MOTHERS' SOCIAL COGNITIONS AND DISCIPLINE RESPONSES: DIFFERENCES BETWEEN PHYSICAL AND RELATIONAL AGGRESSION

By

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Abstract

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This research was designed to explore differences in mothers' social cognitions, affect, and proposed discipline responses to physical and relational aggression. The two main aims of the research were: (1) to examine whether maternal social cognitions (i.e. attributions of responsibility and stability, and descriptive norms) about, and their responses to, children's aggressive behavior vary as a function of aggression form; and (2) to investigate the associations between mothers' social cognitions and their emotional reactions and proposed discipline responses (i.e., level of power assertion). Ninety-nine mothers of 3rd-5th grade students read hypothetical vignettes depicting their child engaged in relational and physical aggression. Following each story, mothers responded to nine questions that assessed social cognitions, affect, and discipline responses. Overall, the results indicated that mothers hold a different set of cognitions about relational aggression as compared to physical aggression, and that these cognitions are reliably linked to their proposed responses to children. Specifically, in situations depicting relational aggression as compared to physical aggression, mothers viewed the behavior as more normative, and they attributed less responsibility to children for engaging in the

behavior. Mothers also reported that they would experience less negative affect and employ lower levels of power assertion in relational aggression situations. Implications of these findings for models of parental influence on child peer competence and for parent education are discussed.

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INTRODUCTION

Mother's Social Cognitions and Discipline Responses: Differences in Physical and Relational Aggression

Past research on the topic of aggression has focused primarily on physically aggressive behaviors commonly displayed in boys. However, Crick and Grotpeter (1995) have defined a form of aggression called relational aggression. Relationally aggressive behaviors are those that inflict harm on a target by damaging a relationship through social exclusion, threats to end friendships, or spreading rumors (Crick & Grotpeter, 1995). Research suggests that relational aggression, and similar categories of behavior such as indirect and social aggression (Cairns et al., 1988; Galen & Underwood, 1997), emerges in early childhood, increases in frequency across childhood and early adolescence, and continues into adulthood (Bjorkqvist, Osterman, Lagerspetz 1994; Burr et al., 2005; Crick, Casas, Mosher, 1997). Intraindividual differences in relational aggression have been shown to be moderately stable across early and middle childhood and comparable to the stability of physical aggression. Importantly, a growing body of literature documents the adverse social and psychological outcomes of relational aggression for all age groups studied (Crick, Werner et al., 1999). In light of this information, researchers have begun to explore familial factors in early childhood in order to better elucidate the processes involved in the development and maintenance of relational aggression (Werner, Senich, & Przepyszny, in press; Hart et al., 1998).

One line of research has explored parental beliefs and emotional reactions about different types of social behavior in childhood. In one study, social exclusion (a relationally aggressive behavior) was seen by parents as being less hurtful and more normative than physically aggressive behaviors, which were seen as more cruel and

unacceptable than social exclusions (Stockdale, Haungaduambo, Duys, Larson, & Sarvela, 2002). In addition, parents have reported stronger emotional reactions in response to hypothetical situations in which their child engaged in physical aggression as compared to social withdrawal (Mills & Rubin, 1990). These studies provide preliminary support for the hypothesis that parental cognitions vary as a function of the form of aggression displayed by children. The current study further investigates differences in parental social cognitions about children's relational and physical aggression. It is hypothesized that relational aggression will arouse less negative attributions about children and will be seen as more normative by parents compared to their responses to physical aggression.

The second aim of the study is to explore associations between the attributions parents make about their children's aggression and their proposed responses to the behavior. It is hypothesized that parental social cognitions will be directly associated with parents' reports of negative affect and proposed level of power assertion.

After providing a general theoretical framework to better understand reasons for research investigating parental influences on children's social competence, specific domains of parental cognitions and behaviors will be discussed. This literature will include research on parents' attributions, descriptive norms, and emotional responses to aggression.

Models of Parental Socialization on Children's Social Competence

Social Learning Theory

Social competence has been defined as qualities that children develop for understanding their structured social environment and coping in unstructured

environments (Peterson & Hann, 1999). Research suggests that the development of social competence is important for children's social development, as children with low levels of social competence are less accepted by peers and spend less time in peer interaction than children with high levels of social competence (Patterson, DeBaryshe, & Ramsey, 1989). Acceptance by peers is extremely important, as low acceptance is related to loneliness, low self-esteem, and other maladaptive behaviors (e.g., Parker & Asher, 1987). Therefore, providing children with skills to enhance social competence is likely a goal that parents share. According to many theories of social development, parents play a fundamental role in children's acquisition of social competence by serving as models and providing guidance for proper behavior in social situations.

Parents serve as active socialization agents for children and function as models of accepted or unacceptable social norms and behavior (Clarke- Stewart, 1988). Two components of the social learning perspective—observational learning and parental authority—help to explain the ways in which parents may influence or "mold" their children even without intentional efforts to do so (Bandura, 1976). According to this perspective, parents serve as models, and children actively view the behavior of others including their models, construct mental reconstructions of the actions of their models, and in turn develop similar social skills mimicking their model's behavior. A parent is a logical choice of a model for a child, because the family, especially when the child is young, serves as the child's central social environment. It is within this social environment that parental beliefs and attitudes can be transmitted to children through their interactions with their children. The transmission of parents' beliefs, attitudes, and

behaviors to their children may occur even without parental intention to do so (Peterson & Hann, 1999).

Children interact with a variety of people; however, children do not imitate every person that they come into contact with. The principle of authority helps to explain why some individuals serve as more powerful models than others. Authority is a principle that may add to the effectiveness of a parent as a model, teaching new beliefs, attitudes, and behavior. Parents represent an authority figure to their children. Parental authority has been defined as a child's assessment that parents have the ability to influence even though they may not choose to use this power (Peterson & Hann, 1999). Authority in this case is not seen as a dimension of power, rather authority is conceptualized through children's perceptions, a subjective assessment. Research suggests that social competence is fostered in children who see their parents as having authority (Henry, Wilson, & Peterson, 1989). This ascribed power of parents plays a vital role in the relationship between parent and child and may be a source of parental influence. Acting both as a model and as an authority figure, parents play a central role in children's developing social and behavioral competence.

Direct and Indirect Influences

Building on this theoretical orientation of Social Learning Theory, Ladd and Pettit (2002) have conceptualized that parents socialize their children in two meaningful ways: indirectly and directly. Both of these forms of influence play a powerful role in children's development of social competence. Social competence, according to Ladd and Pettit (2002) refers to children's abilities to form, maintain, and sustain positive relationships and avoid negative social roles (i.e. victimization or rejection). Direct modes of influence

highlight the socialization process that parents actively undertake to foster children's social competence as well as how parents manage their children and their environments. Direct parental influences have been characterized in terms of the various roles that parents take on such as designer, mediator, supervisor, and consultant (Ladd & Pettit, 2002). For example, parents "design" children's social environment through decisions of neighborhoods and schools that their children will attend.

Parents also play an active role in discussing peer interactions with their children, thus serving as a "consultant" according to Ladd and Pettit (2002). Mize and Ladd (1990) have termed the parental practice where information, guidance, and feedback are given to the child via the parent as parental social coaching. Parental social coaching has been shown to be a predictive factor in the development of children's social competence (Mize & Pettit, 1997). In their study, Mize and Pettit (1997) showed mothers and children vignettes, some of which included aggressive content, and asked the mothers to coach their children as to the proper way to handle these hypothetical situations. Children benefited when mothers pointed out the positive aspects in social relationships and provided guidance and feedback for effective ways to deal with problematic peer situations. Mothers who were found to use these more positive coaching strategies had children with greater social skills, lower levels of aggressive behavior, and higher acceptance by peers. This study served to show the importance of parenting behavior as well as one way in which parents have a direct impact on their children.

In contrast to the direct ways that parents affect their children's development, parents also influence their children through indirect methods. Indirect modes of influence are learned behavioral and relationship patterns, which later are transferred by

the child from the family to peer relationships. Indirect influences include broad parenting styles, attachment security, and parental discipline (Ladd & Pettit, 2002). For example, parental disciplinary strategies have been shown to predict children's social competence. Research suggests an association between parents who use high power assertive strategies such as verbal commands and physical actions and children's use of aggression and hostility with their friends. However, high levels of parental reasoning or inductive disciplinary styles were associated with increased prosocial behavior in children (Becker, 1964). Important factors that affect parents' indirect modes of influence are parents' perceptions, attitudes, and beliefs. These parental cognitions are seen as especially worthwhile to study as they may affect the ways in which children are socialized and may change, for example with the context of an aggressive act (i.e. relational verses physical aggression.)

It is important to note that direct and indirect parenting strategies often are interrelated. Mize and Pettit (1997) demonstrated that parenting styles and parenting practices, such as encouraging prosocial behavior, communicating about social interactions, and being responsive, had an impact on children's social competence. Mothers who showed warmth, reciprocity, and low coercion in interactions with their child, and who directly engaged in activities that enhanced social skills, had children who were more likely to engage in prosocial behavior rather than aggressive behavior with peers. This finding may give support to the interconnectedness of indirect and direct influences. A parent's indirect strategies may play a role in their direct parenting strategies and vice versa.

Social Information Processing

Another theory that helps explain associations between cognitive and social behavioral processes is social information processing theory (Crick & Dodge, 1994; Huesmann, 1988). Although this theory has generally been applied to children, it can be useful in understanding adult behavior as well. Much of the research focusing on children's and adults' social information processing has origins in the reformulated model proposed by Crick and Dodge (1994). It is posited in this model that individuals come to situations with a database of past experiences. This database, in many cases, drives the interpretation of a social setting, serving as a template for behavioral responses. Behavioral responses are executed following a sequence of processing steps including interpretation of cues, clarification of goals, response access or construction, response decisions, and behavioral enactment (Crick & Dodge, 1994).

The study of social information processing as it relates to aggressive behavior is well documented. Aggressive children have unique social information processing patterns, including the tendency to attribute hostile intent to others in ambiguous situations, to access aggressive responses from memory, and to anticipate positive rewards for enacting aggressive behavior (see Crick & Dodge, 1994 for a review). Longitudinal research has suggested that children's social information processing patterns precede changes in aggression levels (Burks, Laird, Dodge, Pettit, & Bates, 1999). In addition, prevention research has successfully reduced levels of aggression by targeting steps in social information processing (Conduct Problems Research Group, 1999).

Recent studies have examined the role that parents may play in children's social information processing. Parents who commonly use harsh parenting are more likely to

have children who pursue hostile goals, increasing the prevalence of hostile attributions and choosing aggressive solutions (Heidgerken, Hughes, Cavell, & Wilson, 2004). Thus, parents may play an important role in their development of children's maladaptive social information processing schemes. In a related body of literature, parents' social information processing patterns have been examined in relation to children's social cognitions and behavior. This research has focused primarily on parental attributions, specifically parental hostile attribution biases. Parental attributions will be examined in closer detail in a following section.

The theoretical basis of the current study includes components of social learning theory, the direct and indirect parental influences framework, and social information processing theory. The progression of each theory demonstrates the proximity to the central research question. Social learning theory provides a basic understanding of why parents serve as models and are able to influence their children. The framework of direct and indirect influences adds to social learning theory by narrowing the focus to the direct and indirect method that parents use to influence children. For example, this framework provides connections between parental discipline and children's aggression and relationship with peers, as research finds an association between parents who use high power assertive strategies and increases in children's aggression and hostility with friends (Ladd & Pettit, 2002). Finally, the social information processing model which has been largely used in the literature to understand roots of children's aggressive behavior, provides a useful framework within which to understand how parents' attributions about children's behavior might impact their behavioral responses to the behavior.

Relational and Physical Aggression

The study of relational aggression has helped researchers to better understand alternative forms of aggression that are damaging to children and adolescents. A large body of literature on relational aggression has focused on preadolescents and adolescents because relational aggression appears to peak during the junior high school years (Cairns, Cairns, Neckerman, Ferguson & Gariepy, 1989**)**. Past research has shown that physical aggression increases at times of transition, for example the transition from primary school to secondary school (Pellegrini & Bartini, 2000; Sutton, Smith, & Sweetenham, 1999), and relational aggression may also be used at this time of transition (Cairns et al., 1989; Paquette & Underwood, 1999; Crick, 1995).

Research also indicates that girls engage in and are the target of relational aggression more often than boys (Crick &Grotpeter, 1995, Morales & Cullerton-Sen, 2000). Furthermore, girls report being hurt more by social forms of aggression (e.g., relational aggression) than boys (Paquette & Underwood, 1999, Crick, 1995). Girls find relationally aggressive behaviors as more damaging than boys possibly because females put more of an emphasis on close, intimate relationships (Galen & Underwood, 1997; Stanley & Arora, 1998).

These findings give a descriptive picture of relational aggression and the impact that such behaviors may have on youth. Research indicates that involvement in relational aggression, as either a victim or perpetrator, is associated with significant social and psychological adjustment difficulties (e.g., Crick, 1997; Grotpeter & Crick, 1996; Prinstein, Boergers, & Vernberg, 2001; Tomada & Schneider, 1997; Werner & Crick, 1999). The destructive influence of relational aggression gives purpose to understanding

the etiology of such behaviors. Research should be concerned with discovering the origins of relational aggression in an attempt to counteract these negative outcomes.

Family Influences on Relational and Physical Aggression

In light of the significant adverse consequences associated with children's engagement in relational aggression, researchers have begun to explore the origins of this behavior. Although research on this topic is limited, the large body of research on the development of physical aggression has demonstrated the important role of familial influences.

Research suggests that aggressive children tend to come from aggressive families. In these families, force is considered a necessary means to an end and children are not taught that aggression in unacceptable (Perry, Perry, & Boldizar, 1990). Gerald Patterson and colleagues at the Oregon Social Learning Center have devoted their careers to studying anti-social behavior and aggression in boys. They have identified a coercive family process that is present in many families with aggressive children (Patterson, 1997). A coercive family process is instated through continued negative interactions between parent and child. This process originates in early parent-child interactions, and escalates as the child grows (Reid, Patterson, Snyder, 2002). Patterson (1982) has seen a trend in the parenting behaviors present in coercive families, as parents lack effective discipline strategies (i.e. consistency, firmness). Other researches have noted that families characterized by aggression have a shift of power in which the child is in control. Mothers in these families often comply with the wishes of their children, allowing their children to "get away" with aggressive behavior (Dumas, LaFreniere, Serketich, 1995).

These findings suggest that poor parenting behaviors, such as ineffective discipline and the loss of control, may reinforce negative, aggressive behaviors in a child.

As stated previously, much of the research on the origins of aggression has focused primarily on physical and verbal forms of aggression, neglecting the study of relational aggression. As the study of relational aggression is relatively new, it has not been explored in the same depth as physical forms of aggression. Nevertheless, the family has been conceptualized as an important contributor to relational aggression.

Available research suggests a relationship between parenting styles and relational aggression. For instance, in one study, mothers' negative interaction styles and general discipline strategies were related to children's use of relational and overt forms of aggression (Campbell, 1999). In a study with Russian families, lower levels of paternal responsiveness and higher levels of maternal coercion were associated with relational aggression in preschoolers (Hart, Nelson, Robinson, Olsen, McNeilly-Choque, 1998). The elements of coercion and control have been investigated in other studies of relational aggression. Nelson and Crick (2002) reported that maternal coercive control predicted the use of relational aggression in 3rd grade boys and girls. Paternal psychological control (e.g. love withdrawal, erratic emotional behavior), on the other hand, was significantly related to relational aggression in daughters only. These findings are consistent with the conceptualized nature of relational aggression, as it is based on relationships and often on the manipulation and fear of losing such relationships. These studies give preliminary support for the relationship between parenting behaviors or styles and children's use of relational forms of aggression.

A large body of research has demonstrated significant associations between broad parenting styles and general strategies and children's physical, and to a lesser degree, relational aggression, thus supporting the notion of indirect influences on children's social competence. Another important question, however, concerns the factors that impact parents' use of parenting styles and discipline strategies. One line of research investigates the role of parental cognitions (i.e., beliefs, attitudes, attributions) for parenting behaviors. In this next section I will discuss the state of the literature concerning the social cognitive variables of attributions, emotional responses, normative beliefs, and descriptive norms as they apply to the study of aggression and parental responses.

Social Cognitive Influences on Parenting

Parental Attributions

Research on parents' attributions about children's aggressive behavior provides a framework for understanding the ways in which parents' beliefs and other social cognitions might drive parental behavior. The term *attribution* refers to the interpretations or inferences individuals make in social situations (Bugental & Happaney, 2002; Dix & Reinhold, 1991). Attributions provide shortcuts in processing social situations, as they change the way in which situations or behaviors are noticed, encoded, recalled, understood, and processed (Dix, 1993). Attributions often operate outside of individuals' awareness; nevertheless they may guide the way in which we interpret and behaviorally and emotionally respond to social situations (Bugental & Happaney, 2002). Attributions have been studied by researchers representing diverse disciplines including social,

clinical, and developmental psychology, and this research has generated a wealth of information about individual differences in emotion and behavior.

One type of attribution has been studied at length is the *causal attribution*, or the inferences individuals make concerning the perceived causes of an event (Smith, Haynes, Lazarus & Pope, 1993). Several dimensions have been identified as important for distinguishing causal attributions, and they include the causal *locus* – is the cause internal to the individual (i.e., dispositional) or external to the individual (i.e., situational); stability – is the cause temporary or constant; and controllability – is the behavior under the voluntary control of the individual. Studies conducted over the last two decades have demonstrated that parents' causal attributions are associated with their affective and behavioral responses to children's misbehavior. Specifically, when parents infer that children's disobedience is intentional and caused by negative dispositions within the child, they report more negative emotion and a greater likelihood to use power assertive responses (Dix & Lochman, 1989; Dix, Ruble, Gusec, & Nixon, 1986; Dix, Ruble & Zambarano; as cited in Dix & Reinhold, 1991; MacBrayer, Milich, & Hundley, 2003). Importantly, an experimental study that manipulated mothers' causal attributions demonstrated that negative attributions precede anger and overreactive discipline (Slep & O'Leary, 1998).

The abovementioned research focuses solely on parental attributions; however, a body of research also exists on children's attributions. In some cases, children's attributions provide a means for learning more about attributions, which may be applied to adult or parent attributions. Researchers have identified a *hostile attribution bias* in which hostile motives are assigned to others' behavior in ambiguous situations.

Aggressive children are more likely than nonaggressive children to hold this hostile attribution bias, which in turn has been shown to predict aggressive responding (see Crick & Dodge, 1994 for a review). Interestingly, recent studies suggest that whereas both physically aggressive and relationally aggressive children tend to attribute hostile intent to peers, they do so in different types of social conflicts. Conflicts involving ambiguous threats to peer acceptance and friendship appear to pose information processing difficulties for relationally aggressive children, whereas conflicts involving instrumental threats elicit hostile attributions for physically aggressive children (Crick, 1995; Crick, Grotpeter & Bigbee, 2002).

The connection between parent's and children's attributions has been of concern in the attribution research. A recent study found that mothers' and children's hostile attributions in ambiguous situations were significantly related, providing a link between parent and child attributions (Mac Brayer, Milich, & Hundley, 2003). Additional research has supported the link between mothers' and sons' hostile attributions. Attributions that mothers and sons made about each other were positively related to outward aggressive and coercive behavior between the dyad. In instances where mothers attributed hostile attributions to their sons, they were more likely to engage in negative interactions, and sons were more likely to reciprocate this negative interaction than if there was no hostile intent attributed (MacKinnon-Lewis, Lamb, Arbuckle, Baradaran, Volling, 1992). This body of research establishes a link between parent and child attributions and provides some support for the hypothesis that children learn negative attributions through their parents. Costanzo and Dix (1983) claimed that children form attributions by watching the

behavior of their parents and assessing the beliefs and values that underlie their parents' behavior. In this manner, parents may transmit a hostile attribution bias to their children.

In contrast to the negatively tinged hostile attribution bias, parents may hold a "positivity bias," in that parents attribute parenting successes to factors in the child and child socialization failures to failures in the parent (e.g. parental incompetence) (Dix & Lochman, 1989). This positivity bias may affect the way that parents react to social difficulties that their children may encounter. If parents attribute their children's problems to ineffective parenting, they may be less likely to assign blame to the child and use less severe punishment. Parents may believe that with more parental intervention and continued development, their child will become more socially competent. Therefore, parental attributions in social interactions with children may have implications for children's development and socialization.

Although the majority of research has focused on causal attributions, another important type of attribution – *attributions of responsibility* – has been investigated in relation to parenting. Attributions of responsibility are often conceptualized along with causal attributions. If a parent views the cause of a child's behavior as purposeful, they are likely to find their child responsible for the behavior (Dix & Reinhold, 1991). Likewise, parents are less likely to attribute responsibility in a case where they view a child's behavior as unintended. The view that behaviors are inadvertent demonstrates that a child may not be responsible for their actions possibly because they lacked the necessary social skills in a given situation (Dix & Reinhold, 1991). Parental attributions of responsibility have been shown to negatively impact parental affect and increase

ratings of disapproval (Dix & Reinhold, 1991). Thus, parental attributions have implications for future parental behavior.

Dix and Reinhold (1991) have proposed a model for understanding the influence of parents' attributions and emotional responses on parenting behavior. Both causal attributions and attributions of responsibility are seen as salient predictors of subsequent parental responses. In particular, causal attributions and attributions of responsibility are hypothesized to influence affect and disapproval. If a parent interprets an aggressive act as something that the child was responsible for (attributions of responsibility) and was due to the disposition of the child (causal attributions), then that parent is more likely to display negative affect and disapproval in response to the behavior. In contrast, if a parent interprets an aggressive act as something that a child was not responsible for and was due to circumstances inherent in the situation, then that parent is less likely to show negative affect or disapproval. Therefore, this model proposed by Dix and Reinhold (1991) highlight the processes that influence parental emotional and behavioral reactions. By learning more about these intervening variables, a better understanding of predictors of parental behavior may be reached.

In another line of research, contextual influences on parents' attributions have been investigated. Mills and Rubin (1990) explored whether mothers' causal attributions varied as a function of the type of social behavior enacted by children. They found that, compared to their attributions about socially withdrawn behavior, mothers attributed the cause of child aggression to transient states (e.g. a bad day) or age-related factors, especially in early childhood (Mills & Rubin, 1990). In addition, mothers were more likely to report affective reactions of concern in response to their child's aggression,

while fathers showed a mix of concern, anger, and disappointment in response to their child's aggressive behavior. When parents were asked what parenting strategies should be used to deal with their child's aggressive behavior, children's aggression aroused stronger negative reactions, more coercive parenting, and more use of power assertion among mothers (Mills & Rubin, 1990). Thus, this research demonstrated a link between parental affective responses and their proposed outward parenting behavior. This research also supports the idea that parent's attributions vary as a function of the form of child misbehavior, which is a central concern in the present research.

Normative Beliefs About Aggression

The field of sociology has greatly added to the conceptualization and understanding of normative beliefs. Two major distinctions between norms are injunctive and descriptive norms. *Descriptive norms* are beliefs about the prevalence or normative nature of a behavior. *Injunctive norms* have been defined as behaviors that are perceived as acceptable by other people. In the child aggression literature, the latter construct is referred to simply as *normative beliefs, and it is defined as* individual standards about the acceptability of a range of behaviors (Huesmann & Guerra, 1997). According to Huesmann and colleagues, normative beliefs are assumed to be part of an underlying belief system that drives our interpretation of various situations and, in turn, influences our reactions to events. Normative beliefs also serve to regulate and create a framework for our reactions to a variety of social stimuli such as acceptable social and moral behaviors (Guerra, Huesmann, & Hanish, 1994). A growing body of research with demonstrated that children who view aggression as acceptable engage in higher levels of

aggression, according to self-, peer-, and teacher-reports (Henry, Guerra, Huesmann, Tolan, VanAcker & Eron, 2000; Huesmann & Guerra, 1997; Crick & Dodge, 1994)

Research on injunctive norms, or normative beliefs, has increased our understanding of social-cognitive processes that contribute to childhood aggression. Less research has focused on *descriptive norms* as they relate to aggression – individuals' beliefs about the prevalence, or normative nature of behaviors (Henry, Guerra, Huesmann, Tolan, VanAcker, & Eron, 2000). Descriptive norms are theorized as distinct from normative beliefs, although descriptive norms and normative beliefs both are types of norms. Normative beliefs reflect value judgments of acceptability, and descriptive norms represent individuals' perceptions of prevalence. Presumably, individuals who perceive a particular behavior as highly prevalent, or normative, would be more likely to engage in the behavior. This hypothesis has been supported in research on substance use, which has shown that college students' reports of descriptive norms about alcohol consumption predict individual levels of consumption (Larimer, Turner, Mallett, & Geisner, 2004). The only study to assess children's descriptive norms about aggression did not find, however, significant associations between norms and peer-reports of aggression (Henry et al., 2000).

In the present study mothers' descriptive norms about relational aggression and physical aggression were assessed. Research to date has not concentrated on differences in parental descriptive norms about relational and physical aggression. It has been documented, though, that relational aggression is more prevalent than physical aggression (Werner & Hill, 2004). It was therefore hypothesized that mothers would view relational aggression as more normative than physical aggression. It was also expected that

mothers' descriptive norms to have an influence on the way that they viewed and interpreted situations involving their child engaged in aggression, which in turn, might alter their behavioral reactions to children.

Differences in Social Cognition Due to Aggression Form

Parental social cognitions have been shown to vary across children, within different contexts, and as a function of the specific social behavior depicted (Bugental & Happaney, 2002). A central question of the current studies asks if parents' social cognitions about children's aggressive behavior varies as a function of the form of aggression used by the child. Although few studies have directly addressed this issue, some evidence exists to support the notion that parents hold a different set of beliefs about relational and physical aggression. Parents have also demonstrated normative beliefs about relational aggression as being less hurtful and more normative, while physical aggression is seen as cruel, hurtful, and unacceptable (Risser, 2004; Stockdale, Haungaduambo, Duys, Larson, & Sarvela, 2002). In the current study, it was therefore hypothesized that parents' attributions and descriptive norms would, in fact, differ based on aggression form.

Initial research also suggests that mothers' emotional and behavioral reactions to relational aggression differ from their reactions to physical aggression (Werner, Senich, Przepyszny, in press). In this study, mothers of preschool aged children read hypothetical stories in which their child engaged in either relational or physical aggression. They were then asked to report how they would feel and what they would do in response to each situation. Mothers were more likely to respond that they would not intervene when their child engaged in relational versus physical aggression. In addition, mothers reported

lower levels of sadness and anger and were less upset in response to images of their child being relationally aggressive in comparison to physically aggressive. This implies that mothers may hold differing beliefs about forms of aggression (Werner, Senich & Przepyszny, 2005). This finding is supported by other research showing that mothers report less negative affective reactions in response to situations in which their child excluded another child (a demonstration of relational aggression) than when their child was physically aggressive in a peer interaction (Colwell, Mize, Pettit, Laird, 2002).

In the current study, some of these results were replicated with an older sample of children, as the first studied was conducted on mothers whose children were in early childhood. Specifically, parents' reports of negative affect and power assertion were examined in response to hypothetical displays of relational and physical aggression. This research extends prior research by examining the relationship between mothers' social cognition and behavioral responses in order to find social cognitive variables that predict subsequent behavioral reactions.

Summary

The aforementioned research has demonstrated links between parental attributions, descriptive norms, and emotional responses and parenting behaviors. In the current study, the research in this area was extended by exploring parental social cognitions, emotion, and behavioral responses to relational and physical aggression. This research is needed to further our understanding of the family factors that might promote and maintain childhood relational aggression during middle childhood. Theoretical underpinnings of social learning theory support this investigation (Bandura, 1976). According to this theory, parents are seen as active models for children and thus are

viewed as socializing agents. Direct and indirect influences on parenting also provide a necessary framework, noting that parents influence children through a variety of avenues (Ladd & Pettit, 2002). Finally, social information processing establishes a connection between parental social cognitions and parental behavior (Crick & Dodge, 1994). This research highlights the importance of understanding social cognitions and norms to adequately understand behavior because parental social cognitions may manifest themselves in parental behavior.

Research Questions and Hypotheses

This research was designed to explore differences in mothers' attributions, descriptive norms, affect, and proposed discipline responses in response to physical and relational aggression. There were two main aims of the research to: (1) examine whether maternal social cognitions (i.e. attributions of responsibility and stability, and descriptive norms) about, and their responses to, children's aggressive behavior vary as a function of aggression form; and to (2) investigate the associations between mothers' social cognitions and their emotional reactions and proposed discipline responses (i.e., level of power assertion).

With respect to the first question, *Do mothers' social-cognitive, emotional, and behavioral responses to relational aggression differ from physical aggression?*, it was hypothesized that mothers would view relational aggression as more normative than physical aggression (descriptive norms). Although, as previously mentioned, this hypothesis has not been investigated in past research, research has suggested that relational aggression is more prevalent than physical aggression (Werner & Hill, 2004), which directly relates to measures of descriptive norms.

In addition, it was expected that mothers would assign less responsibility to their children for engaging in relational aggression as compared to physical aggression. Research suggests that children's behavior that is perceived by the parent to be inadvertent or uncontrollable by the child is less likely to be punished (Dix & Reinhold, 1991). Whereas physical aggression appears to be more overt and purposeful, relational aggression often goes unnoticed. No specific hypotheses pertaining to mothers' attributions of stability were proposed, therefore this analysis is considered exploratory. Dix and Reinhold's (1991) model does not contain information on attributions of stability; however, based on other types of attributions, it could be assumed that this type of attribution would also predict subsequent parental behavior. As this is a new variable, though, it is exploratory in nature.

Drawing on prior work (Werner, Senich, & Przepyszny, in press), it was hypothesized that mothers would report less negative emotional reactions, and lower levels of power assertion, in response to relational aggression. This hypothesis replicates past research which suggested that mothers do have less negative emotional reactions and behavioral reactions in response to relational as compared to physical aggression (Werner et al., in press.)

With respect to the second research question, *How are mothers' social-cognitive, emotional, and behavioral responses to aggression associated?*, it was hypothesized that mothers' proposed discipline responses would be less severe if she viewed the relationally or physically aggressive behavior as normative rather than non-normative. In addition, if mothers attributed less responsibility to their child engaging in aggression, they would report lower levels of power assertion. This piece directly tested Dix and

Reinhold's (1991) model, in that attributions of responsibility were hypothesized to influence parental reactions of affect and disapproval. For example if a mother attributed that their child should have known the behavior was wrong (a responsibility attribution), more severe discipline responses would be proposed than if the behavior is something that the child would not know was wrong to do.

Method

Participants

Participants in this study were mothers of 3rd, 4th, and 5th graders who were taking part in a larger study of school climate. A total of 434 3rd, 4th, and 5th grade students in three elementary schools in a rural Washington community completed an initial, school-based survey. Following this assessment, parents of the participants were invited to take part in a longitudinal family-based study. Ninety-nine of the students (26 3rd grade, 30 4th grade, 32 5th grade) and their parents (19.8% of the school sample) completed a family interview at T1. A series of comparative analyses revealed no differences between the large sample and subsample on teachers' ratings of relational aggression, overt aggression, peer acceptance, prosocial behavior, or family involvement. Using the Hollingshead system of categorizing social-economic status, 58.7% of participants fell in the top 2 of 5 categories, with the majority of parents working as manual laborers or on public assistance. More specifically, 28% of the population had a high school diploma or less, 8.4% earned Associate's degrees, 37.9% had Bachelor's degrees, and 25.3% had advanced degrees. 20% reported that they received public assistance, and 69.5% were married. The ethnic composition of the sample was 82.7% White, 10.2% Asian, and 4.1%

indicated membership in other ethnic groups. A total of 95 mothers with complete data were included in the present study.

Consent and Procedure

A consent form was sent home to students in three elementary schools in 3rd through 5th grades for the school climate study in fall 2003. Parents were asked in a portion of the consent form if they would be willing to be contacted regarding participation in future home interviews. A second consent form was later sent to parents after the original school-based survey data was analyzed. This form was attached to a letter describing the purpose of the family-based study to be conducted and a letter explaining the results of the school climate survey. Within the letter, parents were informed that they would be compensated $50 for their participation in the home interview, which would last approximately one and one half to two hours. Participation in the family interview was voluntary. Of the possible 501 students, approximately 25% or 129 families agreed to be contacted for further interviews. The Institutional Review Board of Washington State University approved all procedures.

Participants stating interest were contacted via phone to schedule an interview time at their own convenience. Most interviews took place at the family's home; however, some families preferred to be interviewed at the university. In two parent homes, both parents were asked to complete the entire interview, although both parents' input was not required for participation. Pairs of trained research assistants conducted the family interviews. During the actual interview, a research assistant explained the procedure to both the parents and children. Participants were educated on the purpose of the study, confidentiality, and implications of the previously completed research. To

protect the privacy of both parents and children, one research assistant interviewed parent(s) and one interviewed the child in separate areas.

Measures

The Parental Beliefs About Aggression Measure (PBAM; Werner & Senich, 2006) was used to assess parents' social cognitions (attributions and descriptive norms), emotional reactions, and their behavioral responses to hypothetical displays of aggression. This measure was adapted from Dix and Zambarano's Discipline and Appraisal Inventory (Dix & Zambarano, 2001). The measure consisted of 8 vignettes depicting situations involving a target child behaving aggressively towards a peer. The stories depict situations involving relational (4 stories), physical (2 stories), and verbal aggression (2 stories). For example, the following story describes the target child as an actor using relational aggression:

> Imagine that you overhear your child on the phone one afternoon with a friend. You child is telling an embarrassing story about a classmate he/she sometimes hangs around with. You know about the story, and you also know that your child promised not to tell anyone about it. When you confront your child about the promise, he/she says that the classmate has been spreading rumors about them in school.

Mothers were asked to read the vignettes and to imagine that the events in the story recently happened. Following each story, mothers responded to nine questions that assessed cognitions and discipline responses. Mothers responded to each item using a 7-point Likert scale. Scores were computed for each of the constructs described below by summing across the items making up each scale. In addition to creating overall scales for the social cognitive, emotional, and behavioral constructs, subscales were also computed for relational aggression and physical aggression separately.

Attributions. Three questions from the Dix and Zambarano's Discipline and Appraisal Inventory (Dix & Zambarano, 2001) were included to assess maternal *attributions of responsibility*. These items include: *knowledge* (e.g., "Does your child know that he/she is acting badly or improperly?"; alpha = .74), *capacity* (e.g., "Would it be reasonable to expect your child to have know that this was wrong?"), *and blame* (e.g., "How much blame does your child deserve for acting like this?"). One item was added to measure mothers' *attributions of stability* (e.g., "How likely is it that your child would behave in a similar way in this kind of situation in the future?"). Alphas for these scales for relational and physical aggression respectively were: knowledge= .64, .62; capacity= .62, .61; blame= .60, .35; stability= .71, .62. Due to the low alpha for blame in physical aggression vignettes, this variable was dropped from analyses.

Descriptive norms. Mothers were also asked to respond to the following question designed to assess their descriptive norms for aggression, ("In general, how typical or common is this kind of behavior among children your child's age?"). Alphas for these subscales for relational and physical aggression, respectively, were: .83, .62.

Emotional and behavioral responses. The three discipline responses questions were included from the Dix and Zambarano's Discipline and Appraisal Inventory (Dix & Zambarano, 2001). They include: *affect* (e.g., "How upset with your child would you be for doing this?"), *disapproval* (e.g., "How much disapproval would you express toward your child for doing this?"), *sternness* (e.g., "How much sternness would be present in your response?"). The disapproval and sternness scales were combined into a single *power assertion* scale. Alphas for these subscales for relational and physical aggression,

respectively, were: affect = .62, .51; disapproval= .69, .60; sternness= .74, .74; power assertion= .85, 84.

Results

Analysis of Aggression Form Effects on Parental Responses

Attributions. The first purpose of this research was to investigate if mothers' responses to physical aggression differed from their responses to relational aggression. Toward this aim, repeated measures ANOVAs were conducted in which child grade (3rd, 4th, and 5th) and gender were the between subjects independent variables and aggression form (2 levels: RA, PA) was the within subjects independent variable. Analyses were conducted separately for each of the attribution, emotional, and behavioral subscales. It should be noted that no main effects of child grade or gender were found for any variables nor were any significant interactions found of these variables with aggression form. Means, standard deviations, and Cronbach's alphas for all variables can be found in Table 1.

A significant main effect of aggression form was found for mothers' reports of descriptive norms, F (1, 81) = 49.70, $p < .001$. Examination of cell means demonstrated that mothers described relational aggression as more common among children their child's age (M = 5, SD = 1.23) as compared to physical aggression (M = 3.92, SD = 1.47).

A significant main effect of aggression form was found was also found for mothers' reports of attributions of knowledge, F (1, 81) = 169.83, $p < .001$ and capacity, F (1, 81) = 185.96, $p < .001$. Relative to their attributions about physical aggression, mothers reported that children had less knowledge that relational aggression was wrong (M = 5.26, SD = .99), and a lesser capacity (M = 5.27, SD = .98) to know their behavior

was wrong. A significant effect of aggression form was also found for mothers' reports of stability, F (1, 81) = 34.20, $p < .001$, indicating that mothers believed their children were more likely to engage in relational aggression (M = 3.06, SD = 1.11) in the future compared to physical aggression (M = 2.47, SD = 1.21).

Emotional and behavioral responses. A significant main effect of aggression form was found for mothers' reports of affect in response to the aggression scenarios, F (1, 81) = 129.03, $p < .001$. Mothers indicated they would feel less upset in response to their child engaging in relational aggression (M = 4.75, SD = .95) as compared to physical aggression (M = 6.16, SD = .86). Analyses of mothers' behavioral responses revealed a significant main effect of aggression form for the composite score of power assertion, F (1, 81) = 127.37, $p < .001$. Mothers' behavioral responses were less severe in response to their child's relational aggression (M = 4.84, SD = 1.01) as compared to physical aggression (M = 6.01, SD = 1.0).

Relations Among Attributions, Emotions and Behavioral Responses

The second purpose of this research was to examine the correlations among attributions and mothers' emotional and behavioral responses to relational and physical aggression. Toward this aim, two sets of analyses were conducted: simple correlations among the variables, and a series of multiple regression analyses predicting mothers' behavioral responses from their attributions and emotional responses to aggression. Analyses were conducted separately for relational and physical aggression.

Correlations: Physical aggression vignettes. As can be seen in Table 2, mothers who reported that physical aggression was common (descriptive norms) also viewed their children's behavior as more stable, and they expressed less disapproval for children's

engagement in physical aggression. Contrary to predictions, reports of stability were not significantly correlated with any other variable. Consistent with Dix and Reinhold's model (1991), mothers' attributions of knowledge and capacity were positively associated with levels of reported upset and power assertion. Mothers who reported being upset about their child's physically aggressive behavior reported higher levels of the use power assertion in their behavioral responses.

Correlations: Relational aggression vignettes. Mothers' reports of descriptive norms for relational aggression were positively associated only with the measure of stability, and stability scores were not significantly correlated with other variables. Mothers' attributions of knowledge, capacity and blame were highly intercorrelated such that mothers who believed their child had more knowledge of their wrongdoing reported higher levels of child capacity to know their behavior was wrong, and they also assigned more blame to children for their behavior. In addition, knowledge, capacity, and blame attributions were associated with reported levels of upset and power assertion in ways that are consistent with Dix and Reinhold's (1991) model. These correlations can be found in Table 3.

Regression analyses. To further understand the relationship among attributions and mothers' emotional and behavioral responses, a series of linear regression analyses were computed separately for relational and physical aggression. Specifically, we tested a mediational model based on Dix and Reinhold's (1991) model which hypothesizes that attributions play a salient role in parental affective and behavioral responses of disapproval. Using procedures outlined by Baron and Kenny (1986), we computed four regression models. In the first model, attribution variables were entered as a step to test

their relationship to the dependent variable - mothers' reports of power assertion. Due to high intercorrelation between the variables of knowledge and capacity, these variables were combined to form a composite score. In the second model, attribution variables were regressed on the proposed mediator - mothers' reports of upset. In the third model, the mediator was regressed on to the dependent variable, and in the fourth and final model, attribution variables and the mediator were regressed on to the dependent variable. Toward the aim of parsimony, only those attribution variables found to be significantly associated with maternal power assertion in the simple correlational analyses described previously were included as predictors in the regression models.

Physical aggression vignettes. In this set of analyses, the attribution variable of knowledge/capacity was included as a predictor of power assertion. The overall regression model was significant, $F(1, 94) = 20.37$, $p < .001$. The second model was also significant, $F(1, 94) = 158.75$, $p < .001$, with mothers' reports of upset significantly predicting power assertion, ß = .79, $p < .001$. In the third model, mothers' attributions of knowledge/capacity significantly predicted reports of upset, $F(1,94) = 36.52$, $p<.001$. The fourth and final regression model was significant, $F(2,94) = 78.82$, $p < .001$. After accounting for the relation of upset to mothers' power assertion, attributions of knowledge/capacity became a nonsignificant predictor of power assertion, $F\Delta = .002$, p = .97. Thus, mothers' level of negative affect completely mediated the relationship between knowledge/capacity attributions and power assertive responses to children's physically aggressive behavior.

Relational aggression vignettes. In this set of analyses, the attribution variables of blame and knowledge/capacity were included as predictors. The overall regression model

was significant, $F(2,94) = 3.6$, $p<.05$ and the attribution variables as a set significantly predicted mothers' reports of power assertion. Examination of beta weights showed that only mothers' attributions of *blame* significantly predicted levels of power assertion (ß = .38, $p<.01$). In the second model, upset was a significant predictor of mothers' reports of power assertion, β= .83, $p<.001$, $F(1, 94) = 203.99$, $p<.001$. In the third model, attribution variables significantly predicted mothers' reports of upset, $F(2,94) = 44.51$, $p< .001$. Examination of beta weights showed that mothers' ratings of blame was a significant unique predictor of upset, β= .65, $p<.001$. The fourth and final regression model was significant, $F(4,94)= 22.28$, $p<.001$. Examination of beta weights indicated that attributions of blame remained a significant unique predictor of power assertion, ß = .19, $p<.05$, although the strength of the relation was reduced once reports of upset were considered. Thus, mothers' level of negative affect partially mediated the relationship between blame attributions and power assertive responses.

Discussion

The purpose of the current research was to examine differences in mothers' social-cognitive, emotional, and behavioral responses to relational and physical aggression, as well as to understand how the process linking parents' social cognition to their emotional and behavioral responses varies as a function of aggression form. Past research has found differences in mothers' proposed discipline responses in reaction to hypothetical displays of preschoolers' physical and relational aggression, which may reflect differences in adults' underlying cognitive processes (Werner, Senich, Przepyszny, in press). Therefore, the current research was designed to extend this line of research by exploring differences in mothers' cognitions about relationally and physically

aggressive behavior among school-aged children. The results provide the first direct evidence that mothers hold a different set of beliefs about relational aggression as compared to physical aggression, and that these cognitions are reliably linked to their proposed responses to children.

Maternal Cognitions About Relational and Physical Aggression

Our first set of analyses was designed to examine mean level differences in mothers' cognitions and their emotional and behavioral responses as a function of aggression form. Significant effects of aggression form were found for all variables studied. Specifically, and as predicted, mothers reported that relational aggression was more common than physical aggression (descriptive norms). This finding is consistent with past research showing that, overall, relational aggression is more prevalent than physical aggression (Werner & Hill, 2004). Thus, mothers' perceptions reflect a reality.

Clearly mothers see that relational aggression is more common; however, this finding has implications for child development, as research on relational aggression highlights the negative outcomes associated with this form of aggression (Prinstein, Boergers, & Vernberg, 2001; Crick, 1996). Relational aggression has been linked with a variety of detrimental outcomes such as loneliness, depression, social isolation, and anxiety (Prinstein, Boergers, & Vernberg, 2001; Crick, 1996). It is possible that by viewing relational aggression as common, mothers are not being sensitive to the hurtful nature of this form of aggression and thus may be allowing this type of behavior. In addition, if mothers view relational aggression as more common, this belief may predict subsequent attributions, and emotional and behavioral responses. We explored these connections in the present study.

Mothers' attributions also differed by aggression form. Mothers rated children as having less knowledge of wrongdoing and a lesser capacity to know their behavior was inappropriate when engaged in relational aggression as compared with physical aggression. These results support the hypothesis that mothers would attribute less responsibility to children for relationally aggressive behavior. Interestingly, mothers also reported that children's relationally aggressive behavior was more *stable* than physically aggressive behavior. These findings taken together bring up an interesting relationship: mothers believe their children have less knowledge of their wrongdoing when engaging in relational verses physical aggression, yet they also view these behaviors as very likely to continue in the future (stability). Together, these cognitions may result in mothers being less likely to intervene in children's relationally aggressive conflicts.

It is possible that mothers feel more competent intervening in physically aggressive conflicts than in relationally aggressive conflicts. In a study assessing mothers' reactions to their preschool children's relational aggression, results showed that mothers were more likely to intervene when their child engaged in physical aggression as compared to relational aggression (Werner, Senich, & Przepyszny, in press). This finding may shed some light on the idea that parents may feel more comfortable intervening in physical aggressive situations. Physical aggression is often times more visible and parents may have more defined scripts for dealing with this sort of misbehavior. On the same hand, parents may lack a repertoire of intervention strategies for relational aggression, as often times this form of aggression is not as visible. It often times is easier to know how to intervene when a child is punching another child than when that same child is hurting another child's feelings. Therefore, these results could be used to inform parent educators

to more explicitly develop ways for parents to intervene in relationally aggressive situations.

Interestingly, mothers who viewed physical aggression as common (descriptive norms) and those who viewed physical aggression as relatively stable reported lower levels of disapproval towards children for their use of physical aggression. These results may reflect feelings of helplessness on the behalf of mothers. A mother who has a child who frequently engages in physical aggression may become desensitized to this behavior, and thus over time, expresses less disapproval. Research has documented that parents with children who are physically aggressive tend to be overly permissive or overly punitive (Cavell, 2001). Mothers may comply with the wishes of their aggressive child, allowing their children to "get away" with aggressive behavior (Dumas, LaFreniere & Serketich, 1995). This finding could likely to be used in parenting programs to educate parents about relational aggression. By challenging and changing mothers' attributions of responsibility and stability, mothers may be more willing to view this form of aggression as controllable with parental intervention and thus less stable.

Maternal Affect and Discipline Responses

Mothers were expected to report lower levels of negative affect and less power assertion when imaging their child engaged in relational aggression. In support of this hypothesis, physical aggression aroused stronger responses of upset and was also found to warrant more power assertion from mothers compared to relational aggression. These findings are consistent with those of a previous study in which mothers of preschoolers reported lower levels of sadness, upset, and anger in situations depicting relational aggression compared to physical aggression (Werner, Senich, Prepyszny, in press.) In

addition, mothers generated intervention strategies in relational aggression conflicts that were characterized by significantly lower levels of power assertion than those generated in physical aggression conflicts. The results of the current study extend this previous research in illustrating that mothers of older children respond to relational aggression in similar ways as mothers of preschool children. These findings are significant because mothers' lower levels of negative affect and power assertion may be communicating to children that relational aggression is more acceptable and less damaging than physical aggression, despite growing evidence of the destructive nature of relational aggression. Research with preschoolers, school-aged children, and adolescents has shown that children view relational aggression as a more acceptable response to peer provocation than physical and verbal aggression (Werner & Hill, 2004; Werner & Nixon, 2005). It is possible that parental responses to relational aggression contribute to the development and maintenance of children's patterns of social cognition. This hypothesis should be tested in future studies.

Testing Dix and Reinhold's (1991) Model

Correlations among the social-cognitive, emotional, and behavioral variables demonstrated the interrelatedness of maternal social cognition, affect, and parenting behavior. It was hypothesized that mothers would report higher levels of negative affect and more severe behavioral responses if children's behavior was interpreted as non-normative and if less responsibility was attributed to the child. In relational and physical aggression scenarios, mothers' descriptive norms were significantly, positively correlated only with attributions of stability. Consistent with Dix and Reinhold's predictions,

attributions of responsibility were positively associated with levels of negative affect and use of power assertion for situations involving both relational and physical aggression.

Regression analyses were conducted to understand the process through which responsibility attributions predict behavioral responses to relational and physical aggression. Specifically an attributional model of parents' reactions to disobedience was tested. In this model, Dix and Reinhold (1991) posit that there are factors that influence attributions, such as beliefs and mood; however, attributions largely influence reactions to children in terms of parental affect and disapproval. Our analyses supported Dix and Reinhold's (1991) model in that responsibility attributions and negative affect predicted maternal power assertion in both relational and physical aggression situations. As will be discussed later, negative affect completely mediated the association of maternal attributions to power assertive discipline responses.

It is interesting to note that in relational aggression situations, mothers' attributions of blame emerged as a unique predictor of power assertion in situations involving relational aggression even after mothers' level of negative affect was entered into the equation. However in physical aggression scenarios attributions did not predict mothers' level of power assertion after controlling for their affective responses. Thus, mothers' cognitions about their child's relationally aggressive behavior have both a direct effect on their proposed responses and an indirect effect (via affect). If mothers believe that their children are at fault for engaging in relational aggression, regardless of the level of negative affect this attribution causes, they are more likely to propose higher power assertive responses. In physical aggression situations, in contrast, attributions appear to be significant primarily to the extent that they elicit negative affect in mothers, which in

turn predicts their responses. These results, although preliminary, provide the first evidence that the cognitive-affective processes involved in mothers' behavioral responses to child aggression vary by aggression form. It is important to note, however, that attributions of blame in physical aggression situations were unreliable and therefore not included in analyses. Future studies should include more physical aggression scenarios, which is likely to increase the reliability of the attribution scales, to replicate the findings reported here.

Limitations and Future Directions

There are a number of limitations of this study that should be noted. Data were based upon mothers' proposed, not actual, responses to their children's hypothetical behavior. Mothers' responses in real-life settings may differ from the strategies they endorsed in this study. For example, mothers were not given the option to not respond in this study, although a similar study of preschool parents' reactions to aggression found that mothers were significantly more likely to report they would not respond in relational aggression situations as compared to physical aggression situations (Werner, Senich, Przepyszny, in press). Observational or experimental methods may be better able to elucidate mothers' actual responses to their children's aggressive behavior. Future studies could use methods used in past research, such as observing mothers' supervision of children's play in experimental settings (e.g., Mize, Pettit & Brown, 1995).

Observational methods in the study of relational aggression have focused primarily on preschool aged participants (e.g. Ostrov et al., 2004). Therefore, this area of research would greatly benefit from using observational methods on an older sample. A better understanding of the mechanisms underlying aggression may be reached by

conducting observations of school-aged children and their parents. Without such data, it is hard to know if results from observational data on preschool aged children are relevant for older children and adolescents.

Another limitation of the current study is that the sample was homogeneous and may not be reflective of all populations. Future studies should replicate the current methods on other participants, in order to understand if these results generalize to a more diverse population of mothers. In addition, this study only reported data from mothers due to low numbers of fathers participating in the study. Future studies should also include fathers in their methods.

In spite of these limitations, the results provide new evidence of mothers' differing cognitions about relational and physical aggression. These findings have implications for future research, as it is necessary to better understand why mothers' discipline responses and cognitions are sensitive to aggression form and how these differences may impact children's social cognitions and behavior. This study was a new exploration into social cognitive differences and serves to extend research on relational aggression.

Future studies should be concerned with exploring how parental social cognitions and parental discipline responses may have an influence on children's social cognitions and aggressive behavior. It may be the case that parents' thoughts and actions have implications for the development of children's social cognitions and aggressive behavior. As parents attribute less responsibility and view relational aggression as more common, they may be sending messages to their children that relational aggression is permissible.

Thus, if children believe they will not be punished for engaging in relational aggression, they may be more inclined to use this form of aggression.

Another important avenue for future research is to better understand the impact that parental social cognition and discipline responses have on child outcomes. In particular, it is important to examine the possible mediating role of child social cognition. Few studies have observed similarities between parent and child attributions. These preliminary studies have given some support to the idea that children and parents have similar social cognitive processes such as attributions (MacKinnon-Lewis, Lamb, Arbuckle, Baradaran, Volling, 1992; MacBrayer, Milich, & Hundley, 2003), which may suggest that children learn attributions from their parents. Future studies should extend the current research by investigating the mediating role that children's social cognitions may have in the acceptance of parental beliefs. With this extra piece of knowledge, a more complete understanding of parental influences may be reached.

There are potential applications of the findings that mothers' hold a differing set of cognitions about relational aggression and physical aggression. It is possible that with education, parents may be better able to see the detrimental effects that relational aggression poses for children's development (i.e. loneliness, low self-esteem). Through education, it is possible that parents' descriptive norms and attributions may be challenged and in the process, changed. Practitioners and parent educators may be able to show parents that relational aggression is a hurtful form of aggression, and by not intervening or attributing less blame to children using this form of aggression, they may be in effect allowing this type of behavior to occur. Thus, parents may learn how to notice this form of aggression and reinforce that it is not permissible. This parallels

movements in schools which have begun to take a “no tolerance” policy in response to this damaging form of aggression.

Therefore, it is the hope of the researchers that with continued examination into the influences on children’s relational aggression and parental responses toward this form of aggression, research may better understand the etiology of relational aggression and will be able to translate this knowledge into practice.

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Table 1

Descriptive Statistics for Social Cognitive, Emotional, and Behavioral Subscales

		Physical Aggression Stories			Relational Aggression Stories		
	Alpha (RA/PA)	Mean	SD	Range	Mean	SD	Range
Descriptive norms	.83/.62	3.92	1.47	1-7	5.0	1.23	1.25-7
Knowledge	.64/.62	6.62	.60	4.5-7	5.26	.99	2.67-7
Capacity	.62/.61	6.65	.57	4.5-7	5.27	.98	2.67-7
Blame	.60/.35	n/a	n/a	n/a	4.88	1.06	1.67-7
Stability	.71/.62	2.47	1.21	1-7	3.06	1.11	1-5.67
Affect	.62/.51	6.16	.86	4-7	4.75	.95	1.75-7
Disapproval	.69/.60	6.15	.95	3.5-7	5.07	.99	1.5-7
Sternness	.74/.74	5.87	1.19	1.5-7	4.62	1.15	1.25-7
Power Assertion	.85/.84	6.01	1.0	3.25-7	4.84	1.01	1.38-7

Note. Blame subscale for PA stories was deleted from analysis because of low reliability; N= 95

Table 2

Correlations Among Social Cognitive, Emotional, and Behavioral Subscales for Relational Aggression Scenarios

	Norm	Know	Cap	Blame	Stab.	Affect	Disap	Stern	Power
Descriptive Norms	1								
Knowledge	.02	1							
Capacity	.06	.90**	1						
Blame	.10	.67**	.70**	1					
Stability	.45**	.07	.14	.1	1				
Affect	.07	.52**	.50**	.70**	.17	1			
Power Assertion	.10	.40**	.42**	.64**	.18	.83**	.93**	.95**	1

Note. N=95, **= p<.01

Table 3

Correlations Among Social Cognitive, Emotional, and Behavioral Subscales for Physical Aggression Scenarios

	Norm	Know	Cap	Stab.	Affect	Disap	Stern	Power
Descriptive norms	1							
Knowledge	-.10	1						
Capacity	-.10	.90**	1					
Stability	.38**	.06	.07	1				
Affect	-.17	.51**	.53**	-.09	1			
Power Assertion	-.19	.41**	.41**	-.05	.79**	.93**	.95**	1

Note. N=95, **= p<.01

Table 4

Final Regression Models Predicting Power Assertion from Negative Affect and Attributions

	Relational Aggression Scenarios					Physical Aggression Scenarios				
Variable	R^2	ΔR^2	*B*	*SEB*	β	R^2	ΔR^2	*B*	*SEB*	β
Step 1	.69	.69***				.63	.63***			
Upset			.88	.06	.83***			.93	.07	.79***
Step 2	.41	.41***				.18	.18***			
Capacity/Knowledge			-.1	.09	-.11			.01	.13	.00
Blame			.18	.09	.19*			na	na	na