

SPECIFIC PARENTING PRACTICES AND THE RELATIONSHIP WITH BULLYING
OUTCOMES IN MIDDLE SCHOOL STUDENTS

A Dissertation by

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ABSTRACT

This research attempted to better understand predictors of bullying-related outcomes in middle school students. In particular, this research considered more proximal contextual factors that are generally ignored in school-based bullying prevention programs. The effects of particular parenting practices as identified by previous research were included as predictors of bullying victimization and perpetration. In addition, this research considered the youth's impulsivity, as this characteristic has been shown to influence rates of bullying perpetration and victimization as well as shape parenting behaviors.

This study used a quantitative methodology to identify predictors of bullying-related behavior, with the goal of informing both bullying prevention and parenting intervention programs. This study is unique in that it used a longitudinal data set, was ethnically diverse, and included videotaped parent-youth interactions in addition to various self-report measures of parenting.

Parenting practices generally were not associated with bullying outcomes, with the exception of observed warmth and monitoring. A significant interaction between youth impulsivity and observed parenting was found, resulting in different bullying-related outcomes. Findings were generally in the opposite direction than predicted and yielded interesting results regarding the relationship of parenting practices and impulsivity with involvement in bullying. This study emphasizes the importance of incorporating the youth's social context in addition to viewing parenting practices along a continuum rather than as a dichotomous practice.

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CHAPTER I

INTRODUCTION

Efforts to understand bullying-related behavior in the school setting and to prevent its occurrence have increased dramatically in recent years following highly publicized suicides of victimized students. Although awareness of bullying in the school setting has increased significantly, there have been disagreements between parents and teachers about who is responsible for decreasing bullying behavior. Consistent with this viewpoint, bullying research tends to examine the school or home context in isolation, while prevention efforts take place largely within the school setting, essentially ignoring other immediate and influential youth relationships. Perhaps one of the most important social contexts to consider is the parent-youth relationship. The link between aggressive behavior and conflicted parent-child relationships has been widely established (Patterson, 1982; Patterson & Fisher, 2002; Snyder, Cramer, A Frank, & Patterson, 2005), but less is known about specific parenting behaviors related to bullying perpetration and victimization. Further, we need to understand individual youth characteristics that might impact parenting behaviors as well as bullying perpetration and victimization in the school and peer contexts. This greater understanding of personal and social variables will facilitate the development of bullying prevention programs that incorporate the larger social contexts in which youth are socialized. Further, identifying key parenting practices and behaviors may inform more focused and targeted parenting intervention efforts aimed at reducing behaviors related to bullying perpetration and victimization.

The Present Study

The present study examines the role of positive parenting practices in allaying bullying perpetration and victimization by youth in the school setting. Individual youth characteristics are also considered, with a focus on ADHD-related characteristics including impulsivity and inattention. Middle school students from one large school district in a moderate-sized Midwestern city participated in this study. Data were collected longitudinally from the sixth through eighth grade years. In addition, a small sample of students and parents were invited to complete videotaped parent-youth interactions.

This study uses a quantitative methodology to identify predictors of bullying-related behavior, with the goal of informing both bullying prevention and parenting intervention programs. This study is unique in that it uses a longitudinal data set, is ethnically diverse, and includes videotaped parent-teen interactions in addition to various self-report measures of parenting. Further, individual youth characteristics that may impact parenting practices and/or bullying behavior are examined.

Chapter II provides a review of the literature and is divided into three sections: bullying, the relationship of parenting practices and bullying, and the relationship of ADHD to parenting and bullying. In the first section, an overview of bullying is provided, including the various definitions of bullying, the prevalence of bullying, and the psychosocial correlates of bullying. The second section considers the role of parents in the socialization of youth who bully and reviews relevant literature, with an emphasis on specific parenting practices rather than global parenting styles. The final section of this chapter explores the role of youth ADHD symptoms, specifically impulsivity and inattention, in relation to parenting and bullying behaviors.

Chapter III provides a description of the research methods that were used for this study and

presents the research questions investigated. The chapter also includes a description of the research design and sampling and data collection methods. Chapter IV includes the results. Finally, Chapter V includes the discussion of the results and dissertation as a whole, complete with a review of hypotheses and integration of results, explanations for findings, integration of findings with past literature, implications of findings, limitations, and future directions.

CHAPTER II

LITERATURE REVIEW

Bullying

Definitions of Bullying

Bullying has traditionally been defined as repeated aggressive behavior occurring within a relationship characterized by an imbalance in power or status (Olweus, 2013). In addition, bullying can be both direct (e.g., hitting, kicking, shoving) and indirect (e.g., social exclusion, manipulation) (Olweus, 2013). Direct and indirect forms of bullying have been further divided into four main types of bullying (Beale & Scott, 2001). These four types include the following: Physical bullies (e.g., hit or kick others, intentional destruction of other's property) (Wolke, Woods, Stanford, & Schulz, 2010), verbal bullies (e.g., teasing and/or humiliation of victim), relational bullies (e.g., intentional social exclusion by ignoring, humiliating, or gossiping) (Crick & Grotpeter, 1995), and reactive bullies (e.g., tease or provoke others to fight and claim self-defense). More recently, research has examined the impact of social media as a vehicle for bullying behavior – e.g., cyber-bullying on Facebook pages (Ybarra & Mitchell, 2004). Research seems to indicate that direct bullying decreases while relational aggression increases during adolescence. Individuals who engage in or are victims of both indirect and direct aggression are at heightened risk for maladjustment and negative outcomes (Crick, Ostrov, & Werner, 2006). As evident in these definitions, bullying and victimization represent very complex social-behavioral constructs. The present study will not address the full complexity of categories of bullying, but rather will examine bullying perpetration of and victimization by verbal and physical aggression.

Bullying Prevalence

Researchers have examined the prevalence of bullying among U. S. children. According to the 2007 School Crime Supplement to the National Crime Victim Survey, approximately 32% of students aged 12-18 reported being bullied (Robers, Zhang, & Truman, 2012). Of these students who reported being bullied, approximately 80% of bullying was reported to have taken place at school. In addition, 21% of these students reported being bullied at least once or twice a month, with 10% being bullied weekly and 7% being bullied almost daily. These rates were found to be highest among students in middle school. A cross-national survey of 40 different countries indicated that approximately 26% of adolescents have been involved in bullying perpetration and/or victimization (the HBSC Violence & Injuries Prevention Focus Group et al., 2009). Although there are discrepancies in the prevalence and incidence of bullying victimization and perpetration in U.S. schools and across countries, it is clearly a pervasive problem affecting youth with potentially serious consequences.

Overview of Bullying Research

Bullying perpetration and victimization in school settings has received increasing attention over the past several years. Previous research has found that bullying results in adverse outcomes in a variety of developmental domains, including but not limited to: academic achievement (Glew, Fan, Katon, Rivara, & Kernic, 2005), psychosocial competence (Bacchini, Esposito, & Affuso, 2009), and emotional well being and psychological adjustment (Arseneault, 2006; Bond, Carlin, Thomas, Rubin, & Patton, 2001; Rethon, Head, Klineberg, & Stansfeld, 2011). Recent instances of adolescent suicide as a consequence of being bullied stress the importance of understanding how bullying impacts victims, and also to understand correlates of bullying perpetration in order to develop and implement more effective bullying prevention and

intervention programs.

Correlates of Bullying

A review by Hong and Espelage (2012) described several individual risk factors that predict bullying perpetration, including age, gender, race/ethnicity, sexual orientation/preference, health status, depression and anxiety, learning/developmental disabilities, intelligence, and poverty status. From the perspective of Bronfenbrenner's ecological systems theory (Bronfenbrenner, 1997), bullying can be examined from micro-, meso-, exo-, and macro-levels. In other words, Bronfenbrenner emphasizes the necessity of considering the immediate and distal environmental systems in which an individual is embedded. The microsystem is the most immediate environment, including the parent-youth and peer relationships, whereas the macrosystem is the most distal environment (e.g., culture, ethnicity). From a prevention/intervention perspective, it seems most productive to focus on the most proximal variables associated with bullying behaviors, including relationships with family and peers.

Indeed, Hong and Espelage (2012) assert that the most direct influences on bullying behavior occur at the microsystem level, including parent-youth relationships. For instance, a survey of a sample of 558 middle school students revealed that adolescents who were exposed to physical discipline at home and who spend increasing amounts of time without adult supervision were more likely to engage in bullying behavior (Espelage, Bosworth, & Simon, 2000). Consistent with social learning theory (Bandura & McClelland, 1977), youth who experience frequent physical discipline in the home are essentially becoming socialized to view and use aggressive behavior as a potential solution to social conflict or as the "norm" in social relationships. Further, youth who are inadequately monitored are more likely to associate with deviant peers, potentially exacerbating existing propensities for aggression and conflicted parent-

youth relationships. Thus, these youth are at increased risk for engaging in bullying peers and may have the increased opportunity to bully others. Lereya, Samara, and Wolke (2013) reported that victims of bullying were less likely to experience positive parenting practices, including monitoring and supervision, warmth, and support.

The research on parenting is especially intriguing, as it again seems to suggest that youths' socialization by parents and the quality of the parenting youth experience shape youth behavior, which is ultimately carried over to relationships with peers in the school setting. It may also be the case that positive parenting practices, such as warmth and support, help adolescents develop important prosocial skills such as empathy. Youth who are not exposed to these parenting practices do not become socialized to behave positively and constructively toward others.

Other research demonstrates that several intrapersonal variables are significantly related to bullying behavior, including anger, depression, impulsivity, and other conduct problems (Bosworth, Espelage, & Simon, 1999). However, these intrapersonal variables are highly inter-correlated. For example, although depression and impulsivity are significantly related to bullying, they do not significantly predict bullying behavior when entered into multiple regression analyses with other predictor variables, including conduct problems, anger, and beliefs supportive of violence (Bosworth, Espelage, & Simon, 1999). Psychosocial correlates and risk factors associated with victimization by bullying have also been explored. Adolescents with disruptive behavior problems such as hyperactivity and impulsivity are at higher risk for experiencing victimization when compared to normally developing peers (Timmermanis & Wiener, 2011; Wiener & Mak, 2009). Internalizing problems, specifically depression, have also been found to be significantly related to several types of victimization, including physical, verbal, and relational types (Vaillancourt et al., 2008).

Intrapersonal characteristics of youth, such as impulsivity and hyperactivity, may impact social relationships with both parents and peers. Adolescents who are impulsive and hyperactive may be perceived as “annoying” by peers, resulting in increased victimization. Youth impulsivity and hyperactivity may also frustrate parents and actually evoke poor parenting practices. Thus, the manner in which these psychosocial characteristics of youth operate in relation to bullying perpetration and victimization needs to be more clearly specified both theoretically and empirically. It is not clear which of these characteristics are antecedent risk factors and which are the consequences of involvement in bullying as perpetrators or victims, and how these characteristics may increment risk in both home and peer settings.

Summary

It is clear that bullying perpetration and victimization are pervasive and extremely damaging problems that many school-aged youth experience on a daily basis. In addition, bullying is a complex and multiply-determined phenomenon (Swearer, Peugh, & Espelage, 2006). Although many different factors contribute to bullying behavior, research has suggested that the most direct influences occur at the microsystem level (Hong & Espelage, 2012). Thus, further examination of both individual and familial characteristics is critical in order to better understand bullying and apply research knowledge to preventive efforts. Given the broad scope of intrapersonal and familial characteristics associated with bullying, the following sections will focus on the relation of disruptive behavior (e.g., hyperactivity, impulsivity) and parenting variables to bullying perpetration and victimization.

Relationship between Parenting and Bullying

Parenting Styles

Much of the research regarding the relationship of bullying and parenting has focused on

broad parenting styles, most commonly using formulations by Baumrind. Baumrind (1991) examined two dimensions of parenting behavior, demandingness and responsiveness, to yield four different parenting styles: authoritative, authoritarian, permissive, and rejecting-neglecting (also known as uninvolved). Authoritative parents are high in both demandingness and responsiveness. These parents provide appropriate monitoring and limit setting while not being punitive, and allow their children developmentally appropriate independence and autonomy. Authoritarian parents, on the other hand, are high in demandingness but low in responsiveness. Consequently, these parents are often strict and punitive, and fail to provide appropriate reasons for rules and expectations. Permissive parents are low in demandingness but high in responsiveness. These parents tend to be lenient and allow too much independence although the parent-child relationship tends to be characterized by high levels of warmth. Finally, uninvolved parents are low in demandingness and responsiveness. They provide no structure, monitoring, or warmth and are likely to be neglectful of their children.

Georgiou (2008) examined the relationship between parenting styles characterized by high levels of responsiveness (i.e., authoritarian and permissive) and involvement in bullying. Findings demonstrated that levels of responsiveness approaching over-protectiveness actually place children at increased risk for victimization by bullying. In other words, mothers who are overprotective may socialize passive and submissive characteristics in their children, which in turn may make their youth more appealing targets of bullying.

Youth whose parents engage in low levels of demandingness and responsiveness, on the other hand, may display characteristics of the “aggressive victim” or bully-victim. Bully-victims report low levels of parental monitoring and closeness with caregivers (Schwartz, Dodge, Pettit, & Bates, 1997). Adolescent bullies often have parents who employ highly punitive behavior and

low responsiveness, defining features of the authoritarian style (Baldry & Farrington, 2000). More specifically, authoritarian parenting was a defining environmental characteristic of bullies compared to non-bullies. Similarly, parents who use punitive and physical discipline practices, and who engage in low levels of monitoring place youth at risk for bullying perpetration, even after controlling for peer influences (Espelage et al., 2000). Thus, an appropriate balance between parent demandingness and responsiveness is needed to minimize youths' involvement in bullying in the peer context. Parents who are high in demandingness but low in responsiveness, for instance, may engender the belief that it is appropriate to behave punitively toward others without having a sense of compassion, empathy, or understanding.

Parenting Components

Linver and Silverberg (1997) suggested that, rather than examining Baumrind's global parenting styles, it is more useful to examine distinct parenting practices or components. The disaggregation of parenting into components may identify key parenting behaviors that are not apparent in more global parenting styles. Close parental monitoring of youth, for example, is a characteristic of both authoritative and authoritarian parenting styles. Thus, in order to specifically identify which parenting components to target in bullying prevention, we must go beyond global parenting styles. Although there are many distinct parenting components and practices, parental monitoring, warmth/support, and limit setting/discipline have regularly been linked with adolescent problem behavior (see Windle et al., 2009 for review). Knowledge and awareness of your child's whereabouts and activities, people with whom they associate, and oversight of youth behavior outside of the home define *parental monitoring*. Expression of positive support, praise, and reinforcement of skilled behavior characterize *warmth and support*. Finally, *discipline* and *limit setting* include guidelines, boundaries, rules, or standards for a

child's behavior; Children who fail to follow and/or break rules are subject to appropriate consequences. The following sections review these specific parenting components and their relationship to bullying victimization and perpetration.

Monitoring. Marini and colleagues (2006) reviewed the unique developmental changes that occur during adolescence, particularly alterations of social cognitive capacities and shifts in relationships. During this period, adolescents gravitate toward spending more time with peers than parents and family. Due to this increase in time spent with peers and away from the home setting, appropriate monitoring is critical, especially in prevention of bullying-related behavior. Research indicates low levels of parental monitoring are related to both aggression and delinquency, likely due to the influence of deviant peers and increased opportunity for deviant and aggressive behavior (Patterson & Fisher, 2002). Diminishing youths' involvement in risky social settings may reduce victimization. However, parental monitoring needs to find appropriate balance. It is critical for parents to be aware of where their children are and who they are with to reduce risk for involvement with deviant peers and activities, but it is equally important that parents allow some space so that youth can develop independence and a sense of healthy autonomy.

Appropriate monitoring, that is, monitoring that provides oversight without being overprotective, is negatively associated with bullying (Ma, 2002). Given the many different forms of bullying perpetration and victimization, research has examined the role of monitoring in cyberbullying (Ybarra & Mitchell, 2004). Consistent with previous findings, individuals who engage in cyberbullying experience lower levels of parental monitoring. Not surprisingly, individuals who are victims of cyberbullying actually report higher levels of parental monitoring, again emphasizing the importance of appropriate levels of monitoring and the potentially

damaging impact of an overprotective parent. Overprotective parents may socialize passive or anxious characteristics in youth, making them easy targets for victimization (Georgiou, 2008). Although cyberbullying is not addressed in the current research, it is strongly related to more traditional forms of bullying (Dehue, Bolman, Völlink, & Pouwelse, 2012; Dempsey, Sulkowski, Dempsey, & Storch, 2011). Thus, it is likely that too much or too little monitoring would be related to involvement in peer bullying.

More recently, research has demonstrated some inconsistencies in the relationship between parental monitoring and bullying (Georgiou & Stavrinides, 2013). In addition, this relationship is further complicated by whether maternal and paternal monitoring is considered. Maternal monitoring is negatively correlated with bullying perpetration, but not victimization. Paternal monitoring, on the other hand, was not related to bullying at all, highlighting the complexity of this relationship. Despite the inconsistencies, it appears that monitoring remains a key ingredient to effective parenting and a variable related to bullying perpetration and victimization.

In summary, given the unique developmental transitions during adolescence and the significant shift toward spending time away from parents, monitoring and supervision play a crucial role in bullying. Making things slightly more challenging, there appears to be an optimal amount of monitoring in order to reduce bullying perpetration and victimization; exceeding this “monitoring threshold” may socialize youth in ways that make them easy targets for bullies, while insufficient monitoring may be associated with increased risk for bullying perpetration. It seems logical that child characteristics associated with inadequate or excessive monitoring in the home setting are carried over to the school setting. Youth with overprotective parents are shaped to be more timid and socially anxious, characteristics that increase their risk for being targets for bullying. Parents who use insufficient monitoring may be oblivious to their children’s

involvement with peers who value aggressive behavior and their children's bullying of peers.

Warmth and Support. A number of studies have examined the relationship of parental warmth and communication to bullying perpetration and victimization. A recent review of the literature highlighted how parental warmth protects youth from victimization by peers, even more than effective supervision (Lereya et al., 2013). The potentially buffering effect of parental support was also demonstrated in youth exposed to violence, particularly when accompanied by school support (Brookmeyer, Fanti, & Henrich, 2006). Parental warmth and support both appear to play a key role in not only minimizing the occurrence of victimization by peers, but also reducing the impact of violence exposure on children's adjustment. Warmth and support provide a positive model for and shape prosocial behavior. Youth raised by parents high in warmth and support may be more likely to disclose victimization, potentially resulting in swift action being taken against the bully. Youth who experience parental warmth and support are also likely to have good problem solving skills, which may diminish risk for victimization by peers. Youth who are bullied also appear to experience less severe negative outcomes when raised in environments with high levels of parental warmth and support because they better able to process the meaning of being victimized in a caring and concerned environment.

Adolescents who perpetrate bullying experience lower levels of emotional support from parents and engage in lower levels of disclosure with parents about peer interaction and relationships (Barboza et al., 2008). Baldry and Farrington (2000) examined differences in the parental support experienced by bullies, delinquents, and youth who were neither bullies nor delinquents. Low levels of parental warmth and support significantly predicted both bullying behavior and delinquency, and were a key difference distinguishing between bullies/delinquents and non-bullies/non-delinquents. Parental warmth and support is not only significantly related to

bullying-specific behaviors, but to delinquency in general. Parental warmth and support appear to play a key role in youth bullying behaviors and may be a critical target for intervention. A recent review by Khaleque (2013) found maternal warmth to be related to many prosocial outcomes, notably decreased levels of hostility and aggression in addition to higher levels of self-esteem, independence, and emotional responsiveness. These findings were noted across several countries and age groups, highlighting the importance of parental warmth as a universal ingredient for youths' development of prosocial proficiency and aptitude.

Limit Setting and Discipline. Much research has established a relationship between ineffective parental discipline practices and aggression/conduct problems (Brenner & Fox, 1998; Knafo & Plomin, 2006; Patterson, 1982; Snyder et al., 2005; Viding, Fontaine, Oliver, & Plomin, 2009). For instance, monozygotic twin studies revealed that a twin child receiving more negative and harsh parental discipline (i.e., yelling, hitting) as a seven-year-old displayed increased conduct problems during adolescence (Viding et al., 2009). Another study drawing from the same twin sample discovered a robust negative relationship between parental negativity and prosocial behavior (Knafo & Plomin, 2006). More specifically, twins exposed to higher levels of coercive and punitive discipline displayed lower levels of prosocial behavior (i.e., playing nicely with others, showing kindness, sharing with other children). Brenner and Fox (1998) suggested that negative and coercive discipline may be seen as the “first step” in the development of future conduct problems in young children, consistent with Patterson's (1982) model of antisocial behavior.

Considered a pioneer in understanding bullying research, Olweus (1980) emphasized that not only does lax discipline predict later aggressive behavior, it also contributes to the development of an aggressive response style that generalizes to multiple relationships.

Permissive or lax discipline is particularly problematic when it co-occurs with other risk factors, including difficult child temperament and low levels of parental support and inadequate supervision. Essentially, the combination of poor parenting practices and difficult child temperament are the perfect cocktail for aggression. Snyder and colleagues (2005) described two critical factors regarding ineffective discipline and poor socialization at school. First, children's behaviors influence parental discipline practices just as much as discipline influences the child's behavior. Consequently, a misbehaving and challenging child may elicit poor parenting practices just as much as poor parenting practices might exacerbate behavioral problems. Second, ineffective and erratic discipline is reliably related to later conduct problems at school. Consistent with Olweus (1980), the presence of certain child characteristics not only increase the likelihood of poor parenting practices but may result in growth of conduct problems, aggression, and poor socialization. The transactional nature of parent-youth interactions may then carry over to the school setting as evidenced by higher levels of aggression and bullying behavior directed toward peers.

Just as with monitoring, parental limit setting and discipline require a balanced approach. Whereas permissive and lax or non-contingent parenting may increase risk for child aggression, so too can overly strict and/or punitive discipline. Parents who respond to misbehavior with spanking or other forms of punishment are essentially modeling aggressive behavior as a solution to problems. Although not statistically significant, online bullies, bully-victims, and victims were more likely to experience frequent and excessive discipline from parents than individuals not involved in any form of bullying (Ybarra & Mitchell, 2004). A study of young children from low SES families and bullying behaviors examined the impact of poor parenting on the development of empathy, a critical ability that allows one to "place themselves in

another's shoes." Results indicated that parenting practices such as harsh discipline and low warmth impeded the development of empathy, resulting in more problematic behaviors toward peers (Curtner-Smith et al., 2006).

Other studies have not found that harsh or punitive discipline predicts bullying perpetration or victimization in the school setting, however (Kokkinos & Panayiotou, 2007). This inconsistency with previous research may reflect the use of a cross-sectional design and self-report measures. However, given this discrepancy, it is critical to further examine the relationship of parenting discipline with bullying behaviors in the school setting using observation of discipline practices in order to better understand the relationship between parental discipline practices and involvement in bullying in the peer setting.

Summary

It is clear that parenting, conceptualized either in terms of broad styles or as specific components, is related to bullying perpetration and victimization. Parents who are warm and supportive, shape social skills and empathy, engage in appropriate levels of monitoring, who articulate consistent and reasonable limits and rules about behavior, and who use consistent and contingent but not harsh consequences for misbehavior, socialize their children in ways that promote healthy peer relationships and decrease involvement in bullying perpetration and victimization. In addition, these parenting practices are most effective when scaffolded to the developmental capacities of their children, providing a balance that promotes adolescents' autonomy and independence without exposure to undue risk. The underlying message seems to be that parenting practices are most effective in moderation; too much or too little of something may negatively impact youth behavior.

Several other important conclusions may be drawn from research to understand how

parenting practices impact bullying perpetration and victimization in the school setting. First, it appears that, although poor parenting practices have a negative impact in isolation, the combination of multiple poor parenting practices is associated with increased risk for involvement in peer bullying and detrimental outcomes relative to any one parenting practice alone. Second and consistent with social learning theory, parenting practices may actually shape prosocial or maladaptive behavior in youth. Thus, appropriate parenting practice may result in a child who is less likely to bully and be bullied, and ineffective parenting may actively socialize children to be increasingly involved in bullying as perpetrators or victims. What happens in the family makes a difference in the peer setting. Finally, as suggested by Snyder et al. (2005), the relationship between problem youth behavior and parenting is transactional; temperamentally difficult youth evoke poor parenting practices. These child temperamental characteristics are also apparent in the peer environment and may increment risk for involvement in peer bullying perpetration and victimization. The transactional nature of the relationships between difficult child temperament and parenting, and between difficult child temperament and peer relationships is examined in the next section, with an emphasis on the role of child impulsivity and other characteristics associated with attention-deficit/hyperactivity disorder as a risk factor for involvement in bullying in the peer setting.

Relationship between Child Impulsivity/ADHD and Bullying

Bullying is not something that can be understood solely by considering social context. Instead, we must consider how individual temperament impacts social relationships and how social experiences interact with temperament to influence behavioral development. It is this social-interactional perspective that acutely reflects the ongoing and bidirectional nature of multiple variables (Craig & Pepler, 1998). In other words, our behavior shapes our environment

just as much as our environment shapes our behavior. Research examining the correlates of bullying has examined many variables, such as oppositional behavior, conduct problems, inattention, and hyperactivity and impulsivity (Card & Hodges, 2008). As discussed previously, we know that youth with a difficult temperament are just as likely to evoke poor parenting practices as ineffective parenting evokes poor child behavior (Snyder et al., 2005). Similarly, children with a difficult temperament may be just as likely to evoke negative and aggressive behavior from peers as well as to direct such behavior toward peers. Thus, it is reasonable to believe that individuals with a diagnosis of ADHD combined type may be at greater risk for bullying, especially because core symptoms including inattention, impulsivity and hyperactivity (American Psychiatric Association, 2000) may increment the display of aggressive behavior. Youth with these characteristics may also be likely to irritate and aggravate peers, perhaps making them easy targets for bullying. Further, low self-control and impulsivity may inhibit prosocial problem solving behaviors, resulting in maladaptive bullying perpetration. The following sections examine the relationship between ADHD and bullying.

ADHD and Peer Bullying

A recent study compared adolescents with and without a diagnosis of ADHD in order to examine whether impulsive teens differ from normative peers in bullying behaviors (Timmermanis & Wiener, 2011). In addition, differences in social correlates for ADHD youth were also examined. Youth with ADHD experienced significantly higher levels of victimization by peers over the last five days, and also reported significantly higher levels of bullying perpetration over the last two months than non-ADHD youth. Teachers and parents also rated the ADHD youth as having greater peer relationship problems. Finally, youth with ADHD reported significantly less emotional and social support from family members. Although a single

study, these findings reveal the breadth of difficulties associated with ADHD symptomatology.

Studies of younger children have revealed similar findings. Holmberg and Hjern (2008) examined bullying behavior in a large sample of 10-year-olds. Children with ADHD were twice as likely to bully peers compared to children with sub-threshold ADHD symptoms, and were over three times as likely to bully peers compared to children without ADHD. Further, children with ADHD and sub-threshold ADHD symptoms were twice as likely to report being bullied as non-ADHD peers. Not only is there a relationship between both peer bullying perpetration and ADHD, but ADHD youth are also two to three times as likely to be targets of bullying compared to normative youth. Clearly, children with ADHD symptoms are at greater risk for bullying-related problems.

Another study using a larger sample of youth found similar differences: Children with ADHD reported higher levels of bullying perpetration and victimization and also were more likely to be categorized as a bully, victim, or bully/victim than non-ADHD youth (Wiener & Mak, 2009). This study expanded previous research in that parent reports of ADHD symptoms in these youth actually predicted bullying victimization, reducing shared method variance as the source of the relationship between bullying and ADHD. Although the causal relationship between ADHD and bullying perpetration cannot be inferred from these studies, it is clear that youth with ADHD are certainly an “at risk” group for experiencing or engaging in bullying-related behavior.

Summary

Research indicates that impulsive and hyperactive youth may be more likely to act without thinking. Consequently, aggressive behavior may seem like a better solution to challenging peer situations for the impulsive child. Impulsive and hyperactive youth may also be perceived as

“annoying” by their peers and evoke bullying behavior from others. Other research suggests that youth with ADHD may be more likely to retaliate to bullying by victimizing others, perhaps due to sheer frustration or failing to think through the consequences (Taylor, Saylor, Twyman, & Macias, 2010). It may also be the case that youth with ADHD attempt to “fit in” with peer associates by bullying and/or excluding others. At any rate, it is clear that characteristics and behaviors associated with a diagnosis of ADHD play a large role in bullying experiences in the peer setting. Impulsivity and hyperactivity may also affect involvement in bullying in the peer setting in an indirect manner, by its transactional impact on parent-child interaction and socialization in the home setting.

ADHD and Parenting

A recent meta-analysis confirmed that parents of children with ADHD report more parenting stress than families of youth without ADHD (Theule, Wiener, Tannock, & Jenkins, 2013). It is possible, and even likely, that this increased stress impedes a parent’s ability to apply effective and positive parenting strategies. For instance, in families of children with ADHD, severity of ADHD symptoms is associated with increases in maternal and paternal negative parenting practices, which ultimately resulted in decreased child social skills (Kaiser, McBurnett, & Pfiffner, 2011). The positive relationship between ADHD severity and diminished child social skills was also mediated through negative parenting practices. Thus, findings indicate that ADHD symptoms interfere with effective parenting practices, resulting in greater aggression and more social problems in the peer setting. The application of effective and positive parenting strategies, especially for youth with ADHD, is extremely important given the impact of parenting on child aggressive behavior and social skills.

From a social-interactional perspective, it is likely that parenting also impacts ADHD

symptoms. Eisenberg et al. (2005) examined the relationship among positive parenting, effortful control, and externalizing problems in a sample of early adolescents. Although impulsivity and ADHD were not directly measured, effortful control that includes behaviors such as attention deployment and behavioral inhibition were assessed. Findings indicated that positive parenting practices, particularly warmth, were associated with increased effortful control, which in turn predicted reduced child externalizing problems. More simply, effortful control mediated the relationship between positive parenting and externalizing problems. Other findings investigating the role of parenting practices on executive functioning, however, have been less consistent. Schroeder and Kelley (2008) found that, in fact, parents of children with ADHD reported lower levels of limit setting, but overall they did not significantly differ from parents of children without ADHD. In addition, parenting practices were not significantly related to executive functioning.

Barkley, Anastopoulos, Guevremont, and Fletcher (1992) found that mothers' reports of parent-adolescent interactions in families of teens with ADHD were characterized by increased levels of conflict, anger, and negative communication compared to families with non-ADHD teens. Interestingly, only teens who had co-morbid symptoms of oppositional defiant disorder reported this same pattern. Consistent with Patterson (1982) and research on the coercive interaction, poor communication, problem solving and conflict may actually exacerbate youth aggressiveness and become manifest in other social settings.

Clearly, there is a relationship between parenting variables and youth ADHD-related symptoms. The degree to which ADHD-related symptoms are indirectly associated with involvement in peer bullying, via their impact on parenting practices and socialization in the home, is less clear. The current study will examine whether parenting practices play a larger role

in bullying-related behaviors for youth high in impulsivity versus those low in impulsivity.

Summary

Youth are continuously shaped by and contribute to their socialization in multiple relationship settings and contexts that cumulatively influence their development. Consequently, we cannot fully understand involvement in peer bullying by examining individual or contextual factors in isolation, or in only one social relationship. Parents play a critical role in guiding adolescents through the developmentally tumultuous adolescent period and parenting efforts can “make or break” development during this time. Despite the vital involvement of parents, bullying research and prevention efforts tend to focus on school-related factors, neglecting the relationship between parenting practices and bullying. Studies that have considered the association of parenting practices and bullying typically use cross-section designs, reducing potential inferences about direction of effects and causality (Lereya et al., 2013). Consequently, we still do not have good estimates of the role of the parent-youth relationships on trajectories of bullying behavior (Hong & Espelage, 2012). Further, prevention efforts taking place within the school environment that fail to incorporate other micro- and meso- level factors, including parenting and the family, potentially miss a productive target for intervention. Thus, understanding the role of specific parenting practices and their effects on bullying behavior may facilitate the development of more effective preventive interventions for bullying that include the youth’s home context.

It is also critical to understand how youth characteristics influence parenting practices and how parenting behaviors affect the behavior of youth with different characteristics. ADHD-like behaviors of youth, including inattention and impulsivity, have been found to transactionally affect the relationships with both parents and peers (Theule et al., 2013) and may increment risk

for involvement in peer bullying in both a direct and indirect manner. Parents of youth with ADHD report more stress, potentially impairing their ability to provide optimal parenting. Consistent with coercion theory, poor parenting may exacerbate existing youth problems, resulting in a vicious and hard-to-break maladaptive cycle of coercion (Patterson & Fisher, 2002) that impacts aggressive behavior at home and in school and peer settings. This research examines the degree to which specific parenting practices play a role in involvement in peer bullying behavior, and whether youth impulsivity and inattention may moderate the relationship of parenting practices with involvement in peer bullying behavior.

Research Question and Hypotheses

A review of the literature indicates that there is still much to know about the relationship of parenting practices and bullying behavior. Although research has shown that parenting practices are associated with risk for bullying victimization and perpetration in the peer environment, the majority of these data is cross-sectional. Further, we know less about how individual temperamental factors influence and interact with parenting practices, and their additive and synergistic association with peer bullying. The main research goal is to identify what specific parenting practices are associated with bullying victimization and perpetration. In addition, differential association of parenting practices with involvement in peer bullying will be examined for youth high and low in impulsivity. The following hypotheses are tested in this study:

- (1): Positive parenting practices will be associated with reductions in bullying perpetration.
- (2): Positive parenting practices will be associated with reductions in bullying victimization.
- (3): Impulsivity will be positively correlated with bullying perpetration.
- (4): Impulsivity will be positively correlated with bullying victimization.

(5): Poor parenting practices will be associated with higher levels of bullying perpetration for youth high in impulsivity.

(6): Poor parenting practices will be associated with higher levels of bullying victimization for youth high in impulsivity.

CHAPTER III

METHODS

This study used quantitative methods to test the hypotheses. A longitudinal design was used to collect data in which youth respondents were surveyed about bullying and the school climate during baseline in the fall of the sixth grade school year and in the spring of the sixth, seventh, and eighth grade school years. Youth were randomly assigned to a school-based Second Step bullying intervention or to a video and school programming as usual group. Thirty parent-youth dyads from the larger sample were recruited to complete additional self-report measures regarding parenting and participate in videotaped parent-youth interaction tasks to assess parenting practices between the end of the seventh grade year and beginning of the eighth grade year.

Participants

Participants include a convenience subsample of 31 students and their parents recruited from a larger sample of middle school students assessed during sixth through eighth grade years from Kansas and Illinois. One student was excluded from the final analyses due to a corrupted video file. Parent-youth dyads in Kansas were recruited to complete additional self-report parenting measures and videotaped parent-youth interaction tasks. Seven participants from the sub-sample were from control schools and 23 were from intervention schools. Of the 30 student participants in this study, 46.7% were female ($n = 14$) and 53.3% were male ($n = 16$). Ages ranged from 11 to 12 years of age with a mean of 11.26 years. Based on self-reported ethnicity, 48.4% of the youth were Caucasian, 25.8% were African American, 16.1% were Hispanic, 6.5% were biracial, and 3.2% were Asian.

Design

The project is funded by the Centers for Disease Control (CDC). A collaborative partnership was established between Wichita State University and University of Illinois at Urbana-Champaign. Three sites were involved in Second Step data collection, involving 19 middle schools in Peoria, IL, Chicago, IL, and Wichita, KS. Students in half of the schools were randomly assigned to the Second Step bullying prevention program, a school-based prevention program designed to reduce bullying and bullying-related behaviors while promoting social-emotional skill development for middle school students. The students in the remaining half of the schools were randomly assigned to a control conditions in which they viewed *Stories of Us*, a bullying educational video. Although intervention effects are not the focus of this research, both Second Step and the *Stories of Us* are briefly described.

Second Step: Student Success Through Prevention

Second Step is a media based social emotional skills training program designed to reduce bullying, sexual harassment, and dating violence. It also aims to improve executive functions and increase empathy, social skills, impulse control, and school bonding. The Second Step program contains 15 lessons at sixth grade and 13 lessons each at seventh and eighth grades. Lessons are conducted weekly and last approximately 50 minutes. Lessons were delivered by trained teachers in one 50-minute or two 25-minute classroom sessions and taught weekly throughout the school year. Lessons are interactive and designed for students with many different learning styles. Delivery of the lessons is structured and supported through a DVD that contains student interviews and student demonstrations of the skills being taught. A 4-hour training before implementation covers the curriculum and its delivery, as well as an introduction to child developmental stages related to the skills being taught. Lessons are skills-based and students

receive feedback on performance. Teachers completed online implementation logs following completion of each lesson, assessing for their perception of student engagement and lesson adherence.

P3R: Stories of Us

The Promoting Positive Peer Relationships (P3R): Stories of Us bullying program is composed of a unique series of film-based educational resources. It is a 45-minute video depicting a group of middle school students who are engaging in bullying and relational aggression. After viewing the video, a trained facilitator discussed the film with the students for an additional 45 minutes. This video was shown only once prior to the administration of the baseline survey. It should be noted that control schools also had other bullying-type programming as usual. No efforts were made to control for other programming.

Procedure

Approval was obtained from the Wichita State University and the University of Illinois at Urbana-Champaign Institutional Review Boards (IRB). The institutional review board approved a waiver of active parental consent. Parents of all students enrolled in the school were sent letters informing them about the purpose of the study. They were asked to sign the form and return it only if they wished to exclude their child from study participation. Students were asked to complete an informed consent form included in the survey. No exclusionary criteria were used for this study as the researchers were interested in a cohort of students in the 19 target schools who were followed from sixth through eighth grade.

Survey Administration

Data collection was completed during school days using small to large student group formats at the participating middle schools. Trained proctors read through each item on the

administered paper-and-pencil questionnaire beginning with demographic information. Proctors ensured that students were sitting far enough apart from each other to ensure confidentiality. Participants were informed that the purpose of the study is to better understand the types of behaviors that occur in the school and how those behaviors might be addressed by peers and school staff. Completion of the survey took approximately 45-50 minutes. Students in Wichita middle schools were awarded a Wichita State University token of appreciation for completion of the questionnaire.

Parent-Youth Videotaped Observation

Approval was obtained from the Wichita State University IRB to complete additional data collection about parenting practices from a subsample of 30 students and their parents at the Kansas site. Although the intention was to recruit only students from the control schools in order to minimize potential confounding variables, limited participation resulted in opening participation to students in intervention schools as well. School administrators provided assistance in recruiting participating students. Study description flyers were mailed out directly to students along with progress reports. Families were directed to an online study website and scheduled via telephone or e-mail. Families were informed that the purpose of the study was to understand parent-teenager problem solving concerning developmental challenges associated with middle school and adolescence. Participating families provided active informed consent.

Consenting youth and parents were invited to participate in six tasks completed in approximately 30-35 minutes. These video data were collected when the youth were in the seventh grade. Parent-youth interactions during these tasks were videotaped for subsequent coding. Additional self-report measures assessing parent and youth perceptions of parenting practices took approximately 15-20 minutes to complete. The entire assessment procedure took

approximately 55-60 minutes. Families were provided \$75 for their participation in the study.

Measures

School Climate Survey

Each participant first completed demographic items that included questions about his/her sex, age, grade, and race. The Second Step student survey was used to examine the effectiveness of the Second Step bullying intervention. The baseline survey (at fall of sixth grade) is a 39-item questionnaire (with multiple sub-items) and includes ratings on a Likert scale (e.g., Never to 7 or more times; Strongly Disagree to Strongly Agree). The survey includes questions about youth's thoughts regarding school safety, their general social skills, and what they would do in different bullying-related situations. Three sets of items or scales from the longer survey will be used in this research: Bullying perpetration, bullying victimization, and impulsivity. Questions related to bullying perpetration and victimization include: "I threatened to hurt or hit another student" and "Other students called me names." Surveys were shortened at subsequent assessment occasions in the spring of sixth, seventh, and eighth grades, although all items and scales used in this study were retained and measured at all assessment waves. Questions related to impulsivity include: "I have a hard time sitting still" and "I do things without thinking." These scales are now described in more detail.

Bullying Perpetration

The 6-item *Modified University of Illinois Bully Scale* and 4-item *University of Illinois Fight Scale* were used to assess the frequency of bullying perpetration. The *Modified University of Illinois Bully Scale* measures bullying behavior (e.g., teasing, group exclusion, rumor spreading, name calling) over the past 30 days. Espelage and Holt (2001) found a Cronbach's alpha coefficient of .80 and factor loadings ranged from .52 to .75 for these items. The

University of Illinois Fight Scale measures physical aggression over the past 30 days. Espelage and Holt (2001) found a Cronbach's alpha coefficient of .80 and factor loadings ranged from .50 to .82 for these items. Scales assessing bullying perpetration demonstrated adequate discriminant validity and maintained a low correlation with University of Illinois Victimization scale ($r = .21$). In addition, a correlation of .65 was found between bullying perpetration measures and the Youth Self-Report Aggression Scale (Achenbach, 1991), demonstrating adequate convergent validity.

Bullying Victimization

The four-item *Modified University of Illinois Victimization Scale* measures victimization by asking about the frequency of being picked on, made fun of, called names, and being hit or pushed. Espelage and Holt (2001) found a Cronbach's alpha coefficient of .89. Factor loadings ranged from .55 through .92 for these items.

Impulsivity

The four-item *Impulsivity-Teen Conflict Survey* obtained at all assessment occasions is a self-report tool that measures the frequency of impulsive behaviors, including lack of self-control, difficulty sitting still, trouble finishing things, and doing things without thinking. Bosworth et al. (1999) found a Cronbach's alpha coefficient of .72 for these items. Impulsivity items obtained during fall of the seventh grade year, just prior to obtaining parent-child videotaped observations, will be used. Parents did not report on child impulsivity.

Parenting/Parent-Youth Relationship

The 30 parent-youth dyads were asked to complete six tasks designed to assess parent-teen problem solving and parenting practices. Four tasks were coded for this research (see Appendix for instructions provided to participants):

1. (Youth) What are your goals for the upcoming year? (Parent) Do you encourage goal setting in your house? In what ways?
2. (Youth) How do your friends help you achieve these goals? (Parent) How do you help support your child's progress towards achieving their goals? How well do you feel you know your child's friends? Do you like to get to know the parents of your child's new friends?
3. (Youth) Discuss a situation in the past where you felt unsafe, disrespected or excluded from a group and how you dealt with the situation. (Parent) Did you know about this situation? What advice did you or would you give your child in this situation or a similar situation?
4. (Parent) Setting Limits can be challenging. I'd like you to talk to your child about an event that occurred within the last month when you felt you needed to set a limit on his/her behavior. Describe what the situation was and what you did. If you did not set a limit, talk about what you might do in the future. (Youth) When parent is finished, comment, get more information, or talk about ways to avoid this problem in the future.

Parent-Youth Interaction Coding

The Family Assessment Task: Observation Coding Manual (Fosco, Doyle, Dishion, Kavanagh, & Stormshak, 2007) was used to code parent-youth interaction. A set of five Likert rating items was applied by trained coders to measure each of the following parenting practices: warmth/support, monitoring/supervision, and limit setting/discipline. Coders were all undergraduate students recruited through advanced undergraduate psychology classes. Coders were provided with a copy of the observation coding manual and participated in five two-hour training sessions. During each training session, training videotapes of parent-youth interactions were observed. Coders were trained to make a rating following the conclusion of each parent-youth observation task. Ratings were compared with those of a "gold standard" coder. Ratings

were considered acceptable if within +/- 1 of the “gold standard” Likert ratings. After training, coders were randomly assigned tapes to code. Coders completed one video per week, allowing regular blind reliability checks to be conducted. Coders were randomly assigned to overlap on approximately 20% of videos. Kappa coefficients were continuously examined to minimize rater drift.

Confusion matrices were created and percent agreement and kappa coefficients were generated to assess inter-rater reliability. The warmth/support construct yielded an average kappa coefficient of 0.79 and ranged from 0.58 to 1.00, indicating substantial agreement. The monitoring/supervision construct yielded an average kappa coefficient of 0.86 and ranged from 0.69 to 1.00, indicating substantial agreement. Finally, the limit setting/discipline construct yielded an average kappa coefficient of 0.82 and ranged from 0.69 to 1.00, indicating substantial agreement.

Each parenting construct was defined by five items rated on a *1 to 5* Likert scale with “lower” or “higher” scores, respectively. Parenting practices were defined as continuous variables summarized from their component items. Items rating interaction during Task 1 provided data to define warmth/support. Items rating interaction during Task 2 and Task 3 provided data to define monitoring/supervision. Items rating interaction during Task 4 provided data to define limit setting/discipline.

Parent and Youth Reports

Parent and youth self-reports about the following parenting constructs were collected: *warmth/support*, *monitoring/supervision*, and *limit setting/discipline*. These constructs were assessed via the *Child and Family Center Caregiver Assessment* and *Child and Family Center Youth Assessment* developed at the Child and Family Center at University of Oregon (Dishion &

Kavanagh, 2003). Items were identified to measure constructs consistent with previous research on the role of parenting in the development of child and adolescent antisocial behavior (Patterson et al., 1992). All items were rated on a Likert scale with response options ranging from *Not at All* or *Never* to *Very Often*. Parent and youth were asked to make ratings as reflecting their experiences over the last month or 30 days. Multi-item scales defining the constructs demonstrated adequate Cronbach's alpha coefficients, ranging from .68 to .85.

Warmth/Support

Warmth and support was measured with the *Child and Family Center Caregiver and Youth Assessment* and assessed for frequency of warm and supportive behaviors, including spending time together, physical affection, and verbal praise. Parent self-report of warmth/support was measured by 20 items, including "Were you able to notice and praise your child's good behavior" and "You praised or complimented your child for something done well." Youth self-report of parental warmth/support was measured by four items, including "How often have your parent(s) or caregiver(s) given you a hug, kiss, or kind word" and "How often have your parent(s) or caregiver(s) praised you or complimented you for something you did well." Respondents indicated on a four-point scale how often these behaviors had occurred in their families in the past 30 days. Response options range from *Not at All* or *Never* to *Very Often*. Previous research using these measures reported a mean Cronbach's alpha of .75, ranging from .69-.82 (Trenta et al., 2011).

Monitoring/Supervision

Monitoring and supervision was measured with the *Child and Family Center Caregiver and Youth Assessment*. Seventeen items assessed the degree of parental monitoring and supervision, including knowing what the youth does during free time, knowing peers with whom

the youth spends time, and checking to see if there is homework. Twelve items assessed youth perception of parental monitoring and supervision. Respondents indicated on a 4-point scale how often these behaviors have occurred in their families in the past 30 days. Response options range from *Not at All* to *Very Often*. Previous research using these measures reported an adequate Cronbach's alpha of .82 (Stormshak, Caruthers, & Dishion, 2006).

Limit Setting/Discipline

Limit setting and discipline were measured with the *Child and Family Center Caregiver and Youth Assessment*. Thirteen items assessed the tactics used by parents or caregivers for limit setting and discipline, including yelling or shouting, using physical discipline, and using non-physical consequence for negative behavior. Similar items were used to assess youth perceptions of limit setting and discipline. Respondents indicated on a four-point scale how often these behaviors have occurred in their families in the past 30 days. Response options range from *Not at All* to *Very Often*. Previous research using these measures reported an adequate Cronbach's alpha of .79 (McEachern et al., 2012).

CHAPTER IV

RESULTS

Development of Parenting Constructs

Parenting constructs derived from the literature (e.g., warmth/support, limit setting/discipline, and monitoring/supervision) were created in order to test main hypotheses suggesting that parenting practices would predict future bullying victimization and perpetration. A multi-step procedure was used to create multi-informant parenting constructs.

First, Cronbach alphas were calculated to assess the internal consistency of the items specified a priori as defining each of the scales, separately for each informant (e.g., self, youth, observer). As shown in Table 1, Cronbach's alpha coefficients across informants ranged from .64 to .86 for the warmth/support. Monitoring/supervision yielded adequate Cronbach's alpha coefficients, with values ranging from .58 to .86 across informants. Finally, limit setting/discipline yielded Cronbach's alpha coefficients ranging from .53 for observers and .76 for parent self-report (youth did not complete items pertaining to limit setting/discipline). One item was excluded from the observation limit setting scale because it yielded a substantially reduced Cronbach's alpha coefficient when included in the analysis.

Second, the following scales were created: (a) parent self-report for warmth/support, limit setting/discipline, and monitoring/supervision; (b) youth self-report for warmth/support and monitoring/supervision; and (c) observer report/rating of warmth/support, limit setting/discipline, and monitoring/supervision. Items were standardized and the mean of the standardized items were summed to create each scale.

Third, correlations among the scales for limit setting, warmth and monitoring derived from parent, youth, and observer ratings were calculated, along with the means and standard

deviations of each scale (see Table 2). The coefficients on the diagonal represent the internal reliability of the scales. Several scales share significant correlations with each other. The observation monitoring and warmth scales are significantly correlated at $p < .01$ level, suggesting the scales are highly related to each other. None of the observation scales correlate with scales derived from parent and child reports. Parent report of limit setting is correlated with parent reported warmth and monitoring, indicating that all three parent-report scales are related to each other. In addition, parent-report scales and youth report scales are reliably related, with the exception that parent report of monitoring is not related to child report of warmth. Finally, youth report of warmth and monitoring are strongly related to each other at $p < .01$ level. It should be noted that all scales were standardized, resulting in a mean of 0 and standard deviations ranging from 0.52 to 0.76.

Finally, an exploratory factor analysis with varimax rotation was used to examine the inter-relationships among the parent and youth report and observer rating scales for warmth, limit setting and monitoring. As shown in Table 3, the analysis suggested three factors. Youth-reports of parental warmth and monitoring, and parent-reports of warmth, limit setting and monitoring converged to define the first factor. Observer report of warmth and monitoring converged to define the second factor. Observer report of limit setting resulted in the third and final factor. Based on the factor analysis, three higher order parenting constructs were created: an aggregate based on youth- and parent-report scales, an aggregate based on observer ratings of warmth and monitoring, and a single scale based on observer ratings of discipline. For constructs involving multiple scales, the higher order parenting construct was created by taking the mean of each component scale after it had been standardized.

In summary, the parent and youth report and observer rating scales yielded three higher

order aggregate parenting constructs to be used in hypothesis testing. These reflect: (a) the collective perspective of parents and youth on warmth, limit setting and monitoring, (b) observer ratings of warmth and monitoring, and (c) observed limit setting. However, given research suggesting that parent and youth reports of parenting may reflect important differences in perspectives, separate aggregate parenting constructs derived from parent-report only (warmth, limit setting and monitoring), and from youth report only (warmth and limit setting) were also used in hypothesis testing.

Tests of the Hypotheses

A series of step-wise regression analyses were used to assess the additive and synergistic association of parenting practices and youth impulsivity with youth perpetration of or victimization by peer bullying in the spring of eighth grade (Time 4) after controlling for youth perpetration of or victimization by peer aggression in the fall of sixth grade (Time 1). In these analyses, the parenting practices construct, youth impulsivity and Time 1 bullying involvement were entered in a first step, and the interaction of parenting and youth impulsivity were entered in a second step. These regression analyses separately entered each of five different parenting constructs as described in the previous section (observed warmth and monitoring; observed limit setting; parent and youth report of warmth, monitoring and limit setting; parent-only reports of warmth, monitoring and limit setting; and, youth-only reports of warmth and monitoring) in relation to bullying perpetration and bullying victimization.

The first of several regression analyses predicting time 4 bullying perpetration and victimization in middle school students included time 1 bullying perpetration, the observed parent monitoring and warmth factor, impulsivity, and the interaction of impulsivity and the observed parent monitoring and warmth factor as predictors (see Table 4). In step 1, time 1 bully

perpetration, impulsivity, and observed parenting monitoring and warmth explained 21% of the variance in time 4 bullying perpetration and was significant ($F(3, 26) = 3.62, p < .05$). Impulsivity and the observed parent monitoring and warmth factor both reliably predicted time 4 bully perpetration. Time 1 bully perpetration was not a significant predictor in this step. Step 2, the model in which the interaction of impulsivity and observed parenting monitoring and warmth was added to step 1 predictors, was also statistically reliable ($F(4, 25) = 6.99, p < .001$), and explained an additional 24% (for a total of 45%) of the variance in time 4 bully perpetration. Time 1 bullying perpetration was not a reliable predictor of time 4 bully perpetration. Observer ratings of parental warmth and monitoring, and youth impulsivity were both associated with higher levels of bullying perpetration at time 4. The interaction of observed monitoring/warmth and youth impulsivity was examined by calculating the relationship of parenting warmth/monitoring with time 4 bullying perpetration at high (+1 SD) and low (-1 SD) levels of child impulsivity. As shown in Figure 1, individuals with high levels of impulsivity and high levels of parenting warmth and monitoring perpetrated more bullying than individuals low in impulsivity with high levels of parenting warmth and monitoring. In contrast, rates of bullying perpetration by youth high and low on impulsivity were not different at low levels of observed parental warmth and monitoring. Increased parental warmth and monitoring was most powerfully associated with increased bullying perpetration for youth high on impulsivity, and with slightly diminished perpetration for youth low on impulsivity.

The second regression analysis predicting time 4 bully victimization included time 1 bully victimization, the observed parent monitoring and warmth factor, impulsivity, and the interaction of impulsivity and the observed parent monitoring and warmth factor as predictors (see Table 5). In step 1, time 1 bully victimization, impulsivity, and observed parenting monitoring and warmth

explained only 14% of the variance and was marginally significant ($F(3, 26) = 2.53, p < .10$). In the first step, time 1 bully victimization was marginally significant. Step 2, the model in which the interaction of impulsivity and observed parenting monitoring and warmth was added to step 1 predictors, explained no additional variance for time 4 bully victimization and was not statistically reliable ($F(4, 25) = 1.99, p > .05$). Time 1 bully victimization, observed parent monitoring and warmth, youth impulsivity, and the interaction of parental warmth/monitoring and impulsivity were not reliable predictors of time 4 bully victimization.

The third regression analysis predicting time 4 bully perpetration included time 1 bully perpetration, impulsivity, parent/youth report of effective parenting, and the interaction of impulsivity and report of effective parenting as predictors (see Table 6). Step 1, the model in which time 1 bully perpetration, parent/youth report of effective parenting, and impulsivity were entered as predictors, explained only 7% of the variance and was not significant ($F(3, 26) = 1.73, p > .05$). Time 1 bully perpetration did not reliably predict time 4 bully perpetration, although impulsivity was marginally significant. Step 2, the model in which the interaction of impulsivity and parent/youth report of effective parenting was added to step 1 predictors, explained an additional 1% (for a total of 8%) of the variance and was not significant ($F(4, 25) = 1.65, p > .05$). Time 1 bully perpetration was not a reliable predictor of time 4 bully perpetration nor was there a significant interaction. Impulsivity, however, was a significant predictor of time 4 bully perpetration.

The fourth regression analysis predicting time 4 bully victimization included time 1 bully victimization, parent/youth report of effective parenting, impulsivity, and the interaction of impulsivity and report of effective parenting as predictors (see Table 7). Step 1, the model in which time 1 bully victimization, parent/child report of effective parenting, and impulsivity were

entered as predictors, explained 15% of the variance and was marginally significant ($F(3, 26) = 2.70, p < .10$). Time 1 bully victimization was a significant predictor of time 4 bully victimization and accounted for most of the variance. Step 2, in which the interaction of impulsivity and parent/youth report of effective parenting was added, explained an additional 1% (accounting for a total of 16%) of the variance and was marginally significant ($F(4, 25) = 2.34, p < .10$). Similar to step 1, time 1 bully victimization was the only significant predictor and accounted for most of the explained variance.

The fifth regression analysis predicting time 4 bully perpetration included time 1 bully perpetration, observed limit setting, impulsivity, and the interaction of impulsivity and observation limit setting as predictors (see Table 8). Step 1, the model in which time 1 bully perpetration, observed limit setting, and impulsivity were entered as predictors, explained only 11% of the variance and was not significant ($F(3, 26) = 2.22, p > .05$). Impulsivity significantly predicted time 4 bully perpetration in this step. Time 1 bully perpetration was a not a significant predictor. Step 2, in which the interaction of impulsivity and observed limit setting was added, was not statistically reliable and explained no additional variance, accounting for a total of 8% ($F(4, 25) = 1.60, p > .05$). Impulsivity was the only significant predictor of time 4 bully perpetration in this step.

The sixth regression analysis predicting time 4 bully victimization included time 1 bully victimization, observed limit setting, impulsivity, and the interaction of impulsivity and observed limit setting as predictors (see Table 9). Step 1, the model in which time 1 bully victimization, observed limit setting, and impulsivity were entered as predictors, explained 17% of the variance and was marginally significant ($F(3, 26) = 2.95, p < .10$). Time 1 bully victimization was the only significant predictor in this step and accounted for the majority of explained variance. Step

2, in which the interaction of impulsivity and observed limit setting was added, was marginally significant and explained no additional variance, accounting for a total of 16% ($F(4, 25) = 2.36$, $p < .10$). There was no significant interaction and most of the variance was accounted for by time 1 bully victimization.

The seventh regression analysis predicting time 4 bully victimization included time 1 bully victimization, youth report of effective parenting, impulsivity, and the interaction of impulsivity and child report of effective parenting as predictors (see Table 10). Step 1, the model in which time 1 bully victimization, youth report of effective parenting, and impulsivity were entered as predictors, explained 15% of the variance and was marginally significant ($F(3, 26) = 2.72$, $p < .10$). Time 1 bully victimization was marginally significant and explained the majority of the variance in this step. Step 2, in which the interaction of impulsivity and youth report of parenting aggregate was added, explained an additional 10% (accounting for a total of 25%) of the variance and was significant ($F(4, 25) = 3.41$, $p < .05$). Time 1 bully victimization was no longer a reliable predictor of time 4 bully victimization in this step. The interaction of youth report of parenting and youth impulsivity was a significant predictor of bullying victimization, and was examined by calculating the relationship of parenting with time 4 bully victimization at high (+1 SD) and low (-1 SD) levels of youth impulsivity. As shown in Figure 2, individuals with high levels of impulsivity and high levels of youth reported parental warmth and monitoring were victimized more than individuals low in impulsivity with high levels of parental warmth and monitoring. In contrast, rates of bully victimization by youth high and low on impulsivity were not different at low levels of child reported parental warmth and monitoring. Increased levels of effective parenting were most powerfully associated with increased bully victimization for youth high on impulsivity, and with slightly diminished victimization for youth low on

impulsivity.

The eighth regression analysis predicting time 4 bully perpetration included time 1 bully perpetration, youth report of parental warmth, limit setting and monitoring, impulsivity, and the interaction of impulsivity and youth report of parenting aggregate as predictors (see Table 11). Step 1, the model in which time 1 bully perpetration, youth report of the parenting aggregate, and impulsivity were entered as predictors, explained only 8% of the variance and was not significant ($F(3, 26) = 1.88, p > .05$). Impulsivity was the only reliable predictor of time 4 bully perpetration. Step 2, in which the interaction of impulsivity and youth report of the parenting aggregate was added, explained no additional variance and was not significant ($F(4, 25) = 1.61, p > .05$). Impulsivity was the only reliable predictor of time 4 bully perpetration in this step.

The ninth regression analysis predicting time 4 bully victimization included time 1 bully victimization, parent report of parental warmth, limit setting and monitoring, impulsivity, and the interaction of impulsivity and parent report of parenting aggregate as predictors (see Table 12). Step 1, the model in which time 1 bully victimization, parent report of the parenting aggregate, and impulsivity were entered as predictors, explained 18% of the variance and was significant ($F(3, 26) = 3.18, p < .05$). Time 1 bully victimization was marginally significant and accounted for the majority of explained variance in this step. Step 2, in which the interaction of impulsivity and parent report of parenting aggregate was added, explained only 15% of the variance and was marginally significant ($F(4, 25) = 2.29, p < .10$). There were no significant predictors in this step.

The tenth regression analysis predicting time 4 bully perpetration included time 1 bully perpetration, parent report of parental warmth, limit setting and monitoring, impulsivity, and the interaction of impulsivity and parent report of the parenting aggregate as predictors (see Table

13). Step 1, the model in which time 1 bully perpetration, parent report of parenting aggregate, and impulsivity were entered as predictors, explained only 7% of the variance and was not significant ($F(3, 26) = 1.73, p > .05$). There were no significant predictors of time 4 bully perpetration in this step. Step 2, in which the interaction of impulsivity and parent report of parenting aggregate was added, explained an additional 1% (accounting for a total of 8%) of the variance and was not significant ($F(4, 25) = 1.67, p > .05$). Impulsivity was the only significant predictor of time 4 bully perpetration in this step.

CHAPTER V

DISCUSSION

Summary of Results

Hypothesis 1

All step-wise regression analyses controlled for time 1 bully perpetration. Positive parenting practices, as defined by any of the various informants, were not reliably related to reductions in bullying perpetration with one exception. In the one significant association, observed parent monitoring and warmth were reliably related to higher levels of time 4 bully perpetration, an effect opposite to that predicted.

It was somewhat surprising to see that positive parenting practices were not reliably related to lower levels of bully perpetration in the eighth grade. Instead, observed parent monitoring and warmth were associated with more bully perpetration. It may be the case that these parents are overprotective and indiscriminately warm, potentially leading to a youth's increased involvement in bullying-related behavior. It is possible that the "helicopter" parenting style does not allow the development of the youth's independence and autonomy needed to adeptly function in the youth's peer group, instead resulting in maladaptive and problematic behaviors that increase the likelihood of being a bully.

Hypothesis 2

Positive parenting practices, as defined by any of the various informants, were not reliably related to reductions in bullying victimization in the eighth grade in any of the five models tested. All step-wise regression analyses controlled for time 1 bully victimization, which when significant, accounted for much of the variance in explaining time 4 bully victimization outcomes.

It is unclear why positive parenting practices are not reliably related to reductions in bully victimization outcomes as suggested by previous literature (Haltigan & Vaillancourt, 2014; Lereya, Samara, & Wolke, 2013). It may be the case that parent- and youth-report and observations of effective parenting practices did not accurately capture dimensions of parent-youth interactions that are relevant to victimization, or that parenting simply is unrelated to victimization in the school setting during adolescence and that the peer setting is simply more important.

Hypotheses 3 and 4

The relationship between child impulsivity and time 4 bully victimization and perpetration was partially supported. Impulsivity was entered into a series of step-wise regression analyses controlling for time 1 bully victimization and time 1 bully perpetration. Youth impulsivity was reliably related to eighth grade bully perpetration in step-wise regressions including observed parent monitoring/warmth, observed parent limit setting, and youth and parent reports of effective parenting. This suggests that impulsive youth perpetrate at higher levels than youth low in impulsivity. Impulsivity was not reliably related to time 4 bully victimization after controlling for time 1 victimization in any of the step-wise regressions.

These findings seem to suggest that impulsivity alone may not be sufficient in explaining higher levels of bully victimization. Impulsivity is significantly related to higher levels of bully perpetration, however, suggesting that impulsive youth likely possess diminished ability to practice self-control and effective problem solving that result in aggressive responses to peer conflict.

Hypotheses 5 and 6

Poor parenting practices were not reliably related to higher levels of bully perpetration and

victimization for youth high in impulsivity. Two significant interactions, however, yielded intriguing findings opposite from those predicted. A significant interaction between observed parent monitoring/warmth and impulsivity with time 4 bully perpetration suggests that highly impulsive youth with high levels of parent monitoring/warmth perpetrate at higher levels than youth with high levels of parent monitoring/warmth and low levels of impulsivity. There was also a significant interaction between youth report of observed limit setting and impulsivity with time 4 bully victimization. In a similar fashion, this interaction suggests that highly impulsive youth with high levels of parent limit setting are victimized at higher levels than youth with high levels of limit setting and low levels of impulsivity.

Although initially surprising, these interactions may suggest that challenging and impulsive youth require a “sweet spot” in effective parenting. In other words, it is not enough to dichotomize parenting as “good” or “bad.” Rather, parenting might be more usefully construed along a continuum in which very high levels of parental involvement as indicated by limit setting, warmth and monitoring may very well be too much of a good thing. For youth who are highly impulsive and potentially challenging, extremely high levels of indiscriminate warmth monitoring, and limit setting may result in youth reactivity that engenders undesired behavior during interaction with peers. Impulsive individuals who experience indiscriminate warmth and over protectiveness in the home may “act out” in the school and peer settings, and may be more likely to be bullied by peers and be bully perpetrators themselves.

Integration of Results and Emerging Themes

Bully Perpetration

Interestingly and surprisingly, time 1 bully perpetration is not a reliable predictor of time 4 bully perpetration in any of the autoregressive models, indicating low levels of stability

across age during this early adolescent period. This is inconsistent with recent longitudinal research (Haltigan & Vaillancourt, 2014) which indicates most individuals who self-report low levels of bullying perpetration do so at levels that remain relatively stable throughout middle school, and that other individuals who report being bullies evidence moderately increasing levels of bullying perpetration throughout middle school.

The current study primarily included individuals who reported relatively low levels of self-reported bullying perpetration, and the lack of significant stability in the current sample may reflect this reduced variance in bullying perpetration in the convenience sampling used in this study. In addition, the majority of respondents in the present study came from schools that were actively employing a bullying prevention program. It may be that the bullying prevention program impacted the continuity and stability of bullying perpetration across middle school in this sample. Another explanation may be the social and emotional development changes substantially during early adolescence, and would be associated with considerable discontinuity in bullying perpetration from sixth through eighth grade.

Bully Victimization

Some modest continuity was observed in bullying victimization. A recent study observed fairly low levels of self-reported bullying victimization in a sample of middle school students (Baly, Cornell, & Lovegrove, 2014) and that the experience of bullying victimization for middle school students may be relatively transient. The small positive correlations observed between self-reported peer victimization between sixth through eighth grades in this study are congruent with this relatively low level of temporal stability.

Only speculations may be made as to why there was continuity in victimization and not in perpetration. Characteristics of the youth may play a stronger role in victimization than bullying

during early adolescence. Previous research has suggested that the lack of assertiveness and conflict resolution skills by youth potentially serve as risk factors for bullying victimization (Card & Hodges, 2008). Further Baly et al. (2014) indicated that individuals who were continually bullied over the course of middle school self-reported being less likely to seek help from peers and adults. It may be that youth observed by peers to be non-assertive, physically and emotionally “weak,” or socially unskilled are at greater risk to be bullied in both the short-term and long-term.

Impulsivity

Impulsivity consistently predicted increased self-reported bully perpetration among participants in this study. Perhaps not surprisingly, impulsive youth are more likely to act rashly and without thinking, potentially engaging in more bullying behavior in order to gain peer approval, solve problems, or to reach some other desired goal. Recent research has consistently supported this relationship, as impulsive youth engage in more bullying perpetration over time, even after controlling for other person variables such as narcissism and conduct problems (Fanti & Kimonis, 2013). Although not measured in the current study, Mrug et al. (2012) showed that youth with ADHD experience higher levels of peer rejection which is linked with later development of delinquent behavior and behavioral problems. It may be that impulsive youth are rejected by “typical” peers, instead seeking out and associating with other problem youth who value and encourage interpersonal aggression. Another explanation is that impulsive youth are rejected by “typical” peers and perpetrate as a form of retaliation.

Interestingly, impulsivity was not associated with increased levels of victimization in this study, inconsistent with recent research (Fanti & Kimonis, 2013; Georgiou, 2008; Wiener & Mak, 2009). Fanti and Kimonis (2013) suggest that impulsive youth are more likely to make

poor decisions, likely due to poor social skills and awareness, potentially placing them in risky situations. Impulsive youth may also be perceived as “obnoxious” by peers, making themselves easy target for bullies. In the current study, prior victimization was included as a predictor of later victimization and explained a significant portion of bully victimization variance, perhaps reducing the potential contribution of impulsivity to change over time.

Parenting

Parenting variables generally did not share the expected relationships with bully victimization and perpetration. Prior research suggests that parenting practices, particularly limit setting, warmth, and monitoring, are reliably related to reduced bullying perpetration and victimization (Espelage, Bosworth, & Simon, 2000; Georgiou, 2008; Georgiou & Stavrinides, 2013). Although not specifically related to bullying, some research has examined the relationship between self-reported parenting practices and youth externalizing behavior, specifically delinquency, conduct disorder, and oppositional defiant disorder (Barry et al., 2008). Barry and colleagues (2008) reported that youth-report only and not parent-report was a reliable predictor of later externalizing behaviors. Given these discrepancies, it is useful to consider why self-report parenting variables and bullying outcomes were not related in this study. One explanation may be that parents are simply not accurate reporters of their parenting practices. Social desirability may skew the self-report ratings in an attempt to appear more favorably or more competent as a parent. Although there is no way to confirm or refute this hypothesis in the current study, the act of being observed and video recorded may have “pressured” parents to over report their use of positive parenting practices.

Another explanation might be related to the broader social and developmental context. During adolescence, peer relationships tend to become more important as independence and

autonomy become more salient. In other words, adolescents are attempting to become parts of peer cliques, and time spent within these cliques tends to increase through the middle school years (Crockett, Losoff, & Peterson, 1984). It should be noted that Crockett et al. (1984) emphasized that peer relationships do not replace parent-youth relationships, but instead supplemented these relationships. If youth are indeed spending more time with peers during middle school, however, then it is likely there is less direct parent-youth contact, and perhaps influence on out-of-home relationships with peers. Given this information, perhaps the peer context may play a more powerful role in modeling and engendering involvement in bullying behavior throughout the middle school years.

Another interesting finding is that only observed parenting behaviors predicted bullying perpetration behaviors. Self- and youth-report of parenting variables did not reliably predict bullying perpetration. Scott, Briskman, and Dadds (2010) examined the relationship between observed, self-, and youth-report of parenting practices in a community sample of youth at risk for externalizing problems. Their results demonstrated that youth-report of parenting practices only, and not parent self-report, was related to independent observation of parenting practices despite a moderate relationship between self- and youth-report of parenting. This suggests that youth-report may be extremely informative, and self-report of parenting practices may not converge with independent observation. Thus, it may not be surprising that observed parenting behavior only, and not self-report, predicted bullying perpetration. Trained raters may see qualitatively different behaviors than parents who are asked to evaluate their own behavior. It should be noted that other research using the same parenting measure, however, found convergence between self-report of parenting and observed parenting behavior (Hawes & Dadds, 2006). Despite the discrepancy, it might be argued that the lack of relationship between reported

and observed parenting practices is indeed a method effect. Observers trained to “spot” the nuances in different parenting practices may see behaviors through a qualitatively different lens.

Perhaps the most interesting and surprising finding is that, when observed parenting was found to be associated with bullying in the current study, it was in a direction opposite to that predicted. As discussed previously, it may be possible to have “too much of a good thing.” As a matter of fact, research has examined the role of the “helicopter” parent during the junior high transition (Grolnick, Kurowski, Dunlap, & Hevey, 2001). Grolnick and colleagues (2001) showed that appropriate levels of parental involvement protected youth from negative effects during this transition. However, over-involvement had the opposite effect, as youth with over-involved parents displayed more acting out behavior. These youth may be reacting to over control and lack of autonomy during this critically important developmental period. Further, this finding was moderated by impulsivity. It might be the case that impulsive youth who receive indiscriminate and non-contingent warmth and intrusive levels of monitoring may actually engage in aggressive behavior to assert their autonomy and independence. However, it is difficult to ascertain whether the levels of warmth and monitoring reported and observed in this study were excessive.

It might be a slightly different story for youth who are victimized. In one model, highly impulsive youth who reported high levels of warmth and monitoring also reported higher levels of victimization in eighth grade. These impulsive youth may be viewed as irritating or obnoxious by peers, and thus evoke peer victimization as “easy targets.” Although not measured, another possible explanation may be that very high levels and what is perceived by youth as intrusive parenting increments risk for peer victimization indirectly via its association with higher levels of youth internalizing problems. Schiffrin et al. (2013) showed that college-

aged individuals who reported developmentally inappropriate parental over-involvement experienced higher levels of internalizing problems. Coupled with impulsivity or a lack of self-regulation, youth with internalizing problems may be viewed by peers as vulnerable.

Contributions of Findings to the Literature

Although many of the findings were not consistent with the hypotheses, parenting and impulsivity interact in some interesting ways to predict involvement in peer bullying. Perhaps not surprisingly, highly impulsive youth are more likely to bully others. Contrary to expectations, highly impulsive children do not appear to experience bully victimization at higher levels. Including certain parenting practices, however, provides a different picture. Youth who are highly impulsive and experience high levels of what nominally appears to be effective parenting may be at greater risk for high levels of bullying others and being bullied themselves than youth low on impulsivity. Thus, whether parenting practices play a key role in understanding bullying and related behaviors depends on the youth's impulsivity. It seems that certain parenting practices may be related to bully victimization and perpetration for impulsive youth. Further, it is not enough to categorize parenting practices as "good" or "bad," rather, there may be a parenting "sweet spot" that might be emphasized in intervention. Parents with impulsive youth who are over-protective as evidenced by high levels of monitoring and warmth may actually place their children at increased risk for involvement in bullying. In other words, effective parenting practices such as monitoring and warmth may need to be scaffolded or fit to both the developmental needs and temperamental characteristics of the child. This may involve a delicate balance between support and autonomy, and between adequate monitoring and intrusiveness. Parenting interventions may want to consider emphasizing the role of balance, rather than just teaching effective child-rearing practices and allowing parents to figure out the

“dosage” for their particular child at a specific period of development.

This study also demonstrates the importance of measuring parenting using multiple methods. In the current study, it appears that parent-, youth-, and observer-report of parenting represent qualitatively different things. The lack of convergence among multiple informants may be due to several reasons. First, parents may not be the best judges of their own parenting practices. Second, while trained raters focus on objectively defined behavioral categories describing parent-youth interaction, parents and youth are reactive to observation and it may be the youths’ perception of parenting behaviors are more influential than their objectively defined topography. Finally, youth may be motivated to under- or over-report certain parenting practices, especially in the presence of the parent being rated, as in this study. This study demonstrates the importance of measuring parenting practices using multiple methods, but also the necessity to better understand various sources of bias in those methods, and to further refine how multi-method measures of parenting practices can be combined.

Limitations

This study had several design and method characteristics that limit interpretation of the results. First, this study utilized a small sample size ($N = 30$) substantially reducing statistical power. Due to this small sample, the possibility of Type II error cannot be ruled out. In other words, many expected correlations were not found in the present study. It may be that, had the sample size been larger, more statistically significant and expected relationships might have been found. In addition, the small sample size limited the types of analyses that could be utilized for hypothesis testing. The original study design proposed examining curvilinear relationships between parenting and involvement in peer bullying. Given the small sample, however, these curvilinear relations could not be assessed. Second, the small convenience sample of students

resided in a single Midwestern city, limiting the generalizability of the results. Replication of this study with more representative samples and in other school districts across other cities throughout the United States is needed to establish the external validity of the findings in this study.

A third limitation of the study involved the method by which measures of parenting behaviors were obtained. Parent and youth completed the assessment measures in the same room, potentially biasing their responses. Youth may not have felt free to respond honestly in the presence of a caregiver. In addition, the observational measures of parenting are subject to both parent and youth reactivity, resulting in attempts to “look good” in front of the researcher(s). Consequently, the range of parenting behaviors may be restricted.

Fourth, impulsivity was measured by several items embedded in the youth-report school climate survey. It may be the case that there were insufficient items to accurately measure impulsivity. Youth may also underreport or be relatively unaware of the extent to which they engage in impulsive behavior. Consequently, the study may not have ascertained the impact of impulsivity on bullying-related outcomes. Finally, the parenting data were obtained between seventh and eighth grade. Ideally, measures of parenting practices would be obtained at multiple assessment occasions to better assess the developmental timing of “parenting effects” and the time dynamic relationships between parenting and involvement in peer bullying.

Finally, there very low levels of youth-reported bullying perpetration and victimization. Consequently, this restricted range of youth-reported bullying outcomes and the relationship with hypothesized predictor variables may be attenuated. It is possible that youth minimized true levels of bullying perpetration and victimization for fear of possible punishment.

Future Directions

Given the importance of parenting practices and the developmental changes that youth experience during the elementary to junior high transition, it is critical that bullying interventions be extended beyond the classroom and school setting to address the youth's family context. Adolescence is a critical time during which proper and age- and person-appropriate monitoring, warmth, and limit setting may support youths' efforts to become autonomous and well functioning individuals. The role of parents may be overlooked in current bullying interventions.

This study yielded some surprising findings that should be further explored in future research. Specifically, the role and importance of parenting practices during adolescence in relationship to bullying remains unclear. The degree to which parenting influences involvement in peer bullying during this developmental period is unclear. Perhaps most interesting is the idea that parenting needs to be congruent with youth characteristics and developmental context. Future research might further explore differences among self-, child-, and observer reports of parenting as it relates to bullying outcomes. Once research clarifies these issues, focus can turn to developing more tailored and targeted parenting interventions that can supplement anti-bullying programs employed in school and community settings. By addressing the multiple social contexts that influence youth development, we can optimize protective factors while minimizing risk factors related to peer bully perpetration and victimization.

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Table 1

Number of items and Cronbach's Alpha coefficients for the a priori multi-informant parenting scales

Source/Informant	Number of Items		
	Warmth/Support	Monitoring/Supervision	Limit Setting/Discipline
Observations (items)	5	5	5
Cronbach's Alpha	.81	.58	.53*
Parent Report (items)	19	16	13
Cronbach's Alpha	.86	.85	.76
Youth Report (items)	8	18	--
Cronbach's Alpha	.64	.86	--

Note: * Scale originally had five items included. One item was dropped from scale due to inadequate Cronbach's Alpha coefficient. Resulting scale includes four items.

Table 2

Correlation coefficients and internal reliability coefficients of parenting scales

	Obs LS	Obs W	Obs M	PR LS	PR W	PR M	YR W	YR M
Observed Limit Setting (Obs LS)	0.53							
Observed Warmth (Obs W)	0.03	0.81						
Observed Monitoring (Obs M)	0.29	0.57**	0.58					
Parent Report Limit Setting (PR LS)	0.26	0.26	0.07	0.76				
Parent Report Warmth (PR W)	0.35	0.09	-0.13	0.72**	0.86			
Parent Report Monitoring (PR M)	0.13	0.07	-0.05	0.41*	0.39*	0.85		
Youth Report Warmth (YR W)	0.19	0.22	0.04	0.39*	0.44*	-0.01	0.64	
Youth Report Monitoring (YR M)	0.11	0.32	0.24	0.46**	0.37*	0.36*	0.50**	0.86
Mean	0.00							
Standard Deviation	0.66	0.76	0.61	0.52	0.55	0.58	0.56	0.57

Note: Correlation coefficients marked with an asterisk were statistically significant (* $p < .05$; ** $p < .01$); Internal reliability coefficients on diagonal

Table 3

Factor Loadings for Parenting Scales

Item	Factor Loadings		
	Parent and Youth Report	Observation Warmth and Monitoring	Observation Limit Setting
Observed Warmth	.19	.84	-.09
Observed Monitoring	-.13	.86	.33
Observed Limit Setting	.19	.11	.92
Parent SR Warmth	.83	-.14	.29
Parent SR Monitoring	.58	-.13	.12
Parent SR Limit Setting	.83	.10	.19
Youth SR Warmth	.63	.25	-.09
Youth SR Monitoring	.70	.41	-.15
Eigenvalues	2.93	1.59	1.02
% of variance	36.63	19.89	12.72

Note: Factor loadings over .50 appear in bold.

Table 3 (cont.)

Factor Loadings for Parenting Scales

Item	Parent Report	Youth Report
Parent SR Warmth	.88	---
Parent SR Monitoring	.69	---
Parent SR Limit Setting	.89	---
Youth SR Warmth	---	.87
Youth SR Monitoring	---	.87
Eigenvalues	2.03	1.50
% of variance	67.65	74.79

Note: Factor loadings over .50 appear in bold.

Table 4

Regression Analysis for Observed Parent Warmth/Monitoring and Youth Impulsivity Predicting T4 Bullying Perpetration for Middle School Students (n = 30)

Model and variable	<i>B</i>	<i>SE B</i>	β	R^2	<i>Adj. R²</i>
Step 1				.30	.21*
Bully Perpetration T1	-.08	.55	-.03		
Observed Parent Monitoring and Warmth	.26	.12	.37*		
Impulsivity	.34	.12	.48*		
Step 2				.53	.45**
Observed Warmth/Monitoring x Impulsivity	.50	.14	.49**		

Note. * $p < .05$; ** $p < .01$

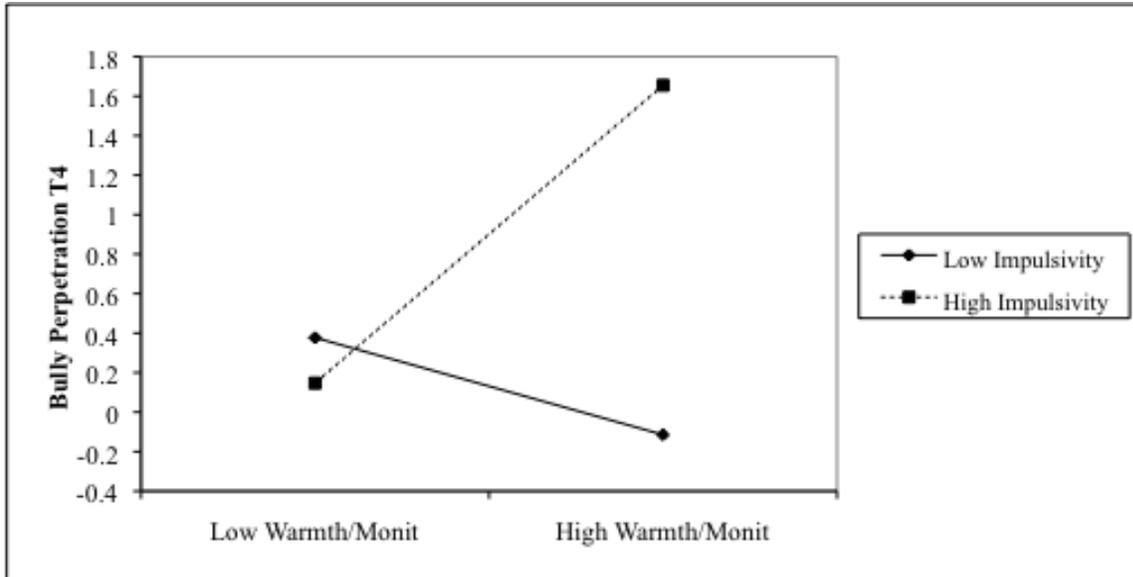


Figure 1. Interaction of Youth Impulsivity x Observed Parent Warmth/Monitoring on Time 4 Bully Perpetration

Table 5

Regression Analysis for Observed Parent Warmth/Monitoring and Youth Impulsivity Predicting T4 Bullying Victimization for Middle School Students (n = 30)

Model and variable	<i>B</i>	<i>SE B</i>	β	<i>R</i> ²	<i>Adj. R</i> ²
Step 1				.23	.14
Bully Victimization T1	.36	.18	.39		
Observed Parent Monitoring and Warmth	-.04	.19	-.04		
Impulsivity	.15	.21	.14		
Step 2				.24	.12
Observed Monitoring/Warmth x Impulsivity	.20	.27	.13		

Note. * $p < .05$; ** $p < .01$

Table 6

Regression Analysis for Parent/Youth Report of Parenting and Youth Impulsivity Predicting T4 Bullying Perpetration for Middle School Students (n = 30)

Model and variable	<i>B</i>	<i>SE B</i>	β	R^2	<i>Adj. R</i> ²
Step 1				.17	.07
Bully Perpetration T1	-.18	.66	-.06		
Parent/Youth Report of Effective Parenting	.01	.17	.01		
Impulsivity	.30	.15	.43*		
Step 2				.21	.08
Parent/Youth Report of Effective Parenting x Impulsivity	.16	.14	.23		

Note. * $p < .05$; ** $p < .01$

Table 7

Regression Analysis for Parent/Youth Report of Parenting and Youth Impulsivity Predicting T4 Bullying Victimization for Middle School Students (n = 30)

Model and variable	<i>B</i>	<i>SE B</i>	β	R^2	<i>Adj. R²</i>
Step 1				.24	.15
Bully Victimization T1	.37	.18	.40*		
Parent/Youth Report of Effective Parenting	-.14	.22	-.14		
Impulsivity	.07	.24	.07		
Step 2				.27	.16
Parent/Youth Report of Effective Parenting x Impulsivity	.21	.19	.21		

Note. * $p < .05$; ** $p < .01$

Table 8

Regression Analysis for Observed Limit Setting and Youth Impulsivity Predicting T4 Bullying Perpetration for Middle School Students (n = 30)

Model and variable	<i>B</i>	<i>SE B</i>	β	R^2	<i>Adj. R²</i>
Step 1				.20	.11
Bully Perpetration T1	.06	.63	.02		
Observed Limit Setting	.15	.13	.21		
Impulsivity	.29	.13	.41*		
Step 2				.20	.08
Observed Limit Setting x Impulsivity	.02	.15	.03		

*Note. *p < .05; **p < .01*

Table 9

Regression Analysis for Observed Limit Setting and Youth Impulsivity Predicting T4 Bullying Victimization for Middle School Students (n = 30)

Model and variable	<i>B</i>	<i>SE B</i>	β	R^2	<i>Adj. R²</i>
Step 1				.25	.17
Bully Victimization T1	.36	.18	.40*		
Observed Limit Setting	-.18	.18	-.17		
Impulsivity	.14	.20	.13		
Step 2				.27	.16
Observed Limit Setting x Impulsivity	-.17	.21	-.16		

*Note. *p < .05; **p < .01*

Table 10

Regression Analysis for Youth Report of Parenting and Youth Impulsivity Predicting T4 Bullying Victimization for Middle School Students (n = 30)

Model and variable	<i>B</i>	<i>SE B</i>	β	<i>R</i> ²	<i>Adj. R</i> ²
Step 1				.24	.15
Bully Victimization T1	.32	.19	.35		
Youth Report of Parenting	.15	.22	.14		
Impulsivity	.25	.25	.24		
Step 2				.35	.25*
Youth Report of Parenting x Impulsivity	.32	.15	.36*		

*Note. *p < .05; **p < .01*

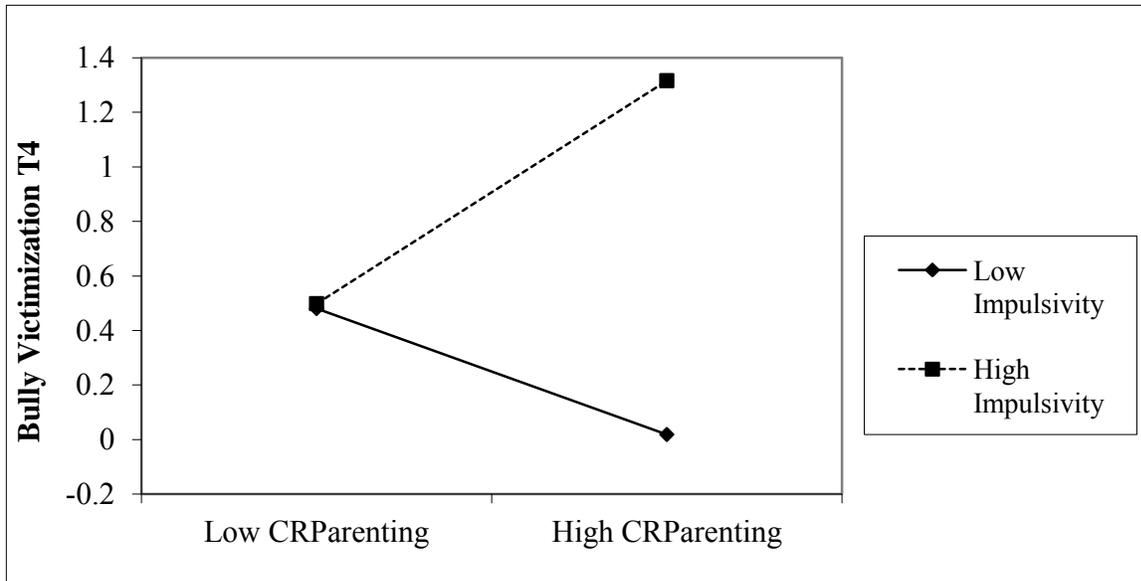


Figure 2. Interaction of Youth Impulsivity x Youth Report of Effective Parenting on Time 4 Bully Victimization

Table 11

Regression Analysis for Youth Report of Parenting and Youth Impulsivity Predicting T4 Bullying Perpetration for Middle School Students (n = 30)

Model and variable	<i>B</i>	<i>SE B</i>	β	R^2	<i>Adj. R²</i>
Step 1				.18	.08
Bully Perpetration T1	-.14	.60	-.04		
Youth Report of Parenting	.09	.15	.13		
Impulsivity	.34	.15	.48*		
Step 2				.21	.08
Youth Report of Parenting x Impulsivity	.11	.12	.18		

*Note. *p < .05; **p < .01*

Table 12

Regression Analysis for Parent Report of Parenting and Youth Impulsivity Predicting T4 Bullying Victimization for Middle School Students (n = 30)

Model and variable	<i>B</i>	<i>SE B</i>	β	R^2	<i>Adj. R²</i>
Step 1				.27	.18*
Bully Victimization T1	.34	.17	.38		
Parent Report Parenting	-.25	.20	-.23		
Impulsivity	.05	.22	.05		
Step 2				.27	.15
Parent Report of Parenting x Impulsivity	.01	.21	.01		

*Note. *p < .05; **p < .01*

Table 13

Regression Analysis for Parent Report of Parenting and Youth Impulsivity Predicting T4 Bullying Perpetration for Middle School Students (n = 30)

Model and variable	<i>B</i>	<i>SE B</i>	β	R^2	<i>Adj. R²</i>
Step 1				.17	.07
Bully Perpetration T1	-.24	.68	-.08		
Parent Report of Parenting	-.03	.16	-.04		
Impulsivity	.29	.14	.41		
Step 2				.21	.08
Parent Report of Parenting x Impulsivity	.17	.14	.23		

*Note. *p < .05; **p < .01*

APPENDIX

APPENDIX



Consent for Participation in a Research Study: Family Problem Solving Around School Goals

Purpose of this Research/Project: You and your teenager are invited to take part in a study of family problem-solving skills and strategies around navigating challenges related to being a middle school student. This study seeks to enhance understanding of problem-solving processes and ways to promote your teen's social and emotional development during middle school.

Participant Selection: You and your teenager are invited to take part in this study because you and your teen provided consent and assent for participation in the Second Step trial being implemented at his/her school.

Procedures: If you decide to participate in this study, you and your teenager will be asked to complete a brief survey about demographic information, school goals, family processes, and efforts at parenting. The survey will take approximately 15-20 minutes to complete. You and your teenager will also be asked to participate in a videotaped observation. During this observation, you and your teenager will be asked to engage in problem-solving tasks surrounding issues related to middle school, including academic goals and difficult peer situations. This videotaped observation is used by trained coders to better understand problem-solving and strategy surrounding social and emotional development during middle school. The observation should take approximately 35 minutes. The entire procedure will take approximately 55-60 minutes.

Discomfort/Risks: You and your teenager may experience some discomfort answering personal questions and engaging in videotaped tasks. Researchers are trained to be aware of any concerns and will do their best to minimize any discomfort. You are free to not answer specific questions, and to withdraw from the study at any time without penalty.

Benefits: The study may provide you and your teenager with opportunities to problem solve together situations they are likely to encounter during middle school. Although there may not be any other direct benefits, you and your teenager will also benefit indirectly by knowing that you have made a contribution to research that will help others in the future by attempting to understand successful navigation of challenges and obstacles faced by individuals during the middle school years.

Confidentiality: Your confidentiality will be maintained. All assessment measures will be stored in a locked filing cabinet by the primary investigators and research assistants. All identifying information will be removed when entered into the data file for research purposes. All videotaped observations will be converted to DVD and stored in a locked filing cabinet by the primary investigator. Any descriptions of the research results in posters, presentations, or publications will be presented as group averages, and will not include any identifying information about you and your teenager.

Compensation or Treatment: You and your teenager will receive \$50 for taking part in this study (\$30 to the parent and \$20 to the teenager). Wichita State University does not provide medical treatment or other forms of reimbursement to persons injured as a result of, or in connection with, participation in research activity conducted by its faculty, staff, or students. If you believe you have been injured as a result of participating in research covered by this consent form, you can contact the Office of Research Administration, Wichita State University, Wichita, KS 67260-0007, telephone (316) 978-3285.

Refusal/Withdrawal: You are free to withdraw from this study at any time without penalty. You will still receive compensation for your time.

Contact: If you have questions or concerns about this research, you may contact the director of the study, Sabina Low, Ph.D., Assistant Professor of Psychology, Wichita State University at (316) 978-3170; sabina.low@wichita.edu, or the co-director of the study, Ryan Sinclair, M.A., at (316) 978-7356; rtsinclair@wichita.edu. If you have any questions about your rights as a research participant, you can contact the Office of Research Administration, Wichita State University, Wichita, KS 67260-0007, telephone (316) 978-3285.

You are not under obligation to take part in this study. Your signature indicates that you have read the information provided above, and have voluntarily decided for your own and your teenager's participation.

Signature of Parent

Date

Witness

Date

APPENDIX



**Assent for Participation in a Research Study:
Family Problem Solving Around School Goals**

I have been informed that my parent(s) have given permission for me to participate, if I want to, in a study concerning problem-solving skills during middle school. My participation in this project is voluntary and I have been told that I may stop my participation at any time. If I choose not to participate, it will not result in any penalty.

Name

Date

APPENDIX

Observation Questions

1. (Child) What are your goals for this upcoming year?
(Parent) Do you encourage goal setting in your house? In what ways?

2. (Child) How do your friends help you achieve these goals?
(Parent) How do you help support your child's progress towards achieving their goals?

(Parent) How well do you feel you know your child's friends? Do you like to get to know the parents of your child's new friends?

3. (Child) Discuss a situation in the past where you felt unsafe, disrespected or excluded from a group and how you dealt with the situation.
(Parent) a.) Did you know about this situation? b.) What advice did you or would you give your child in this situation or a similar situation?

4. (Parent) Setting limits can be challenging. I'd like you to talk to (youth) about an event that occurred within the last month when you felt you needed to set a limit on his/her behavior. Describe what the situation was and what you did. If you did not set a limit, talk about what you might do in the future.
(Youth) When parent is finished, comment, get more information, or talk about ways to avoid this problem in the future.

5. (Family) Now, for the next 5 minutes I would like you to work together to solve a family problem. You have identified _____ as a problem that you'd like to work on. I'd like you to talk about what the problem is and to come up with at least one solution. You can come up with more than one solution if you'd like. It may be hard to solve this problem in the next five minutes so just do the best you can to make progress.

6. (Child) What do you like about your friends and what do they like about you?
(Parent) What do you believe are some of the strengths of your child?

APPENDIX

Family ID: _____	Date: _____	Coded by: _____
Codes by Task:	Rating 1-5	Notes
Goal Setting Task #1		
1. Clear, measurable goals		
2. Realistic goals		
3. Expectations stated positively		
4. Caregiver support/incentives		
5. Caregiver confident in success		
Monitoring Task #2		
1. Caregiver know child's friends		
Monitoring Task #3		
1. Awareness and structure		
2. Caregiver active listener		
3. Child disclosure		
4. Caregiver gather information		
Limit Setting Task #5		
1. Limits clear & understandable		
2. Limits realistic & reasonable		
3. Positive Alternative behavior		
4. Caregiver willing to set limits		
5. Not harsh/critical statements		