PARENT- AND PEER-RELATED VARIABLES ASSOCIATED WITH RELATIONAL
AGGRESSION IN MIDDLE CHILDHOOD

by

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B.A., Kansas Wesleyan University, 2003
M.S., Kansas State University, 2007

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

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Abstract

To date, the research testing the predictors of relational aggression has largely mirrored that of the more robust physical aggression literature. Similar to the physical aggression literature, research on relational aggression has focused on age and gender differences and, more recently, the possible associations between relational aggression and other variables. However, there is a lack of research investigating the parent and peer behaviors that could potentially model relationally aggressive behavior in children. The current study drew upon social-cognitive models of aggression to test such associations. Specifically, I measured parents' use of psychological control with their children, parents' use of manipulative behavior with their children and other adults, and peer groups' use of relational aggression to determine whether these variables predicted children's use of relational aggression. It was expected that the aforementioned variables would be positively associated with children's use of relational aggression.

One hundred and sixty-five fourth-, fifth-, and sixth-grade children (52% male) enrolled in public elementary schools in the Midwest participated in the study. Additionally, 137 female and 70 male caregivers also participated. The children completed questionnaires to measure a) their use of relational aggression, b) their peers' use of relational and physical aggression, c) the cohesiveness and distinctiveness of their main group of friends, and d) their parents' use of psychological control. The caregivers also completed questionnaires that assessed a) their behaviors toward other adults when angry, b) how they respond to their children's misbehavior, and c) social desirability.

Consistent with Social Learning Theory and the Social-Cognitive Theory of Aggression, children's use of relational aggression was positively related to their mothers' use of psychological control and to their peer groups' use of relational aggression especially when that peer group was seen as relatively cohesive and distinct. In addition, children's use of relational aggression was more strongly associated with their parents' use of psychological control than was their peer groups' use of relational aggression. The current study was the first to examine and compare the associations between parent- *and* peer-related variables and children's use of relational aggression.

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Dedication

I would like to dedicate my dissertation to my husband, Chris, and son, Eric. This accomplishment is not only mine, but ours as a family. Chris, I could not have done this without you. Your patience is astounding as you helped me when I needed it, listened when I complained, and believed in me always. Thank you for supporting me and constantly helping me see the positives in myself.

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Chapter 1 - Introduction

General Purpose

There has been a long history of research on physical aggression in children. Research has focused on age differences (Loeber & Hay, 1997; Tremblay, 2000), gender differences (Eagly & Steffen, 1986; Knight, Guthrie, Page, & Fabes, 2002), correlates (Anderson, 1989; Bushman, 1995; Parrott & Zeichner, 2002; Tremblay, 2001), and antecedents (Cairns, Cairns, Neckerman, Gest, & Gariepy, 1988; Coie & Dodge, 1998) of physical aggression. However, in the last several years, researchers have begun to study a less direct, more verbal form of aggression called relational aggression. Relational aggression is the act of "harming others through purposeful manipulation and damage of their relationships" (Crick & Grotpeter, 1995, p.711). In the relatively short history of relational aggression, the empirical research has mirrored that of physical aggression, with research focusing on age differences (see Archer & Coyne, 2005 for review; Bjorkqvist, Lagerspetz, & Kaukiainen, 1992) and gender differences (see Archer, 2004; Archer & Coyne, 2005 for reviews). However, only recently have researchers begun to focus on the possible associations between relational aggression and other variables.

As with physical aggression, researchers have started to investigate potential parental (Nelson & Crick, 2002; Nelson, Hart, Yang, Olsen, & Jin, 2006; Reed, Goldstein, Morris, & Keyes, 2008) and peer (Brendgen, Boivin, Vitaro, Bukowski, et al., 2008; Ellis & Zarbatany, 2007; Werner & Crick, 2004) associations with relational aggression. However, there are relatively few published studies on the correlates of relational aggression, and no individual investigation has compared the relative contributions of parents and peers to this form of aggression in children.

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The purpose of the current study was to investigate the possible correlates of relational aggression in children. More specifically, the major goal of this research was to determine the associations between parent and peer variables and children's use of relational aggression. In addition, the current study sought to determine whether mothers', fathers', and peers' associations with relational aggression are different for boys and girls.

The Concept of Aggression

Human aggression is defined as behavior conducted with the intent to harm another individual who is motivated to avoid that harm (Anderson & Bushman, 2001). Over the past century, much research has been conducted to understand human aggression; however, research has primarily focused on physical aggression. Physical aggression involves overt, physical actions performed with the intent to harm a target (e.g., punching, kicking). While physical aggression can be carried out from a distance (e.g., dropping a bomb), typically it occurs in the presence of the target (e.g., throwing a punch, kicking) and the aggressor's identity is known to the victim.

Recently research on aggression has expanded its focus beyond physical aggression to include other ways to implement aggression. Different terms have been coined to describe this particular form of nonphysical aggression (i.e., relational aggression, indirect aggression, social aggression). According to Crick and Grotpeter (1995), relational aggression involves overt (i.e., open, observable) and covert (i.e., concealed, secret, disguised) actions performed to manipulate or damage relationships. Relational aggression includes behaviors such as gossiping behind someone's back and socially excluding someone from a group of friends. Indirect aggression is defined as "a type of behavior in which the perpetrator attempts to inflict pain in such a manner that he or she makes it seem as though there is no intention to hurt at all" (Bjoirkqvist et al.,

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1992, p. 118). Indirect aggression includes behaviors such as gossiping behind someone's back and telling someone's secrets to a third person. Social aggression was first defined as "the manipulation of group acceptance through alienation, ostracism, or character defamation" (Cairns et al., 1988, p. 323) but was broadened by Galen and Underwood (1997) to include behaviors such as social exclusion, gossiping, and negative facial expressions or body movements.

Even though there is considerable overlap among the three forms of nonphysical aggression, the term relational aggression was used in this study. This term was chosen because it includes the intent to harm and manipulate and incorporates the ideal range of behaviors for the focus of this study. Relational aggression (Crick & Grotpeter, 1995) includes the covert behaviors of social and indirect aggression (e.g., gossiping) and the overt behaviors (e.g., telling someone that he/she cannot be your friend unless he/she does what you want) that are potentially damaging to one's relationships (Merrell, Buchanan, & Tran, 2006). Moreover, the term relational aggression does not imply that the focus of the research is solely on covert behaviors, as is the case with the term indirect aggression. While relational aggression and social aggression are quite similar (i.e., both are manipulative and can be expressed in overt and covert ways), studies of relational aggression do not include the examination of specific bodily movements and facial expressions as do some studies of social aggression. The current study focused on overt *and* covert manipulative behaviors committed with the intent to harm relationships but did not focus on specific expressions or gestures. Given that the term relational aggression best captures the behavior of interest in this study, I will now review some of the similarities and differences between relational and physical aggression[1].

Relational and Physical Aggression

Relational aggression and physical aggression are both forms of aggression because they involve behaviors conducted with the intent to harm another individual. Moreover, these two types of behaviors are often found to be positively related to one another (Crick & Grotpeter, 1995; Sandstrom, 2007; Vaillancourt, Brendgen, Boivin, & Tremblay, 2003), although not so highly correlated to conclude that they reflect the same construct (Vaillancourt et al., 2003). A major difference between these two forms of aggression is the way that the potential harm is inflicted. While physical aggression is most often overt, relational aggression may be carried out in overt or covert ways, which increases the possibility that the aggressor may go unidentified. For example, typically it is easier to identify who threw a punch at you than to identify who started rumors about you. The potential harm that these two types of aggression can inflict may also be different. Victims of physical aggression may suffer from physical harm, depression, loneliness, and social anxiety (Boivin, Hymel, & Bukowski, 1995; Craig, 1998; Crick & Bigbee, 1998; Klomek, Sourander, Kumpulainen, Piha, et al., 2008). While the use of relational aggression may result in emotional hurt (Paquette & Underwood, 1999), social anxiety, depression, loneliness, and peer rejection (Crick & Bigbee, 1998; Crick & Grotpeter, 1995; Prinstein, Boergers, & Vernberg, 2001), it does not result in physical harm.

Although the empirical research on relational aggression is expanding, the knowledge that researchers have accumulated regarding the socialization correlates of relational aggression is scant in comparison to the knowledge accumulated on the socialization correlates of physical aggression. The current study adds to the literature on relational aggression by investigating the associations between parent- and peer-related variables and children's levels of relational aggression.

Developmental Trajectories of Aggression and Individual Differences

Previous research has revealed general patterns for the use of aggression as humans develop. Overall, the use of physical aggression tends to peak during the toddler years (Tremblay, 2000; Tremblay, Japel, Perusse, McDuff, et al., 1999), and after the age of 4, acts of physical aggression tend to decrease as individuals develop alternative responses (Anderson & Huesmann, 2003; Tremblay et al., 1999). As acts of physical aggression decrease, the use of relational aggression has been found to increase after the toddler years and peak at, and then maintain after, age 11 (Anderson & Huesmann, 2003; Archer & Coyne, 2005; Bjorkqvist et al., 1992). With age, children's use of relational aggression becomes more sophisticated and covert in nature (Crick, Werner, Casas, O'Brien, et al., 1999). The first displays of relational aggression seen during the toddler years often include direct, verbal manipulations (e.g., "I won't be your friend unless you give me your toy."). As children age, they are able to manipulate peers through the use of a social structure and relational aggression becomes more covert (e.g., secretly turning friends against a disliked classmate).

While there are general trends for the development of aggression, there are also individual differences in the expression of aggression over time. The preponderance of research on individual differences and aggression has focused on physical aggression. For example, while physical aggression tends to decrease after the age of four, some children will be more aggressive than others during middle childhood. Several biological/physiological influences have been found to contribute to this variation (see Coie & Dodge, 1998 for a broad review). Some of these variables include sex (i.e., males have been found to be more physically aggressive than females; Broidy, Nagin, Tremblay, Brame, et al., 2003; Crick, Casas, & Mosher, 1997; Maccoby & Jacklin, 1974), level of testosterone (i.e., high levels of testosterone have been associated with

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physical aggression; Archer, 1991; Book, Starzyk, & Quinsey, 2001), and level of serotonin (i.e., low levels of serotonin have been associated with physical aggression; see Asberg, 1994). Several socialization factors also contribute to individual differences in patterns of physical aggression including socioeconomic status (i.e., people of low socioeconomic status have been found to be more physically aggressive than people of high socioeconomic status; Bradley & Corwyn, 2002; Sampson & Laub, 1994; Spencer, Dobbs, & Phillips, 1988) and violent media exposure (i.e., children exposed to violent media have been found to be more physically aggressive than those not exposed; Gentile, 2003; Huesmann, Moise-Titus, Podolski, & Eron, 2003).

Two additional socializing agents that have received considerable attention in studies of physical aggression are parents and peers. There is evidence that children's interactions with and observations of their parents and peers are important in the development of physical aggression (see Boivin, Vitaro, & Poulin, 2005; Coie & Dodge, 1998; Deptula & Cohen, 2004; Pettit, 1997 for reviews). For example, children exposed to authoritarian parenting (i.e., high demand, low warmth) and permissive parenting styles (i.e., low demand, high warmth) have been found to be more physically aggressive than those exposed to authoritative (i.e., high demand, high warmth) parenting (Baumrind, 1967; see Hart, Olsen, Robinson, & Mandleco, 1997; Ladd & Pettit, 2002 for reviews). Moreover, as children get older, peers become increasingly important in the behavioral choices that they make (Berk, 2006). For example, children who have physically aggressive friends have been found to be more physically aggressive than children who do not have physically aggressive friends (see Boivin et al., 2005; Deptula & Cohen, 2004; Pettit, 1997 for reviews).

The literature on individual differences associated with physical aggression (e.g., biological/physiological, socialization) is robust relative to the literature on individual differences associated with relational aggression. However, the findings already established for the development of physical aggression may provide important insights into the development of relational aggression. Although biological/physiological individual difference variables are considered important in the expression of physical (and, perhaps, relational) aggression, the present study focused exclusively on two socialization agents: parents and peers. The influence of these two socializing agents will first be briefly discussed with regard to physical aggression. Then, a more detailed account of the relatively few studies that have examined the role of parents and peers in relational aggression will be provided.

Associations with Physical Aggression in Children

Social Learning Theory posits that individuals learn behaviors through direct and/or vicarious experiences (Bandura, 1973; Bandura, Ross, & Ross, 1963). By learning through observation, humans are able to gain an immense amount of information without having to experience hundreds of different situations, including situations that are uncomfortable or harmful. Social Learning Theory is often applied to children because they are especially prone to learning new behaviors through imitation, which can contribute to the formation of aggressive scripts and other knowledge structures (see Anderson, Gentile, & Buckley, 2007). Children can learn by observing those in their immediate presence, such as parents and peers, and through exposure to media outlets, especially if that model is liked by the child (Bandura, 1973; Bandura et al., 1963). This type of learning has been evident in an abundance of research that has shown that children learn physically aggressive behavior by experiencing or observing parents who behave aggressively (Bjorkqvist & Osterman, 1992; Conger, Neppl, Kim, & Scaramella, 2003;

Grych & Fincham, 1990; Larzelere, 1986; Tremblay, Nagin, Seguin, Zoccolillo, et al., 2005) and

by associating with peers that are physically aggressive (see Boivin et al., 2005; Deptula &

Cohen, 2004 & Pettit, 1997 for reviews; Werner & Crick, 2004).

The Social-Cognitive Model of Aggression also predicts the importance of parental and

peer involvement in the development of aggression. This model posits that children assimilate

information through hearing and observing their parents and peers and, from this information,

may learn how to aggress and that aggression is acceptable under certain circumstances

(Anderson & Huesmann, 2003). The continued imitation and learning of aggressive techniques

are related to the development of complex knowledge structures. These knowledge structures

include perceptual schemas and behavioral scripts about how and when to aggress. With

continued exposure to aggressive models, the accessibility of these knowledge structures will

become automatic (Anderson & Huesmann, 2003). It is not surprising, based on this model, that

children's aggressive beliefs are often correlated with their parents' beliefs (Huesmann, Eron,

Guerra, & Crawshaw, 1994) and their peers' beliefs (Henry, Guerra, Huesmann, Tolen,

VanAcker, & Eron, 2000) concerning aggression.

Parent Behaviors Associated with Children's Physical Aggression

Parents are typically viewed as prominent influences on their children's interpersonal

behaviors, including physical aggression. Research has shown that physical aggression in

children is related to their parents' use of authoritarian and permissive parenting styles

(Baumrind, 1967; see Hart et al., 1997; Ladd & Pettit, 2002 for reviews). However, recently

researchers have moved away from studying the relationships with general parenting styles and

instead investigated specific behaviors of the parent that better predict physical aggression. The

harsh, power assertive discipline (including threats, physical force, and intimidation) often

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characteristic of authoritarian parenting has been found to predict children's levels of physical aggression (see Coie & Dodge, 1998 for review; Deater-Deckard & Dodge, 1997; Hart, DeWolf, & Burts, 1992; Hoffman, 1960). Other parenting behaviors such as lack of discipline, low parental monitoring, and low responsiveness (often characteristic of permissive parenting) have also been found to relate to children's use of physical aggression. It is speculated that these behaviors (or lack of behaviors) reward children's use of physical aggression by allowing it to occur without punishment (Hart, Nelson, Robinson, Olsen, & McNeilly-Choque, 1998; Olweus, 1980; Vuchinich, Bank, & Patterson, 1992).

Both physical parental control (i.e., control of children's behaviors) and psychological parental control (i.e., "an insidious type of control that potentially inhibits or intrudes upon psychological development through manipulation and exploitation of the parent-child bond, negative, affect-laden expressions and criticisms, and excessive personal control", Barber, 1996, p. 3297) are important predictors of physical aggression. Research has established that a certain level of control is necessary for gaining children's compliance and is related to positive child outcomes; however, the excessive use of control is related to physical aggression in children (see Coie & Dodge, 1998; Nelson & Crick, 2002 for reviews). While the excessive use of parental control is problematic, somewhat different patterns have emerged for sons and daughters.

Research has repeatedly shown that maternal and paternal use of physical and psychological control is positively related to their daughters' use of physical aggression (Casas, Weigel, Crick, Ostrov, et al., 2006; Hart et al., 1998; Hart, Newell, & Olson, 2002; Nelson et al., 2006). This robust relationship has been found across American (Casas et al., 2006), Chinese (Nelson et al., 2006), and Russian samples (Hart et al., 1998). The relationships between maternal and paternal use of physical and psychological control and their sons' use of physical

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aggression have been less consistent. Nelson et al. (2006) found that maternal and paternal use of physical and psychological control were positively related to their sons' use of physical aggression. Similarly, Casas et al. (2006) found that maternal use of psychological control was related to their sons' use of physical aggression; however, paternal psychological control was negatively related to their sons' use of physical aggression. The authors explained the negative relationship between paternal control and their sons' physical aggression with the speculation that fathers' use of control may be positively related to their sons' tendencies to socially withdraw, which would make them less likely to be aggressive. Additional research has found no relationship between paternal psychological control and their son's use of physical aggression in a Russian sample (Hart et al., 1998). While there may be differences between Russian and American samples, Hart et al. (1998) also added that the effect of paternal psychological control was reduced to marginal significance due to the larger effects of other predictors in the study (i.e. gender, maternal coercion, paternal responsiveness). In sum, the association between psychological control and physical aggression has been found to be more consistent with daughters than sons and merits further study.

In this brief overview, aspects of parenting that have been found to be related to children's use of physical aggression have been highlighted. Specifically, children's use of physical aggression has been positively related to parents' use of authoritarian and permissive parenting styles (see Ladd & Pettit, 2002 for review) and specific parenting behaviors such as physical and psychological control (Casas et al., 2006; Hart et al., 1998; Nelson et al., 2006). Of particular interest for the current study were the parenting factors that are most relevant to relational aggression. As will be discussed later, these factors include parents' use of psychological control and manipulative behavior toward adults and child (i.e., manipulative

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discipline) because these behaviors may teach children interpersonal behaviors that can be used in a relationally aggressive way. Both parents' tendencies to use psychological control and manipulative behavior need to be studied for researchers to better understand the associations between parenting practices and sons' and daughters' relationally aggressive behavior (Casas et al., 2006; Nelson & Crick, 2002; Nelson et al., 2006).

Peer-Related Variables Associated with Physical Aggression

Children's physical aggression is not only associated with parent-related behaviors; it has also been strongly linked to the behaviors of children's peers. While children who are physically aggressive tend to be less accepted than children who are not physically aggressive (Coie, Dodge, & Kupersmidt, 1990), most aggressive children still belong to a group of friends (Cairns et al., 1988) and have as many friends as nonaggressive children (Ray, Cohen, Secrist, & Duncan, 1997). Research has shown that friends can be an important influence on children's behavior. For example, having high quality friends can help protect children against peer victimization (Hodges, Boivin, Vitaro, & Bukowski, 1999) and help children adjust to school (Berndt, Hawkins, & Jiao, 1999). Besides providing support, friends can also influence children's use of certain interpersonal behaviors. Research has found that children can learn physically aggressive behaviors by associating with peers who are physically aggressive (see Boivin et al., 2005; Deptula & Cohen, 2004; Pettit, 1997 for reviews; Werner & Crick, 2004). Moreover, numerous studies have identified a positive relationship between children's use of physical aggression and their friends' use of physical aggression (Berndt et al., 1999; Brendgen, Bowen, Rondeau, & Vitaro, 1999; Brendgen et al., 2008; Cairns et al., 1988; Snyder, Horsch, & Childs, 1997; Werner & Crick, 2004). This relationship has been found for early and middle

childhood (Brendgen et al., 1999; Snyder et al., 1997) and applies to males and females (Cairns et al., 1988; Werner & Crick, 2004).

While the positive relationship between children's use of physical aggression and their friends' use of physical aggression is rather robust, this relationship does not specify directionality. It is unclear from correlational results if aggressive peers are influencing children's use of aggression or if aggressive children are seeking to associate with similar peers. To make this distinction, longitudinal studies have been performed. Using short-term longitudinal studies, Patterson, Reid, and Dishion (1992) and Werner and Crick (2004) found that children's associations with physically aggressive peers at time 1 predicted the children's levels of physical aggression at time 2 even after controlling for the children's initial levels of aggression. Thornberry, Krohn, Lizotte, and Chard-Wierschem's (1993) longitudinal research with gang members revealed that associating with physically aggressive peers increased adolescents' use of physical aggression. In addition, researchers have found that aggressive adolescents are especially likely to associate with peers who are also aggressive (Cairns et al., 1982; Dishion, Andrews, & Crosby, 1995; Thornberry et al., 1993).

In sum, this research shows that there is a reciprocal relationship between peers' influence on children's aggressive behavior and the peers with whom aggressive children choose to associate. That is, associating with physically aggressive peers can further increase children's use of physical aggression (Patterson et al., 1992; Thornberry et al., 1993; Werner & Crick, 2004) and physically aggressive children tend to seek out physically aggressive peers (Cairns et al., 1982; Dishion et al., 1995; Thornberry et al., 1993). Thornberry et al. (1993) concluded that (a) physically aggressive peers model and reinforce that it is acceptable to be aggressive and (b) individuals tend to seek out peers who are similar to themselves. Unfortunately, by entering into

this reciprocal cycle, children become less likely to gain the important social skills that they need to become more accepted by (and to interact successfully with) non-aggressive peers (Werner & Crick, 2004).

A limited amount of research has tested the potential moderating effect of gender in the relationship between peers and physical aggression. Moreover, the research on peers and physical aggression has focused primarily on males because it was assumed that physical aggression was more of a "male problem" (Buss, 1961; Eagly & Steffen, 1986; Maccoby & Jacklin, 1974). The limited empirical work that has been conducted on antisocial behaviors (e.g., aggression, smoking, drug use) in males and females has revealed that both genders are equally influenced by their peers (Laird, Jordan, Dodge, Pettit, & Bates, 2001; Urberg, Degirmencioglu & Pilgrim, 1997). For example, one study (Urberg et al., 1997) found that males and females were equally influenced by their best friends and their group of friends to use cigarettes and consume alcohol. In a similar vein, Werner and Crick (2004) found that peers influenced both girls' and boys' use of physical aggression. In sum, it appears that gender is not a strong moderator of the relationship between peers and physically aggressive behavior. However, this conclusion is based on a very limited amount of information.

The previous research conducted on physical aggression provided a guide for understanding relational aggression. Due to the abundance of information available on physical aggression, the focus of the review was on social factors such as specific parenting and peer group behaviors that can potentially model and/or reward aggressive behaviors for children. With a review of the relational aggression literature to follow, it will become clear that the research conducted on relational aggression is quite limited compared to the research on physical aggression, and that most researchers have chosen to investigate variables previously associated

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with physical aggression. The current study followed the same approach by assessing specific parent- and peer-related variables that, while associated with physical aggression in children, may also apply to relational aggression. However, while prior research has typically examined parent- and peer-related variables separately, the current study examined both parent- and peer-related variables in a single investigation.

Associations with Relational Aggression

Given that physical and relational aggression are both forms of aggression with the intent to harm another person, it would seem reasonable to assume that their correlates are similar and that there may be parallels between the (previously established) correlates of physical aggression and the (relatively unestablished) correlates of relational aggression (Brown, Arnold, Dobbs, & Doctoroff, 2007; Casas et al., 2006). As will be described below, their results often reveal similar, although not identical, patterns with regard to the correlates of physical and relational aggression. Perhaps, the mechanisms of physical and relational aggression are similar (e.g., experiences with and observations of aggressive parents), but the specific behaviors of the model may differ (e.g., parents' use of physical punishment may relate to children's use of physical aggression while manipulative punishment may relate to children's relational aggression).

Social Learning Theory (Bandura, 1973) would suggest that relational aggression is learned by observing and/or experiencing relationally aggressive acts or similar manipulative behaviors. Parents' and peers' use of relationally aggressive (manipulative) behaviors should serve as models for children's use of relational aggression. To learn how to be relationally aggressive and utilize these manipulative, potentially harmful behaviors, the Social-Cognitive Model of Aggression (Anderson & Huesmann, 2003) would suggest that children need to be

exposed to relationally aggressive models, not physically aggressive ones, to create the specific knowledge structures for how to behave in a relationally aggressive manner.

Parent Behaviors Associated with Relational Aggression

As briefly summarized earlier, previous research has shown that children can learn how and when to use physically aggressive behaviors after repeated interactions with their parents and/or by observing their parents' aggressive behavior directed toward others (Bandura, 1973; Nelson et al., 2006; Vaillancourt, Miller, Fagbemi, Cote, & Tremblay, 2007). Children's use of physical aggression has been associated with multiple parent behaviors: parenting styles, power assertive discipline, lack of parental monitoring, and physical and psychological control (see Coie & Dodge, 1998; Ladd & Pettit, 2002; Nelson & Crick, 2002 for reviews). While parents' use of harsh, power assertive discipline has been positively related to children's use of physical aggression, parents' use of manipulative discipline may be related to children's use of relational aggression. Pettit and colleagues (Pettit, Brown, Mize, & Lindsey, 1988; Pettit, Harrist, Bates, & Dodge, 1991) argued that the disciplinary styles children are exposed to provide models for how children are to behave toward their peers. Nelson et al. (2006) also concluded that "children's aggressive styles may parallel the…disciplinary style enacted by parents" (p. 557). For example, if parents discipline their children by making them feel guilty or by not talking to them until they do what the parents have requested, their children may learn that they can manipulate others by using guilt or withholding their attention from others. Besides learning behaviors through experience, children can also learn through their observations. Children may learn manipulative behaviors by observing their parents manipulate and relationally aggress against other adults. Through these experiences and observations, children may learn that these manipulative behaviors can cause harm to others because of their own emotional responses to being

manipulated as well as by observing their parents' use of intentionally harmful, manipulative behaviors with other adults.

In addition to parents' use of manipulative behavior with their children and others, parents' use of psychological control was of interest in this study. Psychological control includes the use of manipulative behaviors in the parents' attempts to control their children. Although there is considerable overlap with manipulative discipline behaviors, the concept of psychological control also includes exploitation of the parent-child bond and can be used in discipline or non-discipline situations with children. Some of the behaviors associated with psychological control parallel behaviors associated with relational aggression (e.g., love withdrawal is characteristic of psychological control and is similar to the relationally aggressive behaviors of social exclusion and threatening to end a friendship). Children may learn these manipulative behaviors through their experiences with their parents and then, as a byproduct, realize that these behaviors can be hurtful and used to control peers.

While a wealth of research has studied parents' associations with physical aggression, relatively little research has explored the relationships between parenting practices and children's use of relational aggression. Similar to the findings for physical aggression, Casas et al. (2006) found a positive relationship between fathers' self-reported use of authoritarian parenting and their preschool-aged daughters' levels of relational aggression (as rated by the fathers). This pattern was only marginally significant for their sons. There was also a positive relationship between mothers' self-reported use of permissive parenting and their preschool-aged daughters' levels of relational aggression (as rated by the mothers). Once again, this pattern was only marginally significant for their sons.

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While it is believed that parents who utilize authoritarian and permissive parenting styles may be teaching their children that physically aggressive behaviors are acceptable (Hart et al., 1992), the use of these parenting styles may also teach children that relationally aggressive behaviors are acceptable. However, relationally aggressive behaviors are different than physically aggressive behaviors, and assessing general parenting styles does not allow for a clear understanding of which specific parenting behaviors are related to children's use of relational aggression.

Moreover, the lack of consistency among the parent-child dyads in the Casas et al. (2006) study (e.g., fathers' but not mothers' use of authoritarian parenting with their preschool-aged daughters was related to relational aggression) supports the notion that it is important to investigate the associations between mothers' and fathers' behaviors and their son's and daughters' use of relational aggression. The inconsistent dyad findings in the Casas et al. (2006) study may be due to differences in how the mothers and fathers influence their children or differences in how the mothers and fathers rated their children's levels of relational aggression. Although Casas et al. (2006) found that the correlation between mothers' and fathers' ratings of relational aggression in their children was significant ($r = .44$, $p < .01$), one would expect this correlation to be quite high because the same questionnaire was used by both parents to assess the same child. The current study investigated both mothers' and fathers' relevant behaviors and their sons' and daughters' use of relational aggression; however, self and peer ratings were used to assess children's use of relational aggression instead of parent ratings to eliminate parent bias yet still retain a multi-method assessment of relational aggression.

As mentioned before, parenting styles incorporate many behaviors that form a general pattern of parenting which may obscure the relationships between specific parenting behaviors

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and relational aggression. Research on parenting styles does not focus on the specific behaviors that some parents may engage in that may inadvertently provide children with a model for manipulative behavior. The present study included a more precise examination of parents' behaviors potentially associated with children's use of relational aggression by assessing the specific manipulative behaviors that parents use with the child (and others) that parallel relational aggression, instead of measuring the general behaviors associated with parenting styles. It is believed that disciplining is a common context in which parents may model manipulative behavior. As previously noted, the disciplinary styles children are exposed to provide models for how children may behave toward their peers (Pettit, Dodge, & Brown, 1988; Pettit et al., 1991). It is important to clarify that while the use of relational aggression involves intent to harm, it is presumed that parents typically do not intend to harm their children through discipline but may, nonetheless, manipulate them with certain disciplinary behaviors. Children may learn manipulative behaviors similar to those used in relational aggression through disciplinary experiences with their parents and, secondarily, learn that these behaviors can be used to control and harm others because of their own responses to being manipulated. While it can be argued that all styles of discipline attempt to manipulate children's behaviors, the "better" discipline approaches (e.g., induction) strive to educate (not manipulate) the children and do not harm the children emotionally.

Some research has focused on more specific parenting behaviors (rather than parenting styles) that could be related to relational aggression. Unfortunately, the results of these studies tend to be inconsistent and somewhat puzzling. In a longitudinal study, Vaillancourt and colleagues (2007) had Canadian mothers (but not fathers) rate aspects of their parenting (e.g., hostile and inconsistent parenting) when their children were two years old and then assessed

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children's use of relational aggression at age 10. None of the variables assessed were found to be significant predictors of relational aggression for girls or boys. Relational aggression may not have been associated with mothers' hostile and inconsistent parenting because, in my opinion, the researchers were not assessing parenting behaviors highly relevant to relational aggression. While some aspects of maternal hostility may overlap with some relationally aggressive behaviors, manipulative behaviors used by the mothers were not specifically assessed. A specific assessment of parents' use of manipulative behaviors with their children may provide a more robust association with children's use of relational aggression than an assessment of parents' behaviors that lack a manipulative quality.

Brown et al. (2007) assessed parental overreactivity, laxness, and negative maternal affect from a videotaped clean-up task between European American and Puerto Rican mothers and their children. The researchers found for European Americans (but not Puerto Ricans) that parental overreactivity, laxness, and negative maternal affect positively correlated with five- to eight-year-old boys' and girls' use of relational aggression. While positive associations were found, the behaviors that were measured in the Brown et al. (2007) study do not convey manipulative behaviors that are considered critical for modeling relational aggression. In addition, the clean-up task utilized to measure maternal behaviors would not be appropriate to use with older children.

The parenting behavior that has received the most empirical attention with regard to children's use of relational aggression is psychological control because of this construct's logical connection with relationally aggressive behaviors (Nelson & Crick, 2002; Reed et al., 2008). For example, love withdrawal is a behavior characteristic of psychological control that is similar to the relationally aggressive behaviors of social exclusion and threatening to end a friendship.

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Research has found that the use of psychological control by parents is positively related to children's use of relational aggression (Nelson & Crick, 2002; Nelson et al., 2006; Yang, Hart, Nelson, Porter, et al., 2004). Psychological control includes behaviors that are used by parents to manipulate and exploit the child-parent relationship and maintain control over their children (Barber, 1996). Psychological control can include love withdrawal, guilt induction, and the parents' expressions of shame and possessiveness. For example, a parent might claim that it is the child's fault the family does not have any money because of the child's extracurricular activities. While psychological control is a component of the authoritarian parenting style, Barber (1996) argued that psychological control should be studied independently because parenting styles include many other elements (e.g., non-psychological forms of control, rejection, lack of responsiveness) that may obscure the unique effects of psychological control.

While the most empirical attention has been given to psychological control, there has not been a clear pattern of associations found among mothers' and fathers' use of psychological control and their sons' and daughters' use of relational aggression. Kuppens, Grietens, Ohghena, and Michiels (2009) found a positive relationship between mothers' and fathers' use of psychological control and their sons' and daughters' us of relational aggression. Nelson et al. (2006) found a positive relationship between mothers' and fathers' use of psychological control and their daughters' (but not their sons') use of relational aggression. Nelson and Crick (2002) found that parents used psychological control equally with boys and girls. However, fathers' use of psychological control predicted their daughters' (but not their sons') use of relational aggression. Mothers' use of psychological control was unrelated to their children's use of relational aggression. In a recent meta-analysis, Kawabata, Alink, Tseng, van IJzendoorn, and Crick (2011) found that fathers' (but not mothers') use of psychological control was positively

related to their daughers' (but not their sons') use of relational aggression. All of these studies provide some support for a positive association between parents' use of psychological control and their daughters' use of relational aggression. However, most of these studies failed to find a significant relationship between parents' use of psychological control and their sons' use of relational aggression. This intriguing gender difference between sons and daughters clearly merits further exploration.

While it makes logical sense that psychological control and relational aggression would be positively associated, it is unclear why this association does not occur for sons. Nelson and Crick (2002) argued that parents may have a stronger effect on their daughters' than their sons' use of relational aggression due to the heightened importance of dyadic relationships to girls. If dyadic relationships are more important to girls than boys, then they would be more strongly affected by the interpersonal behaviors of their parents (see Archer & Coyne, 2005). The present study further investigated the relationship between parents' use of psychological control and their daughters' and sons' use of relational aggression.

In one study, Reed et al. (2008) did not find a significant relationship between maternal psychological control and children's use of relational aggression. This non-significant finding may be due to the use of teacher ratings of children's relational aggression instead of peer ratings. Because of the covert nature of relational aggression, children may not regularly display these acts in front of their teachers and, as a result, it may be difficult for teachers to assess these behaviors accurately. The non-significant finding could also be due to differences in intent between psychological control and relational aggression. While the concept of psychological control parallels relationally aggressive behaviors (Nelson & Crick, 2002; Reed et al., 2008), relationally aggressive behaviors are committed with the intent to harm whereas psychological

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control does not include a harmful intent. The current study further investigated the difference between the associations of mothers' and fathers' use of psychological control and their sons' and daughters' use of relational aggression. However, this study also assessed parents' use of manipulative discipline with their children and parents' use of manipulative behavior with other adults (which includes a harmful intent) to attempt to find a stronger association between parents' behavior and their children's use of relational aggression.

Authoritarian and permissive parenting styles and the specific parenting behaviors previously examined (i.e., low monitoring, negative maternal affect, as well as hostile, inconsistent, overreactive, and lax parenting) do not capture the manipulative quality of relational aggression that children may learn from their parents. While the use of psychological control may closely translate into relational aggression, previous research has not assessed the specific manipulative behaviors that parents may use when disciplining their children that may encourage the children's use of relational aggression. As previously mentioned, researchers (Nelson et al., 2006; Pettit et al., 1988; Pettit et al., 1991) have argued that the disciplinary styles children are exposed to provide models for how children may behave toward their peers. For example, if parents discipline their children by making them feel guilty or by not talking to them until they do what the parents have requested, their children may learn that they can manipulate others by using guilt or withholding their attention from others. Children may also learn that these manipulative behaviors can control and cause harm to others through their own responses to being manipulated by their parents as well as through observing their parents' use of relational aggression with their spouse or friends.

Previous research has failed to adequately address what children may observe their parents doing that may promote the development of relational aggression. Reed et al. (2008)

found a positive relationship between mothers' self-reported use of relational aggression with their peers and their use of psychological control with their children, reflecting a general use of manipulative behavior across these two contexts. However, the mothers' use of relational aggression with their peers was unrelated to their children's use of relational aggression with peers. The non-significant relationship may be due to the reliance on teachers' ratings of children's relational aggression (as mentioned before, peers have been found to be more accurate raters of relational aggression than teachers) and/or the specific items selected to assess maternal relational aggression toward their peers. An examination of these items reveals that Reed et al. (2008) were measuring behaviors of the mothers that the younger children in their sample (ages ranged from 5 to 15 years) would be unlikely to observe. For example, it would be difficult for a young child to regularly observe his/her mother "excluding a person from her circle of friends because of anger" or "threatening to stop being friends with someone to cause hurt or for personal gain". To be related to the children's use of relational aggression, the parents' behaviors (that are assessed) should be readily observable and understood by the children.

In this review, aspects of parenting that have been found to be related to children's use of relational aggression have been highlighted. Specifically, children's use of relational aggression has been positively related to parents' use of authoritarian and permissive parenting styles (see Hart et al., 1997; Ladd & Pettit, 2002 for review) as well as specific parenting behaviors such as inconsistent and over reactive parenting, negative maternal affect, and psychological control (Brown et al., 2007; Nelson & Crick, 2002; Reed et al., 2008; Yang et al., 2004). However, the research reviewed has not been without limitations. The current study sought to improve upon the previous research investigating parent behaviors associated with relational aggression by (a) collecting information from mothers and fathers, (b) using peer- and self-ratings of children's

relational aggression, and (c) assessing behaviors of parents potentially experienced and observed by their children (i.e., parents' use of psychological control and manipulative discipline with their children and parents' use of manipulative behavior with other adults).

Peer-Related Variables Associated with Relational Aggression

As summarized earlier, research has found that children can learn physically aggressive behaviors by associating with peers who are physically aggressive (see Boivin et al., 2005; Deptula & Cohen, 2004; Pettit, 1997 for reviews). This relationship has been found for early and middle childhood (Brendgen et al., 1999; Snyder et al., 1997) and applies to males and females (Werner & Crick, 2004).   However, the influence of peers likely extends beyond physical aggression. If peers are capable of modeling physically aggressive behaviors and rewarding their friends who also behave aggressively, they may also be capable of modeling and rewarding the use of relationally aggressive behaviors. It was a goal of the current study to investigate the association between peers' and children's use of relational aggression. There may be a parallel association between the influence of peers on children's use of physical aggression and the influence of peers on children's use of relational aggression.

With regard to relational aggression, Werner and Geiger (1999) reported that the friends of relationally aggressive children engaged in more relational aggression than the friends of non-relationally aggressive children. However, the influence that friends have on children's use of relational aggression has rarely been investigated. In a twin study to assess the genetic and environmental influences on relational aggression, Brendgen et al. (2008) found a link between first grade children's use of relational aggression and their friends' use of relational aggression. The authors also assessed the possible link between children's friends' use of physical aggression and children's use of relational aggression, but a significant relationship was not

found. It appears that the influence of peers may be specific with regard to physical and relational aggression. These findings suggest that children may seek out peers who aggress in a similar fashion to themselves and/or that relationally aggressive peers may increase children's use of relational aggression. Drawing upon the physical aggression literature, research has shown that both processes (i.e., seeking out similar peers and peers' influence on other children) occur with groups of physically aggressive friends (Cairns et al., 1982; Dishion et al., 1995; Thornberry et al., 1993; Werner & Crick, 2004). Further research is needed to assess the associations between friends' and children's relationally aggressive behavior. This relationship for relational aggression has not been thoroughly investigated yet, and the aforementioned findings need to be replicated for first grade children as well as explored with older children. While relational aggression is evident by first grade, first grade children are limited in the sophistication of their relationally aggressive behavior. As children age, their use of relational aggression tends to increase until, and then maintain around, age 11 (Bjorkqvist et al., 1992) and peer relations are typically more important at age 11 than at age six (Crick et al., 1999). Therefore, there is justification for studying peer-related variables with older children because the associations between relational aggression and peer-related variables may be more robust for older children than younger children. It is expected that, as with younger children, older children seek out peers who aggress in a similar fashion to themselves and that relationally aggressive peers can increase older children's use of relational aggression.

In the first longitudinal study to explore the association of peers' behavior and children's use of relational aggression, Werner and Crick (2004) conducted a one-year study of children in the second through fourth grades. They found that friends' use of relational aggression at time 1 positively predicted girls' use of relational aggression one year later (controlling for the

children's initial levels of relational aggression). This pattern was not evident for boys. From this study, it appears that the development of relational aggression may be more characteristic of the friendships of girls than those of boys. A possible explanation for friends' lack of influence on boys' use of relational aggression is that relational aggression is not an important, salient behavior in boys' relationships. The behaviors characteristic of relational aggression (e.g., gossiping, sharing someone's secrets, ending friendships) are conducted with the intent to harm someone in a relationship. Research has shown that girls report forming closer relationships than boys do (Maccoby, 1990; Parker & Asher, 1993) and girls have been found to rate relationally aggressive acts as more hurtful than boys do (Crick, 1995). Before strong conclusions can be drawn, additional research is needed that investigates the influence of peer-related variables on children's use of relational aggression with specific attention given to potential differences between boys and girls.

Beyond the investigation of the relationship between peers' and children's relationally aggressive behavior, research is needed that explores the specific qualities of peer relationships that are most likely to facilitate such a relationship. Grotpeter and Crick (1996) found that relationally aggressive females reported higher levels of intimacy and exclusivity within their dyadic friendships than females that were not relationally aggressive. In an additional study, which included males, Grotpeter and Crick (1996) found that relationally aggressive children reported higher levels of intimacy and exclusivity within their friendships than non-relationally aggressive children, whereas physically aggressive children reported lower intimacy within their friendships than non-physically aggressive children. While intimacy and exclusivity are typically viewed as positive characteristics of friendships, they are potentially harmful in relationships that utilize relational aggression (Grotpeter & Crick, 1996; Parker & Asher, 1993). While relational

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aggression often includes divulging someone's private information (e.g., gossiping, sharing secrets), high levels of intimacy in a relationship can provide the aggressor with more "ammunition." In addition, high levels of exclusivity limit a friend's chance of leaving a relationship because there are no other options. These early findings indicate that (a) the relationships of relationally aggressive children may be unlike those of physically aggressive children and (b) there may be heightened levels of intimacy and exclusivity in these relationally aggressive relationships that facilitate the positive relationship between peers' and children's use of relational aggression. To investigate potential differences within the association between peers' and children's use of relational aggression at a group level, the current study assessed how much each child felt his/her main group of friends was cohesive and distinct.

Although research has shown that peers influence boys' and girls' use of physical aggression equally (Laird et al., 2001; Urberg et al., 1997; Werner & Crick, 2004), the same pattern may not be true for relational aggression. Unlike physically aggressive acts, relationally aggressive acts are often committed to harm someone with whom the perpetrator has a relationship and there are differences between the relationships of males and females (Bjorkqvist et al., 1992; Maccoby, 1990; Parker & Asher, 1993). Research has shown that girls tend to rate their friendships as more important and intimate than boys rate their friendships (Maccoby, 1990; Parker & Asher, 1993). Bjorkqvist et al. (1992) argue that females form closer relationships with peers than males and that the type of aggression predominantly used by males and females depends on which type of aggression is thought to inflict the most harm on their targets. These targets are typically the same gender as the aggressor because throughout early and middle childhood, children predominately cultivate same-gender relationships (Archer, 1992; Maccoby, 1988). Moreover, relationally aggressive acts are rated as more hurtful and harmful by females

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than males (Crick, 1995). In a relevant study, Azmitia, Kamprath, and Linnet (1998) found that girls were more likely to use relationally aggressive behaviors and encourage other children to use these behaviors than were boys. Additional studies have found that girls are more relationally aggressive than boys during elementary school (particularly when using peer ratings of relational aggression; Bjorkqvist et al., 1992; Lagerspetz, Bjorkqvist, & Peltonen, 1988; Owens, 1996). Integrating this research finding with Social Learning Theory, relational aggression may be modeled more often and reinforced more strongly in girls' peer relationships than in boys' peer relationships, which would suggest that girls may be more strongly influenced by their peers than boys are with regard to relational aggression.

While there is a lack of research exploring the relationships between peers' behaviors and children's use of relational aggression, the few studies that have been conducted suggest that peers play an important role in the development of relational aggression just as they do in the development of physical aggression (Brendgen et al., 2008; Werner & Crick, 2004). It is important to investigate the associations between peer-related variables and children's use of relational aggression to more fully understand the parallels (and differences) between the potential antecedents of relational and physical aggression.

Parents' versus Peers' Strength of Associations with Relational Aggression

While most contemporary researchers (Hart, 2007; Nelson & Crick, 2002; Olsen, Yang, Hart, Robinson, et al., 2002; Pettit et al., 1991) agree that both parents and peers are important for children's development, some researchers have questioned such claims. These researchers have taken a minimalist view, arguing that parents have a negligible impact on their children's personality and social development (Harris, 1995, 1998, 2002; Plomin, 1999; Rowe, 1994). Judith Harris has been the most vocal minimalist, and she believes that genetic and peer

influences are the most critical factors in the development of children's behaviors. Others have argued against such a minimalist approach. Hart (2007) reviewed the literature on the influence that parents have on children's behavior to "confront the minimalist view of parenting" (p. 227). Hart's analysis showed that parents do have a substantial influence on their children's behaviors. Others (e.g., Berk, 2006; Vandell, 2000) have also taken a stance against Harris' view and have argued for the importance of understanding the parent-child relationship as well as other socialization factors (e.g., peers) that can influence children's behavioral development.

To date, no individual studies have examined the associations between children's use of relational aggression and (a) parents' behaviors and (b) peers' use of relational aggression. Research is needed that will address this void in the relational aggression literature. The more information researchers have on the socialization correlates and antecedents of relational aggression, the more successful they can be in developing ways to control children's use of relational aggression, which has been linked with social anxiety, depression, loneliness, and peer rejection (Crick & Bigbee, 1998; Crick & Grotpeter, 1995; Prinstein et al., 2001). The current study was the first to compare the relative strength of associations between parent- and peer-related variables and relational aggression in 9- to 13-year-old children.

Current Study

The purpose of the current study was to investigate the possible associations between parent- and peer-related variables and relational aggression in children. Currently little research in this area exists. Social Learning Theory and the Social-Cognitive Theory of Aggression provide the foundation for the expectation that parents and peers are important influences in the development of various forms of aggression. Furthermore, a plethora of studies have been conducted that show that parents and peers play an important role in children's use of physical

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aggression (see Cairns et al., 1988; Coie & Dodge, 1998 for reviews). Specifically, research has shown that physical aggression in children is related to their parents' use of authoritarian and permissive parenting styles, harsh, power assertive discipline, lack of discipline, low parental monitoring, low responsiveness, and physical and psychological control (see Coie & Dodge, 1998; Hart et al., 1997; Ladd & Pettit, 2002 for reviews). Moreover, multiple studies have identified positive relationships between children's use of physical aggression and their friends' use of physical aggression (Berndt et al., 1999; Brendgen et al., 1999; Brendgen et al., 2008; Cairns et al., 1988; Snyder et al., 1997; Werner & Crick, 2004).

Unlike the abundance of research that has been conducted on physical aggression, the body of research on relational aggression is quite small. The studies that have been conducted on relational aggression have revealed that children's use of relational aggression is related to parents' use of authoritarian and permissive parenting styles, low monitoring, hostile, inconsistent, overreactive, and lax parenting, negative maternal affect, and psychological control (Brown et al., 2007; Casas et al., 2006; Leadbeater, Banister, Ellis, & Yeung, 2008; Nelson & Crick, 2002; Vaillancourt et al., 2007). Children's use of relational aggression has also been positively linked with their friends' use of relational aggression (Brendgen et al., 2008; Werner & Crick, 2004).

The current study built upon the limited research on relational aggression by (a) examining and comparing the associations between parent- *and* peer-related variables and children's use of relational aggression, (b) including mothers and fathers in the data collection, and (c) assessing whether mothers', fathers', and peers' associations with relational aggression are different for boys and girls. The current study focused on children in middle childhood because they are at an age when the use of relational aggression is rather sophisticated and covert

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(Crick et al., 1999) and they have, most likely, had a multitude of interactions with their primary

caregivers as well as with their group of friends. Based on the results of previous research

(Nelson & Crick, 2002; Nelson et al., 2006; Pettit et al., 1988; Pettit et al., 1991; Reed et al.,

2008; Yang et al., 2004), it was predicted that mothers' and fathers' use of psychological control

and manipulative discipline with their children and their use of manipulative behavior with other

adults would be positively related to their children's use of relational aggression. However,

based on previous evidence of a gender difference (Nelson & Crick, 2002; Nelson et al., 2006),

these relationships were expected to be stronger for daughters than for sons. Furthermore, the

peer groups' use of relational aggression was predicted to be positively related to boys' and girls'

use of relational aggression (Brendgen et al., 2008; Werner & Geiger, 1999), especially when the

peer group was perceived by the child to be relatively high on group cohesion and distinctiveness

(Grotpeter & Crick, 1996). While it was unclear if the parent- or peer-related variables would

have a stronger association with children's use of relational aggression, determining the relative

strength of these associations was an important goal of this investigation.

Chapter 2 - Method

Participants

Child Participants

Participants included 165 fourth- (n = 71), fifth- (n = 68), and sixth- (n = 26) grade

students enrolled in public elementary schools in central and western Iowa and western Kansas.

Two of the schools were located in rural areas (with populations less than 2,600) while the other

six schools were located in an urban area (with a population of 33,600). The children (52% male)

ranged in age from 9 to 13 years with an average age of 10.37 years (*SD* = .84). All participants

had the written consent of their parents (see Appendix A) and provided their own written assent

at the time of the study (see Appendix B). Both parents (or guardians) of each student were also

asked to participate in the study (see Appendix A for the Parent Letter). Sixty-four children

(38.8%) had two parents/guardians participate, 79 (47.9%) had one parent/guardian participate,

and 22 (13.3%) did not have a parent/guardian participate in the current study.

Adult Participants

The adult participants included 137 female caregivers ranging in age from 28 to 59 years

with an average age of 40.11 years (*SD* = 6.10). The majority of female caregivers was

Caucasian (96.4%), married (75.2%), and had attended at least some college (88.3%). One

grandmother and two female guardians completed the measures with the remaining 97.8% of the

respondents being mothers. With the majority of adult female participants being biological

mothers, the term mother will be used throughout the remainder of the document to refer to the

female caregivers. Seventy male caregivers participated in the current study ranging in age from

29 to 57 years with an average age of 41.74 years ($SD = 6.33$). The majority of male caregivers was Caucasian (97.1%), married (88.6%), and had attended at least some college (81.4%). The majority of male caregivers were biological fathers (91.4%), five were step-fathers (7.1%), and one reported as other (1.4%). With the majority of adult male participants being biological fathers, the term father will be used throughout the remainder of the document to refer to the male caregivers. (For a comprehensive description of all of the parent participants, see Table 1.) All participants provided their own written consent (see Appendix A).

Materials[2]

Child Measures

The child participants completed a demographics form requesting that they specify their name, sex, age, birth date, and grade in school (see Appendix C). The participants then completed measures assessing aggression[3]. The first measure (see Appendix D) was a sociometric rating form developed for use in this study to measure relational and physical aggression. Participants rated on a 1 (*Not At All Similar*) to 5 (*Very Similar*) scale how similar they and each of their classmates are to children described as relationally aggressive toward peers with whom they are angry or do not want to be friends. Using the same rating scale, participants then rated how similar they and each of their classmates are to children described as physically aggressive toward peers with whom they are angry or do not want to be friends. The peer ratings for each child (for each type of aggression) were summed and then averaged based on the number of ratings made. Each participant's self ratings (for relational and physical aggression) were also used in analyses. The description of relational aggression presented in the instructions of this measure was adapted from Crick and Grotpeter (1995). The description of

physical aggression provided to the children was created for use in this study. Only children with parental permission had their names appear on the sociometric rating forms.

The next measure of aggression (see Appendix E) asked each participant to rate on a 1 (*Not at All Likely*) to 5 (*Very Likely*) scale how likely he/she would be to engage in 12 different behaviors if he/she was mad at another child or did not want a child to be his/her friend. Six of the behaviors reflected relational aggression (e.g., spread rumors about that child) and six behaviors reflected physical aggression (e.g., hit that child); the items were adapted from Crick and Grotpeter (1995). The relational aggression item ratings were summed to create a single relational aggression score for each child participant, and the physical aggression item ratings were summed to create a single physical aggression score for each child participant.

The child participants then completed the Psychological Control Scale – Youth Self-Report (PCS-YSR; adapted from Barber, 1996). The PCS-YSR consists of eight items (e.g., My mother/father is a person who brings up my past mistakes when she/he criticizes me) that are rated on a 1 (*Not At All Like Her/Him*) to 5 (*Very Much Like Her/Him*) scale (see Appendix F). The ratings were summed to create a psychological control score for each child's primary female and male caregiver.

Following the control measure, participants responded to the Group of Friends Question (see Appendix G) and completed the Peer Group Cohesiveness and Distinctiveness Measure (see Appendix H; created by Bartel, 2006; cohesion items adapted from Kiesner and Notari, 2002, cited in Kiesner, Cadinu, Poulin, and Bucci, 2002). Participants first indicated if they currently had a group of friends (based on the definition provided for "group of friends"; see Appendix G) and then rated on a 1 (*Don't Agree With At All*) to 5 (*Agree With Very Much*) scale the extent to which the individuals in their group of friends feel cohesive (six items) and distinct from other

groups (six items). The ratings for the cohesiveness (distinctiveness) items were averaged to create a peer group cohesiveness (distinctiveness) score for each child participant.

For the final child measure, participants rated on a 1 (*Not At All Important*) to 5 (*Very Important*) scale how important 12 behaviors were to their main groups of friends (see Appendix I). Five of the behaviors were relationally aggressive, while the other seven behaviors were neutral or positive filler items. The ratings for the relational aggression items were summed to create a "peer group relational aggression" score for each child participant.

Parent Measures

The parents/guardians completed a demographic form requesting that they specify their child's name, their relationship to the child participating in the study, their sex, age, marital status, race/ethnicity, and highest level of education completed (see Appendix J). The parents then completed a questionnaire assessing their use of manipulative behaviors with adults that was developed for use in this study (see Appendix K). The parents rated on a 1 (*Not at All Likely*) to 5 (*Very Likely*) scale how likely they were to engage in nine behaviors if angry at a spouse or close friend. Four of the items reflected manipulative behaviors while the other five (filler) items reflected neutral or positive behaviors. The ratings of the manipulative behavior items were summed to create a "manipulative behavior with adults" score for each parent participating in the study. Each parent also completed a questionnaire assessing his/her use of manipulative behaviors in disciplining his/her child who participated in the study (see Appendix L). They rated on a 1 (*Not at All Likely*) to 5 (*Very Likely*) scale how likely they were to respond to their children's misbehavior in 12 different ways. Five of the discipline techniques were manipulative while the other seven discipline techniques were not manipulative. The ratings for the manipulative discipline items were summed for each parent participating in the study.

Finally, the parents completed the Social Desirability Scale (Crowne & Marlowe, 1964; see Appendix M) which consisted of 33 statements that participants indicated were either "true" or "false" for them. The Social Desirability Scale assessed the degree to which individuals were concerned that others view them in a favorable manner. Total scores on this measure were used in the analyses to control for socially desirable responding.

Procedure

Approval for the study was obtained from the IRBs at Kansas State University and Iowa State University, the elementary school administrations, principals, and classroom teachers participating in the study. After obtaining approval from the education system, the parents of the fourth-, fifth-, and sixth-grade students were contacted through information packets. The packets contained an introductory letter explaining the purpose of the study along with the procedure for gathering data from the children and the parents (see Appendix A). The packets also contained informed consent forms for the parents to sign and return. Each parent was given the option of (a) not allowing his/her child to participate in the study, (b) allowing his/her child to participate without any parental involvement, (c) allowing his/her child to participate with one parent involved, or (d) allowing his/her child to participate with both parents involved. All written forms of consent were gathered prior to the start of the study. In the Iowa schools, the principals determined the most convenient times for the experimenter to conduct the study in the classrooms whereas the classroom teachers in the Kansas school determined the ideal times for the experimenter to visit.

Child participants

At the start of the sessions, the experimenter introduced the study under the guise of wanting to further investigate how children choose to behave in different situations. After

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providing written assent, the children were each given a packet of questionnaires. They were told to only complete the pages after being instructed by the experimenter and to stop at the end of each questionnaire. Before the participants completed each measure, the experimenter explained the rating scale and gave the children a chance to practice using the appropriate scale. After the children demonstrated that they could use the scale properly, the experimenter read the instructions at the top of the questionnaires out loud, and the participants were then allowed to complete the forms on their own.

Participants first completed the demographics form followed by the sociometric rating forms for relational and physical aggression, and then they completed the questionnaire assessing their own use of relational and physical aggression. Next, the children received the PCS-YSR which assessed their parents' use of psychological control. Before completing the final questionnaires, the experimenter read the definition of a group of friends and asked the participants to indicate if they did or did not currently have a group of friends based on the provided definition (see Appendix G). In responding to the final two questionnaires, the children were told to think of only one group of friends (if they had more than one) or to think of a group of friends they would like to have in the future (if they did not have a group of friends). The participants completed the Peer Group Cohesiveness and Distinctiveness Measure (see Appendix H) followed by the Peer Group Relational Aggression Measure (see Appendix I). When the session was finished, the principals/teacher and children were thanked and any questions the children had about their participation were answered. The sessions took about 45 minutes each.

Parent participants

As mentioned previously, the parents received a packet of materials before the start of study. The packet contained a letter explaining the purpose and procedure of the study and a

form for parents to consent (or not consent) to their children's participation in the study. The parents were also asked to participate in the study by completing a demographics form and three questionnaires. The packet contained a set of forms for *both* parents of the child to complete. The parents could return the questionnaire packets either completed or not completed. If one (or both) of the parents did not complete the packet, the parent could still give permission for his/her child to participate in the study.

Directions were provided at the top of each form/questionnaire in the parents' packets explaining how the parent should go about completing each measure. The parents were first asked to complete the demographics form. After the demographics form was finished, the parents were asked to move on to the first questionnaire (Parents' Use of Manipulative Behaviors with Adults) which assessed how likely they would be to engage in certain behaviors when angry at a spouse or close friend. The second questionnaire (Parents' Use of Manipulative Disciplinary Responses with Child) asked the parents to rate how likely they would be to respond to their children's misbehavior in various ways. The final questionnaire the parents completed was the Marlowe-Crowne Social Desirability Scale which assessed the degree to which individuals are concerned that others view them in a favorable manner. Once the parents completed the packet of materials (if they chose to), they were asked to seal their consent forms in an envelope provided for this purpose and to seal each of the parents' questionnaires in separate envelopes provided for this purpose. All of the sealed envelopes were then returned to the school and then to the experimenter.

Upon completion of the study, a brief summary of the research findings was sent to participating principals and teachers. Parents were also sent a summary of the results if they had

requested a copy on their returned informed consent form. Parents did not have to participate in

the study to request and receive a summary.

Chapter 3 - Results

Preliminary Analyses

Child measures

Before testing the primary predictions, preliminary analyses were conducted to assess the internal reliabilities of each of the measures. Second, principal component factor analyses were conducted on responses to the Peer Group Cohesiveness and *Peer Group* Distinctiveness *measures* to assess the factor structure of the scales (see Table 2 for the descriptive statistics for all of the measures).

The child self-report aggression scale that was created for use in this study had acceptable internal reliability for the physical aggression subscale (see Table 2). The internal reliability was also acceptable for the relational aggression subscale after removing an item (i.e., ignore or walk away from that child when that child tries to talk with you). The Psychological Control Scale – Youth Self-Report (PCS-YSR; Barber, 1996) had acceptable internal reliabilities for mothers and for fathers. The Peer Group Relational Aggression Measure had acceptable internal reliability once we removed an item (e.g., exclude kids from your group if they make someone in your group mad).

The principal component factor analysis with verimax rotation conducted on the Peer Group Cohesiveness subscale (adapted from Kiesner and Notari, 2002) and the Peer Group Distinctiveness subscale (created by Bartel, 2006). Two factors emerged that accounted for 46% of the variance. Six items of the Peer Group Cohesiveness subscale loaded onto one factor (factor loadings ranged from .59 - .81) and had an acceptable internal reliability. The remaining six items (initially conceptualized as two group distinctiveness items, two restrict outgroup

members items, and two reject outgroup members items; see Appendix H) were combined to create one subscale (factor loadings ranged from .20 - .74) labeled as the Peer Group Distinctiveness subscale that had a rather weak internal reliability (see Table 2).

Parent measures

The parents completed two measures of manipulativeness created for use in this study. One measure focused on manipulative behavior with adults and the other focused on manipulative discipline with their children. Because the internal reliabilities for the separate manipulative measures were lower than anticipated, we combined the items on the two measures to form a 9-item Total Manipulative Behavior Measure for mothers and fathers that achieved a more acceptable level of internal reliability. Finally, the 33-item Social Desirability Scale (Crowne & Marlowe, 1964) had acceptable internal reliabilities for mothers and fathers (see Table 2).

Correlations[4]

The correlations among scores on the relational aggression and physical aggression measures were examined first. As presented in Table 3, scores on the relational aggression self 1 item measure were positively related to scores on the relational aggression self scale measure and scores on the relational aggression peer measure. However, scores on the relational aggression self scale measure and scores on the peer measure were not significantly related. Scores on the three measures of physical aggression were all positively related to each other. Children's use of relational aggression (as assessed by all three measures) was positively related to their use of physical aggression (as assessed by all three measures). Correlation comparison analyses using *r*-to *Z*-transformation showed that the physical aggression measures were more strongly

intercorrelated than were the relational aggression measures for all three pairs of compared

correlations (all $Zs > 2.22$, ps $< .05$).

It was predicted that children's use of relational aggression would be positively correlated

with their mothers' and fathers' use of manipulative behavior and psychological control. As

presented in Table 4, no significant relationships were found between children's use of relational

aggression (measured in three ways) and their mothers' or fathers' use of manipulative behavior.

In contrast, children's use of relational aggression (measured by the self 1 item and the self

scale) was positively related to their mothers' use of psychological control. Also, children's use

of relational aggression (measured by the self scale) was positively related to their fathers' use of

psychological control.

It was also predicted that children's use of relational aggression would be positively

correlated with their peer groups' use of relational aggression. As presented in Table 5, the peer

groups' use of relational aggression was positively related to children's use of relational

aggression as assessed by all three measures. While specific correlational predictions were not

made for peer group distinctiveness, results revealed that scores on peer group distinctiveness

were positively related to children's use of relational aggression as measured by the self 1 item

and the self scale (as well as peer group relational aggression). Scores on peer group

cohesiveness were unrelated to scores on all three measures of children's use of relational

aggression.

Parent and Peer Variables as Predictors of Children's Relational Aggression

The first major goal of the study was to examine and compare the associations between

parent- and peer-related variables and children's use of relational aggression. It was predicted

that parents' use of psychological control with their children and manipulative behaviors would

be positively related to their children's use of relational aggression (see Table 6). To test these predictions, a series of hierarchical regressions were conducted. Separate regressions were conducted for children's use of relational aggression measured by the self 1 item, peer ratings, and the self scale. For each regression, child gender, children's physical aggression scores, and mothers' (fathers') social desirability scores were entered as control variables in the first step. Then mothers' (fathers') use of psychological control and manipulative behavior were entered in the second step. Overall, six linear regression analyses were conducted with the parent variables as predictors of the child's relational aggression.

Mother variables

As presented in Table 7, the first two models were significant at Step 1 and revealed a positive relationship between children's use of physical aggression and children's use of relational aggression. A significant gender difference was also found for use of relational aggression in the second model (when relational aggression was measured by peers). Peers rated girls as more relationally aggressive than boys. The third model (when relational aggression was measured by the self scale) was significant at Step 2. A positive relationship was found between children's use of physical aggression and children's use of relational aggression. In addition mothers' use of psychological control was uniquely related to children's use of relational aggression, after controlling for children's gender, children's physical aggression scores, and mothers' social desirability scores.

Father variables

As presented in Table 8, all three of the overall models were significant at Step 1 and revealed a positive relationship between children's use of physical aggression and children's use of relational aggression.

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Peer variables[5]

It was also hypothesized that the use of relational aggression by children's peer groups would positively predict children's use of relational aggression (see Table 9). It was believed that this relationship would be stronger the more cohesive and distinct the children perceived their peer groups to be. To test this hypothesis, three hierarchical regressions were conducted. Separate regressions were conducted for children's use of relational aggression measured by the self 1 item, peer ratings, and the self scale. For each regression, child gender and children's physical aggression scores were entered into the first step to control for these variables. Peer groups' use of relational aggression, peer group cohesiveness, and peer group distinctiveness were entered into the second step and the two-way interactions involving peer groups' use of relational aggression, peer group cohesiveness, and peer group distinctiveness were entered into the third step. The three-way interaction of peer groups' use of relational aggression, peer group cohesiveness, and peer group distinctiveness was entered into the fourth step. Prior to analysis, the data for peer group relational aggression, peer group cohesiveness, and peer group distinctiveness were centered due to high multicollinearity among the variables (Cohen, Cohen, West, & Aiken, 2003).[6]

Peer regression using self 1 item measure of relational aggression.

As presented in Table 10, the overall model for the first hierarchical regression (relational aggression measured by self 1 item) was significant at Step 4. Results revealed significant main effects for child gender, children's use of physical aggression, and peer groups' use of relational aggression on children's use of relational aggression. In addition, the three-way interaction with peer groups' use of relational aggression, peer groups' cohesiveness, and peer groups' distinctiveness was significant.

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To further explore the three-way interaction, a simple slopes analysis was conducted using the method described by Cohen, Cohen, West, and Aiken (2003) for continuous variables. The results showed that peer groups' use of relational aggression was significantly related to children's use of relational aggression when the peer group was rated a) high on cohesiveness and high on distinctiveness, $\beta = .39$, $t(146) = 3.22$, $p < .01$, b) high on cohesiveness and low on distinctiveness, $\beta = .21$, $t(146) = 2.48$, $p < .05$, c) low on cohesiveness and high on distinctiveness, $\beta = .25$, $t(146) = 2.66$, $p < .01$, and d) low on cohesiveness and low on distinctiveness, $\beta = .21$, $t(146) = 2.84$, $p < .01$. The steepest slope occurred when peer groups were rated high on cohesiveness and distinctiveness which explains the significant three-way interaction.

Peer regression with peer measure of relational aggression.

As presented in Table 11, the overall model for the second hierarchical regression was significant at Step 1 and revealed significant main effects for child gender and children's use of physical aggression on children's use of relational aggression when measured by peers. Peers reported that girls were more relationally aggression than boys, and children's use of physical and relational aggression were positively related.

Peer regression with self scale measure of relational aggression.

As presented in Table 12, the overall model for the third hierarchical regression was significant at Step 4 and revealed significant main effects for children's use of physical aggression and peer groups' use of relational aggression on children's use of relational aggression (measured by the self scale). In addition, the three-way interaction with peer group's use of relational aggression, peer groups' cohesiveness, and peer groups' distinctiveness was significant.

To further explore the three-way interaction, a simple slopes analysis was conducted using the method described by Cohen, Cohen, West, and Aiken (2003) for continuous variables. The results showed that peer groups' use of relational aggression was significantly related to children's use of relational aggression when the peer group was rated a) high on cohesiveness and high on distinctiveness, $\beta = .57$, $t(134) = 4.66$, $p < .001$, b) high on cohesiveness and low on distinctiveness, $\beta = .39$, $t(134) = 4.72$, $p < .001$, c) low on cohesiveness and high on distinctiveness, $\beta = .31$, $t(134) = 3.36$, $p < .001$, and d) low on cohesiveness and low on distinctiveness, $\beta = .31$, $t(134) = 4.13$, $p < .001$. The steepest slope occurred when peer groups were rated high on cohesiveness and distinctiveness which explains the significant three-way interaction.

A Comparison of Parent and Peer Variables as Predictors of Children's Relational Aggression

To examine the relative associations between the parent and peer variables with relational aggression, six regressions were conducted. Once again, separate regressions were conducted for children's use of relational aggression measured by the self 1 item, peer ratings, and the self scale. For each regression, child gender, children's physical aggression scores, and mothers' (fathers') social desirability scores were entered as control variables in the first step. Mothers' (fathers') use of manipulative behavior and psychological control and peer groups' use of relational aggression were entered in the second step[7] (see Table 13).

Mother and peer variables

The first two models including the mother and peer variables (see Table 14) were significant at Step 1 and revealed a positive relationship between children's use of physical aggression and children's use of relational aggression. A significant gender difference was also

found for use of relational aggression in the second model (when relational aggression was measured by the peers). Peers rated girls as more relationally aggressive than boys. The third model, when relational aggression was measured by the self scale, was significant at Step 2. A positive relationship was found between children's use of physical aggression and children's use of relational aggression. In addition mothers' use of psychological control was uniquely related to children's use of relational aggression. Peer group use of relational aggression was not a unique predictor of the children's use of relational aggression in any of the regressions.

Father and peer variables

The first two models including the father and peer variables (see Table 15) were significant at Step 1 and revealed a positive relationship between children's use of physical aggression and children's use of relational aggression. The third model, when relational aggression was measured by the self scale, was significant at Step 2. A positive relationship was found between children's use of physical aggression and children's use of relational aggression. In addition fathers' use of psychological control was uniquely related to children's use of relational aggression. Peer group use of relational aggression was not a unique predictor of children's use of relational aggression in any of the regressions.

Exploring Potential Gender Differences in the Prediction of Children's Relational Aggression

Another major goal of the current study was to determine whether the relationships between the parent and peer variables and children's use of relational aggression were different for boys and girls. Specifically, it was predicted that the girls' (but not the boys') relational aggression scores would be positively associated with their parents' use of psychological control and manipulative behavior and their peer groups' use of relational aggression. To test these

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predictions, a series of multiple regressions were conducted. Once again, separate regressions were conducted for children's use of relational aggression measured by peer ratings and by the two self ratings. For the first regression, children's use of physical aggression and mothers' social desirability scores were entered into the first step to control for these variables. Child gender and mothers' use of manipulative behavior were entered into the second step, and the two-way interaction between child gender and mothers' use of manipulative behavior was entered in the third step (see Table 16). Similar regressions were conducted for each additional parent- and peer-related variable (i.e., fathers' use of manipulative behavior, mothers' and fathers' use of psychological control with their children, and peers' use of relational aggression) by substituting each variable in, one at a time, for mothers' use of manipulative behavior.

Out of the fifteen hierarchical regressions conducted to investigate whether the relationships between the parent and peer variables and children's use of relational aggression were different for boys and girls, only two revealed significant child gender X variable interactions. Because most of the significant main effects (e.g., for children's physical aggression) found for the other thirteen regressions are redundant with the regression findings previously reported, only the two regressions with significant interactions will be discussed here in detail (see Tables 17 through 21 for additional findings).

As presented in Table 19, the first overall model that found a significant child gender X variable interaction at Step 3 revealed a significant main effect for children's use of physical aggression and child gender on children's use of relational aggression (measured by the self 1 item). In addition, the two-way interaction between child gender and fathers' use of manipulative behavior was significant[8]. A simple slopes analysis (Hayes & Matthes, 2009) revealed that fathers' use of manipulative behavior was negatively related to girls' use of relational aggression,

$\beta = -.10$, $t(62) = -2.61$, $p < .05$, as measured by the self 1 item (see Figure 3). In contrast, fathers' use of manipulative behavior was not significantly related to boys' use of relational aggression, $\beta = .01$, $t(62) = .40$, $p = .688$.

As presented in Table 20, the second overall model that found a significant child gender X variable interaction at Step 3 revealed a significant main effect for children's use of physical aggression and child gender on children's use of relational aggression (measured by the self 1 item). In addition, the two-way interaction between child gender and fathers' use of psychological control was significant. A simple slopes analysis (Hayes & Matthes, 2009) revealed that fathers' use of psychological control was negatively related to girls' use of relational aggression, $\beta = -.05$, $t(55) = -2.24$, $p < .05$, as measured by the self 1 item (see Figure 4). However, fathers' use of psychological control was not significantly related to boys' use of relational aggression, $\beta = .04$, $t(55) = 1.57$, $p = .122$.

Given that, previously, mothers' use of psychological control was found to be positively associated with girls' and boys' use of relational aggression (measured by the self scale) and fathers' use of psychological control was negatively related to girls' use of relational aggression, it prompted the speculation that girls might score especially high on relational aggression when parents provide a model of psychological control as being especially gender-appropriate for females (that is, higher in mothers than fathers). Therefore, to explore this speculation, a difference score (mothers' use of psychological control minus fathers' use of psychological control) was computed to determine if this score would be positively correlated with girls' (but not boys') use of relational aggression Consistent with the speculation, the difference score was found to be significantly correlated with girls' use of relational aggression, $r = .31$, $p < .05$ (using the self 1-item measure) but unrelated with boys' use of relational aggression, $r = .06$, $p = .61$

(using the self 1-item measure). In addition, no significant relations were found for the difference between mothers' and fathers' use of manipulative behavior and boys' and girls' use of relational aggression (for any measures of relational aggression).

Chapter 4 - Discussion

The major goal of this study was to determine the associations between parent and peer variables and children's use of relational aggression. In addition, the current study sought to determine whether mothers', fathers', and peers' associations with relational aggression were different for boys and girls.

It was predicted that mothers' and fathers' use of psychological control with their children and their use of manipulative behaviors with their children and other adults would be positively related to their children's use of relational aggression. Furthermore, the peer groups' use of relational aggression was predicted to be positively related to boys' and girls' use of relational aggression, especially when the peer group was perceived to be cohesive and distinct. The (a) relative associations between the parent- and peer-related variables and children's use of relational aggression and (b) potential differences between boys and girls in these associations were also explored.

Parents' Use of Psychological Control

Children's use of relational aggression (as measured by the self scale) was found to be positively related to their mothers' use of psychological control. The limited amount of research previously conducted on psychological control and relational aggression has found that parents' use of psychological control is positively related to their daughters' use of relational aggression, however the findings have been less consistent for sons' use of relational aggression (Nelson & Crick, 2002; Nelson et al., 2006; Yang et al., 2004). While the positive relationship was found for daughters and sons considered together (see Tables 6 and 7), a gender difference qualifying this general pattern is addressed later in the discussion.

Due to the correlational nature of the study, we were unable to test the direction of influence between mothers' psychological control and relational aggression. Therefore, this positive relationship might be explained in multiple ways. One explanation (and the one offered here) would be that the mothers' controlling behaviors are influencing the child. A plethora of previous research has shown that parents serve as salient models to their children (Bandura, 1973; Bandura, Ross, & Ross, 1963; Bjorkqvist & Osterman, 1992; Conger et al., 2003; Grych & Fincham, 1990; Larzelere, 1986; Tremblay et al., 2005) and in this case, mothers' use of psychological control may be teaching their children ways to control others. In a related vein, repeated exposure to controlling behaviors could establish and reinforce the children's scripts for how to behave toward others (see Anderson, Gentile, & Buckley, 2007; Anderson & Huesmann, 2003). A second explanation would be that the children's relationally aggressive behaviors are influencing their mothers. That is, it might be the case that children's use of relational aggression causes their mothers to use more psychological control. While parents might respond to their child's pattern of behaviors, the literature offers little evidence that children provide their parents with salient models of how to think or behave in interpersonal situations.

A third possible explanation is that the relationship is reciprocal. It could be the case that the mothers' use of psychological control influences the children's use of relational aggression and, subsequently, the children's use of relational aggression influences the mothers' use of psychological control. This explanation would appear more reasonable if both directions of influence (especially, children's use of relational aggression influencing their mothers' use of psychological control) were found. The final possible explanation is that there is a third variable that could be moderating the relationship between mothers' use of psychological control and children's use of relational aggression. Because research on relational aggression is fairly new to

the field of psychology, studies (including the present one) have not explored many possible moderators of the socialization antecedent-child relational aggression relation.

While any of the possible explanations could be true, the argument was made in the introduction that parents do influence their children's use of physical aggression (Bjorkqvist & Osterman, 1992; Coie & Dodge, 1998; Conger et al., 2003; Grych & Fincham, 1990; Tremblay et al., 2005) and are also likely to influence their children's use of relational aggression. The parent-child relationship is formed very early on in development, and the power structure in the typical family supports the argument that parents are more likely to provide a salient model for their children's behaviors than vice versa. Two predominant learning theories, Social Learning Theory (Bandura, 1973; Bandura, Ross, & Ross, 1963) and Social-Cognitive Model of Aggression (Anderson & Huesmann, 2003), are both based on the understanding that parents are important models to their children and can provide them with a multitude of experiences that teach them how to behave toward others. For example, previous research on physical aggression has shown that parents' use of harsh, power assertive discipline (Coie & Dodge, 1998; Deater-Deckard & Dodge, 1997; Hart, DeWolf, & Burts, 1992; Hoffman, 1960) and physical control (Casas et al., 2006; Hart et al., 1998; Hart, Newell, & Olson, 2002) are positively related to their children's use of physical aggression with peers. While the physical characteristics of power assertive discipline and physical control provide children with examples of how to be physically aggressive, the manipulative quality of psychological control can provide children with the model for how to manipulate others in an attempt to harm (i.e., relational aggression).

Overall the pattern of results was not consistent for fathers' use of psychological control. Fathers' use of psychological control was positively related to their sons' and daughters' use of relational aggression (as measured by the self scale) only when the peer groups' use of relational

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aggression was controlled for in the analysis. It is unclear why this relationship was not found when the father variables were analyzed alone. The findings for fathers' use of psychological control were not as robust as they were for mothers' use of psychological control in relation to their children's use of relational aggression. Mothers' use of psychological control was positively related to their sons' and daughters' use of relational aggression (as measured by the self scale) with and without the peer groups' use of relational aggression included in the analyses.

Parents' Use of Manipulative Behavior

Inconsistent with predictions, mothers' and fathers' use of manipulative behaviors were not significantly related to any measures of children's use of relational aggression. This finding was unexpected because mothers' use of psychological control was positively related to children's use of relational aggression, and manipulativeness and psychological control are similar concepts. One notable difference that may have contributed to the contrasting findings is who was making the ratings. Parents' use of manipulativeness was rated by the parents whereas the children rated their parents' use of psychological control (just as the children rated their own level of relational aggression on the self scale). It would be valuable in future research to have both parents and children rate the parents' use of manipulativeness and psychological control to determine if the pattern of findings between the parents' behaviors and children's use of relational aggression is replicated across raters and, more generally, to determine if parents and children agree in their ratings of the parents' behaviors. This was the first study, to our knowledge, to explore the possible association between parents' use of manipulative behaviors (i.e., manipulative discipline with their children and manipulative behavior with other adults) and their children's use of relational aggression. As might be expected, additional research is needed

to more clearly delineate the relations among parents' manipulativeness, parents' psychological control, and children's relational aggression.

Peer Groups' Use of Relational Aggression

Consistent with our prediction, children's use of relational aggression (as assessed by the self 1 item and self scale measures) was positively related to their group of friends' use of relational aggression. Brendgen and colleagues (2008) and Werner and Crick (1999) also found that peers' and children's use of relational aggression were positively related. Because this finding is again correlational, the positive relationship could be explained in multiple ways. Children may seek out peers who are similar to themselves to befriend (Male, 2007; McPherson, Smith-Lovin, & Cook, 2001), and one of those important similarities could involve the tendency to behave in a relationally aggressive manner toward others. Alternatively, relationally aggressive peers may influence children's use of relational aggression. Children often place a great deal of importance on their peer group, especially in middle childhood (Berk, 2006; Crick et al., 1999), which makes peers potentially a strong influence on children's behaviors through modeling or reinforcing certain behaviors (Anderson & Huesmann, 2003; Bandura, 1973). In one relevant investigation, Werner and Crick (2004) conducted a one-year study of children in the second through fourth grades. They found that friends' use of relational aggression at time 1 positively predicted girls' use of relational aggression one year later (controlling for the girls' initial levels of relational aggression). In addition, a reciprocal relationship between the peer group's and the child's use of relational aggression is possible. Children who use relational aggression may tend to seek out peer groups that use relational aggression, and peer groups that use relational aggression may model and reinforce such behavior in group members. Previous research provides evidence for a reciprocal relationship between peer groups' and individual

children's use of relational aggression (Sijtsema, Ojanen, Veenstra, Lindenberg, Hawley, & Little, 2010).

In a longitudinal study, Sijtsema and colleagues (2010) found that relationally aggressive adolescents sought out other relationally aggressive adolescents to befriend, and that the friends' use of relational aggression increased the adolescents' use of relational aggression over time; therefore, a reciprocal relationship between peer groups' and adolescents' use of relational aggression was demonstrated. Similarly, in the physical aggression literature, research has shown that both processes (i.e., physically aggressive children seeking out similar peers and peers influencing individual children's level of physical aggression) contribute to the positive relation between children's and their peer groups' level of physical aggression (Cairns et al., 1982; Dishion et al., 1995; Thornberry et al., 1993; Werner & Crick, 2004).

To investigate possible moderating variables between children's and peers' use of relational aggression, peer group cohesiveness and distinctiveness were measured along with the peer group's use of relational aggression. While children's use of relational aggression was positively related to their peer groups' use of relational aggression at relatively high and low levels of cohesiveness and distinctiveness, the positive relationship between children's and their peer groups' use of relational aggression was especially robust when the peer group used a relatively high amount of relational aggression and those peer groups were perceived by the child as relatively cohesive and distinct from others (using the self 1 item and self scale measures of the child's use of relational aggression). Similarly, Grotpeter and Crick (1996) found that relationally aggressive children reported higher levels of intimacy and exclusivity within their friendships than did non-relationally aggressive children. If a peer group is seen as relatively cohesive and distinct from others, children may identify quite strongly with that group. This

strong identity could accentuate the need for behaving similarly to the relationally aggressive others in the group which would reinforce the use of relational aggression and strengthen the parameters for social learning.

Parent- vs Peer-Related Variables

In another series of regression analyses, the relative strength of association between (a) parent- and peer-related variables and (b) children's use of relational aggression was examined. Separate regressions were conducted for the mother and the father variables. Mothers' and fathers' use of psychological control were significant predictors of children's use of relational aggression (when using the self scale measures) while controlling for peer groups' use of relational aggression. In contrast, peer groups' use of relational aggression was not a significant predictor of the children's use of relational aggression when controlling for mothers'/fathers' use of psychological control. This pattern indicates that, for this measure of relational aggression, mothers' and fathers' use of psychological control more strongly predicted children's use of relational aggression than did peers' use of relational aggression. This was the first study, to our knowledge, to compare parent and peer predictors of children's use of relational aggression.

The present findings counter Judith Harris' (1995; 1998; 2002) position that parents have a negligible impact on their children's social development and that peer influences are the most critical in the development of children's behaviors. Inconsistent with Harris' position, our data suggest that in middle childhood, parent behaviors (e.g., use of psychological control) are more important than peer group behaviors (e.g., use of relational aggression) in relation to children's use of relational aggression. As stated earlier, parents' use of psychological control may be teaching their children ways to control others. This modeling and then possible reinforcing of harmful interpersonal behaviors may begin early in a child's development, before the child has

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had a chance to develop relationally aggressive peer friendships. Our findings, consistent with previous research demonstrating the importance of parenting behaviors in children's development (Berk, 2006; Hart, 2007; Vandell, 2000), support the position that parents' behaviors have a substantial relationship with how their children behave and may be more important than peer group behaviors in the development of children's use of relational aggression.

Gender Differences

Previous research has found that the relationships between parent- and peer-related variables and relational aggression tend to be stronger and more consistent for girls than boys (Nelson & Crick, 2002; Nelson et al., 2006; Werner & Crick, 2004, Yang et al., 2004). For example, previous research has shown that mothers' and fathers' use of psychological control is positively related to their daughters' use of relational aggression; however, the relationship between these variables has been inconsistent for sons (Nelson & Crick, 2002; Nelson et al., 2006; Yang et al., 2004). In addition, girls' use of relational aggression has been consistently, positively related to their friends' use of relational aggression whereas boys' use of relational aggression has been less consistently associated with peers' use of relational aggression (Brendgen et al., 2008; Werner & Crick, 2004). Based on this previous research, the current study sought to determine if the parent- and peer-related variables would be more strongly associated with girls' than boys' use of relational aggression.

To investigate possible gender differences, child gender was included in a series of regression analyses to determine if it interacted with the parent- and/or peer-related variables in predicting children's use of relational aggression. In the majority of analyses, the relationships that emerged for the girls and boys did not differ. Only two analyses yielded a pattern of results

that significantly differed for girls and boys. First, fathers' use of manipulative behavior was negatively related to their daughters' (but not their sons') use of relational aggression (assessed with the self 1 item measure). Second, fathers' use of psychological control was negatively related to their daughters' (but not their sons') use of relational aggression (assessed with the self 1 item measure). These findings support the prediction that the associations with children's use of relational aggression would be stronger for girls than for boys. However, the specific pattern of results was unexpected.

It was speculated, given (a) the negative relationship between fathers' use of psychological control and girls' use of relational aggression and (b) the positive relationship between mothers' use of psychological control and girls' and boys' use of relational aggression, that girls' use of relational aggression may be associated with the combination of mothers' and fathers' use of psychological control, particularly if the use of psychological control is viewed as gender appropriate for females (mothers use more psychological control than fathers). In a similar comparison, Barnett, King, Howard, and Dino (1980) found that girls were the most empathic when their mothers were relatively more empathic than their fathers; thus, one may expect girls to have higher relational aggression when mothers' use of psychological control was higher than their fathers' use of psychological control. Consistent with this prediction, girls (but not boys) reported using more relational aggression (assessed by the self 1 item measure) the more their mothers used psychological control relative to their fathers (as measured by the difference score). It should be noted, however, that this relationship was not found for boys or for parents' differential use of manipulative behavior and their daughters' or sons' use of relational aggression.

Strengths and Limitations of Present Study

This study was created to build upon the research focusing on the associations with relational aggression in childhood. It improved upon most of the previous research on this topic by including mothers and fathers in data collection rather than just mothers (e.g., Hart, DeWolf, & Burts, 1992; McNamara, Selig, & Hawley, 2010; Reed, Goldstein, Morris, & Keyes, 2008; Sandstrom, 2007; Werner & Grant, 2010). By having both parents involved, we were able to explore the specific relationships between the various parent-child dyads. In addition to including mothers and fathers, we also included peers. This was the first study to examine *both* parent- and peer-related variables in relation to children's use of relational aggression. By including both parent and peer variables in one study, it was possible to assess the relative strength of these variables' associations with the children's use of relational aggression and, thereby, contribute to the "parent vs peer" debate (Harris, 1995; 1998; 2002; Hart, 2007; Vandell, 2000) in the developmental literature. In addition to including peers' use of relational aggression as a predictor of children's use of relational aggression, we examined specific characteristics of the peer group (i.e., cohesiveness and distinctiveness) that appear to heighten the association between peers' and children's use of relational aggression. An additional strength of the current study was the use of a dual-rater approach to measuring children's use of relational aggression. Each child rated his/her own use of relational aggression by responding to a single item on the sociometric measure and by completing a multi-item measure. In addition, peers rated each child's use of relational aggression. While it was beneficial to include the multiple assessments as we explored alternatives for measuring relational aggression, the findings were not consistent across the three measures (an issue that is revisited as a limitation below). Finally, many of the measures we utilized were created for use in this study, and they were found to

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achieve acceptable levels of internal reliability. Several of these measures produced meaningful results and should be useful in future research.

While it was a strength of the current study to include fathers, as well as mothers, in the data collection, fathers' participation (n = 70) was far less than that of mothers (n = 137). It is typical in parent-child studies for fathers to participate at a lower rate than mothers, if they are included at all (e.g., Casas et al., 2006; Hart et al., 1998). Unfortunately having relatively few fathers may have weakened the opportunity to find significant results.

Another limitation of the current study was the correlational nature of the design. While the relationships that were found are meaningful, discussions about the direction of influence between the parent and peer variables of interest and the children's use of relational aggression were necessarily speculative. Because it is unethical to design experiments in which some children are exposed to negative parent and peer behaviors (e.g., psychological control, manipulative behaviors, relational aggression), longitudinal research is necessary to examine causal relations among such variables. Only recently have researchers begun to investigate associations with relational aggression longitudinally. For example, as mentioned earlier, Sijtsema and colleagues (2010) were able to show a reciprocal relationship between adolescents' and peers' use of relational aggression using a longitudinal design.

While the use of multiple measures of aggression was a strength for retrieving information about children's use of relational aggression, it was also a limitation as the different measures yielded different patterns of results. The differing patterns make understanding the associations with relational aggression challenging and decrease our confidence in the ability to draw clear conclusions. When reviewing the results, it became apparent that all of the critical significant effects occurred when relational aggression was measured by the two self measures

(which were positively correlated with one another) and not by the peer measure[9] (which was not related to either of the self measures). It could be the case that the peers were unable to accurately assess the degree to which every other child in their grade uses relational aggression due to the covert nature of relationally aggressive acts. However, it is unclear, due to the inconsistent pattern of results, which measure of relational aggression was more valid.

Future Research

While the current study addressed multiple questions, the need for future research on the correlates, expression, and development of relational aggression in children is clearly necessary. Additional research is needed that will use and refine the measures that were created for use in this study. As noted earlier, the majority of measures had acceptable internal reliabilities but could use further validation in future research.

Research should continue to examine the associations between parent-related variables and children's use of relational aggression within the various parent-child dyads as well as the associations between peer-related variables and children's use of relational aggression. Longitudinal research would allow us to more fully understand the different patterns of relationships for girls and boys. An ideal study would assess mothers' and fathers' use of multiple parenting behaviors (e.g., psychological control and manipulative behavior), peers' use of physical and relational aggression and children's use of physical and relational aggression beginning very early in the children's development. This information would allow for an examination of (a) the specific influences of mothers' and fathers' parenting over the years and (b) the relative use of behaviors between mothers and fathers on their sons' and daughters' use of physical and relational aggression as well as the influence of peers' behaviors on girls' and boys'

use of aggression over time. Such longitudinal studies would help to distinguish between the socialization antecedents of physical and relational aggression.

In addition, other environmental factors that may be related to children's use of relational aggression should be investigated. For example, socioeconomic status might be related to children's use of relational aggression. In the physical aggression literature, people of low socioeconomic status have been found to be more physically aggressive than people of high socioeconomic status (Bradley & Corwyn, 2002; Sampson & Laub, 1994). Moreover, researchers are just beginning to assess the influence that media use can have on children's use of relational aggression (Coyne, Nelson, Graham-Kevan, Tew, Meng, & Olsen, 2011; Gentile, Coyne, & Walsh, 2011). Exposure to physically aggressive media has repeatedly been found to be related to girls' and boys' use of physical aggression (see Bushman & Huesmann, 2006). If the models that children are observing on television or in video games are acting in a relationally aggressive manner, children may learn those behaviors and/or be reinforced for already using those behaviors with others (Coyne et al., 2011; Gentile, Coyne, & Walsh, 2011).

As noted earlier, future research could compare the ratings of parents and children on the same variables. In the current study, children's use of relational aggression and parents' use of psychological control were rated by the children and were more strongly associated with one another than children's use of relational aggression (rated by the children) and parents' use of manipulative behavior (rated by the parents). The behaviors that children perceive their parents enacting may or may not relate to the perceptions that parents have of their own behaviors. By including a parent and child assessment of each variable, we could compare parent and child observations to see if they agree on their ratings and, if not, which observation yields a stronger association with the children's use of relational aggression.

In addition, we did not incorporate assessments of children's use of physical aggression into the current study (beyond controlling for it). However, it is apparent that scores on children's use of physical aggression and relational aggression were positively related. Also, the physical aggression measures (self 1 item, peer, self scale) were more strongly related to one another than the relational aggression measures. These patterns of results suggest that physical aggression is likely more salient than relational aggression and easier, especially for peers, to notice and rate. Given that there is variation in the amount of physical and relational aggression that a child uses (even though the two are positively related), research could examine the specific socialization variables associated with children that score (a) relatively high on relational and physical aggression, (b) relatively high on relational aggression but relatively low on physical aggression, (c) relatively low on relational aggression but relatively high on physical aggression, and (d) relatively low on relational and physical aggression. This research approach could be used to delineate the socialization antecedents that are associated with children who display various levels of physical and relational aggression.

Conclusion

The current study was the first to examine and compare the associations between parent- *and* peer-related variables and children's use of relational aggression as well as investigate the relationships between the specific parent-child dyads. Consistent with Social Learning Theory and the Social-Cognitive Theory of Aggression, children's use of relational aggression was positively related to their mothers' use of psychological control and to their peer groups' use of relational aggression especially when that peer group was seen as relatively cohesive and distinct. However, parents' use of psychological control was more strongly associated with children's use of relational aggression than their peer groups' use of relational aggression. These

findings have implications for how to reduce children's use of relational aggression. Parents, and especially mothers, should be encouraged (or even taught how) to teach their children ways to handle social situations that do not include psychologically controlling or aggressive behaviors.

References

Anderson, C. A. (1989). Temperature and aggression: Ubiquitous effects of heat on the occurrence of human violence. *Psychological Bulletin, 106*, 74-96.

Anderson, C. A., & Bushman, B. J. (2001). Effects of violent video games on aggressive behavior, aggressive cognitions, aggressive affect, physiological arousal, and prosocial behavior: A meta-analytic review of the scientific literature. *Psychological Science, 12,* 353-359.

Anderson, C. A., Gentile, D. A., & Buckley, K. E. (2007). *Violent video game effects on children and adolescents: Theory, research, and public policy.* New York, NY: Oxford University Press.

Anderson, C.A., & Huesmann, L.R. (2003). Human aggression: A social-cognitive view. In M. A. Hogg & J. Cooper (Eds.), *Handbook of social psychology* (pp. 296-323). London: Sage Publications.

Archer, J. (1991). The influence of testosterone on human aggression. *British Journal of Psychology, 82,* 1-28.

Archer, J. (1992). Childhood gender roles: Social context and organization. In H. McGurk (Ed.), *Childhood social development: Contemporary perspectives* (pp. 31-61). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

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

Archer, J., & Coyne, S. M. (2005). An integrated review of indirect, relational, and social aggression. *Personality and Social Psychology Review, 9,* 212-230.

Asberg, M. (1994). Monoamine neurotransmitters in human aggressiveness and violence: A

    selected review. *Criminal Behaviour and Mental Health, 4,* 303-327.

Azmitia, M., Kamprath, N. A., & Linnet J. (1998). Making friends: The influences of culture and

    development. In L. H. Meyer, H. S. Park, M. Grenot-Scheyer, I. S. Schwartz, & B. Harry

    (Eds.), *Children, youth, and change: Sociocultural perspectives (Volume 3)* (pp. 171-

    187). Baltimore, MD: Paul H Brookes Publishing.

Bandura, A. (1973). *Aggression: A social learning analysis.* Oxford, England: Prentice-Hall.

Bandura, A., Ross, D., & Ross, S. A. (1963). Imitation of film-mediated aggressive models.

    Journal of Abnormal and Social Psychology, 66, 3-11.

Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child

    Development, 67,* 3296-3319.

Barnett, M. A., King, L. M., Howard, J. A., & Dino, G. A. (1980). Empathy in young children:

    Relation to parents' empathy, affection, and emphasis on the feelings of others.

    Developmental Psychology, 16, 243-244.

Bartel, J. S. (2006). *Parental and peer influences on adolescent helping.* Unpublished doctoral

    dissertation, Kansas State University, Manhattan.

Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behavior.

    Genetic Psychology Monographs, 75, 43-88.

Berk, L. E. (2006). *Child development* (7th ed.). Boston, MA: Allyn and Bacon.

Berndt, T. J., Hawkins, J. A., & Jiao, Z. (1999). Influences of friends and friendships on

    adjustment to junior high school. *Merrill-Palmer Quarterly, 45,* 13-33.

Bjorkqvist, 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.

Bjorkqvist, K., & Osterman, K. (1992). Parental influence on children's self-estimated aggressiveness. *Aggressive Behavior, 18,* 411-423.

Boivin, M., Hymel, S., & Bukowski, W. M. (1995). The roles of social withdrawal, peer rejection, and victimization by peers in predicting loneliness and depressed mood in childhood. *Development and Psychopathology, 7,* 765-786.

Boivin, M., Vitaro, F., & Poulin, F. (2005). Peer relationships and the development of aggressive behavior in early childhood. In R.E. Tremblay, W. Willard, & J. Archer (Eds.), *Developmental origins of aggression* (pp. 376-397). New York, NY: Guilford Press.

Book, A. S., Starzyk, K. B., & Quinsey, V. I. (2001). The relationship between testosterone and aggression: A meta-analysis. *Aggressive and Violent Behavior, 6,* 579-599.

Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual Review of Psychology, 53,* 371-399.

Brendgen, M., Boivin, M., Vitaro, F., Bukowski, W. M., Dionne, G., Tremblay, R. E., & Perusse, D. (2008). Linkages between children's and their friends' social and physical aggression: Evidence for a gene-environment interaction? *Child Development, 79,* 13-29.

Brendgen, M., Bowen, F., Rondeau, N., & Vitaro, F. (1999). Effects of friends' characteristics on children's social cognitions. *Social Development, 8,* 41-51.

Broidy, L. M., Nagin, D. S., Tremblay, R. E., Brame, B., Dodge, K. A., Fergusson, D., et al. (2003). Developmental trajectories of childhood disruptive behaviors and adolescent delinquency: A six-site, cross-national study. *Developmental Psychology, 39,* 222-245.

Brown, S. A., Arnold, D. H., Dobbs, J., & Doctoroff, G. L. (2007). Parenting predictors of

   relational aggression among Puerto Rican and European American school-age children.

   Early Childhood Research Quarterly, 22, 147-159.

Bushman, B. J. (1995). Moderating role of trait aggressiveness in the effects of violent media on

   aggression. *Journal of Personality and Social Psychology, 69,* 950-960.

Bushman, B. J., & Huesmann, L. R., (2006). Short-term and long-term effects of violent media

   on aggression in children and adults. *Archives of Pediatrics & Adolescent Medicine, 160,*

   348-352.

Buss, A. H. (1961). *The psychology of aggression.* New York: Wiley.

Cairns, R. B., Cairns, B., Neckerman, H., Gest, S. D, & Gariepy, J. (1988). Growth and

   aggression: Childhood to early adolescence. *Developmental Psychology, 25,* 320-330.

Casas, J. F., Weigel, S. M., Crick, N. R., Ostrov, J. M., Woods, K. E., Jansen Yeh, E. A., &

   Huddleston-Casas, C. (2006). Early parenting and children's relational and physical

   aggression in the preschool and home contexts. *Journal of Applied Developmental*

   Psychology, 27, 209-227.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation*

   analysis for the behavioral sciences (3rd ed.). Mahwah, NJ: Lawrence Erlbaum

   Associates, Inc.

Coie, J. D., & Dodge, K. A. (1998). Aggression and antisocial behavior. In W. Damon & N.

   Eisenberg (Eds.), *Handbook of child psychology: Volume 3. Social, emotional, and*

   personality development (5th ed.) (pp. 779-862). Hoboken, NJ: John Wiley & Sons Inc.

Coie, J. D., Dodge, K. A., & Kupersmidt, J. B. (1990). Peer group behavior and social status. In

    S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood. Cambridge studies in social*

    and emotional development (pp. 17-59). New York, NY: Cambridge University Press.

Conger, R. D., Neppl, R., Kim, K. J., & Scaramella, L. (2003). Angry and aggressive behavior

    across three generations: A prospective, longitudinal study of parents and children.

    Journal of Abnormal Child Psychology, 31, 143-160.

Coyne, S., Nelson, D. A., Graham-Kevan, N., Tew, E., Meng, K. N., & Olsen, J. A. (2011).

    Media depictions of physical and relational aggression: Connections with aggression in

    young adults' romantic relationships. *Aggressive Behavior, 37,* 56-62.

Craig, W. M. (1998). The relationship among bullying, victimization, depression, anxiety, and

    aggression in elementary school children. *Personality and Individual Differences, 24,*

    123-130.

Crick, N. R. (1995). Relational aggression: The role of intent attributions, feelings of distress,

    and provocation type. *Development and Psychopathology, 7,* 313-322.

Crick, N. R., & Bigbee, M. A. (1998). Relational and overt forms of peer victimization: A

    multiinformant approach. *Journal of Consulting and Clinical Psychology, 66,* 337-347.

Crick, N. R., Casas, J. F., & Mosher, M. (1997). Relational and overt aggression in preschool.

    Developmental Psychology, 33, 589-600.

Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological

    adjustment. *Child Development, 66,* 710-722.

Crick, N. R., Werner, N. E., Casas, J. F., O'Brien, K. M., Nelson, D. A., Grotpeter, J. K., &

    Markon, K. (1999). Childhood aggression and gender: A new look at an old problem. In

D. Bernstein (Ed.), *Gender and motivation. Nebraska symposium on motivation*, *Vol. 45* (pp. 75-141). Lincoln, NE: University of Nebraska Press.

Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24,* 349-354.

Deater-Deckard, K., & Dodge, K. A. (1997). Externalizing behavior problems and discipline revisited: Nonlinear effects and variation by culture, context, and gender. *Psychological Inquiry, 8,* 161-175.

Deptula, D. P., & Cohen, R., (2004). Aggressive, rejected, and delinquent children and adolescents: A comparison of their friendships. *Aggression and Violent Behavior, 9,* 75-104.

Dishion, T. J., Andrews, D. W., & Crosby, L. (1995). Anti-social boys and their friends in early adolescence: Relationship characteristics, quality, and interactional processes. *Child Development, 66,* 139-151.

Eagly, A. H., & Steffen, V. (1986). Gender and aggressive behavior: A meta-analytic review of the social psychological literature. *Psychological Bulletin, 100,* 309-330.

Ellis, W. E., & Zarbatany, L. (2007). Peer group status as a moderator of group influence on children's deviant, aggressive, and prosocial behavior. *Child Development, 78,* 1240-1254.

Galen, B. R., & Underwood, M. K. (1997). A developmental investigation of social aggression among children. *Developmental Psychology, 33,* 589-600.

Gentile, D. A. (2003). *Media violence and children.* Westport, CT: Ablex.

Gentile, D. A., Coyne, S., & Walsh, D. A. (2011). Media violence, physical aggression, and

    relational aggression in school age children: A short-term longitudinal study. *Aggressive*

    Behavior, 37, 193-206.

Grotpeter, J. K., & Crick, N. R. (1996). Relational aggression, over aggression, and friendship.

    Child Development, 67, 2328-2338.

Grych, J. H., & Fincham, F. D. (1990). Marital conflict and children's adjustment: A cognitive-

    contextual framework. *Psychological Bulletin, 108,* 267-290.

Harris, J. R. (1995). Where is the child's environment? A group socialization theory of

    development. *Psychological Review, 102,* 458-489.

Harris, J. R. (1998). *The nurture assumption: Why children turn out the way they do.* New York,

    NY: Free Press.

Harris, J. R. (2002). Beyond the nurture assumption: Testing hypotheses about the child's

    environment. In J. G. Borkowski, S. L. Ramey, & M. Bristol-Power (Eds.), *Parenting*

    and the child's world: Influences on academic, intellectual, and social-emotional

    development.(pp. 3-20). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.

Hart, C. H. (2007). Why are parents important? Linking parenting to childhood social skills in

    Australia, China, Japan, Russia, and the United States. In S. A. Loveless & T. B. Homan

    (Eds.), *The family in the new millennium; World voices supporting the 'natural' clan.*

    Vol. 1 (pp. 227-247). Westport, CT: Praeger Publishers/Greenwood Publishing Group.

Hart, C. H., DeWolf, D. M., & Burts, D. C. (1992). Linkages among preschoolers' playground

    behavior, outcome expectations, and parental disciplinary strategies. *Early Education and*

    Development, 3, 265-283.

Hart, C. H., Nelson, D. A., Robinson, C. C., 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.

Hart, C. H., Newell, L. D., & Olsen, S. F. (2002). Parenting skills and social-communicative competence in childhood. In J. O. Greene & B. R. Burleson (Eds.), *Handbook of communication and social interaction skills* (pp. 753-797). Mahwah, NJ: Lawrence Erlbaum Associations Publishers.

Hart, C. H., Olsen, S. F., Robinson, C. C., & Mandleco, B. L. (1997). The development of social and communicative competence in childhood: Review and a model of personal, familial, and extrafamilial processes. In B. R. Burleson & A. W. Kunkel (Eds.), *Communication yearbook 20* (pp. 305-373). Thousand Oaks, CA: Sage Publications, Inc.

Henry, D., Guerra, N., Huesmann, R, Tolen, P., VanAcker, R., & Eron, L. (2000). Normative influences on aggression in urban elementary school classrooms. *American Journal of Community Psychology, 28,* 59-81.

Hodges, E. V. E., Boivin, M., Vitaro, F., & Bukowski, W. M. (1999). The power of friendship: Protection against an escalating cycle of peer victimization. *Developmental Psychology, 35,* 94-101.

Hoffman, L. W. (1960). Effects of the employment of mothers on parental power relations and the division of household tasks. *Marriage and Family Living, 22,* 27-35.

Huesmann, L. R., Eron, L. D., Guerra, N. G., & Crawshaw, V. B. (1994). Measuring children's aggression with teachers' predictions of peer nominations. *Psychological Assessment, 6,* 329-336.

Huesmann, L. R., Moise-Titus, J., Podolski, C-L., & Eron, L. D. (2003). Longitudinal relations

 between children's exposure to TV violence and their aggressive and violent behavior in

 young adulthood: 1977-1992. *Developmental Psychology, 39,* 201-221.

Kawabata, Y., Alink, L. R. A., Tseng, W. R., Van IJzendoorn, M. H., & Crick, N. R. (2011).

 Maternal and paternal parenting styles associated with relational aggression in children

 and adolescents: A conceptual analysis and meta-analytic review. *Developmental Review,*

 31, 240-278.

Kiesner, J., Cadinu, M., Poulin, F., & Bucci, M. (2002). Group identification in early

 adolescence: Its relation with peer adjustment and its moderator effect on peer influence.

 Child Development, 73, 196-208.

Klomek, A. B., Sourander, A. Kumpulainen, K. Piha, J., Tamminen, T., Moilanen, I., Amqvist,

 F., & Gould, M. S. (2008). Childhood bullying as a risk for later depression and suicidal

 ideation among Finnish males. *Journal of Affective Disorders, 109,* 47-55.

Knight, G. P., Guthrie, I. K., Page, M. C., & Fabes, R. A. (2002). Emotional arousal and gender

 differences in aggression: A meta-analysis. *Aggressive Behavior, 28*, 366-393.

Kuppens, S., Grietens, H., Onghena, P., & Michiels, D. (2009). Associations between parental

 control and children's over and relational aggression. *British Journal of Developmental*

 Psychology, 27, 607-623.

Ladd, G. W., & Pettit, G. S. (2002). Parenting and the development of children's peer

 relationships. In M. H. Bornstein (Ed.), *Handbook of parenting* (pp. 269-309). Mahwah,

 NJ: Lawrence Erlbaum Associates.

Lagerspetz, K., Bjorkqvist, K., & Peltonen, T. (1988). Is indirect aggression typical of females? Gender differences in aggressiveness in 11- to 12-year old children. *Aggressive Behavior, 14,* 403-414.

Laird, R. D., Jordan, K. Y., Dodge, K. A., Pettit, G. S., & Bates, J. E. (2001). Peer rejection in childhood, involvement with antisocial peers in early adolescence, and the development of externalizing behavior problems. *Development and Psychopathology, 13*, 337-354.

Larzelere, R. E. (1986). Moderate spanking: Model or deterrent of children's aggression in the family? *Journal of Family Violence, 1,* 27-36.

Leadbeater, B. J., Banister, E. M., Ellis, W. E., & Yeung, R. (2008). Victimization and relational aggression in adolescent romantic relationships: The influence of parental and peer behaviors, and individual adjustment. *Journal of Youth and Adolescence, 37*, 359-372.

Loeber, R., & Hay, D. F. (1997). Key issues in the development of aggression from childhood to early adulthood. *Annual Review of Psychology, 48,* 371-410.

Maccoby, E. E. (1988). Gender as a social category. *Developmental Psychology, 24,* 755-765.

Maccoby, E. E. (1990). Gender and relationships: A developmental account. *American Psychologist, 45*, 513-520.

Maccoby, E. E., & Jacklin, C. N. (1974). *The psychology of sex differences.* Stanford: Stanford University Press.

Male, D. B. (2007). Friendships and peer relationships. In L. Florian (Ed.), *The SAGE handbook of special education* (pp. 460-471). London: Sage.

McNamara, K. A., Selig, J. P., & Hawley, P. H. (2010). A typological approach to the study of parents: Associations between maternal parenting patterns and child behaviour and social reception. *Early Child Development and Care, 180,* 1185-1202.

McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). Birds of a feather: Homophily in social

        networks. *Annual Review of Sociology, 27,* 415-444.

Merrell, K. W., Buchanan, R., & Tran, O. K. (2006). Relational aggression in children and

        adolescents: A review with implications for school settings. *Psychology in the Schools,*

        43, 345-360.

Nelson, D. A., & Crick, N. R. (2002). Parental psychological control: Implications for childhood

        physical and relational aggression. In B. K. Barber (Ed.), *Intrusive parenting: How*

        psychological control affects children and adolescents (pp. 161-189). Washington, DC:

        American Psychological Association.

Nelson, D. A., Hart, C. H., Yang, C., Olsen, J. A., & Jin, S. (2006). Aversive parenting in China:

        Associations with child physical and relational aggression. *Child Development, 77,* 554-

        572.

Olsen, S. F., Yang, C., Hart, C. H., Robinson, C. C., Wu, P., Nelson, D. A., Nelson, L. J., Jin, S.,

        & Wo, J. (2002). Maternal psychological control and preschool children's behavioral

        outcomes in China, Russia, and the United States. In B. K. Barber (Ed.), *Intrusive*

        parenting: How psychological control affects children and adolescents (pp. 235-262).

        Washington, DC: American Psychological Association.

Olweus, D. (1980). Familial and temperamental determinants of aggressive behavior in

        adolescent boys: A causal analysis. *Developmental Psychology, 16,* 644-660.

Owens, L. (1996). Sticks and stones and sugar and spice: Girls' and boys' aggression in schools.

        Australian Journal of Guidance and Counseling, 6, 45-55.

Paquette, J. A., & Underwood, M. K. (1999). Gender differences in young adolescents'

    experiences of peer victimization: Social and physical aggression. *Merrill-Palmer*

    Quarterly, 45, 242-266.

Parker, J. G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood:

    Links with peer group acceptance and feelings of loneliness and social dissatisfaction.

    Developmental Psychology, 29, 611-621.

Parrott, D. J., & Zeichner, A. (2002). Effects of alcohol and trait anger on physical aggression in

    men. *Journal of Studies on Alcohol, 63,* 196-204.

Patterson, G. R., Reid, J. B., & Dishion, T. J. (1992). *A social learning approach: Volume 4.*

    Antisocial boys. Eugene, OR: Castalia Press.

Pettit, G. S. (1997). The developmental course of violence and aggression: Mechanisms of

    family and peer influence. *Psychiatric Clinics of North America, 20,* 283-299.

Pettit, G. S., Brown, E. G., Mize, J., & Lindsey, E. (1998). Mothers' and fathers' socializing

    behaviors in three contexts: Links with children's peer competence. *Merrill-Palmer*

    Quarterly, 44, 173-193.

Pettit, G. S., Dodge, K. A., & Brown, M. M. (1988). Early family experience, social problem

    solving patterns, and children's social competence. *Child Development, 59,* 107-120.

Pettit, G. S., Harrist, A. W., Bates, J. E., & Dodge, K. A. (1991). Family interaction, social

    cognition, and children's subsequent relations with peers at kindergarten. *Journal of*

    Social and Personal Relationships, 8, 383-402.

Plomin, R. (1999). Two views about the nurture assumption. *PsycCRITIQUES, 44,* 269-271.

Prinstein, M. J., Boergers, J., & Vernberg, E. M. (2001). Overt and relational aggression in

adolescents: Social-psychological functioning of aggressors and victims. *Journal of*

Clinical Child Psychology, 30, 477-489.

Ray, G. E., Cohen, R., Secrist, M. E., & Duncan, M. K. (1997). Relating aggressive and

victimization behaviors to children's sociometric status and friendships. *Journal of Social*

and Personal Relationships, 14, 95-108.

Reed, T. J., Goldstein, S. E., Morris, A. S., & Keyes, A. W. (2008). Relational aggression in

mothers and children: Links with psychological control and child adjustment. *Sex Roles,*

59, 39-48.

Rowe, D. C. (1994). *The limits of family influence: Genes, experience, and behavior.* New York:

The Guilford Press.

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.

Sandstrom, M. J. (2007). A link between mothers' disciplinary strategies and children's

relational aggression. *British Journal of Developmental Psychology, 25,* 399-407.

Sijtsema, J. J., Ojanen, T., Veenstra, R., Lindenberg, S., Hawley, P. H., & Little, T. D. (2010).

Forms and functions of aggression in adolescent friendship selection and influence: A

longitudinal social network analysis. *Social Development, 19,* 515-534.

Snyder, J., Horsch, E., & Childs, J. (1997). Peer relationships of young children: Affiliative

choices and the shaping of aggressive behavior. *Journal of Clinical Child Psychology,*

26, 145-156.

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.

Thornberry, T. P., Krohn, M. D., Lizotte, A. J., & Chard-Wierschem, D. (1993). The role of

    juvenile gangs in facilitating delinquent behavior. *Journal of Research in Crime and*

    Delinquency, 30, 55-87.

Tremblay, R. E. (2000). The development of aggressive behaviour during childhood: What have

    we learned in the past century? *International Journal of Behavioral Development, 24,*

    129-141.

Tremblay, R. E. (2001). The development of physical aggression during childhood and the

    prediction of later dangerousness. In G. F. Pinard & L. Pagani (Eds.), *Clinical assessment*

    of dangerousness: Empirical contributions (pp. 47-65). New York, NY: Cambridge

    University Press.

Tremblay, R. E., Japel, C., Perusse, D., McDuff, P., Boivin, M., Zoccolillo, M., & Montplaisir, J.

    (1999). The search for the age of 'onset' of physical aggression: Rousseau and Bandura

    revisited. *Criminal Behaviour and Mental Health, 9,* 8-23.

Tremblay, R. E., Nagin, D. S., Seguin, J. R., Zoccolillo, M., Zelazo, P. D., Boivin, M., Perusse,

    D., & Japel, C. (2005). Physical aggression during early childhood: Trajectories and

    predictors. *Canadian Child and Adolescent Psychiatry Review, 14,* 3-9.

Urberg, K. A., Degirmencioglu, S. M., & Pilgrim, C. (1997). Close friend and group influence on

    adolescent cigarette smoking and alcohol use. *Developmental Psychology, 33,* 834-844.

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.

Vaillancourt, T., Miller, J. L., Fagbemi, J., Cote, S., & 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.

Vandell, D. L. (2000). Parents, peer groups, and other socializing influences. *Developmental Psychology, 36,* 699-710.

Vuchinich, S., Bank, L., & Patterson, G. R. (1992). Parenting, peers, and the stability of antisocial behavior in preadolescent boys. *Developmental Psychology, 28,* 510-521.

Werner, N. E., & Crick, N. R. (2004). Maladaptive peer relationships and the development of relational and physical aggression during middle childhood. *Social Development, 13,* 495-514.

Werner, N. E., & Geiger, T. (1999). *Do birds of a feather flock together? Selective affiliation among aggressive and victimized children.* Poster presented at the biennial meetings of the Society for Research in Child Development, Albuquerque, NM.

Werner, N. E., & Grant, S. (2009). Mothers' cognitions about relational aggression: Associations with discipline responses, children's normative beliefs, and peer competence. *Social Development, 18,* 77-98.

Xie, H., Farmer, T. W., & Cairns, B. D. (2003). Different forms of aggression among inner-city African-American children: Gender, configurations and school social networks. *Journal of Social Psychology, 41,* 355-375.

Yang, C., Hart, C. H., Nelson, D. A., Porter, C. L., Olsen, S. F., Robinson, C. C., & Jin, S. (2004). Fathering in a Beijing, Chinese sample: Associations with boys' and girls'

negative emotionality and aggression. In R. D. Day & M. E. Lamb (Eds.), *Conceptualizing and measuring father involvement* (pp. 185-215). Mahwah, NJ: Erlbaum.

Endnotes

[1] Since the time I wrote my dissertation proposal and included a justification for using the term "relational aggression" over other terms, the debate over these terms has subsided. Relational aggression is the term predominately used in the current literature (Coyne et al., 2011; Kawabata et al., 2011; Kuppens et al., 2009; Werner & Grant, 2009).

[2] The titles that appear on the various measures in the Appendix did not appear on the measures distributed to the children and their parents.

[3] Teachers were not asked to make ratings about the children's use of relational aggression because gossiping, ignoring, and related covert behaviors among children are unlikely to be observed on a regular basis by teachers.

[4] Correlation and regression analyses involving parent data were conducted initially with data from all parents then again with data from only biological parents. With one exception (see Footnote 9), all patterns of significant results were the same when using data from all parents and when using data from only biological parents.

[5] Regression analyses involving peer data were conducted with only data from the 151 (91.5% of the sample) children that indicated that they had a group of friends.

[6] As is typical in a multiple regression with interaction terms, multicollinearity was violated. This created beta weights greater than one. Therefore, as suggested by Cohen, Cohen, West, and Aiken (2003), scores were centered prior to creating the interaction term.

[7] Regressions comparing the associations between (a) parent variables and (b) peer group cohesiveness and distinctiveness with children's use of relational aggression were not conducted. The potential characteristics of the peer group (i.e., cohesiveness and distinctiveness) were not considered as primary variables related to relational aggression. However, as noted earlier,

cohesiveness and distinctiveness were expected (and were found) to play moderating roles between peer groups' use of relational aggression and children's use of relational aggression.

[8] When analyzing the data from only biological fathers, the interaction between child gender and fathers' use of manipulative behavior was no longer significant.

[9] Although not central to the study, the only consistent finding involving the peer measure of relational aggression was a gender difference with the use of relational aggression. Peers rated girls as using more relational aggression than boys. This finding is consistent with the results of a meta-analytic review by Archer (2004). He concluded that when looking at the raters of relational aggression, females were rated as using more relational aggression than males when using peer ratings (Archer, 2004).

Appendix A - Parent Letter

Dear Parent:

     My name is Natalie Barlett, and I am currently pursuing a doctoral degree from the Department of Psychology at Kansas State University. This letter describes the research project I am planning to conduct this semester, which will serve as the basis for my doctorate. This study has been approved by the Human Subjects Committees at Kansas State University and Iowa State University and by the administration of the Oberlin school district. This study requires the participation of fourth-, fifth-, and sixth-grade students as well as their parents. I am hoping that, after you read this letter, you will be interested in taking part in this study.

     The general purpose of this research is to investigate the relationships between children's use of relational aggression (e.g., gossiping, ignoring, excluding others when angry at them) and parent- and peer-relevant variables. For this research, I am asking (1) for your permission to allow your child to participate, and (2) for your consent (and the consent of any other parent/step-parent/guardian) to participate.

     Your Child's Participation. Each child that is given permission to participate in this study will be asked to complete questionnaires assessing their and their peers' use of relational and physical aggression and their parents' use of control. They will also be asked questions about the characteristics of their peer group. To measure aggression, a sociometric rating form will be used. This form lists the names of all of the children in the classroom that are given parental permission to participate in the study and asks children to rate how similar each child is to a description of aggressive children. Because of the way this measure is used to assess aggression, confidentiality is of great importance to us. When collecting the information from children, the researcher will repeatedly stress the importance of the children completing their ratings individually, without discussion and the importance of not sharing their answers with others. Also, no one but the researchers will see the names and ratings, and the names will be removed as soon as your child's information is paired with yours. These surveys will be completed in your child's regular classroom at school, and they should take only 45 minutes to complete. Your child may refuse to answer any question at any time without penalty.

     Your Participation. You will be asked to complete three brief questionnaires. One of these assesses how likely you would be to engage in certain behaviors toward a spouse or close friend. The second questionnaire asks you to rate how likely you would be to respond to your child's misbehavior in various ways. The final measure will assess your general attitudes and traits. These questionnaires should take only about 15 minutes (or less) to complete. After you have completed them, I ask that you seal them in the envelope provided and return them to your child's classroom teacher. A separate envelope is provided for each parent/step-parent/guardian. You are asked to return the questionnaire packet within one week after receiving it. <u>When you return your consent form, your name will be entered into a drawing for one of three $20 gift cards (whether or not you or your child are participating in the study).</u>

Participation in this study is voluntary. This research involves no foreseeable risks and places no stress on the participants. Indeed, the large majority of children and parents who have taken part in prior similar studies have found participation quite enjoyable. Participation also provides you and your child with firsthand knowledge about how psychological research is conducted. All of the data collected (from the child and adult participants) will be kept confidential. No participants' names will be used in the analysis of data or in the reporting of the results of this study. All parents and children are free to withdraw from this study at any time if they wish.

If you have questions or concerns about the design or procedures associated with this study, please feel free to call me at (515) 509-4424 or Dr. Mark Barnett, Professor of Psychology and faculty advisor for this project, at (785) 532-0603. If you have any questions about the rights of participants in this study or about the manner in which the study is conducted, you may contact Dr. Rick Scheidt (Chair, Committee on Research Involving Human Subjects, 1 Fairchild Hall, Kansas State University) at (785) 532-3224 or the IRB Administrator, (515) 294-4566, or Director, (515) 294-3115, Office for Responsible Research, at Iowa State University.

Please indicate on the attached form whether you give (or do not give) consent for you and/or your child to take part in this study. You may give consent for your child to participate even if you choose not to, but I hope you will. For children who have another parent/step-parent/guardian, it is extremely important for him or her to participate as well; however please fill the measures our separately. Please share this letter and ask him or her to also sign the attached permission form. (His/her name will also be entered into the gift card drawing.) There are two copies of the permission slip attached. Please sign and return the second copy (marked "Experimenter Copy") to your child's teacher. After the study is completed and the data are analyzed, a summary of the results will be made available to you (see attached form). Thank you very much for your time and cooperation.

Sincerely,

Natalie D. Barlett, MS

Permission Slip – Your Copy (please retain)

Child's Name (Please Print):_____

Please check the appropriate "yes" or "no" box below, and provide the information requested.

_ *Yes*, I understand the procedures outlined on the previous page and give consent for **myself and my child** to participate in the study.

I understand this project is research and that our participation is completely voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time and stop participating at any time without explanation or penalty and that even with my consent, my son or daughter may stop participating at any time.

I verify that my signature below indicates that (1) I have read and understood this consent form, and willingly agree to participate in this study under the terms described, (2) my child has permission to participate in the study, and (3) I acknowledge that I have received a copy of this consent form.

1st Parent/Step-Parent/Guardian's Name (Please Print): _____

1st Parent/Step-Parent/Guardian's Signature: _____

Date: _____

Relationship to Child (circle one): Parent   Step-Parent   Guardian

2nd Parent/Step-Parent/Guardian's Name (Please Print): _____

2nd Parent/Step-Parent/Guardian's Signature: _____

Date: _____

Relationship to Child (circle one): Parent   Step-Parent   Guardian

_ *Yes*, I understand the procedures outlined on the previous page and give consent for **my child** to participate in the study.

I understand this project is research and that my child's participation is completely voluntary. I also understand that my son or daughter may stop participating at any time without explanation or penalty. I verify that my signature below indicates that (1) I have read and understood this consent form, (2) my child has permission to participate in the study, and (3) I acknowledge that I have received a copy of this consent form.

Parent/Step-Parent/Guardian's Name (Please Print): _____

Parent/Step-Parent/Guardian's Signature: _____

Date: _____

_ *No,* I do not give consent for myself or my child to participate in the study.

Parent/Step-Parent/Guardian's Name (Please Print): _____

Parent/Step-Parent/Guardian's Signature: _____

Date: _____

Permission Slip – Experimenter Copy (please return)

Child's Name (Please Print):_____

Please check the appropriate "yes" or "no" box below, and provide the information requested.

_ *Yes*, I understand the procedures outlined on the previous page and give consent for **myself and my child** to participate in the study.

I understand this project is research and that our participation is completely voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time and stop participating at any time without explanation or penalty and that even with my consent, my son or daughter may stop participating at any time.

I verify that my signature below indicates that (1) I have read and understood this consent form, and willingly agree to participate in this study under the terms described, (2) my child has permission to participate in the study, and (3) I acknowledge that I have received a copy of this consent form.

1st Parent/Step-Parent/Guardian's Name (Please Print): _____

1st Parent/Step-Parent/Guardian's Signature: _____

Date: _____

Relationship to Child (circle one): Parent   Step-Parent   Guardian

2nd Parent/Step-Parent/Guardian's Name (Please Print): _____

2nd Parent/Step-Parent/Guardian's Signature: _____

Date: _____

Relationship to Child (circle one): Parent   Step-Parent   Guardian

_ *Yes*, I understand the procedures outlined on the previous page and give consent for **my child** to participate in the study.

I understand this project is research and that my child's participation is completely voluntary. I also understand that my son or daughter may stop participating at any time without explanation or penalty. I verify that my signature below indicates that (1) I have read and understood this consent form, (2) my child has permission to participate in the study, and (3) I acknowledge that I have received a copy of this consent form.

Parent/Step-Parent/Guardian's Name (Please Print): _____

Parent/Step-Parent/Guardian's Signature: _____

Date: _____

_ ***No,*** I do not give consent for myself or my child to participate in the study.

        Parent/Step-Parent/Guardian's Name (Please Print):   _____

              Parent/Step-Parent/Guardian's Signature: _____

                              Date: _____

After the study is completed, a summary of the results of the study will be distributed to those who are interested. Would you like to receive a copy of this summary?
_ Yes   _ No   (Please check one)

Once you return this permission slip, the parents/guardians' names on it will be entered into a drawing for one of three $20 Target gift cards. Please provide the mailing addresses where the gift card should be sent if you are chosen.

1st Parent/ Parent/Step-Parent/Guardian

Name   _____

Address _____

          _____

          _____

2nd Parent/ Parent/Step-Parent/Guardian

Name   _____

Address _____

          _____

          _____

Appendix B - Child Assent Script

(To be inserted after initial greeting but before the full explanation of procedure and forms)

Today I am going to ask you to help me by participating in a study I am conducting. First, I will ask you to rate how similar the students in your class are to a description of other children. Second, I will ask you to rate how likely you are to perform different actions. Third, I will give you a list of different actions parents may do and ask you to rate how much the descriptions are like your parents (or guardians). Finally, I will ask you to rate how important different feelings and actions are to your group of friends.

If you feel uncomfortable responding to any of the questions today, you may choose to not respond to that particular question or you may stop participating all together. However, I hope that you will respond to all of the questions and participate in the entire study.

Do you have any questions about the study that you are going to participate in today?

Your parent or legal guardian has already agreed that you may participate in the study today, but I need for you to agree as well. So, please read the two paragraphs on the Participation Form with me now.

(Read two paragraphs on the Child Participation Form. Collect completed forms from children before continuing with instructions.)

Child Participation Form

I understand that my participation in this study today is voluntary and that I may stop participating at any point without any penalty. I understand that I will be making ratings about myself, my parents, and my group of friends.

If you agree to participate in my study today, please print your full name neatly on the first line below and then sign and put today's date on the next two lines. (If you do not agree to participate in this study, do not print or sign your name below.) Thank you.

_____

Please print your full name

_____

Please sign your full name

_____

Today's date

Appendix C - Child Demographic Information

Name: _____
(please print)

Sex: Male   Female
(please circle one)

Age: _____

Birth date: _____/_____/_____
                  Month   Day   Year

Grade in School: _____

Appendix D - Relational and Physical Aggression: Sociometric Ratings

      We have been conducting research about how different children act when they get mad at someone or don't want someone to be their friend. There are lots of different ways that someone can behave, but I am going to describe to you two of the ways that some children about your age act when they are in these situations. **One way these boys and girls act when they get mad at another kid or do not want someone to be their friend is they will say bad things about the kid behind his or her back, they will tease the kid in front of others, they will ignore the kid, or they will gossip with others about the kid.**

      Now, think about what these boys and girls do when they are mad at another kid or do not want to be friends with another kid. I am going to ask you to rate **how similar each of the students in your class are** to these children when they get mad at someone or don't want someone to be their friend, and **how similar you are** to these children when you get mad at someone or don't want someone to be your friend. Please circle the one number that best matches how similar you think your classmates and you are to these children in these situations.

1	2	3	4	5
Not At All Similar		Somewhat Similar		Very Similar

Sarah   1   2   3   4   5

Josh   1   2   3   4   5

Kyle   1   2   3   4   5

Another way these boys and girls act when they get mad at another kid is they will try to start a fight with the kid, they will shove or push the kid, or they will throw a punch at the kid.

Now, think about what these boys and girls do when they are mad at another kid. Again, I am going to ask you to rate **how similar each of the students in your class are** to these children when they get mad at someone, and **how similar you are** to these children when you get mad at someone. Please circle the one number that best matches how similar you think your classmates and you are to these children in these situations.

	1 Not At All Similar	2	3 Somewhat Similar	4	5 Very Similar
Sarah	1	2	3	4	5
Josh	1	2	3	4	5
Kyle	1	2	3	4	5

Appendix E - Self-Rating: Use of Relational and Physical Aggression

On this questionnaire, we would like you to indicate how likely you would be to engage in various behaviors if you were mad at another kid or if you didn't want someone to be your friend.

Please circle the one number below each phrase that best reflects how likely you would be to engage in the following behaviors if you were mad at another child or if you didn't want someone to be your friend.

1	2	3	4	5
Not at All		Somewhat		Very
Likely		Likely		Likely

1. ignore or walk away from that child when that child tries to talk with you (R)*

    1   2   3   4   5

2. hit that child (P)

    1   2   3   4   5

3. spread rumors about that child (R)

    1   2   3   4   5

4. trip that child (P)

    1   2   3   4   5

5. try to get other kids to dislike that child (R)

    1   2   3   4   5

6. tease that child (R)

    1   2   3   4   5

7. push that child (P)

    1   2   3   4   5

8. say bad things to other kids about that child (R)

    1   2   3   4   5

9. kick that child (P)

    1   2   3   4   5

10. send e-mails or text messages to other kids that make fun of that child (R)

    1   2   3   4   5

11. throw something at that child (P)

   1   2   3   4   5

12. start a fight with that child (P)

   1   2   3   4   5

(R) = Relationally aggressive behavior

(P) = Physically aggressive behavior

*This item was removed before calculating participants' scores.

Appendix F - Psychological Control Scale-Youth Self-Report (PCS-YSR)

The following are characteristics that may or may not describe your current female caregiver (e.g., your mother) and your current male caregiver (e.g., your father). When filling out the following form, please think about the primary mother and father figures in your life right now. These parental figures may be your biological mother or father, a step-mother or father, a grandmother or grandfather, or another adult who takes care of you. Think about the same female caregiver and the same male caregiver for all of the phrases listed below. If you do not have a primary female or male caregiver, you can skip the corresponding section.

My primary female caregiver is my: ___ **parent**
    (please check one)   ___ **step-parent**
                           ___ **grandparent**
                           ___ **guardian**
                           ___ **other** _____

My primary male caregiver is my: ___ **parent**
    (please check one)   ___ **step-parent**
                           ___ **grandparent**
                           ___ **guardian**
                           ___ **other** _____

Please circle one number next to each phrase to indicate how much the description is like your primary female caregiver and then your primary male caregiver.

1	2	3	4	5
Not At All		Somewhat		Very Much
Like Her/Him		Like Her/Him		Like Her/Him

	Mother or Current Female Caregiver	Father or Current Male Caregiver
l. changes the subject, whenever I have something to say.	1 2 3 4 5	1 2 3 4 5
2. finishes my sentences whenever I talk.	1 2 3 4 5	1 2 3 4 5
3. often interrupts me	1 2 3 4 5	1 2 3 4 5
4. acts like she/he knows what I'm thinking or feeling.	1 2 3 4 5	1 2 3 4 5

	1	2	3	4	5
	Not At All		Somewhat		Very Much
	Like Her/Him		Like Her/Him		Like Her/Him

5. would like to be able to tell me how to feel or think about things all the time. 1 2 3 4 5   1 2 3 4 5

6. is always trying to change how I feel or think about things. 1 2 3 4 5   1 2 3 4 5

7. blames me for other family members' problems. 1 2 3 4 5   1 2 3 4 5

8. brings up my past mistakes when she/he criticizes me. 1 2 3 4 5   1 2 3 4 5

Appendix G - Group of Friends Question

For the purposes of the following questionnaires, a "group of friends" is defined as a set of three or more friends who all spend time together. That is, two people would not be considered a group, and neither would a set of independent friends who do not spend time together.

Based on the definition given above, do you have a group of friends? (circle one)   Yes   No

Appendix H - Peer Group Cohesiveness and Distinctiveness Measure

For the questions on this survey, think about your group of friends (if you have more than one group of friends, think about your "most important" group of friends). If you do not have a group of friends now, think about friends from the past or that you may have in the future. Using the following scale, please indicate the extent to which you agree with each statement by circling the number under each statement that best matches your opinion.

1	2	3	4	5
Don't Agree		Agree With		Agree With

1. The individuals in my group of friends feel that it is important to belong to our group.(C)

     1   2   3   4   5

2. When someone wants to join my group of friends, we usually welcome them. (D-)[b]

     1   2   3   4   5

3. The individuals in my group of friends feel connected to one another. (C)

     1   2   3   4   5

4. If someone we don't know very well wants to do something with my group of friends,

we usually don't let them. (D)[b]

     1   2   3   4   5

5. I feel that the people in my group of friends are different from other kids my age. (D)

     1   2   3   4   5

6. The individuals in my group of friends feel proud to be part of this group. (C)

     1   2   3   4   5

7. In most ways, the friends in my group are pretty much like other kids in school. (D -)

     1   2   3   4   5

8. The individuals in my group of friends feel happy to be members of this group. (C)

     1   2   3   4   5

1	2	3	4	5
Don't Agree		Agree With		Agree With

9. The friends in my group choose not to have too much social contact with people who aren't in our group of friends. (D)[a]

	1	2	3	4	5

10. I talk to lots of different kids my age, even if they're not in my group of friends. (D-)[a]

	1	2	3	4	5

11. The individuals in my group of friends feel important to the group. (C)

	1	2	3	4	5

12. The individuals in my group of friends feel like members of this group. (C)

	1	2	3	4	5

(C) = Cohesiveness

(D) = Distinctiveness

 (-) = negatively keyed

[a]These sentences were initially conceptualized as "rejection of outgroup members" items.

[b]These sentences were initially conceptualized as "restriction of access to outgroup members"

items.

Appendix I - Peer Group Relational Aggression Measure

Below are several activities and characteristics that kids sometimes feel are important among their group of friends. **In responding to this questionnaire, keep thinking about the group of friends that you were thinking about on the last 2 pages**.

To the members of your group of friends, how important are each of the following activities in keeping the group friendship? Using the following scale, circle the number below each phrase that best describes **how important the activity or characteristic is to the members of your group of friends**.

1	2	3	4	5
Not At All		Somewhat		Very

To the members of your group of friends, how important is it to _____?

1. tease kids who are not in your group (RA)

         1   2   3   4   5

2. play sports with one another

         1   2   3   4   5

3. yell at other kids

         1   2   3   4   5

4. like the same kinds of movies

         1   2   3   4   5

5. say unkind things about the appearance or behaviors of kids who are not in your group(RA)

         1   2   3   4   5

6. spend the night at each others' houses

         1   2   3   4   5

To the members of your group of friends, how important is it to _____?

<table>
<tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr>
<tr><td>Not At All</td><td></td><td>Somewhat</td><td></td><td>Very</td></tr>
</table>

7. gossip about kids who are not in your group (RA)

          1   2   3   4   5

8. help the kids in your group

          1   2   3   4   5

9. exclude kids from your group if they make someone in your group mad (RA)*

          1   2   3   4   5

10. get into physical fights with other kids

          1   2   3   4   5

11. ignore kids who are not in your group (RA)

          1   2   3   4   5

12. talk to each other about how you feel

          1   2   3   4   5

(RA) = Relationally aggressive behavior

Unmarked items = Filler items

*This item was removed before calculating participants' scores.

Appendix J - Parent Demographic Information

Child's Name: _____
(please print)   (Your child's name will not be used in any of the analyses, nor will your child be identified in any way in the results. Your child's name is only requested so that we may match your answers to your child's.)

Relationship to Child: ____ Parent
(please check one)   ____ Step-Parent
     ____ Grandparent
     ____ Guardian
     ____ Other _____

Your Sex: Male   Female
(please circle one)

Your Age: _____

Marital Status: Single   Married   Separated   Divorced   Widowed
(please circle one)

Your Race/Ethnicity: ____ African-American/Black
(please check one)   ____ Asian
     ____ Caucasian/White
     ____ Hispanic
     ____ Native American
     ____ Other _____

What is the highest
level of education
you have completed: ____ Elementary
(please check one)   ____ High School
     ____ Some College or Associate's Degree
     ____ Bachelor's Degree
     ____ Some Graduate School
     ____ Graduate Degree(s)

Appendix K - Parents' Use of Manipulative Behavior with Adults

We have been investigating how individuals behave when they get angry at another person, especially a spouse or a close friend. We have discovered that individuals differ markedly in the approaches they take when they are angry at others.

Please think about situations in which you might be angry with a spouse or a close friend, and circle the one number below each statement that best reflects how likely you would be to engage in that behavior.

How likely would you be to engage in the following behaviors when you are angry at a spouse or close friend?

1	2	3	4	5
Not at All Likely		Somewhat Likely		Very Likely

1. Try to make that person feel guilty (M)

      1   2   3   4   5

2. Yell at the person

      1   2   3   4   5

3. Go for a walk or a drive to distract yourself or to "let off steam"

      1   2   3   4   5

4. Exaggerate how displeased you are with that person to make him/her feel badly about what he/she has said or done (M)

      1   2   3   4   5

5. Talk calmly with that person about why you are angry

      1   2   3   4   5

6. Try to see the other person's point of view

      1   2   3   4   5

7. Exclude that person from commonly shared activities (e.g., going for a walk, going

    shopping, going to a sporting event) (M)

        1   2   3   4   5

8. Stop talking to that person (M)

        1   2   3   4   5

9. Talk to someone else (i.e., not your spouse or close friend) about the reason you are

    angry

        1   2   3   4   5

(M) = Manipulative response

Unmarked items = Filler items

Appendix L - Parents' Use of Manipulative Disciplinary Responses with Child

Parents choose to discipline their children in many different ways when they misbehave, and we would like to know what types of discipline techniques you tend to use with your child. We are not judging the way anyone chooses to parent. Instead, we are interested in determining if the way children are disciplined relates to how they interact with their peers.

Imagine that your child (the one who is participating in this study) has purposely done something that you instructed him or her not to do. How likely would you be to respond in the following ways?

Please circle the one number below each statement that best reflects how likely you would be to respond to your child's misbehavior in that particular manner.

1	2	3	4	5
Not at All Likely		Somewhat Likely		Very Likely

1. Not let your child do activities that he/she enjoys (e.g., go out with friends, watch television)

      1   2   3   4   5

2. Discuss with your child what he/she did wrong

      1   2   3   4   5

3. Try to make your child feel guilty (M)

      1   2   3   4   5

4. Take away your child's allowance or spending money

      1   2   3   4   5

5. Ignore your child (M)

      1   2   3   4   5

6. Yell at your child

          1   2   3   4   5

7. Exaggerate how hurt or angry you are in front of your child to make him/her feel badly about the misbehavior (M)

          1   2   3   4   5

8. Pretend like it didn't happen

          1   2   3   4   5

9. Stop talking to your child (M)

          1   2   3   4   5

10. Assign your child extra chores

          1   2   3   4   5

11. Tell your child that you don't like or love him/her when he/she misbehaves (M)

          1   2   3   4   5

12. Discuss with your child how his/her misbehavior made you feel

          1   2   3   4   5

(M) = Manipulative response

Unmarked items = Filler items

Appendix M - Marlowe-Crowne Social Desirability Scale

Listed below are a number of statements concerning personal attitudes and traits. Please read each item and decide whether the statement is true or false as it pertains to you personally. **Write "T" (for true) or "F" (for false) beside each item number to indicate your answers.**

1. _____Before voting I thoroughly investigate the qualifications of all the candidates. (-)
2. _____I never hesitate to go out of my way to help someone in trouble. (-)
3. _____It is sometimes hard for me to go on with my work if I am not encouraged.
4. _____I have never intensely disliked someone. (-)
5. _____On occasion I have had doubts about my ability to succeed in life.
6. _____I sometimes feel resentful when I don't get my way.
7. _____I am always careful about my manner of dress. (-)
8. _____My table manners at home are as good as when I eat out in a restaurant. (-)
9. _____If I could get into a movie without paying and be sure I was not seen, I would probably do it.
10. _____On a few occasions, I have given up doing something because I thought too little of my ability.
11. _____I like to gossip at times.
12. _____There have been times when I felt like rebelling against people in authority even though I knew they were right.
13. _____No matter who I'm talking to, I'm always a good listener. (-)
14. _____I can remember "playing sick" to get out of something.
15. _____There have been occasions when I took advantage of someone.
16. _____I'm always willing to admit it when I make a mistake. (-)
17. _____I always try to practice what I preach. (-)
18. _____I don't find it particularly difficult to get along with loud mouthed, obnoxious people. (-)
19. _____I sometimes try to get even, rather than forgive and forget.
20. _____When I don't know something, I don't at all mind admitting it. (-)
21. _____I am always courteous, even to people who are disagreeable. (-)
22. _____At times I have really insisted on having things my own way.
23. _____There have been occasions when I felt like smashing things.
24. _____I would never think of letting someone else be punished for my wrongdoings. (-)
25. _____I never resent being asked to return a favor. (-)
26. _____I have never been irked when people expressed ideas very different from my own. (-)
27. _____I never make a long trip without checking the safety of my car. (-)
28. _____There have been times when I was quite jealous of the good fortune of others.
29. _____I have almost never felt the urge to tell someone off. (-)
30. _____I am sometimes irritated by people who ask favors of me.
31. _____I have never felt that I was punished without cause. (-)
32. _____I sometimes think when people have a misfortune that they only got what they deserve.
33. _____I have never deliberately said something that hurt someone's feelings. (-)

(-) Item is keyed true

Table 1

Demographic Information for the Parent/Guardian Participants

	Mother Participants N = 137		Father Participants N = 70	
Marital Status				
Single	10	7.3%	2	2.9%
Married	103	75.2%	62	88.6%
Separated	1	.7%	2	2.9%
Divorced	22	16.1%	4	5.7%
Widowed	1	.7%	0	0%
Race				
Black	2	1.5%	0	0%
Asian	2	1.5%	1	1.4%
White	132	96.4%	68	97.1%
Hispanic	1	.7%	1	1.4%
Education				
High School	16	11.7%	13	18.6%
Some College	57	41.6%	17	24.3%
Bachelor's Degree	44	32.1%	19	27.1%
Some Graduate School	8	5.8%	9	12.9%
Graduate Degree	12	8.8%	12	17.1%

Table 2

Child and Parent Measures: Descriptive Statistics

	# items	α	Possible Range	M	SD
Child Completed Measures					
RA (Self 1 item)	1		1 - 5	2.25	1.19
RA (Peer)	1 x peers		1 – 5	2.22	.66
RA (Self scale)	5	.84	5 – 25	7.69	3.63
PA (Self 1 item)	1		1 - 5	1.69	1.20
PA (Peer)	1 x peers		1 - 5	1.73	.66
PA (Self scale)	6	.91	6 - 30	8.56	4.75
PCS-YSR					
Mothers	8	.78	8 - 40	14.16	5.94
Fathers	8	.80	8 - 40	14.15	6.17
Peer Group RA	4	.81	4 - 20	5.89	2.93
Peer Group Cohesiveness	6	.85	1 - 6	3.79	.89
Peer Group Distinctiveness	6	.50	1 - 6	2.48	.66
Parent Completed Measures					
Manipulative Behavior with Adults[a]					
Mothers	4	.65	4 - 20	9.28	3.19
Fathers	4	.63	4 - 20	8.96	2.94

Manipulative Discipline with Children[a]

Mothers	5	.55	5 - 25	7.29	2.15
Fathers	5	.66	5 – 25	7.71	2.41

Total Manipulative Behavior (with Adults and Children)

Mothers	9	.72	9 - 45	16.56	4.64
Fathers	9	.74	9 - 45	16.71	4.64

Social Desirability

Mothers	33	.77	0 - 33	18.38	5.14
Fathers	33	.82	0 – 33	17.72	5.85

Note: RA = Relational aggression; PA = Physical aggression; PCS-YSR = Psychological Control

Scale – Youth Self Report

[a] These scales were combined to form the Total Manipulative Behavior (with Adults and

Children) measure.

Table 3

Correlations Among Scores on the Three Relational Aggression Measures and Three Physical

Aggression Measures

	2.	3.	4.	5.	6.
1. RA (Self 1 item)	.16*	.40***	.50***	.23**	.31***
2. RA (Peer)		.13	.24**	.65***	.26***
3. RA (Self scale)			.48***	.27***	.65***
4. PA (Self 1 item)				.46***	.59***
5. PA (Peer)					.43***
6. PA (Self scale)					

Note: RA = Relational aggression; PA = Physical aggression

*p < .05; **p < .01; ***p < .001

Table 4

Correlations Among Scores on the Three Measures of Relational Aggression and Scores on

Mothers' and Fathers' Use of Manipulative Behavior and Psychological Control

	4.	5.	6.	7.
1. RA (Self 1 item)	.05	-.03	.16*	.05
2. RA (Peer)	.10	.07	.00	.00
3. RA (Self scale)	.02	.13	.37***	.38***
4. Mothers' Manipulative Behavior		.20	.14	.09
5. Fathers' Manipulative Behavior			.13	.22
6. Mothers' Psychological Control				.76***
7. Fathers' Psychological Control				

Note: Correlations among scores on the relational aggression (RA) measures are omitted because

they are presented in Table 3.

*p < .05; ***p* < .01; ****p* < .001

Table 5

Correlations Among Scores on the Three Measures of Relational Aggression and Scores on Peer

Groups' Use of Relational Aggression, Cohesiveness, and Distinctiveness

	4.	5.	6.
1. RA (Self 1 item)	.28***	-.11	.17*
2. RA (Peer)	.25**	.08	.08
3. RA (Self scale)	.40***	-.10	.27**
4. Peer Group RA		.01	.28**
5. Peer Group Cohesiveness			-.09
6. Peer Group Distinctiveness			

Note: Correlations among scores on the relational aggression (RA) measures are omitted because they are presented in Table 3.

*p < .05; **p < .01; ***p < .001

Table 6

Overview of Six Regression Analyses Predicting Children's Relational Aggression Scores with

Scores on Mothers' (Fathers') Use of Manipulative Behavior and Psychological Control:

Expected Pattern of Results

	β	t	p	R^2	F	p	ΔR^2
Step 1						< .05	
A) Child Gender							
B) Child PA (Self 1 item/Peer/Self scale)		+	< .05				
C) Mothers' (Fathers') Social Desirability							
Step 2						< .05	<.05
D) Mothers' (Fathers') ManipulativeBehavior		+	< .05				
E) Mothers' (Fathers') Psychological Control		+	< .05				

Note: + indicates a positive relationship was predicted; PA = physical aggression

The predicted pattern of results was the same for all six regressions (see text for complete

description of these regressions).

Table 7

Regression Analyses Predicting Scores on Children's Relational Aggression (Measured in Three Ways) with Scores on Mothers' Manipulative Behavior and Psychological Control

	β	t	p	R^2	F	p	ΔR^2	p
RA (Self 1 item) Step 1				.27	14.07[a]	<.001		
A) Child Sex	-.13	-1.47	.144					
B) Child PA (Self 1 item)	.55	6.28	<.001					
C) Mothers' Social Desirability	-.02	-.29	.771					
RA (Peer) Step 1				.44	30.14[a]	<.001		
A) Child Gender	-.24	-3.13	.002					
B) Child PA (Peer)	.72	9.28	<.001					
C) Mothers' Social Desirability	-.07	-.94	.349					
RA (Self scale) Step 2				.57	27.94[b]	<.001	.07	<.001
A) Child Gender	.01	.09	.925					
B) Child PA (Self scale)	.61	8.51	<.001					
C) Mothers' Social Desirability	-.01	-.14	.886					
D) Mothers' Manipulative Behavior	.02	.34	.736					
E) Mothers' Psychological Control	.27	3.99	<.001					

Note: RA = Relational aggression; PA = Physical aggression

a = degrees of freedom (3, 115); b = degrees of freedom (5, 106)

Table 8

Regression Analyses Predicting Scores on Children's Relational Aggression (Measured in Three

Ways) with Scores on Fathers' Manipulative Behavior and Psychological Control

	β	t	p	R^2	F	p
RA (Self 1 item) Step 1				.26	6.72[a]	.001
A) Child Sex	-.11	-.86	.395			
B) Child PA (Self 1 item)	.52	4.25	<.001			
C) Fathers' Social Desirability	-.19	-1.58	.119			
RA (Peer) Step 1				.51	19.62[b]	<.001
A) Child Gender	-.15	-1.41	.165			
B) Child PA (Peer)	.77	7.42	<.001			
C) Fathers' Social Desirability	-.01	-.11	.910			
RA (Self scale) Step 1				.66	32.71[c]	<.001
A) Child Gender	-.03	-.38	.709			
B) Child PA (Self scale)	.82	9.31	<.001			
C) Fathers' Social Desirability	-.16	-1.87	.068			

Note: RA = Relational aggression; PA = Physical aggression

a = degrees of freedom (3, 57); b = degrees of freedom (3, 56); c = degrees of freedom (3, 51)

Table 9

Overview of Three Regression Analyses Predicting Children's Relational Aggression Scores with

Scores on Peer Group Relational Aggression, Cohesiveness, and Distinctiveness: Expected

Pattern of Results

	β	t	p	R^2	F	p	ΔR^2
Step 1						< .05	
A) Child Gender							
B) Child PA (Self 1 item/Peer/Self scale)	+		< .05				
Step 2						< .05	< .05
C) Peer Group RA	+		< .05				
D) Peer Group Cohesiveness							
E) Peer Group Distinctiveness							
Step 3						< .05	< .05
C X D	+		< .05				
C X E	+		< .05				
D X E							
Step 4						< .05	< .05
C X D X E	+		< .05				

Note: + indicates a positive relationship was predicted; RA = Relational aggression;

PA = Physical aggression

The predicted pattern of results was the same for all three regressions (see text for a complete

description of these regressions).

Table 10

Regression Analysis Predicting Scores on Children's Relational Aggression (Assessed by the Self 1 Item Measure) with Scores on Peer Groups' Use of Relational Aggression, Peer Group Cohesiveness, and Peer Group Distinctiveness

	β	t	p	R^2	F	p	ΔR^2	p
Step 4				.35	7.88[a]	<.001	.03	.014
A) Child Gender	-.18	-2.35	<.05					
B) Child PA (Self 1 item)	.40	5.07	<.001					
C) Peer Group RA	.33	3.04	<.01					
D) Peer Group Cohesiveness	-.10	-1.26	.211					
E) Peer Group Distinctiveness	.12	1.33	.187					
C X D	-.13	-1.21	.227					
C X E	-.08	-.70	.487					
D X E	.12	1.30	.196					
C X D X E	.28	2.49	<.05					

Note: RA = Relational aggression; PA = Physical aggression

a = degrees of freedom (9, 133)

Table 11

Regression Analysis Predicting Scores on Children's Relational Aggression (Assessed by the Peer Measure) with Scores on Peer Groups' Use of Relational Aggression, Peer Group Cohesiveness, and Peer Group Distinctiveness

	β	t	p	R^2	F	p
Step 1				.49	67.01[a]	<.001
A) Child Gender	-.19	-2.91	.004			
B) Child PA (Peers)	.76	11.43	<.001			

Note: RA = Relational aggression; PA = Physical aggression

a = degrees of freedom (2, 139)

Table 12

Regression Analysis Predicting Scores on Children's Relational Aggression (Assessed by the Self

Scale) with Scores on Peer Groups' Use of Relational Aggression, Peer Group Cohesiveness,

and Peer Group Distinctiveness

	β	t	p	R^2	F	p	ΔR^2	p
Step 4				.47	12.10[a]	<.001	.03	<.01
A) Child Gender	.03	.38	.702					
B) Child PA (Self scale)	.48	6.42	<.001					
C) Peer Group RA	.39	3.83	<.001					
D) Peer Group Cohesiveness	-.07	-.88	.380					
E) Peer Group Distinctiveness	.05	.56	.575					
C X D	-.08	-.76	.447					
C X E	-.04	-.38	.702					
D X E	-.06	-.76	.447					
C X D X E	.28	2.77	<.01					

Note: RA = Relational aggression; PA = Physical aggression

a = degrees of freedom (9, 123)

Table 13

Overview of Six Regression Analyses Predicting Children's Relational Aggression Scores with

Scores on Mothers' (Fathers') Manipulative Behavior and Psychological Control and Peer

Group Relational Aggression: Expected Pattern of Results

	β	t	p	R^2	F	p	ΔR^2
Step 1						< .05	
A) Child Gender							
B) Child PA (Self 1 item/Peer/Self scale)	+		< .05				
C) Mothers' (Fathers') Social Desirability							
Step 2						< .05	<.05
D) Mothers' (Fathers') ManipulativeBehavior	+		< .05				
E) Mothers' (Fathers') Psychological Control	+		< .05				
F) Peer Group RA	+		< .05				

Note: + indicates a positive relationship was predicted; RA = Relational aggression;

PA = Physical aggression

The predicted results remained the same for all regressions.

Table 14

Regression Analyses Predicting Scores on Children's Use of Relational Aggression (Measured in Three Ways) with Scores on Mothers' Manipulative Behavior and Psychological Control and Peer Groups' Relational Aggression

	β	t	p	R^2	F	p	ΔR^2	p
RA (Self 1 item) Step 1				.23	10.61[a]	<.001		
A) Child Gender	-.17	-1.85	.068					
B) Child PA (Self 1 item)	.51	5.55	<.001					
C) Mothers' Social Desirability	.00	-.01	.996					
RA (Peer) Step 1				.49	33.33[a]	<.001		
A) Child Gender	-.22	-2.95	<.01					
B) Child PA (Peer)	.74	9.81	<.001					
C) Mothers' Social Desirability	-.08	-1.08	.285					
RA (Self scale) Step 2				.62	27.05[b]	<.001	.10	<.001
A) Child Gender	.02	.32	.749					
B) Child PA (Self Scale)	.57	7.81	<.001					
C) Mothers' Social Desirability	-.06	-.84	.402					
D) Mothers' Manipulative Behavior	.02	.29	.776					
E) Mothers' Psychological Control	.34	4.83	<.001					
F) Peer Group RA	.05	.77	.446					

Note: RA = Relational aggression; PA = Physical aggression

a = degrees of freedom (3, 106); b = degrees of freedom (6, 98)

Table 15

Regression Analyses Predicting Scores on Children's Use of Relational Aggression (Measured in Three Ways) with Scores on Fathers' Manipulative Behavior and Psychological Control and Peer Groups' Relational Aggression

	β	t	p	R^2	F	p	ΔR^2	p
RA (Self 1 item) Step 1				.26	6.31[a]	<.01		
A) Child Gender	-.12	-.99	.327					
B) Child PA (Self 1 item)	.52	4.17	<.001					
C) Fathers' Social Desirability	-.15	-1.28	.206					
RA (Peer) Step 1				.56	21.71[b]	<.001		
A) Child Gender	-.08	-.74	.464					
B) Child PA (Peer)	.77	7.61	<.001					
C) Fathers' Social Desirability	.02	.17	.867					
RA (Self scale) Step 2				.71	17.99[c]	<.001	.06	<.05
A) Child Gender	-.04	-.40	.692					
B) Child PA (Self Scale)	.70	7.07	<.001					
C) Fathers' Social Desirability	-.06	-.68	.503					
D) Fathers' Manipulative Behavior	-.07	-.76	.454					
E) Fathers' Psychological Control	.24	2.52	<.05					
F) Peer Group RA	.15	1.65	.106					

Note: RA = Relational aggression; PA = Physical aggression

a = degrees of freedom (3, 53); b = degrees of freedom (3, 54); c = degrees of freedom (6, 44)

Table 16

Overview of Fifteen Regression Analyses Predicting Boys' and Girls' Relational Aggression

Scores with Scores on Mothers' (Fathers') Manipulative Behavior and Psychological Control as

Well as Peer Group Relational Aggression: Expected Pattern of Results

	β	t	p	R^2	F	p	ΔR^2
Step 1						$< .05$	
A) Child PA (Self 1 item/Peer/Self scale)	+		$< .05$				
B) Mothers' (Fathers') Social Desirability							
Step 2						$< .05$	$< .05$
C) Child Gender							
D) Mothers' (Fathers') Manipulative Behavior/	+		$< .05$				
Psychological Control/Peer Group RA							
Step 3						$< .05$	$< .05$
C X D*	+		$< .05$				

Note: + indicates a positive relationship was predicted; RA = Relational aggression;

PA = Physical aggression

*Effects of predictors expected to be stronger for girls than boys.

The predicted results remained the same for all regressions.

Table 17

Regression Analyses Predicting Scores on Children's Relational Aggression (Measured in Three Ways) with Child Gender and Mothers' Manipulative Behavior

	β	t	p	R^2	F	p	ΔR^2	p
RA (Self 1 item) Step 1				.25	20.11[a]	<.001		
A) Child PA (Self 1 item)	.50	6.23	<.001					
B) Mothers' Social Desirability	-.01	-.10	.917					
RA (Peer) Step 2				.47	26.05[b]	<.001	.05	<.01
A) Child PA (Peer)	.74	9.85	<.001					
B) Mothers' Social Desirability	-.08	-1.11	.272					
C) Child Gender	-.23	-3.19	<.01					
D) Mothers' Manipulative Behavior	-.01	-.11	.917					
RA (Self scale) Step 1				.51	59.06[c]	<.001		
A) Child PA (Self scale)	.71	10.86	<.001					
B) Mothers' Social Desirability	-.03	-.47	.636					

Note: RA = Relational aggression; PA = Physical aggression

a = degrees of freedom (2, 122); b = degrees of freedom (4, 120);
c = degrees of freedom (2, 114)

Table 18

Regression Analyses Predicting Scores on Children's Relational Aggression (Measured in Three Ways) with Child Gender and Mothers' Psychological Control

	β	t	p	R^2	F	p	ΔR^2	p
RA (Self 1 item) Step 1				.25	19.95[a]	<.001		
A) Child PA (Self 1 item)	.50	6.20	<.001					
B) Mothers' Social Desirability	-.01	-.16	.871					
RA (Peer) Step 2				.46	24.97[b]	<.001	.08	<.001
A) Child PA (Peer)	.74	9.86	<.001					
B) Mothers' Social Desirability	-.05	-.73	.464					
C) Child Gender	-.27	-3.61	<.001					
D) Mothers' Psychological Control	-.13	-1.84	.069					
RA (Self scale) Step 2				.57	35.44[c]	<.001	.06	<.01
A) Child PA (Self scale)	.61	8.60	<.001					
B) Mothers' Social Desirability	-.04	-.57	.567					
C) Child Gender	.02	.23	.385					
D) Mothers' Psychological Control	.27	3.95	<.001					

Note: RA = Relational aggression; PA = Physical aggression

a = degrees of freedom (2, 119); b = degrees of freedom (4, 117);

c = degrees of freedom (4, 109)

Table 19

Regression Analyses Predicting Scores on Children's Relational Aggression (Measured in Three

Ways) with Child Gender and Fathers' Manipulative Behavior

	β	t	p	R^2	F	p	ΔR^2	p
RA (Self 1 item) Step 3				.40	8.36[a]	<.001	.05	<.05
A) Child PA (Self 1 item)	.62	5.89	<.001					
B) Fathers' Social Desirability	-.16	-1.56	.124					
C) Child Gender	-.96	-2.59	<.05					
D) Fathers' Manipulative Behavior	-.18	-1.70	.094					
C X D	.84	2.28	<.05					
RA (Peer) Step 1				.54	37.21[b]	<.001		
A) Child PA (Peer)	.73	8.60	<.001					
B) Fathers' Social Desirability	-.04	-.45	.654					
RA (Self scale) Step 1				.63	49.06[c]	<.001		
A) Child PA (Self scale)	.79	9.88	<.001					
B) Fathers' Social Desirability	-.12	-1.51	.135					

Note: RA = Relational aggression; PA = Physical aggression

a = degrees of freedom (5, 62); b = degrees of freedom (2, 64); c = degrees of freedom (2, 58)

Table 20

Regression Analyses Predicting Scores on Children's Relational Aggression (Measured in Three

Ways) with Child Gender and Fathers' Psychological Control

	β	t	p	R^2	F	p	ΔR^2	p
RA (Self 1 item) Step 3				.35	6.03[a]	.01	.09	<.01
A) Child PA (Self 1 item)	.50	4.12	<.001					
B) Fathers' Social Desirability	-.21	-1.79	.078					
C) Child Gender	-.77	-2.89	<.01					
D) Fathers' Psychological Control	-.04	-.31	.761					
C X D	.73	2.74	<.01					
RA (Peer) Step 1				.50	27.95[b]	<.001		
A) Child PA (Peer)	.70	7.48	<.001					
B) Fathers' Social Desirability	-.04	-.40	.688					
RA (Self scale) Step 1				.66	49.81[c]	<.001		
A) Child PA (Self scale)	.81	9.90	<.001					
B) Fathers' Social Desirability	-.17	-2.03	.047					

Note: RA = Relational aggression; PA = Physical aggression

a = degrees of freedom (5, 55); b = degrees of freedom (2, 57); c = degrees of freedom (2, 52)

Table 21

Regression Analyses Predicting Scores on Children's Relational Aggression (Measured in Three Ways) with Child Gender and Peer Groups' Relational Aggression

	β	t	p	R^2	F	p	ΔR^2	p
RA (Self 1 item) Step 2				.25	16.49[a]	<.001	.06	<.01
A) Child PA (Self 1 item)	.46	5.80	<.001					
B) Child Gender	-.18	-2.38	<.05					
C) Peer Group RA	.19	2.60	<.05					
RA (Peer) Step 2				.51	48.61[b]	<.001	.03	<.05
A) Child PA (Peer)	.74	11.21	<.001					
B) Child Gender	-.18	-2.86	<.01					
C) Peer Group RA	.06	.96	.341					
RA (Self scale) Step 2				.52	48.75[c]	<.001	.05	<.01
A) Child PA (Self scale)	.62	9.60	<.001					
B) Child Gender	-.01	-.13	.897					
C) Peer Group RA	.24	3.87	<.001					

Note: RA = Relational aggression; PA = Physical aggression

a = degrees of freedom (3, 146); b = degrees of freedom (3, 148);

c = degrees of freedom (3, 138)