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Child And Family Predictors Of Bullying In Middle School Students

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by

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DEDICATION

To my husband, Gary,

and

daughters,

Savannah and Sierra.

You fill my life with joy.

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CHAPTER 1

INTRODUCTION

Background

No single factor can be used to predict or explain aggressive and vicious behavior. However, longitudinal studies have constructed developmental models that guide the understanding of the development of aggressive, delinquent and antisocial behavior. Delinquent behavior is associated with childhood and adolescent hyperactivity, limited attention span, fidgeting, risk-taking, inadequate social skills and retaliatory beliefs. Students with emotional difficulties, attention deficit-hyperactivity disorders and learning disabilities tend to demonstrate behaviors deemed as antisocial, and considered risk factors for later aggressive and destructive behaviors (Leone, Mayer, Malmgren & Meisel, 2000). In a systematic review of the connection between school bullying and later criminality, bully status was a weighty contributor to later offending, after controlling for other notable risk factors of childhood. School bullying was a robust risk factor for subsequent offending, and increases the probability of adverse outcomes later in life (Ttofi, Farrington, Losel & Loeber, 2011).

Bullying is considered a form of aggression. School bullying is common. It is estimated that almost 30 percent of United States adolescents are entangled in school bullying as the bully, the bully's target, or both. In the 2008-2009 School Crime Supplement (SCS) to the National Crime Victimization Survey (NCVS) prepared for the National Center for Educational Statistics (Dinkes, Kemp, & Baum, 2009), 25,217,000 students ages 12 through 18 reported on the prevalence of bulling and cyber-bullying. The survey estimates included the following student characteristics: student sex,

race/ethnicity, grade and household income. Twenty-eight percent of total students reported that they were directly or indirectly bullied at school, with an additional 6.0% reported themselves as victims of cyber-bullying. Of note, 18.8% of students were made fun of, called names or insulted; 16.5% were the subject of rumors; 5.7% were threatened with harm. Nine percent of students were pushed, shoved, tripped, or spit on. This is a sharp increase from one national survey involving 6th to 10th grade students, of which 11 percent of students were targets of school bullies (Nansel, Overpeck, Pilla, Ruan, Simmons-Morton, & Scheidt, 2001) and a study with a 14 to 16 year old population in which he number of adolescents reporting bullying on a weekly basis was 9 percent girls and 17 percent boys (Kaltiala-Heino, Rimpela, Marttunen, Rimpela, & Rantanen, 1999). Bullying is reported most frequently between 6th to 8th grades, as bullying is much more common among younger students than among older students. The bullying rates in the 2011 U.S. Department of Education study were as follows: 6^{th} graders: 39.4%; 7^{th} graders: 33.1%; 8^{th} graders: 31.7%. As students age, they are less likely to bully others and to be the targets of bullies, with the same sample of 12^{th} graders reporting a 20.4% rate of bullying. The bullying rates were also reported for urban areas (27.0%), suburban areas 27.8%), and rural areas (30.5%), and geographic regions: Northeast (25.5%); Midwest (31.9%); South (28.7%); and West (27.3%). Sex differences were reported, as well with 26.6% of males and 29.5% of females reporting bullying (Stuart-Cassel, Bell, & Springer, 2011).

School bullying has both instant and enduring negative effects. Bullying results in higher levels of substance abuse (Gini & Pozzoli, 2009), poor academic outcomes (Nolin, Davies, & Chandler, 1996), family violence (Cook, Williams, Guerra, Kim, &

Sadek, 2010), and mental health problems, including internalizing disorders (Gini & Pozzoli, 2009; Sourander, Helstelä, Helenius, & Piha, 2000). All forms of bullying are indicative of subsequent of psychosomatic problems and difficulty with psychosocial adjustment (Nansel, et al, 2001). Sourander et al. (2000) note that victims of high levels of bullying in elementary school reported increased psychosocial difficulties at age 16. In addition low self-esteem, depression and social isolation resulting from childhood bullying continue into the adult years (Cook, et al., 2010).

When controlling other childhood factors, Farrington, Lösel, Ttofi, and Theodorakis, (2012) found that bullying perpetration significantly predicts externalizing behavior (offending) for approximately six years after the perpetration and that perpetrators are significantly prone to being depressed later in life. In the same study, victims of bullying were significantly prone to depression for up to seven years, after controlling for other risk factors. Though there was a small effect size, victims were also more likely to externalize behavior in terms of offending behavior. Inn their systematic review of school bullying and violence later in life, Ttofi, Farrington, and Lösel (2012) speculated that the implications of finding continuity would be helpful at the theoretical, as well as the practical level. Such results would determine if bullying predicts a general violent tendency or bullying predicts a more anti-social tendency. The results of their meta-analysis supported the existence of a more general long-term underlying antisocial tendency, having implications for early crime prevention and bully intervention programs that interrupt the continuity from adolescent bullying to poor outcomes in adulthood.

In a school setting, bullying encompasses a variety of behaviors. However, a common thread is that they involve a person or a group repetitively intending to harm a weak or vulnerable student. School bullying involves the following direct and indirect tactics: slapping/punching, threatening, teasing, verbal taunting, sexual harassment, theft, destroying property, rumor spreading or isolating or excluding another student Victims of bullying are more likely to be off-task, as reported by teachers, and have lower overall academic achievement scores (Schwartz, 2000). Decreased instructional time (Fonagy, Twemlow, Vernberg, Sacco, & Little, 2005), reading and language problems (Tomblin, Zhang, Buckwalter, & Catts, 2000) and grade retention (Rodney, Crafter, Rodney, & Mupier, 1999) are also linked bullying. Bulling also results in increased risk for school truancy, school failure, and dropping out of school (Kelley, Loeber, Keenan, & DeLamatre, 1997).

A meta-analytic review of 148 studies (Card, Stucky, Sawalani, & Little, 2008) found that direct and indirect forms of bullying share approximately half of their variance, suggesting further research is needed to explore the commonalities between direct and indirect bullying. What variables explain children's bullying regardless of form? Understanding what the variables that contribute to both forms of bullying may also help identity the variables that are not shared, which has been elucidated in the reviews demonstrating an imperfect correlation that direct and indirect bullying have to different forms of maladjustment. Of significance to this study is the shared contributors to direct and indirect bullying, given that indirect forms of bullying are difficult to observe and identify, identifying the shared predictors of both types may allow for earlier

intervention on use of indirect bullying. In addition, it was hypothesized that Effortful Control would mediate the shared predictors of bullying.

Problem

The majority of students attending middle school are well-behaved, non-aggressive, and academically engaged. These students govern and curb the level of aggressive behavior in school through their compliance and capacity to adhere to school policy and routines. However, a normally distributed adolescent population at the secondary level typically includes a behaviorally at-risk group of between 10% and 20% of the students. The stakes are high in public schools. Funding is now tied to achievement. National and State legislation now mandates that schools prove that all children are making adequate yearly progress. Schools are also required to prevent and/or intervene with bully behavior, as part of federal and state-mandated laws (U.S. Department of Education, 2008). However, the majority of current antibullying programs have produced insignificant or weak effects, perpetuating the need for additional research and strategies for curbing bullying in the school setting (Bauer, Lozano, & Rivara, 2007; Jenson & Dieterich, 2007; Olweus, 1993). Complicating the search for intervention strategies is the understanding of normative acceptance of bullying and aggressive behavior associated with children of middle school age (Guerra, Williams, & Sadek, 2011).

The present study attempted to identify shared predictor variables of Direct Bullying and Indirect Bullying, that is, what helps explain and predict bullying, regardless of form. School bullying is the subset of aggression that was be measured in this study. The predictor variables of interest are: (a) adolescent perception of

parental monitoring; and (b) adolescent perception of parental support for fighting, (c) adolescent Effortful Control; (d) adolescent Agreeableness.

Theoretical Framework

This study assumed a social-ecological framework of bullying (Bronfenbrenner, 1977; Orpinas & Horne, 2006; Swearer & Doll, 2001), based on evidence from previous studies that no individual element can describe why some individuals are at an elevated risk of behaving aggressively, while others are more resilient. This framework considers bullying as the resulting interaction among factors at three reciprocal groupings—individual, their relationships, and the particular school that they attend. The social-ecological model of bullying assumes that the individual characteristics of children are important, but are fully understood by understanding their interaction with their context. That is, children who bully do so because they are prone to solving aggressive conflict by way of bullying. Families mediate these characteristics when they model, tolerate, or contribute to the encouragement of bullying behavior (Swearer & Doll, 2001). For example, children learn to model behavior by observing or imitating models, of which parents and siblings are strong, influential models of behavior (Bandura, 1973). The effects of intergenerational violence and/or maladaptive socialization patterns in families are likely internalized and later used to interpret and respond to perceived threats of others (Hazler, 1996). Erratic, punitive disciplinary practices in families contribute to bullying behavior (Dishion, 1990). Kindergartners are more likely to be aggressive in studies where family interactions are found to be coercive and intrusive (Pettit, Harris, Bates, & Dodge, 1991). Children identified as insecurely attached to their primary caregiver as infants and toddlers have been later found to have poor peer relationships,

struggle with conflict resolution, and have difficulty with self-regulation that contribute to bullying behavior (Smith & Myron-Wilson, 1998).

Bullying behavior is tolerated in the school setting by way of insufficient adult supervision, poor physical settings, and weak policies to address prompt and effective response when bullying occurs (Olweus, 1993b). Bullying results from a complex interaction of several levels of the child's ecosystem: individual, family, and school (Swearer & Doll, 2001). The results obtained from using this theoretical model also was intended to identify and assemble intervention plans based on the ecological level in which they occur.

Adolescent bullying is not easily separated from the larger social context in which it the adolescent lives. The hierarchy of macro and micro systems interacting within school settings also is influenced by chrono systems (Bronfenbrenner. 1976, 2005). Research has supported that bullying and violence are complexly connected with a school's organization and social structure.

This study posits that developmental history combined with personality predispositions and social climate determines the extent to which the adolescent uses aggression, in the form of bullying, as a problem-solving tool. To assess whether direct and indirect aggression manifests a unique set combination of psychosocial risk factors, this study examined a span of variables that may be differentially related with direct and indirect bullying experiences. This research could be beneficial in establishing a greater awareness of developmental pathways in the formation and use of aggressive behavior, providing model to construct educational training for understanding bullying in the school setting. In addition, the identification of joint contributors of direct and indirect

bullying may unearth modifiable psychosocial risk factors that may be modified through evidence-based therapies (Kendall, 2012; Weisz & Kazdin, 2010).

Children and young adolescents who behave aggressively require ongoing attention, intervention, and prevention in order to reduce bullying in school. Currently, school and community programs exist that provide care and intervention services to children, to victims of bullying, but intervention that directly target the aggressive behavior or individual are limited. Past research has shown several variables that directly influence aggressive children. However, do other factors exist that influence the strength of these direct relationships? There is a gap in the literature related to analyzing indirect, or mediated, relationships between individual, personality, and parenting variables and bullying. Though direct relationships exist with the aforementioned variables and bullying, none is a perfect statistical relationship. Therefore, another variable may influence the relationship. In this study, Effortful control is considered a variable that is outside of the direct pathways that have already been established in previous research as contributing to perpetration of aggressive behavior.

The analysis of mediating variables could be of significance to research in direct and indirect bullying, as it may answer the "how" and "why" the two types of bullying are used by some children, but not all children, and in varying degrees of severity (Baron & Kenney, 1986). The mediating variable of effortful control may be positioned between the independent causal factors that have been identified in previous studies, as well as hypothesized within this study, and the final outcome of bullying behavior. Effortful control is hypothesized to be an intervening factor that can change the impact of parental monitoring, parental support for fighting, and agreeableness on perpetration of

bullying. The analysis of mediating variables in this study aims to estimate the way the chosen mediating-variable, effortful control affects the impact of parental monitoring, parental support for fighting, and agreeableness on perpetration of bullying. Thus, instead of replicating studies that hypothesize the direct causal relationship between parenting and personality factors and the perpetration of bullying, it is hypothesized that the parenting and personality factors contribute to the development and use of effortful control, which in turn contributes to the perpetration of bullying. Thus, the proposed mediator of effortful control serves to clarify the relationship between parental monitoring, parent support for fighting, agreeableness and bullying. If effortful control is identified as a mediating variable, it may mean that students have the ability to suppress the desire to model their parent's behavior, appropriately self-monitor their own activities, and/or suppress the desire to act in a non-agreeable manner. Thus, in situations of negative emotions or high arousal, individuals with high effortful control may inhibit the action that they most desire, demonstrating flexibility and restraint against behaving in an aggressive manner.

Attention to effortful control could potentially reshape the current knowledge base that exists in the area of child-centered variables that are related to bullying, making a significant contribution to the study of resiliency and prevention. Research must address whether or not factors exist that influence the relationship between variables thought to cause bullying and the perpetration of bullying in schools. This question is of great relevance when considering the potential impact this could have on the developing child. When children experience poor parenting or negative community factors that threaten their physical and/or psychological health, it places them at risk of negative

interactions with others. Over time, these negative interactions could decrease the child's social skills and coping mechanisms to deal with awkward, strained or novel experiences in an age-appropriate manner, which may lead to aggressive tendencies and/or bullying behavior.

Research Questions and Hypotheses

The aim of the present study was to construct a theoretical framework to determine if effortful control had a mediating influence between bullying influencing variables and direct and indirect bullying. Specifically, this study examined the extent to which effortful control mediates the impact that known bullying influencing variables (e.g., parental monitoring, parent support for fighting, agreeableness) has on the perpetration of direct and indirect bullying.

Research Question 1 Are there gender and grade differences in the study variables (direct and indirect) and experiences (perpetration, victimization)?

Research Question 2. How do differences in parental monitoring agreeableness, and parental support for fighting predict bullying perpetration (direct and indirect)?

Research Question 3. Does Effortful Control predict perpetration of bullying (direct and indirect)?

Research Question 4. Does Effortful Control mediate the relationship between bullying influencing variables and perpetration of bullying (direct, indirect)?

CHAPTER 2

REVIEW OF RELATED LITERATURE

Evolutionary Perspectives

From an evolutionary point of view, bullying is used to increase access to resources, raise an individual's status, and reduce competition from others. The use of direct bullying, that is physical attack and verbal threats expressing attack, are one type of strategy, with consideration of physical size, strength, and fighting ability (Archer & Coyne, 2005). Direct bullying is considered a strategy that humans use when moral restraints are few and the laws governing society are weak (Courtwright, 1996), in which individual's gain social standing based on a perception of violent retaliation (Archer, 2009). Coie and Dodge (1998) consider bullying as an act intended to hurt another individual. Their reference to harm assumes many forms and functions. The form most frequently studied, physical bullying, involves being mistreated by peers by way of actual or threat of physical injury (Underwood, Galen, & Paquette, 2001). Physical bullying is also referred to as direct bullying. Common examples of physical bullying include shoving, biting, kicking, slapping, or threatening bodily harm. However, physical bullying has costs.

Indirect bullying is considered a more adaptive strategy than direct bullying under particular social circumstances. Use of Indirect bullying necessitates that people possess the societal and communication skills that are prerequisites for social forms of bullying. In addition, it assumes that there are social networks in place that could be manipulated to advance social prominence at the sacrifice of another person's reputation (Underwood et al., 2001). Björkqvist, Lagerspetz, and Kaukianen (1992)

theorized that, as social intelligence develops; direct bullying is partly subsumed by indirect bullying, dependent on the context and the individual.

Indirect, relational and social bullying share similar descriptions and are grouped together more than they are considered as different constructs. Indirect bullying is a substitute for direct bullying sanctioned when the damage from of direct bullying is deemed high, with the intent of social excluding or harming the social rank of the victim. Relational bullying refers to harm resulting from damage to or exploitation of a relationship (Crick & Grotpeter, 1995). Common instances of relational bullying consist of the silent treatment, the threat of discontinuing communication with a friend, social exclusion; separating a peer from their friends, or dissemination of false or damaging information (Young, Boye, & Nelson, 2006).

Over the years, research has found that girls and boys are equal participants in manifestations of bullying when tactics like gossip and rumor spreading are used. Indirect, social and relational bullying are comparable alternatives to physical bullying, dependent upon the strength of the aggressor's language skills and resultant harm to the social status of the victim (Archer & Coyne, 2005).

The capacity to inhibit and control aggressive responses is an innate human trait. Across time, historical and cross-cultural accounts confirm the use of bullying and violence that is not limited to primitive times or specific cultural groups. Historically, men used aggression to secure females, food, shelter, and different types of resources. In a similar fashion, females used aggression to defend their children and procure resources. Aggressive individuals were more likely to pass their genes on to subsequent generations. However, over time, more prosocial genes became valuable

and learning to negotiate social groups became more common (Bueshman & Huesmann, 2010).

Bullying is an early appearing behavior in children of all cultures (Bushman & Huesmann, 2010). Proactively, without apparent provoking, Infants display angry facial expressions toddlers tantrum and take things that do not belong to them (Bugental, Corpuz & Schwartz, 2012); and children and adolescent's bully to gain prestige or wanted items. Reactively, acts of retaliation serve as a defense for future attacks (Olweus, 1991). The existence of early, unprovoked bullying lends credence to aggressive tendencies being in-born, with the early developmental task of socializing as a key contributor to obtaining socially acceptable behavior (Bushman & Huesmann, 2010). Bullying, left unchecked, can compromise survival. Therefore, inhibitory strategies and abilities have developed to curb bullying in order to meet affiliation and belonging needs (Baumeister & Leary, 1995).

Social-Ecological Perspective on Bullying

Relationships, including aggression and bullying behavior, evolve in the context of social environments (Swearer & Doll, 2001). Bronfenbrenner's (1979) ecological systems theory pertains to the blending of environmental factors and personal traits within the multiple levels or contexts of family, peers, school, and community. Neighborhood features impact a child's development to some extent by their influence on the family unit (McLoyd, 1990), which then exerts its own impact on the development of antisocial behaviors (Dodge, 2008).

Aggressive individuals, for the most part, do not remain aggressive over time (Cairns & Cairns, 2000; Moffitt & Caspi, 2005), negating the theoretical supposition that

bullying itself is a personality trait or a solely a within child occurrence (Cairns & Cairns, 2000; Underwood, 2004). Instead, social, cultural, cognitive, and biological factors are all considered relevant and mostly enmeshed in the development process of each individual child (Cairns & Cairns, 2000; Cicchetti & Rogash, 1996; Shields & Cicchetti, 2001). As a result, several researchers (Cairns & Cairns, 2000; Crick, 1997; Tremblay and Côté, 2005) have suggested that aggressive behavior and its consequences should be considered in the context in which the behavior occurs. Viewing the use of bullying in context, does not then minimize the role of bullying as a normal, valuable tool for psychosocial development and survival.

Current research on the development of bullying notes that bullying variance is best explained by way of individual and combined temperamental and social influences (Carey, 1998; Vitaro, Barker, Boivin, Brendgen, & Tremblay, 2006). Thus it is the acknowledgment that multiple individual and interacting factors, at multiple proximal and distal levels, within an ecological framework, contribute to the development of bullying (Baillargeon, Tremblay, & Williams, 2005; Buss, 1997). In addition, the role of cognitive processes, as evolved internal guides for behavior, is supported in the evidence that continuity occurs across levels of bullying, a robust finding across bullying literature. That is, highly aggressive children are likely to be highly aggressive adults, and less aggressive children are likely to be less aggressive adults, reflecting an organized pattern of processing aggressive information (Huesmann & Moise, 1998).

The social environment becomes quite complex during the transition from childhood to adolescence, which typically marks the time that children transition from elementary school to middle school, where the impact interpersonal and intrapersonal

factors respond to change and maturation processes (Larson & Richards, 1994). Simmons and Blythe (1987) note that the transition to adolescence includes the following considerations: peer and family relations are reworked, the structure and requirements of school change, physical maturation occurs, and identity/sex roles are questioned and formed. It is during this type of transitional period where personality is most powerful (Caspi & Moffitt, 1993). An individual's most stable characteristics, like personality, generally have their greatest impact during times of ambiguity and vulnerability (Caspi & Moffitt, 1993; Ickes, 1982).

Bullying, in comparison to other types of aggression, shows the greatest variation across cultures. This finding demonstrates the importance of evaluating bullying within a social-ecological context (Smith-Khuri et al., 2004).

Types of Bullying

Physical bullying generally reaches its highest level at the age of 30 months, after which it typically decreases (Côté, Vaillancourt, LeBlanc, Nagin, & Tremblay, 2006). However, indirect bullying tends to increase with age (Cairns, Cairns, Neckerman, Ferguson, & Gariépy 1989), with older children using indirect bullying more than younger children (Österman et al., 1998). Björkqvist and colleagues (Björkqvist, 1994; Lagerspetz, Björkqvist, & Peltonen, 1988) hypothesize that the differences in the rate at which children use indirect and direct bullying during childhood development reflect heterotopic continuity of bullying. This hypothesis surmises that indirect bullying is a more complex bullying form that requires social cognitive and linguistic skills. These skills are used to replace more direct forms (physical and verbal) of bullying (Vaillancourt, Brendgen, Boivin, & Tremblay, 2003).

Few studies have explored the predictors of indirect bullying (Vaillancourt, et al., 2003). The participant of, as well as the receiver of, indirect bullying tends to undergo subsequent psychosocial adjustment problems (Crick, Casas, & Mosher, 1997; McNeilly-Choque, Hart, Robinson, Nelson, & Olsen 1996). Indirect bullying is used more by females and direct bullying is used more by males (Crick & Groteper, 1995). While Males use direct and indirect bullying, females tend to rely on indirect strategies more than direct bullying (Vaillancourt et al., 2003). However, there are negligible differences between male and female use of indirect bullying (Card, Stuckey, Sawalini, & Little 2008). While numerous studies have identified individual, environmental, genetic, peer influence, and family contextual factors linked to the development of physical bullying (Coie & Dodge, 1998; Dodge, Coie & Lynam, 2006; Tremblay, 2001), antecedents to the development of indirect bullying are lagging (Tremblay, Nagin, Sequin, & Zoccolillo, 2004).

A meta-analytic investigation of 148 studies on youth direct and indirect bullying analyzed the extent of sex differences, intercorrelations between types, and connections to maladjustment (Card, et al., 2008). Their results confirmed results of prior studies that found gender distinctions (biased toward boys) in direct bullying, and unimportant gender variance in indirect bullying. They did find a solid intercorrelation (r = .76) between direct and indirect bullying. In spite of the high intercorrelation, direct and indirect bullying display distinctive relations with maladjustment. Direct bullying is solidly associated with delinquent behavior, impoverished peer relations, and decreased prosocial interactions. Indirect bullying is associated with internalizing problems and stronger prosocial interactions. These results are replicated by a meta-analytic review

by Archer (2004) on sex differences in bullying. Both reviews find no significant gender differences in indirect bullying, which conflicted with previous reviews that demonstrated that boys engage in more direct bullying than girls (Hyde, 1984).

Côté, Vaillancourt, Barker, Nagin, and Tremblay (2007) studied the joint developmental trajectories of direct and indirect bullying in children over the course of six years, specifically from preschool through elementary school. Their goal was to track the membership that children that were identified at initial assessment (age 2) held over time. Children were identified as high or low indirect and/or direct bullying and membership trajectories were checked for increasing, desisting, or stable membership over time. They found that 14.6% of children have high, stable trajectories of physical bullying, while the remainder of children has low or declining physical bullying over time. Indirect bullying trajectories indicated that 67.9% followed low group membership, while 32.1% had high, rising trajectories. Of interest, they found no children that were high on one type of bullying, but not the other. Based on variables that were measured at age two, young motherhood and low income were the best predictors of high trajectory, joint group membership. However, upon running the data with multinomial bullying analysis, hostile parenting was the only variable that remained significant. The resulting trends that were identified for boys for high physical bullying were young mothering and hostile parenting. The resulting trends for girls were that as they aged, physical bullying decreased, while indirect bullying increased. Girls and boys use of bullying becomes distinguished during the preschool years. However, for all children, those high in physical bullying were also high in indirect bullying. The authors conclude that young motherhood and hostile parenting hinder the socialization of bullying.

Bullying

Bullying is a subset of aggression that occurs in schools around the world (Nansel et al., 2001). In general, bullying is a repeated aggressive act in which an individual repeatedly targets a person that is vulnerable and a passive recipient of such attacks (Olweus, 2001). Children that engage in high levels of bullying behavior are generally impulsive and lack self regulatory skills related to emotional arousal (Espelage, Bosworth, & Simon, 2001), experience less anxiety and empathy than same-age peers (Jolliffe & Farrington, 2006; Olweus, 1978), and are identified as having high moral disengagement (Gini, 2006). From a bully's point of view, the use of aggression is justified and normalized (Bentley & Li, 1995; Sutton & Keogh, 2000). Terranova, Morris and Boxer (2008) speculated that these qualities fit with existing research and theory regarding poor regulatory abilities as a contributor to bullying.

An accurate rate of the prevalence of bullying is difficult to measure due to differences in defining bullying and differences related to measuring bullying (Espelage & Swearer, 2003). However, several large-scale studies have confirmed that bullying is rampant throughout United States schools (Espelage, Bosworth, & Simon, 2000; Hoover, Oliver, & Hazler, 1992), with as many as 77% of students in one study reporting that they have been bully victims (Hoover et al., 1992).

Gender, Ethnicity, and Poverty Related to Bullying

Achenbach (1991) noted that ethnic differences in the rate of bullying during early childhood are negligible in United States samples. However, this changes upon adolescence, with African American males accounting for 52% of juvenile violent crimes, even though they accounted for 15% of the juvenile population (Dryfoos, 1990).

The pattern of bullying and delinquency appears to begin in middle childhood, growing in seriousness through age 17 years (Dodge, et al., 2006). Bullying, coupled with high drug use and sexual activity compounds the rate and use of aggressive behavior (Jessor, Donovan, & Costa, 1991). Thus, for this high risk population, bullying over time actually increases, resulting in serious crimes culminating in incarceration instead of the typical trajectory of decreasing bullying that is common for the majority of aggressive individuals (Dodge et al., 2006). Poor African American males fare the worst, once they begin early aggressive behavior (Coie, 2004).

Census data has been used to analyze neighborhood characteristics that result in important markers for identifying probable risk for subsequent conduct problems for children. These risk factors include poverty, low levels of education, single-parent homes, high unemployment, transient life style, and low-income jobs (Beyers, Bates, Pettit, & Dodge, 2003). However, these risk factors are not easily separated from the family factors that are also correlated with subsequent conduct problems for children (Jencks & Mayer, 1990). That is, community factors influence family dynamics in a family, and none is more powerful than low socioeconomic status (McLoyd, 1990). Poverty, when other community variables are controlled, results in more aggressive behavior enacted by children, adolescents, and adults (Sampson & Laub, 1994; Spencer, Dobbs, & Phillips, 1988). Ogbu (1990) stated that being African American in the United States is an adversity that increases the risk of developing aggressive behavior. McLoyd (1990) noted that poverty in an African American family places enormous stress on parents and cripples support systems used by the family, resulting in ineffective, coercive, and physically punishing parenting practices, which may lead to

aggressive interactions in the family and in the community setting, which is also consistent with findings from White families (Dodge, Pettit & Bates, 1994; Sampson & Laub, 1994). As of 2003 (National Center for Children in Poverty, 2003) 16% (11 million) of children lived homes below the poverty level ($13,861 for a family of three), with a poverty rate for African Americans at 30% and the poverty rate for Latinos at 28%. Extreme poverty ($6,930 for a family of three) affects 6% (5 million) of United States children (Crocket, 2003).

Marital conflict (Cummings & Davies, 2002), domestic violence, being raised in a large family (Rutter, Tizard, & Whitmore, 1970), and being a child of a convicted felon (Farrington, 1991) all result in an increased likelihood of using bullying as a child and adolescent. In addition, teenage and/or single parenting increases a child's risk for developing aggressive tendencies (Blum, Boyle, & Offord, 1988; Morash & Rucker, 1989). In addition, children growing up in low-income, disadvantaged neighborhoods are potentially indoctrinated with individual beliefs that support bullying (Miller, 1958) as a way to obtain social status, financial rewards, or protection from other aggressors (Guerra, Huessman, & Hanish, 1994). Normative beliefs supporting bullying are legitimized and normalized in urban settings (Huesmann, Guerra, Miller, & Zelli, 1992).

Guerra et al. (1995) studied the effects of three factors: economic disadvantage, individual beliefs, and stressful events, on increasing risk for aggressive behavior in Caucasian, African American, and Latino children (n=1,935). Poverty and ethnicity are confounded, but both related to bullying. Only Caucasian children had a significant relation between poverty and bullying. Significant interactions between individual beliefs and poverty predicted bullying for Latino and African American children. For African

American children, poverty predicted stress, which promoted use of bullying by way of adopted beliefs that supported bullying. For Latino children, poverty predicted individual beliefs that accept the use of bullying.

Gender differences in physical bullying have been noted in studies of preschool children, beginning at about age 3 years (Crick, et al., 1997), with boys being identified as more physically aggressive than girls, including seriousness and stability for the rated bullying (Kingston & Prior, 1995). Evidence from six longitudinal studies spanning three countries has concluded that boys are identified as and remain more physically aggressive across assessment period throughout early childhood through adolescence. Even girls identified as physically aggressive remained stable in their bullying, but were consistently rated with a lower mean bullying score that the high, stable aggressive boys (Broidy et al., 2003). Another study of gender differences in bullying (n=2,000), using the Achenbach Child Behavior Checklist, found that boys were rated as more physically aggressive than girls from every age spanning age 4 to age 18 (Côté et al., 2007).

Gender differences in the use of indirect bullying have been negligible (Underwood, 2003) or favor girls higher use (Crick & Zahn-Waxler, 2003). Most finding from research of indirect bullying use note that it is a more normative type of bullying for girls. However, conflicting or less-clear evidence exists that girls actually use indirect bullying more than boys. This lack of consensus regarding rate of use remains throughout early childhood and the middle school years (Xie, Drabick, & Chen, 2011). For example, in a study of four-to-five year old children, girls were rated as using more indirect bullying than boys when rated by teachers and peers (McNeilly-Choque et al.,

1996). Crick et al. (1997) found that girls were rated higher by teachers, but boys were rated as using indirect bullying more often than girls by their classmates. Additional studies of Russian preschoolers (Hart, Nelson, Robinson, Olsen, & McNeilly-Choque, 1998) and United States Headstart preschoolers (Kupersmidt, Bryant, & Willoughby, 2000) found no gender differences.

In middle school samples, one study (Archer, Pearson, & Westerman, 1988) used observations to identify 7 to 11 year old girls as higher in use of indirect bullying. However, a cross-cultural study (Österman et al., 1994) using classmate ratings of peers found greater use of indirect bullying by boys, echoing the findings of Crick et al. (1997). Studies using parent reports have yielded no gender differences (Tiet, Wasserman, Loeber, McReynolds, & Miller, 2001), yet other studies of teacher reports find that teachers identify girls as using more indirect bullying than boys (Crick & Groteper, 1995). Yet another study of teacher reports found boys to be rated higher in indirect bullying (David & Kistner, 2000). Mixed results for gender differences in the use of indirect bullying remain for studies of adolescents (Salmivelli, Kaukiainen, & Lagerspetz, 2000).

Archer's (2004) meta-analytic review of 78 studies that compared male and female use of indirect bullying found no gender differences in indirect bullying. The research on gender differences regarding the rates of indirect bullying seem to concur that teachers rate girls as higher, peers rate boys as higher, and parent results find no gender differences (Dodge et al., 2006). This lack of consistency may reflect methodological differences or may reflect gender norms that are held by the rater, as opposed to actual gender differences in use.

Bullying and Family Context

Although direct bullying has been regularly connected to unfavorable family circumstances such as being poor, low maternal education, young motherhood, parent relationship conflict, unhappy family functioning, and intimidating and punitive parenting styles (Côté et al., 2007), few studies have looked at Indirect bullying in relation to these same types of family variables. However, Vaillancourt, Miller, Fagbemi, Côté, & Tremblay (2007) found that children with high use of Indirect bullying are more likely to come from larger families distinguished by adverse interactions and more erratic parenting practices.

Parents convey specific messages considering the utilization of aggressive and nonviolent techniques (Farrell, Harry, Mays, & Shoenhy, 2011). Dodge (2002) argued that parents are effective in socializing children through the promulgation of messages or schemas about the rules of society. Parents who feel strongly opposed to bullying may model their disapproval and use discipline in a manner that encourages children to consider have empathy and understanding for others. On the other hand, some parents may transmit beliefs that support fighting, like hostile attribution biases (Krevans & Gibbs, 1996). A parent's beliefs may effect children's beliefs (Côté et al., 2007). Studies have revealed that parental emotional support is a powerful safeguard against adolescent bullying (Gaononi, Black & Baldwin, 1998; Young, Miller, Norton, & Hill, 1995), tempering the following risk factors: low income, parent psychopathology, and environmental handicaps (Gaononi et al., 1998).

The most favorable family environments that are identified as those with pronounced cohesion, positive emotional support, and low in conflict and contention can

buffer the effects of exogenous risk factors, such as high crime, exposure to violence, and poverty (Andreas & Watson, 2009; Gorman-Smith, Henry, & Tolan, 2004). However, it is not clear that these family protective factors can protect the child from negative consequences of endogenous factors related to personality and social cognitions on behaving aggressively (Andreas & Watson, 2009). Some researchers have considered whether the family environment can moderate within-child factors, such as children's aggressive beliefs and personality traits related to the development of bullying in children (Dodge, Petit, Bates, & Valente, 1995; Gorman-Smith & Tolan, 1998; Huesmann & Guerra, 1997). Given that within-child factors tend to be most proximal and family factors the next most proximal (Bronfenbrenner, 1979), these factors are thought to be more influential on determining the development of aggressive tendencies (Andreas & Watson, 2009).

Farrington (2003) used longitudinal data from the Cambridge Study of Delinquent Development (n=411 boys) to affirm the transmission of aggressive behavior from parents to children. Parents who had a history of bullying tended to have children who bullied (16%), but those who did not bully tended to have children who did not bully (5.5%). In the same study, fathers convicted of violent crimes (n=20) had a higher likelihood of having a child who bullied (35%).

Parent Support for Fighting

Normative beliefs about bullying, that is, the judgment about how suitable the use of bullying is given a particular setting, manifest from historical use of bullying, modeling of bullying by others, and use of bullying across contexts (Guerra, Huesmann, Tolan, VanAcker, & Eron, 2000). Individual, situational, and contextual effects strengthen or

weaken the probability that aggressive behavior could ensue. Over time, patterns of thinking and behavior that reward characteristic or habitual bullying as having adaptive value are strengthened and maintained in certain contexts (Guerra & Huesmann, 2004).

Parental feelings regarding violence influence adolescent attitudes toward violence (Lindstrom-Johnson, Finigan, Bradshaw, Haynie, & Cheng, 2011). In a study of youth and parental attitudes toward fighting, it was found that parents and youth attitudes predicted aggressive behavior, school suspensions, and fighting (Soloman, Bradshaw, Wright, & Chen, 2008). Parents convey specific messages regarding the use of bullying and nonviolent strategies (Farell et al., 2011). Dodge (2002) asserts that parents communicate messages or schemas to children that impact the way the child views their world. Krevans and Gibbs (1996) suggest that some parents indoctrinate, by way of hostile attribution biases, beliefs that support fighting as a way to manage perceived threat. In a study by Copeland-Linder, Jones, Haynie, & Simons-Morton (2007), parental support for fighting was a strong predictor of an adolescent's use of fighting as a retaliation strategy. These African American adolescents were studied as they entered emergency room with injuries resulting from violence and demonstrated that parental influence was stronger than peer influence on adolescent beliefs related to fighting.

In a study that examined the influence of family structure, relationship with parents, parental monitoring, and parental support for fighting on middle school students (Orpinas, Murray, & Kelder, 1999), each variable was related to bullying. However, parental support for fighting was found to have the largest impact, accounting for 14% of the variance.

In a qualitative study by Farrell, Bettencourt, Mays, Vulin-Reynolds, and Sullivan (2008), parental support for nonviolence was found to be an important moderator of adolescent bullying beliefs, even when anger, peer relationships, and normative beliefs were ripe for an aggressive response. Farrell et al. (2011) used the qualitative results of the Farrell et al. (2008) study to direct an empirical evaluation of parenting factors (support for fighting, support for nonviolence) as mitigating parental factors of school and peer risk factors. Their study used data, from a larger study consisting of two cohorts of students from 37 middle schools at four sites. The results of this study supported the previous findings of Orpinas et al. (1999) who found connections between parental support for fighting and weapon carrying. This study extended the literature related to the direct effects of parenting factors on bullying by demonstrating that parenting factors can weaken the school and peer relationship risk factors for physical bullying, moderated by gender and over time. Specifically the results indicated that parents moderated the effects of school norms for bullying, but not peer relations for girls or boys. In addition, parental factors lose their influence as the middle school years progress, peaking at sixth grade. The researchers (Farrell et al., 2011) suggested that parental involvement is not beneficial if the parent is highly involved (monitoring), but supports fighting as a response to bullying.

Parental Monitoring

Despite the obstacles that children face when raised in adverse environments (e.g., high crime, poverty), many persevere, or demonstrate resilience (Stattin & Kerr, 2000). Children that have a positive relationship with a competent adult are better able to manage persistent adversity. Parental monitoring, in its simplest form, that is keeping

track of the whereabouts of the child, prevents delinquency and aggression by avoiding interactions with peers that would influence such behavior (Laird, Pettit, Bates, & Dodge, 2003). Patterson and Stouthhamer-Loeber (1984) suggested that parental monitoring behaviors, as a part of a global family management system, account for approximately 2.5 times as much variance in delinquency scores relative to other parenting variables, such as discipline, problem-solving, or reinforcement patterns. Dishion, Bullock, and Granic (2002) found that, in intervention studies, increased parental involvement with high-risk children slowed their rate of involvement with delinquent youth.

In their study of perceived social environment and personal control variables of African American sixth grade students (n=452), Griffin , Botvin, Scheier, Diaz and Miller (2000) found that perceived parental monitoring was directly associated with lower bullying. Perceived parental monitoring also had an indirect effect, in that it was mediated by anger control proficiency. The researchers suggested that anger control mediated parental monitoring and aggression because parental monitoring instills coping skills that enable the child to control anger and deal with frustration.

Parental monitoring is more influential in some circumstance, than others (Dodge, 2008). The effects of parental monitoring on curbing antisocial behavior is more crucial for children living in dangerous neighborhoods, than safe neighborhoods, and is critical for children with previous histories of aggression (Petitt, Bates, Dodge, & Meece, 1999). Children at low-risk for antisocial behavior do not benefit from parental monitoring, like those at high risk for antisocial behavior (Dodge, 2008). The level of parental monitoring appears to adjust based on the child's involvement with conflict.

That is, if a child misbehaves (i.e. bullies), the parent may withdraw monitoring, based on the resultant negative parent-child interaction from punishing the child, which may cause the parent to lessen monitoring (retreat), reinforcing the child's aggression, which may lead to increases in adolescent delinquency (Laird, Pettit, Bates, & Dodge, 2003; Stattin & Kerr, 2000).

Bullying and Personality

The five-factor model (Costa & McCrae, 1992), is an important, well-known theoretical model for conceptualizing personality dimensions, and has been used to establish a relationship between personality and aggressive behavior (Jensen-Campbell & Graziano, 2001; Miller, Flory, Lynam, & Leukefeld, 2003). The five-factor model includes the following personality dimensions: Extraversion, Conscientiousness, Openness to Experience, Neuroticism, and Agreeableness. Each individual personality dimension is further divided into six more descriptive, specific dimensions. The Agreeableness Neuroticism personality dimensions have been linked to aggression in the literature (Gleason, Jensen-Campbell & Richardson 2004; Graziano, Jensen-Campbell & Hair, 1996; Miller et al., 2003; Suls, Martin & David, 1998).

The Agreeableness dimension refers to an individual's incentives to preserve peaceful interpersonal relations, and to reduce interpersonal disputes. (Graziano & Eisenberg, 1997; Jensen-Campbell & Graziano, 2001). Gleason et al. (2004) found evidence that agreeableness predicted aggressive behaviors by showing that agreeableness, when compared to self-reports and peer reports had a negative relationship to aggression; agreeableness had a negative relationship aggressive social

cognitions. An individual's self-regulation skills play a primary role in inhibiting aggressive tendencies (Gleason et al., 2004).

Bandura (1986) notes that the development and maturation of self-regulatory strategies allows individuals to be more deliberate, instead of reactive in their actions. Effortful control (EC) is a facet of temperament that is thought to govern the strength to tamp a dominant behavior in order to execute a subdominant response. This strategy is thought to mange other temperament systems of individuals (Kochanska, Murray, & Harlan, 2000; Rothbart & Bates, 1998; Rothbart, Ellis, Rosario Rueda, & Posner, 2003). Effortful control is thought to predispose an individual to development of agreeableness in adulthood.

Agreeableness

Bullying may be adaptive by means of prosocial and aggressive means to obtain goals (Hawley, Little, & Rodkin, 2007). Specifically, adolescents may use bullying to gain control over desired resources, or as a way of creating or maintaining strategic alliances with coveted adolescents (Book, Volk, & Hosker, 2012). Agreeableness is considered the personality dimension that is related to the rationale to sustain and preserve favorable interpersonal relationships. When an individual describes themselves or others, Agreeableness is the Big Five personality dimension that accounts for the most variance. Bullying studies in Italy have revealed that bully perpetration is associated with low agreeableness and high neuroticism (Menesini, Camodeca, & Nocentini, 2010). An American-based study showed a negative correlation between bullying and agreeableness, but no relationship between agreeableness and neuroticism (Bollmer, Harris, & Milich, 2006).

Agreeableness is also the dimension that appears to have a significant impact on the formation of self-regulating behaviors early in life (Gleason, Jensen-Campbell, & Richardson, 2004). Rothbart and Bates (1998) suggest that effortful control guides the typical maturation tasks underlying agreeableness and that anger, which is present throughout the lifespan, is an example of an emotion that loads on the Agreeableness dimension. Agreeableness is negatively linked to delinquency and antisocial personality (Robins, John, & Caspi, 1994). In comparison, children with high Agreeableness better negotiate conflict, work more cooperatively in a group setting (Jensen-Campbell & Graziano, 2001), and stifle negative responses during interactions with others (Tobin, Graziano, Vanman, & Tassinary, 2000).

Effortful Control

Effortful control is a construct that demonstrates distinct differences in the capacity to disallow dominant cognitive propensities in favor of subdominant tendencies (Eisenberg, Smith, Sadovsky, & Spinrad, 2004; Rothbart, 1989). Effortful control is thought of as a self-regulatory skill that is under voluntary control, such as shifting and focusing attention, while choosing a response (Terranova et al., 2008). The use of effortful control is linked to lower aggressive tendencies and reduced anger (Wilkowski & Robinson, 2008). Early deficits in effortful control are linked to the disruption of the development of social skills, including the ability to inhibit aggressive urges (Eisenberg & Fabes, 1992). Researchers (Posner & Rothbart, 2007; Rothbart & Bates, 2006) have established three general dimensions of temperament, which each include a set of more narrowly defined dimensions: (a) surgency-extraversion; (b) negative affectivity; and (c) effortful control. Surgency-extraversion includes facets of positive anticipation, activity

level, and sensation seeking. Negative affectivity includes the elements of fear, anger-frustration, and social discomfort. Effortful control includes dimensions of inhibitory control, attentional focusing, and perceptual sensitivity (Zentner & Bates, 2008). The model of Rothbart and colleagues (Posner & Rothbart, 2007; Rothbart & Bates, 2006) insinuates a connection of reactive and self-regulatory behaviors to neurobiological processes. A specific system of conceptually corresponding links occurs between key aspects of temperament and later elements of adjustment. The types of adjustment problems in later childhood, aggression and rule-breaking (externalizing) and anxiety and depression (Internalizing), appear to represent the distinct temperament attributes of early childhood (Rothbart & Bates, 2006).

Theoretical and literature-based support has been given linking higher effortful control with higher levels of agreeableness (Ahadi & Rothbart, 1994; Cumberland-Li, Eisenberg, & Reiser, 2004; Graziano & Eisenberg, 1997; Jensen-Campbell et al., 2002). Effortful control is considered a general resource that is employed by agreeable individuals to manage hostile thoughts (Meier & Robinson, 2004; Meier, Robinson & Wilkowski, 2006). Gottman, Katz, & Hooven (1997) suggest that children can learn effortful control skills from parents that respond appropriately to them during stressful times, which in-turn, helps them negotiate later pulls to anger and bullying (Carson & Parke, 1996; Gottman et al., 1997). In contrast, Eisenberg et al. (1999) noted that parents' who dismiss distress may in fact help to contribute to angry and aggressive tendencies by children who do not grow and develop skills related to effortful control.

Terranova, Morris, and Boxer (2008) gave the Early Adolescent Temperament Questionnaire to 124 middle school students to explore the role of fear reactivity and

effortful control on direct (overt) and indirect (relational) bullying behaviors. They found that students with low levels of fear reactivity and effortful control predicted a future increase in overt bullying. However, the results did not hold true for indirect (relational) bullying. The researchers speculated that although direct and indirect bullying were highly correlated, they formed by different processes, at least related to the variables used in their study.

Deficiencies in fear reactivity do not result in distress related to the possibility of suffering negative consequence for behaving aggressively. However, a deficiency in effortful control results in an inability to inhibit aggressive urges in order to behave in a more appropriate, socially acceptable manner (Frick & Morris, 2004). The disruption of the development of social skills that is implicated in children possessing low effortful control, may contribute to increased direct bullying. The heritability of direct physical bullying (Brendgen, Vitaro, Boivin, Dionne, & Pérusse, 2005), coupled with family factors that influence the development of physical bullying (Curtner-Smith, 2000; Olweus, 1978), indicate a need to pursue mediating factors. The idea that low effortful control contributes to bullying behavior is aligned with research that finds that bullies tend to be impulsive and possess low self-regulation skills. Low effortful control should result in children who have difficulty in controlling all forms of aggressive behavior, given their inability to regulate urges (Espelage et al., 2001). However, based on the findings in this particular study, the researchers concluded that children who use direct (bullying) behaviors lack the regulatory abilities to inhibit aggression and do not appear to fear negative repercussions of their behaviors, but do not find evidence when measuring relational bullying only (Terranova, Boxer, & Morris, 2008). The researchers concluded

that relational bullying was not hereditable and might be more influenced by social context and social relationships.

In a study of 8 to12 year-old children, Lengua, Bush, Kovacs, and Trancik (2007) examined parenting and environmental risk factors that contribute to low effortful control. Family income, neighborhood characteristics, family income level, negative life events, family conflict, quality of parenting, and parental depression were simultaneously related to low effortful control. Rothbart and Rueda (2005) suggested that the preschool period is an important period in the development of effortful control, and that effortful control is mediated by the mother's behavior. Spinrad et al. (2007) found that the mother's impact on a toddler's aggressive behavior decreases with the development of sophisticated self-regulation skills such that the relationship between parenting and aggressive behavior becomes more fully mediated by effortful control with increasing age.

Effortful control is also linked to increased resilience to deviant peers, depression, and deprived environment (Gardner, Dishion, & Connell, 2008). High effortful control may serve as a buffer to risk factors, promoting prosocial behavior, in spite of family and environmental factors that might otherwise contribute to aggressive behavior (Valiente et al., 2011). In this study, effortful control is hypothesized to mediate variables that have been identified in previous studies as contributing to aggressive behavior. Specifically, low agreeableness, high parent support for fighting, and low parental monitoring are each predicted to directly contribute to bullying behavior. It is speculated that effortful control would mediate this relationship.

Bullying and School Environment

Research on student attachment to school has consistently shown that emotional affection and enjoyment of school motivation is associated with increased adjustment related to social, emotional, and academic achievement (Hill & Werner, 2006). These research results are robust and can be generalized across race, nationality, and ethnicity in United States samples. Research studies also show that improvements to school climate have resulted in decreased rates of student misconduct, substance use, and school turmoil (Gottfredson, 1988).

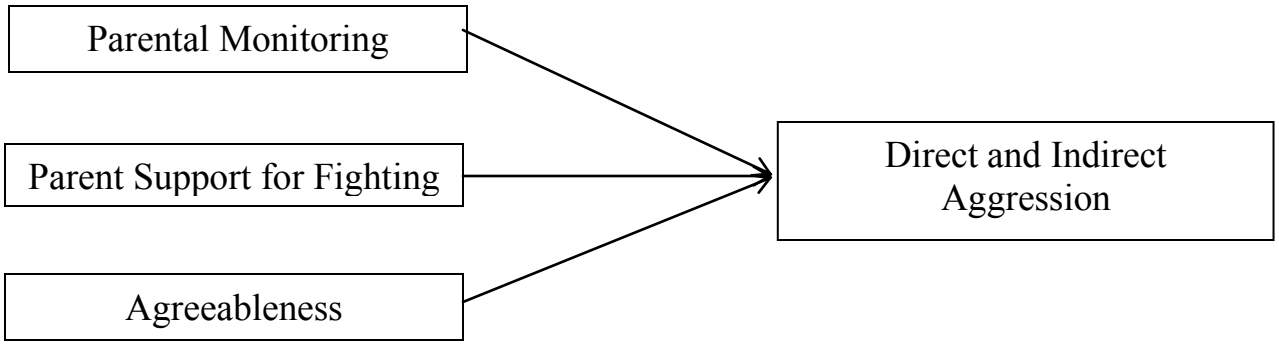
Theoretical Model of Mediation for Effortful Control on Bullying

As previously stated, various factors are thought to contribute to the development of direct and indirect aggression related to the perpetration of bullying in the schools. Current research in this area given significant weight on measuring the direct relationship between variables hypothesized to influence aggression and the actual perpetration of bullying. Aggression and bullying research has lacked focus on mediating factors and how indirect relationships influence bullying.

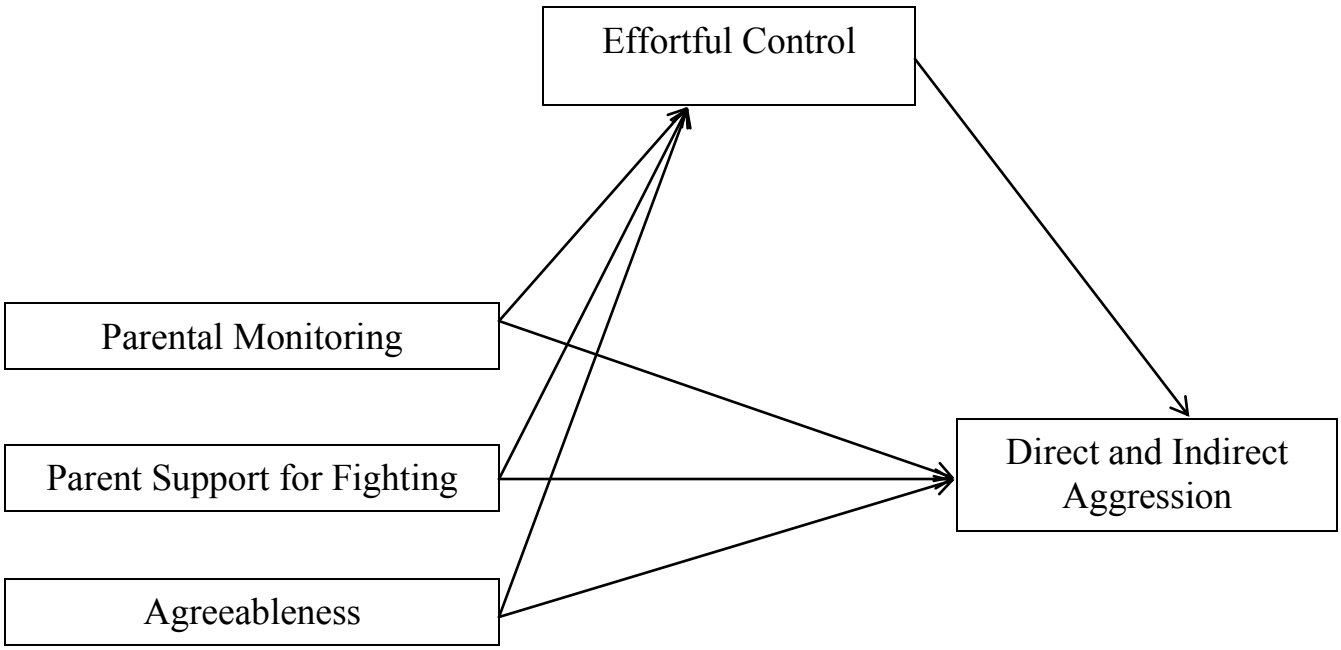
Effortful control as a mediating factor may be the mechanism through which children process the influences of personality, parental influences, and their environment that they experience. Additionally, a child's effortful control in any situation may determine if they act aggressively toward their peers. Given this, it is reasonable to assert that, if a child is agreeable, has high parental monitoring, low parental support for fighting, effortful control may not be a needed tool in curbing aggressive tendencies. However, if a child is low in agreeableness, low in parental monitoring, and/or has high parental support for fighting, effortful control may be the key to whether the child enacts aggressively or manages to cope in a nonaggressive manner. Effortful control may

explain the variation of aggressive behavior within high-risk population by explaining why some children act aggressively, while others do not. A child having high effortful control would be expected to perpetrate less bullying than an individual with low effortful control who otherwise had the same life circumstances. If significance for effortful control as a mediator of known bullying risk factors is found, it may provide impetus for further inquiry in the examination of effortful control as an intervention focus.

Though variables exist that have been found to directly influence bullying, the model proposed for this study suggests that the influence of bullying influencing variables on the perpetration of bullying follows an indirect route. Specifically, this theoretical model hypothesizes that effortful control acts as a filter between agreeableness, parental monitoring, and parent support for fighting on the perpetration of bullying. The theoretical framework and its relationship to the direct pathway model can be found in Figure 1.



a) Direct Pathway



b) Indirect/Mediated Pathway

Figure 1. Theoretical Model of Mediation for Effortful Control on Bullying.

Note: Theoretical model of mediation hypothesized in study (on the basis of Baron & Kenny, 1986). The direct pathway indicates the relationship between bullying- influencing variables and bullying perpetrated by middle school students. The indirect pathway proposes that effortful control mediates the relationship between the bullying- influencing factors and perpetration of bullying.

CHAPTER 3

METHODOLOGY

This chapter details the methods that were used to collect and analyze the data collected in this study. The discussions, by topic, are the following: restatement of the problem, research design, research questions, participants, instrumentation, data collection procedures, and data analysis.

Restatement of the Problem

The study examined the shared variables that contribute to direct and indirect bullying, specifically bullying and to explore the role of family context, and adolescent personality characteristics on predicting bullying behavior.

Research Design

This study used a nonexperimental, correlational, cross-sectional research design. This type of design was appropriate as the independent variables were not manipulated and no treatment or interventions were provided to the participants. Data were collected from students at Clintondale Middle School located in Macomb County Michigan. The purpose of using a cross-sectional research design was to examine developmental changes across middle school grade levels.

Participants

The sample was drawn from Clintondale Middle School (n=279) students in grades six, seven and eight. According to community demographics, the ethnicity of the students included: Caucasian (28%), African-American (68%), Asian (1%), and other (3%). As an indicator of socioeconomic status, 72% of students qualified for free or reduced lunch during the 2011/2012 school year.

An a priori power analysis using G*Power 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009) was completed to determine the appropriate sample size needed for a 2 x 3 multivariate analysis of variance. Using an effect size of .25 (medium) and an alpha level of .05, a sample of 250 was needed to achieve a power of .95. The sample for the present study of 278 middle school students was sufficient to obtain accurate results on the null hypotheses.

Measures

Five instruments were administered to all participants in a single packet along with a demographic survey. Counterbalancing of the instruments in the study packets was used to ensure that any affective responses on a particular instrument did not carry over into the administration of other instruments and influence scores.

Demographic Survey. A demographic survey was designed to gather information on students' grade, gender, and living arrangements. The instrument used forced-choice categories to ensure consistent responses from the students.

Bullying. Bullying was measured using Vernberg, Jacobs, and Hershberger's (1999) Peer Experiences Questionnaire (PEQ), an 18-item measure was used to assess the experiences of bullying (perpetration and victimization) among students in the areas of indirect and direct bullying in the past year. The Olweus (1999) definition of bullying guides the measure: "It is aggressive behavior or intentional harm doing which is carried out repeatedly and over time in an interpersonal relationship characterized by an imbalance of power" (p. 11). There are nine items that assess experiences of perpetration broken down by three questions for each bullying experience: direct bullying perpetration (e.g., "have you hit, kicked, or pushed a peer in a mean way?), and

indirect bullying perpetration (e.g. “have you teased a peer in a mean way?”). Nine items assess experiences of victimization broken down by three questions for each victimization experience: direct bullying victimization (e.g., “has a peer hit, kicked, or pushed you in a mean way?) and indirect bullying victimization (e.g. “has a peer teased you in a mean way?”).

Students’ responses to the 18-item questionnaire were made on a 5-point Likert-type scale ranging from “how often in the past school year…” 1 “never” to 5 “several times a week”. An overall score was computed for perpetration and victimization for indirect and direct aggression in the form of bullying.

Pearce, Boergers and Prinstein (2002) noted that items on the scale were significantly related to peer-report indicators of victimization and bullying (r between .34-.40, $p<.001$). Validity data from this measure note significant correlations for two samples between parent-reported and self-reported victimization (r between .36-.39, $p<.001$). Further validity data shows significant relationships between self-reported bullying and victimization and peer-reports of bullying and victimization (r between .20-.25, $p<.001$). The four subscales have the following internal consistencies, as measured by Cronbach’s alpha: Overt Aggression (.80), Relational Aggression (.77), Overt Victimization (.79), and Relational Victimization (.76; Pearce, Boergers, & Prinstein, 2002).

Parental Monitoring. The Parental Monitoring Scale (Small & Kerns, 1993) measures (eight items) the extent to which parents are informed about their adolescents’ actions, situation/location and friends. Using a 5-point Likert scale (1 = never to 5 = always) participants were asked to rate their perception of their parents’

monitoring. An example of a sample item is “My parents know who my friends are”. A total score is obtained by summing all responses. Higher scores indicate greater agreement with each of the statements, indicating greater parental monitoring. For example, a score of 30 would indicate very high monitoring and a score of 8 would be indicative of very low parental monitoring (Abbott, Hall, & Meredith, 2005).

Small and Kerns (1993) obtained an original Cronbach’s alpha of .87 ($F = 30.08$, $p < .001$, Discriminant Function Coefficient= -.50, $p < .001$) from a sample of 1,141 adolescent females. In a sample of 2,567 adolescents ages 13 to 19 from the Midwest, Luster and Small (1994) reported a Cronbach’s alpha of .90 ($F = 143.10$, $p < .001$, Discriminant Function Coefficient = -.348, $p < .001$) and in a subsequent study of 10,868 female adolescents, grades 7-12, the same researchers reported a Cronbach’s alpha of .77 ($F = 137.00$, $p < .001$, Discriminant Function Coefficient = -.291, $p < .001$). In another study of 300 Midwest adolescents, Abbott et al., (2005) found that parental monitoring was related to adolescent depression, high-risk behaviors, and parent-adolescent conflict. In their adolescent sample, $M = 41.90$, $SD = 5.60$, and Cronbach’s alpha was .87.

Li, Stanton, and Feigelman (2000), in their cross-sectional (three surveys) study of urban, low-income African-American adolescents (n=1159) ages 9-17 years, used the Parental Monitoring Scale and found a robust inverse correlation between parental monitoring and high risk behaviors (i.e., violence $r = .27$, $p < .0001$, school truancy $r = .28$, $p < .0001$, risk-taking/delinquency $r = .32$, $p < .0001$). Of interest, they found gender effects for the three studies ($F = 3.89$, $p < .001$, alpha = .70; $F = 3.99$, $p < .001$, $\alpha = .77$;

$F = 2.33$, $p < .05$, $\alpha = .73$), concluding that females in the study perceived themselves to be more highly monitored than their male counterparts.

Agreeableness. The Big Five Inventory (BFI) measures the Big Five dimensions: Neuroticism, Extraversion, Conscientiousness, Agreeableness, and Openness to Experience; each dimension is represented by six facets. The scale includes 44 items, consisting of short phrases. Participants were asked to indicate the extent to which they agree or disagree with a statement (spread form Strongly Disagree to Strongly Agree). Only items identified as contributing to the Agreeableness (nine statements) dimensions were used for this study, as they appear to be particularly associated with bullying (Gleason et al., 2004; Graziano, Jensen-Campbell, & Hair, 1996; Miller, Flory, Lynam, & Luekefield, 2003; Suls, Martin, & David, 1998). A sample item on the Agreeableness dimension includes “I am someone who tends to find fault with others”. Scaled scores are created by averaging the items for Agreeableness. The BFI is written at a fifth-grade reading level (Benet-Martìnez & John, 1998), and the scales have shown high internal consistency (.74), test-retest stability (.75), and clear factor structure (validity correlation = .44) (Rammstedt & John, 2007).

Gleason et al. (2004) used the Big Five Inventory in their study examining the link between personality and self-reported aggressive behavior. They used all five dimensions of the scale and found internal consistency that ranged from .69 to .78. Specifically, the internal consistency for Agreeableness was .75 (mean = 3.65; SD = .64; skewness = .32). In addition, a strong, substantial agreement exists between self- and peer-reports (DeYoung, 2006; Rammstedt & John, 2007).

Effortful Control. The Early Adolescent Temperament Questionnaire-Revised Short Form (EAT-R; Capaldi & Rothbart, 1992) was used to assess Effortful Control. The questionnaire is devised to help measure and describe the temperament and self-regulatory ability or young adolescent children (Capaldi & Rothbart, 1992). The original Early Adolescent Temperament Questionnaire (EATQ) began with 14 scales, was revised and eventually finished with 11 scales, with alpha levels: fear (.74), irritability (.69), shyness (.67), sadness (.74), high-intensity pleasure (.74), low-intensity pleasure (.79), sensitivity (.65), autonomic reactivity (.78), motor activation (.76), activity level (.78), and attention (.76). The development of the EATQ was conceptually based on the work of Eysenck (1967) and Zuckerman (1979). Two studies were employed in developing the scales. The first study had a sample of 97 middle school students (47 boys, 50 girls, ages 11-14). Discriminant validity was obtained by correlating the 138 remaining items obtained after scale internal consistency analysis with the scale scores. Scale homogeneity was then verified by running principal component factor analysis in each of the scales. The EAT-R revision process also included scales that measure depression and aggression to examine the relationships between temperament and traits of socialization (Ellis & Rothbart, 2001). The scales were given to 177 adolescents, age 10-16 to determine the reliability of the scales. Four factors were revealed in exploratory factor analysis: Negative Affect, Surgency, Affiliativeness, and Effortful Control. Depressed Mood and Aggression were predicted by high Negative Affect and low Effortful Control (Beta -.451, t= -6.45).

Each item is rated using a 5-point Likert-response format, with possible answers ranging from “Almost Always Untrue” to “Almost Always True.” Multiple regression has

revealed that low Effortful Control is a good predictor of aggression. The factors (scales) that positively load for Effortful Control demonstrate internal consistency reliability, including their respective coefficient alpha levels are Activation Control (.76,), Attention (.67), and Inhibitory Control (.69). All alpha levels are above the criterion level of .60 and test/retest correlations are above the criterion level .70. A negative correlation was obtained between effortful control and negative affectivity ($r = -0.38$, $p < .001$). Gender differences for the Effortful Control scales were not statistically significant. Thirteen items of the original 65-item scale contribute to Effortful Control in the EAT-R. These items were selected and included in the questionnaire.

Parental Support for Fighting. The Parental support for fighting and for nonviolence measure assesses students' perception of their parents' support for fighting and for nonviolent solutions to conflict (Orpinas et al., 1999). The scales intended use is for middle-school age children. Students respond yes or no to 10 declarative statements to indicate whether each was something they had heard from their parent(s). Five items on the scale consider aggressive solutions to conflict. The other five items on the scale consider peaceful solutions to conflict. Items were originally obtained from focus groups with middle schools students (Kelder et al., 1996; Orpinas et al., 2000). This measure was originally developed for the Students for Peace Project (Orpinas et al., 1999) and subsequently used for the Multisite Violence Prevention Project (MVPP) project (Miller-Johnson et al., 2004).

The researchers from the MVPP study administered confirmatory factor analysis testing to explore the benefit of using a one-factor (all 10 items) versus two-factor (aggressive versus nonaggressive solutions) model. Their analysis found that the two-

factor model resulted in a more suitable fit for the data. They found a negative correlation of -.45 for the two subscales, which is considered moderate (Miller-Johnson, Sullivan, Simon, & MVPP, 2004). The internal consistency of the total scale's scores (Cronbach's alpha) was .81 (Orpinas et al., 1999). In the MVPP study, the Cronbach's alpha for the Aggressive Solutions Scale was .62 and Non-aggressive Solutions Scale was .66.

Final results from the MVPP study identified parental communication regarding fighting as the strongest predictor of student violence (Pearson's $r = .50$, $p < .001$), reflected by a strong linear relationship between parent support for fighting and the number of aggressive behaviors per week, for both genders (boys n = 4187; girls n = 4147). Extreme categories of aggression differed by a factor of four. The mean aggression score for students with the strongest parental attitudes of supporting peace was 10 versus the mean aggression score of 40 for strongest parental attitudes for supporting fighting (Orpinas et al., 2000). The mean scores were significantly higher among middle school students who fought at school ($F = 637.40$, $p < .0001$), sustained injury from fighting ($F=249.3$, $p<.0001$), or carried weapons ($F = 1,443.00$, $p = .0001$), versus those students not involved in these types of incident. Four family factors: Parental monitoring, family structure, support for fighting, and relationship with parents) had a significant main effect for aggression scores, explaining approximately one-third of the obtained variance ($F = 7111.70$, $p < .0001$, $R^2 = .30$). with parental support for fighting accounting for 14% of the variance score, ($\beta = .41$). A multiple logistic regression model for fighting correctly identified 78% of middle school students that

fought at school, 85% of students that sustained injuries from fighting, 77% of students who subsequently carried weapons (Orpinas et al., 1999).

Procedures

Permission was obtained from the Principal of the middle school. The study was also reviewed and approved by the Human Investigation Committee at Wayne State University (Appendix B). The list of potential student participants for this study was obtained from enrollment data from the middle school.

A brief description of the study including a research information sheet was mailed to the homes to all possible participants' parents/guardians describing the study and its purposes, including its benefits to school and students (see Appendix C). The researcher provided a contact e-mail address, a mailing address, and a phone number in case the parent/guardian wished to learn more about the study. Parents/guardians were asked to send the consent form back to the researcher only if they did not want their child to participate in the study.

A total of 301 letters were mailed to the parents. Of this number, three parents signed and returned the consent form indicating they did not agree to allow their children to participate in the study. Over the course of two days, 17 participants were absent from school. Surveys with missing data on self-reported grades and the scaled variables were subjected to "mean substitution" as a way of calculating replacement values (Hair et al., 2006). Specifically, the mean value of the specific variable was calculated for all valid responses. This value was then substituted for the missing data. Nine participants did not indicate their ethnicity and an additional 13 participants did not indicate if they were eligible to participate in the free or reduced lunch program. These

students were removed from the study. After these deletions, 259 (86.0%) students of the possible sample (N = 301) had complete data on all measures and were included in the statistical analyses to address the research questions and test the hypotheses.

The primary investigator read aloud a script describing directions for the survey and explaining that student participation was voluntary and responses would be anonymous (see Appendix A for the script). The researcher distributed the student assent form to provide additional information to the students regarding the study, their participation. The student assent followed the requirements of the HIC at Wayne State University. Students who were willing to participate in the study did not have to sign the assent form, and were told to retain the copy for their records. The students were told that the return of their completed surveys was evidence of their willingness to participate in the study. All students who received assent forms participated in the study.

The counterbalanced surveys were administered at the middle school in classrooms by the primary investigator. Surveys were given during each Social Studies class on two school days. The three students whose parents returned the research information sheet declining participation were allowed to work on assignments or silently read in their classrooms during administration of the surveys. Students' name did not appear on any forms, nor was any one person able to be traced back to a particular survey. Administration of the surveys took approximately 20 minutes. Following completion of the surveys, students placed their surveys in a sealed envelope to safeguard their confidentiality further. All surveys were kept in a locked cabinet at the primary investigator's office.

Data Analysis

The resulting data set was analyzed using IBM-SPSS-Windows version 21. The data analyses were divided into three sections. The first section used descriptive statistics to provide information on each of the selected scales and subscales. The purpose of this analysis was to provide the reader with baseline data to understand the extent to which students were positive or negative about each of the scales. The second section provided a profile of the students by grade and gender using measures of central tendency and dispersion. The third section addressed each of the research questions using inferential statistical analyses that include factorial analysis of variance, Pearson product moment correlations and multiple linear regression analyses. All decisions on the statistical significance of the findings were made using a criterion alpha level of .05. Table 1 presents the statistical analyses that were used to address each research question.

Table 1

Statistical Analysis

Research Questions & Hypotheses	Variables	Statistical Analysis
1) Are there gender and grade differences in perpetrator direct and indirect bullying experiences?		
$H_{1.1}$: Females will report more indirect bullying for perpetration than males. $H_{1.2:}$ Males will report more direct bullying for perpetration than females. $H_{1.3}$: Sixth graders will report more bullying experiences than seventh graders and seventh graders will report more direct and indirect bullying experiences than eighth graders.	<u>Dependent Variables:</u> Bullying experiences -direct, indirect -Perpetration -Victimization Cyberbullying -Victim -Perpetrator <u>Independent Variables:</u> Gender (M, F) Grade (6, 7, 8)	A multivariate analysis of variance (MANOVA) was used to determine if bullying experiences differed by gender. If a statistically significant result is obtained for the omnibus F test, the between subjects effects were be examined to determine which of the subscales are contributing to the statistically significant results. If a difference is found for comparisons by gender, the mean scores were be examined to determine the direction of the difference. If differences are found for grade, Scheffé a posteriori tests were used to compare all possible pairwise comparisons to determine which of the groups are contributing to the significant differences. If the interaction effect is statistically significant, simple effects analyses were used to determine which of the groups are differing.
2) Can parental monitoring, parental support for fighting, agreeableness, and effortful control be used to predict bullying (direct, indirect, cyber) perpetration?		
$H_{2.1}$: Parental monitoring, parental support for fighting, agreeableness, and effortful control can be used to predict bullying (direct) perpetration. $H_{2.2}$: Parental monitoring, parental support for fighting, agreeableness, and effortful control can be used to predict bullying (indirect) perpetration.	<u>Criterion Variable:</u> Bullying (direct, indirect, cyber) <u>Predictor Variables</u>: Parental monitoring Parental Support for Fighting Agreeableness Effortful Control	Separate multiple linear regression analyses were used to determine if parental monitoring, parental support for fighting, agreeableness, and effortful control can be used to predict direct and indirect bullying and cyberbullying.

Research Questions & Hypotheses	Variables	Statistical Analysis
$H_{2.3}$: Parental monitoring, parental support for fighting, agreeableness, and effortful control can be used to predict cyberbullying perpetration.		
3) Does effortful control predict perpetration of bullying (direct, indirect, cyber)?		
$H_{3.1}$: A negative relationship exists between effortful control and bullying (direct) perpetration. $H_{3.2}$: A negative relationship exists between effortful control and bullying (indirect) perpetration. $H_{3.2}$: A negative relationship exists between effortful control and cyberbullying perpetration	Independent Variables: Effortful Control Dependent Variable: Direct, indirect, and cyber bullying	Pearson product moment correlations were used to determine if effortful control can be used to predict perpetration of direct and indirect bullying and cyberbullying.
4) Does effortful control mediate the relationship between parental monitoring, parental support for fighting, and agreeableness and perpetration of bullying (direct, indirect, cyber)?		
$H_{4.1}$: Effortful control mediates the relationship between parental monitoring and perpetration of bullying (direct, indirect, and cyber). $H_{4.2}$: Effortful control mediates the relationship between parental support for fighting and perpetration of bullying (direct, indirect, and cyber). $H_{4.3}$: Effortful control mediates the relationship between agreeableness and perpetration of bullying (direct, indirect, and cyber).	Criterion Variable: Direct and Indirect Bullying. Predictor Variable: Parental Monitoring Parental Support for fighting Agreeableness Mediating Variable Effortful Control	A mediation analysis was used to examine the predictive influence of parental monitoring, Parental Support for fighting, and Agreeableness on perpetration of direct and indirect bullying with Effortful Control included as a potential mediating variable.

CHAPTER 4

RESULTS

The results of the data analyses that were used to describe the sample and address the research questions and associated hypotheses are presented in this chapter. The chapter is divided into three sections. The first section provides a profile of the sample, with the second section providing descriptive information on the scaled variables. Inferential statistical analyses were used to address the research questions and test the hypotheses in the third section.

The present study identified shared predictor variables of direct bullying and indirect bullying that helps explain and predict bullying, regardless of form. School bullying is the subset of bullying that was measured in this study. The predictor variables of interest were: 1) adolescent perception of parental monitoring; and 2) adolescent perception of parental support for fighting, 3) adolescent effortful control; 4) adolescent agreeableness.

A total of 301 students who met the criteria for inclusion in the study were asked to participate. Of this number, 259 completed the surveys for a response rate of 86.0%.

Description of the Participants

The students in the study answered a short demographic survey. The responses to the items regarding their personal characteristics were summarized using frequency distributions. Table 2 presents the results of this analysis.

Table 2

Frequency Distributions: Personal Characteristics of the Students

Personal Characteristics	Number	Percentage
Gender		
Male	130	50.2
Female	129	49.8
Total	259	100.0
Ethnicity		
African American	128	49.5
Asian American	4	1.5
Caucasian	62	23.9
Hispanic/Latino	5	1.9
Multi-racial	60	23.2
Total	259	100.0
Student lives with		
Mother and father	112	43.2
Mother only	109	42.2
Father only	15	5.8
Grandparent	5	1.9
Other	18	6.9
Total	259	100.0

The majority of students in the studies reported their gender as male (n = 130, 50.2%). The ethnicity of the largest group of students (n = 128, 49.5%) were African American, followed by Caucasian (n = 62, 23.9%). Sixty (23.2%) students reported they were multi-racial. Most of the students were living with their mothers and fathers (n = 112, 43.2%), with the next largest group indicating they lived with their mothers only (n = 109, 42.2%). Five (1.9%) students reported they were living with the grandparents.

The students were asked to provide information regarding their school variables. Their responses were summarized using frequency distributions for presentation in Table 3.

Table 3

Frequency Distributions: School Variables

School Variables	Number	Percentage
Grade in school		
Sixth	88	34.0
Seventh	65	25.1
Eighth	106	40.9
Total	259	100.0
Receive Free/Reduced Lunch		
Yes	204	78.8
No	55	21.2
Total	259	100.0
English/Language Arts		
A	111	42.9
B	82	31.7
C	42	16.2
D	11	4.2
F	13	5.0
Total	259	100.0
Math		
A	43	16.6
B	83	32.0
C	74	28.6
D	27	10.4
F	32	12.4
Total	259	100.0
Science		
A	64	24.7
B	78	30.2
C	64	24.7
D	27	10.4
F	26	10.0
Total	259	100.0
Social Studies		
A	124	47.8
B	84	32.5
C	29	11.2
D	14	5.4
F	8	3.1
Total	259	100.0

The largest group of students (n = 106, 40.9%) indicated they were in the eighth grade, with 88 (34.0%) reporting they were in the sixth grade. Sixty-five (25.1%) students were in the seventh grade. The majority of students (n = 204, 78.8%) indicated

that they were receiving free/reduced lunch. The largest group of students (n = 111, 42.9%) reported they were receiving an A in English/language arts, with 83 (32.0%) indicating a B in math. Seventy-eight (30.2%) students were receiving a B in science, and 124 (47.8%) reported their grades in social studies was an A.

Scaled Variables

The scaled variables were scored using the authors' protocols. Descriptive statistics were used to summarize these variables. Table 4 presents results of these analyses.

Table 4

Descriptive Statistics – Scaled Variables

					Actual Range		Possible Range	
Scale	N	Mean	SD	Median	Minimum	Maximum	Minimum	Maximum
Victim – Indirect Bullying	259	1.61	.79	1.40	1.00	5.00	1.00	5.00
Victim – Direct Bullying	259	1.45	.71	1.25	1.00	4.75	1.00	5.00
Perpetrator – Indirect Bullying	259	1.35	.52	1.20	1.00	5.00	1.00	5.00
Perpetrator – Direct Bullying	259	1.27	.53	1.00	1.00	5.00	1.00	5.00
Victim – Cyberbullying	259	1.21	.54	1.00	1.00	5.00	1.00	5.00
Perpetrator - Cyberbullying	259	1.13	.47	1.00	1.00	5.00	1.00	5.00
Effortful control	259	2.93	.61	2.92	1.00	4.54	1.00	5.00
Agreeableness	259	3.66	.66	3.67	2.11	5.00	1.00	5.00
Parental Monitoring	259	3.72	.98	3.88	1.00	5.00	1.00	5.00
Parental support for fighting	259	1.66	1.36	1.00	0.00	5.00	0.00	5.00

The mean scores for the victim – indirect bullying (m = 1.61, sd = .79) and victim – direct bullying (m = 1.45, sd = .71) were generally higher than the mean scores for the perpetrator – indirect bullying (m = 1.35, sd = .52) and perpetrator – direct bullying (m = 1.27, sd = .53). Similar results were obtained for cyberbullying, with victim (m = 1.21, sd = .54) having slightly higher mean scores than perpetrator (m = 1.13, sd = .47). For the bullying scales, high scores indicate more bullying behaviors. Higher mean scores were obtained for agreeableness (m = 3.66, sd = .66) than for effortful control (m = 2.93, sd = .61). Higher scores on agreeableness and effortful control are indicative of higher levels of these scales. The mean score for parental monitoring (m = 3.72, sd = .98) was higher than the mean score for parental support for fighting (m = 1.66, sd = 1.36). Higher scores on parental monitoring reflect that students perceive their parents are monitoring their behavior, while higher scores on parental support for fighting provide evidence that

parents are supportive of their children solving problems by aggressive behaviors, including fighting.

An intercorrelation matrix for the scaled variables was obtained using Pearson product moment correlations. The results of this analysis are presented in Table 5.

Table 5

Intercorrelation Matrix – Scaled Variables (N = 259)

	1	2	3	4	5	6	7	8	9	10
1	--									
2	.73**	--								
3	.19**	.19**	--							
4	.18**	.29**	.81**	--						
5	.40**	.30**	.46**	.40**	--					
6	.04	.04	.74**	.68**	.42**	--				
7	.04	.01	.04	.08	.10	-.01	--			
8	.01	-.06	-.04	-.07	-.01	-.03	.15*	--		
9	.02	-.02	-.07	-.08	.01	-.07	.19*	.41**	--	
10	-.11	.01	.01	.06	.02	.07	-.11	-.36**	-.30**	--

*p < .05; **p < .01
Note: 1 = Victim Indirect Bullying; 2 = Victim Direct Bullying; 3 = Perpetrator Indirect Bullying; 4 = Perpetrator Direct Bullying; 5 = Victim Cyberbullying; 6 = Perpetrator Cyberbullying; 7 = Effortful Control; 8 = Agreeableness; 9 = Parental Monitoring; 10 = Parental Support for Fighting

Statistically significant correlations were obtained among the victim and perpetrator bullying and cyberbullying variables. However, when the bullying and cyberbullying variables were correlated with effortful control, agreeableness, parental monitoring, and parental support for fighting, the results were not statistically significant. Statistically significant correlations in a positive direct were obtained for the relation between effortful control and agreeableness ($r = .15$, $p < .05$) and parental monitoring ($r = .19$, $p < .05$), but effortful control was not significantly correlated with parental support

for fighting. A statistically significant correlation in a positive direction was obtained between agreeableness and parental control ($r = .41$, $p < .01$) and in a negative direction for agreeableness and parental support for fighting ($r = -.36$, $p < .01$). A statistically significant correlation in a negative direction was found for the relationship between parental monitoring and parental support for fighting ($r = -.30$, $p < .01$).

Research Questions and Hypotheses

Four research questions and associated hypotheses were developed for this study. Each of these questions were addressed using inferential statistical analyses, with all decisions on the statistical significance made using a criterion alpha level of .05.

Research question 1. Are there gender and grade differences in perpetrator direct and indirect bullying experiences?

$H_{1.1}$: Females will report more indirect bullying for perpetration than males.

$H_{1.2:}$ Males will report more direct bullying for perpetration than females.

$H_{1.3}$: Sixth graders will report more bullying experiences than seventh graders and seventh graders will report more direct and indirect bullying experiences than eighth graders.

A 3 x 2 multivariate analysis of variance (MANOVA) was used to determine if victim and perpetrator direct and indirect bullying and cyberbullying differed by students' grade and gender. Table 6 presents results of this analysis.

Table 6

3 x 2 Multivariate Analysis of Variance – Victim and Perpetrator Direct and Indirect Bullying and Cyberbullying by Grade and Gender (N = 259)

Source	Hotelling's Trace	F Ratio	DF	Sig	η^2
Grade	.05	.97	12, 494	.477	.02
Gender	.13	5.44	6, 248	<.001	.12
Grade x Gender	.05	1.07	12, 494	.380	.03

The results of the 3 x 2 MANOVA provided evidence of a statistically significant difference by gender, F (6, 248) = 5.44, p <.001, η^2 = .12. Differences by grade level was not statistically significant, F (12, 494) = .97, p = .477, η^2 = .02 The interaction effect between grade and gender was not statistically significant, F (12, 496) = 1.07, p = .380, η^2 = .03. These findings indicated that one or more of the dependent variables are differing between male and female students. To determine which of the scales were contributing to the statistically significant results, the one-way analyses of variance for gender were examined. Table 7 presents results of these analyses.

Table 7

One-Way Analyses of Variance - Victim and Perpetrator Direct and Indirect Bullying and Cyberbullying by Gender

Gender	Sum of Squares	DF	Mean Square	F Ratio	Sig	η^2
Victim – Indirect bullying	.43	1, 253	.43	.68	.411	.01
Victim – Direct bullying	2.17	1, 253	2.17	4.35	.038	.02
Perpetrator – Indirect bullying	.10	1, 253	.10	.35	.552	.01
Perpetrator – Direct bullying	.02	1, 253	.02	.06	.816	.01
Cyberbullying – Victim	2.35	1, 253	2.35	8.09	.005	.03
Cyberbullying - Perpetrator	.05	1, 253	.05	.24	.623	.01

Two subscales, victim – direct bullying ($F [1, 253] = 5.89$, $p < .016$, $\eta^2 = .02$) and cyberbullying – victim ($F [1, 253] = 8.09$, $p < .005$, $\eta^2 = .03$), differed significantly between the male and female students. This result indicated that male and female students differed in their perceptions of victim – direct bullying and cyberbullying – victim. The remaining subscales did not differ between the male and female students. To explore these results further, descriptive statistics were obtained for the six subscales by grade and gender. Table 8 presents these results.

Table 8

Descriptive Statistics – Bullying and Cyberbullying by Grade and Gender (N = 259)

Subscale	Number	Mean	SD
Victim – Indirect bullying			
Sixth grade	88	1.68	.89
Seventh grade	65	1.62	.79
Eighth grade	106	1.55	.71
Victim – Direct bullying			
Sixth grade	88	1.55	.79
Seventh grade	65	1.37	.72
Eighth grade	106	1.41	.64
Perpetrator – Indirect bullying			
Sixth grade	88	1.28	.34
Seventh grade	65	1.32	.61
Eighth grade	106	1.42	.57
Perpetrator – Direct bullying			
Sixth grade	88	1.22	.37
Seventh grade	65	1.26	.64
Eighth grade	106	1.33	.57
Cyberbullying – Victim			
Sixth grade	88	1.19	.62
Seventh grade	65	1.21	.57
Eighth grade	106	1.22	.46
Cyberbullying – Perpetrator			
Sixth grade	88	1.05	.20
Seventh grade	65	1.11	.52
Eighth grade	106	1.20	.58
Victim – Indirect bullying			
Male	130	1.58	.74
Female	129	1.65	.85
Victim – Direct bullying			
Male	130	1.55	.79
Female	129	1.34	.61
Perpetrator – Indirect bullying			
Male	130	1.37	.50
Female	129	1.35	.54
Perpetrator – Direct bullying			
Male	130	1.28	.55
Female	129	1.26	.51
Cyberbullying – Victim			
Male	130	1.11	.28
Female	129	1.30	.71
Cyberbullying – Perpetrator			
Male	130	1.12	.43
Female	129	1.14	.51

Subscale	Number	Mean	SD
Victim – Indirect bullying			
Sixth grade x Male	45	1.73	.91
Sixth grade x Female	43	1.63	.86
Seventh grade x Male	33	1.50	.62
Seventh grade x Female	32	1.75	.94
Eighth grade x Male	52	1.50	.63
Eighth grade x Female	54	1.60	.79
Victim – Direct bullying			
Sixth grade x Male	45	1.72	.94
Sixth grade x Female	43	1.37	.55
Seventh grade x Male	33	1.37	.70
Seventh grade x Female	32	1.36	.75
Eighth grade x Male	52	1.51	.69
Eighth grade x Female	54	1.31	.57
Perpetrator – Indirect bullying			
Sixth grade x Male	45	1.31	.30
Sixth grade x Female	43	1.25	.39
Seventh grade x Male	33	1.32	.49
Seventh grade x Female	32	1.32	.73
Eighth grade x Male	52	1.45	.62
Eighth grade x Female	54	1.39	.53
Perpetrator – Direct bullying			
Sixth grade x Male	45	1.18	.28
Sixth grade x Female	43	1.25	.45
Seventh grade x Male	33	1.26	.61
Seventh grade x Female	32	1.26	.68
Eighth grade x Male	52	1.39	.66
Eighth grade x Female	54	1.27	.46
Cyberbullying – Victim			
Sixth grade x Male	45	1.07	.18
Sixth grade x Female	43	1.31	.85
Seventh grade x Male	33	1.11	.29
Seventh grade x Female	32	1.32	.74
Eighth grade x Male	52	1.15	.33
Eighth grade x Female	54	1.29	.55
Cyberbullying – Perpetrator			
Sixth grade x Male	45	1.07	.26
Sixth grade x Female	43	1.04	.11
Seventh grade x Male	33	1.05	.22
Seventh grade x Female	32	1.16	.71
Eighth grade x Male	52	1.20	.61
Eighth grade x Female	54	1.20	.55

Male students (m = 1.55, sd = .79) had significantly higher scores for victim – direct bullying than female students (m = 1.34, sd = .61). A statistically significant difference was found for the subscale measuring cyberbullying – victim, with female students (m = 1.30, sd = .71) having significantly higher scores than male students

(m = 1.11, sd = .28). The remaining comparisons by gender and grade, as well as for the interaction between grade and gender were not statistically significant.

Based on the mixed findings on these analyses, the null hypothesis for no difference by grade was retained, while the null hypothesis for gender was rejected. The hypothesis for the interaction of grade and gender was retained.

Research question 2. Can parental monitoring, parental support for fighting, agreeableness, and effortful control be used to predict bullying (direct, indirect, cyber) perpetration?

$H_{2.1}$: Parental monitoring, parental support for fighting, agreeableness, and effortful control can be used to predict bullying (direct) perpetration.

Multiple linear regression analysis was used to determine which of the predictor variables (parental monitoring, parental support for fighting, agreeableness, and effortful control) could be used to predict the criterion variable (bullying [direct] perpetration). An enter command was used to enter all predictor variables simultaneously. The results of this analysis are presented in Table 9.

Table 9

Multiple Linear Regression Analysis: Bullying (Direct) Perpetration

Predictor Variable	Constant	b-Weight	β-Weight	t-Value	Sig
Effortful control	1.26	.09	.11	1.65	.101
Agreeableness		-.03	-.04	-.62	.535
Parental monitoring		-.04	-.07	-1.01	.315
Parental support for fighting		.01	.03	.48	.632

Multiple R	.14
Multiple R^2	.02
F Ratio	1.23
DF	4, 254
Sig	.301

None of the four predictor variables entered the multiple linear regression equation, indicating they were not statistically significant predictors of bullying (direct) perpetration. As a result of the nonsignificant findings, the null hypothesis was not rejected.

$H_{2.2}$: Parental monitoring, parental support for fighting, agreeableness, and effortful control can be used to predict bullying (indirect) perpetration.

A multiple linear regression analysis was used to determine if bullying (indirect) perpetration could be predicted from the predictor variables (parental monitoring, parental support for fighting, agreeableness, and effortful control). The predictor variables were entered simultaneously into the multiple linear regression equation. The results of this analysis are presented in Table 10.

Table 10

Multiple Linear Regression Analysis: Bullying (Indirect) Perpetration

Predictor Variable	Constant	b-Weight	β-Weight	t-Value	Sig
Effortful control	1.40	.05	.05	.83	.408
Agreeableness		-.01	-.02	-.25	.803
Parental monitoring		-.04	-.07	-1.00	.319
Parental support for fighting		.01	.01	.10	.924

Multiple R	.09
Multiple R^2	.01
F Ratio	.49
DF	4, 254
Sig	.742

None of the predictor variables entered the multiple linear regression equation, indicating they were not statistically significant predictors of bullying (indirect) perpetration. Based on these findings, the null hypothesis is retained.

$H_{2.3}$: Parental monitoring, parental support for fighting, agreeableness, and effortful control can be used to predict cyberbullying perpetration.

A multiple linear regression analysis was used to determine which of the predictor variables, parental monitoring, parental support for fighting, agreeableness, and effortful control, could be used to predict cyberbullying perpetrator. The predictor variables were entered into the multiple linear regression analysis using the enter command. Table 11 presents results of this analysis.

Table 11

Multiple Linear Regression Analysis: Cyberbullying Perpetration

Predictor Variable	Constant	b-Weight	β-Weight	t-Value	Sig
Effortful control	1.13	.01	.01	.216	.829
Agreeableness		.01	.02	.217	.828
Parental monitoring		-.03	-.06	-.843	.400
Parental support for fighting		.02	.06	.819	.413

Multiple R	.09
Multiple R^2	.01
F Ratio	.47
DF	4, 274
Sig	.761

None of the predictor variables entered the multiple linear regression equation indicating they were not statistically significant predictors of cyberbullying perpetrator. As a result of the lack of statistically significant outcomes, the null hypothesis is retained.

Research Question 3: Does effortful control predict perpetration of bullying (direct, indirect, cyber)?

$H_{3.1}$: A negative relationship exists between effortful control and bullying (direct) perpetration.

$H_{3.2}$: A negative relationship exists between effortful control and bullying (indirect) perpetration.

$H_{3.3}$: A negative relationship exists between effortful control and cyberbullying perpetration

Pearson product moment correlations were used to examine the strength and direction of the relationships between effortful control and direct and indirect bullying, and cyberbullying perpetration. Results of these analyses are presented in Table 12.

Table 12

Pearson Product Moment Correlations: Effortful Control and Direct, Indirect, and Cyberbully Perpetration

Bullying Perpetration	n	r	Sig
Direct	259	.04	.561
Indirect	259	.08	.193
Cyber	259	-.01	.988

The results of the correlation analysis provided no evidence of statistically significant correlations between effortful control and direct, indirect, and cyberbullying perpetration. Based on the lack of significance, the null hypothesis of no relationship is retained.

Research Question 4. Does effortful control mediate the relationship between parental monitoring, parental support for fighting, and agreeableness and perpetration of bullying (direct, indirect, cyber)?

$H_{4.1}$: Effortful control mediates the relationship between parental monitoring and perpetration of bullying (direct, indirect, and cyber).

$H_{4.2}$: Effortful control mediates the relationship between parental support for fighting and perpetration of bullying (direct, indirect, and cyber).

$H_{4.3}$: Effortful control mediates the relationship between agreeableness and perpetration of bullying (direct, indirect, and cyber).

Pearson product moment correlations were used to create a correlation matrix to examine the relationships between predictor variables (parental monitoring, parental support for fighting, and agreeableness) and criterion variables (perpetration [direct, indirect, and cyberbullying]). Mediation analyses would be completed if the predictor variables and criterion variables were significantly related. Table 13 presents the intercorrelation matrix.

Table 13

Intercorrelation Matrix: Predictor and Criterion Variables

	Criterion Variables								
	Direct Bullying			Indirect Bullying			Cyberbullying		
Predictor Variables	n	r	Sig	n	r	Sig	n	r	Sig
Agreeableness	259	-.07	.273	259	-.04	.516	259	-.03	.671
Parental Monitoring	259	-.08	.209	259	-.07	.266	259	-.07	.282
Parental Support for Fighting	259	.06	.349	259	.03	.649	259	.07	.285

No statistically significant correlations were obtained between direct and indirect bullying and cyberbullying and agreeableness, parental monitoring, and parental support for fighting. As a result of the lack of statistically significant relations between the predictor and criterion variables, no mediation analyses were completed.

Summary

The results of the data analyses that were used to describe the sample and test the hypotheses have been presented in this chapter. A discussion of these findings, along with limitation and suggestions for further research are presented in Chapter 5.

CHAPTER 5

DISCUSSION

The aim of the present study was to construct a theoretical framework to determine if effortful control had a mediating influence between bullying influencing variables and direct and indirect bullying. Specifically, this study examined the extent to which effortful control mediates the impact that known bullying influencing variables (e.g., parental monitoring, parent support for fighting, agreeableness) has on the perpetration of direct and indirect bullying.

Though variables exist that have been found to have a direct influence on direct and indirect bullying behavior, the model for this study suggested that the perpetration of bullying follows an indirect route. Specifically, this theoretical model hypothesized that effortful control was a mediator between agreeableness, parental monitoring, and parent support for fighting on the perpetration of bullying.

Description of the Participants

A total of 259 middle school students participated in the study. Of this number, 130 (50.2%) were male and 129 (49.8%) were female. Most of the students (n = 128, 49.5%) reported their ethnicity as African American, with 62 (23.9%) indicating they were Caucasian. The greatest number of students were living with both biological parents (n = 112, 43.2%), followed by students who were living only with their mothers (n = 109, 42.2%). The students were in the sixth (n = 88, 34.0%), seventh (n = 65, 25.1%), and eighth grades (n = 106, 40.9%), with the majority qualifying for free or

reduced lunch programs (n = 204, 78.8%). The students self-reported grades in English/language arts, math, science, and social studies.

Research Questions and Hypotheses

Four research questions and associated hypotheses were developed for the study. Each of these questions were addressed using inferential statistical analyses, with all decisions on the statistical significance made using a criterion alpha level of .05.

Research question 1: Are there gender and grade differences in perpetrator direct and indirect bullying experiences?

$H_{1.1}$: Females will report more indirect bullying for perpetration than males.

$H_{1.2:}$ Males will report more direct bullying for perpetration than females.

$H_{1.3}$: Sixth graders will report more bullying experiences than seventh graders and seventh graders will report more direct and indirect bullying experiences than eighth graders.

A 3 x 2 multivariate analysis of variance (MANOVA) was used to determine if victim and perpetrator direct and indirect bullying and victim and perpetrator cyberbullying differed among students relative to their grade in school and gender. Results of this analysis provided support of statistically significant differences in students by gender. Further examination of the subscales indicated that victim – direct bullying differed between the male and female students, with male students having significantly higher scores than females. A statistically significant difference was found for cyberbullying – victim, with females having significantly higher scores than males. No statistically significant differences were found for grade level when the four subscales were considered separately. The interaction between grade and gender was not statistically significant.

Research question 2. Can parental monitoring, parental support for fighting, agreeableness, and effortful control be used to predict bullying (direct, indirect, cyber) perpetration?

$H_{2.1}$: Parental monitoring, parental support for fighting, agreeableness, and effortful control can be used to predict bullying (direct) perpetration.

$H_{2.2}$: Parental monitoring, parental support for fighting, agreeableness, and effortful control can be used to predict bullying (indirect) perpetration.

$H_{2.3}$: Parental monitoring, parental support for fighting, agreeableness, and effortful control can be used to predict cyberbullying perpetration.

Separate multiple linear regression analyses were used to determine if parental monitoring, parental support for fighting, agreeableness, and effortful control (predictor variables) could be used to predict direct and indirect bullying perpetration and cyberbullying perpetration (criterion variables). None of the predictor variables were statistically significant predictors of the criterion variables indicating they were not statistically significant predictors of direct and indirect bullying perpetration and cyberbullying perpetration.

Research question 3. Does effortful control predict perpetration of bullying (direct, indirect, cyber)?

$H_{3.1}$: A negative relationship exists between effortful control and bullying (direct) perpetration.

$H_{3.2}$: A negative relationship exists between effortful control and bullying (indirect) perpetration.

$H_{3.2}$: A negative relationship exists between effortful control and cyberbullying perpetration

Pearson product moment correlations were used to determine the strength and direction of the relationships between effortful control and direct and indirect bullying perpetration and cyberbullying perpetration. None of the obtained correlation

coefficients were statistically significant, indicating effortful control could not be used to predict direct and indirect bullying perpetration and cyberbullying perpetration.

Research question 4. Does effortful control mediate the relationship between parental monitoring, parental support for fighting, and agreeableness and perpetration of bullying (direct, indirect, cyber)?

$H_{4.1}$: Effortful control mediates the relationship between parental monitoring and perpetration of bullying (direct, indirect, and cyber).

$H_{4.2}$: Effortful control mediates the relationship between parental support for fighting and perpetration of bullying (direct, indirect, and cyber).

$H_{4.3}$: Effortful control mediates the relationship between agreeableness and perpetration of bullying (direct, indirect, and cyber).

Pearson product moment correlations were used to determine the strength and direction of the relationships between perpetration of bullying (direct, indirect, and cyber) and parental monitoring, parental support for fighting, and agreeableness. One statistically significant correlation was obtained between cyberbullying and parental support for fighting. The remaining correlations were not statistically significant. As a result of the nonsignificant findings between the predictor and criterion variables, mediation analysis was not completed.

Discussion

Hypotheses for this study were based on theory and the current literature on aggression and bullying. Internal and external validity issues (Campbell & Stanley, 1966) may have tempered the lack of support for the study hypotheses. Aggression and bullying literature is hampered by inconsistencies in defining aggression and bullying, and further complicated by the attempt to classify bullying as direct, indirect, and cyber. The operational definition of bullying is further complicated by the variability found in bullying measures. A one-time survey was given to students within a single class

session in May, 2012. This study employed a convenience sample, which does not allow the researcher to generalize the results to a larger population.

The findings of the present study indicated that male students tended to be perpetrators in direct bullying more often than female students, while girls were more likely to be victims in incidents of cyberbullying. As expected, boys reported higher levels of physical bullying than girls. These findings were typical of what has been found in the literature as a number of studies have found that males tend to display higher rates of physical bullying than females (Card et al., 2008; Côté et al., 2007). This finding supports bullying as an evolutionary tactic used by males to gain resources by way of dangerous and potentially costly physical means (Archer & Coyne, 2005).

The hypothesis that females would report more indirect bullying for perpetration than males was not supported. The literature on gender and indirect bullying is less consistent than that of gender and direct bullying (Crick & Grotpeter, 1995). In a study of indirect bullying of middle school students (Espelage, Holt, & Henkel, 2003) found no gender differences in the perpetration of indirect bullying. Card et al. (2008) found no meaningful gender differences for indirect bullying. This study found that female students were more likely to be victims of cyberbullying. This finding supported previous research in which 60% victims of cyberbullying were females (Li, 2006). Li (2006) also noted that females were more likely than males to report bullying behavior. Research is needed to continue an exploration of the larger context regarding the development and maintenance of indirect and cyber bullying.

The meta-analytic review of 148 studies of common factors for direct and indirect aggression found that indirect and direct forms of aggression share many common

variables of influence. In this study, the reported perpetration of all forms of bullying (indirect, direct, cyber) was low that may reflect many factors. Bullying was widely publicized in and out of schools. Most public school districts in the State of Michigan developed zero-tolerance policies in the year that this study was held. Students were made aware that any incidents of bullying or cyberbullying would not be tolerated and the perpetrators would be punished. Quantifying the cumulative outcomes of these policies on the incidence of bullying is premature. The extent to which students heard and internalized anti-bullying information during the school year was unknown to this researcher. Students may not have admitted either to being bullied or to being a bully on a school questionnaire because of perceived penalty or informed decision-making despite assurances of anonymity. Student attrition by way of school suspensions and transfers in and out of the school district also may have influenced bullying prevalence rates.

A small number of students may be responsible for bullying many students. Therefore, the low incidence of perpetration reflected in this study may reflect the need to design a better instrument to vet large numbers of children in order to identify the small number of students that perpetrate a great deal of bullying towards others. Previous studies and media reports inform us that large numbers of children are being bullied. Instruments should also be developed to identify if one perpetrator or multiple perpetrators victimize students. The instrument used in this study did not address these issues. The information obtained in this study indicates that the large majority of middle school students are not perpetrators or victims of bullying.

The Middle School sampled in this study is a “School of Choice,” meaning that students from other districts may attend the school. At the time of the study, approximately 60% of the student population did not live in the school district. Of the 60%, approximately 40% of the students lived in neighboring Wayne County. Students were not asked to identify their resident district. This researcher can only speculate that the unusual dynamics of this building may have contributed to the results. For example, school of choice students are not provided transportation. Therefore, the parents of these students may inherently provide greater supervision. Out-of-district parents may have perceived the Middle School as a safe, suburban alternative. Students who either were picked up or rode the bus were not staying after school, which may have limited their free time before or after school. Bullying generally takes place before and after school or at unsupervised times during the school day. Bullying is a phenomenon that requires contact between people. Therefore, the low incidence of reported perpetration may speak to the strengths that these particular students had within their personality and family systems.

Parental monitoring was thought to influence perpetrator bullying; although this relationship was not statistically significant. In general, the middle school students in this study perceived a high level of parental monitoring ($m = 3.72$, $sd = .98$). Participants in this study also reported low levels of bullying perpetration. Normative changes that occur in early adolescence had the potential to alter the link between parental monitoring and bullying perpetration, such as time spent with peers (unsupervised) diminished authority and control those parents had during childhood (Steinberg & Silk, 2002). In this study, perceived parental monitoring may have served a protective

function by limiting contact with bullying and/or antisocial peers (Laursen, Hafen, Kerr, & Statin, 2012). The positive perceptions of parental monitoring may reflect students' willingness to share information with their parents and live by parental rules, which is further supported by findings related to parental support for fighting.

Parental support for fighting should have had a positive effect, with parents who supported aggressive actions, such as fighting, more tolerant of their children being bullies. However, this relationship was not supported in the findings. Previous research by Farrell et al. (2011) suggested that parents influence peaks at sixth grade, with decreases in their influence occurring as the students progress through middle school. The decrease in bullying behavior from sixth through eighth grade may explain the lack of findings in this study. In addition, previous findings suggested that parental involvement was not beneficial if the parent was highly involved (monitoring), and supported fighting as a response to bullying (Farrell et al., 2011). In this study, the relationships between bullying perpetration and parental support for fighting were low, also suggesting that students raised in homes with low parental support for fighting will be less likely to bully others.

Agreeableness is a personality trait that reflects an individual's ability to get along and manage their behavior appropriately. Studies have shown antisocial personality individuals are low on agreeableness (Miller & Lynam, 2001). This study predicted that the personality factors associated with antisocial personality would generalize to bullying; students who scored high on bullying also were expected to score low on agreeableness (Tani, Greenman, Schneider, & Fregoso, 2003). Students whose

personality traits were agreeable were not expected to be bullies. Outcomes of the present study did not find a relationship between being agreeable and being a bully.

The relationship between effortful control and bullying was expected to be statistically significant in a negative direction. Effortful control as a mediating factor was not found to be a mechanism through which middle school students process the influences of personality and parental influences. Effortful control did not predict aggressive behavior toward peers. Students high in agreeableness, high in parental monitoring, and low in parental support for fighting, may not need effortful control to minimize aggressive tendencies. The student may not need to activate effortful control in managing aggressive thoughts and behaviors, as well as peer influences.

Various factors appear to contribute to the development of aggression related to the perpetration of bullying in the schools. Previous research in this area has demonstrated a direct relationship between variables hypothesized to influence bullying (parental monitoring, parental support for fighting, agreeableness, and effortful control) and the actual perpetration of bullying (direct, indirect, and cyber). The findings that direct relationships among these variables were not found may indicate a need for additional research related to bullying in middle school students.

The findings of the present study indicated that male students tended to be perpetrators in direct bullying more often than female students, while girls were more likely to be victims of cyber bullying. Personality and parenting predictors found in previous research cannot be generalized to the personal characteristics of students in the present study. The ethnicity of this population (African American [49.5%], Caucasian [24.1%], multi-racial [23.3%]), combined with living arrangements (living with mother

and father [43.7%], living with mother [41.9%]) and socioeconomic status (free/reduced lunch [78.6%]) present future researchers with the task of identifying and understanding predictors of bully perpetration.

Implications for Practitioners

As incidences of direct and indirect bullying along with cyberbullying are becoming more prevalent in the news reports, the public has demanded laws to handle the perpetrators of bullying. The state of Michigan has enacted a law specifically that makes it a crime to be a bully. The school could become liable for damages if unreported bullying is occurring in their schools. School administrators, teachers, and mental health professionals should be aware of the requirements of this law to make sure that the school is in compliance.

Direct and indirect bullying, as well as cyber bullying, tend to peak in middle school and become less problematic as the adolescents mature. Perpetrators often have been victims (Farrington et al., 2012) and tend to bully peers who are perceived to be vulnerable. All forms of bullying (direct, indirect, and cyber) are types of bullying that can result in distress for the victim. This study attempted to gain a greater understanding of how personality and parenting factors contribute to bullying. Understanding the role of personality factors is important in clinical and school-based interventions related to perpetration and victimization of aggression related to bullying. Though agreeableness and effortful control were not predictive of bullying in this study, other within child personality factors may contribute to bullying behaviors. Professional development for teachers and school mental health professionals are needed to help

develop an understanding of the role of personality and family factors in determining if and how students may become bullies.

Family/parenting factors (parental monitoring and parental support for fighting) in this study were not predictive of bullying perpetration. More research is needed on personality and family/parenting factors contributing to bullying and bully prevention programs adapted to the different personal characteristics of students and school settings. Clinical and school psychologists are knowledgeable about identification, intervention, and research related to high-risk populations and normative child development. This knowledge could be used to inform teachers, parents, students, and administrators of signs/symptoms of potential perpetration and/or victimization through consultative and direct service roles.

Limitations of the Study and Directions for Further Research

The use of a single middle school may have been a limitation of the study. The school was small, with most of the students in the same school for the entire year. Replicating the study with students from more than one school could provide more information about perpetrators of bullying.

A second limitation was the instrument used to determine victim and perpetrator bullying and cyberbullying. A floor effect was noted with the instrument that measured bullying because of the large number of participants who provided responses at the bottom of the scale. This effect is a methodological limitation that can result in restricted variance. Hessling, Schmidt, and Traxel (as cited in Lewis-Beck, Bryman, & Liao, 2004) indicated that the validity of any research method is compromised where a dependent variable provides little or no variance. Few instruments have been developed to

measure direct, indirect and cyber bullying. The development of a valid and reliable instrument to measure all forms of bullying from both the victim's and perpetrator's perspective could provide a more accurate depiction of bullying in middle school.

The use of a cross-section design assumes that all adolescents mature at approximately the same time. While the stages of development are similar for most children, some mature earlier and some later. The use of a longitudinal study of the same children or adolescents would be a better determination of changes in bullying behavior over time.

Additional research is needed to determine other factors that may contribute to children becoming bullies. Parenting style, personality, and family structure should be considered as possible variables that could be used to predict the probability of a child becoming a bully.

The theoretical model described in Chapter 2 was not supported by the findings of the present study. Because of the lack of statistically significant findings, the mediating analyses could not be completed. Additional research is needed to determine which psychosocial variables could be contributing to being either a victim or a perpetrator of direct, indirect, and cyber bullying.

APPENDIX A

DIRECTIONS FOR BULLY SURVEY

"The purpose of this survey is to learn how much bullying occurs in our school and to learn what we need to do to stop bullying. Bullying is defined as a form of aggression that is intentional, repeated, and involves an imbalance of power between the people involved. Bullying can take the form of an action, word, or gesture."

"It is very important that you are honest as you answer each question. Please do not write your name on the survey. This is an anonymous survey and your responses will not be known to teachers or parents."

"Read each question carefully and try not to leave any questions blank. If you have any questions, please ask me. Please begin and turn in the form when you are done."

Gender (please shade one)
① Male
② Female

Grade (please shade one)
①6th
① 7th
①8th

With whom do you live (please shade one)
① Mother and Father
② Mother
③ Father
④ Grandparent
⑤ Other

What is your ethnicity?
① African American
⑤ Asian American
① Caucasian
① Hispanic or Latino
⑤ Multi-Racial

Do you receive a free or reduced lunch?
① Yes
① No

We all have different experiences in school. Based on your experiences, please indicate how often each has happened over the past school-year.

How often in the **past school year…**	**Never**	**Once or Twice**	**A Few Times**	**About Once a Week**	**Several Times a Week**
1. Has a peer teased you in a mean way?	①	②	③	④	⑤
2. Has a peer hit, kicked, or pushed you in a mean way?	①	②	③	④	⑤
3. Has a peer spread rumors or put downs about	①	②	③	④	⑤

you?					
4. Has a peer threatened you with physical violence?	①	②	③	④	⑤
5. Has a peer grabbed, held, or touched you in an undesired manner?	①	②	③	④	⑤
6. Has a peer excluded you from a desired activity?	①	②	③	④	⑤
7. Has a peer scared you into giving up money or other things?	①	②	③	④	⑤
8. Has a peer chased you in order to hurt you?	①	②	③	④	⑤
9. Has a peer played a mean trick to hurt or scare you?	①	②	③	④	⑤

How often in the **past school year…**	**Never**	**Once or Twice**	**A Few Times**	**About Once a Week**	**Several Times a Week**
10. Have you teased a peer in a mean way?	①	②	③	④	⑤
11. Have you hit, kicked, or pushed a peer in a mean way?	①	②	③	④	⑤
12. Have you spread rumors or put downs about a peer?	①	②	③	④	⑤
13. Have you threatened a peer with physical violence?	①	②	③	④	⑤
14. Have you grabbed, held, or touched a peer in an undesired manner?	①	②	③	④	⑤
15. Have you excluded a peer from a desired activity?	①	②	③	④	⑤
16. Have you scared a peer into giving up money or other things?	①	②	③	④	⑤
17. Have you chased a peer wanting to hurt him or her?	①	②	③	④	⑤
18. Have you played a mean trick on a peer to hurt or scare him/her?	①	②	③	④	⑤

How often in the **past school year…**	**Never**	**Once or Twice**	**A Few Times**	**About Once a Week**	**Several Times a Week**
19. Have you received a text message that threatened your physical safety?	①	②	③	④	⑤
20. Have you received a Facebook or Twitter message that threatened your physical safety?	①	②	③	④	⑤
21. Have you received a text message that spread a rumor about you?	①	②	③	④	⑤
22. Have you received a Facebook or Twitter message that spread a rumor about you.	①	②	③	④	⑤
23. Have you sent a text message that threatened someone's physical safety?	①	②	③	④	⑤
24. Have you sent a Facebook or Twitter message that threatened someone's physical safety?	①	②	③	④	⑤
25. Have you sent a text message that spread a rumor about someone?	①	②	③	④	⑤
26. Have you sent a Facebook or Twitter message that spread a rumor about someone?	①	②	③	④	⑤

I am someone who…	**Disagree Strongly**	**Disagree a little**	**Neither agree or disagree**	**Agree a little**	**Agree strongly**
27. Tends to find faults in others.	①	②	③	④	⑤
28. Is helpful and unselfish with others	①	②	③	④	⑤
29. Starts quarrels with others.	①	②	③	④	⑤
30. Has a forgiving nature.	①	②	③	④	⑤
31. Is generally trusting.	①	②	③	④	⑤
32. Can be cold and aloof.	①	②	③	④	⑤
33 Is considerate and kind to almost everyone.	①	②	③	④	⑤
34. Is sometimes rude to others.	①	②	③	④	⑤
35. Likes to cooperate with others.	①	②	③	④	⑤

Please shade in your best answer	Never	Rarely	Sometimes	A lot of the time	Always
36. My parent(s) usually know what I am doing after school.	①	②	③	④	⑤
37. My parents(s) know who my friends are.	①	②	③	④	⑤
38. My parent(s) know where I am after school.	①	②	③	④	⑤
39. If I am going to be home late, I am expected to call my parent(s) to let them know.	①	②	③	④	⑤
40. I tell my parent(s) whom I'm going to be with before I go out.	①	②	③	④	⑤
41. I talk to my parent(s) about the plans I have with my friends.	①	②	③	④	⑤
42. My parent(s) know how I spend money	①	②	③	④	⑤
43. My parent9s) know the parent(s) of my friends.	①	②	③	④	⑤

What do your **parents** tell you about fighting?

44. If someone calls you names, ignore them.	Yes-①	No-②
45. If someone hits you, hit him or her back.	Yes-①	No-②
46. If someone asks you to fight, you should try to talk your way out of the fight.	Yes-①	NO-②
47. If someone calls you names, hit them back	Yes-①	No-②
48. You should think the problem through, calm yourself, and then talk the problem out with your friend.	Yes-①	No-②
49. If someone calls you names, call them names back.	Yes-①	No-②
50. If another student asks you to fight, you should tell a teacher or someone older.	Yes-①	No-②
51. If someone asks you to fight, hit them first.	Yes-①	No-②
52. No matter what, fighting is not good, there are other ways to solve problems.	Yes-①	No-②
53. If you can't solve a problem by talking, it is best to solve it through fighting.	Yes-①	No-②

How true is each statement for you?	**Almost always not true**	**Usually not true**	**Sometimes true, sometimes untrue**	**Usually true**	**Almost always true**
54. It is easy for me to really concentrate on homework problems.	①	②	③	④	⑤
55. I have a hard time finishing things on time.	①	②	③	④	⑤
56. My teacher notices when I do a good job.	①	②	③	④	⑤
57. It's hard for me not to open presents before I'm suppose to.	①	②	③	④	⑤
58. I do something fun for awhile before starting my homework, even when I'm not suppose to.	①	②	③	④	⑤
59. The more I try to stop myself from doing something I shouldn't, the more likely I am to do it.	①	②	③	④	⑤
60. There are lots of changes at my school to talk to the teacher one-on-one.	①	②	③	④	⑤
61. If I have a hard assignment to do, I get started right away.	①	②	③	④	⑤
62. I find it hard to shift gears when I go to one class to another at school.	①	②	③	④	⑤
63. When trying to study, I have difficulty tuning out background noise and concentrating.	①	②	③	④	⑤
64. Getting good grades is important to me.	①	②	③	④	⑤
65. I finish my homework before the due date.	①	②	③	④	⑤
66. I am good at keeping track of several different things at are happening around me.	①	②	③	④	⑤
67. My teachers praise me when I work hard in school.	①	②	③	④	⑤
68. I put off working on projects until right before they are due.	①	②	③	④	⑤
69. I tend to get in the middle of one thing, then go off and do something else.	①	②	③	④	⑤
70. I can stick with my plans and goals	①	②	③	④	⑤

APPENDIX B

HIC LETTER

WAYNE STATE UNIVERSITY

IRB Administration Office
87 East Canfield, Second Floor
Detroit, Michigan 48201
Phone: (313) 577-1628
FAX: (313) 993-7122
http://irb.wayne.edu

NOTICE OF EXPEDITED APPROVAL

To: Rene Nota
College of Education

From: Dr. Scott Millis
Chairperson, Behavioral Institutional Review Board (B3)

Date: May 30, 2012

RE: IRB #: 044212B3E

Protocol Title: "Effortful Control as a Mediator of Aggression in Middle School Students

Funding Source:

Protocol #: 1204010805

Expiration Date: May 29, 2013

Risk Level / Category: 45 CFR 46.404 - Research not involving greater than minimal risk

The above-referenced protocol and items listed below (if applicable) were **APPROVED** following *Expedited Review* Category (#7)* by the Chairperson/designee for the Wayne State University Institutional Review Board (B3) for the period of 05/30/2012 through 05/29/2013. This approval does not replace any departmental or other approvals that may be required.

- Revised Protocol Summary Form (received in the IRB Office 05/03/2012)
- Protocol (received in the IRB Office 04/12/2012)
- Receipt of letter of support from Carlondale Middle School (dated 03/29/2012)
- The request for a waiver of the requirement for written documentation of informed consent has been granted according to 45 CFR 46.117(1)(2). Justification for this request has been provided by the PI in the Protocol Summary Form. The waiver satisfies the following criteria: (i) the research involves no more than minimal risk to participants, (ii) the research involves no procedures for which written consent is normally required outside of the research context, (iii) the consent process is appropriate, and (iv) an information sheet disclosing the required and appropriate additional elements of consent disclosure will be provided to participants.
- Research Information Sheet (dated 05/07/2012)
- School Shorter Parental Permission/Research Informed Consent (dated 05/07/2012)
- Recruitment Letter
- Data collection tools

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

NOTE:

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

*Based on the Expedited Review List, revised November 1998

APPENDIX C

Parental Consent

Wayne State University
CHILD AND FAMILY PREDICTORS OF BULLYING IN MIDDLE SCHOOL STUDENTS

Dear Parents,

Please allow me to introduce myself. I am a graduate student at Wayne State University conducting research for my Doctoral dissertation. I have consulted with Mr. Ira Hamden, principal of Clintondale Middle Schools, and he has given me approval to administer surveys relative to aggression and bully behavior. The nature of the study is to examine bully behavior by asking children questions regarding their perception as to whether they have ever been a victim or perpetrator of bullying behavior. This study is also conducted with approval from the Internal Review Board for research at Wayne State University.

These five surveys will take approximately 25 minutes to complete. A copy of the surveys will be kept on file in the school's main office for any parents or guardians interested in viewing the survey prior to administration. Parents may also contact the Principal Investigator via email ( ) or by telephone ( ) at any time. All responses to the survey will be anonymous and in no way will students be individually identifiable.
Attached you will find an information sheet which discusses the nature of this research study in more detail, along with an exemption sheet. Any parent wishing to exclude his or her child from participation in this study should return the attached exemption sheet to the Principal Investigator (Rene Nota), or contact the Principal Investigator directly via email ( ) or by telephone ( ), no later than _____.
Students who do not participate will be
permitted to work quietly on non-research related activities or they may do homework during the study. Administration of the questionnaire is scheduled to take place sometime between May and June 2012. Thank you for you time.

Sincerely,
Rene M. Nota, M.A.
Doctoral Candidate; Principal Investigator

Wayne State University

Principal Investigator: Rene M. Nota
EXEMPTION SHEET

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

Student's Name: _____
Parent/Guardian's Name: _____
Parent/Guardian's Signature: _____
Date: _____

Parental Permission/Research Information Sheet

Title of Study: Child and Family Predictors of Bulling in Middle School Students

Purpose: You are being asked to allow your child to be in a research study at Clintondale Middle School that is being conducted by Rene Nota, a school psychologist in the Clintondale Community School district and Wayne State University Ph.D. candidate, to explore issues related to bullying and student and family influences. Your child has been selected because he/she is a student at Clintondale Middle School. This survey has been approved by Clintondale Community Schools.

Study Procedures: If you decide to allow your child to take part in the study, your child will be asked to fill out surveys related to bullying, individual beliefs, and the family influences of bullying and monitoring. Bullying will include his/her perception of bullying such as "How often in the past school year have you been teased" or "How often in the past school year have you had rumors spread about you". These questions will also include his/her experience with social media forms of bullying via computer or cell phone. This study will take place during one class period for approximately 45 minutes. Copies of the surveys will be available in the main office at Clintondale Middle School. Your child will have the option to opt-out of the study at any time. Your child's participation will not have an impact on his/her academic standing

Benefits:

There may be no direct benefits for your child; however, information from this study may benefit other people now or in the future.

Risks:

There are no known risks at this time to your child for participation in this study.

Costs:

There are no costs to you or your child to participate in this study.

Compensation:

You or your child will not be paid for taking part in this study.

Confidentiality:

All information collected about your child during the course of this study will be kept confidential to the extent permitted by law. All information collected about your child during the course of this study will be kept without any identifiers.

Voluntary Participation /Withdrawal:

Your child's participation in this study is voluntary. You are free to withdraw your child at any time. Your decision about enrolling your child in the study will not change any present or future relationships with Wayne State University or its affiliates, your child's school, your child's teacher, your child's grades or other services you or your child are entitled to receive.

Questions:

If you have any questions about this study now or in the future, you may contact Rene Nota at the following phone number , address: 35100 Little Mack Clinton Township, Michigan 48035 and/or email at notar@ccs.k12.mi.us. If you have questions or concerns about your rights as a research participant, the Chair of the Human Investigation Committee at Wayne State University can be contacted at (313) 577-1628. If you are unable to contact the research staff, or if you want to talk to someone other than the research staff, you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

Consent to Participate in a Research Study:

I do not allow my child _____to participate in this research study.

Name

_____

Printed Name of Parent/Guardian

_____ _____

Signature of Parent/Guardian Date

APPENDIX D

Child Assent

Title of Study: Child and Family Predictors of Bulling in Middle School Students

Principal Investigator (PI): Rene Nota
Education Department

Purpose:
You are being asked to be in a research study that will explore issues related to bullying, school climate and family influences. This study is being conducted with all students at Clintondale Middle School.

Study Procedures:
If you take part in the study, you will be asked to fill out surveys related to bullying, your perception of the school climate and family influences. You have the right not to participate in this study and it will have no impact on your academic standing. The surveys will take approximately 45 minutes to complete during one class period.

Benefits:
As a participant in this research study, there will be no direct benefit for you; however, information from this study may benefit other people now or in the future.

Risks:
There are no known risks at this time to participation in this study.

Costs:
There will be no costs to you for participation in this research study.

Compensation:
You will not be paid for taking part in this study.

Confidentiality:
All information collected about you during the course of this study will be kept without any identifiers.

Voluntary Participation /Withdrawal:
Taking part in this study is voluntary. You are free to not answer any questions or withdraw at any time. Your decision will not affect your academic standing.

Questions:

If you have any questions about this study now or in the future, you may contact Rene Nota at the following phone number . If you have questions or concerns about your rights

as a research participant, the Chair of the Human Investigation Committee can be contacted at (313) 577-1628. If you are unable to contact the research staff, or if you want to talk to someone other than the research staff, you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

Participation:
By completing the surveys you are agreeing to participate in this study.

REFERENCES

Abbott, D.A., Hall, S.S., & Meredith, W.H. (2005). Family predictors of well-functioning Midwestern adolescents, *Great Plains Research*, 15, 267-278.

Achenbach, T. (1991). Childhood Behavior Checklist. Burlington, VT: University of Vermont, Department of Psychiatry.

Ahadi, S. A., & Rothbart, M. K. (1994). Temperament, development and the Big Five. In G. Khonstamm & C. Halverson (eds.), *The developing structure of temperament and personality from infancy to childhood* (pp. 189-208). Hillsdale, NJ: Erlbaum.

Andreas, J. B., & Watson, M. W. (2009). Moderating effects of family environment on the association between children's aggressive beliefs and their aggression trajectories from childhood to adolescence. *Development and Psychopathology*, 21, 189-205. doi:10.1017/S0954579409000121

Archer, J. (2004). Sex differences in aggression in real-world settings: A meta-analytic review. *Review of General Psychology*, 8, 291-322. doi: 10.1037/1089-2680.8.4.291

Archer, J. (2009). Does sexual selection explain human sex differences in aggression? *Behavioral and Brain Sciences*, 32, 249-266. doi: 10.1017/S0140525X09990951

Archer, J., & Coyne, S. M. (2005). An integrated review of indirect, relational, and social aggression. *Personality and Social Psychology Review*, 3, 212-230. doi: 10.1207/s15327957pspr0903_2

Archer J, Pearson NA, & Westerman KE. (1988). Aggressive behavior of children aged 6-11: gender differences and their magnitude. *British Journal of Social Psychology*, 27, 371-384. doi: 10.1111/j.2044-8309.1988.tb00839.x

Baillargeon, R. H., Tremblay, R. E., & Williams, J. D. (2005). Gender differences in the prevalence of physically aggressive behaviors in the Canadian population of 2- and 3-year-old children. In D. J. Pepler, K. C. Madsen, C., Webster, & K. S. Levene (Eds.), *The development and treatment of girlhood aggression* (pp. 55 – 74). Mahwah, NJ: Lawrence Erlbaum Associates

Bandura, A. (1973). *Aggression: A social learning analysis*. Englewood Cliffs, NJ: Prentice-Hall

Bandura, A. (1986). Self efficacy. In A. Bandura (Ed.), *Social foundations of thought and action* (pp. 390-453). Englewood, NJ: Prentice-Hall.

Baron, R. M., & Kenney, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality & Clinical Psychology*, 51, 1173-1182. doi: 10.1037/0022-3514.51.6.1173

Bauer, N.S., Lozano, P., & Rivara, F.P. (2007). The effectiveness of the Olweus bullying prevention program in public middle schools: A controlled trial. *Journal of Adolescent Health*, 40, 266-274. doi: 0.1016/j.jadohealth.2006.10.005

Baumeister, R. F., & Leary, M. R. (1995). The need to belong—desire for interpersonal attachments as a fundamental human-motivation. *Psychological Bulletin*, 117, 497-529. doi: 10.1037/0033-2909.117.3.497

Benet-Martìnez, V., & John, O. P. (1998). "Los Cinco Grandes" across cultures and ethnic groups: Multitrait-multimethod analyses of the Big Five in Spanish and English. *Journal of Personality & Social Psychology*, 75, 729-750. doi: 10.1037//0022-3514.75.3.729

Bentley, K. M., & Li, A. K. F. (1995). Bully and victim problems in elementary school and students' beliefs about aggression. *Canadian Journal of School Psychology*, 22, 153-65. doi: 10.1177/082957359501000202

Beyers, J. M., Bates, J. E., Pettit, G. S., & Dodge, K. A. (2003). Neighborhood structure, parenting processes, and the development of youths' externalizing behaviors: A multilevel analysis. *American Journal of Community Psychology*, 31, 35-53. doi: 10.1023/A:1023018502759

Björkqvist, K. (1994). Sex differences in physical, verbal, and indirect aggression: A review of recent research. *Sex Roles*, 30, 177-188. doi: 10.1007/BF01420988

Björkqvist, K., Lagerspetz, K. M. J., & Kaukiainen, A. (1992). Do girls manipulate and boys fight? Developmental trends in regard to direct and indirect aggression. *Aggressive Behavior*, 18, 117-127. doi: 10.1002/1098-2337(1992)18:2

Blum, H. M., Boyle, M. H., & Offord, D. R. (1988). Single-parent families: Child psychiatric disorder and school performance. *Journal of the American Academy of Child and Adolescent Psychiatry*, 214-219.

Bollmer, J.M., Harris, M.J., & Milich, R. (2006). Reactions to bullying and peer victimization: Narratives, physiological arousal, and personality. *Journal of Research in Personality*, 40, 803-828. doi: 10.1016/j.jrp.2005.09.003

Book, A.S., Volk, A.A., & Hosker, A. (2012). Adolescent bullying and personality: An adaptive approach. *Personality and Individual Differences*, 52, 218-233. doi: 10.1016/j.paid.2011.10.028

Brendgen, M., Dionne, G., Girard, A., Boivin, M., Vitaro, F. and Pérusse, D. (2005), Examining Genetic and Environmental Effects on Social Aggression: A Study of

6-Year-Old Twins. *Child Development*, 76, 930–946. doi: 10.1111/j.1467-8624.2005.00887.x

Broidy, L. M., Nagin, D. S., Tremblay, R. E., Bates, J. E., Brame, B., Dodge, K. A., Vitaro, F. (2003). Developmental trajectories of childhood disruptive behaviors and adolescent delinquency: A six-site, cross-national study. *Developmental Psychology*, 39, 222-245. doi: 10.1037/0012-1649.39.2.222

Bronfenbrenner, E. (1977). Toward an experimental ecology of behavior development. *American Psychologist*, 32, 513-531. doi: 10.1037//0003-066X.32.7.513

Bronfenbrenner. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.

Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives on human development*. Thousand Oaks, CA: Sage.

Bugental, D. B., Corpuz, R., & Schwartz, A. (2012). Preventing children's aggression: Outcomes of an early intervention. *Developmental Psychology*, 48(5), 1443-1449. doi:10.1037/a0027303

Bushman, B. J., & Huesmann, L. R. (2010). Aggression. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology* (5th ed., Ch. 23, pp. 833-863). New York: John Wiley & Sons.

Buss, A. (1997). Temperament as personality traits. In G. A.Kohnstamm, J. E.Bates, & M. K.Rothbart (Eds.), *Temperament in childhood* (pp. 49—58). New York: Wiley.

Cairns, R. B., & Cairns, B. D. (2000). The natural history and developmental functions of aggression. In A. Sameroff, M. Lewis & S. Miller (Eds.), *Handbook of Developmental Psychopathology* (2nd ed., pp. 403-429). New York: Kluwer

Academic/Plenum Publishers.

Cairns, R. B., Cairns, B. D., Neckerman, H. J., Ferguson, L. L., & Gariépy, J.-L. (1989). Growth and aggression: 1. Childhood to early adolescence. *Developmental Psychology*, 25, 320-330. doi: 10.1037/0012-1649.25.2.320

Campbell, D. T., & Stanley, J. C. (1966). Experimental and quasi-experimental designs for research. Chicago: Rand McNally.

Capaldi, D. M., & Rothbart, M. K. (1992). Development and validation of an early adolescent temperament measure. *Journal of Early Adolescence*, 12, 153-173. doi: 10.1177/0272431692012002002

Card, N. A., Stucky, B. D., Sawalani, G. M., & Little, T. D. (2008). Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Development*, 79, 1185-1229. doi: 10.1111/j.1467-8624.2008.01184.x

Carey, W. B. (1998). Temperament and behavior problems in the classroom. School *Psychology Review*, 27, 522-534. doi: 1999-00154-005.

Carson, J. L., & Parke, R. D. (1996). Reciprocal negative affect in parent-child interactions and children's peer competency. *Child Development*, 67, 2217-2226. doi:10.2307/1131619902223910.2307/11316191997-02752-020

Caspi, A., & Moffitt, T. E. (1993). When do individual differences matter? A paradoxical theory of personality coherence. *Psychological Inquiry*, 4, 247-271. doi: 10.1207/s15327965pli0404_1

Cicchetti, D., & Rogash, F. A. (1996). Equifinality and multifinality in developmental psychopathology. *Development & Psychopathology*, 8, 597-600. doi: 10.1017/SO954579400007318

Coie, J. D. (2004). The impact of negative social experiences on the development of antisocial behavior. In J. B. Kupersmidt. & K. A. Dodge (Eds.), *Children's peer relations: From development to intervention* (pp. 243-267). Washington, DC: American Psychological Association.

Coie, J., & Dodge, K. (1998). Aggression and antisocial behavior. In N. Eisenberg (Ed.) & W. Damon (Series Ed.), Handbook of child psychology: Vol. 3. Social, emotional, and personality development (5th ed., pp. 779-862). New York: Wiley.

Cook, C.R., Williams, K.R., Guerra, N.G., Kim, T.E., & Sadek, S. (2010). Predictors of bullying and victimization in childhood and adolescence; a meta-analytic review. *School Psychology Quarterly*, 25, 65-83. doi: 10.1037/a0020149

Copeland-Linder, N., Jones, V. C., Haynie, D. L., Simons-Morton, B. G., Wright, J. L. & Cheng, T. L. (2007) Factors associated with retaliatory attitudes among African American adolescents who have been assaulted. *Journal of Pediatric Psychology* 32, 760–70 doi: 10.1093/jpepsy/jsm007

Costa, P., & McCrae, R. R. (1992). NEO PI-R. professional manual. Odessa, FL: PAR.

Côté, S., Vaillancourt, T., LeBlanc, J., Nagin, D. W., & Tremblay, R. E. (2006). The development of physical aggression from toddlerhood to pre-adolescence: A nationwide longitudinal study of Canadian children. *Journal of Abnormal Child Psychology*, 34, 71-85. doi: 10.1007/s10802-005-9001-z

Côté, S. M., Vaillancourt, T., Barker, E. D., Nagin, D., & Tremblay, R. E. (2007). Continuity and change in the joint development of physical and indirect aggression in early childhood. *Development and Psychopathology*, 19, 37-55. doi: 10.1017/S0954579407070034

Courtwright, D. T. (1996). *Violent land: Single men and social disorder from the frontier to the inner city.* Cambridge, MA: Harvard University Press.

Crick, N. R. (1997). Engagement in gender normative versus nonnormative forms of aggression: Links to social-psychological adjustment. *Developmental Psychology*, 33, 610-617. doi: 10.1037/0012-1649.33.4.610

Crick, N. R., Casas, J. F., & Mosher, M. (1997). Relational and overt aggression in preschool. *Developmental Psychology*, 33, 579-588. doi: 10.1037/0012-1649.33.4.579

Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development*, 66, 710-722. doi: 10.2307/1131945

Crick, N. R., & Zahn-Waxler, C. (2003). The development of psychopathology in females and *males: Current progress and future challenges. Development* and Psychopathology, 15, 719-742. doi: 1017/S095457940300035X

Crockett, D. (2003). Critical issues children face in the 2000s. *School Psychology Quarterly,* 18, 446-453. doi: 10.1521/scpq.18.4.446.26997

Cumberland-Li, A., Eisenberg, N., & Reiser, M. (2004). Relations of young children's agreeableness and resiliency to effortful control and impulsivity. *Social Development*, 13, 193-212. doi: 10.1111/j.1467-9507.2004.000263.x

Cummings, E. M., & Davies, P. T. (2002). Effects of marital conflict on children: Recent advances and emerging themes in process-oriented research. *Journal of Child Psychology and Psychiatry*, 43, 33-36 doi:10.1023/B:JACP.0000019770.13216.be.

Curtner-Smith, M. E. (2000). Mechanisms by which family processes contribute to schoolage boys' bullying. *Child Study Journal*, 30, 169–186.

David, C. F., & Kistner, J. A. (2000). Do positive self-perceptions have a "dark" side? Examination of the link between perceptual bias and aggression. *Journal of Abnormal Child Psychology*, 28, 327-338. doi: 1023/A:1005164925300

DeYoung, C. G. (2006). Higher-order factors of the Big Five in a multi-informant sample. *Journal of Personality and Social Psychology*, 91, 1138-1151. doi: 10.1037/0022-3514.91.6.1138

Dinkes, R., Kemp, J., & Baum, K. (2009). Indicators of School Crime and Safety: 2008 (NCES 2009–022/NCJ 226343). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, and Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice. Washington, DC.

Dishion, T. (1990). Peer context of troublesome child and adolescent behavior. In P. E. Leone (Ed.), *Understanding troubled and troubling youth* (pp. 128-153). Newbury Park, CA: Sage.

Dishion, T. J., Bullock, B. M., & Granic, I. (2002). Pragmatism in modeling peer influence: Dynamics, outcomes, and change processes. *Development and Psychopathology*, 14, 969-981. doi: 10.1017/S0954579402004169

Dodge, K. A. (2002). Mediation, moderation, and mechanisms in how parenting affects children's aggressive behavior. In J. Borkowski, S. L. Ramey, & M. Bristol-Power (Eds.), *Parenting and the child's world: Influences on academic, intellectual, and social- emotional development* (pp. 215-229). Mahwah, NJ: Erlbaum.

Dodge, K. A. (2008). Framing public policy and prevention of chronic violence in American youths. *American Psychologist*, 63, 573-590. doi: 10.1037/0003-066X.63.7.573

Dodge, K. A., Coie, J. D., & Lynam, D. (2006). Aggression and antisocial behavior in youth. In W. Damon & R. M. Lerner (Eds. in Chief) & N. Eisenberg, (Vol. Ed.),*Handbook of child psychology: Vol. 3. Social, emotional and personality development* (6th ed., pp. 719-788). New York: Wiley and Sons.

Dodge, K. A., Pettit, G. S., & Bates, J. E. (1994). Effects of physical maltreatment on the development of peer relations. *Development and Psychopathology*, 6, 43-56. doi: 10.1017/**S**0954579400005873

Dodge, K. A., Pettit, G. S., Bates, J. E., & Valente, E. (1995). Social information-processing patterns partially mediate the effect of early physical abuse on later conduct problems. *Journal of Abnormal Psychology*, 104, 632–643. doi: 10.1037/0021-843X.104.4.632

Dryfoos, J. (1990). *Adolescents at risk: Prevalence and prediction*. New York: Oxford University Press.

Eisenberg, N., & Fabes, R. A. (Eds.). (1992*). Emotion and its regulation in early development: New directions for child development*. (Vol.55). San Francisco: Jossey-Bass.

Eisenberg, N., Guthrie, I. K., Murphy, B. C., Shepard, S. A., Cumberland, A., & Carlo, G. (1999). Consistency and development of prosocial dispositions: A longitudinal study. *Child Development*, 70, 1360-1372. doi: 10.1111/1467-8624.00100

Eisenberg, N., Smith, C. L., Sadovsky, A., & Spinrad, T. L. (2004). Effortful control: Relations with emotion regulation, adjustment, and socialization in childhood. In R. F. Baumeister & K. D. Vols (Eds.). *Handbook of self regulation: Research, theory, and applications* (pp. 259-282). New York: Guilford Press.2004-00163-012.

Ellis, L. K., & Rothbart, M. K. (2001, April). Revision of the Early Adolescent Temperament Questionnaire. Paper presented at the biennial meeting of the Society for Research in Child Development, Minneapolis, Minnesota.

Espelage, D. L., Bosworth, K., & Simon, T. R. (2000). Examining the social context of bullying behaviors in early adolescence. *Journal of Counseling and Development*, 78(3), 326-333. doi: 10.1002/j.1556-6676.2000.tb01914.x

Espelage, D. L., Bosworth, K., & Simon, T. R. (2001). Short-term stability and change of bullying in middle school students: An examination of demographic, psychosocial, and environmental correlates. *Violence and Victims*, 16, 411-426.

Espelage, D., Holt, M., & Henkel, R. (2003). Examination of peer-group contextual effects on aggression during early adolescence. *Child Development*, 74, 205–220. doi: 10.1111/1467-8624.00531

Espelage, D., & Swearer, S. (2003). Research on school bullying and victimization: What have we learned and where do we go from here? *School Psychology Review*, 32, 365-383. doi: 10.2003-09341-007.

Eysenck, H. J. (1967). *The biological basis of personality*. Springfield, IL.: Charles C Thomas.

Farrell, A.D., Erwin, E.H., Bettencourt, A., Mays, S., Vulin-Reynolds, M., & Sullivan, T., (2008). Individual factors influencing effective nonviolent behavior and fighting in peer situations: A qualitative study with urban African American adolescents. *Journal of Clinical Child and Adolescent Psychology*, 37, 397–411. doi: 10.1080/15374410801955821

Farrell, A.D., Henry, D.B., Mays, S.A¸& Schoenhy, M.E. (2011). Parents as moderators of the impact of school norms and peer influences on aggression of middle school students. *Child Development*, 82(1), 146-161. doi: 10.1111/j.1467-8624.2010.01546.x

Farrington, D.P. (1991). Childhood aggression and adult violence: Early precursors and later-life outcomes. In D.J. Pepler and K.H. Rubin (Eds) *The Development and Treatment of Childhood Aggression (*pp. 5–29). Hillsdale, NJ: Lawrence Erlbaum,

Farrington, D. P. (2003). Key results from the first forty years of the Cambridge study in delinquent development. *Taking stock of delinquency*, 137-183.

Farrington, D.P., Lösel, F., Ttofi, M.M., & Theodorakis, N. (2012). School bullying, depression, and offending behavior later in life: An updated systematic review of longitudinal studies. Stockholm: Swedish National Council for Crime Prevention.

Faul, F. Erdfelder, E., Buchner, A. & Lang, A.G. (2009). Statistical power analyses using G*Power 3.1: tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149–1160. doi: 10.3758/BRM.41.4.1149

Fonagy, P., Twemlow, S., Vernberg, E., Sacco, F., & Little, T. (2005). Creating a peaceful school learning environment: The impact of an anti-bullying program on educational attainment in elementary schools. *Medical Science Monitor*, 11 (7), CR317-325.

Frick, P. J., & Morris, A. S. (2004). Temperament and developmental pathways to conduct problems. *Journal of Clinical Child and Adolescent Psychology*, 33, 54–68. doi: 10.1207/S15374424JCCP3301_6

Gaoni, L., Black, Q.C., & Baldwin, S. (1998). Defining adolescent behavior disorder: An overview. *Journal of Adolescence*, 21, 1-13. doi: 10.1006/jado.1997.0125

Gini, G. (2006). Social cognition and moral cognition in bullying: What's wrong? *Aggressive Behavior*, 32, 528-539. doi: 10.1002/ab.20153

Gini, G. & Pozzoli, T. (2009). Association between bullying and psychosomatic problems: a meta-analysis. *Pediatrics*, 123, 1059-1065. doi: 10.1186/1471-2431-9-73

Gleason, K. A., Jensen-Campbell, L. A., & Richardson, D. S. (2004). Agreeableness as a predictor of aggression in adolescence. *Aggressive Behavior*, 30, 43-61. doi: 10.1002/ab.20002

Gorman-Smith, D., Henry, D. B., & Tolan, P. (2004). Exposure to community violence and violence perpetration: The protective effects of family functioning. *Journal of Clinical Child and Adolescent Psychology*, 33, 439-449. doi: 10.1207/s15374424jccp3303_2

Gottfredson, D. C. (1988). An evaluation of an organization development approach to reducing school disorder. *Evaluation Review*, 11, 739-763. doi: 10.1177/0193841X8701100603

Gottman, J. M., Katz, L. F., & Hooven, C. (1997). *Meta-emotion and gender. In Meta-emotion: How families communicate emotionally* (pp. 229-235). Hillsdale, NJ: Erlbaum.

Graziano, W. G., & Eisenberg, N. H. (1997). Agreeableness as a dimension of personality. In R. Hogan, J. Johnson, &s. Briggs (eds.), *Handbook of personality* (pp. 795-825).San Diego, CA: Academic Press.

Graziano, W. G., Jensen-Campbell, L. A., & Hair, E. C. (1996). Perceiving interpersonal conflict and reacting to it: The case for agreeableness. *Journal of Personality and Social Psychology*, 70, 820-835. doi: 10.1037//0022-3514.70.4.820

Griffin, K.W., Botvin, G.J., Scheier, L.M., Diaz, T., & Miller (2000). Parenting practices as predictors of substance use, delinquency, and aggression among urban minority youth: moderating effects of family structure and gender. *Psychology of Addictive Behaviors*, 14, 174-184. doi: 10.1542/peds.2012-0880

Guerra, N. G., Huesmann, L. R., & Hanish, L. (1995). The role of normative beliefs in children's social behavior. In N. Eisenberg (Ed.), *Review of personality and social psychology, development, and social psychology: The interface* (pp.140-158). Thousand Oaks, CA: Sage.

Guerra, N. G., Huesmann, L. R., Tolan, P. H., VanAcker, R., & Eron, L. D. (1995). Stressful events and individual beliefs as correlates of economic disadvantage

and aggression among urban children. *Journal of Consulting and Clinical Psychology*, 63, 518-528

Guerra, N.G., Williams, K.R., & Sadek, S. (2011). Understanding bullying and victimization during childhood and adolescence: A mixed methods study. *Child Development,* 82(1), 295-310. doi: 10.1111/j.1467-8624.2010.01556.x

Hart, C. H., Nelson, D.A., Robinson, C. D., Olsen, S. F., & McNeilly-Choque, M. K. (1998). Overt and relational aggression in Russian nursery-school-age children: Parenting style and marital linkages. *Developmental Psychology*, 34, 687-697. doi: 10.1037/0012-1649.34.4.687

Hawley, P.H., Little, T.D., & Rodkin, P.C. (Eds.). (2007). *Aggression and adaptation*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Hazler, R. J. (1996). *Breaking the cycle of violence: Interventions for bullying and victimization*. Washington, DC: Accelerated Development.

Hill, L. G., & Werner, N. E. (2006). Affiliative motivation, school attachment, and aggression in school. *Psychology in the Schools*, *43*(2), 231-246. doi: 10.1002/pits.20140

Hoover, J., Oliver, R., & Hazler, R. (1992). *Bullying: Perceptions of adolescent victims in Midwestern USA. School Psychology International*, 13, 5-16. doi: 10.1992-27629-001.

Huesmann, L. R., & Guerra, N. G. (1997). Children's normative beliefs about aggression and aggressive behavior. *Journal of Personality and Social Psychology*, 72, 408-419. doi: 10.1037/0022-3514.72.2.408

Huesmann, L. R., Guerra, N., Miller, L., & Zelli, A. (1992). The role of social norms in the development of aggression. In H. Zumkley & A. Fraczek (Eds.), *Socialization and aggression* (pp. 139-151). New York, NY: Springer.

Huesmann, L.R., & Moise, J. (1998). The stability and continuity of aggression from early childhood to young adulthood. In D.J. Flannery & C.R. Huff (Eds.), Youth violence: Prevention, intervention, and social policy (pp. 73–95). Washington, DC: American Psychiatric Press.

Hyde, J. S. (1984). How large are gender differences in aggression? A developmental meta-analysis. *Developmental Psychology*, 20, 722-736. doi:10.1037/0012-1649.20.4.722

Ickes, W. (1982). A basic paradigm for the study of personality, roles and social behavior. In W. Ickes & E. Knowles (Eds.), *Personality, roles and social behavior*. New York: Springer.

Ikeda, R. M., Farrell, A. D., Horne, A. M., Rabiner, D. L., Tolan, P. H., & Reid, J. (2004). Prevention of youth violence: The Multisite Violence Prevention Project. *American Journal of Preventive Medicine*, 26 (Suppl. 1).

Jencks, C., & Mayer, S. E. (1990). The social consequences of growing up in a poor neighborhood. In L. E. Lynn & M. G. H. McGeary (Eds.), *Inner-city poverty in the United States* (pp. 111-181). Washington, DC: National Academy Press.

Jensen-Campbell, L. A., & Graziano, W. G. (2001). Agreeableness as a moderator of interpersonal conflict. *Journal of Personality*, 69, 323-362. doi: 10.1111/1467-6494.00148

Jensen-Campbell, L. A., Rosselli, M., Workman, K. A., Santisi, M., Rios, J. D., & Bojan, D. (2002). Agreeableness, conscientiousness, and effortful control processes. *Journal of Research in Personality*, 36, 476-489. doi: 10.1016/S0092-6566(02)00004-1

Jessor, R., Donovan, J. E., & Costa, F. (1990). Personality, perceived life chances, and adolescent health behavior. In K. Hurrelmann & F. Losel (Eds.), *Health hazards in adolescence* (pp. 25-42). New York: Walter de Gruyter

Jolliffe, D., & Farrington, D. P. (2006). Examining the relationship between low empathy and bullying. *Aggressive Behavior*, 32, 540-550. doi: 10.1002/ab.20154

Kaltiala-Heino, R., Rimpela, M., Marttunen, M., Rimpela, A., & Rantanen, P. (1999). Bullying, depression, and suicidal ideation in Finnish adolescents: School survey. *British Medical Journal*, 319, 348-351.

Kelder, S., Orpinas, P., McAlister, A., Frankowski, R., Parcel, G., & Friday, J. (1996). The students for peace project: A comprehensive violence-prevention program for middle school students. *American Journal of Preventive Medicine*, 12, 22-30. doi: 89096211998-00238-003.

Kelley, B., Loeber, R., Keenan, K., & DeLamatre, M. (1997). Developmental pathways in boys ' disruptive and delinquent behavior (Juvenile Justice Bulletin NCJ No. 165692). Washington, DC: U. S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention.

Kendall, P (2012). *Child and adolescent therapy: Cognitive-behavioral procedures*. New York: The Guilford Press

Kingston, L., & Prior, M. (1995). The development of patterns of stable, transient, and school-age onset aggressive behavior in young children. *Journal of the American Academy of Child & Adolescent Psychiatry*, 34, 348-358.

Kochanska, G., Murray, K. T., & Harlan, E. T. (2000). Effortful control in early childhood: Continuity and change, antecedents, and implications for social development. *Developmental Psychology*, 36, 220-232. doi: 10.1037/0012-1649.36.2.220

Krevans, J., & Gibbs, J. C. (1996). Parents' use of inductive discipline: Relations to children's empathy and prosocial behavior. *Child Development*, 67, 3263-3277.1997-03369-037.

Kupersmidt, J. B., Bryant, D., & Willoughby, M. (2000). Prevalence of aggressive behaviors among preschoolers in Head Start and community child care programs. *Behavioral Disorders*, 26, 42-52.

Lagerspetz, K. M. J., Bjorkqvist, K., & Peltonen, T. (1988). Is indirect aggression more typical of females? Gender differences in aggressiveness in 11-12 year-old children. *Aggressive Behavior*, 14, 403-414.1989-25611-001.

Laird, R. D., Pettit, G. S., Bates, J. E., & Dodge, K. A. (2003). Parents' monitoring-relevant knowledge and adolescents' delinquent behavior: Evidence of correlated developmental changes and reciprocal influences. *Child Development*, 74, 752-768. doi: 10.1111/1467-8624.00566

Larson, R., & Richards, M. (1994). *Divergent realities: The daily lives of young adolescents, their mothers and fathers*. New York: Basic Books. Citation

Laursen, B., Hafen, C., Kerr, M., & Strattin, M. (2012). Friend influence over adolescent problem behaviours as a function of relative peer acceptance: To be liked is to be

emulated. *Journal of Abnormal Psychology,* 121(1), 88-94. doi: 10.1037/a0024707

Leone, P. E., Mayer, M. J., Malmgren, K., & Meisel, S. M. (2000). School violence and disruption: Rhetoric, reality, and reasonable balance. *Focus on Exceptional Children*, 33, 1-20.

Lengua, L.J., Bush, N.R., Long, A.C., Kovacs, E.A., & Trancik, A.M. (2008). Effortful control as a moderator of the relation between contextual risk factors and growth and adjustment problems. *Development and Psychopathology*, 20, 509-528. doi: 10.1111/j.1467-9507.2007.00438.x

Lewis-Beck, M. S., Bryman, A., Liao, T. F. (2004). The Sage Encyclopedia of Social Science Research Methods. Thousand Oaks, CA: Sage Publishing. doi: 10.4135/9781412950589

Li., Q. (2006). Cyberbullying in schools: A research of gender differences. *School Psychology International*, 27, 157-170. doi: 10.1177/0143034306064547

Li, X., Stanton, B., & Feigelman, S. (2000). Impact of perceived parental monitoring on adolescent risk behaviors over 4 years. *Journal of Adolescent Health*, 27, 49-56. doi: 10.1016/S1054-139X(00)00092-6

Lindstrom Johnson S, Finigan N, Bradshaw C, Haynie D, Cheng TL. (2011). Examining the link between neighborhood context and parental messages to their adolescent children about violence. *Journal of Adolescent Health,* 49, 58-63. doi: 10.1016/j.jadohealth.2010.10.014

McLoyd, V. (1990). Minority children. *Child Development*, 61, 263-266.

McNeilly-Choque, M., Hart, C. H., Robinson, C. C., Nelson, L. J., & Olsen, S. F. (1996). Physical and relational aggression on the playground: Correspondence among different informants. *Journal of Research on Childhood Education*, 11, 47-67.

Meier, B. P., & Robinson, M. D. (2004). Does quick to blame mean quick to anger? The role of agreeableness in dissociating blame and anger. *Personality and Social Psychology Bulletin*, 30, 856-867. doi: 10.1177/0146167204264764

Meier, B. P., Robinson, M. D., & Wilkowski, B. M. (2006). Turning the other cheek: Agreeableness and the regulation of aggression-related primes. *Psychological Science*, 17, 136-142. doi: 10.1111/j.1467-9280.2006.01676.x

Menesini, E., Camodeca, M., & Nocentini, A. (2010). Bullying among siblings: the role of personality and relational variables. *British Journal of Developmental Psychology*, 28, 921-939. doi: 10.1348/026151009X479402

Miller, W.B. (1958). Lower class culture as a generating milieu of gang delinquency. *Journal of Social Issues*, 14, 5–19.

Miller, J., Flory, K., Lynam, D., & Leukefeld, C. (2003). A test of the four-factor model of impulsivity-related traits. *Personality and Individual Differences*, 34, 1403-1418. doi: 10.1016/S0191-8869(02)00122-8

Miller, J. D., & Lynam, D. (2001). Structural models of personality and their relation to antisocial behavior: A meta-analytic review. *Criminology, 39*, 765–792

Miller-Johnson, S., Sullivan, T. N., Simon, T. R., & the Multisite Violence Prevention Project. (2004). Evaluating the impact of interventions in the Multisite Violence

Prevention Study: Samples, procedures, and measures. *American Journal of Preventive Medicine*, 26(Suppl. 1), 48-61. doi: 10.1016/j.amepre.2003.09.015

Moffitt, T.E. & Caspi, A. (2005) Life-course persistent and adolescence-limited antisocial males: Longitudinal follow-up to adulthood. In *Developmental Psychobiology of Aggression*. DM Stoff and EJ Susman, eds. Cambridge: Cambridge University Press. Pp. 161-186.

Morash, M., & Rucker, L. (1989). An exploratory study of the connection of mother's age at child-bearing to her children's delinquency in four data sets. *Crime & Delinquency*, 35, 45-93.

Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among U.S. youth—Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association*, 285, 2094-2100.

National Center for Children in Poverty. (2003). NCCP fact sheets. Retrieved March 1, 2012, from http://www.nccp.org/fact.html

National Institute of Child Health and Human Development (NICHD) Early Child Care Research Network. (2004). Trajectories of physical aggression from toddlerhood to middle childhood: Predictors, correlates, and outcomes. *Monographs of the Society for Research in Child Development*, 69, 1-146.

Nolin, M. J., Davies, E., & Chandler, K. (1996). Student victimization at school. *Journal of School Health*, 66, 216-221.

Ogbu, J. (1990). Minority education in comparative perspective. *Journal of Negro Education*, 59(1), 45-57.

Olweus, D. (1978). *Aggression in schools*. New York: Wiley. Citation

Olweus, D. (1979). Patterns of aggressive reaction in males: A review. *Psychological Bulletin,* 86, 825-875.

Olweus, D. (1991). Bully-victim problems among school children: Basic facts and effects of a school based intervention program. In K.Rubin & D.Pepler (Eds.), *The development and treatment of childhood aggression* (pp. 411-448). Hillsdale, NJ: Erlbaum.

Olweus, D. (1993). Bullies on the playground: The role of victimization. In C. H. Hart (Ed.), *Children on playgrounds: Research perspectives and applications* (pp. 85-128). Albany: State University of New York Press.

Olweus, D. (1993b). *Bullying at School: What we know and what we can do*. Oxford, England: Basil Blackwell.

Olweus, D. (1999). Sweden. In P. K.Smith, Y.Morita, J.Junger Tas, D.Olweus, R.Catalano, & P.Slee (Eds.), *The nature of school bullying: A cross-national perspective* (pp. 7-27). London: Routledge.

Olweus, D. (2001). Olweus' core program against bullying and antisocial behavior: A teacher handbook. Bergen, Norway: Research Center for Health Promotion.

Orpinas, P., Murray, N., & Kelder, S. (1999). Parental influences on students' aggressive behaviors and weapon carrying. *Health Education & Behavior*, 26, 774-787. doi: 10.1177/109019819902600603

Orpinas, P., Kelder, S., Frankowski, R., Murray, N., Zhang, Q., & McAlister, A. (2000). Outcome evaluation of a multi-component violence-prevention program

for middle schools: The Students for Peace project. *Health Education Research*, 15, 45-58. doi: 10.1093/her/15.1.45

Orpinas, P., & Horne, A. (2006). Bullying prevention: Creating a positive school climate and developing social competence. Washington, DC: American Psychological Association.

Österman, K., Björkqvist,, K., Lagerspetz, K., Kaukiainen, A., Huesmann, R., & Fraczek, A. (1994). Peer and self-estimated aggression and victimization in 8-year-old children from five ethnic groups. *Aggressive Behavior*, 20, 411-428. doi: 10.1002/(SICI)1098-2337(1998)24:1<1::AID-AB1>3.3.CO;2-F

Österman, K., Björkqvist, K., Lagerspetz, K. M. J, Landau, S. F., Frączek, A., & Caprara, G. V. (1998). Cross-cultural evidence of female indirect aggression. *Aggressive Behavior*, 24, 1-8. doi: 10.1002/(SICI)1098-2337(1998)24:1<1::AID-AB1>3.0.CO;2-R

Patterson, G., & Stouthamer-Loeber, M. (1984). The correlation of family management practices and delinquency. *Child Development*, 55, 1299-1307. doi: 10.2307/1129999

Pearce, M. J., Boergers, J., & Prinstein, M. J. (2002). Adolescent obesity, overt and relational peer victimization, and romantic relationships. *Obesity Research*, 10, 386-393.

Pettit, G. S., Harris, A. W., Bates, J. E., & Dodge, K. A. (1991). Family interaction, cognition, and children's subsequent relations with peers at kindergarten. *Journal of Social & Personal Relationships*, 8, 383-402. doi: 10.1177/0265407591083005

Pettit, G., Bates, J., Dodge, K., & Meece, D. (1999). The impact of after-school peer contact on early adolescent externalizing problems is moderated by parental monitoring, perceived neighborhood safety, and prior adjustment. *Child Development*, 70, 768-778. doi: 10.1111/1467-8624.00055

Posner, M. I., & Rothbart, M. K., (2007). Educating the human brain. Washington, DC: American Psychological Association. Doi: 10.1037/11519-000

Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German. *Journal of Research in Personality*, 41, 203-212. doi: 10.1016/j.jrp.2006.02.001

Robins, R. W., John, O. P., & Caspi, A. (1994). Major dimensions of personality in early adolescence: The Big Five and beyond. In C.F.Halverson, G.A.Kohnstamm, & R.P.Martin (Eds.), *The developing structure of temperament and personality from infancy to adulthood* (pp. 267-291). Hillsdale, NJ: Erlbaum.

Rothbart, M. K. (1989). Temperament and development. In G. A. Kohnstamm, J. E. Bates, & M. K. Rothbart (Eds.), *Temperament in childhood* (pp. 187-248). Chichester, England: Wiley.

Rothbart, M. K., & Bates, J. E. (2006). Temperament. In W.Damon & R. M.Lerner (Eds.-in-Chief) & N.Eisenberg (Vol. Ed.),*Handbook of child psychology*: Vol.3. Social, emotional, and personality development (6th ed., pp. 99-166). Hoboken, NJ: Wiley. Citation

Rothbart, M., & Bates, J. (1998). Temperament. In W. Damon & N. Eisenberg (Eds.), *Handbook of child psychology: Social, emotional, and personality development* (Vol. 3, pp. 105-176). New York: Wiley.

Rothbart, M. K., Ellis, L. K., Rosario, R., Rueda, M., & Posner, M. I. (2003). Developing mechanisms of temperamental effortful control. *Journal of personality*, *71*, 1113-1144. doi: 10.1111/1467-6494.7106009

Rothbart, M.K., & Rueda, M. (2005). The development of effortful control. In U. Mayr, E. Awh, & S. Keele (Eds.), *Developing individuality in the human brain: A tribute to Michael I. Posner* (167-188). Washington, DC: American Psychological Association.

Rutter, M., Tizard, J., & Whitmore, K. (1970). *Education health and behaviour*. New York: Krieger.

Salmivalli, C., Kaukiainen, A. and Lagerspetz, K. (2000), Aggression and sociometric status among peers: Do gender and type of aggression matter? *Scandinavian Journal of Psychology*, 41: 17–24. doi: 10.1111/1467-9450.00166

Sampson, R. J., & Laub, J. H. (1994). Urban poverty and the family context of delinquency: A new look at structure and process in a classic study. *Child Development*, 65, 523-540.

Schwartz, D. (2000). Subtypes of aggressors and victims in children's peer groups. *Journal of Abnormal Child Psychology*, 28, 181-192. doi: 10.1023/A:1005174831561

Shields, A. M., & Cicchetti, D. (2001). Narrative representations of children's emotion dysregulation as predictors of maltreated children's rejection by peers. *Developmental Psychology*, 37, 321-337. doi: 10.1037/0012-1649.37.3.321

Simmons, R., & Blythe, D. (1987). *Moving into adolescence: the impact of pubertal change and school context*. Hawthorn, NY: Aldine de Gruyter.

Small, S. A., & Kerns, D. (1993). Unwanted sexual activity among peers during early and middle adolescence: Incidence and risk factors. *Journal of Marriage and the Family*, 55, 941-952. doi: 10.2307/352774

Smith, P. K., & Myron-Wilson, R. (1998). Parenting and school bullying. *Clinical Child Psychology and Psychiatry*, 3(3), 405-417. doi: 10.1177/1359104598033006

Smith-Khuri, E., Iachan, R., Scheidt, P.C., Overpeck, M.D. (2004) A Cross-national Study of Violence-Related Behaviors in Adolescents. *Archives of Pediatric and Adolescent Medicine,* 158(6):539-544. doi:10.1001/archpedi.158.6.539

Soloman, B.S., Bradshaw, C.P., Wright, J., & Cheng, T.L. (2008). Youth and parental attitudes toward fighting. *Journal of Interpersonal Violence*, 23, 544-560. doi: 10.1177/0886260507312947

Sourander, A., Helstelä, L., Helenius, H., & Piha, J. (2000). Persistence of bullying from childhood to adolescence—A longitudinal 8-year follow-up study. *Child Abuse & Neglect*, 24, 873-881. doi: 10.1016/S0145-2134(00)00146-0

Spencer, M. B., Dobbs, B., & Phillips, D. (1988). African-American adolescents: Adaptational processes and socioeconomic diversity in behavioral outcomes. *Journal of Adolescence*, 11, 117-137. doi: 10.1016/S0140-1971(88)80048-4

Spinrad, T.L., Eisenberg, N., Gaertner, B., Popp, T., Smith, C.L., Kupfer, A., Greving, K., Liew, J., & Hofer, C. (2007). Relations of maternal socialization and toddlers' effortful control to children's adjustment and social competence. *Developmental Psychology*, 43(5), 1170-1186. doi: 10.1037/0012-1649.43.5.1170

Stattin, H., & Kerr, M. (2000). Parental monitoring: A reinterpretation. *Child Development*, 71, 1072-1085. doi: 10.1111/1467-8624.00210

Steinberg, L. & Silk, J.S. (2002). Parenting Adolescents. In M.H. Bornstein (Ed.), *Handbook of Parenting: Children and Parenting* (2nd ed., vol1, pp.103-133). Mahwah, NJ: Erlbaum.

Stuart-Cassel, V., Bell, A., & Springer, J.F. (2011). Analysis of state bullying laws and policies. U.S. Department of Education. Office of Planning, Evaluation, and Policy Development.

Suls, J., Martin, R., & David, J. (1998). Person-environment fit and its limits: Agreeableness, neuroticism, and emotional reactivity to interpersonal conflict. *Personality and Social Psychology Bulletin*, 24, 88-98. doi: 10.1177/0146167298241007

Sutton, J., & Keogh, E. (2000). Social competition in school: Relationships with bullying, Machiavellianism and personality. *British Journal of Educational Psychology*, 70, 443–457. doi: 10.1348/000709900158227

Swearer, S. M., & Doll, B. (2001). Bullying in schools: An ecological framework. *Journal of Emotional Abuse*, 2, 7-23. doi: 10.1300/J135v02n02_02

Tani, F., Greenman, P. S., Schneider, B. H., & Fregoso, M. (2003). Bullying and the Big Five: A study of childhood personality and participant roles in bullying incidents. *School Psychology International*, 24(2), 131-146. doi: 10.1177/0143034302234007

Terranova, A. M., Morris, A. S., & Boxer, P. (2008). Fear reactivity and effortful control in overt and relational bullying: A six month longitudinal study. *Aggressive Behavior*, 34, 104-115. doi: 10.1002/ab.20232

Tiet, Q. Q., Wasserman, G. A., Loeber, R., McReynolds, L. S., & Miller, L. S. (2001). Developmental and sex differences in types of conduct problems. *Journal of Child & Family Studies*, 10, 181-197.

Tobin, N. M., Graziano, W. G., Vanman, E. J., & Tassinary, L. G. (2000). Personality, emotional experience, and the effort to control emotions. *Journal of Personality and Social Psychology*, 79, 656-669. doi: 10.1037/0022-3514.79.4.656

Tomblin, J.B., Zhang, X., Buckwalter, P., & Catts, H. (2000). The association of reading disability, behavioral disorders, and specific language impairment in second grade children. *Journal of Child Psychology and Psychiatry*, 41, 473-482. doi: 10.1111/1469-7610.00632

Tremblay, R. E. (2001, September). Antisocial behaviour in childhood. Paper presented at the meeting of the European Society of Criminology, Lausanne, Switzerland.

Tremblay, R. E., & Côté, S. (2005). The developmental origins of aggression: Where are we going? In R. E. Tremblay, W. W. Hartup & J. Archer (Eds.), *Developmental origins of aggression* (pp. 447-464.). New York, NY: The Guilford Press.

Tremblay, R. E., Nagin, D., Seguin, J. R., Zoccolillo, M., Zelazo, P. D., Boivin, M., & Japel, C. (2004). Physical aggression during early childhood: Trajectories and predictors. *Pediatrics*, 114, 43-50. doi: 10.1542/peds.114.1.e43

Ttofi, M.M., Farrington, D.P., & Lösel, F. (2012). School bullying as a predictor of violence in later life: A systematic review and meta-analysis of prospective longitudinal studies. *Aggression and Violent Behavior*, 17, 405-418. doi: 10.1016/j.avb.2012.05.002

Ttofi, M.M., Farrington, D.P., Lösel, F., & Loeber, R. (2011) Do the victims of school bullies tend to become depressed later in life? A systematic review and meta-analysis of longitudinal studies, *Journal of Aggression, Conflict and Peace Research*, 3(2), 63-73.

Underwood, M.K. (2003). *Social aggression in girls*. New York: Guilford Press.

Underwood, M. K. (2004). Glares of contempt, eye rolls of disgust, and turning away to exclude: Understanding nonverbal forms of social aggression among girls. *Feminism & Psychology*, 14, 371-375. doi: 10.1177/0959353504044637

Underwood, M. K., Galen, B. R., & Paquette, J. A. (2001). Top 10 challenges for understanding aggression and gender: Why can't we all just get along? *Social Development*, 10, 248-266. doi: 10.1111/1467-9507.00162

Vaillancourt, T., Brendgen, M., Boivin, M., & Tremblay, R. E. (2003). A longitudinal confirmatory factor analysis of indirect and physical aggression: Evidence of two factors over time? *Child Development*, 74, 1628-1638. doi: 10.1046/j.1467-8624.2003.00628.x

Vaillancourt, T., Miller, J. L., Fagbemi, J., Côté, S. M., & Tremblay, R. E. (2007). Trajectories and predictors of indirect aggression: Results from a nationally representative longitudinal study of Canadian children aged 2-10. *Aggressive Behavior*, 33, 314-326. doi: 10.1002/ab.20202

Valiente, C., Eisenberg, N., Haugen, R., Spinrad, T.L., Hofer, C., Liew, J., & Kupfer, A. (2011) Children's Effortful Control and Academic Achievement: Mediation Through Social Functioning. *Early Education & Development*, 22, 411-433 doi: 10.1080/10409289.2010.505259

Vernberg, E. M., Jacobs, A. K., & Hershberger, S. L. (1999). Peer victimization and attitudes about violence during early adolescence. *Journal of Clinical Child Psychology,* 28, 386-395. doi: 10.1207/S15374424jccp280311

Vitaro, F., Barker, E. D., Boivin, M., Brendgen, M., & Tremblay, R. E. (2006). Do early difficult temperament and harsh parenting differentially predict reactive and proactive aggression? *Journal of Abnormal Child Psychology*, 34, 685-695. doi: 10.1007/s10802-006-9055-6

Weisz, J.R., & Kazdin, A.E. (2010) Evidence-based psychotherapies for children and adolescents, 2nd edition. New York: Guilford.

Wilkowski, B. M., & Robinson, M. D. (2008). The cognitive basis of trait anger and reactive aggression: An integrative analysis. *Personality and Social Psychology Review*, 12, 3-21. doi: 10.1177/1088868307309874

Xie, H., Drabick, D. A.G. and Chen, D. (2011), Developmental trajectories of aggression from late childhood through adolescence: similarities and differences across gender. *Aggressive Behavior, 37*, 387-404. doi: 10.1002/ab.20404

Young, E.D., Boye, A., & Nelson, D. (2006). Relational aggression: Understanding, identifying, and responding in schools. *Psychology in the Schools*, *43*, 297-312. doi: 10.1002/pits.20148

Young, M. H., Miller, B. C., Norton, M. C., & Hill, E. J. (1995). The effect of parental supportive behaviors on life satisfaction of adolescent off-spring. *Journal of Marriage and the Family*, *57*(3), 813-821. doi: 10.2307/353934

Zentner, M., & Bates, J. E. (2008). Child temperament: An integrative review of concepts, research programs, and measures. *European Journal of Developmental Science, 2*, 7-37. doi: 10.3233/DEV-2008-21203

Zuckerman, M. (1979) *Sensation Seeking: Beyond the optimal level of arousal*. New York: Lawrence Erlbaum.

ABSTRACT

CHILD AND FAMILY PREDICTORS OF BULLYING IN MIDDLE SCHOOL STUDENTS

by

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Advisor: Dr. Stephen B. Hillman

Major: Educational Psychology

Degree Doctor of Philosophy

The purpose of this study was to examine the shared variables that contribute to direct and indirect bullying and to explore the role of family context, and adolescent personality characteristics on predicting bullying behavior. The theoretical framework of this study was based on evidence that no specific element can describe why some individuals are at risk for behaving aggressively and others are more resilient.

The study included 259 middle schools students in grades six through eight. The students were enrolled at a single middle school located in a suburban area. The largest group of students was African American, lived with both parents or mother only, and qualified for free or reduced lunch programs. The students' self-reported academic achievement appeared to reflect typical grades in a middle school.

Five instruments, Peer Experiences Questionnaire, Parental Monitoring Scale, The Big Five Inventory, Early Adolescent Temperament Questionnaire – Revised, and Parental Support for Fighting, were used to obtain information regarding bullying, role of family context, and adolescent personality characteristics. Four research questions and associated hypotheses were developed for the study. The findings of the study

indicated that male students tended to be perpetrators in direct bullying more often than female students and girls were more likely to be victims in incidents of cyberbullying. The hypotheses were not supported, indicating that family context and personality characteristics were not related to bullying.

A floor effect was noted in the Peer Experiences Questionnaire that resulted in limited variance in the students' responses to bullying. A different instrument to measure direct and indirect bullying should be considered to provide greater variance in bullying. Another limitation is the use of a single middle school. Additional research using middle schools in different geographic areas should be considered to obtain more information about perpetrators of bullying.

AUTOBIOGRAPHICAL STATEMENT

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