peer and is accompanied by a display of anger" p. 269) reflect a proclivity within that individual to attribute hostile intent, whereas the tendency of one engaged in proactive aggression (i.e., "unprovoked, deliberate, goal-directed behavior used to influence or coerce a peer" p. 269) pertains to the belief that by enacting aggressive behavior, positive outcomes will be gained.

Hubbard et al.'s findings indicated dyad-specific outcomes for reactive aggression, such that as peers interacted socially, hostile attributional styles regarding their peers' intent resulted in the victim enacting aggressive behavior toward that peer. Proactive aggression was related to outcome expectancies when that aggression was directed toward a peer. When a child experiences a deficit in social information processing, they are more apt to misinterpret social cues and respond with aggression (Perry, D., Kusel, & Perry, L., 1988).

Studies have also examined the importance of addressing acting-out behaviors and their relationship to poor social information-processing abilities. One such study conducted by Hains et al. (1983) examined the relationship of Flavell's (1974) model of social cognition (i.e., existence, need, inference, and application). This study compared delinquent and non-delinquent youths (aged 10-11 and 14-15), and indicated that non-

delinquents, especially older non-delinquents, were more thorough in their consideration of cognitive solutions to problems.

It may be that delinquent youth have not learned to process information as thoroughly, or have acquired aversive behavioral styles as a result of modeling. This was supported by Bacchini, Esposito, Giovann, Affuso, and Gaetana (2009) who studied 734 7th, 10th, and 12th grade students' perception of neighborhood and school environments affect upon the attainment of bully or victim behavior; students who tended to experience violence in the neighborhoods in which they live maintained a negative perception of their relationship with teachers, whereas victims of bullying held negative perceptions toward classmates.

Youngsters residing in communities rife with violence tend to acquire attitudes and thoughts about violence that are desensitized to violence and the impact it has upon psychological functioning (Aisenberg, Ayon, & Orozco-Figueroa, 2008). The authors further suggested that the violence in high-risk/high-crime neighborhoods occurs repeatedly, exposing young people to a multitude of violent acts. Therefore, subjective perceptions of what constitutes violence or aggression, including bully or bully-victim behavior, has the obvious potential to influence how these children make sense of social situations and the behavior enacted by others during social encounters. Subsequently, what one child identifies as aggression may to another child appear trivial based upon their desensitization to violence.

In a study by Rudolph et al. (2009), 110 children (mean age = 10.13 years) were examined to determine the affect of relational victimization upon the children's thoughts, emotions, and social behavior in an environment unfamiliar to them; the transition from

elementary to middle school provides a relatively unfamiliar setting, independent of the acquaintances children have with peers also entering middle school. Findings suggested children high in social-cognitive deficits, maintaining negative peer beliefs, were subject to more peer victimization.

Helms (1988) assessed the level of social perspective taking relative to peer group interactions among incarcerated and non-incarcerated youth, and interactions with adults or adult authority figures that were unrelated to the child. Levels of cognitive, intellectual, and social variables were considered. It was suggested that incarcerated youths rated significantly lower in each domain than non-incarcerated youth; these factors related to delinquent behavior and interfered with normative social skills relative to typical rates seen in adolescent development.

Emotion-Related Regulation

Emotional information was suggested by Crick et al. (1994) as a motivator for individuals to attain goals (i.e., feelings of anger can motivate proactive aggression, while positive emotions can motivate behavior intended to maintain positive affective states). Lemerise et al. (2000) asserted that affective prompts compel children to behave in a certain manner, while the intensity of the emotion determines the goals sought after in social situations. Additionally, when children feel overwhelmed by their own or others' emotions, they may be prompted to enact hostility or aggression in an effort to minimize their discomfort; deficits that exist in the realm of empathy or cognition may influence negative/aggressive behavior on part of the child because they are incapable of attending appropriately to another child's discomfort (Cohen & Strayer,

1996). As such, emotion-related regulation pertains to innate abilities as well as the integration of emotional stimuli that influences how one will react interpersonally.

It is logical to assume that the physical appearance of victims (i.e., body weight/size, facial complexion, hair color) elicits negative emotional responses and aggressive behavior in some children that gets directed toward victims. Yet, as reported by Olweus (2000), physical appearances have little to do with bully/victim behavior. While Olweus concedes that physical attributes may play a role in peer victimization, he reported emergent emotional attributes of victims as more salient; victims tend to possess more anxiety and to be more insecure than other students. Such children tend to internalize problems (Hodges & Perry, 1999), while victims of persistent peer aggression suffer the risk of increased depression, inability to regulate emotion, decreased self-esteem, withdrawal from social interactions, disinterest and avoidance of school, decreased academic performance, and have fewer friends (Perry, Hodges, & Egan, 2001).

Hodges et al. (1999) further reported that children who exhibit internalizing difficulties tend to demonstrate anxiety, are apt to cry, be more socially withdrawn, and are prone to sadness. In Fleming et al. (2009) study, children who indicated they were bullied within the past month acknowledged negative affective states such as sadness, hopelessness, loneliness, experienced disrupted sleep, and had thoughts of suicide. These students also reported engaging more in sexual intercourse and using illicit substances.

Being emotionally distressed may signal to others that they are ready targets. Hence, becoming victims of peer aggression could be the result of behaviors that signal

an inability to guard against bullying, and thereby draw negative attention to oneself. Indeed, anxious and sad children possess fewer capabilities than other children to organize an appropriate response to the affronts of bullies (Olweus, 1995; Seals & Young, 2003; Slee, 1994). Previous studies (Bandura, 1986; Camodecca et al., 2002) have indicated that bullies display a propensity for identifying weaknesses among victims, anticipating that victims will behave in a certain manner (i.e., displaying signs of fearfulness, suffering, crying) that is perceived as weakness, reinforcing aggression in the attacker.

Differences exist between children relative to the intensity with which they experience and act upon emotions, including their ability to regulate emotions (Arsenio & Lemerise, 2001). One difference that influences how children regulate emotional information pertains to social competence (Demaray & Malecki, 2003; Eisenberg, 1997) which involves social information-processing abilities; the ability to exhibit social competence involves accessing previously stored learning (i.e., rules, knowledge of social interactions, and social schemas) (Crick et al., 1994). In addition to cognition, Arsenio et al. (2000) stated that representations of past events also involve affective tendencies, such that “one’s own and others’ affective signals provide ongoing information about how (a social encounter) is proceeding, allowing for sensitive adjustments to behavior... (Furthermore, that) the nature of emotional ties with an interaction partner also may influence encoding and interpretation” of a given encounter (p. 112) with implications for how well emotional stimuli are regulated and acted upon within a social context.

Social Skills

Pellegrini (1998) asserted that students engage in bullying behavior as a means to establish social dominance and develop a sense of pride, and will continue to enact aggressive behavior so long as their efforts are rewarded and negative outcomes avoided. Winstok (2009) also reported that male adolescents tend to 'adjust the environment to the self' and initiate aggressive social behavior to establish a place for themselves and experience a sense of pride, whereas girls, who also demonstrate aggressive behavior, have a tendency to accommodate their environment and are less apt than males to use aggression as a means to enhance their social status. Pellegrini, Bartini, and Brooks (1999) stated of victims that, as a group, these individuals generally avoid the use of aggressive behavior. However, Pellegrini et al. (1999) reported that victims will use aggressive behavior as a means to retaliate against bullies, or as a means to protect themselves from bullies (i.e., bully-victims).

Research has indicated that children who possess the skill to acquire and engage in positive social behavior are in a better position to develop pro-social skills that support positive peer relationships (Demaray et al., 2003, Hodges et al., 1997). Hodges et al. also argued that children may use these friendships to obtain information that enhances positive self-perception and self-esteem, as well as to sustain socio-emotional needs and a cognitive frame of reference to help them cope with stressful events.

Additionally, Hodges et al. contend that friendships protect against victimization merely by having 'strength in numbers'; being surrounded by peers who are positive decreases the likelihood of being bullied. Children who associate with other positive

children are also less likely to be alone, and therefore minimize opportunities to fall prey to bullies seeking a vulnerable target. Advice offered by friends further strengthens a child's ability to avert negative outcomes in social situations. Importantly, Hodges et al. (1997) suggested that outcomes are more positive for children when their friends engage in positive behaviors themselves.

As suggested by Hodges et al. (1997), poor social skills or social behavior problems alone do not necessarily lead a child to become a victim or bully-victim. Rather, two additional social risk factors play a role in the attainment of victim status: friendships that are lacking in support and peer rejection. Hodges et al. stated the "children who possess behavior problems that put them at risk for victimization are more likely to be chronically abused if they are also at social risk for victimization, that is, if they lack friends who can protect them or if they are widely devalued by peers" (p. 1037). Furthermore, Hodges et al. asserted that victims whose friends are also victims do not benefit from these affiliations, as do non-victims who are friends with other non-victims. As suggested by Salmivalli and Isaacs (2005), children who withdraw from social interactions because they perceive themselves as having a negative self-image are quite likely to be rejected by peers, increasing the chance they will fall prey to bullying.

Some children are likely to be victimized by peers occasionally (Perry, Perry, & Kennedy, 1992), while others are victimized repeatedly (Browning, Cohen, & Warren, 2003). A study conducted by Schwartz, McFadyen-Ketchum, Dodge, Pettit, and Bates (1999) furthered the understanding of peer victimization during childhood; the authors suggested that displays of submission by children or social withdrawal prompt other

children to aggress against them. This finding has been supported by others (Gottheil et al., 2001; Olweus, 2000; Crick & Bigbee, 1998; Schwartz, Dodge, Coie, Hubbard, Cillessen, Lemerise, & Bateman, 1998; Troy & Sroufe, 1987).

Schwartz et al. (1999) also reported that additional behavioral problems exhibited by children increase their risk of being victimized. Such behavior problems include difficulty with sustained attention, poor impulse control, dependency associated with immaturity, anxious-depressive behavior, and aggression that leads to acting-out. The authors asserted that a behavioral style of this nature predicted later peer victimization. Schwartz et al. (1999) also stated that problems with social behavior facilitate the acquisition of peer victimization as a causal factor, rather than as a mere consequence of bully behavior.

As with behavior problems, the influence of poor social information-processing abilities, emotional dysregulation, and negative environment can contribute to the development of poor social skills and the onset of victim behavior, including the aggressive behavior of bully-victims (Crick et al., 1994; Lemerise & Arsenio, 2000; Bronfenbrenner, 1979). Behavior problems that lend themselves to negative actions correlated with bully-victim status in children include oppositional tendencies, that is behavior deemed as unruly (i.e., frequently loses temper, argumentative with adults, spiteful) but it does not generally include overt aggressive acts of violence (DSM-IV, 1994). Oppositional behavior differs from a more serious disturbance of conduct disorder that includes externalizing or delinquent/antisocial behaviors that “refer broadly to any behaviors that reflect social-rule violations or acts against others...such as fighting” (Kazdin, 1987, p. 187). Generally, conduct disordered behaviors are coercive

in nature. In this sense, coercion pertains to an individual's aberrant behavior that is sustained by another person, (Kazdin, 1987); such negative behavior appears to occur sporadically or in 'bursts' (Patterson, 1976), suggesting that 'bursts' of negative or bully behavior may occur after one has been victimized.

Purposeful aggressive behaviors are distinguished from those of bully-victims, who engage in retaliatory behavior or as a defense against perceived threat (Pelligrini et al., 1999). As previous research has found (Bandura,1978; Pellegrini et al., 1999), bully-victims, who presumably generate some of their own misery (e.g., retaliation for their aggressive behavior is leveled against them by others), believe that by aggressing against their aggressors they will eventually be left alone, whereas 'antisocial' behavior pertains to proactive-aggression that is goal oriented and is intended to facilitate a positive outcome for the actor (Crick & Dodge, 1996). Additionally, differences in the activity level of children as well as their ability to regulate emotions (i.e., impulsivity leading to inappropriate behavior, negative affect) correlate highly to bully-victim status (Xu, Schwartz, & Chang, 2003)

School Climate

School size as well as the climate of the school have been reported as contributory factors in the bully/victim cycle, particularly in grades eight and six (Ma, 2001). Olweus (2000) reported that more bully and victim behavior occurs in schools with a larger population of students. However, Olweus also stated that bully/victim outcomes occurs independent of the size of the school or classroom; it is behavior that takes place in schools regardless of the number of students who attend.

Peer victimization is born out of interpersonal relationships, and schools are institutions that facilitate and encourage social interaction; a context that is determined by factors such as students' perception of their peers' behavior as well as the environment of the school (Dulmus et al., 2006; Haynes, Emmons, and Ben-Avie, 1997; Wienke-Totura et al., 2009). Lane (1989) suggested that the broader social context within schools should be evaluated to better understand peer victimization. It is within the context of schools where adults (i.e., teachers, other staff) contribute to the social milieu, able to influence not only students' perceptions of the school climate but as stated by Pellegrini (2002), teachers implicitly or unintentionally perpetuate bully/victim behavior.

Bronfenbrenner (1979) stated that progressive links between children and environment, including the school, are essential in fostering development. He further suggested that when the connection between children and the environment erodes, the process of socialization is hampered and the attrition of cognitive competence follows. However, relative to the attainment of victim status, whether the disintegration of the social milieu or inabilities of the child take precedence one over the other may be a moot point. As suggested by previous researchers (Hodges et al., 1997; Leff et al., 2007), an important perspective to take may be that disparate risk factors and instances of victimization serve a complimentary role, such as the presence of peers and adults who appear elemental in fostering a particular context where aggressive behavior is spawned and/or perpetuated (Sutton, 2001).

In her study of 1,042 middle school students from 23 different schools, Wang (2009) found that when adolescents' perceptions of their school environment were

positive, their sense of social competence improved. Students' behavior and psychological adjustment was reported as contributory to the regulation of their negative emotions while enhancing social problem-solving abilities. Subsequently, students reported greater ability to guard against feelings of depression and negative social behaviors.

During childhood and adolescence, observations made by individuals often occur within the school environment that affects emerging cognitive processes. Relative to a social-ecological approach to maturing cognitive abilities, Shotter et al. (1982) suggested that cognitive development follows a reciprocal interaction between the child and the environment. The merging of these two elements is termed by the authors as *Umwelten*. This is a term that appears to connote not merely environment, but the reciprocal nature of learning that takes place in the child's social/interpersonal domain. The child's *Umwelten* contains other persons, who act as informants for the child, passing on to the child knowledge that they too acquired from years past. In light of this, the authors suggested that cognitive development has an implicit historical component, linking previous learning with new possibilities in a social-ecological context.

As active participants in their milieu, children develop as their environments develop, creatively engaging people and events by which knowledge is acquired; while children elicit information from their surroundings, their cognitive and emotional abilities mature as evidenced by positive social behavior. Bandura (1986, 1989) suggested that social-ecological cognitive development pertains to the knowledge a child attains in the environment, especially how the environment is perceived by the child at any given

time. Traits within the environment impact upon the child, influencing the child's framework and cognitive/emotional development. In this manner, the child's *Umwelten* takes on broader dimensions. Developmentally, children engage others socially (parents, peers, teachers) thereby influencing all parties' *Umwelten*. As such, social liaisons evolve with the child that could impact later interpersonal relationships (Patterson, 1976).

Bornstein and Lamb (1992) suggested that emotional development evolves within the context of the environment influencing one's behavior; innate characteristics, such as emotional functioning, may influence behavioral initiative or reactivity. Young children and adolescents have had relatively insufficient time to integrate cognitive, emotional, and social experiences. Therefore, whatever behavioral repertoire the very young child displays is ascribed to affective tendencies, reflecting a hereditary characteristic or personality style with lifelong implications for behavior (Bornstein et al., 1992). However, as the authors suggested, the child's emotional functioning does not solely dictate future behavior. Rather, the interaction of affective tendencies and environmental referents determine future behavior. For instance, Chang (2004) reported that the environment of the classroom can influence the relationship between negative affect (i.e., anxiety) and victim status.

In their study of middle school students' emotional and academic abilities relative to students' perceptions of family and school environments, Wienke-Totura et al. (2009) reported that two variables mediated the relationship between students' emotional functioning and attainment of bully or victim status: 1) perceptions students held about aggressiveness in the school and 2) adult monitoring of student behavior. Students

who experience greater difficulty attenuating negative affective states are more vulnerable to becoming a victim of bullying, particularly if the perception they hold of the school environment is one with lower levels of aggressiveness. Perhaps the students who experience difficulty regulating negative emotions and who perceive lower levels of aggressiveness within their schools are not vigilant to potential threats of bullying, and in their lower level of awareness, they are unprepared to defend against bully behavior.

The interaction of emotional functioning and the environment influence children's affective styles and related behavior within their families, and can influence the development of negative behavior patterns (Wienke-Tortura et al., 2009). Wienke-Tortura et al. reported that if a child acts coercively or aggressively, especially toward the parents, and to the degree parents react with hostility toward the child, a negative, hostile pattern of behavior will be adopted by the child and enacted toward others. Schwartz, Dodge, Pettit, and Bates (1997) reported that children in pre-school whose family experiences were harsh, disorganized and potentially abusive, enacted aggressive-victim behavior as early as third and fourth grade. Further, Schwartz et al. reported that aggressive behavior enacted by the adults and witnessed by the child may influence aggressive behavior in the child; being subject to adult violence supports the development of both aggressive behavior and becoming a victim to bullying. As such, it is not merely the child's affective tendencies or parental characteristics that influence the development of later behavioral problems, but the collaboration of the two in a social context.

While aggressive behavior, conceivably including bullying behavior, may be associated with normative adolescent development, whereby young adolescents are

jostling for status or otherwise asserting themselves during the transition from childhood to adolescence (Cadwallader, 2000; Pellegrini, 2002; Weisfeld, 1999), it has been suggested by Olweus (2000) that contextual factors within the social environment where peer victimization occurs may contribute to the onset and maintenance of aggressive behavior, including bully, victim, and bully-victim tendencies.

The school as an institution of learning provides a venue where student success is measured by more than academic performance. The formation of social behavior is fostered by the school culture or the climate in which students' social behavior is being developed over time, including behaviors along the bully/victim continuum.

Studies have shown that teachers' and students' awareness of bully behavior, as well as students' perceptions of teachers monitoring and intervening when they recognize bullying is important in creating students' perception of a positive school climate (Totura, MacKinnon-Lewis, Gesten, Gadd, Divine, Dunham, & Kamboukos, 2009). Olweus' (1994) intervention research on bully behavior suggested that as teachers become aware of bully behavior and take initiative to intervene, a dramatic decrease in the rates of bullying are evident. Additionally, Olweus (1997) reported the potential for increased positive outcomes relative to bully/victim behavior when teachers establish firm limits for inappropriate behavior, providing further reason to suggest that the school climate, as shaped by teacher behavior, mediates student social functioning.

A study of 8th grade students over the span of 33 countries by Akiba (2008) indicated that students' fear of becoming a victim of bullying decreased where student-centered instruction was practiced by teachers. Through meditational analysis, Flaspohler, Elfstrom, Vanderzee, Sink, and Birchmeier (2009) discovered that as

teachers and students work toward increasing social support within the school, the impact of bullying upon victims is mitigated. Conversely, as Card and Hodges (2008) found, victimization within schools is most predictive when adults are absent.

School-Ecology as a Mediating Agent for Bully/Victim Outcomes

Students upon entering into the school system, come with a repertoire of social skills, or lack thereof. This level of social finesse, along with other personality factors and variables (i.e., family dynamics involving substance abuse, domestic violence, mental illness, cognitive functioning), contribute to how their peers perceive them and can lead to the acquisition of a negative social behaviors (i.e., bully, victim, bully-victim) for those that lack the social graces common to the larger population of peers.

There are students whose school environments are rife with violence, such as urban settings, where violence is not merely enacted as a means to establish a hierarchy of dominance, but rather is necessitated by a 'kill or be killed' mentality. It stands to reason that as children's attention is directed toward survival, the emotional sensitivity that many of them possess could morph into hypervigilance or alter their perception of what is or is not aggressive behavior (Aisenberg, Ayon, & Orozco-Figueroa, 2008) compromising their efforts to succeed socially and academically. In many school environments 'zero tolerance' policies have been instituted in an effort to limit school violence and create an atmosphere of security that contributes to students' success.

It is proposed that the perceived climate of the school can play an important role by influencing the trajectory of bully/victim outcomes. School climates that are perceived as tolerating aggressive behavior, with adults viewed as unsupportive of

students' needs, are thought to mediate the likely outcome of bully and victim behaviors. School climates, on the other hand, that are perceived by students as reinforcing and directly teaching social skills, provide a caring environment, and have adults and fellow peers that are responsive to students' emotional needs can mitigate the probability of bully and victim outcomes as bullying behavior is not tolerated and prosocial behaviors are reinforced.

A perceived negative school climate can unwittingly contribute to aggressive behavior, including bullying. It is in negative school climates where aggressive behavior makes bullies feel more empowered and victims more helpless. For bully-victims, their means of defense by preemptive or retaliatory aggressive behavior also strengthens in the absence of a school climate that consistently emphasizes positive behavior practices. Positive school climates emphasize prosocial skills intended to diminish a bully's or bully-victim's power, while increasing victims' and non-bully/non-victims' efficacy as students are reinforced for positive behavior, knowing that adults will also be responsive to the social and emotional needs of the students.

For the most part, schools that rely upon aversive or exclusionary consequences when responding to violent, aggressive behavior (i.e., verbal reprimands, in school detention, or out of school suspensions) may recognize a noticeable decrease in the undesired behavior in the immediate future. Yet this type of intervention does little to address the myriad differences in students behaviorally, psychologically, and emotionally, including those whose motivation to engage in aggressive behavior stems in part from learned behavior (i.e., dysfunctional behavior within families and/or communities). Additionally, adverse effects stemming from the use of reactive

approaches to aggressive behavior can result in a continuation of the negative behavior by students being reprimanded (Sugai & Horner, 1999).

Academic success is but one of the responsibilities a school has when helping shape the life path of students. Yet, the curriculum does not determine how the schools must function; rather the curriculum that includes explicitly stated expectations of staff and students can generate a climate within the school that can be perceived by students as supportive of their needs emotionally, while ensuring their physical security.

The U.S. Department of Education (Horner & Sugai, 2004) has encouraged local schools nationwide to establish Positive Behavior Support (PBS) practices within their educational institutions. Positive Behavior Support initiatives have been developed as a means to increase the likelihood of success in schools both academically and socially. The aims of PBS are to help students develop and strengthen their ability to remain on task relative to assignments, complete school work, maintain a positive disposition toward peers and staff, and to generally put forth their best effort in school. The learning environment is directly targeted by PBS within the classroom as a means to minimize problematic behavior, while reinforcing prosocial behavior. It is intended to foster a school climate that is readily perceived by students, and to create a positive climate that fits with the individual culture of each school. The implications of PBS initiatives imply that schools have become a critical determining influence that can mediate bully/victim outcomes.

Summary

The significance of individual traits that contribute to one's social status (i.e., bully, victim, bully-victim, non-bully/non-victim) presupposes biological processes that

give way to cognitive, emotional, and behavioral development from which learning and interpersonal relationships evolve. Human functioning is by nature social, and as such gives rise to various communities (e.g., schools, towns) where the drama of interpersonal relations is played out. Biological processes notwithstanding, adolescents emerge from childhood within a social context, jostling for status on their way to adulthood (Pellegrini, 2002; Weisfeld, 1999). Indeed, as Hubbard et al. (2001) indicated, social relationships play a significant role in a child's development, especially as they pertain to behavior along the bully/victim continuum.

Aspects of social and ecological cognitive development, relative to environmental factors, influence behavioral outcomes (i.e., perception of self, others, and school climate). Additionally, emotional development including temperament is a biological component that may serve to influence affective tendencies, as well as influence how the emerging adolescent interacts with and makes use of social and emotional information within their environment, thus contributing to the child's cycle of learning and acquisition of social skills (Bornstein & Lamb, 1992). As children enact behaviors, they elicit responses from others which in turn the child answers (Flavell, 1977).

While the evaluation of ancillary or ecological factors that contribute to social status has come under increasing attention, it is ultimately the individual who assumes the burden as victim among his or her peers (Juvonen & Graham, 2001). Further exploring developmental factors (i.e., cognitive, emotional, and behavioral) implicated in students' social status can empower educational institutions, as well as the wider community, to contend with the issue of bully/victim behavior more effectively (Haynie, et al., 2001; Seals, et al., 2003).

CHAPTER III

Methods

Participants

Two public middle schools from West Bloomfield, Michigan, a suburb of Detroit, were used in this study. Two schools were selected for this study to ensure that a sufficient sample size would be obtained providing a diverse range of demographic variability. There were a total of 1,242 students in the sixth and seventh grades in both schools. A total of five questionnaires were included in the study.

Participants in this study were 6th and 7th grade general education students, including mainstreamed special education students. The principals identified 17 classroom teachers respectively (8 teachers from the 6th grade and 9 teachers from the 7th grade) who allowed the study to be conducted in their classroom. This constituted all 6th and 7th grade classrooms in both schools respectively. Eighth grade students constitute a group that has been widely studied and have gone through the transition from elementary to middle school. This study was interested in early adolescents and their transition and re-establishment of dominance in the middle school environment, particularly those students in the sixth and seventh grades.

Descriptive Data

The current sample (Table 1) was comprised of 422 male (50.40%) and 415 female (49.60%) middle school students. Sixth grade students (56.50%) and 7th grade students (43.50%) were included in the study. The sample consisted of predominantly Caucasian (45.80%) students. The remaining ethnic groups were comprised of African

American (20.30%), Arabic (3.50%), Asian/Pacific Islander (10.80%), Chaldean (7.30%), Hispanic (2.40%), and students of other ethnicities (9.90%).

All participants were mainstreamed academically with only 9.00% receiving special education services. Those participants reporting enrollment in a gifted program was 7.10%; this figure may be accounted for by students who assumed that advanced placement in mathematics constituted a gifted program. The majority of participants consisted of 627 (75%) students reporting a Grade Average in the range of A to B, with the second highest group of 107 (13%) students reporting a B/C+ to C grade average, and only 47 (6%) students reporting a Grade Average of C/D+ to E.

Parents' levels of education for mothers and fathers was predominantly reported as a masters degree (36.40% and 34.60% respectively), while the remaining levels of education consisted of bachelor degrees (25.20% and 21.00% respectively), high school degrees (13.80% and 15.30% respectively), and doctoral degrees (8.05% and 12.50% respectively).

Table 1

Frequency Distributions: Personal Characteristics (n = 837)

| Variable | n | % |
|------------------------|-----|-------|
| Student Gender | | |
| Female | 402 | 48.02 |
| Male | 411 | 49.10 |
| Missing Data | 24 | |
| Student Grade | | |
| 6 th | 468 | 55.91 |
| 7 th | 358 | 42.77 |
| Missing Data | 11 | |
| Student Ethnicity | | |
| African American | 164 | 20.30 |
| Arabic | 28 | 3.50 |
| Asian/Pacific Islander | 87 | 10.80 |
| Caucasian | 369 | 45.80 |
| Chaldean | 59 | 7.30 |
| Hispanic | 19 | 2.40 |
| Other | 80 | 9.90 |
| Grade Average | | |
| A | 237 | 30.30 |
| A/B+ | 339 | 43.40 |
| B | 51 | 6.10 |
| B/C+ | 93 | 11.10 |
| C | 14 | 1.70 |
| C/D+ | 32 | 4.10 |
| D | 8 | .90 |
| E | 7 | .80 |
| Special Education | | |
| Yes | 57 | 6.80 |
| No | 750 | 89.40 |
| Missing Data | 30 | |
| Mom Level of Education | | |
| High School | 116 | 13.80 |
| Bachelors | 211 | 25.20 |
| Masters | 305 | 36.40 |
| Doctor | 71 | 8.50 |
| Dad Level of Education | | |
| High School | 128 | 15.30 |
| Bachelors | 176 | 21.00 |
| Masters | 290 | 34.60 |
| Doctor | 105 | 12.50 |

Since general education classrooms were exclusively being sampled in this study, students with a wide range of abilities were involved in the study that included mainstreamed special education students; however, special education students who were not mainstreamed were excluded from the study. Also excluded were students with severe reading limitations, as well as students with autistic disorders. West Bloomfield schools provide separate classrooms for these students and therefore, these classrooms were not included in the study. Otherwise, students were only excluded if they or their parents did not want them to participate.

Approximately 1,242 letters were mailed. Of this number, 86 parents contacted this researcher by telephone or email stating their intent to withhold their child from participating in the study. On the day of the study, some students were excluded on the basis of being absent from school. Although, there is no record indicating the number of students absent on the day of the study. Some students elected to discontinue filling out the questionnaire during its administration, and therefore, their surveys were not counted in the study. Participants with missing data or highly questionable response patterns (i.e., had indicated a single response choice for all items) on any of the measures used in the present study were dropped from analyses. A total of sixty-seven percent of the available sample (837 out of 1,242 students) completed data on all measures.

Measures

Five instruments were administered to all participants, with the demographic survey attached (see Appendix A). Variables measured for this study included: bully/victim assessment, social information-processing abilities, emotion related-

regulation, social skills, and perceived school climate. A demographic instrument was developed for the purposes of this study, including information on age, gender, grade level, grade average, and parents' education level. The questionnaires used in this study were abbreviated due to time constraints to accommodate one class period (i.e., approximately 50 minutes) providing sufficient time for students to complete the entire survey. Subscales were selected based upon alpha levels, contextual relevance, and existing literature.

Olweus Bully/Victim Questionnaire

Bully/victim behaviors were measured using the Revised Olweus Bully/Victim Questionnaire (1996) to assess various dimensions of bully/victim problems, including exposure to various types of abuse (e.g., physical, verbal, indirect, racial, sexual, etc.), settings where bullying occurs, attitudes reflecting positive and negative attitudes toward bullying, and the degree to which the school environment (i.e., teachers) are informed about bullying behavior. The measure contained a detailed definition of bullying which was read aloud to the students by the researcher. A clear time frame was specified (i.e., "reference period") that was intended to encompass a natural period of time by which the students could recall pertinent events (i.e., "in the past couple of months," approximating six weeks from start of the school year). The questions also elicited information that pertained strictly to behavior that has occurred "at school."

The definition of bullying was followed by the "global" question: "How often have you been bullied at school in the past couple of months?" together with the five response alternatives listed previously. A similar question was later posed in the survey, inquiring whether students have bullied other students in the past couple of

months. The global questions that pertained to bully and victim behavior were followed by more detailed questions seeking to identify the specific forms of bully/victim behavior (i.e., physical, verbal).

Good psychometric properties for the measure have been reported. Pellegrini and Bartini (2000), in their study examining aggression and victimization in school settings, found with their middle school sample coefficient alphas of .84 and .95 for bullying and victimization respectively while using the Olweus Senior Bully/Victim Questionnaire. This is similar to reliability information reported by Pellegrini, Bartini, and Brooks (1999) with their sample of 5th grade students (.76 and .78 respectively). Finally, Boulton (1995) and Olweus (1993) consistently found coefficient alphas of .89 for both bullying and victimization factors.

The Olweus Bully/Victim Questionnaire also demonstrates good validity when distinguishing between victims and non-victims (Olweus, 2003). Olweus used the Cohen's-*d* statistic (i.e., the difference between the group means divided by the pooled standard deviation) to examine effect sizes between victims' and non-victims' self-report of internalizing problems. Using a sample of 5th through 9th grade students, Olweus (2003) found significant differences between groups. For example, *d*-values of victims suggested higher levels of social disintegration (1.05) and global negative self-evaluations (.62) than non-victims. Furthermore, Olweus' study indicated substantial effect size differences between bullies and non-bullies (i.e., 1.12 for general aggression and 1.02 for antisocial behavior for males and females combined).

Olweus (2003) also reported strong linear relations relative to degree of victimization and variables, such as depressed mood, low self-esteem, and rejection by

peers, as well as strong linear relations between bullying others and antisocial tendencies. Selection of subscales used was based upon an adaptation of the measure by Yoon (personal correspondence, December 7, 2005) to classify whether students are bullies, victims, bully-victims, or none. Yoon (personal correspondence, May 2, 2007) estimates that 10% of the population of middle school students in America engages in bully behavior, victim tendencies, bully-victim behavior, and none respectively.

Social Information-Processing

The Adolescent Stories measure (CPPRG, 1999) is a social-cognitive interview used to assess adolescent hostile or benign tendencies. Student responses reflect the type of emotion experienced in a situation that is unfair (angry or worried), the manner in which they are treated when faced with a situation that is unfair, and how they would respond toward the individual who created the unfair situation. Students are presented with six hypothetical situations each followed by six questions (on a 5-point scale ranging from not at all likely to very likely) asking them to indicate how they would respond (hostile or benign), how they would feel (angry or worried), the manner in which they would like to be treated (liked or respected), and how they would act in the situation (aggressively or competently).

T-tests were used to compare the two groups (high-risk and normative samples). Using a probability value of .05, a difference was indicated only for percentages of responses for the following categories: hostile responses, appropriate responses, and percentage of being liked or respected. Alpha scores for the six conceptual groups were as follows: angry feelings .75, benign attributions .59, aggressive or appropriate responses .78, hostile attributions .71, respected or liked .75, and worried feelings .78.

As time constraints may affect whether students will complete the questionnaire, this measure was reduced in length to accommodate one class period (approximately 50 minutes). The following subscales that were used in this study assessed: aggressive/competent response, hostile attributions, and worried feelings. These subscales were selected on the basis of high alpha coefficients. Because the nature of this study was to examine negative emotions, attributions, and behaviors that contribute to victimization, lack of endorsement of relevant items (aggressive, hostile, worried) is assumed to reflect a more benign level of functioning, and thus scales measuring pro-social behavior were not included. The angry measure subscale was excluded, as the content of this subscale overlapped with aggressive and hostile items.

Emotion Related-Regulation

Emotion self-regulation was assessed using the Early Adolescent Temperament Questionnaire-Revised Short Form (EAT-R; Capaldi & Rothbart, 1992). This measure included 12 factors describing participants' temperament, and two behavioral scales for purposes of examining how temperament and self-regulation are related in adolescence. Aggression and depression were assessed with scales enclosed within the measure intended to identify a potential relationship between temperament and social-emotional functioning. Factors analyzed included Activation Control, Affiliation, Activity Level, Attention, Fear, Frustration, High Intensity Pleasure/Surgency, Inhibitory Control (the capacity to plan, as well as suppress inappropriate responses), and Pleasure Sensitivity, Perceptual Sensitivity, and Shyness.

Cronbach alpha coefficient levels indicated strong internal reliability for the self-report scales - Activation Control .76, Affiliation .75, Attention .67, Fear .65, Frustration

.70, High Intensity Pleasure .71, Inhibitory Control .69, Perceptual Sensitivity .71, Pleasure Sensitivity .78, and Shyness .82. For Aggression and Depressive mood, Cronbach alpha coefficient levels were .80 and .69 respectively. Relative to scores on the parent measure, convergence was high for all levels for males and females (Cronbach alpha coefficient levels .65 - .86).

Additionally, the EATQ-R score correlates positively and negatively with four apparent variables: Effortful Control and Negative Reactivity (-.36), Effortful Control and Surgency (.03), Effortful Control and Affiliativeness (-.03), Negative Affectivity and Surgency (-.07), Negative Affectivity and Affiliativeness (.14), and Surgency and Affiliativeness (.07). Because the literature indicates that certain aspects of emotion regulation are more relevant than others regarding bully/victim behaviors, the following subscales were selected consistent with the literature: affiliation and depressive mood (Perry et al., 2001), aggression (Schwartz et al., 1999), frustration (Arsenio et al., 2001), perceptual sensitivity (Hubbard et al., 2001; Flavell, 1977), and shyness (Hodges et al., 1999).

Social Skills

Adolescent social competence was assessed using the Teenage Inventory of Social Skills (TISS; Inderbitzen & Foster, 1992). The instrument has 40 items intended to demonstrate behaviors that share a functional relationship to peer acceptance in adolescence, and uses a 6-point Likert style format (1=does not describe me at all to 6=describes me totally). Sample statements included items such as "I tell jokes and get other classmates to laugh," "I forget to return things that other guys loan me," "I lie to get out of trouble," and "I tell classmates I'm sorry when I know I have hurt their feelings."

The instrument is a two-scale measure, relating positive and negative scales that were based upon four factors: 1) behaviors during adolescence that increase or decrease the likelihood of being liked, 2) evidence that friendships during adolescence are important, 3) behaviors commonly associated with those used in social skills training programs, and 4) results of studies indicating corollary behaviors inherent of adolescent peer approval.

Regarding reliability, scores of .90 and .72 were derived from test-retest Pearson correlations for the positive and negative scales respectively. Good internal consistency for the TISS was reported (Cronbach alpha coefficients = .88). Positive and negative behaviors were observed to encompass disparate areas of functioning in correlation of the scales (-.26). Only 7% of the variance was shared by the positive and negative scales, further suggesting they are ideally unconnected scales.

Validity was assessed by comparing self-reports on the TISS and self-monitoring (e.g., eight separate behaviors that subjects noted on index cards). Analysis of variance resulted in a main effect of endorsement for high and low positive and negative behaviors, $F(1,28) = 10.80$, $p < .01$. Subjects reported engaging in more positive behaviors ($M = 28.05$, $SD = 12.96$) than negative behaviors ($M = 15.77$, $SD = 34.55$), also demonstrating a main effect, $F(1,28) = 8.00$, $p < .01$. No significant sex differences or interactions were found to exist.

To assess discriminant validity, four measures were used including 1) Teenage Inventory of Social Skills-Other Form (TISS-O), 2) Conflict Behavior Questionnaire (CBQ), 3) Sociometric and Demographic Questionnaire (SDQ), and 4) the Children's Social Desirability Questionnaire (CSD). Positive scores for the TISS were found to be

significant relative to social preference ($r = .39$) as well as z-positive scores ($r = .41$), suggesting that adolescents reporting engaging in positive behaviors also received positive endorsements from a peer who knew them. Indices of negative behavior also share a significant, although low, negative correlation with positive peer endorsements with a z-positive score $r = -.26$. Reports by adolescents indicating negative behaviors about themselves indicated a tendency to not act in a socially appropriate manner. Overlapping variance was not found in the relationship between the TISS and social desirability when the effects of social desirability were held constant.

School Climate

The Thoughts About School – Student measure (TAS-S, Swearer, 1999) measured students' perception of positive and negative student-teacher interactions, bullying support, and vandalism. Kasen, Johnson, and Cohen, (1990) previously developed a scale from which this measure was based, intended to describe aspects of school climate relative to the student's emotional and behavioral development. In the current measure, a four point Likert style format is used to aid students rate their perception of their school, including 1 = 'Totally False' to 4 = 'Totally True'.

According to Swearer, Peugh, Espelage, Siebecker, Kingsbury, and Bevins (in Jimerson and Furlong, 2006), the TAS-S items showed acceptable levels of internal consistency ($\alpha .80$). Construct validity was established using exploratory / confirmatory analyses with 20 TAS items originally that was later reduced to include 13 items as follows: 5 items assessing positive student and teacher interactions, four items assessing negative teacher and student interactions, two items assessing bullying support, and two items assessing vandalism. It was determined that from the

exploratory analyses, one factor (i.e., school climate) explained the items. While the comparative fit index (CFI) of .82 fell short of the recommended value of .96, considered indicative of model fit, the root mean square error of approximation (RMSEA) (.06) and factor determinency values (.91) were acceptable. Therefore, according to Swearer et al. (in Jimerson et al., 2006), “these fit indices can be considered adequate for exploratory research purposes” p. 16.

Procedure

Prior to conducting this study, permission was obtained from the school principals within the school district where research was conducted. The Internal Review Board (IRB) at Wayne State University also reviewed and approved this study prior to it being implemented in the schools. American Psychological Association Ethical Guidelines on the treatment of human subjects were followed. Principals of each school invited all teachers in the 6th and 7th grades to participate in the study; teachers willing to participate in the study, excluding ‘special classrooms’ to avoid bias (e.g., special education, etc.), allowed questionnaires to be distributed in their classrooms during one class period (approximating 55 minutes). All students were invited to participate in the study. Prior to the administration of the questionnaire, a brief description of the study including an information sheet/waiver of consent form was mailed to all possible participants’ parents/guardians describing the study and its purposes, including its benefits to school and students (see Appendix B). Parents/guardians were asked to send the consent form back to the researcher only if they did not want their child to participate in the study. The researcher also provided a contact e-mail address, a

mailing address, and a phone number for the parent/guardian who wished to learn more about the study.

On the day of administration, the researcher read a prepared statement that briefly explained the study in each classroom and informed the students that their participation was completely voluntary. The statement read as follows:

“I am Joseph Zambo, a graduate student at Wayne State University. I am working toward the completion of my Doctoral degree in Educational Psychology. Today, you are being asked to answer some questions about bully and victim behavior among students in middle school. A survey packet containing five questionnaires will be handed out to you; these questionnaires should take no more than 50 minutes to complete. Please do not write your name on any part of the questionnaires. Your responses will remain completely anonymous, and no one will know how you answered the questions. When you have finished all of the questions, you may place your entire packet inside the envelope that is at the front of the classroom. There is no obligation for you to answer any of the questions. If you do not want to participate in answering any of the questions, you may place a blank questionnaire packet in the envelope at the front of the classroom and work quietly in the classroom. I will be happy to answer any questions you may have while you are filling out the questionnaire. Thank you for your involvement in completing this questionnaire.”

Students who elected to participate in the study were administered the questionnaires in a counterbalanced order (see Appendix G). Each student completed the questionnaires independently. Students were asked to place completed surveys in an envelope that were sealed and remained in the researcher’s possession.

Data Analysis

The resulting data set were analyzed using SPSS-Windows version 17.0. and Stata version 10. The data analysis was divided into three sections. The first section provided a profile of the students by grade and measures of central tendency and dispersion. The second section used descriptive to provide information on each of the selected scales and subscales. The purpose of this analysis was to provide the reader

with baseline data to understand the extent to which students are positive or negative about each of the scales. The third section addressed each of the research questions using inferential statistical analyses that included factorial analysis of variance, Pearson product moment correlations, t-test, Stepwise multiple regression, and mediation regression analysis. Decisions regarding the statistical significance of the findings were made using a criterion alpha level of .05. Figure 3 presents the statistical analyses that were used to address each research question.

HYPOTHESES

| Research Questions & Hypotheses | Variables | Statistical Analysis |
|---|--|--|
| 1) Which demographic variables are most characteristic of bully/victim behaviors (e.g., bully, victim, bully-victim, non-bully/non-victim)? | | |
| H _{1.a} : Males and females will not differ in bully/victim behaviors (i.e., bully, victim, bully-victim, none) relative to gender and grade. | <u>Independent Variables:</u> Gender & Grade <u>Dependent Variable:</u> Bully/Victim Behaviors (i.e., bully, victim, bully-victim, none) Total Score | A 2 x 2 factorial analysis of variance (ANOVA) was used to determine if bully/victim behaviors (i.e., bully, victim, bully-victim, none) differed between gender and grade. |
| H _{1.b} : Bully/victim behaviors (i.e., bully, victim, bully-victim, none) will not differ among students relative to ethnicity. | <u>Independent Variables:</u> Student Ethnicity <u>Dependent Variable:</u> Bully/victim behaviors (i.e., bully, victim, bully-victim, none) Total Score | A 1 x 7 factorial analysis of variance (ANOVA) was used to determine if bully/victim behaviors (i.e., bully, victim, bully-victim, none) differed between students' ethnicity. |
| H _{1.c} : Bully/victim behaviors (i.e., bully, victim, bully-victim, none) will not differ among students relative to academic standing (i.e., grade average). | <u>Independent Variables:</u> Student Academic Standing <u>Dependent Variable:</u> Bully/victim behaviors (i.e., bully, victim, bully-victim, none) Total Score | A 1 x 8 factorial analysis of variance (ANOVA) was used to determine if bully/victim behaviors (i.e., bully, victim, bully-victim, none) differed between students' academic standing. |
| H _{1.d} : Students who are mainstreamed but enrolled in special education will not differ from mainstreamed students not enrolled in special education. | <u>Independent Variables:</u> Special Education <u>Dependent Variable:</u> Bully/victim behaviors (i.e., bully, victim, bully-victim, none) Total Score | A 1 x 2 factorial analysis of variance (ANOVA) was used to determine if social bully/victim behaviors (i.e., bully, victim, bully-victim, none) differed between special education. |
| H _{1.e} : Bully/victim behaviors (i.e., bully, victim, bully-victim, none) will not differ among students relative to mother's level of education. | <u>Independent Variables:</u> Mother's Education Level <u>Dependent Variable:</u> Bully/victim behaviors (i.e., bully, victim, bully-victim, none) Total Score | A 1 x 4 factorial analysis of variance (ANOVA) was used to determine if bully/victim behaviors (i.e., bully, victim, bully-victim, none) differed |

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| | none) Total Score | between mother's level of education. |
| H _{1.f} : Bully/victim behaviors (i.e., bully, victim, bully-victim, none) will not differ among students relative to father's level of education. | <u>Independent Variables:</u> Father's Education Level <u>Dependent Variable:</u> Bully/victim behaviors (i.e., bully, victim, bully-victim, none) Total Score | A 1 x 4 factorial analysis of variance (ANOVA) was used to determine if bully/victim behaviors (i.e., bully, victim, bully-victim, none) differed between father's level of education. |
| 2) Do 6 th and 7 th grade students' social information processing abilities (hostile response, worried response, aggressive/competent response), emotion regulation (affiliation, aggression, depressive mood, frustration, perceptual sensitivity, shyness), and social skills (positive, negative) vary by social status (bully, victim, bully-victim, non-bully/non-victim)? | | |
| <p>H_{2.a}: Students' social information processing abilities (students in higher grade levels exhibiting greater ability to process social information and lower grade level less capacity for social information processing) will not differ between levels of bully/victim behaviors (i.e., bully, victim, bully-victim, none).</p> <p>H_{2.b}: Students' ability to regulate emotion (students in higher grade levels exhibiting greater ability to regulate emotion and lower grade level less capacity to regulate emotion) will not differ between levels of bully/victim behaviors (i.e., bully, victim, bully-victim, none).</p> | <u>Independent Variables:</u> Bully/victim behaviors (i.e., bully, victim, bully-victim, none) Total score. <u>Dependent Variables:</u> Hostile Score; Worried Score; Aggressive/Competent Score; Affiliation Score; Aggression Score; Depressive Mood Score; Frustration Score; Perceptual Sensitivity Score; Shyness Score; Negative Social Skills; Positive Social Skills; Negative Thoughts About School; Positive Thoughts About School. | A 2 x 13 factorial analysis of variance (ANOVA) was used to determine if social status differed between students' social information processing, emotion regulation, and social skills; A multiple analysis of variance (MANOVA); Bonferroni Post-Hoc. |

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| <p>H_{2.c}: Students' social skills (students in higher grade levels exhibiting greater social skills and lower grade level less capacity for positive social skills) will not differ between levels of bully/victim behaviors (i.e., bully, victim, bully-victim, none).</p> | | |
| <p>3) Which variables within social information processing (hostile response, worried response, aggressive/competent response), emotion regulation (affiliation, aggression, depressive mood, frustration, perceptual sensitivity, shyness), and social skills (positive, negative) and perceived school climate (positive, negative) are most predictive of bully/victim behavior (bully, victim, bully-victim, non-bully/non-victim)?</p> | | |
| <p>H_{2.c}: Low social information processing, low emotion related-regulation, negative social skills, and negative perceived school climate will emerge as the best predictors of victim status.</p> <p>H_{2.b}: Low social information processing, low emotion related-regulation, negative social skills, and perceived negative school climate will emerge as the best predictors of bully status.</p> <p>H_{2.c}: Low social information processing, low emotion related-regulation, negative social skills, and perceived negative school climate will emerge as the best predictors of bully-victim status.</p> | <p><u>Criterion Variables :</u> Bully/victim behaviors (i.e., bully, victim, bully-victim, none) Total score.</p> <p><u>Predictors:</u> Hostile tendency score; Worried feeling score; Competent/aggressive score; Affiliation score; Aggression score; Depressive Mood score; Frustration score; Perceptual Sensitivity score; Shyness score; Positive social skills; Negative social skills; School climate.</p> | <p>Multivariate regression analysis was used to determine which of the predictor variables can predict bully/victim behaviors (i.e., bully, victim, bully-victim, none) of middle school students.</p> |

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| 4) Does school climate mediate levels of bully/victim behaviors (bully, victim, bully-victim, none)? | | |
| <p>H_{4.a}: Perception of school climate significantly mediates the relationship between victim behavior and gender.</p> <p>H_{4.b}: Perception of school climate significantly mediates the relationship between victim behavior and grade level (6th or 7th).</p> <p>H_{4.c}: Perception of school climate significantly mediates the relationship between victim behavior and ethnicity (African American; Arabic; Asian/Pacific Islander; Chaldean; Hispanic; White; Other).</p> <p>H_{4.d}: Perception of school climate significantly mediates the relationship between victim behavior and grade average.</p> <p>H_{4.e}: Perception of school climate significantly mediates the relationship between victim behavior and parents' level of education.</p> <p>H_{4.f}: Perception of school climate significantly mediates the relationship between victim behavior and social information processing (hostile response; worried response; aggressive/competent response).</p> | <p><u>Criterion variables:</u> Bully/victim behaviors (bully, victim, bully-victim, none). Total score.</p> <p><u>Mediating Variable:</u> Perception of school climate.</p> <p><u>Predictor Variables:</u> Gender; Ethnicity; Current Grade Level (6th or 7th); Current Grade Average; Parents' Level of Education; Adolescent Stories – Hostile Response; Adolescent Stories – Worried Response; Aggressive/Competent Response; Positive Social Skills; Negative Social Skills; Affiliation; Aggression; Depressive Mood; Frustration; Perceptual Sensitivity; Shyness.</p> | <p>Baron and Kenny's (1986) Mediation Model was used.</p> <p>Separate multiple linear regressions were used to determine the mediating effect of students' perception of school climate and the relationship between overall bully/victim behaviors (i.e., bully, victim, bully-victim, none) and the predictor variables.</p> <p>The process used to determine the influence of perceived school climate as a mediating variable included:</p> <p>Step 1: A multiple linear regression analysis was used to examine the strength of the relationship between bully/victim behaviors (i.e., bully, victim, bully-victim, none) and each of the criterion variables. If the predictor variable was not explaining a significant amount of variance of the criterion variable, the mediation process could not be completed.</p> <p>Step 2: A second multiple linear regression analysis was used to examine the relationship between the predictor variable and the mediating variable; the predictor and mediating</p> |

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| <p>H_{4.g}: Perception of school climate significantly mediates the relationship between victim behavior and social skills (positive or negative).</p> <p>H_{4.h}: Perception of school climate significantly mediates the relationship between victim behavior and emotion related regulation (affiliation; depressive mood; aggression; frustration; perceptual sensitivity; shyness).</p> <p>H_{4.i}: Perception of school climate significantly mediates the relationship between bully behavior and gender.</p> <p>H_{4.j}: Perception of school climate significantly mediates the relationship between bully behavior and ethnicity (African American; Arabic; Asian/Pacific Islander; Chaldean; Hispanic; White; Other).</p> <p>H_{4.k}: Perception of school climate significantly mediates the relationship between bully behavior and grade level (6th or 7th).</p> <p>H_{4.l}: Perception of school climate significantly mediates the relationship between bully behavior and grade average.</p> <p>H_{4.m}: Perception of school climate significantly mediates the relationship between bully behavior and parents' education level.</p> | | <p>variables must be significantly related (Baron & Kenny, 1986).</p> <p>Step 3: The relationship between the mediator and criterion variables was also examined to determine whether the necessary significance between these variables existed.</p> <p>Step 4: This final step involved evaluating the significance of the relationship between the mediating variable of perceived school climate and the predictor variables (i.e., Social Information Processing, Social Skills, Emotion Related Regulation, Gender, Ethnicity, Current Grade Level [6th or 7th], Current Grade Average, Parent's Level of Education).</p> <p>Taking into account the effect of the mediating variable upon the relationship between the predictor and criterion variables, whereby that relationship must be significant in the first step, should be non-significant following the inclusion of the mediating variable for a mediation effect to exist.</p> <p>If a mediating effect was evident, the Sobel test was conducted as a suggested by Baron and Kenny (1986). The Sobel test</p> |
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| <p>H_{4.n}: Perception of school climate significantly mediates the relationship between bully behavior and social information processing (hostile response; worried response; aggressive/competent response).</p> <p>H_{4.o}: Perception of school climate significantly mediates the relationship between bully behavior and social skills.</p> <p>H_{4.p}: Perception of school climate significantly mediates the relationship between bully behavior and emotion related regulation (affiliation; depressive mood; aggression; frustration; perceptual sensitivity; shyness).</p> <p>H_{4.q}: Perception of school climate significantly mediates the relationship between bully/victim behavior and gender.</p> <p>H_{4.r}: Perception of school climate significantly mediates the relationship between bully/victim behavior and ethnicity (African American; Arabic; Asian/Pacific Islander; Chaldean; Hispanic; White; Other).</p> <p>H_{4.s}: Perception of school climate significantly mediates the relationship between bully/victim behavior and grade level (6th or 7th).</p> | | <p>determined whether the students' perceived school climate influenced their bully/victim behaviors (i.e., bully, victim, bully-victim, none) relative to the predictor variables (i.e., Social Information Processing, Social Skills, Emotion Related Regulation [Temperament], Gender, Ethnicity, Current Grade Level [6th or 7th], Current Grade Average, Parent's Level of Education).</p> |
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| <p>H_{4.t}: Perception of school climate significantly mediates the relationship between bully/victim behavior and grade average.</p> <p>H_{4.u}: Perception of school climate significantly mediates the relationship between bully/victim behavior and parents' education level.</p> <p>H_{4.v}: Perception of school climate significantly mediates the relationship between bully/victim behavior and social information processing (hostile response; worried response; aggressive/competent response).</p> <p>H_{4.w}: Perception of school climate does not significantly mediate the relationship between bully/victim behavior and social skills (positive or negative).</p> <p>H_{4.x}: Perception of school climate significantly mediates the relationship between bully/victim behavior and emotion related regulation (affiliation; depressive mood;; aggression; frustration; perceptual sensitivity; shyness).</p> <p>H_{4.y}: Perception of school climate significantly mediates the relationship between non-bully /non-victim behavior and gender.</p> <p>H_{4.z}: Perception of school</p> | | |
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| | | |
|--|--|--|
| <p>climate significantly mediates the relationship between non-bully /non-victim behavior and ethnicity (African American; Arabic; Asian/Pacific Islander; Chaldean; Hispanic; White; Other).</p> <p>H_{4.aa}: Perception of school climate significantly mediates the relationship between non-bully /non-victim status and grade level (6th or 7th).</p> <p>H_{4.bb}: Perception of school climate significantly mediates the relationship between non-victim/non-bully behavior and grade average.</p> <p>H_{4.cc}: Perception of school climate significantly mediates the relationship between non-bully /non-victim behavior and parents' education level.</p> <p>H_{4.dd}: Perception of school climate significantly mediates the relationship between non-bully /non-victim behavior and social information processing (hostile response; worried response; aggressive/competent response).</p> <p>H_{4.ee}: Perception of school climate significantly mediates the relationship between non-bully /non-victim behavior and social skills (positive or negative).</p> <p>H_{4.ff}: Perception of school climate significantly mediates the relationship between non-</p> | | |
|--|--|--|

| | | |
|---|--|--|
| bully /non-victim behavior and emotion related regulation (affiliation; depressive mood; aggression; frustration; perceptual sensitivity; shyness). | | |
|---|--|--|

CHAPTER IV

Results

The purpose of this study was to examine which variables make an individual more susceptible to becoming a victim of bullying (i.e., victim, bully-victim), or conversely, enable an individual to more competently engage in pro-social behavior not associated with bully behavior (i.e., bully, victim, bully-victim).

The overall number of female (n=402) and male (n=411) students involved in bully/victim behavior was 837. Approximately 11% of females and 17% of males reported involvement in bully behavior, whereas approximately 21% of females and 16% of males reported victimization, with 43% of females and 46% of males reporting bully-victim behavior, and approximately 25% of females and 21% of males reported non-involvement. Table 2 presents these results.

Table 2

Descriptive Statistics – Gender (n = 402 females; n = 411 males)

| | Females | Males |
|------------------|---------|-------|
| Bully | 43 | 70 |
| Victim | 84 | 66 |
| Bully-Victim | 174 | 189 |
| Non Bully/Victim | 101 | 86 |
| Missing Data | 24 | |

The overall number of 6th grade students (n = 468) and 7th grade students (n = 358) involved in bully/victim behavior was 826. Sixth and seventh graders reported scores of 7.4% and 7.0% for bully behavior respectively, with 9.3% and 8.6% reporting victim behavior respectively, while 22.9% of 6th grade students and 20.8% of 7th grade

students reported bully-victim behavior, and 15.7% of 6th graders and 6.0% of 7th graders reported non-involvement. Table 3 presents these results.

Table 3

Descriptive Statistics – Grade (n= 468 for 6th Grade; n= 358 for 7th Grade)

| | 6 th Grade | 7 th Grade |
|------------------|-----------------------|-----------------------|
| Bully | 61 | 57 |
| Victim | 77 | 79 |
| Bully/Victim | 189 | 172 |
| Non Bully/Victim | 130 | 50 |
| Missing Data | 11 | |

The overall mean of victims for females (Table 4) was 11.92 (SD = 4.39). The mean for EATQ-R (emotion regulation) ranged from 9.66 (SD = 3.62) for aggression to 21.10 (SD = 6.39) for frustration. The mean for Adolescent Stories (social information processing) ranged from 8.05 (SD = 3.14) for aggressive/competent response to 17.76 (SD = 6.02) for worried response. Respective means and standard deviations for both negative and positive TISS and TAS are reported in the table.

Table 4

Means, Standard Deviations, and Observed Ranges of Female Victims

| Variable | n | M | SD | Observed Range | |
|------------------------|----|-------|-------|----------------|-----|
| | | | | Min | Max |
| Victims | 84 | 11.92 | 4.39 | 9 | 34 |
| EATQ-R | | | | | |
| Affiliation | 83 | 18.53 | 3.97 | 4 | 25 |
| Aggression | 83 | 9.66 | 3.62 | 5 | 20 |
| Depressive Mood | 83 | 15.63 | 5.13 | 4 | 30 |
| Frustration | 83 | 21.10 | 6.39 | 7 | 35 |
| Perceptual Sensitivity | 83 | 13.02 | 3.81 | 4 | 20 |
| Shyness | 83 | 9.88 | 3.62 | 2 | 20 |
| TISS | | | | | |
| Negative | 81 | 11.88 | 13.70 | 1 | 104 |
| Positive | 80 | 51.35 | 10.62 | 15 | 72 |
| AS | | | | | |
| Hostile | 77 | 12.56 | 4.02 | 6 | 29 |
| Worried | 76 | 17.76 | 6.02 | 6 | 30 |
| Aggressive/Competent | 76 | 8.05 | 3.14 | 1 | 20 |
| TAS | | | | | |
| Negative | 80 | 24.48 | 4.24 | 12 | 32 |
| Positive | 80 | 11.88 | 3.21 | 3 | 19 |

Note: Victims = Bully/Victim Questionnaire; EATQ-R = Early Adolescent Temperament Questionnaire–Revised (emotion regulation); TISS = Teenage Inventory of Social Skills; AS = Adolescent Stories (social information-processing); TAS = Thoughts About School (perception of school climate).

The overall mean of bullies for females (Table 5) was 10.62 (SD = 3.44). The mean for EATQ-R (emotion regulation) ranged from 10.00 (SD = 3.78) for shyness to 21.30 (SD = 5.37) for frustration. The mean for Adolescent Stories (social information processing) ranged from 8.40 (SD = 2.45) for aggressive/competent response to 16.71 (SD = 5.61) for worried response.

Table 5

Means, Standard Deviations, and Observed Ranges of Female Bullies

| Variable | n | M | SD | Observed Range | |
|------------------------|----|-------|-------|----------------|-----|
| | | | | Min | Max |
| Bullies | 43 | 10.62 | 3.44 | 8 | 21 |
| EATQ-R | | | | | |
| Affiliation | 43 | 18.12 | 4.24 | 8 | 25 |
| Aggression | 43 | 12.26 | 5.33 | 6 | 28 |
| Depressive Mood | 43 | 14.27 | 4.26 | 7 | 25 |
| Frustration | 43 | 21.30 | 5.37 | 11 | 32 |
| Perceptual Sensitivity | 43 | 12.53 | 3.41 | 6 | 19 |
| Shyness | 43 | 10.00 | 3.78 | 3 | 16 |
| TISS | | | | | |
| Negative | 43 | 74.16 | 12.59 | 39 | 103 |
| Positive | 43 | 48.28 | 11.55 | 5 | 71 |
| AS | | | | | |
| Hostile | 41 | 12.39 | 4.46 | 7 | 23 |
| Worried | 41 | 16.71 | 5.61 | 6 | 29 |
| Aggressive/Competent | 42 | 8.40 | 2.45 | 6 | 15 |
| TAS | | | | | |
| Negative | 43 | 23.24 | 4.38 | 13 | 32 |
| Positive | 43 | 12.24 | 3.41 | 5 | 17 |

Note: Bully = Bully/Victim Questionnaire; EATQ-R = Early Adolescent Temperament Questionnaire–Revised (emotion regulation); TISS = Teenage Inventory of Social Skills; AS = Adolescent Stories (social information-processing); TAS = Thoughts About School (perception of school climate).

The overall mean of bully-victims for females (Table 6) was 24.09 (SD = 8.13).

The mean for EATQ-R (emotion regulation) ranged from 9.50 (SD = 3.99) for shyness to 22.44 (SD = 5.58) for frustration. The mean for Adolescent Stories (social information processing) ranged from 9.60 (SD = 3.60) for aggressive/competent response to 17.50 (SD = 5.33) for worried response. Respective means and standard deviations for both negative and positive TISS and TAS are reported in the table.

Table 6

Means, Standard Deviations, and Observed Ranges of Female Bully-Victims

| Variable | n | M | SD | Observed Range | |
|------------------------|-----|-------|-------|----------------|-----|
| | | | | Min | Max |
| Bully-Victims | 174 | 24.09 | 8.13 | 17 | 61 |
| EATQ-R | | | | | |
| Affiliation | 173 | 18.53 | 4.19 | 4 | 25 |
| Aggression | 173 | 12.54 | 4.66 | 6 | 30 |
| Depressive Mood | 173 | 16.09 | 4.69 | 5 | 28 |
| Frustration | 173 | 22.44 | 5.58 | 2 | 35 |
| Perceptual Sensitivity | 173 | 13.02 | 3.59 | 5 | 20 |
| Shyness | 173 | 9.50 | 3.99 | 2 | 23 |
| TISS | | | | | |
| Negative | 173 | 77.78 | 14.55 | 2 | 123 |
| Positive | 172 | 49.55 | 10.41 | 6 | 67 |
| AS | | | | | |
| Hostile | 165 | 12.45 | 4.57 | 4 | 30 |
| Worried | 164 | 17.50 | 5.33 | 6 | 30 |
| Aggressive/Competent | 162 | 9.60 | 3.60 | 4 | 21 |
| TAS | | | | | |
| Negative | 161 | 22.63 | 4.96 | 4 | 32 |
| Positive | 160 | 11.64 | 3.31 | 5 | 20 |
| Missing Data | 14 | | | | |

Note: Bully-Victim = Bully/Victim Questionnaire; EATQ-R = Early Adolescent Temperament Questionnaire–Revised (emotion regulation); TISS = Teenage Inventory of Social Skills; AS = Adolescent Stories (social information-processing); TAS = Thoughts About School (perception of school climate).

The overall mean of non-bully/non-victim for females (Table 7) was 14.08 (SD = 1.36). The mean for EATQ-R (emotion regulation) ranged from 8.97 (SD = 3.38) for aggression to 19.42 (SD = 5.70) for frustration. The mean for Adolescent Stories (social information processing) ranged from 7.21 (SD = 2.61) for aggressive/competent response to 15.85 (SD = 6.58) for worried response. Respective means and standard deviations for both negative and positive TISS and TAS are reported in the table.

Table 7

Means, Standard Deviations, and Observed Ranges of Female None

| Variable | n | M | SD | Observed Range | |
|------------------------|-----|-------|-------|----------------|-----|
| | | | | Min | Max |
| Non-bully/non-victims | 101 | 14.08 | 1.36 | 8 | 15 |
| EATQ-R | | | | | |
| Affiliation | 99 | 17.54 | 3.88 | 5 | 25 |
| Aggression | 99 | 8.97 | 3.38 | 5 | 21 |
| Depressive Mood | 99 | 13.01 | 4.00 | 4 | 23 |
| Frustration | 99 | 19.42 | 5.70 | 7 | 31 |
| Perceptual Sensitivity | 99 | 12.68 | 3.81 | 3 | 20 |
| Shyness | 99 | 9.26 | 3.51 | 3 | 19 |
| TISS | | | | | |
| Negative | 101 | 66.22 | 11.60 | 31 | 100 |
| Positive | 101 | 49.00 | 11.82 | 3 | 67 |
| AS | | | | | |
| Hostile | 98 | 10.22 | 3.68 | 1 | 21 |
| Worried | 96 | 15.85 | 6.58 | 4 | 53 |
| Aggressive/Competent | 96 | 7.21 | 2.61 | 1 | 18 |
| TAS | | | | | |
| Negative | 95 | 25.18 | 5.71 | 4 | 32 |
| Positive | 94 | 12.03 | 3.22 | 2 | 18 |
| Missing Data | 7 | | | | |

Note: None = Bully/Victim Questionnaire; EATQ-R = Early Adolescent Temperament Questionnaire–Revised (emotion regulation); TISS = Teenage Inventory of Social Skills; AS = Adolescent Stories (social information-processing); TAS = Thoughts About School (perception of school climate).

The overall mean of victims for males (Table 8) was 12.65 (SD = 4.90). The mean for EATQ-R (emotion regulation) ranged from 7.86 (SD = 3.61) for shyness to 19.71 (SD = 5.84) for frustration. The mean for Adolescent Stories (social information processing) ranged from 8.68 (SD = 3.77) for aggressive/competent response to 16.75 (SD = 4.80) for worried response. Respective means and standard deviations for both negative and positive TISS and TAS are reported in the table.

Table 8

Means, Standard Deviations, and Observed Ranges of Male Victims

| Variable | n | M | SD | Observed Range | |
|------------------------|----|-------|-------|----------------|-----|
| | | | | Min | Max |
| Victims | 66 | 12.65 | 4.90 | 9 | 33 |
| EATQ-R | | | | | |
| Affiliation | 63 | 16.52 | 4.31 | 4 | 25 |
| Aggression | 64 | 10.03 | 3.64 | 3 | 18 |
| Depressive Mood | 64 | 13.31 | 5.14 | 2 | 24 |
| Frustration | 63 | 19.71 | 5.84 | 8 | 33 |
| Perceptual Sensitivity | 63 | 13.14 | 3.94 | 3 | 20 |
| Shyness | 64 | 7.86 | 3.61 | 2 | 18 |
| TISS | | | | | |
| Negative | 61 | 69.54 | 12.94 | 38 | 104 |
| Positive | 61 | 40.70 | 11.17 | 4 | 66 |
| AS | | | | | |
| Hostile | 57 | 13.61 | 4.60 | 5 | 28 |
| Worried | 57 | 16.75 | 4.80 | 6 | 28 |
| Aggressive/Competent | 57 | 8.68 | 3.77 | 4 | 23 |
| TAS | | | | | |
| Negative | 56 | 23.36 | 4.86 | 11 | 32 |
| Positive | 56 | 11.84 | 3.64 | 5 | 20 |
| Missing Data | 10 | | | | |

Note: Victim = Bully/Victim Questionnaire; EATQ-R = Early Adolescent Temperament Questionnaire–Revised (emotion regulation); TISS = Teenage Inventory of Social Skills; AS = Adolescent Stories (social information-processing); TAS = Thoughts About School (perception of school climate).

The overall mean of bullies for males (Table 9) was 11.54 (SD = 5.35). The mean for EATQ-R (emotion regulation) ranged from 7.91 (SD = 3.15) for shyness to 21.09 (SD = 6.27) for frustration. The mean for Adolescent Stories (social information processing) ranged from 9.23 (SD = 3.19) for aggressive/competent response to 14.43 (SD = 4.99) for worried response. Respective means and standard deviations for both negative and positive TISS and TAS are reported in the table.

Table 9

Means, Standard Deviations, and Observed Ranges of Male Bullies

| Variable | n | M | SD | Observed Range | |
|------------------------|----|-------|-------|----------------|-----|
| | | | | Min | Max |
| Bullies | 70 | 11.54 | 5.35 | 8 | 35 |
| EATQ-R | | | | | |
| Affiliation | 70 | 15.27 | 5.07 | 5 | 25 |
| Aggression | 70 | 13.87 | 4.36 | 6 | 25 |
| Depressive Mood | 70 | 11.99 | 3.57 | 3 | 21 |
| Frustration | 70 | 21.09 | 6.27 | 7 | 34 |
| Perceptual Sensitivity | 70 | 12.14 | 3.81 | 4 | 20 |
| Shyness | 70 | 7.91 | 3.15 | 3 | 17 |
| TISS | | | | | |
| Negative | 69 | 80.19 | 19.22 | 7 | 120 |
| Positive | 68 | 37.38 | 12.74 | 4 | 60 |
| AS | | | | | |
| Hostile | 64 | 12.09 | 4.31 | 1 | 25 |
| Worried | 63 | 14.43 | 4.99 | 1 | 26 |
| Aggressive/Competent | 60 | 9.23 | 3.19 | 5 | 19 |
| TAS | | | | | |
| Negative | 62 | 20.85 | 6.50 | 4 | 32 |
| Positive | 60 | 10.98 | 3.75 | 4 | 20 |
| Missing Data | 10 | | | | |

Note: Bully = Bully/Victim Questionnaire; EATQ-R = Early Adolescent Temperament Questionnaire–Revised (emotion regulation); TISS = Teenage Inventory of Social Skills; AS = Adolescent Stories (social information-processing); TAS = Thoughts About School (perception of school climate).

The overall mean of bully-victims for males (Table 10) was 27.66 (SD = 10.02).

The mean for EATQ-R (emotion regulation) ranged from 8.87 (SD = 3.50) for shyness to 22.11 (SD = 5.82) for frustration. The mean for Adolescent Stories (social information processing) ranged from 9.37 (SD = 3.12) for aggressive/competent response to 17.10 (SD = 4.55) for worried response. Respective means and standard deviations for both negative and positive TISS and TAS are reported in the table.

Table 10

Means, Standard Deviations, and Observed Ranges of Male Bully-Victims

| Variable | n | M | SD | Observed Range | |
|------------------------|-----|-------|-------|----------------|-----|
| | | | | Min | Max |
| Bully-Victims | 189 | 27.66 | 10.02 | 17 | 70 |
| EATQ-R | | | | | |
| Affiliation | 186 | 16.31 | 4.76 | 1 | 25 |
| Aggression | 187 | 14.56 | 5.12 | 5 | 30 |
| Depressive Mood | 187 | 15.32 | 4.78 | 3 | 30 |
| Frustration | 184 | 22.11 | 5.82 | 7 | 35 |
| Perceptual Sensitivity | 187 | 12.83 | 3.75 | 2 | 20 |
| Shyness | 187 | 8.87 | 3.50 | 2 | 20 |
| TISS | | | | | |
| Negative | 186 | 81.16 | 20.55 | 8 | 162 |
| Positive | 183 | 38.89 | 11.63 | 4 | 72 |
| AS | | | | | |
| Hostile | 173 | 15.25 | 4.68 | 6 | 30 |
| Worried | 172 | 17.10 | 4.55 | 6 | 30 |
| Aggressive/Competent | 170 | 9.37 | 3.12 | 4 | 22 |
| TAS | | | | | |
| Negative | 166 | 21.70 | 5.63 | 7 | 32 |
| Positive | 166 | 11.42 | 3.48 | 1 | 20 |
| Missing Data | 23 | | | | |

Note: Bully-Victim = Bully/Victim Questionnaire; EATQ-R = Early Adolescent Temperament Questionnaire–Revised (emotion regulation); TISS = Teenage Inventory of Social Skills; AS = Adolescent Stories (social information-processing); TAS = Thoughts About School (perception of school climate).

The overall mean of non-bully/non-victim for males (Table 11) was 14.03 (SD = 1.32). The mean for EATQ-R (emotion regulation) ranged from 8.00 (SD = 3.03) for shyness to 19.02 (SD = 7.17) for frustration. The mean for Adolescent Stories (social information processing) ranged from 7.68 (SD = 2.81) for aggressive/competent response to 15.55 (SD = 4.98) for worried response. Respective means and standard deviations for both negative and positive TISS and TAS are reported in the table.

Table 11

Means, Standard Deviations, and Observed Ranges of Male None

| Variable | n | M | SD | Range | |
|------------------------|----|-------|-------|-------|-----|
| | | | | Min | Max |
| Non-bully/non-victim | 86 | 14.03 | 1.32 | 6 | 15 |
| EATQ-R | | | | | |
| Affiliation | 85 | 15.31 | 4.24 | 5 | 23 |
| Aggression | 85 | 9.99 | 3.47 | 4 | 18 |
| Depressive Mood | 85 | 11.71 | 3.76 | 6 | 21 |
| Frustration | 85 | 19.02 | 7.17 | 6 | 51 |
| Perceptual Sensitivity | 85 | 11.64 | 3.66 | 3 | 20 |
| Shyness | 85 | 8.00 | 3.03 | 4 | 17 |
| TISS | | | | | |
| Negative | 84 | 70.69 | 17.22 | 26 | 131 |
| Positive | 83 | 40.70 | 11.53 | 5 | 65 |
| AS | | | | | |
| Hostile | 80 | 12.09 | 4.85 | 1 | 24 |
| Worried | 76 | 15.55 | 4.98 | 2 | 27 |
| Aggressive/Competent | 75 | 7.68 | 2.81 | 1 | 16 |
| TAS | | | | | |
| Negative | 76 | 25.34 | 5.08 | 8 | 32 |
| Positive | 76 | 11.86 | 3.62 | 4 | 19 |
| Missing Data | 11 | | | | |

Note: None = Bully/Victim Questionnaire; EATQ-R = Early Adolescent Temperament Questionnaire–Revised (emotion regulation); TISS = Teenage Inventory of Social Skills; AS = Adolescent Stories (social information-processing); TAS = Thoughts About School (perception of school climate).

The mean for 6th grade victims and bullies respectively was 10.76 (SD = 4.97) and 9.23 (SD = 4.46) (Table 12). The mean for EATQ-R (emotion regulation) ranged from 4.58 (SD = 4.67) for depressive mood to 20.77 (SD = 6.15) for frustration. The mean for Adolescent Stories (social information processing) ranged from 7.75 (SD = 2.67) for aggressive/competent response to 17.43 (SD = 5.96) for worried response.

Respective means and standard deviations for both negative and positive TISS and TAS are reported in the table.

Table 12

Means, Standard Deviations, and Observed Ranges of 6th Graders on Bully/Victim Behaviors and Interpersonal Measures

| Variable | n | M | SD | Observed Range | |
|------------------------|-----|-------|-------|----------------|-----|
| | | | | Min | Max |
| Victims | 464 | 10.76 | 4.97 | 2 | 35 |
| Bullies | 459 | 9.23 | 4.46 | 1 | 35 |
| EATQ-R | | | | | |
| Affiliation | 456 | 16.50 | 4.40 | 1 | 25 |
| Aggression | 420 | 11.65 | 4.92 | 1 | 30 |
| Depressive Mood | 417 | 4.58 | 4.67 | 3 | 30 |
| Frustration | 455 | 20.77 | 6.15 | 2 | 51 |
| Perceptual Sensitivity | 457 | 12.42 | 3.88 | 2 | 20 |
| Shyness | 457 | 8.94 | 3.86 | 2 | 20 |
| TISS | | | | | |
| Negative | 457 | 71.85 | 17.63 | 3 | 162 |
| Positive | 451 | 43.68 | 12.98 | 7 | 72 |
| AS | | | | | |
| Hostile | 424 | 12.76 | 4.99 | 1 | 30 |
| Worried | 420 | 17.43 | 5.96 | 1 | 30 |
| Aggressive/Competent | 417 | 7.75 | 2.67 | 1 | 23 |
| TAS | | | | | |
| Negative | 411 | 23.38 | 5.62 | 4 | 32 |
| Positive | 406 | 11.68 | 3.33 | 1 | 20 |
| Missing Data | 58 | | | | |

Note: Victim/Bully = Bully/Victim Questionnaire; EATQ-R = Early Adolescent Temperament Questionnaire–Revised (emotion regulation); TISS = Teenage Inventory of Social Skills; AS = Adolescent Stories (social information-processing); TAS = Thoughts About School (perception of school climate).

The respective means of the Bully/Victim measure for 7th grade victim and bully behavior was 11.69 (SD = 4.58), 10.02 (SD = 4.86) (Table 13). The mean for EATQ-R

(emotion regulation) ranged from 8.97 (SD = 3.24) for shyness to 21.44 (SD = 6.10) for frustration. The mean for Adolescent Stories (social information processing) ranged from 9.68 (SD = 3.53) for aggressive/competent response to 15.67 (SD = 4.43) for worried response. Respective means and standard deviations for both negative and positive TISS and TAS are reported in the table.

Table 13

Means, Standard Deviations, and Ranges of 7th Graders on Bully/Victim and Interpersonal Measures

| Variable | n | M | SD | Observed Range | |
|------------------------|-----|-------|-------|----------------|-----|
| | | | | Min | Max |
| Victims | 353 | 11.69 | 4.58 | 2 | 35 |
| Bullies | 347 | 10.02 | 4.86 | 1 | 35 |
| EATQ-R | | | | | |
| Affiliation | 349 | 17.81 | 4.67 | 1 | 25 |
| Aggression | 351 | 12.18 | 4.61 | 3 | 30 |
| Depressive Mood | 351 | 15.13 | 4.89 | 2 | 30 |
| Frustration | 349 | 21.44 | 6.10 | 1 | 51 |
| Perceptual Sensitivity | 350 | 13.00 | 3.62 | 1 | 20 |
| Shyness | 457 | 8.97 | 3.24 | 2 | 19 |
| TISS | | | | | |
| Negative | 347 | 77.15 | 16.69 | 1 | 127 |
| Positive | 344 | 45.39 | 11.85 | 5 | 72 |
| AS | | | | | |
| Hostile | 332 | 12.85 | 4.21 | 4 | 30 |
| Worried | 326 | 15.67 | 4.43 | 6 | 30 |
| Aggressive/Competent | 322 | 9.68 | 3.53 | 4 | 23 |
| TAS | | | | | |
| Negative | 328 | 22.97 | 5.26 | 8 | 32 |
| Positive | 328 | 11.63 | 3.37 | 3 | 20 |
| Missing Data | 137 | | | | |

Note: Victim/Bully = Bully/Victim Questionnaire; EATQ-R = Early Adolescent Temperament Questionnaire–Revised (emotion regulation); TISS = Teenage Inventory of Social Skills; AS = Adolescent Stories (social information-processing); TAS = Thoughts About School (perception of school climate).

The internal consistency and reliability of the instruments with the students in the sample was determined by calculating Cronbach's alpha coefficients for each subscale and overall scores (See Table 14). The alpha coefficients obtained for the scales and associated subscales ranged from .58 on the shyness subscale of the Early Adolescent Temperament Questionnaire-Revised (EATQ-R = emotion regulation) to .88 total on the victim and bully subscales of the Bully Victim Questionnaire (BVQ). These results provided evidence of adequate internal consistency for most of the instruments with the students in the sample. The reliability coefficients obtained in this study were consistent with the results found by the authors of the instruments that are specified in chapter three.

Table 14

Cronbach's Alpha Coefficients – Scaled Variables

| Scales Coefficient | Number of Items | α |
|------------------------|-----------------|----------|
| BVQ | | |
| Victim | 7 | .84 |
| Bully | 7 | .87 |
| Total | 14 | .88 |
| AS | | |
| Hostile | 6 | .62 |
| Worried | 6 | .59 |
| Aggressive/Competent | 6 | .67 |
| Total | 18 | .63 |
| EATQ-R | | |
| Affiliation | 5 | .65 |
| Aggression | 6 | .77 |
| Depressive Mood | 6 | .62 |
| Frustration | 7 | .72 |
| Perceptual Sensitivity | 4 | .63 |
| Shyness | 4 | .58 |
| Total | 32 | .83 |
| TISS | | |
| Negative | 12 | .80 |
| Positive | 23 | .80 |
| Total | 35 | .80 |
| TAS | | |
| Negative | 8 | .62 |
| Positive | 5 | .79 |
| Total | 13 | .73 |

Note: BVQ = Bully Victim Questionnaire; AS = Adolescent Stories (social information-processing); EATQ-R = Early Adolescent Temperament Questionnaire–Revised (emotion regulation); TISS = Teenage Inventory of Social Skills; TAS = Thoughts About School (perception of school climate).

The respective means by grade and gender (Table 15) was 20.67 (SD = 8.54) and 23.02 (SD = 10.37) 6th and 7th grade males respectively, and 19.15 (SD = 7.41) and 19.84 (SD = 7.39) for 6th and 7th grade females respectively.

Table 15

Total Mean Score of Bully/Victim Measure (i.e., Bully, Victim, Bully-Victim, None) by Grade and Gender

| Grade | Gender | Mean | SD | N |
|-----------|--------------|-------|-------|-----|
| 6th Grade | Male | 20.67 | 8.54 | 226 |
| | Female | 19.15 | 7.41 | 237 |
| | Total | 19.89 | 8.01 | 463 |
| 7th Grade | Male | 23.02 | 10.37 | 182 |
| | Female | 19.84 | 7.39 | 172 |
| | Total | 21.47 | 9.17 | 354 |
| Total | Male | 21.72 | 9.46 | 408 |
| | Female | 19.44 | 7.40 | 409 |
| | Total | 20.58 | 8.57 | 817 |
| | Missing Data | | | 20 |

A preliminary examination of the variables produced a correlation matrix (Table 16) that showed that not all of the predictor variables were significantly related to the criterion variable, victim behavior. Affiliation, Perceptual Sensitivity, and Positive Social Skills were not significantly related to the criterion variable. The remaining predictor variables were related to the criterion variable in the directions anticipated.

The intercorrelation matrix produced a moderate coefficient in the positive direction between victim behavior and bully behavior ($r = .45, p < .001$). A non-significant low coefficient in the positive direction emerged between victim behavior and

affiliation (emotion regulation) ($r = .05$). A coefficient in the positive direction emerged between victim behavior and aggression ($r = .25$, $p < .001$) whereas a significant coefficient existed in the positive direction was evident for negative social skills ($r = .26$, $p < .001$). Also relative to victim behavior, a significant coefficient for adolescent stories - hostile response was indicated ($r = .34$, $p < .001$), with weak but significant coefficients reported for adolescent stories - worried response ($r = .14$, $p < .001$) and adolescent stories - aggressive/competent response ($r = .22$, $p < .001$). Victim behavior and thoughts about school emerged as significantly low in the negative direction ($R = -.25$, $p < .001$).

Table 16

Intercorrelation Matrix All Study Variables

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---------------|---|-------|--------|-------|-------|-------|-------|-------|--------|-------|--------|-------|-------|--------|
| 1 V | | .45** | .05 | .24** | .27** | .15** | .05 | .08* | -.04 | .26** | .34** | .14** | .21** | -.25** |
| 2 B | | | -.10** | .48** | .10** | .11** | .01 | -.02 | -.17** | .43** | .27** | .02 | .21** | -.32** |
| 3 Aff | | | | .02 | .29** | .31** | .33** | .06 | .43** | .14** | .01 | .14** | .03 | .14 |
| 4 Agg | | | | | .32** | .42** | .19** | .09** | -.23** | .46** | .22** | .03 | .23** | -.26** |
| 5 DM | | | | | | .41** | .30** | .41** | .14** | .21** | .23** | .11** | .25** | -.07* |
| 6 F | | | | | | | .33** | .16** | .09* | .32** | .15** | .11** | .13** | -.08* |
| 7 PS | | | | | | | | .11** | .21** | .19** | .08* | .05 | -.01 | .01 |
| 8 S | | | | | | | | | .08* | -.04 | .04 | .12** | .09** | .01 |
| 9 SSPos | | | | | | | | | | .20** | -.13** | .13** | -.05 | .23** |
| 10 SSNeg | | | | | | | | | | | .25** | .07 | .20** | -.19** |
| 11 ASHos | | | | | | | | | | | | .34** | .24** | -.21** |
| 12 ASWor | | | | | | | | | | | | | -.06 | .09 |
| 13 ASAgg/Comp | | | | | | | | | | | | | | -.26** |
| 14 SchThgt | | | | | | | | | | | | | | |

Note: V = Victim; B = Bully; Aff = Affiliation; Agg = Aggression; DM = Depressive Mood; F = Frustration; PS = Perceptual Sensitivity; S = Shyness; SSPos = Social Skills Positive; SSNeg = Social Skills Negative; ASHos = Adolescent Stories Hostile response; ASWor = Adolescent Stories Worried response; ASAgg/Comp = Adolescent Stories Aggressive/Competent response; SchThgt = Thoughts About School.

*p < .05; **p < .001.

Forty-eight hypotheses were developed to address the research questions related to this study. This section details each of the research questions and hypotheses and is followed by the corresponding statistical analyses. An alpha level of .05 was used for all statistical interpretations and effect sizes are provided.

Research Question 1.) Which demographic variables are most characteristic of bully/victim behaviors (e.g., bully, victim, bully-victim, none)?

H_{1.a}: Males will report being victimized more than females, and 6th graders will report more victimization than 7th graders.

Demographic variables for grade and gender relative to bully/victim outcomes (bully, victim, bully-victim, none) was analyzed in a 2 x 2 Analysis of Variance to determine whether significance existed (Table 17). The hypothesis was partially supported. While males reported experiencing significantly more bully/victim outcomes than females, 7th graders (m = 21.47, SD = 9.17) reported experiencing more bully/victim outcomes than 6th graders (m = 19.89, SD = 8.01). No significant interaction effects were obtained between grade and gender.

Table 17
Two-Way Analysis of Variance for Grade and Gender
ANOVA

| Source | m | SD | df | SS | MS | E |
|----------------|-------|-------|-----|----------|---------|---------|
| Grade | 21.49 | 9.23 | 1 | 461.57 | 461.57 | 6.45* |
| Gender | 33.29 | 11.18 | 1 | 1109.58 | 1109.68 | 15.50** |
| Grade x Gender | 20.58 | 8.57 | 1 | 138.79 | 138.79 | 1.94 |
| Residual | | | 813 | 58209.66 | 71.60 | |

p < .05*, p < .01**

H_{1.b}: Victimization will differ among students relative to student ethnicity.

Demographic variables for ethnicity were examined in a 1 x 7 ANOVA comparing victim behavior for each ethnic group (Table 18). Mean scores ranged from 10.46 (SD = 4.38) for Arab students to 13.68 (SD = 7.58) for Caucasian students. Statistically significant differences were not observed.

Table 18

Analysis of Variance for Victim Behavior as a Function of Ethnicity

ANOVA

| Ethnicity | | | | | | |
|------------------------|--------|-------|------|----|---------|----------|
| Source | Number | m | SD | df | F Ratio | Sig of F |
| African American | 162 | 10.82 | 5.27 | 6 | 1.75 | .108 |
| Arabic | 28 | 10.46 | 4.38 | | | |
| Asian/Pacific Islander | 86 | 10.72 | 4.69 | | | |
| Caucasian | 366 | 13.68 | 7.58 | | | |
| Chaldean | 19 | 10.47 | 5.85 | | | |
| Hispanic | 58 | 11.26 | 5.00 | | | |
| Other | 79 | 12.15 | 5.20 | | | |
| Missing Data | 39 | | | | | |

H_{1.c}: Victimization will differ among students relative to academic standing (grade average).

Demographic variables for grade average were examined in a 1 x 8 ANOVA comparing victim behavior and students' grade average (Table 19). Statistical significance was observed providing evidence that students' self-reported academic standing and victim behavior differed. Students who reported an average grade of an E (m = 23.67) reported greater victim behavior than students who reported grade averages A through D (mean range 10.82 to 12.15).

Table 19

Analysis of Variance for Victim Behavior as a Function of Grade Average

ANOVA

| Grade Average | | | | | | |
|---------------|--------|-------|---------------------|----|---------|----------|
| Source | Number | m | SD | df | F Ratio | Sig of F |
| A | 230 | 10.82 | 5.27 | 7 | 8.58 | .000 |
| A/B+ | 337 | 10.46 | 4.38 | | | |
| B | 50 | 10.72 | 4.69 | | | |
| B/C+ | 93 | 11.26 | 5.00 | | | |
| C | 15 | 10.47 | 5.85 | | | |
| C/D+ | 32 | 13.68 | 7.58 | | | |
| D | 8 | 12.15 | 5.20 | | | |
| E | 6 | 23.67 | 3.98 ^{***} | | | |
| Missing Data | 66 | | | | | |

p < .001

H_{1,d}: Students who are mainstreamed but receiving special education services will report more victim, bully-victim behavior than students not receiving special education services.

The demographic variable of special education was examined in a 1 x 2 ANOVA comparing victim behavior by special education (Table 20). Students who were enrolled in special education reported greater victim behavior (m = 14.75) than students who were not enrolled in special education (m = 10.92).

Table 20

Analysis of Variance for Victim Behavior as a Function of Special Education

ANOVA

| Special Education | | | | | | |
|-------------------|--------|-------|------|----|---------|----------|
| Source | Number | m | SD | df | F Ratio | Sig of F |
| No | 744 | 10.92 | 4.87 | 1 | 27.04 | .000*** |
| Yes | 53 | 14.75 | 8.45 | | | |
| Missing Data | 40 | | | | | |

p < .001

H_{1,e}: Victimization will differ among students relative to mother's level of education.

H_{1,f}: Victimization will differ among students relative to father's level of education.

Demographic variables for parents' level of education were examined in two 1 x 4 ANOVA comparing victim behavior by parents' level of education (Tables 21 & 22). No statistically significant differences were observed.

Table 21

Analysis of Variance for Victim Behavior as a Function of Mother's Education

ANOVA

Mother's Education

| Source | Number | m | SD | df | F Ratio | Sig of F |
|--------------|--------|-------|------|----|---------|----------|
| High School | 112 | 12.13 | 6.57 | 3 | 1.95 | .12 |
| Bachelors | 210 | 11.43 | 5.08 | | | |
| Masters | 301 | 10.80 | 4.77 | | | |
| Doctor | 69 | 11.72 | 6.45 | | | |
| Missing Data | 145 | | | | | |

Table 22

Analysis of Variance for Victim Behavior as a Function of Father's Education

ANOVA

Father's Education

| Source | Number | m | SD | df | F Ratio | Sig of F |
|--------------|--------|-------|------|----|---------|----------|
| High School | 124 | 11.67 | 5.95 | 3 | 1.57 | .195 |
| Bachelors | 171 | 11.93 | 6.09 | | | |
| Masters | 288 | 10.94 | 4.65 | | | |
| Doctor | 103 | 11.04 | 5.44 | | | |
| Missing Data | 151 | | | | | |

Research Question 2: Do 6th and 7th grade students' social information processing (hostile response, worried response, aggressive/competent response), emotion regulation (affiliation, aggression, depressive mood, frustration, perceptual sensitivity, shyness), and social skills (positive, negative) vary by bully/victim behavior (bully, victim, bully-victim, and non-bully/non-victim)?

H_{2.a}: Students in 7th grade will exhibit greater social information processing abilities than students in 6th grade relative to bully/victim behavior (bully, victim, bully-victim, and non-bully/non-victim).

H_{2.b}: Students in 7th grade will exhibit greater ability to regulate emotion than students in 6th grade relative to bully/victim behavior (bully, victim, bully-victim, and non-bully/non-victim).

H_{2.c}: Students in 7th grade will exhibit greater positive social skills than students in 6th grade relative to bully/victim behavior (bully, victim, bully-victim, and non-bully/non-victim).

Results of the Multivariate analysis (Table 23) provided evidence of statistically significant differences in overall levels of interpersonal functioning by bully/victim behavior (i.e., bully, victim, bully-victim, non-bully/non-victim) ($F = 6.22$, $df = 39, 685$, $p < .000$) with students who endorse bully-victim behavior reporting greater negative social skills ($m = 81.03$), hostile social responses (13.94), worried social responses ($m = 17.43$), aggressive social responses (9.32), aggressive behavior ($m = 13.60$), depressive mood ($m = 15.88$), and frustration ($m = 22.38$) than other groups. Students endorsing victim behavior reported greater positive social skills ($m = 47.75$) and greater shyness ($m = 9.25$) than other groups. Students endorsing neither bully nor victim status reported more negative thoughts about school ($m = 25.34$) than other groups (see Table 2 for Bonferroni post-hoc comparisons of bully/victim/ non-bully/non-victim groups).

Results of the Multivariate analysis (Table 23) provided evidence of statistically significant differences in overall levels of interpersonal functioning for grade. The

differences by grade (Bonferonni Post-Hoc Analyses, Table 24) were statistically significant ($F = 7.20$, $df = 13, 685$, $p < .000$) with 7th graders reporting greater differences in negative social skills ($m = 76.57$), aggressive social responses ($m = 9.45$), and affiliation ($m = 18.05$) than 6th graders ($m = 73.32$, $m = 7.80$, $m = 16.79$). Sixth graders differed significantly from 7th graders with 6th graders ($m = 17.53$) reporting greater worried responses than 7th graders ($m = 15.43$).

Table 23

Multivariate and Univariate Analyses of Variance for Interpersonal Variables Relative to Grade and Bully, Victim, Bully-Victim and None Behavior

| Source | Multivariate | | Univariate | | | | | |
|------------------|--------------|---------|------------|----------|-------------|------------|------------|-----------|
| | df | F | AS Hos | AS Wor | AS Agg/Comp | EATQ-R Aff | EATQ-R Agg | EATQ-R DM |
| Grade | 13 | 7.20*** | .469 | 24.17*** | 42.21 | 12.10** | .07 | 2.49 |
| B,V,B-V,N | 39 | 6.22*** | 11.59*** | 6.36*** | 8.28*** | 2.14 | 48.09*** | 19.90*** |
| Gradex B,V,B-V,N | 39 | .94 | | | | | | |

Note: AS = Adolescent Stories (social information processing) Hos = Hostile response, Wor = Worried response, Agg/Comp = Aggressive/Competent response; EATQ-R = Early Adolescent Temperament Questionnaire-Revised (emotion regulation) Aff = Affiliation, Agg = Aggression, DM = Depressive Mood, F = Frustration, PS = Perceptual Sensitivity, S = Shyness; TISS = Teenage Inventory of Social Skills (negative, positive); TAS = Thoughts About School (perception of school climate).

*p < .05; **p < .001, ***p = .000.

Table 23

Multivariate Analyses and Univariate Analyses (continued)

| Source | Multivariate | | Univariate | | | | | | |
|------------------|--------------|---------|-------------|--------------|-------------|-------------|-------------|------------|------------|
| | df | F | EATQ-R F | EATQ-R PS | EATQ-R S | TISS Neg | TISS Pos | TAS Neg | TAS Pos |
| Grade | 13 | 7.20*** | 1.09 | 3.84 | .005 | 7.42** | .897 | .244 | .768 |
| B,V,B-V,N | 39 | 6.22*** | 7.22*** | 1.48 | .427 | 34.67*** | 4.22** | 12.55*** | 1.60 |
| Gradex B,V,B-V,N | 39 | .94 | | | | | | | |

Note: AS = Adolescent Stories (social information processing) Hos = Hostile response, Wor = Worried response, Agg/Comp = Aggressive/Competent response; EATQ-R = Early Adolescent Temperament Questionnaire-Revised (emotion regulation) Aff = Affiliation, Agg = Aggression, DM = Depressive Mood, F = Frustration, PS = Perceptual Sensitivity, S = Shyness; TISS = Teenage Inventory of Social Skills (negative, positive); TAS = Thoughts About School (perception of school climate).

*p < .05; **p < .001, ***p = .000.

Results of the Bonferroni Post-Hoc Analysis (Table 24) provided evidence of statistically significant differences between levels of interpersonal behaviors (social information processing, emotion regulation, social skills, and thoughts about school) as a function of bully/victim behavior (bully, victim, bully-victim, non-bully/non-victim).

Non-bully/non-victim students endorsing hostile responses ($m = 11.31$, $SD = 4.10$) significantly differed from victims endorsing hostile responses ($m = 13.01$, $SD = 4.32$), while bullies ($m = 12.41$, $SD = 4.13$) endorsing hostile responses significantly differed from bully-victim students ($m = 13.94$, $SD = 4.82$).

Non-bully/non-victim students endorsing worried responses ($m = 16.01$, $SD = 5.69$) differed significantly from bully-victim students endorsing worried responses ($m = 17.43$, $SD = 4.80$), as did students endorsing bullying and bully-victim behavior ($m = 15.59$, $SD = 5.08$). Likewise, non-bully/non-victim status students endorsing aggressive/competent responses ($m = 7.63$, $SD = 2.54$) significantly differed from bully-victims endorsing aggressive/competent responses ($m = 9.32$, $SD = 3.40$). This finding for students endorsing aggressive/competent responses was also observed in non-bully/non-victim and bully students ($m = 8.88$, $SD = 2.93$).

Victims endorsing aggressive/competent responses ($m = 8.36$, $SD = 3.44$) significantly differed from bully-victims, whereas non-bully/non-victim ($m = 16.67$, $SD = 4.02$) and victim students ($m = 18.05$, $SD = 3.92$) differed significantly.

Students endorsing aggressive behaviors significantly differed from non-bullies/non-victims ($m = 9.37$, $SD = 3.41$), victims ($m = 9.55$, $SD = 3.28$), and bully-victims ($m = 13.60$, $SD = 4.90$). Similarly, bullies ($m = 13.20$, $SD = 4.74$), victims ($m = 9.55$, $SD = 3.28$), and victim and bully-victims.

Significant differences were observed relative to depressive mood between non-bully/non-victims ($m = 12.58$, $SD = 3.93$), victim ($m = 14.98$, $SD = 5.10$), and bully-victims ($m = 15.88$, $SD = 4.69$), while bullies ($m = 13.21$, $SD = 3.91$) and bully-victims differed significantly. For depressive mood, significant differences were likewise seen between bullies and victims.

Non-bully/non-victims and bully-victims endorsing frustration significantly differed ($m = 19.40$, $SD = 6.24$ and $m = 22.38$, $SD = 5.59$ respectively), as did victims ($m = 20.68$, $SD = 6.16$) and bully-victims. Non-bully/non-victims ($m = 69.20$, $SD = 13.48$), bullies ($m = 78.85$, $SD = 13.81$) and bully-victims ($m = 81.03$, $SD = 15.61$) differed significantly relative to negative social skills, as did bullies and victims ($m = 68.85$, $SD = 12.04$), and victims and bully-victims.

A significant difference was observed for positive social skills between bullies ($m = 42.98$, $SD = 11.88$) and victims ($m = 47.75$, $SD = 11.25$). Students endorsing negative thoughts about school differed significantly from non-bully/non-victim students ($m = 25.34$, $SD = 5.22$), bully ($m = 22.28$, $SD = 5.46$), and bully-victim students ($m = 22.28$, $SD = 5.25$). Non-bully/non-victim and victim students ($m = 23.97$, $SD = 4.60$) also differed significantly relative to negative thoughts about school. A significant difference was observed between bullies ($m = 11.35$, $SD = 3.57$) and victims ($m = 11.94$, $SD = 3.18$) relative to positive thoughts about school.

Table 24

Bonferonni Post-Hoc Analysis on Thirteen Measures of Interpersonal Behavior as a Function of Bully, Victim, Bully-Victim, None Behavior

| Interpersonal Functioning | Bully/Victim | | | | | | | |
|------------------------------|----------------------|-------|----------------------|-------|----------------------|-------|----------------------|-------|
| | Non-bully/Non-victim | | Bully | | Victim | | Bully-Victim | |
| | m | SD | m | SD | m | SD | m | SD |
| ASHos | 11.31 _a | 4.10 | 12.41 _b | 4.13 | 13.01 _a | 4.32 | 13.94 _{a,b} | 4.82 |
| ASWor | 16.01 _a | 5.69 | 15.59 _b | 5.08 | 17.38 | 5.49 | 17.43 _{a,b} | 4.80 |
| ASAgg/Comp | 7.63 _{a,b} | 2.54 | 8.88 _b | 2.93 | 8.36 _c | 3.44 | 9.32 _{a,c} | 3.40 |
| EATQ-R | | | | | | | | |
| Aff | 16.67 _a | 4.02 | 16.89 | 4.75 | 18.05 _a | 3.92 | 17.65 | 4.55 |
| Agg | 9.37 _{a,b} | 3.41 | 13.20 _b | 4.74 | 9.55 _{b,c} | 3.28 | 13.60 _{a,c} | 4.90 |
| DM | 12.58 _a | 3.93 | 13.21 _{b,c} | 3.91 | 14.98 _{a,c} | 5.10 | 15.88 _{a,b} | 4.69 |
| F | 19.40 _a | 6.24 | 21.11 | 5.93 | 20.68 _b | 6.16 | 22.38 _{a,b} | 5.59 |
| PS | 12.36 | 3.79 | 12.49 | 3.50 | 13.18 | 3.72 | 13.24 | 3.62 |
| S | 8.85 _a | 3.37 | 8.82 _a | 3.55 | 9.25 _a | 3.72 | 9.15 _a | 3.65 |
| TISSNeg | 69.20 _a | 13.48 | 79.85 _{a,b} | 13.81 | 68.85 _{b,c} | 12.04 | 81.03 _{a,c} | 15.61 |
| TISSPos | 46.58 | 10.70 | 42.98 _a | 11.88 | 47.75 _a | 11.25 | 45.30 | 10.77 |
| TASNeg | 25.34 _{a,b} | 5.22 | 22.28 _a | 5.46 | 23.97 _b | 4.60 | 22.28 _{a,b} | 5.25 |
| TASPos | 11.98 | 3.42 | 11.35 _a | 3.57 | 11.94 _a | 3.18 | 11.45 | 3.30 |

Note: AS (Adolescent Stories = social information processing) Hos = Hostile response; Wor = Worried response; Agg/Comp = Aggressive/Competent response; EATQ-R (Early Adolescent Temperament Questionnaire-Revised = emotion regulation): Aff = Affiliation, Agg = Aggression, DM = Depressive Mood, F = Frustration, PS = Perceptual Sensitivity, S = Shyness; TISS (Teenage Inventory of Social Skills) Neg = Negative, Pos = Positive; TAS (Thoughts About School = perception of school climate) Neg = Negative, Pos = Positive; for Bully/Victim groups, None = Neither Bully nor Victim.

Means in a row sharing subscripts are significantly different. For all measures, higher means indicate greater difficulty within Bully/Victim groups relative to Interpersonal Functioning with the exception of Positive TISS and TAS, where higher means indicated greater capacity.

Research Question 3) Which variables within social information processing (hostile, aggressive/competent, worried), emotion-related regulation (aggression, depressive mood, frustration, shyness), negative social skills, and school climate predict victim, bully, or bully-victim behavior?

H_{3a}: Low social information processing, low emotion related-regulation, negative social skills, and negative school climate will emerge as the best predictors of victim behavior.

H_{3b}: Low social information processing, low emotion related-regulation, negative social skills, and negative school climate will emerge as the best predictors of bully behavior.

H_{3c}: Low social information processing, low emotion related-regulation, negative social skills, and negative school climate will emerge as the best predictors of bully-victim behavior.

A multivariate regression analysis (Tables 25, 26, 27) was completed to determine the amount of variance in victim behavior that was accounted for by each of the independent variables (bully, hostile response, worried response, competent/aggressive response, affiliation, aggression, depressive mood, frustration, perceptual sensitivity, shyness, positive and negative social skills, and positive and negative thoughts about schools). The determination of which variables were to be included in the regression was based on existing empirical data, as reported in chapter two. Effect sizes of the variables (squared multiple correlations, Increase in R^2) represent the overall amount of variance in the criterion variable accounted for by the predictor variables.

The results (Table 25) show that six predictors (depressive mood, hostile responses, aggressive/competent responses, worried responses, negative social skills, and negative thoughts about school) accounted for 24% of the variance in victim behavior ($R^2 = .24$). The associated F ratio of 18.68 was statistically significant at an alpha level of .000 with 2 and 686 degrees of freedom. The results

indicated depressive mood ($\beta = .22$, $p = .000$), hostile responses ($\beta = .17$, $p = .000$), aggressive/competent responses ($\beta = .13$, $p < .05$), worried responses ($\beta = .10$, $p = .01$), negative social skills ($\beta = .05$, $p = .000$), and negative thoughts about school ($\beta = -.11$, $p = .000$) accounted for a significant amount of variance in victim behavior.

Table 25

Summary of Multivariate Regression Analysis of Student Interpersonal Functioning Predicting Victim Behavior

| | Victim Behavior $R^2 = .24$ β | Standard Error |
|--------------------------------|---|-------------------|
| Depressive Mood | .22*** | .24 |
| Hostile responses | .17*** | .04 |
| Aggressive/Competent responses | .13* | .06 |
| Worried responses | .10** | .04 |
| Negative Social Skills | .05* | .01 |
| Negative Thoughts About School | -.11*** | .03 |

Note. $F = 18.68$; $df = 2, 686$. Numbers rounded to the second decimal place may have resulted in rounding errors.

* $p < .05$; ** $p < .001$, *** $p = .000$.

The results (Table 26) also indicated that for bullies, five predictors (aggression, hostile responses, negative social skills, negative thoughts about school, and frustration) accounted for 38% of the variance ($R^2 = .38$). The associated F ratio of 34.44 was statistically significant at an alpha level of .000 with 2 degrees 2 and 686 degrees of freedom. The results indicated aggression ($\beta = .27$, $p = .000$), hostile responses ($\beta = .12$, $p = .001$), negative social skills ($\beta = .10$, $p = .000$), negative thoughts about school ($\beta = -.09$, $p = .000$), and frustration ($\beta = -.10$, $p = .001$) accounted for a significant amount of variance.

Table 26

Summary of Multivariate Regression Analysis of Student Interpersonal Functioning Predicting Bully Behavior

| | Bully Behavior $R^2 = .38$ β | Standard Error |
|-------------------------------------|--|-------------------|
| Aggression | .27*** | .24 |
| Hostile responses | .12** | .04 |
| Negative Social Skills | .13* | .06 |
| Thoughts About School (negative) | -.09 | |
| Frustration | -.10 | |

Note. $F = 34.44$; $df = 2, 686$. Numbers rounded to the second decimal place may have resulted in rounding errors.

* $p < .05$; ** $p < .001$, *** $p = .000$.

Further results (Table 27) for bully-victim behavior indicated eight predictors (aggression, depressive mood, hostile responses, aggressive/competent responses, worried responses, negative social skills, and negative thoughts about school) accounted for 36% of the variance ($R^2 = .36$). The associated F ratio of 18.68 was statistically significant at an alpha level of .000 with 2 degrees 2 and 686 degrees of freedom. The results suggested aggression ($\beta = .32$, $p = .000$), hostile responses ($\beta = .30$, $p = .000$), aggressive/competent responses ($\beta = .18$, $p < .05$), depressive mood ($\beta = .17$, $p = .01$), negative social skills ($\beta = .15$, $p = .000$), worried responses ($\beta = .11$, $p = .05$), frustration ($\beta = -.14$, $p = .01$), and thoughts about school ($\beta = -.20$, $p = .000$) accounted for a significant amount of variance.

Table 27

Summary of Multivariate Regression Analysis of Student Interpersonal Functioning Predicting Bully-Victim Behavior

| | Bully-Victim Behavior | |
|--------------------------------|-----------------------|----------------|
| | $R^2 = .36$ | |
| | β | Standard Error |
| Aggression | .32*** | .24 |
| Hostile responses | .30*** | .04 |
| Aggressive/competent responses | .18* | .06 |
| Depressive Mood | .17** | .04 |
| Negative Social Skills | .15*** | .01 |
| Worried responses | .11* | .04 |
| Frustration | -.14** | .01 |
| Negative Thoughts About School | -.20*** | .03 |

Note. $F = 18.68$; $df = 2, 686$. Numbers rounded to the second decimal place may have resulted in rounding errors.

* $p < .05$; ** $p < .001$, *** $p = .000$.

Research Question 4) Does school climate mediate levels of bully/victim behavior (bully, victim, bully-victim, non-victim/non-bully)?

Mediation models using multiple linear regression were used to determine whether perceived school climate functioned as a mediator between bully, victim, bully-victim, or none (hypotheses 4a through 4ff).

Tests of mediation involve a four-step process described by Kenny (2003). The first step examines the relationship between the predictor and criterion variable. A statistically significant outcome for this step indicates the existence of a relationship that can be mediated. The second step examines the relationship between the predictor and the mediator. At this step, the mediator is treated as a criterion variable. A significant relationship is necessary between the mediator and the predictor variable to establish a possible mediating effect. The third step determines the relationship between the mediator and the criterion variable, while controlling for the contributions of

the predictor variable. A significant relationship between the mediator and criterion variables is necessary for a mediating effect to exist. The fourth step establishes the mediation of the relationship between the predictor and criterion variables, and is accomplished by examining the three individual relationships outlined in the above steps. If the researcher is to infer that mediation has resulted, the relationship between the predictor and the criterion in Step 4 should be nonsignificant.

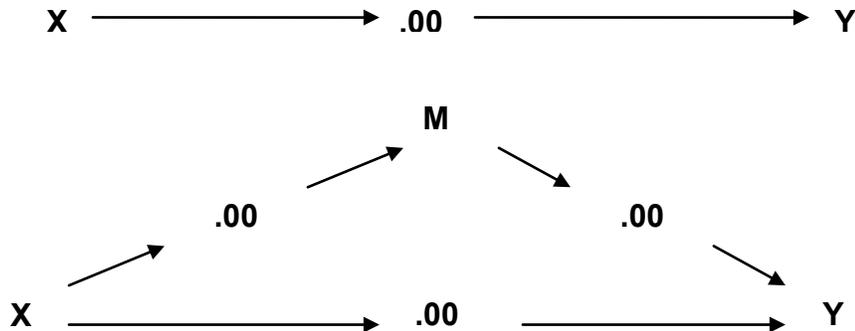
If on the fourth step of the analysis, the criterion variable is no longer statistically significant and the Sobel test (Sobel, 1982) is significant, one must next look at the bootstrap results for a full or partial mediation effect. If the range of the lower level confidence interval and the upper level confidence interval does not include zero, the mediator is said to fully mediate the relationship between the predictor variable and the criterion variable. However, if on the fourth step of the analysis, the amount of variance was reduced, but remained statistically significant (thus indicating a lack of full mediation), the Sobel test is calculated to determine if the mediating variable is partially mediating the relationship between the predictor and criterion variable. If on step four of the analysis, the criterion variable remains significant and the Sobel test is also significant, one must next look at the bootstrap results for a significant or nonsignificant indirect effect. If the range of the lower level confidence interval and the upper level confidence interval includes zero, the mediator is said to partially mediate the relationship between the predictor variable and the criterion variable. If the lower level confidence interval and the upper level confidence interval do not include a zero, one must look at the coefficients of the first 4 steps. If the lower level coefficient is lower than the upper level coefficient, a partial mediation is said to exist. The SPSS

procedure for estimating partial effects of mediators based on the Sobel test was utilized for the analyses that failed to find a full mediating effect (Preacher & Hayes, 2004).

Variables included for this analysis were consistent with the existing literature, and involved all 13 interpersonal variables (hostile, worried, aggressive/competent responses, affiliation, aggression, depressive mood, frustration, perceptual sensitivity, shyness, and positive/ negative social skills). Only statistically significant results (n = 10) are reported below.

Hypothesis 4.f.1: Perception of school climate significantly mediates the relationship between victim behavior and adolescent stories – hostile response.

Figure 1. Mediating Path Model for Victim Behavior, Adolescent Stories – Hostile Response, and Perceived School Climate.



Y = Victim **Behavior**

X = Adolescent Stories – Hostile Response

M = Perceived School Climate

Rules to establish a mediating relationship (all four need to be met):

1. The relationship between hostile response (X) and victim *behavior* (Y) should be significant.

Result: A significant relationship was found to exist between hostile response and victim *behavior*, $\beta = .71$, $t = 7.78$, $p < .000$. The criterion is met. Due to the significance of step 1, mediation analysis continued between hostile response and perceived school climate in step 2.

2. The relationship between adolescent stories – hostile response (X) and perceived school climate (M) should be significant.

Result: A significant relationship was found to exist between hostile response and the mediating variable, perceived school climate, $\beta = -.36$, $t = -5.41$, $p < .000$. The criterion is met. Due to the significance of step 2, mediation analysis continued between the mediating variable, perceived school climate, and victim *behavior* in step 3.

3. The relationship between perceived school climate (M) and victim *behavior* (Y) should be significant when controlling for hostile response (X).

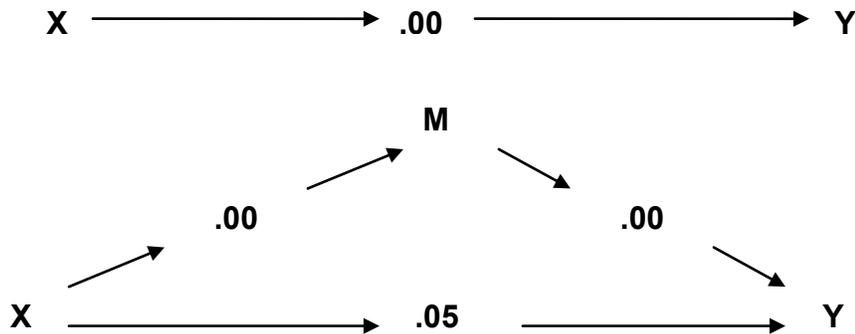
Result: The relationship between perceived school climate and victim *behavior* was significant when hostile response was controlled for, $\beta = -.46$, $t = -6.77$, $p < .000$. The criterion is met. Due to the significance of step 3, mediation analysis continued between hostile response and victim status when controlling for the mediating variable, perceived school climate in step 4.

4. The relationship between hostile response (X) and victim *behavior* (Y) should no longer be significant when controlling for the mediating variable, perceived school climate (M).

Result: The relationship between hostile response (X) and victim *behavior* (Y) remained significant when the mediator, perceived school climate, was controlled, $\beta = .54$, $t = .09$, $p < .000$. Because the relationship was statistically significant, a Sobel test was completed. The results of this test were statistically significant, $p < .000$, and the bootstrap result between the lower level confidence interval and upper level confidence interval did not include zero. However, because the first four steps of the analysis are significant and the last coefficient, $\beta = .54$, is lower than the first coefficient, $\beta = .71$, evidence existed to suggest that perceived school climate partially mediated the relationship between hostile response and victim *behavior*.

Hypothesis 4.f.3: Perception of school climate significantly mediates the relationship between victim behavior and adolescent stories – aggressive/competent response.

Figure 2. Mediating Path Model for Victim Behavior, Adolescent Stories-Aggressive/Competent Response, and Perceived School Climate.



Y = Victim Behavior

X = Adolescent Stories-Aggressive/Competent Response

M = Perceived School Climate

Rules to establish a mediating relationship (all four need to be met):

1. The relationship between aggressive/competent response (X) and victim behavior (Y) should be significant.

Result: A significant relationship was found to exist between aggressive/competent response and victim behavior, $\beta = .55$, $t = .14$, $p < .000$. The criterion is met. Due to the significance of step 1, mediation analysis continued between aggressive/competent response and perceived school climate in step 2.

2. The relationship between aggressive/competent response (X) and the mediating variable, perceived school climate, (M) should be significant.

Result: A significant relationship was found to exist between aggressive/competent response and the mediating variable, perceived school climate, $\beta = -.53$, $t = -5.60$, $p < .000$. The criterion is met. Due to the significance of step 2, mediation analysis continued between the mediating variable, perceived school climate, and victim behavior in step 3.

3. The relationship between perceived school climate (M) and victim status (Y) should be significant when controlling for aggressive/competent response (X).

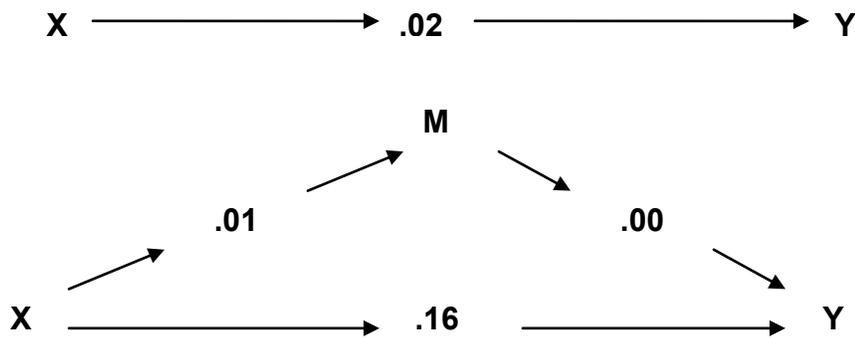
Result: The relationship between the mediating variable, perceived school climate, and victim behavior was significant when hostile response was controlled for, $\beta = -.53$, $t = .07$, $p < .000$. The criterion is met. Due to the significance of step 3, mediation analysis continued in step 4.

4. The relationship between aggressive/competent response (X) and victim behavior (Y) should no longer be significant when controlling for the mediating variable, perceived school climate (M).

Result: The relationship between aggressive/competent response (X) and victim behavior (Y) was non-existent when the mediator, perceived school climate, was controlled, $\beta = .26$, $t = 1.97$, $p = .05$. Therefore, criteria are met suggesting that the mediating variable, perceived school climate, mediates the relationship between aggressive/competent response and victim behavior.

Hypothesis 4.h.1: Perception of school climate significantly mediates the relationship between victim behavior and affiliation.

Figure 3. Mediating Path Model for Victim Behavior, Affiliation, and Perceived School Climate.



Y = Victim Behavior

X = Affiliation

M = Perceived School Climate

Rules to establish a mediating relationship (all four need to be met):

1. The relationship between affiliation (X) and victim behavior (Y) should be significant.

Result: A significant relationship between affiliation and victim behavior was evident, $\beta = -.25$, $t = -2.29$, $p < .05$. The criterion is met. Therefore, further analysis between affiliation and perceived school climate was conducted in step 2.

2. The relationship between affiliation (X) and perceived school climate (M) should be significant.

Result: A significant relationship was found to exist between affiliation and the mediating variable, perceived school climate, $\beta = .19$, $t = 2.50$, $p < .05$. The criterion is met. Therefore, further analysis between the mediating variable, perceived school climate, and victim behavior when controlling for affiliation was conducted in step 3.

3. The relationship between perceived school climate (M) and victim behavior (Y) should be significant when controlling for affiliation (X).

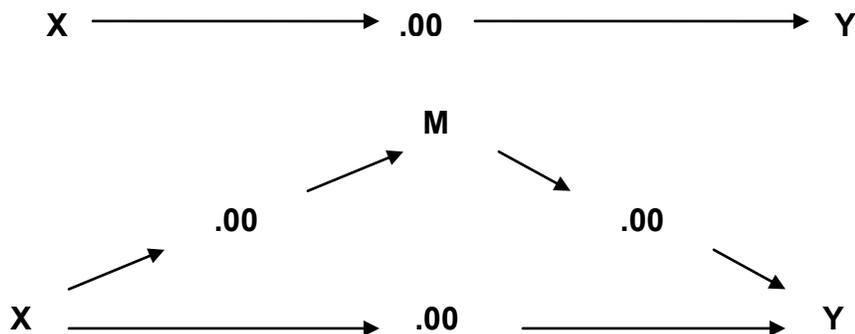
Result: The relationship between perceived school climate and victim behavior was significant when affiliation was controlled for, $\beta = -5.62$, $t = -8.21$, $p < .000$. The criterion is met. Therefore, further analysis between affiliation and victim behavior when controlling for the mediating variable, perceived school climate, in step 4 of the analysis was conducted.

4. The relationship between affiliation (X) and victim behavior (Y) should no longer be significant when controlling for the mediating variable, perceived school climate (M).

Result: The relationship between affiliation (X) and victim behavior (Y) was not significant when the mediating variable, perceived school climate, was controlled, $\beta = -.14$, $t = -1.39$, $p = .16$. Therefore, criterion is met suggesting that perceived school climate mediates the relationship between affiliation and victim behavior.

Hypothesis 4.h.2: Perception of school climate significantly mediates the relationship between victim behavior and aggression.

Figure 4. Mediating Path Model for Victim Behavior, Aggression, and Perceived School Climate.



Y = Victim Behavior

X = Aggression

M = Perceived School Climate

Rules to establish a mediating relationship (all four need to be met):

1. The relationship between aggression (X) and victim behavior (Y) should be significant.

Result: A significant relationship between aggressive and victim behavior was evident, $\beta = .72$, $t = 8.32$, $p = .000$. The criterion is met. Therefore, further analysis between aggression and the mediating variable, perceived school climate, was conducted in step 2.

2. The relationship between aggression (X) and perceived school climate (M) should be significant.

Result: A significant relationship was found to exist between aggression and the mediating variable, perceived school climate, $\beta = -.37$, $t = -5.70$, $p < .000$. The criterion is met. Therefore, further analysis between the mediating variable, perceived school climate, and victim behavior when controlling for aggression was conducted in step 3.

3. The relationship between perceived school climate (M) and victim behavior (Y) should be significant when aggression (X) is controlled for.

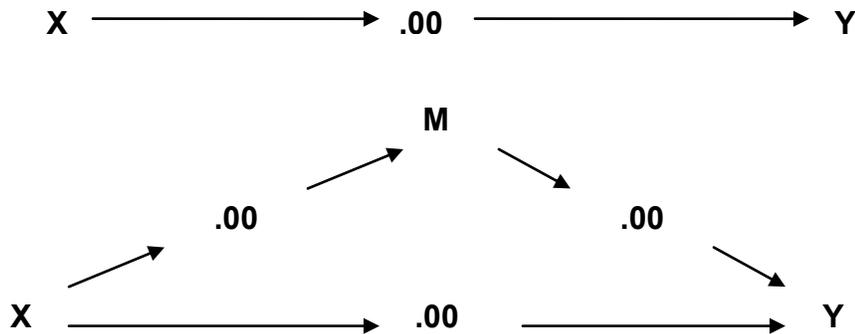
Result: The relationship between perceived school climate and victim behavior was not significant when aggression was controlled for, $\beta = -.44$, $t = -6.67$, $p < .000$. The criterion is met. Therefore, further analysis between aggression and victim behavior when controlling for the mediating variable, perceived school climate, was conducted in step 4.

4. The relationship between aggressive/competent response (X) and victim behavior (Y) should no longer be significant when controlling for the mediating variable, perceived school climate (M).

Result: The relationship between aggression (X) and victim behavior (Y) remained significant when the mediator, perceived school climate, was controlled, $\beta = .55$, $t = 6.51$, $p = .000$. Because the relationship was statistically significant, a Sobel test was completed. The results of this test were statistically significant, $p < .000$, and the bootstrap result between the lower level confidence interval and upper level confidence interval did not include zero. However, because the first four steps of the analysis are significant and the last coefficient, $\beta = .55$, is lower than the first coefficient, $\beta = .72$, evidence existed to suggest that perceived school climate functioned as a partial mediator for the relationship between aggression and victim behavior.

Hypothesis 4.1.1: Perception of school climate significantly mediates the relationship between bully behavior and adolescent stories – hostile response.

Figure 5. Mediating Path Model for Bully Behavior, Adolescent Stories – Hostile Response, and Perceived School Climate.



Y = Bully Behavior

X = Adolescent Stories – Hostile Response

M = Perceived School Climate

Rules to establish a mediating relationship (all four need to be met):

1. The relationship between hostile response (X) and bully behavior (Y) should be significant.

Result: A significant relationship between hostile response and bully behavior was evident, $\beta = .83$, $t = 8.35$, $p < .000$. The criterion is met. Therefore, further analysis between hostile response and the mediating variable, perceived school climate, was conducted in step 2.

2. The relationship between hostile response (X) and perceived school climate (M) should be significant.

Result: A significant relationship was found to exist between hostile response and the mediating variable, perceived school climate, $\beta = -.36$, $t = -4.59$, $p < .000$. The criterion is met. Therefore, further analysis between the mediating variable, perceived school climate, and bully behavior when controlling for hostile response was conducted in step 3.

3. The relationship between perceived school climate (M) and bully behavior (Y) should be significant controlling for hostile response (X).

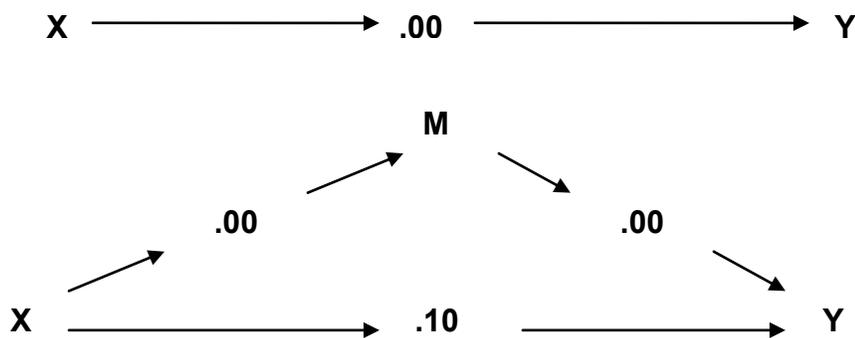
Result: The relationship between perceived school climate and bully behavior was significant when hostile response was controlled for, $\beta = -.32$, $t = -4.55$, $p < .000$. The criterion is met. Therefore, further analysis between hostile response and bully behavior when controlling for the mediating variable, perceived school climate, was conducted in step 4.

4. The relationship between hostile response (X) and victim behavior (Y) should no longer be significant when controlling for the mediating variable, perceived school climate.

Result: The relationship between hostile response (X) and bully behavior (Y) remained significant when the mediator, perceived school climate, was controlled, $\beta = .72$, $t = 7.17$, $p < .000$. Because the relationship was statistically significant, a Sobel test was completed. The result of this test was statistically significant, $p < .000$, and the bootstrap result between the lower level confidence interval and upper level confidence interval did not include zero. However, because the first four steps of the analysis were significant and the last coefficient, $\beta = .71$, was lower than the first coefficient, $\beta = .83$, evidence existed to suggest that the mediating variable, perceived school climate, partially mediated the relationship between hostile response and bully behavior.

Hypothesis 4.1.3: Perception of school climate significantly mediates the relationship between bully behavior and adolescent Stories – aggressive/competent response.

Figure 6. Mediating Path Model for Bully Status, Adolescent Stories – Aggressive/Competent Response, and Perceived School Climate.



Y = Bully Behavior

X = Adolescent Stories – Aggressive/Competent Response

M = Perceived School Climate

Rules to establish a mediating relationship (all four need to be met):

1. The relationship between Adolescent Stories – Aggressive/Competent Response (X) and bully behavior (Y) should be significant.

Result: A significant relationship between aggressive/competent response and bully behavior was evident, $\beta = .54$, $t = 3.21$, $p < .00$. The criterion is met. Therefore, further analysis between aggressive/competent response and the mediating variable, perceived school climate, was conducted in step 2.

2. The relationship between aggressive/competent response (X) and the mediating variable, perceived school climate, (M) should be significant.

Result: A significant relationship between aggressive/competent response and the mediating variable, perceived school climate, was determined to exist, $\beta = -.63$, $t = -5.22$, $p = .000$. The criterion is met. Therefore, further analysis between the mediating variable, perceived school climate, and bully behavior when controlling for aggressive/competent response was conducted in step 3.

3. The relationship between the mediating variable, perceived school climate, (M) and bully behavior (Y) should be significant controlling for aggressive/competent response (X).

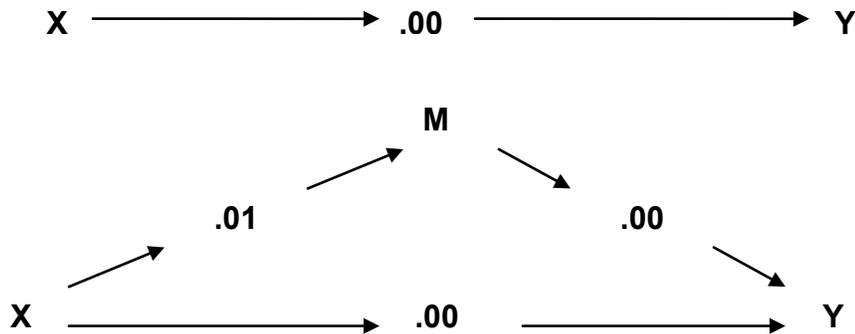
Result: The relationship between the mediating variable, perceived school climate, and bully behavior was significant when controlling for hostile response, $\beta = -.42$, $t = -5.41$, $p < .000$. The criterion is met. Therefore, further analysis between aggressive/competent response and bully behavior when controlling for the mediating variable, perceived school climate in step 4.

4. The relationship between aggressive/competent response (X) and bully behavior (Y) should no longer be significant when controlling for the mediating variable, perceived school climate, (M).

Result: The relationship between aggressive/competent response (X) and bully behavior (Y) was non-existent when controlling for the mediating variable, perceived school climate, $\beta = -.28$, $t = 1.66$, $p = .10$. The criterion is met. Therefore, evidence existed to suggest that the mediating variable, perceived school climate, mediated the relationship between aggressive/competent response and bully behavior.

Hypothesis 4.m.2: Perception of school climate significantly mediates the relationship between bully behavior and aggression.

Figure 7. Mediating Path Model for Bully Behavior, Aggression, and Perceived School Climate.



Y = Bully Behavior

X = Aggression

M = Perceived School Climate

Rules to establish a mediating relationship (all four need to be met):

1. The relationship between aggression (X) and bully behavior (Y) should be significant.

Result: A significant relationship between aggression and bully behavior was found to exist, $\beta = .54$, $t = 5.12$, $p < .000$. The criterion is met. Therefore, further analysis between aggression and the mediating variable, perceived school climate, was conducted in step 2.

2. The relationship between aggression (X) and perceived school climate (M) should be significant.

Result: A significant relationship between aggression and the mediating variable, perceived school climate, was found to exist, $\beta = -.22$, $t = -2.71$, $p < .05$. The criterion is met. Therefore, further analysis between the mediating variable, perceived school climate, and bully behavior when controlling for aggression was conducted in step 3.

3. The relationship between the mediating variable, perceived school climate, (M) and bully behavior (Y) should be significant when aggression (X) is controlled for.

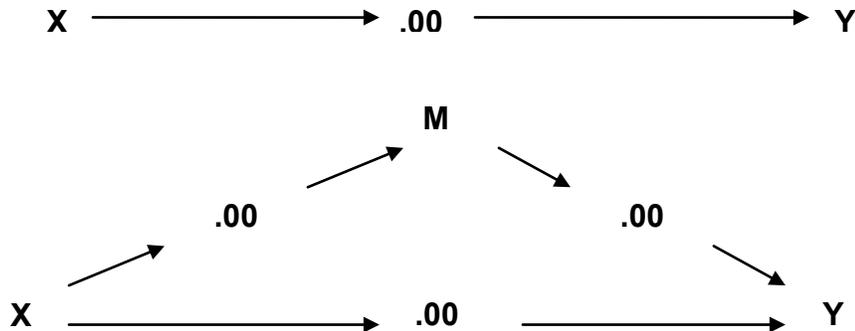
Result: The relationship between the mediating variable, perceived school climate, and bully behavior was significant when controlling for aggression, $\beta = -.38$, $t = -5.23$, $p < .000$. The criterion is met. Therefore, further analysis between aggression and bully behavior when controlling for the mediating variable, perceived school climate, was conducted in step 4.

4. The relationship between aggression (X) and bully behavior (Y) should no longer be significant when controlling for the mediating variable, perceived school climate, (M).

Result: The relationship between aggression (X) and bully behavior (Y) remained significant when controlling for the mediating variable, perceived school climate, $\beta = .46$, $t = 4.47$, $p < .000$. Because the relationship was statistically significant, a Sobel test was completed. The result of this test was statistically significant, $p < .05$, and the bootstrap result between the lower level confidence interval and upper level confidence interval did not include zero. However, because the first four steps of the analysis were significant and the last coefficient, $\beta = .46$, was lower than the first coefficient, $\beta = .54$, existed to suggest that the mediating variable, perceived school climate, partially mediated the relationship between aggression and bully behavior.

Hypothesis 4.q.1: Perception of school climate significantly mediates the relationship between bully-victim behavior and adolescent stories – hostile response.

Figure 8. Mediating Path Model for Bully-Victim Behavior, Adolescent Stories-Hostile Response, Perceived School Climate.



Y = Bully-Victim Behavior

X = Adolescent Stories-Hostile Response

M = Perceived School Climate

Rules to establish a mediating relationship (all four need to be met):

1. The relationship between hostile response (X) and bully-victim behavior (Y) should be significant.

Result: A significant relationship between hostile response and bully-victim behavior was evident, $\beta = .82$, $t = 6.68$, $p < .000$. The criterion is met. Due to

the significance of step 1, further analysis between hostile response and the mediating variable, perceived school climate, was conducted in step 2.

2. The relationship between hostile response (X) and perceived school climate (M) should be significant.

Result: A significant relationship between hostile response and bully-victim behavior was evident, $\beta = -.42$, $t = -4.95$, $p = .000$. The criterion is met. Due to the significance of step 2, further analysis between the mediating variable, perceived school climate, and bully-victim behavior was when controlling for hostile response was conducted in step 3.

3. The relationship between perceived school climate (M) and bully-victim behavior (Y) should be significant when hostile response (X) is controlled for.

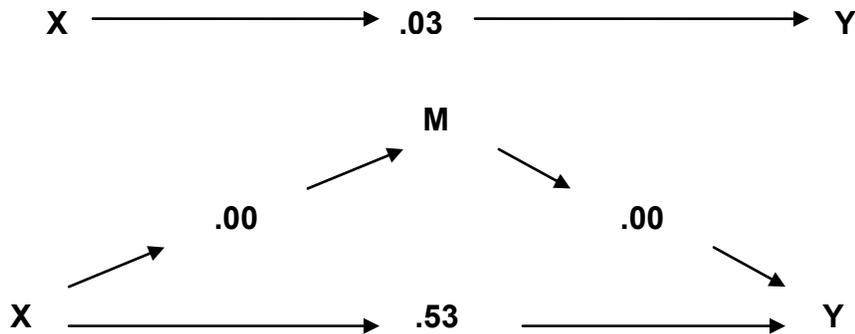
Result: The relationship between hostile response and perceived school climate and bully-victim behavior was significant when controlling for hostile response $\beta = -.46$, $t = -4.76$, $p < .000$. The criterion is met. Due to the significance of step 3, further analysis between hostile response and bully-victim when controlling for the mediating variable, perceived school climate, in step 4.

4. The relationship between hostile response (X) and bully-victim behavior (Y) should no longer be significant when controlling for perceived school climate (M).

Result: The relationship between hostile response (X) and bully-victim behavior (Y) remained significant when controlling for the mediating variable, perceived school climate, $\beta = .63$ $t = 5.07$, $p < .000$. Because the relationship was statistically significant, a Sobel test was completed. The result of this test was statistically significant, $p < .001$, and the bootstrap result between the lower level confidence interval and upper level confidence interval did not include zero. However, because the first four steps of the analysis were significant and the last coefficient, $\beta = .63$, was lower than the first coefficient, $\beta = .82$, evidence existed to suggest that the mediating variable, perceived school climate, functioned as a partial mediator for the relationship between hostile response and bully-victim behavior.

Hypothesis 4.q.3: Perception of school climate significantly mediates the relationship between bully-victim behavior and adolescent stories – aggressive/competent response.

Figure 9. Mediating Path Model for Bully-Victim Behavior, Adolescent Stories-Aggressive/Competent Response, Perceived School Climate.



Y = Bully-Victim Behavior

X = Adolescent Stories-Aggressive/Competent Response

M = Perceived School Climate

Rules to establish a mediating relationship (all four need to be met):

1. The relationship between aggressive/competent response (X) and bully-victim behavior (Y) should be significant.

Result: A significant relationship between aggressive/competent response and bully-victim behavior was evident, $\beta = .44$, $t = 2.13$, $p < .05$. The criterion is met. Due to the significance of step 1, further analysis between aggressive/competent response and the mediating variable, perceived school climate, was conducted in step 2.

2. The relationship between aggressive/competent response (X) and perceived school climate (M) should be significant.

Result: A significant relationship between aggressive/competent response and perceived school climate was found to exist, $\beta = -.53$, $t = -3.92$, $p < .000$. The criterion is met. Due to the significance of step 2, further analysis between the mediating variable, perceived school climate, and bully-victim behavior when controlling for aggressive/competent response was conducted in step 3.

3. The relationship between perceived school climate (M) and bully-victim behavior (Y) should be significant when controlling for aggressive/competent response (X).

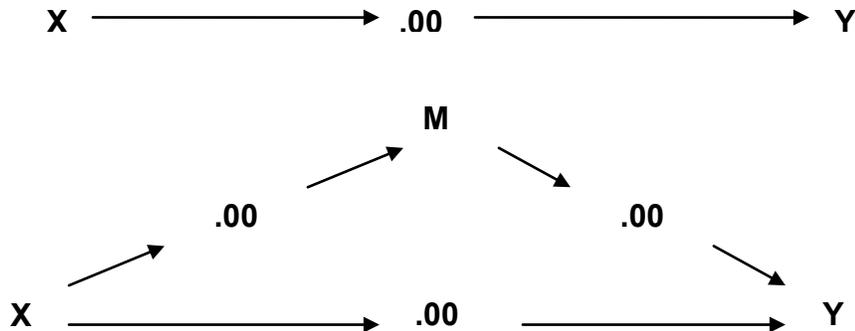
Result: The relationship between perceived school climate and bully-victim behavior was significant when controlling for aggressive/competent response, $\beta = -.60$, $t = -6.02$, $p < .000$. The criterion is met. Due to the significance of step 3, further analysis between aggressive/competent response and bully-victim behavior when controlling for the mediating variable, perceived school climate, was conducted in step 4.

4. The relationship between aggressive/competent response (X) and bully-victim behavior (Y) should no longer be significant when controlling for perceived school climate (M).

Result: The relationship between aggressive/competent response (X) and bully-victim status (Y) was no longer significant when controlling for the mediator, perceived school climate, $\beta = .12$, $t = .63$, $p = .53$, criteria is not met. Therefore, evidence existed to suggest that perceived school climate mediated the relationship between aggressive/competent response and bully-victim behavior.

Hypothesis 4.r.2: Perception of school climate significantly mediates the relationship between bully-victim behavior and aggression.

Figure 10. Mediating Path Model for Bully-Victim Behavior, Aggression, Perceived School Climate.



Y = Bully-Victim Behavior
 X = Aggression
 M = Perceived School Climate

Rules to establish a mediating relationship (all four need to be met):

1. The relationship between aggression (X) and bully-victim behavior (Y) should be significant.

Result: A significant relationship between aggression and bully-victim behavior was found to exist, $\beta = .57$, $t = 4.46$, $p < .000$. The criterion is met. Due to the significance of the relationship found between aggression and

bully-victim behavior in step 1, further analysis between aggression and the mediating variable, perceived school climate, was conducted in step 2.

2. The relationship between aggression (X) and perceived school climate (M) should be significant.

Result: A significant relationship between aggression and perceived school climate emerged as a statistically significant predictor, $\beta = -.31$, $t = -3.54$, $p < .001$. The criterion is met. Due to the significance of the relationship found between aggression and perceived school climate, further analysis between the mediating variable, perceived school climate, and bully-victim behavior when controlling for aggression was conducted in step 3.

3. The relationship between perceived school climate (M) and bully-victim behavior (Y) should be significant when aggression (X) is controlled for.

Result: The relationship between perceived school climate and bully-victim behavior emerged as a statistically significant predictor when controlling for aggression, $\beta = -.56$, $t = -5.77$, $p < .000$. The criterion is met. Due to the significance found in step 3, further analysis between aggression and bully-victim behavior when controlling for the mediating variable, perceived school climate, was conducted in step 4.

4. The relationship between aggression (X) and bully-victim behavior (Y) should no longer be significant when controlling for perceived school climate (M).

Result: The relationship between aggression (X) and bully-victim behavior (Y) remained significant when controlling for the mediator, perceived school climate, $\beta = .40$, $t = 3.26$, $p < .01$. Because the relationship was statistically significant, a Sobel test was completed. The result of this test was statistically significant, $p < .01$, and the bootstrap result between the lower level confidence interval and upper level confidence interval did not include zero. However, because the first four steps of the analysis were significant and the last coefficient, $\beta = .40$, was lower than the first coefficient, $\beta = .57$, evidence existed to suggest that perceived school climate functioned as a partial mediator for the relationship between aggression and bully-victim behavior.

In summary, perceived school climate served to fully mediate two interpersonal variables (i.e., affiliation for victims only; aggressive/competent responses for bullies and bully-victims), and served as a partial mediator in the relationship between victims, bullies, and bully-victims relative to two additional interpersonal variables (i.e., hostile, aggressive responses).

Chapter V

Discussion

The purpose of the study was to examine the influence of interpersonal variables, such as social information processing (i.e., hostile, worried, aggressive/competent responses), emotion related-regulation (affiliation, aggression, depressive mood, frustration, perceptual sensitivity, shyness), and positive and negative social skills of 6th and 7th grade middle school students in the context of perceived school climate upon the attainment of bully/victim behavior (i.e., bullies, victims, bully-victims, and non-bully/non-victim). Based on a social-ecological construct, the perception of school climate by students was hypothesized to mediate the relationship between students' behavior relative to bully/victim outcomes.

Results of the statistical analyses used to test the hypotheses established for this study were mixed, with support provided for some of the hypotheses. Results of the major research questions are discussed in this section.

Bullying and Demographic Variables

The hypotheses developed from the first research question explored differences in students' bully/victim tendencies by gender and grade, ethnicity, academic standing, special education status, and parent level of education. The hypotheses were tested using Analysis of Variance.

In keeping with Boulton et al. (1993) and Olweus (1991) males reported being subjected to more bully behavior than females. This also lends support to Pellegrini's (2002) argument that entry into middle school coincides with young males'

establishment of dominance hierarchies, and thus males experiencing more aggression than females.

Although it was hypothesized that students in 6th grade would report being bullied more than 7th grade students, it was determined that 7th graders reported experiencing more bullying than 6th graders. It may be important to note that in this study, students in the 6th grade were in the lowest grade level of both middle schools. Consistent with Olweus' finding (1991), it was expected that students who were new to middle school (i.e., the lowest grade in the school), would be subject to the bullying of older students. A possible reason for the contrary finding in this study may be that, while 6th graders are in the lowest grade of both middle schools, the efforts by 7th and 8th grade students to assert/maintain dominance is more robust. Perhaps 7th and 8th grade students', particularly males, with increases in age and subsequently hormonal levels (i.e., testosterone) is what distinguishes them from 6th graders, and as such, older students are biologically driven to engage in more competitive behavior in 7th and 8th grades.

The finding that ethnic differences in bully/victim behavior were non-significant was somewhat curious. A possible explanation may be that, for the most part, students in this school district share a similar socio-economic background regardless of ethnicity, and for the most part reside in neighborhoods subjected to relatively little violence. Subsequently, the greater similarity may negate the potential influence of violence that is not uncommon for those who reside in environments where community violence is more commonplace.

Academic standing (grade average) as a function of victim behavior was significant, consistent with Juvonen's et al. findings, as reported in chapter two. The

significance found for students enrolled in special education being more prone to peer-victimization may be consistent with those students who are victimized as a result of lower academic functioning. Although students enrolled in special education programs in both schools within this study are in mainstream classrooms, the differences in their ability to comprehend and respond to material presented by the teacher, in books, etc., may be noticeably lacking, insofar as peers not in special education may more readily incorporate academic material.

The manner by which students enrolled in special education respond to material in the classroom, or their lack of response, may further set them apart from their peers whose academic functioning does not interfere with the acquisition or expression of academic, social, or emotional information. It is not only that students in special education programs are labeled by virtue of their academic abilities, but any deficits that are noticed by other students, including peers also in special education, may set them apart and set them up for ridicule. Such differences, however, are not generally regarded positively by any student, whether they are receiving a special education curriculum or not.

No significant differences were found for parents' level of education. A paucity of research exists pertaining to the relationship of parents' level of education and bully/victim outcomes. Although, it is possible that in this school district the parents' overall relatively high level of education factored into bully/victim outcomes; further research into parents' level of education and its affect upon bullying and victimization is warranted.

Bullying and Psychological Variables

With respect to hypotheses 2a, 2b, and 2c, students' bully/victim behavior (bully, victim, bully-victim, non-bully/non-victim) relative to social information processing (hostile, aggressive/competent, worried), emotion regulation (affiliation, aggression, depressive mood, frustration, perceptual sensitivity, shyness), and positive and negative social skills, significant differences between 6th and 7th grades were not observed. However, within grade differences were found to significantly differ for both grades, suggesting that all students could potentially be affected by bully/victim behavior.

The observed differences between 6th and 7th grade students pertained to the type of interpersonal variables they endorsed. Sixth graders indicated a tendency to worry more in social situations, whereas 7th graders' response to social situations suggested greater aggressive social responses, negative social skills, and a greater need for affiliation than 6th graders. One possibility for the interpersonal variance in grade could be accounted for by maturational differences existing, not merely between 6th and 7th grade students, but influenced by the presence of 8th grade students who constitute the highest of the three grades in both middle schools.

While 8th grade students were not included in this study, their presence in the school could have altered the complexity of the social structure between 6th and 7th graders, thus affecting the particular interpersonal differences between students included in this study; the maturational differences between 6th and 7th grade students could be more pronounced than that of 7th and 8th grade students. Despite only one grade difference separating 6th and 7th grade students, the leap into adolescence may be noticeably different between these students, particularly if the relatively older

adolescents in 8th grade pose a challenge or threat to the place 7th graders hold in the social continuum or social ladder.

The presence of 8th graders in the school may draw the attention of 7th graders away from 6th grade students. Consistent with previous literature (Pellegrini, 1991; Weisfeld, 1999), biological processes motivate individuals to assert dominance and hold their position in the social hierarchy. While the age difference between 6th and 7th grade students is relatively miniscule, the developmental progression into adolescence may be more pronounced in 7th graders. The aggressive social information processing tendencies, negative social behavior, and greater need for affiliation observed for 7th grade students may be a result of their closer resemblance to older adolescents and thus with 8th graders, with whom they share increased levels of testosterone. Subsequently, the apparent negative behavior endorsed by 7th grade students may be a reflection of their 'ramping' up of normative social behavior as they endeavor to broaden their social status as influenced by hormonal changes.

In light of their relatively lower status in the school, 6th grade students' tendency to experience worry as they perceive the social behavior of schoolmates makes sense given that they fall within the lower and youngest of the two-thirds of the entire student body. Perhaps as 6th graders take 'the back seat' to the competitive nature of more maturing adolescents in 7th and 8th grades their social skills are not challenged as much as 7th graders. It remains possible that the biological drive of students in 7th grade motivates them to take more social risks resulting in a greater number of social interactions. Subsequently, the likelihood of making a social faux pas and being

misunderstood increases (i.e., social behavior perceived as negative, menacing, bully-like) as these students attempt to define themselves while refining their social graces.

Younger students may assume a more reserved, passive response to social events. This may be relatively 'safe' for younger students who avoid initiating or responding to social situations. Sixth graders' tendency to worry about social interactions may be based upon their relative immaturity and lack of social experience, particularly with older adolescents in 7th and 8th grade who have had more time to practice social behavior and claim their place on the social ladder, especially if they have attended the same school the year previous. A 'passive' response to social situations, however, does not presuppose a weak constitution or inability to defend against intrusive behavior. It may be that some younger students are 'pacing' themselves as they transition into middle school and acquire the social finesse that comes with maturation and experience.

Bullying and Social Information Processing Variables

The third question examined which variables within social information processing (hostile, aggressive/competent, worried), emotion related-regulation (aggression, depressive mood, frustration, shyness), negative social skills, and school climate predict victim, bully, or bully-victim behavior. It was predicted that low social information processing, low emotion related-regulation, negative social skills, and perceived negative school climate will emerge as the best predictors of victimization.

Dimensions of social information processing, poor emotion related-regulation, negative social skills, and perceived negative school climate significantly contributed to victimization, consistent with previously cited literature in chapter two. It was found that

of three social information processing variables, hostile social responses emerged as the most significant factor relative to victimization. DeWall, Twenge, Gitter, and Baumeister (2009) found that a causal influence of hostile or aggressive social behavior in 7th graders was social exclusion. The authors stated that the experience of rejection of one's behavior in social scenarios frequently activates hostile cognitions that translate into aggressive behavior. The behavior is not merely enacted to intentionally or unwittingly exclude students, but students who are excluded socially also tend to perceive ambiguous social information as hostile.

The emphasis DeWall et al. places upon social exclusion is interesting in that it suggests the importance of attaining social relationships, and that when individuals are excluded from social opportunities it is then that their social information processing abilities are compromised. DeWall's et al. research indicated that implicit deficits in social information processing abilities are not necessarily the sole factor in generating hostile attributions. Perhaps it is that biological processes involved in the 'fight-flight' mechanism are triggered in individuals who are prevented from establishing relationships that are essential in fostering a sense of social inclusion, considering that social inclusion is essential for one to attain basic human needs. The implication here is significant when considering the social structure of schools that, by design, tend to exclude students (i.e., sports, clubs, special education).

As with victims, bullies and bully-victims also were found in the present study to have poor social information processing abilities, although for bullies and bully-victims this was limited to hostile social responses, while worrying does not factor into their processing of social information. It was observed that bully-victims shared with victims

worried emotion regulation; this may reflect a general tendency or personality trait. It may also be that, for bully-victims, the worry they experience is somewhat dissipated when they begin processing social information relative to a particular event, generating a focus away from their worry when other negative emotions are aroused. It could also be that bullies and bully-victims experience exclusion from groups based upon their negative behavior which in turn influences hostile social information processing tendencies.

While many of the same attributes exist for bullies, victims, and bully-victims, a significant difference between victims and bullies and bully-victims was frustration and aggression. It is not surprising that bully-victims would share very similar characteristics with bullies, including both frustration and aggression; the inability to attain a goal or resolve internal or external conflict contributes to the experience of frustration, and aggressive behavior is a defining characteristic of bully behavior. This finding is consistent with literature discussed in chapter two.

The finding among victims and bully-victims regarding worried emotion related-regulation makes sense given that the negative behavior that bully-victims enact may be a direct response to overt, covert, or perceived bullying leveled against them. A significant difference between these three levels of bully/victim behavior (i.e., bully, victim, bully-victim) is the frustration that experienced by bullies, whose behavior could be driven by a perceived need to attain a goal but, due to deficits within their interpersonal functioning, are 'blocked' from achieving that goal. Theirs may include a tendency to 'force the square peg into the round hole' as it were, for lack of more refined social graces.

It may also be that some of these older adolescents who experience heightened levels of frustration have lower levels of testosterone, thus contributing to a diminished biological drive that other students naturally experience with normative increased levels of testosterone. While students prone to experience heightened frustration may be apt to recognize increasing social, dominance behavior in their peers, behavior generated by increased levels of testosterone, they may be confounded by a perceived lack of social finesse within themselves that is aided by the increase in testosterone. Perceived differences between these students and their more capable peers, although not overtly identifiable (i.e., increased levels of testosterone), may factor into their feeling of frustration for lack of an identifiable explanation. Such students may engage in bully behavior as a means to compensate for lowered levels of testosterone that would otherwise enable them to meet the challenge of adolescence (Weisfeld, 1999).

It stands to reason that bully-victims would share many of the same attributes as victims, given that they experience victimization as well as enact bully behavior. Given that bully-victims also engage in bully behavior, their tendency to enact hostility could be born out of frustration that does not necessarily involve the attainment of a goal, but out of a belief that their well-being is in jeopardy. Thus, their goal may be toward self-preservation. Victims have been shown to worry rather than experience the frustration of bullies and bully-victims. Perhaps it is victims' personality styles that differ from those of bullies and bully-victims; is there a more other-centered style of operating that victims possess, whereas bullies and bully-victims may possess more self-centered personality styles which could serve to strengthen bullies and bully-victims sense of entitlement?

Mediation Analyses

The fourth question examined the influence of perceived school climate as a mediating agent and bully/victim tendencies (bully, victim, bully-victim, non-victim/non-bully) relative to interpersonal abilities of students: social information processing (hostile, aggressive/competent, worried responses), emotion related-regulation (affiliation, aggression, depressive mood, frustration, perceptual sensitivity, shyness), and positive and negative social skills).

For victims, statistically significant results were found between perceived school climate and social information processing abilities: the perception of school climate partially mediated victimization relative to hostile social information processing, and fully mediated victim status relative to aggressive/competent social information processing, suggesting that victims' tendencies to cognitively perceive their environment as hostile and the manner by which they respond to social situations is less than competent.

The above finding is consistent with Browning et al. (2003) who, as stated in chapter two, suggested that negative social information processing is closely linked to victimization. Furthermore, as Olweus (2000) reported, the perception of a negative school environment reinforces aggressive responses to social events when students have a tendency to perceive social situations negatively, the students' ability to cognitively identify and enact competent behavior is diminished. This further supports the idea that the processing of social information is closely linked to victimization; as a child discontinues being a victim, their scores of social and global self-competence increase (Browning, Cohen, & Warman, 2003).

The present study indicated that for students involved in bully/victim outcomes, the status as bully-victims was most common, particularly among males. This was consistent with Hubbard and colleagues (2001) who based their study upon previous findings that boys' aggressive tendencies are born within the context and types of aggressive dyadic relationships they share with each other. This included differences within the individual, relative to reactive aggression (e.g., "a defensive, retaliatory response to a perceived provocation from a peer and is accompanied by a display of anger" p. 269) reflecting a proclivity within that individual to attribute hostile intent to others' behavior, whereas the tendency of one engaged in proactive aggression was goal directed.

It was found that students whose behavior, excluding bullies or victims, perceived their school environment as negative. This finding is unusual, in that it would appear that groups other than students reporting no involvement in bully/victim outcomes would report a negative perception of their school environment. Perhaps these students are unencumbered and can 'stand back' and see the forest for the trees, not having to attend to who will bully them nor partake in acts of peer aggression, and therefore perceive bully/victim behavior as negative social behaviors. This finding warrants further attention into how those students who are not bullies or victims may affect the outcome of bully behavior (i.e., as possible bystanders, could they abet the bully/reinforce victim behavior, or might they be a source of positive support for victims).

Implications for Clinicians, Educators, and Parents

Interpersonal relationships involve cognitive, behavioral, and emotional mechanisms. Adolescents are relatively immature, limited by their brain development and life experiences. Their relative immaturity does not allow for a transition from childhood into adolescence in a seamless manner; rather, as they develop their ability to monitor and use social information cues (Hubbard et al., 2001; Inderbitzen & Foster, 1992), regulate their emotions (Loevinger, 1990), and gracefully engage others behaviorally (Hodges et al., 1997), many of the behaviors enacted by adolescents can be attributed to biological processes. As such, their development follows an evolutionary continuum that drives young people to establish a place for themselves in their social milieu (Pellegrini, 1998, Weisfeld, 1999).

If adolescent behavior is motivated by biological mechanisms to adopt aggressive behavior in an effort to establish dominance, it is possible that there will be some adolescents who regard this behavior as positive and influential (Rose, Swenson, & Waller, 2004). The popularity that aggressive individuals attain can minimize the negativity of their behavior and make it difficult for school staff to alter. Yet, behavior along the bully/victim continuum is a very real occurrence with potential damaging consequences, as has been cited by previous research (Atlas & Pepler, 1998; Espelage, 2004; Olweus, 2000; Slee, 1994; Rudolph et al., 2009; Spriggs, Iannotti, Nansel, & Haynie, 2007). Within a social context, there are ranges of acceptable, normative behavior where a hierarchy can be established, the school environment notwithstanding. Perhaps oversight or intervention by adults is necessary to ensure the well-being of students who are targeted by aggressive peers.

It is not merely bullies who engage in aggressive behavior however, but as this study and others (i.e., Leff, 2007) have indicated, many students assume bully-victim behavior. This is a complex group because of the number of contributing factors that influence their behavior (e.g., social information processing difficulties, poor emotion related-regulation, and negative social environments at home or in the wider community). Bully-victims enact aggressive behavior that is not necessarily 'purposeful' (i.e., as a means to achieve a goal) but initiated by those who perceive threat in their environment. It is bully behavior in which these adolescents engage as a means to protect against being bullied.

It is therefore necessary to understand what factors contribute toward the attainment of victim, bully, and bully-victim behavior and conversely, what enhances the prospect of social success. The context in which victimization and bullying occurs, such as the school environment and how the youth perceives that environment can generate understanding of the needs of middle school students relative to overt and non-physical forms of aggression.

Educators and clinicians working with young people need to maintain a perspective of normative and pathological pathways to socialization that includes biological and social-emotional influences. Furthermore, collaboration with parents through teacher-parent meetings or parent-teacher associations can provide a forum where parents and teachers can be educated about the difficulties young people face and how to intervene without interfering in normative development (i.e., finding an alternative to 'zero-tolerance' policies, and understanding normative 'aggressive' behavior). Parents could be encouraged to reinforce initiatives the school is taking in

teaching students ways to deal with bully behavior; the school could list some responses victims could give to their tormentors, such as “that’s all you got?,” “knock it off,” “cut it out,” “that’s rude,” “that is not cool,” “that’s getting boring,” as well as teaching them to use humor and encourage parents to practice these social responses at home. Additionally, the school and parents could dialogue about ways to strengthen students’ self-esteem and self-concept by also providing lists of simple phrases of encouragement that parents can use in the home, such as “I love you,” “I believe in you,” “You make me proud.”

Additionally, given that students in this study who were involved in bully/victim behaviors, particularly victims, indicated their need for affiliation, programs within the school may stress the importance of students seeking help from others when they experience bullying. This could include telling a teacher when the student perceives threat or witnesses peer-aggression, as well as the development of peer support groups under the supervision of school staff. Also, teaching students how to identify resources available to them may reinforce their ability to assert themselves and articulate their needs while also strengthening their social skills.

Implications for School Environment

It is important for school staff to remain sensitive to students’ social needs and interactions through their awareness of hostile or aggressive behavior within the school environment. As reported by Limber (2004), bullying behavior can be reduced but it is essential to change the climate of the school, including social norms, particularly as it pertains to bully/victim behavior. For it is by altering the school environment that student behavior can be directly affected (Espelage, 2004). To alter the school

environment, all school personnel must be involved (i.e., teachers, administrators, support staff), as well as students and their parents (Limber, 2004). This further supports the idea proposed by Kerns and Prinz (2002), who indicated that the social ecology of schools plays a fundamental role in the occurrence of bully/victim outcomes, and suggests that the school climate mediates the occurrence of bully/victim behavior.

Perhaps one means by which teachers can more readily intervene and effect positive change within the school and increase students' perception of a positive school climate is through the development of positive teacher-student relationships. Bergin, C. and Bergin, D. (2009) suggested that positive teacher-student attachment is an important element in generating lower levels of delinquent behavior (including peer aggression) while increasing greater emotional regulation, social competence, and students' willingness to engage in more challenging tasks. Subsequently, an increased perception is fostered in the students that their school is a secure learning environment.

Beyond the academic responsibilities of teachers is a responsibility to continue the socialization of children, helping them develop and refine social etiquette. As adolescents spend the majority of their day in school or school related activities, they are in a position to witness how adults conduct themselves with one another, and are often directed by adults who oversee the academic or social activities in which students are involved. Students are in a position to observe the manner in which adults interact with one another, as well as how they interact with other students. Through their behavior, adults also convey their sense of confidence and self-respect.

During the time of transition from childhood to adolescence, students are developing a greater cognitive ability to make sense of their environment, to think

abstractly, and are driven biologically to assert their independence (Weisfeld, 1999). However adolescents assert their independence, research has shown the significance of generating a positive school climate (Bronfenbrenner, 1979; Tatura, 2009; Wienke-Tortura et al., 2009) with outcomes that lead to students' success in a variety of domains, including their social behavior (Espelage, 2004). Conversely as reported by Chang (2004), the environment of the classroom can also influence the relationship between negative affect (i.e., anxiety) and victim status. Furthermore, as Nansel et al. (2003) has reported, students who tend not to like their school are bullies. This underscores the importance of establishing healthy relationships between students, teachers, and other staff that generates a recognizable positive school climate, the outcome of which can foment healthy functioning for students in later life.

Providing a forum for students to discuss their concerns and voice their opinions within the classroom could have a positive impact on lowering the level of bullying behavior within schools. Adding time to the school curriculum, approximately 20-30 minutes on a regular basis, where teachers monitor discussion between students relative to concerns surrounding social behavior within the school (student and adult behavior alike) can generate cognitive awareness of significant issues and may increase empathy within students, among other benefits (Olweus, 1999).

Implications for Future Research

The findings of this study have provided insight to the issue of bully/victim outcomes among middle school students. Future studies into the socio-ecology of schools are warranted. The perspective of teachers should be included to help balance potential biases of students' self-reporting. Further investigation into the effectiveness

of disciplinary practices (i.e., school-/home-based suspensions or detentions) and how they influence the attainment of bully/victim outcomes among middle school students may contribute to greater awareness of the effectiveness of disciplinary practices and how they influence perceived school climate. More research is sorely needed in regard to ethnicity and bullying. As the population in the public school environment becomes more diverse, it will be crucial to study the differences in bullying and victimization in order to address the individual needs of students.

Research should also take into account how bystanders' behavior could influence one's social status; non-victim/non-bully students may be unwitting contributors to bully behavior if they witness peer aggression and do nothing to stop it. Therefore, future research should consider the role of non-victim/non-bullies or other witnesses to interpersonal violence in schools, whose presence may serve to inflame hostility if they remain passive or otherwise do not protest against aggressive behavior, including telling a teacher.

Perhaps it is not so much the age of the child as it may be how the grades are configured in middle school that contributes to bully/victim outcomes. Some schools include elementary grades up to 5th, 6th, or 7th grades; parochial schools are often comprise grades pre-school through 8th grade. Future research should examine differences among students who are in the same grade but in different school settings (i.e., elementary or middle school). In other words, it may be useful to examine student social behavior whose school structure places them at the apex of the social ladder or on the lowest rung of the social ladder in their respective schools. Would bully/victim tendencies differ among students who are in the same grade but, by virtue of the school

they attend or the school district in which they reside, are the youngest or oldest students in their school?

Additional research should be conducted to investigate aspects of family structure as well (i.e., inquire whether students have experienced the absence of a parent through divorce or death; remarriage by one or both parents) that would influence adolescents' functioning. Furthermore, it may be beneficial to examine students' perception of violence outside of school (i.e., at home, in their neighborhoods, as well as media based: TV, video games, etc.) to determine if relationships exist between these outside influences and students' perception of their school environment.

Limitations

Two public middle schools within the same school district in suburban metropolitan Detroit, Michigan were involved in this study. The findings of this study may, therefore, not be generalized to same aged students in other settings (i.e., inner city or rural areas).

Self-report measures were used in this study to assess students' behaviors relative to bully/victim outcomes, level of social information processing and emotion related-regulation abilities, social skills, and students' perception of their school climate. Although past research has suggested that self-report measures are the most available means by which to assess bully/victim behaviors among students, as Leff, Power, Goldstein (2004) indicated that measures relying upon past events being recollected by students may not be entirely objective. Some students may minimize their role in bullying or victim scenarios. While efforts were made in this study to maintain relatively small groups during data collection, victims may have experienced pressure to

underreport bullying episodes because the bully was present at the time the questions were being answered.

The sample size was reasonably large for this study; however, the number of students who were excluded may have been done so by parent(s) who were sensitive to the nature of the study or by students themselves who may not have wanted to reveal bully/victim behaviors. The parents of students who supported their child's involvement in the study may differ in ways we do not know from those who elected to exclude their child from this research.

APPENDIX A



HUMAN INVESTIGATION COMMITTEE
 101 East Alexandrine Building
 Detroit, Michigan 48201
 Phone: (313) 577-1628
 FAX: (313) 577-7122
 http://hic.wayne.edu



NOTICE OF FULL BOARD APPROVAL

To: Joseph Zambo
 Deans Office Education
 10024 Nathaline

From: Ellen Barton, Ph.D. E. Barton / E
 Chairperson, Behavioral Institutional Review Board (B3)

Date: January 17, 2008

RE: HIC #: 114507B3F
 Protocol Title: Bullies and Victims among Young Adolescents
 Sponsor:
 Coeus #: 0711005404

Expiration Date: December 12, 2008

Risk Level/Category: No greater than minimal risk.

The above-referenced protocol and items listed below (if applicable) were **APPROVED** following *Full Board Review* by the Wayne State University Institutional Review Board (B3) for the period of 01/17/2008 through 12/12/2008. This approval does not replace any departmental or other approvals that may be required.

- Recruitment Letter
- Assent Information Sheet
- Information Sheet

-
- Federal regulations require that all research be reviewed at least annually. You *may* receive a "Continuation Renewal Reminder" approximately two months prior to the expiration date; however, it is the Principal Investigator's responsibility to obtain review and continued approval **before** the expiration date. Data collected during a period of lapsed approval is unapproved research and can never be reported or published as research data.
 - All changes or amendments to the above-referenced protocol require review and approval by the HIC **BEFORE** implementation.
 - Adverse Reactions/Unexpected Events (AR/UE) must be submitted on the appropriate form within the timeframe specified in the HIC Policy (<http://www.hic.wayne.edu/hicpol.html>).

NOTE:

1. Upon notification of an impending regulatory site visit, hold notification, and/or external audit the HIC office must be contacted immediately.
2. Forms should be downloaded from the HIC website at **each** use.

APPENDIX B

West Bloomfield School District

WEST BLOOMFIELD SCHOOL DISTRICT
NATIONAL EXEMPLARY SCHOOLS

ABBOTT MIDDLE SCHOOL
3380 Orchard Lake Road
West Bloomfield, Michigan 48324
(248) 865-3670
(248) 865-3671, FAX



October 1, 2007

To Whom It May Concern:

This letter is being prepared on behalf of Joseph Zambo, Doctoral candidate at Wayne State University who we are giving permission to conduct research/data collection at Abbott Middle School. It is understood that passive consent will be obtained from students. Parents will have received information regarding the nature of the study. I am also aware of the nature of this study.

Sincerely,

A handwritten signature in cursive script that reads "Amy Hughes".

Amy Hughes
Principal

AH/sb

APPENDIX C

West Bloomfield School District

WEST BLOOMFIELD SCHOOL DISTRICT
NATIONAL EXEMPLARY SCHOOLS

OFFICE OF THE PRINCIPAL



October 15, 2007

To Whom It May Concern:

This letter is being prepared on behalf of Joseph Zambo Doctoral candidate at Wayne State University. We are giving permission for Mr. Zambo to conduct research and collect data at Orchard Lake Middle School. I was afforded the opportunity to have a phone interview with Mr. Zambo in order to gain insight on the nature of the study. The interview was in the presence of Mrs. Amy Hughes the Principal of Abbott Middle School who will also be involved in the study. Parents and students at Orchard Lake Middle School will receive information regarding the study being conducted prior to the start date.

Sincerely,


Sonja James
Principal

APPENDIX D**Wayne State University
Bullies and Victims among Young Adolescents**

Dear Parents,

Please allow me to introduce myself. I am a graduate student at Wayne State University conducting research for my Doctoral dissertation. I have consulted with Mrs. Amy Hughes and Mrs. Sonja James, principals of Abbott and Orchard Lake Middle Schools respectively, and they have given me approval to administer surveys relative to bully/victim behavior and perception of school climate to sixth grade students at Abbott and Orchard Lake Middle Schools. The nature of the study is to examine bully and victim behavior by asking children questions regarding their perception as to whether they have ever been a victim or perpetrator of bullying behavior. This study is also conducted with approval from the Internal Review Board for research at Wayne State University.

These five surveys will take approximately 55 minutes to complete. A copy of the surveys will be kept on file in the school's main office for any parents or guardians interested in viewing the survey prior to administration. Parents may also contact the Principal Investigator via email (josephzambo@hotmail.com) or telephone (313-732-1012) at any time. All responses to the survey will be anonymous and in no way will students be individually identifiable.

Attached you will find an information sheet which discusses the nature of this research study in more detail, along with an exemption sheet. Any parent wishing to exclude his or her child from participation in this study should return the attached exemption sheet to the Principal Investigator (Joseph Zambo), or contact the Principal Investigator directly via the above email address or telephone number, no later than _____. Students who do not participate will be permitted to work quietly on non-research related activities or they may do homework during the study. Administration of the questionnaire is scheduled to take place sometime between January and February 2008.

Thank you for your time.

Sincerely,

Joseph J. Zambo, M.A.
Doctoral Candidate; Principal Investigator

APPENDIX E

Wayne State University Bullies and Victims among Young Adolescents Principal Investigator: Joseph J. Zambo

Introduction/Purpose

Your child is being asked to participate in a research study that will explore issues related to bully/victim behavior, self-perception, and perception of school climate.

Procedure

If you elect to participate in this study, your child will be asked to complete a demographic survey and 5 questionnaires. The entire survey packet of questionnaires will take approximately 55 minutes to complete. Questionnaire 1 asks questions about students' social behaviors/skills. Questionnaire 2 asks questions about how students react emotionally in social situations. Questionnaire 3 asks questions about students' perception of positive and negative aspects of student-teacher interactions, bullying support and vandalism within their school. Questionnaire 4 asks questions about how students process information relative to the cues they perceive in social situations. Questionnaire 5 asks questions about various dimensions of bully / victim problems, including exposure to various types of bullying (verbal, physical, etc.). When the questionnaires are completed, the student will place the questionnaire into an envelope prior to the end of the class period, anonymously.

Risks

The potential risks of participating in this research are no greater than those ordinarily occurring in the school environment. If you find that your child is emotionally upset due to answering questions in the inventory or is having difficulty with other students, you or your child may contact your school's counselors, or the psychology clinic at Wayne State University (313) 577-2840.

Benefits

There are no direct benefits to your child or family for participation in this research study, other than the knowledge that you have assisted in furthering psychological research in education.

Voluntary Participation/Withdrawal

Any parent wishing to withdraw their child from this study should complete the attached Exemption Sheet and return it to the Principal Investigator, Joseph Zambo at 10024 Nathaline, Redford, MI 48239, no later than _____; parents may also contact the Principal Investigator directly by phone (313-732-1012) or by email study. Participation is completely voluntary and you may withdraw your child at any time. Students who do not participate will be given an opportunity to work quietly in the classroom during the study. Your decision to not have your child participate in this

study will not negatively affect your child or the services they receive in the school. If you do not exempt your child, he or she will be asked to participate in the study.

Compensation

Your child will not be paid to participate in this study.

Questions

If you have any questions concerning your child's participation in this study, either now or in the future, you may contact Joseph Zambo at (313) 732-1012. If you have any questions regarding your child's rights as a research participant, you may contact the chairman of the Human Investigative Committee at (313) 577-1628.

Confidentiality

Students will not put names, addresses, dates of birth, or any other individually identifying information on either the demographics questionnaire or the inventory. Additionally, the form the student signs that they understand the content and nature of the study and give consent to participate will be kept separate from their answers in a locked file cabinet. Therefore, the identity of the students will remain completely anonymous.

Participation

By completing the questionnaire your child is agreeing to participate in this study.

Wayne State University
Bullies and Victims among Young Adolescents
Principal Investigator: Joseph J. Zambo

EXEMPTION SHEET

I have read the enclosed information regarding the nature of this research study. I understand the possible risks, benefits, and freedom to withdraw. I wish to exempt my child from participation in this research study. You may mail this exemption sheet to the Principal Investigator or communicate your intent to withdraw your child from the study by contacting Joseph Zambo via email (josephzambo@hotmail.com) or telephone: 313-732-1012.

Student's Name: _____

Parent/Guardian's Name: _____

Parent/Guardian's Signature: _____

Date: _____

APPENDIX F**Assent Information Sheet**
(ages 11 - 13)

Title: **Bullies and Victims Among Middle School Students**

Study Investigator: Joseph J. Zambo

Why am I here?

This is a research study. Only people who choose to take part are included in research studies. You are being asked to take part in this study because this study involves looking at behavior among young people in middle school, especially bully behavior and victim behavior.

Why are they doing this study?

This study is being done to find out how students get along with one another in their school, and to see what they think about their school environment.

What will happen to me?

You will complete several questionnaires by circling the answers that most describe you. The questionnaires will be given to you during one class period and should take no more than 55 minutes to complete. You are not to write your name or use any mark that would identify you on the questionnaire so no one will know which questionnaire is yours. After you finish the questionnaire, you will place the questionnaire in an envelope that will be placed in the front of the classroom.

How long will I be in the study?

You will be in the study for as long as it takes to complete the questionnaire: approximately 55 minutes or less.

Will the study help me?

We cannot promise you that being in this research study will help you. However, your involvement in the study will provide information that can be used by your school to increase positive relationships among students with each other, as well as student-teacher relationships.

Will the study hurt?

Nothing bad will happen to you because of your involvement in this study. However, it is possible that by reading some questions, you may experience some negative feelings about bullying behavior.

What other options are there?

- If you choose not to participate in the study at any time, you do not have to complete any part of the questionnaire and may work quietly in the classroom while other students complete the survey.

Do my parents know about this?

This study was explained to your parents/guardian.

What about confidentiality?

We will keep your records private and, as stated above, you will not write your name or make any identifying mark on any of the questionnaires.

What if I have any questions?

For questions about the study please call the Principal Investigator, Joseph Zambo at 313-732-1012 or contact Mr. Zambo via email: josephzambo@hotmail.com . If you have questions or concerns about your rights as a research participant, the Chair of the Human Investigation Committee can be contacted at (313) 577-1628.

Compensation

You will not be paid to participate in this study.

Do I have to be in this study?

You don't have to be in this study if you don't want to or you can stop being in the study at any time. No one will be angry if you decide to stop being in the study.

Participation

By completing the questionnaire you are agreeing to participate in this study.

APPENDIX G

1. Circle whether you are: Male Female

2. Circle your ethnicity:

- African American
- Arabic
- Asian/Pacific Islander
- Chaldean
- Hispanic
- White
- Other

3. Circle the grade you are in now:

- 6th
- 7th
- 8th

4. Circle the grade(s) that you most often receive (for example: if you are mostly an 'A' student, circle 'A', etc.)

- A
- A / B+
- B
- B / C+
- C
- C / D+
- D
- E

5. Are you in a Gifted program? Circle: Yes or No

6. Are you in a Special Education program? Circle: Yes or No

7. Check the highest level of education your parents received:

Mother: ___High school ___Bachelors ___Masters ___Doctor

Father: ___High school ___Bachelors ___Masters ___Doctor

BULLYING SECTION

We say a student is being bullied when another student, or several other students:

- Say mean and hurtful things, make fun of him or her, or call the person mean and hurtful names.
- Completely ignore or exclude him or her from their group of friends or leave him or her out of things on purpose.
- Hit, kick, push, shove around, or lock him or her inside a room.
- Tell lies or spread false rumors about him or her or send mean notes and try to make other students dislike him or her.
- And other hurtful things like that.

When we talk about bullying, these things happen repeatedly, and it is difficult for the student being bullied to defend himself or herself. We also call it bullying when a student is teased repeatedly in a mean and hurtful way.

But we don't call it bullying when the teasing is done in a friendly and playful way. Also, it is not bullying when two students of about equal strength or power argue or fight.

Have you been bullied at school in the past couple of months in one or more of the following ways? Please answer all of the questions.

1. How often have you been bullied at school in the past couple of months? (place an X next to one)
 - I have not been bullied at school in the past couple of months
 - It has only happened once or twice
 - 2 or 3 times a month
 - About once a week
 - Several times a week

2. I was called mean names, was made fun of, or teased in a hurtful way.
 - It hasn't happened to me in the past couple of months
 - Only once or twice
 - 2 or 3 times a month
 - About once a week
 - Several times a week

- Other students left me out of things on purpose, excluded me from their group of friends, or completely ignored me.

It hasn't happened to me in the past couple of months
 Only once or twice
 2 or 3 times a month
 About once a week
 Several times a week

4. I was hit, kicked, pushed, shoved around, or locked indoors.

It hasn't happened to me in the past couple of months
 Only once or twice
 2 or 3 times a month
 About once a week
 Several times a week

5. Other students told lies or spread false rumors about me and tried to make others dislike me.

It hasn't happened to me in the past couple of months
 Only once or twice
 2 or 3 times a month
 About once a week
 Several times a week

6. I had money or other things taken away from me or damaged.

It hasn't happened to me in the past couple of months
 Only once or twice
 2 or 3 times a month
 About once a week
 Several times a week

7. I was threatened or forced to do things I didn't want to do.
- It hasn't happened to me in the past couple of months
 - Only once or twice
 - 2 or 3 times a month
 - About once a week
 - Several times a week

In the past couple of months have you bullied another student at school in one or more of the following ways? Please answer all of the questions.

8. How often have you taken part in bullying another student at school in the past couple of months? (place an X next to one)
- I haven't bullied other students at school in the past couple of months
 - It has only happened once or twice
 - 2 or 3 times a month
 - About once a week
 - Several times a week
9. I called another student mean names, made fun of or teased him or her in a hurtful way.
- I haven't done this in the past couple of months
 - It has only happened once or twice
 - 2 or 3 times a month
 - About once a week
 - Several times a week
10. I kept him or her out of things on purpose, excluded him or her from my group of friends or completely ignored him or her.
- I haven't done this in the past couple of months
 - It has only happened once or twice
 - 2 or 3 times a month
 - About once a week
 - Several times a week

11. I hit, kicked, pushed, and shoved him or her around or locked him or her indoors.
- I haven't done this in the past couple of months
 - It has only happened once or twice
 - 2 or 3 times a month
 - About once a week
 - Several times a week
12. I spread false rumors about him or her and tried to make others dislike him or her.
- I haven't done this in the past couple of months
 - It has only happened once or twice
 - 2 or 3 times a month
 - About once a week
 - Several times a week
13. I took money or other things from him or her or damaged his or her belongings.
- I haven't done this in the past couple of months
 - It has only happened once or twice
 - 2 or 3 times a month
 - About once a week
 - Several times a week
14. I threatened or forced him or her to do things he or she didn't want to do.
- I haven't done this in the past couple of months
 - It has only happened once or twice
 - 2 or 3 times a month
 - About once a week
 - Several times a week

Instructions: After reading each question, CIRCLE the letter that best describes you.

Story One: Let's imagine that you are talking with a girl in the hallway at school. You kind of like this person and seem to be getting along well with her. You are about to ask her to get together after school when another kid yells, "Fire!" and laughs. Everybody runs outside. It turns out to be a false alarm. But, you lose sight of the girl and don't get to ask her to get together.

1. How likely is it that this happened to you because the kid who yelled "Fire!" was being mean to you or was playing a joke specifically on you so you wouldn't get to talk to the girl?

A. Not at all likely B. Unlikely C. Unsure D. Likely E. Very likely

2. How worried would you be that you wouldn't be able to find the girl if this happened?

A. Not at all likely B. A little C. Somewhat D. Worried E. Very worried

3. What would you do or say to the kid who yelled "Fire!" if this happened?

A. Say "Why did you do that?" B. Say "What IS your problem?!"

Story Two. Imagine that you are walking down the street in a hurry to get to a friend's house, and a police car slowly pulls up next to you. The policeman gets out of the car and say, "Hey, you. We just got a report from a gas station owner nearby who says that his store has been robbed. I want to talk with you about it."

1. How likely is it that the policeman questioned you because he is being mean to you or is thinking that you robbed the store?

A. Not at all likely B. Unlikely C. Unsure D. Likely E. Very likely

2. How worried would you be that you would be arrest or taken to the police station if this happened?

A. Not at all B. A little C. Somewhat D. Worried E. Very worried

3. What would you do or say to the policeman if this happened?

A. Say "I don't know anything about it." B. Say "It wasn't me; mind your own business."

Story Three. Imagine that you are given a huge homework assignment by a particularly tough teacher. You work hard on it, complete it, and bring it to school in a book bag. When it comes time to turn it in, you look in the book bag, and it's not there! You say to the teacher, "My homework is missing." The teacher yells out in an angry voice, "Your homework is missing? Where is your homework?"

1. How likely is it that the teacher said this to you because she doesn't trust you and was being mean to you?
A. Not at all likely B. Unlikely C. Unsure D. Likely E. Very likely
 2. How worried would you be that you would have to do the assignment over if this happened?
A. Not at all likely B. A little C. Somewhat D. Worried E. Very worried
 3. What would you do or say to the teacher if this happened?
A. Say "I put it in my bag. Someone must have taken it."
B. Say "Someone must have taken it. I'm NOT doing it over!"
-

Story Four. Imagine that you are sitting at your desk at school before class starts and another kid runs down the aisle past your desk. Your books get knocked off the desk onto the floor, making a mess.

1. How likely is it that the other kid knocked over your books on purpose to be mean to you?
A. Not at all likely B. Unlikely C. Unsure D. Likely E. Very likely
2. How worried would you be that your stuff would be ruined if this happened?
A. Not at all likely B. A little C. Somewhat D. Worried E. Very worried
3. What would you do if this happened?
A. Tell the kid to pick the books up.
B. Say "You'd BETTER pick them up" to the other kid.

Story Five. Imagine that some illegal drugs are found at your school, but you know absolutely nothing about it. The school principal sends a letter home to all the parents in the entire school, telling them that there is a drug problem at your school. That night at your home, just as you are about to go out, your parent reads the letter and yells out to you “Get in here. I have something to talk about with you.”

1. How likely is it that your parent believes that you are involved in the drug problem at school?
A. Not at all likely B. Unlikely C. Unsure D. Likely E. Very likely
 2. How worried would you be that your parent was going to get upset with you if this happened?
A. Not at all likely B. A little C. Somewhat D. Worried E. Very worried
 3. What would you do or say to your parent if this happened?
A. Say “I’m not involved with drugs or with the people who are.”
B. Say “Get off my back!”
-

Story Six. Imagine that you are at a park near your house, and you see a bunch of kids talking in a circle about 15 feet away. You yell out, “Hey, everybody!” The kids keep on talking and don’t say anything to you.”

1. How likely is it that the other kids failed to answer you because they don’t like you and were being mean to you?
A. Not at all likely B. Unlikely C. Unsure D. Likely E. Very likely
2. How embarrassed would you be if this happened?
A. Not at all likely B. A little C. Somewhat D. Embarrassed E. Very Embarrassed
3. What would you do or say to the other kids if this happened?
A. Just go over and start talking.
B. Say “Don’t talk to me then!”

Directions: Below are some things that teenagers do. Please CIRCLE the *letter* indicating how much the statement describes you.

1. I tell jokes and get other classmates to laugh. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

2. I try to get other classmates to do things my way when working on a group project. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

3. I stick up for other girls when somebody says something nasty behind their backs. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

4. I forget to return things that other girls loan me. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

5. I make jokes about other girls when they are clumsy at sports. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

6. I ask other girls to go places with me. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

7. I help other girls with their homework when they ask me for help. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

8. I ignore classmates when they tell me to stop doing something. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

9. I offer to help classmates do their homework. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

10. When I don't like the way other girls look, I tell them. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

11. I listen when other girls want to talk about a problem. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

12. I laugh at other girls when they make mistakes. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

13. I push girls I do not like. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

14. When I want to do something, I try to talk other girls into doing it, even if they don't want to. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

15. I make sure that everyone gets a turn when I am involved in a group activity. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

16. I talk only about what I'm interested in when I talk to other girls. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

17. I ask other girls for advice...This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

18. I tell other girls that they are nice. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

19. I ignore other girls when I am not interested in what they are talking about. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

20. I lie to get out of trouble. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

21. I always tell other classmates what to do when something needs to be done. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

22. When I am with my best friend, I ignore other girl. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

23. I flirt with another girl's boyfriend when I like him. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

24. I make things up to impress other girls. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

25. I tell other classmates they played a game well when I lose. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

26. I offer to share something with other girls when I know that they would like it. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

27. I lend other girls money when they ask for it. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

28. I hit other girls when they make me mad. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

29. I tell classmates I'm sorry when I know I have hurt their feelings. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

30. I tell the truth when I have done something wrong and other girls are being blamed for it. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

31. I talk more than others when I am with a group of girls. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

32. I ignore other girls when they give me compliments. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

33. I throw things when I get angry. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

34. I offer to loan other girls my clothes for special occasions. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

35. I thank other girls when they have done something nice for me. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

36. I do my share when working with a group of classmates. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

37. I call classmates bad names to their faces when I am angry. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

38. I keep secrets private. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

39. I tell other girls how I really feel about things. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

40. I share my lunch with classmates when they ask me to. This describes me...

A. Not at all B. Very Little C. A Little D. Somewhat E. Mostly F. Totally

TISS

| How true is each statement for you? | Almost always untrue | Usually untrue | Sometimes true, sometimes untrue | Usually true | Almost always true |
|---|----------------------------|-------------------|---|-----------------|-----------------------|
| 1) I feel pretty happy most of the day | 1 | 2 | 3 | 4 | 5 |
| 2) If I'm mad at somebody, I tend to say things that I know will hurt their feelings | 1 | 2 | 3 | 4 | 5 |
| 3) I notice even little changes taking place around me, like lights getting brighter in the room. | 1 | 2 | 3 | 4 | 5 |
| 4) I feel shy with kids of the opposite sex. | 1 | 2 | 3 | 4 | 5 |
| 5) When I'm angry, I throw or break things. | 1 | 2 | 3 | 4 | 5 |
| 6) My friends seem to enjoy themselves more than I do. | 1 | 2 | 3 | 4 | 5 |
| 7) I tend to notice little changes that other people do not notice. | 1 | 2 | 3 | 4 | 5 |
| 8) If I get really mad at someone, I might hit them. | 1 | 2 | 3 | 4 | 5 |
| 9) I feel shy about meeting new people. | 1 | 2 | 3 | 4 | 5 |
| 10) I want to be able to share my private thoughts with someone else. | 1 | 2 | 3 | 4 | 5 |
| 11) It often takes very little to make me feel like crying. | 1 | 2 | 3 | 4 | 5 |
| 12) I am very aware of noises. | 1 | 2 | 3 | 4 | 5 |
| 13) I tend to be rude to people I don't like. | 1 | 2 | 3 | 4 | 5 |
| 14) I can tell if another person is angry by their expression. | 1 | 2 | 3 | 4 | 5 |
| 15) It bothers me when I try to make a phone call and the line is busy. | 1 | 2 | 3 | 4 | 5 |
| 16) I enjoy exchanging hugs with people I like. | 1 | 2 | 3 | 4 | 5 |
| 17) I get sad more than other people realize. | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|--|---|---|---|---|---|
| 18) I will do most anything to help someone I care about. | 1 | 2 | 3 | 4 | 5 |
| 19) I get very upset if I want to do something and my parents won't let me. | 1 | 2 | 3 | 4 | 5 |
| 20) I get sad when a lot of things are going wrong. | 1 | 2 | 3 | 4 | 5 |
| 21) It is important to me to have close relationships with other people. | 1 | 2 | 3 | 4 | 5 |
| 22) I am shy. | 1 | 2 | 3 | 4 | 5 |
| 23) I get irritated when I have to stop doing something that I am enjoying. | 1 | 2 | 3 | 4 | 5 |
| 24) When I'm really mad at a friend I tend to explode at them. | 1 | 2 | 3 | 4 | 5 |
| 25) I am not shy. | 1 | 2 | 3 | 4 | 5 |
| 26) I am quite a warm and friendly person. | 1 | 2 | 3 | 4 | 5 |
| 27) I feel sad even when I should be enjoying myself like at Christmas or on a trip. | 1 | 2 | 3 | 4 | 5 |
| 28) It really annoys me to wait in long lines. | 1 | 2 | 3 | 4 | 5 |
| 29) I pick on people for no real reason. | 1 | 2 | 3 | 4 | 5 |
| 30) I get really frustrated when I make a mistake in my school work. | 1 | 2 | 3 | 4 | 5 |
| 31) It frustrates me if people interrupt me when I'm talking. | 1 | 2 | 3 | 4 | 5 |
| 32) I get upset if I'm not able to do a task really well. | 1 | 2 | 3 | 4 | 5 |

THOUGHTS ABOUT SCHOOL

| <i>Please tell us what you think of your school. Circle one answer Only.</i> | Totally False | Sort of False | Sort of True | Totally True |
|--|----------------------|----------------------|---------------------|---------------------|
| IN MY SCHOOL: | | | | |
| 1. There is a lot of graffiti written on school property (e.g., bathroom, outside walls). | 1 | 2 | 3 | 4 |
| 2. Teachers and other school staff bully students. | 1 | 2 | 3 | 4 |
| 3. School assignments are interesting for students. | 1 | 2 | 3 | 4 |
| 4. Teachers argue and shout at other teachers or school staff. | 1 | 2 | 3 | 4 |
| 5. Many students get bullied. | 1 | 2 | 3 | 4 |
| 6. Teachers and students argue and shout at each other. | 1 | 2 | 3 | 4 |
| 7. Students talk with teachers about their personal problems. | 1 | 2 | 3 | 4 |
| 8. Teachers and other school staff do not try to stop bullying. | 1 | 2 | 3 | 4 |
| 9. Teachers ask students for their thoughts about assignments and projects. | 1 | 2 | 3 | 4 |
| 10. Students vandalize or damage school property. | 1 | 2 | 3 | 4 |
| 11. Bullying is a problem at my school. | 1 | 2 | 3 | 4 |
| 12. Students often talk about school grades, assignments, projects, and subjects in their free time. | 1 | 2 | 3 | 4 |
| 13. Students are friends with teachers or other school staff. | 1 | 2 | 3 | 4 |

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ABSTRACT**BULLIES AND VICTIMS AMONG MIDDLE SCHOOL STUDENTS**

by

JOSEPH J. ZAMBO**DECEMBER 2010****Advisor:** Dr. Stephen Hillman**Major:** Educational Psychology**Degree:** Doctor of Philosophy

The purpose of this study was to identify whether middle school students' perception of school climate affected bully/victim outcomes among 6th and 7th grade students, $n = 837$, (49.6% female and 50.4% male) from two public schools located in a suburb in Southeast Michigan. An index of bullying behavior was used to measure the extent of students' involvement in bullying in the past couple of months. This index included measures of physical, verbal, indirect-relational, and coercive bullying, as well as vandalism. Participants were observed as bullies ($n = 113$), consisting of 43 females (5.28%) and 70 males (8.61%), victims ($n = 150$), consisting of 84 females (10.33%) and 66 males (8.08%), bully-victims ($n = 363$), consisting of 174 females (21.40%) and 189 males (23.24%), and not involved in bullying or victimization ($n = 187$), consisting of 101 females (12.42%) and 86 males (10.57%).

Multiple linear regression was used to determine whether the perception of school climate mediated bully/victim outcomes (i.e., bully, victim, bully-victim, none). In addition to bully/victim variables, the following variables were included in the analyses in the analyses: hostile, worried, aggressive/competent social responses, affiliation,

aggression, depressive mood, frustration, perceptual sensitivity, shyness, and positive/negative social skills.

Statistical significance was observed for bully, victim, and bully-victim outcomes. The effect of perceived school climate was observed to significantly mediate the relationship between bully, victim, and bully-victim behaviors relative to hostile and aggressive social responses, as well as aggressive emotion regulation. The relationship between affiliation and victimization was also observed to have been mediated by perceived school climate.

Bully-victim behavior was observed as the most prominent status among 6th and 7th grade students for both females and males; although, 7th graders reported more victimization than 6th graders. Being a victim was positively associated with a tendency to worry, as well as difficulty processing social information, regulating emotions, and lacking positive social skills.

Implications of the results are discussed in the context of clinical applications and directions for future research.

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