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Positive and Negative Parenting Strategies, Parental Psychopathology, and Relational Aggression in Youth

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Abstract

This study examined the mediating role of parental psychological control on the association between parental psychopathology and youth relational aggression in a community sample of 118 adolescents (aged 11-17) and their parents. Additionally, an analysis was conducted to examine the moderating role of positive parenting on the association between parental psychopathology and relational aggression. Further analyses controlled for overt aggression and examined effects of youth gender. Results suggest psychological control partially mediates the association between parental psychopathology and relational aggression. The overall mediation was not significant after controlling for overt aggression; however, the association between psychological control and relational aggression remained significant. The moderation was not significant. Parental psychopathology interacted with gender; specifically, psychopathology was significantly associated with relational aggression only for boys. Findings demonstrate the complexity of associations between different parenting variables and relational aggression, and the necessity of assessing the effects of overt aggression and gender.

Keywords: relational aggression; psychological control; parental psychopathology; positive parenting; overt aggression

Introduction

Aggression is generally described as a behavior implemented with the intentions of causing physical or psychological harm (Berkowitz, 1993). This harmful behavior is an important construct in the field of child and adolescent psychology as it is known to be one of the best behavioral predictors of children's concurrent and long-term social adjustment problems (Nelson & Crick, 2002). Such social adjustment problems include depression, social isolation, (Crick & Grotpeter, 1995), poor academic achievement (Brook & Newcomb, 1995) delinquency (Crick, Ostrov, & Werner, 2006), and a small percentage of aggressive adolescents even engage in serious antisocial (Di Giunta, 2010) and criminal behavior (Letendre, 2007). Thus, a thorough understanding of aggression is critical for the wellbeing of the aggressor, the victim, and society in general.

Subtypes of Aggression

Traditionally, aggression was only measured in a physical form. Physical aggression refers to the use of physical force (such as hitting, kicking, or punching) to harm others (Crick & Grotpeter, 1995). With such a measurement, girls did not reach elevated levels of aggression compared to boys, and thus, were believed to be less aggressive (e.g. Walters, Pearce & Dahms, 1957). However, once social alienation and ostracism began to be included as forms of aggression, researchers demonstrated that girls do express levels of aggression comparable to boys (Cairns, Cairns, Neckerman, Ferguson, & Gariépy, 1989). Since this discovery, more attention has been directed to other non-physical aggression forms that may be more relevant to girls, in particular, relational aggression. Relational aggression is described as the act of harming or threatening to harm an individual by targeting a relationship, such as excluding a peer,

damaging a reputation, or withdrawing friendship (Crick & Grotpeter, 1995). Although similar to indirect aggression, where an unknown aggressor causes harm in a circuitous manner, such as gossiping, (Björkqvist et al., 1992), relational aggression can also be overt and confrontational in nature, such as telling a friend she will be excluded unless she does as the aggressor wishes (Archer & Coyne, 2005).

Relational and physical aggression are often studied together to examine their similarities and distinctions. By definition, both forms of aggression are behaviors that seek to cause harm. Thus, researchers often do find moderate (Cillessen, Jiang, West, & Laszkowski, 2005; Gros, Gros, & Simms, 2010) to strong (Kawabata, Crick, & Hamaguchi, 2010; Smith, Rose, & Schwartz-Mette, 2009) correlations between physical and relational aggression (e.g., rs=.36-.65).

Given the considerable overlap, relational and physical aggressors share several similar psychosocial adjustment problems. Like physical aggressors, relational aggressors are significantly more likely to have externalizing problems than non-aggressors (Prinstein, Boergers, & Vernberg, 2001; Williams, Freland, Han, Campbell, & Kub, 2009). More specifically, relational aggression predicts delinquency (Crick et al., 2006) and later drug and alcohol use among youth (Herrenkohl, Catalano, Hemphill, & Toumbourou, 2009; Skara et al., 2008) similar to physical aggression. Relational aggressors also experience many of the same internalizing problems as physical aggressors including depressive symptoms (Fite, Greening, & Preddy, 2011), and social, cognitive, and somatic anxiety (Gros et al., 2010). They are also likely to experience peer rejection (Werner & Crick, 1999).

Furthermore, similar to their physically aggressive peers, relational aggressors exhibit psychopathic traits (Czar, Dahlen, Bullock, & Nicholson, 2011; Marsee, Silverthorn, & Frick, 2005; Schmeelk, Sylvers, & Lilienfeld, 2008). Specifically, they display antisocial personality

traits (Werner & Crick, 1999) and more recent research has demonstrated an association between relational aggression and callous-unemotional traits (Kerig, & Stellwagen, 2010; Marsee & Frick, 2007). Overall, these correlates reveal how relational aggressors exhibit severe adjustment problems and maladaptive characteristics similar to physical aggressors.

Due to the overlap and the host of similar adjustment problems between the two aggression forms, some have questioned whether relational aggression uniquely predicts problems beyond physical aggression. Research indicates that despite the overlap, relational and physical aggression are not redundant constructs (Goldstein & Tisak, 2010; Nelson, Hart, Yang, Olsen, & Jin, 2006; Prinstein et al., 2001; Storch, Bagner, Geffken, & Baumeister, 2004). First, by definition, physical aggression is a behavior that intends to cause bodily harm while relational aggression targets a social relationship (Crick & Grotpeter, 1995). Also, many of the aforementioned adjustment problems are uniquely correlated to relational aggression. That is, even after controlling for physical aggression, relational aggressors still exhibit depressive symptoms (Fite et al., 2011), anxiety (Gros et al., 2010; Marsee, Weems, & Taylor, 2008), drug use (Skara et al., 2008), and psychopathic (Czar et al., 2011) and callous-unemotional traits (Marsee & Frick, 2007). These findings contest prior arguments that relational aggression is only associated with psychosocial adjustment problems because of its co-occurrence with physical aggression.

As physical and relational aggression are not redundant constructs, researchers have recently begun to explore different characteristics and psychosocial adjustment problems that may be unique to relational aggression. First, relational aggressors exhibit unique characteristics relevant to their social environments. For example, relational aggression is positively associated with jealousy in friendships, while physical aggression is not (Culotta & Goldstein, 2008).

Relational aggressors are also often perceived to have positive social characteristics. For example, they are rated by teachers and peers as high on popularity (Cillessen, & Mayeux, 2004; Xie, Swift, Cairns, & Cairns, 2002), and affiliation or friendliness (Xie et al., 2002). This is because, unlike their physically aggressive peers, relationally aggressive youth are skilled in using manipulation to obtain power and exert influence in the peer group (Cillessen, & Mayeux, 2004).

Furthermore, relational aggressors exhibit particular psychological traits not observed in physical aggressors. For example, Werner and Crick (1999) found relational aggression was uniquely associated with borderline personality features. More recently, Schmeelk et al. (2008) similarly found relational aggression was significantly more correlated to Cluster B personality disorders (including Borderline Personality Disorder) than cluster A or C, while physical aggression was equally correlated to all three clusters. Relational aggression may be more strongly correlated to these particular personality traits because it often entails manipulation and interpersonal damage, similar to those characteristics exhibited by those with Borderline Personality Disorder (Schmeelk et al., 2008). Overall, these findings demonstrate relational aggressors have characteristics and adjustment problems distinct from physical aggressors.

A final important feature that distinguishes relational from physical aggression is the role of gender. Within the physical aggression literature, males consistently exhibit greater physical aggression than females (e.g. Skara et al., 2008). In contrast, relational aggression is often viewed as the female form of aggression (e.g. Crick & Grotpeter, 1995) but the results are inconsistent. For example, in a recent meta-analytic review, Merrell, Buchanan, and Tran (2006) found the majority of the literature suggests relational aggression is more common among females. Conversely, Card, Stucky, Sawalani, and Little (2008) conducted a meta-analysis

examining direct and indirect aggression (including indirect, relational, social, and covert aggression studies) and concluded there were trivial gender differences in the rates of indirect aggression.

Despite the negligible gender differences found in Card et al. (2008) and others (e.g. Czar et al., 2011; Williams et al., 2009), relational aggression may still be more pertinent to females. First, whether females are the majority or only about half of relational aggressors, they are still exhibiting significantly higher levels of relational aggression compared to their rates of physical aggression (Prinstein et al, 2001). Hence, relational aggression holds something specifically appealing to girls. Additionally, only limited conclusions can be drawn from a simple comparison of the rates of male and female relational aggressors. Rather, a consideration of how relational aggression affects females and males differently may be more informative. For example, Paquette and Underwood (1999) found girls were more distressed by relational aggression than boys. Similarly, Storch et al. (2004) found, although males expressed higher rates of relational aggression than females, relational aggression was a significant predictor of adjustment problems only for females. These results support the need to further consider how males and females are differentially affected when studying relational aggression.

Overall, the previous findings on relational aggression illustrate the vital need to further study and expand our knowledge of this maladaptive behavior. First, relational aggression is consistently associated with various behavioral and psychosocial adjustment problems; thus a greater understanding of this construct is warranted for the adjustment and wellbeing of the aggressor. Second, relational aggression is mistakenly dismissed as a less harmful behavior than physical aggression (Russell, Kraus, & Ceccherini, 2010). For example, Goldstein and Tisak (2010) found youth rated physical aggression as significantly more wrong than peer exclusion.

Many youth even fail to recognize they are victims of relational aggression (Raskaukas & Stoltz, 2004). Also, school officials are less likely to intervene in a situation involving relational aggression than in one involving physical aggression (Xie, Swift, Cairns, & Cairns, 2002). These findings highlight the need to raise awareness of the destructive nature of this behavior for the wellbeing of the relational aggression victims. Finally, despite the emerging research on the associated adjustment problems, less is known about the antecedents of relational aggression, particularly compared to the antecedents of physical aggression. A greater knowledge of the factors that encourage youth relational aggression will be imperative to design and implement appropriate intervention plans. Therefore, the present study seeks to explore possible antecedents that may contribute to the development of relational aggression.

There are several factors proposed in the literature that may influence the development of relational aggression. The media is often viewed as an influential source because magazines, movies, and reality shows often portray characters and celebrities exerting relational aggression (Coyne, Robinson, & Nelson, 2010; Letendre, 2007). School setting and peer groups are also thought to contribute as reputations and popularity are important among adolescents, and thus, serve as suitable targets for relational aggression (Merrell et al., 2006; Werner & Hill, 2010). However, the primary environment where relational aggression is learned is the home (Fraser, 1996; Merrell et al., 2006).

What, specifically, in the home influences the development of this aggression? As relational aggression revolves around a relationship, the child's very first relationship may provide some insight into how this maladaptive behavior is developed. The parent-child relationship is highly influential in that it has the ability to positively shape the child's future behavior. Parents teach their children prosocial relationship development and healthy ways of

interacting with others through their own positive interactions and involvement with their child (Letendre, 2007). Positive interactions, such as those involving warmth, acceptance, and conflict resolution strategies are associated with less relational aggression (Kawabata, Alink, Tseng, van IJzendoorn, & Crick, 2011).

Conversely, the parent-child relationship also has the ability to negatively shape the child's future behavior. More conflictual and negative interactions between the parent and child can lead to more maladaptive social skills and externalizing problems (Marmorstein & Iacono, 2004). This relationship is particularly important in studying the development of relational aggression, as the manner in which the parent and child bond and interact generalizes to other contexts, including peer relationships, (Bolby 1980; Haskett & Willoughby, 2006; Jones, Rickel, & Smith, 1980; Leve & Fagot, 1997; Pettit & Mize, 1993; Sroufe, 1983; Vaillancourt, 2007). Thus, in order to understand the development of relational aggression, let us examine two factors that disrupt the development and maintenance of these adaptive parent-child interactions: dysfunctional parenting strategies and parental psychopathology.

Dysfunctional Parenting Strategies and Aggression

Parenting strategies are practices based on specific content and socialization goals for the child that have a direct effect on the child's behavior and characteristics (Darling & Steinberg, 1993). These practices can range from supportive to dysfunctional in nature. Supportive parenting is a broad construct, including various strategies such as warmth and responsiveness, which is associated with positive child development (Barber, 2002). For example, positive parenting, a strategy that involves warmth, sensitivity, and responsiveness towards the child (Kawabata et al., 2011) is associated with social competence and prosocial behavior (Chen, Dong, & Zhou, 1997). In contrast, dysfunctional parenting refers to any behavior, or failure to

implement a behavior, that may lead to adverse effects in the child (Kendziora & O'Leary, 1993) including both internalizing and externalizing problems (see Berg-Nielsen, Vikan, & Dahl, 2002, for a review).

Concerning externalizing problems, a large body of research on dysfunctional parenting has particularly focused on physical aggression, conduct problems, and antisocial behavior. For example, inconsistent parenting, a dysfunctional parenting strategy that occurs when there are partial, recurrent, and unpredictable breakdowns in the parent's authority (Berg-Nielsen et al., 2002) is positively associated with conduct disorder (Frick et al., 1992) and physical aggression (Merrell et al., 2006). Corporal punishment, which is physical force used to cause the child pain but not injury in order to control behavior (Straus & Kantor, 1994), is also associated with physical aggression (Gershoff, 2002) as well as antisocial traits in children (Gámez-Guadix, 2010). Dysfunctional parenting, by definition, can also include a failure to implement appropriate parenting behaviors (Kendziora & O'Leary, 1993) and this lack of appropriate parenting also leads to various externalizing problems. For example, a lack of appropriate limit-setting has been positively associated with physical aggression in children (Merrell et al., 2006), and a lack of parental involvement has been positively associated with both physical and verbal aggression (Pagani, 2009).

Despite this breadth of research on dysfunctional parenting and various youth externalizing problems, the association between dysfunctional parenting and relational aggression is not firmly established. Within the literature on parenting and physical aggression, researchers continue to draw similarities between the goal-directed behavior of physically aggressive children and the goal-directed behavior of their parents. For example, as physically aggressive children use physical force to gain compliance from peers, their parents often use

physical punishment to gain compliance from the child (Hicks-Pass, 2009; Taylor & Hamvas, 2011). In order to address the deficiency of literature on parenting and relational aggression, it may be reasonable to also investigate those parenting strategies that use goal-directed behaviors similar to relational aggression. Using this reasoning, one particular parenting strategy emerges: psychological control.

Psychological control is described as a process in which parents intrude or interfere with the child's autonomy by attempting to gain control over the child's psychological world (Barber, Olsen, & Shagle, 1994). This type of control may be implemented in different forms such as inducing guilt, invalidating feelings, and withdrawing love. Psychological control is a controversial parenting strategy as it hinders the child's independence while helping the parent maintain power in the relationship (Pettit & Laird, 2002). In contrast to behavioral control that uses discipline to manage child behavior, psychological control uses intrusive and constraining tactics to manipulate and violate the child's psychological self (Barber & Harmon, 2002).

The dysfunctional goal-directed behavior of relational aggressors may be reflected in the dysfunctional goal-directed behavior of psychologically controlling parents. When the goal is obedience, a psychologically controlling parent may manipulate the parent-child relationship to ensure the child thinks or behaves in a manner pleasing to the parent. For instance, a psychologically controlling mother may be less friendly with her child, should the child think differently than the mother about an issue. Similarly, as a means of getting one's way, a relationally aggressive adolescent might manipulate a peer relationship. For example, a relationally aggressive adolescent may choose to give a peer the "silent treatment" until the peer acknowledges her wrongdoing (Nelson & Crick, 2002). This similarity in goal-directed behavior

has led many researchers to hypothesize parental psychological control may be associated with youth relational aggression (e.g. Barber, 1994; Nelson & Crick, 2002; Reed et al., 2008).

The findings on the association between psychological control and relational aggression are somewhat inconsistent. That is, some studies find parental psychological control to be positively and significantly related to youth relational aggression (Nelson et al., 2006*;* Yu & Gamble, 2008), whereas others find no relationship (Hart et al, 1998*;* Reed et al., 2008). However, there are a few trends in the literature worth noting. First, among the studies that examined both relational and physical aggression, relational aggression emerges as a more relevant outcome of parental psychological control. That is, the association between psychological control and physical aggression is weaker than the association between psychological control and relational aggression (Casas et al., 2006; Leadbeater, Banister, Ellis, & Yeung, 2008; Nelson, Hart, Yang, Olsen, & Jin, 2006; Yu & Gamble, 2008;) or, in some studies, non-significant all together (Gaertner, et al., 2010; Kuppens, Grietens, Onghena, & Michiels, 2009a). This trend further supports the unique parallels between psychologically controlling behavior and relational aggression.

A second trend concerns the gender of the relational aggressor. Among the current studies, gender emerges as a significant moderator in the association between psychological control and relational aggression (Kawabata et al., 2011). Specifically, the association between psychological control and girls' relational aggression is significantly larger than the association between psychological control and boys' relational aggression. These findings further emphasize the importance of considering gender in studying relational aggression. Importantly though, the majority of studies testing the association between psychological control and relational aggression did not examine relational aggression separately by gender (e.g. Kuppens,

Grietens, Onghena, Michiels, 2009b; Reed et al., 2008; Yu & Gamble, 2008). As gender significantly moderates this relationship, a failure to examine boys' and girls' relational aggression separately may yield misleading results, possibly providing insight into the current inconsistencies. Therefore, the current study seeks to examine the association between psychological control and relational aggression with a consideration of the relational aggressors' gender.

Parental Psychopathology and Aggression

Like psychological control, parental psychopathology (e.g. depression, anxiety, antisocial behavior) may also be a relevant predictor of relational aggression as it too disrupts the parent-child relationship (Downey & Coyne, 1990; Goodman & Gotlib, 1999). To our knowledge, only one study has tested this association, finding that maternal and paternal depression predicted youth relational aggression (Park et al., 2005). However, it is informative to review the literature on parental psychopathology and general youth externalizing problems because, unlike psychological control, which is specifically associated with relational aggression due to similar goal-directed behaviors, parental psychopathology may be associated with relational aggression for the same reason it is associated with other externalizing problems: a general disruption in parent-child interactions.

The parental psychopathology literature demonstrates disruptions in parent-child interactions are associated with serious youth externalizing problems. For example, parental psychopathology is significantly associated with externalizing behavior problems (Mun et al., 2001), conduct disorder (Schonfeld, 1988), and physical aggression (Connolly & Vance, 2010). Further, parental antisocial behavior and antisocial personality disorder may influence the development of oppositional defiant disorder (Frick et al., 1992) and conduct problems in

children (Frick et al., 1992; Marmorstein & Iacono, 2004). Also, children with depressed parents are at a heightened risk for developing physical aggressiveness (Frick et al., 1992; Middleton, Scott, & Renk, 2009), hostility (Middleton et al., 2009), conduct problems (Chronis et al., 2007), conduct disorder (Marmorstein & Iacono, 2004), and antisocial behavior problems (Frick et al., 1992).

To further gauge how parental psychopathology may influence relational aggression, it will be essential to have a thorough understanding of how parents' mental health affects the child. In a recent meta-analysis of parental psychopathology and youth behavior problems, Connell (2002) found that although parental psychopathology was frequently associated with youth externalizing problems, there was significant heterogeneity across results, indicating that other factors may be affecting this relationship. The association between parental psychopathology and youth behavior problems is not, in fact, a linear relationship, but a more complex process involving another inter-related variable: parenting strategies (Vostanis et al, 2006).

Association between Parental Psychopathology and Dysfunctional Parenting Strategies in Predicting Aggression

The co-occurring, dysfunctional parenting strategies are one of the mechanisms through which parental psychopathology influences youth externalizing problems (Dodge, 1990). Therefore, the relationship between parental psychopathology and youth externalizing problems is more of an indirect one (Davies & Windle, 1997). Overall, dysfunctional parenting strategies mediate the association between parental psychopathology and youth externalizing problems (Rutter, 1990).

This mediation is evident in the extensive literature that has demonstrated strong associations between parental psychopathology and dysfunctional parenting. This association may be explained by the considerable stress psychopathology causes the parent (Berg-Nielsen et al., 2002). This psychological distress may lead parents to be less effective or to withdraw altogether from their parenting responsibilities (Hadley et al., 2011). For example, depressed mothers respond to their children with more negative, critical affect (Cummings & Davies, 1994). Additionally, antisocial fathers show poor involvement with their children compared to non-antisocial fathers (Shears, Robinson, Emde 2002).

This association is particularly evident when considering psychologically controlling parenting strategies. Depressed mothers, for example, use more psychologically controlling strategies than non-depressed mothers (Garber & Flynn, 2001). In particular, they use strategies such as inducing guilt and expressing disappointment towards their children (Rutter, 1990). They are also more likely to use intrusive and coercive behaviors with their children (Lyons-Ruth, Wolf, & Lyubchik, 2000). Although much of the parental psychopathology literature focuses on maternal depression, psychologically controlling strategies are associated with other forms of parental psychopathology as well. Lieb et al. (2000) found parents with anxiety disorders used more rejection towards their children than non anxious parents. These findings further support the association between parental psychopathology and dysfunctional parenting strategies, specifically psychological control.

Further evidence for this mediation comes from studies finding that parental psychopathology did not have adverse effects on the child when unaccompanied by dysfunctional parenting. For example, children with schizophrenic parents showed very low levels of externalizing problems when not exposed to dysfunctional parenting compared to

children who were (Downey & Walker, 1992). Similarly, when studying the effects of maternal depressive symptoms, girls' conduct problems were partially accounted for by parenting impairments (Davies & Windle, 1997). This mediation has not yet been tested with relational aggression. However, since this model has generalized across various types of parental psychopathology, dysfunctional parenting strategies, and youth externalizing problems, the present study sought to further test this model with relational aggression as the externalizing behavior of interest.

Protective Effects of Supportive Parenting Strategies

Because of their frequent co-occurrence, parental psychopathology is often studied in conjunction with dysfunctional parenting strategies. However, emerging research considers the effects of supportive parenting strategies in the presence of parental psychopathology. How would a parent's depression affect the child if the parent implemented positive parenting as opposed to the typical negativity displayed? How might a child adjust if an antisocial parent nevertheless remained involved in the child's life? Studies demonstrate that appropriate parental responsiveness discourages youth problem behavior even in the context of parental psychopathology (Nolen-Hoeksema, Wolfson, Mumme, & Guskin, 1995). For example, Hadley et al. (2011) found mothers with mental health symptoms were less likely to have adolescents who engaged in risky sexual behavior once proper monitoring was implemented. Similarly, Middleton et al. (2009) found that maternal depressive symptoms were no longer significantly associated with youth externalizing behavior problems when mothers implemented limit-setting strategies. Overall, these findings indicate that supportive parenting strategies may serve to buffer the effects parental psychopathology has on youth problem behavior.

There is a fair amount of research that supports a negative association between supportive parenting and relational aggression (e.g. Brown, Arnold, Dobbs & Doctoroff, 2007). Specifically, positive parenting strategies, such as warmth, acceptance, and positive interactions are negatively related to youth relational aggression (Kawabata et al., 2011). However, the protective effects of these supportive parenting strategies have yet to be examined with relational aggression. The current study was the first to examine the association between positive parenting and relational aggression in the context of parental psychopathology.

Statement of the Problem

Literature on the negative outcomes associated with relational aggression indicates that there is a need for the continued study of its development and correlates (Leadbeater et al., 2008). Although often grouped together, relational and physical aggression are unique constructs (Nelson et al., 2006) with differential associations with serious psychosocial adjustment problems, including both internalizing and externalizing symptoms (Crick & Grotpeter, 1995; Prinstein et al., 2001). Such findings support the notion of studying relational aggression as a unique behavior and suggest that youth who exhibit relational aggression may require unique interventions (Crick, Ostrov, & Werner, 2006).

One factor consistently associated with physical aggression is parenting, particularly dysfunctional parenting strategies and parental psychopathology (Connolly & Vance, 2010; Merrell et al., 2006). However, less is known about the association between these parenting variables and relational aggression. As relational aggression revolves around a relationship, it seems critical to study the parent-child relationship. This relationship may be able to provide insight into the use of relational aggression with peers as the way the parent and child interact generalizes to the child's peer relationships (Bolby 1980; Sroufe, 1983; Vaillancourt, 2007). A

healthy parent-child relationship is critical for the wellbeing of the child, as this relationship is where the child learns prosocial ways of interacting with others (Letendre, 2007). Thus, to understand relational aggression, we examined two factors that disrupt the parent-child relationship and the learning of prosocial behavior: parental psychological control and parental psychopathology.

Parental psychological control describes intrusive parenting behaviors that manipulate children's thoughts and emotions (Barber et al., 1994). This type of parental control parallels the strategies used in relational aggression as both behaviors attempt to control a relationship to obtain a desired outcome. Recent research supports this unique parallel by finding psychological control to be more strongly predictive of relational aggression than physical aggression (Casas et al., 2006). However, there are still some inconsistencies to be explained as some researchers find psychological control and relational aggression to be significantly associated (e.g. Nelson et al., 2006), while others find no relationship (e.g. Hart et al., 1998). Nevertheless, the present research may reflect a weaker relationship than is actually present by failing to consider how male and female relational aggressors are differentially affected. A recent meta-analysis found gender moderates the relationship between psychological control and relational aggression, where this relationship is significantly stronger for female than male relational aggressors (Kawabata et al., 2011). Therefore, examining male and female relational aggressors separately may be useful when testing the association between psychological control and relational aggression.

Parental psychopathology similarly disrupts the parent-child relationship as a parent with mental illness has more dysfunctional interactions with the child (Goodman & Gotlib, 1999). Researchers continue to find these maladaptive parent-child interactions positively influence

physical aggression (Frick et al., 1992), yet less is known about their influence on relational aggression. As children learn prosocial relationship development through their parents' positive interactions (Letendre, 2007), it would be reasonable that such dysfunctional, negative interactions would lead the child to more antisocial and relationally aggressive behavior. To date, one study examined the association between parental depression and relational aggression, finding a positive relationship (Park et al., 2005), but further analyses are needed.

In order to gauge how parental psychopathology may influence relational aggression, the co-occurring parenting strategies must be considered. That is, parental psychopathology contributes to youth problem behavior through dysfunctional parenting strategies (Dodge, 1990). First, parental psychopathology and dysfunctional parenting strategies consistently co-occur (Haskett & Willoughby, 2006). Second, studies continue to find little to no association between parental psychopathology and youth problem behavior once the dysfunctional parenting strategies are controlled (e.g. Downey & Walker, 1992). This study was the first to test this mediation with relational aggression as the outcome variable and psychological control as the mediator. For comparative purposes, additional analyses were conducted using dysfunctional parenting (a composite of poor monitoring, corporal punishment, and inconsistency) as the mediator.

Finally, emerging research has tested whether supportive parenting strategies may protect against the effects of parental psychopathology. Results show that various supportive parenting strategies, such as monitoring and limit-setting, buffer the effects of parental psychopathology on youth problem behaviors (Hadley et al., 2011; Middleton et al., 2009). The current study sought to expand upon this recent research by examining the association between positive parenting and relational aggression in the context of parental psychopathology.

Hypotheses

1. Psychological control will mediate the association between parental psychopathology and relational aggression in youth.

    A. Psychological control will be positively and significantly associated with relational aggression.

    B. Parental psychopathology will be positively and significantly associated with relational aggression.

    C. Parental psychopathology will be positively and significantly associated with psychological control.

    D. The association between parental psychopathology and relational aggression will be reduced when controlling for psychological control.

    E. Psychological control will mediate the association between parental psychopathology and relational aggression after controlling for overt aggression.

2. Positive parenting will moderate the association between parental psychopathology and relational aggression in youth. Specifically, parental psychopathology and relational aggression will be significantly associated at low levels of positive parenting, but not at high levels of positive parenting.

    A. Positive parenting will moderate the association between parental psychopathology and relational aggression after controlling for overt aggression.

3. Hypotheses 1 and 2 will show stronger associations for girls than for boys.

Method

Participants

The present study is part of Project PACES (Parenting and Adolescent Cognition, Emotion, and Social Behavior), a larger study on parenting and youth behavior. Participants were recruited from the University of New Orleans and the nearby community through flyers, campus news emails, online classified ads, and announcements in undergraduate classes. Children and adolescents ages 11 to 17 and their parents were recruited. The study recruited a total of 141 families, 118 parents and 141 children. Several families included two or more children with the same parent reporter (n=23). To create single parent-child dyads for data analysis, one sibling was chosen at random from each family to participate, resulting in a total of 118 participants.

Measures

Peer Conflict Scale, Youth and Parent Report (PCS; Marsee et al., 2011). The PCS is a 40 item questionnaire designed to assess the forms (relational and overt) and the functions (reactive and proactive) of aggression in youth. Scores can be calculated for total aggression, the overall forms or functions, or the four subtypes: proactive overt, proactive relational, reactive overt, and reactive relational. Each item is scored on a 0 to 3 scale (0=not at all true, 1=somewhat true, 2=very true, or 3=definitely true). The four scales have demonstrated good internal consistency in previous studies (Cronbach's alpha: proactive overt =0.85; reactive overt=0.88; proactive relational=0.85; and reactive relational =0.85; Crapanzano, Frick, & Terranova, 2010). Similarly, Marsee et al. (2011) revealed good internal consistency across the four scales (Cronbach's alpha: proactive overt=.82; reactive overt=.89; proactive relational=.80; and reactive relational=.79). Additionally, factor analyses suggest a two-factor model of the aggression forms (relational and physical) yields a better fit than a unidimensional aggression

factor, and finally, a four-factor model that included both the aggression forms and functions yielded a greater fit than the unidimensional and the two-factor model (Marsee et al., 2011).

The relational and overt aggression scales of the PCS have been associated with relevant cognitive and emotional correlates such as delinquency, callous-unemotional traits, and narcissism (Barry, Grafeman, Adler & Pickard, 2007; Marsee & Frick, 2007; Marsee et al., 2011). Furthermore, the two scales also demonstrate unique associations. For example, the overt aggression scale has been uniquely associated with adaptive narcissism (Barry et al., 2007) while the relational aggression scale has been uniquely associated with maladaptive narcissism (Barry, Pickard, & Ansel, 2009). For the purposes of this study, a composite measure of the youth and parent report of relational and overt aggression will be used (Frick, Barry, & Kamphaus, 2010). Items for corresponding youth and parent reports were compared, and the higher of the two item-level scores were used to create a composite aggression variable for analysis (Cronbach's alpha: relational composite-report=.85; overt composite-report=.91).

Psychological Control Scale-Youth Self-Report (PCONS; Barber, 1996). The PCONS is a 16 item self-report scale measuring six elements of psychological control, including constraining verbal expression, invalidating feelings, personal attack, guilt induction, love withdrawal, and erratic emotional behavior. Items are rated on a scale from 0 to 3 (0=not like him/her, 1=somewhat like him/her, 2=a lot like him/her). An example item includes, "My father/mother is a person who brings up my past mistakes when he/she criticizes me". The PCONS was designed to improve upon the Child Report of Parent Behavior Inventory (CRPBI; Schaefer, 1965) by adding greater behavioral specificity of items. It has demonstrated good internal consistency (Cronbach's alpha: .80-.83; Barber, 1996). Because the child's psychological self is the target of parental psychological control, the youth self-report is

considered an accurate means of measuring this parenting strategy (Barber 1996; Barber, 2002). The parent-report is also regarded as an accurate means of measuring psychological control, particularly for younger children who may not be able to differentiate the various psychologically controlling strategies used by their parents (Nelson & Crick, 2002). For this study, both the youth self-report and the parent-report were used (Cronbach's alpha: youth-report=.87; parent-report=.92).

Alabama Parenting Questionnaire -Youth Self-Report (APQ; Frick, 1991). The APQ Questionnaire youth self-report is a 38 item questionnaire that includes five different subscales of parenting strategies (positive parenting, involvement, inconsistent discipline, corporal punishment, poor monitoring/supervision). Each item is rated on a 5-point frequency scale (0=never, 1=almost never, 2=sometimes, 3=often, 4=always). The APQ can be divided into a three factor structure as indicated by Hinshaw et al. (2000): Positive Involvement (positive parenting and involvement) which includes items such as "Your parents praise you for behaving well", Negative/Ineffective Discipline (inconsistent discipline and corporal punishment) including items such as "Your parents threaten to punish you and then do not do it" and Deficient Monitoring (poor monitoring/supervision) including items such as "Your parents do not know the friends you are with." The Negative/Ineffective Discipline and the Deficient Monitoring factors have demonstrated adequate reliability (Cronbach's alpha: .70; .72, respectively), and the Positive Involvement factor has demonstrated good reliability (Cronbach's alpha: .85; Hinshaw et al., 2000). For the current study, the positive involvement factor was used to measure positive parenting (Cronbach's alpha: youth-report= .88; parent-report= .84), and a composite of the negative/ineffective discipline and deficient monitoring factors was used to measure dysfunctional parenting (Cronbach's alpha: youth-report= .81; parent-report= .74).

Brief Symptom Inventory (BSI; Derogatis, 1975). The BSI is a self-report symptom inventory designed to measure overall psychopathology in adolescents and adults. It contains nine clinical scales (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism) and three summary scales (positive symptom total, positive symptom distress, and global severity). The BSI is an abridged version of the revised Symptom Checklist (SCL-90-R), containing 53 items rated on a five point scale (0=not at all, 1=a little bit, 2=moderately, 3=quite a bit, 4=extremely). An example item includes "How much were you distressed by temper outbursts that you could not control?" Each of the nine subscales has high internal consistency, with alpha coefficients ranging from .71 to .85 (Piersma, Boes, Reaume, 1994; Derogatis & Melisarator, 1983). Test-retest reliability for a two week interval is .90 (Handal, Gist, Gilner, & Searight, 1993). The Global Severity Index (GSI) is one of the summary scales that measures overall psychological distress. It is a sum of scores from all the subscales divided by the total number of questions answered. The GSI is the best single indicator of distress among adults (Derogatis & Spencer, 1982) with high internal consistency (Chronbach's alpha=.97). For the purpose of this study, only the GSI scale was used (Cronbach's alpha=.96).

Procedures

Prior to recruitment for Project PACES, approval was obtained from the University of New Orleans Institutional Review Board. Upon IRB approval, recruitment procedures began on campus and in the community. Several recruitment strategies were used. First, large undergraduate classes in Psychology were identified and instructors were contacted to obtain permission to make an announcement about the study during class time. Upon permission from class instructors, trained graduate research assistants (RAs) visited the classes and made

announcements regarding the opportunity to participate in a study of adolescent behavior. Students were informed that they could refer youth within the 11-17 age range (or themselves if they were 17) and that they could receive extra credit for making a referral. RAs then collected the names and contact information for anyone with a referral. In addition to class announcements, flyers describing the study were posted across the UNO campus and the New Orleans community. Also, the UNO Campus News included an announcement regarding the study on its weekly campus-wide email to all faculty, staff, and students. Finally, an announcement for the study was posted on the internet on the Craigslist website (an online classified ads website).

For names collected from UNO classes, the RAs contacted students to set up an appointment date and time for the consent/assent process and the assessment. For all other means of recruitment (i.e., flyers, email announcements, and classified ads), RAs took phone calls in the lab and scheduled the assessment at that time. When participants arrived at the laboratory for their scheduled assessment, an RA reviewed the consent/assent forms with the parents and youth. The forms were read aloud to each participant and ample opportunity for questions was provided. The potential participants were informed that they could drop out of the study at any time without any consequences. After obtaining parental consent and youth assent, the youth and parent were taken to separate rooms and given privacy to complete the questionnaires. The overall battery (in which the PCS, PCONS, APQ, and BSI were collected in addition to several other measures) took approximately 90 – 120 minutes to complete, and participants were allowed short breaks if necessary. Upon completion of the parent and youth assessments, each parent and each child received $25 in compensation for their time.

Results

Data Screening

Prior to analyses, relational aggression, overt aggression, parental psychopathology, parental psychological control, positive parenting, and dysfunctional parenting were examined for missing data, normality of distribution, and univariate and multivariate outliers. Mean substitution was used for missing data. Except for the moderation analysis, all analyses included 118 participants. For the moderation analysis, seven participants were missing data on over twenty percent of the positive parenting measure, and thus were deleted. Therefore, the moderation analysis had a total of 111 participants. Relational aggression, overt aggression, parental psychopathology, psychological control, and dysfunctional parenting were positively skewed as expected, so no transformations were performed. Positive parenting was normally distributed. Examination of the standardized scores, histograms, and scatterplots revealed four univariate outliers. The Mahalanobis distance test ($p<.001$) revealed two of the univariate outliers were also multivariate outliers. Because the outliers did not change the significance among the correlations of the main study variables, the participants containing these outliers were kept in the sample for analysis.

Descriptive Statistics

Our sample included 118 youth (50% female) and their parents (87.9% female). Youth age range was from 11 to 17, with a mean age of 13.5. Parent age range was from 21 to 58 with a mean age of 42. Among the families, 22.6% had an annual income range of $30,000 or less, 31.3% between $30,001 and $60,000, and 42.6% greater than $60,000. For ethnicity, 59% of the parent participants were Caucasian, 22.2% African-American, 9.4% Hispanic/Latino, 3.4% Asian, .9% Native American, and 5.1% marked “other” for their ethnicity. For ethnicity of the

youth, 51.3% were Caucasian, 24.3% African-American, 9.6% Hispanic/Latino, 3.5% Asian, 2.6% Native American, 8.7% marked "other" for their ethnicity. Among the parent/guardian participants, 85.5% were mothers, 10.2% fathers, less than 1% were aunts, and 3.4% were classified as "other". Among the mothers and fathers, 96.4% were biological parents, 3.6% were adoptive parents.

Correlations

Table 1 shows the Pearson's correlations among the main study variables, gender, and age. As expected, relational and overt aggression (composite scores) were significantly positively correlated with each other ($r=.54$, $p<.001$). Youth-reported psychological control was positively correlated with relational ($r=.30$, $p<.01$) and overt aggression ($r=.26$, $p<.01$), but not with parental psychopathology ($r=.13$, $p>.10$). However, parent-reported psychological control and psychopathology were significantly correlated ($r=.34$, $p<.001$). Parent-reported psychological control was also correlated with relational ($r=.29$, $p<.01$) and overt aggression ($r=.25$, $p<.01$), as was parental psychopathology (relational aggression, $r=.27$, $p<.01$; overt aggression, $r=.28$, $p<.01$).

Positive parenting was negatively correlated with youth-reported psychological control ($r=-.21$, $p<.05$) and relational aggression ($r=-.21$, $p<.05$) and was unrelated to parental psychopathology ($r=-.07$, $p>.10$) or overt aggression ($r=-.10$, $p>.10$). Both parent-reported and youth-reported dysfunctional parenting were correlated with relational aggression ($r=.20$, $r=.21$ respectively, both $p<.05$) and overt aggression ($r=.18$, $p<.05$; $r=.28$ $p<.01$, respectively). Parent-reported and youth-reported dysfunctional parenting were also correlated with youth-reported psychological control ($r=.26$, $p<.01$; $r=.47$, $p<.001$, respectively) and parent-reported psychological control ($r=.46$, $p<.001$; $r=.21$, $p<.05$, respectively). Gender (coded as 0=boys and

1=girls) was not correlated with any of the variables except overt aggression (r=-.25, p<.01), suggesting that boys exhibited higher rates of overt aggression. Age was not correlated with any of the study variables except youth-reported dysfunctional parenting (r=.22, p<.05) and parent-reported dysfunctional parenting (r=.36, p<.001) indicating that higher levels of dysfunctional parenting are associated with increased youth age.

Mediation Analysis

Hypothesis 1 states that psychological control will mediate the association between parental psychopathology and youth relational aggression. In order to test this mediation, a series of regressions were performed as indicated by Baron and Kenny (1986). Four conditions must be met for a variable to be considered a mediator. First, the independent variable (parental psychopathology), and the mediator (parental psychological control), must be significantly associated. Second, the mediator (parental psychological control), and the dependent variable (relational aggression) must also be significantly associated. Third, the independent variable (parental psychopathology) and the dependent variable (relational aggression) must be significantly associated. Finally, the association between the independent variable (parental psychopathology), and dependent variable (relational aggression), must no longer be significantly associated when controlling for the mediator (parental psychological control).

Parental psychopathology was not significantly associated with youth-reported psychological control (β=.13, *p*>.10). Youth-reported psychological control was significantly associated with relational aggression (β=.30, *p*<.01). Parental psychopathology was significantly associated with relational aggression (β=.27, *p*<.01), and this association remained significant after controlling for youth-reported psychological control (β=.23 *p*<.01).

Because youth-reported psychological control did not meet all the requirements for mediation, the mediation analysis was conducted again using parent-reported psychological control as the mediator (see Table 2 and Figure 1). The analyses show that the first three conditions for mediation were met. As shown in Figure 1, parental psychopathology significantly predicted psychological control ($\beta = .34$, $p < .001$); psychological control significantly predicted relational aggression ($\beta = .29$, $p < .01$); and parental psychopathology significantly predicted relational aggression ($\beta = .27$, $p < .01$). Finally, the association between psychopathology and relational aggression remained significant, but there was a reduction in the standardized coefficient upon controlling for psychological control ($\beta = .19$, $p<.05$; see Figure 1). A Sobel test was conducted as indicated by Holmbeck (2002), and the results suggest the association between psychopathology and relational aggression is partially mediated by psychological control ($z=2.52$, $p<.05$).

The final part of Hypothesis 1 states that psychological control will mediate the association between parental psychopathology and relational aggression after controlling for overt aggression To test this, the regression analyses for the mediation were repeated with overt aggression entered as an additional step to the regressions with relational aggression as the dependent variable. Overall, psychological control did not mediate the association between parental psychopathology and relational aggression after controlling for overt aggression (see Table 2).

Although the overall mediational model was not significant, the specific regression between psychological control and relational aggression remained significant after controlling for overt aggression ($\beta=.17$ $p<.05$). To further examine the differential associations between psychological control and the two aggression forms, we tested the association between

psychological control and overt aggression, while controlling for relational aggression. Parent-reported psychological control was significantly associated with overt aggression ($\beta = .25$ $p<.05$), but was no longer significantly associated with overt aggression after controlling for relational aggression ($\beta = .10$ $p>.1$).

Moderation Analysis

Hypothesis 2 states that positive parenting will moderate the association between parental psychopathology and relational aggression. A standard linear regression was conducted to test this moderation. Positive parenting and parental psychopathology were centered to avoid problems with multicollinearity. Positive parenting, parental psychopathology, and an interaction term (positive parenting centered by parental psychopathology centered) were entered as the independent variables and relational aggression was entered as the dependent variable. Results are summarized in Table 3. There was a main effect of parental psychopathology on relational aggression ($\beta=.35$, $p<.01$) but the interaction term was not significant ($\beta=.19$, $p>.05$).

The final part of Hypothesis 2 states that positive parenting will moderate the association between parental psychopathology and relational aggression after controlling for overt aggression. To test this, an additional standard regression was conducted with overt aggression entered as the first step, followed by psychopathology, positive parenting, and the interaction term (see Table 3). Controlling for overt aggression did not change the significance of either of the parenting variables or the interaction term.

Effects of Gender

Hypothesis 3 states that both the mediational and moderational analyses will show stronger associations for girls than boys. First, a t-test was conducted to compare rates of

relational aggression across gender. There were no mean-level differences in boys' and girls' rates of relational aggression (t=.29; p>.10).

To test the interactive effects of gender on the mediational model, a regression was conducted with psychological control and gender entered as the first step. A two way interaction was then computed by multiplying psychological control (centered) by gender. In step two, psychological control, gender, and the interaction term, psychological control (centered) X gender, were entered as the independent variables. Relational aggression was entered as the dependent variable. Gender had no main effects and the interaction term was not significant (p>.1).

To test any interactive effects of gender on the moderational analysis, an additional regression was conducted with positive parenting, parental psychopathology, and gender entered as the first step. In the second step of the regression, the main variables, positive parenting, parental psychopathology, and gender, were re-entered in addition to two interaction terms, parental psychopathology (centered) X gender, and positive parenting (centered) X gender. Finally, a three way interaction was computed by multiplying positive parenting (centered) by parental psychopathology (centered) by gender. In the third step of the regression, positive parenting, parental psychopathology, gender, positive parenting X gender, parental psychopathology X gender, and positive parenting X parental psychopathology X gender, were entered as the independent variables. Relational aggression was entered as the dependent variable. The two way interaction, parental psychopathology X gender, was significant (β= -.52, p<.001; see Table 4), while the other two way interaction, positive parenting X gender, and the three way interaction, positive parenting X parental psychopathology X gender, were not significant. Post hoc analyses were conducted as indicated by Holmbeck (2002) and indicated

that the association between parental psychopathology and relational aggression was significant only for boys (males β=.70, $p<.001$; females β=.08; $p>.10$).

Supplemental Analyses

The mediation model from Hypothesis 1 was tested a second time with parent-reported dysfunctional parenting (a composite of inconsistent parenting, poor monitoring/supervision, and corporal punishment) as the mediator in order to examine whether dysfunctional parenting mediated the association between parental psychopathology and relational aggression. The overall mediation was not significant, but dysfunctional parenting was significantly associated with relational aggression (β= .20 $p<.05$). To further test this specific association, we ran an additional regression between dysfunctional parenting and relational aggression while controlling for overt aggression. Contrary to the association between psychological control and relational aggression, the association between dysfunctional parenting and relational aggression was no longer significant after controlling for overt aggression (β= .10, $p>.10$). These analyses were repeated with youth-reported dysfunctional parenting, demonstrating the same pattern of results.

Discussion

Mediation Analysis

The current study expanded on past research by integrating two distinct literatures. We evaluated research examining the association between parental psychological control and youth relational aggression. Additionally, we reviewed previous findings on the mediating role of poor parenting strategies in the association between parental psychopathology and youth problem behaviors. Considering these two literatures together, we formulated a hypothesis on parental psychological control mediating the association between parental psychopathology and youth

relational aggression. The results demonstrated that psychological control partially mediates the association between parental psychopathology and relational aggression. This finding suggests that parental psychopathology may be associated with relational aggression, but it is primarily the psychologically controlling strategies used by parents with psychopathology that are influencing the youth's relational aggression. These findings are consistent with previous studies demonstrating a mediating effect of poor parenting strategies on the association between parental psychopathology and youth problem behaviors (e.g. Davies & Windle, 1997). However, this study is the first to demonstrate this mediation with relational aggression as the youth problem behavior.

Furthermore, the other bivariate associations within the mediation also contribute to the current literature on parenting and relational aggression. Psychological control and youth relational aggression were positively significantly associated, consistent with past research (Nelson et al., 2006*;* Yu & Gamble, 2008). Some researchers have argued psychologically controlling parents may be modeling relationally aggressive behaviors to their children (Kuppens et al., 2009a). More specifically, as psychologically controlling parents manipulate the parent-child relationship to obtain goals, relationally aggressive youth learn to manipulate peer relationships to obtain goals (Nelson & Crick, 2002). Future studies should continue to explore the mechanisms through which psychological control is associated with youth relational aggression.

Additionally, parental psychopathology was significantly associated with psychological control, similar to previous studies (e.g. Rutter, 1990). It is plausible parents with psychopathology engage in ineffective parenting strategies because of the undue stress of the mental illness (Berg-Nielsen et al., 2002). Parental psychopathology was also significantly

associated with relational aggression. This particular association has been vastly neglected in the literature (but see Park et al., 2005, for an exception). As our results showed only partial mediation by psychological control in the association between parental psychopathology and relational aggression, it would be of interest for future studies to explore other variables that may be contributing to this relationship.

Analyses Controlling for Overt Aggression

Similar to past research (e.g. Smith et al., 2009) relational and overt aggression were significantly positively correlated in this study (r =.54). Thus, analyses were conducted controlling for overt aggression in order to determine whether the relationship between the parenting variables and relational aggression stayed the same. Overall, psychological control did not mediate the association between parental psychopathology and relational aggression after controlling for overt aggression. These findings may be better understood by examining the results of the individual regressions. Parental psychopathology was no longer associated with relational aggression after controlling for overt aggression. It is probable that parental psychopathology influences a broad range of externalizing problems rather than one specific aggression form (Mun et al., 2001). Conversely, psychological control remained significantly associated with relational aggression after controlling for overt aggression, consistent with the findings of Loukas, Paulos, and Robinson (2005). However, according to a recent meta-analysis by Kawabata et al. (2011), studies examining the association between psychological control and relational aggression have largely neglected to control for overt aggression. Our results are one of the first to demonstrate psychological control remains significantly associated with relational aggression above and beyond overt aggression.

Psychological control was also significantly associated with overt aggression, consistent with previous studies (e.g. Leadbeater et al., 2008; Yu & Gamble, 2008). However, this association was no longer significant after controlling for relational aggression. These findings further support the differential association between psychological control and relational aggression and emphasize the importance of accounting for the shared variance between relational and overt aggression. Overall, our results indicate, despite the high correlation between relational and overt aggression, psychological control is uniquely associated with relational aggression.

Psychological control may be associated with relational aggression because this specific parenting strategy parallels relational aggression with its similar goal-directed behaviors (Nelson & Crick, 2002). Another possibility is that these significant associations are simply tapping into a broader array of poor parenting strategies that are equally important in influencing relational aggression. To test the latter explanation, we conducted an additional set of regressions examining the mediating role of dysfunctional parenting (a composite of corporal punishment, poor monitoring/supervision, and inconsistency) on the association between parental psychopathology and relational aggression. The overall mediation was not significant, specifically because dysfunctional parenting was not associated with parental psychopathology. It is possible this association did not reach significance because of the restricted range of parental psychopathology in our non-clinical sample. Examining the specific associations within the mediation, dysfunctional parenting was significantly associated with relational aggression. However, unlike psychological control, dysfunctional parenting was no longer significantly associated with relational aggression when controlling for overt aggression. These findings are consistent with the theory of "specialized associations" (Kuppens et al., 2009a), which states that

specific parenting strategies are associated to specific youth behavior problems (i.e. corporal punishment uniquely predicts overt aggression, psychological control uniquely predicts relational aggression). Future studies should continue to investigate other possible factors associated with relational aggression independent of overt aggression.

Moderation Analysis

This study also examined the potential moderating effects of positive parenting on the association between parental psychopathology and youth relational aggression. Positive parenting was significantly negatively correlated with relational aggression (r=-.21), consistent with Kawabata's recent meta-analysis (2011). However, positive parenting did not moderate the relationship between parental psychopathology and relational aggression. It is possible positive parenting alone may not be sufficient to buffer the effects of parental psychopathology. Rather, a combination of positive parenting as well as appropriate discipline, such as limit setting, may be necessary to attenuate the effects of parental psychopathology (Middleton et al., 2009). Additionally, this study was the first to specifically examine relational aggression within this moderational model. Additional studies may be needed to replicate these analyses and decipher the role of positive parenting on relational aggression in the presence of parental psychopathology.

Of relevance, our mediation model (see Figure 1) suggests parental psychopathology is still associated with relational aggression after controlling for psychological control. Together, these findings provide evidence that parental psychopathology is partially associated with relational aggression independent of any parenting strategies, positive or negative. There are other mechanisms besides parenting strategies that may help explain the association between

parental psychopathology and relational aggression. For instance, marital discord is often studied in the context of parental psychopathology as it frequently occurs in couples with a depressed spouse (Gotlib & Hooley, 1988). Marital conflict has also been linked to youth overt and relational aggression (Hart et al., 1988). Future studies should continue to explore other genetic or environmental mechanisms, beyond parenting strategies, through which parental psychopathology is associated with youth externalizing problems.

Effects of Gender

Gender was correlated with overt aggression, indicating boys exhibited higher rates of overt aggression than girls. This is consistent with much of the previous literature on overt aggression (e.g. Burton, Hafetz, & Henninger, 2007). Gender was not correlated with relational aggression and there were no mean-level differences in relational aggression across boys and girls. These results are consistent with previous studies finding similar rates of relational aggression across boys and girls (e.g. Card et al., 2008). Although relational aggression is often conceptualized as the "female-form" of aggression (Crick & Grotpeter, 1995), many studies do not find that girls exhibit greater rates of relational aggression than boys (Burton et al., 2007). However, girls do tend to exhibit greater rates of relational aggression compared to their rates of physical aggression (Prinstein et al., 2001).

The two way interaction of gender by psychological control was not significant. These findings suggest that psychological control is associated with relational aggression similarly across genders in this study. Also relevant, gender was not correlated with psychological control, indicating that parents use psychologically controlling strategies equally across sons and daughters. With similar rates of exposure, boys and girls may be equally susceptible to the

negative influences of psychological control. This is inconsistent with recent studies finding that psychological control, although implemented equally across genders, was associated with relational aggression only for girls (Nelson & Crick, 2002). However, Nelson and Crick also examined mothers and fathers separately, specifically finding psychological control was associated with relational aggression only for the father-daughter dyad. Our sample consisted of majority mothers (85.5%), and thus, no comparisons across mothers and fathers were made. Future studies should further examine the relationship between psychological control and relational aggression across the four dyads.

The two-way interaction of gender by parental psychopathology was significant. Post-hoc analyses revealed that parental psychopathology was significantly associated only with boys' relational aggression. There are a couple of explanations for these gender differences. One possible explanation is that an overall diminished parent-child relationship has more detrimental effects on boys. This phenomenon has been demonstrated across various measures of parenting that may negatively impact the parent-child relationship. For example, coercive control is more often associated with boys' physical and relational aggression than girls' physical and relational aggression (e.g. Fagot & Leve, 1998; Li, Putallaz, & Su, 2011). Marital conflict has demonstrated similar gender-specific youth outcomes (Li et al., 2011). Finally, maternal unresponsiveness (Shaw, Keenan, & Vondra, 1994) and general parental psychopathology (Walker, Downey, & Bergman, 1989) have demonstrated to predict externalizing problems only in boys. Further research is needed to determine why boys may be more vulnerable than girls to the deleterious effects of a poor parent-child relationship.

Another explanation for these gender differences concerns the gender non-normative nature of relational aggression for boys. While overt aggression is viewed as atypical for

females, relational aggression is often perceived as atypical for males (Crick, 1997). As such, Crick (1997) found youth who engage in gender incongruent behaviors (females using overt aggression and males using relational aggression) display significantly more adjustment problems compared to youth who use gender normative aggressive behavior or non aggressive behavior. Similarly, Rose, Swenson, and Waller (2004) conducted a longitudinal study, finding initial relational aggression predicted later popularity for adolescent girls but not for adolescent boys. These results indicate relational aggression is more maladaptive for boys compared to girls. Although the present study did not similarly measure outcomes of youth relational aggression per se, the cross-sectional design does not indicate the direction of effects. That is, youth relational aggression may be reciprocally influencing parents. Specifically, this gender non-normative relational aggression exhibited by boys may elicit psychological distress in the parents, whereas girls' gender normative relational aggression does not. Importantly though, the findings of Crick (1997) and Rose et al. (2004) directly contradict other recent studies that have found relational aggression is associated with greater adjustment problems for girls (e.g. Storch et al., 2004). Therefore, additional studies are needed to disentangle the differential correlates of relational aggression by gender.

Limitations and Implications

The current study is not without a few limitations. First, there were some discrepancies across parent and youth reports of psychological control. Specifically, psychological control mediated the association between parental psychopathology and relational aggression; however this mediation was only significant for parent-reported psychological control. These significant findings may be in part due to shared method variance, as parent-reported parental

psychopathology was only associated with parent-reported psychological control but not with youth-reported psychological control.

Additionally, the current study relied on a volunteer-based community sample. Therefore, the findings may not generalize to more at-risk samples, such as detained youth. Furthermore, our range of symptoms and behaviors were restricted given the non-clinical sample. Future studies may see more pronounced associations within a clinical sample.

Finally, our study featured a cross-sectional design, thus limiting the conclusions we can draw on the direction of effects as well as the long term consequences of relational aggression. Although the various parenting factors are often discussed as antecedents to relational aggression, it is plausible that youth engaging in relationally aggressive behavior may reciprocally invoke aversively controlling strategies in the parent. Future studies should use longitudinal designs to help delineate the direction of effects and further examine the long-term consequences of this coercive cycle.

Despite these limitations, the findings of this study provide evidence that psychological control is a pertinent mechanism through which parental psychopathology is associated with relational aggression. Such findings have implications for behavioral interventions, indicating it may be most practical to target parents' psychologically controlling strategies when the goal is to reduce youth relational aggression. Additionally, our results suggest parental psychopathology still has some effects on youth relational aggression, independent of any parenting strategies. Results also demonstrate that psychological control is a specific parenting strategy significantly associated with relational aggression above and beyond overt aggression. Conversely, dysfunctional parenting is not associated with relational aggression after controlling for overt

aggression. These findings illustrate the complexity of the relationships between parenting and youth relational aggression and the importance of continuing to study these associations in the context of overt aggression.

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Appendix

Table 1

Means, Standard Deviations, and Correlations of Main Study Variables

	1	2	3	4	5	6	7	8	9	M	SD
1. Relational Aggression C										6.86	5.78
2. Overt Aggression C	.54***									6.61	7.42
3. Psychopathology P	.27**	.28**								.44	.46
4. Positive Parenting Y	-.21*	-.10	-.07							53.92	15.34
5. Psyc Control Y	.30**	.26**	.13	-.21*						8.49	6.23
6. Psyc Control P	.29**	.25**	.34***	-.03	.25**					44.70	19.42
7. Dys Parenting Y	.21*	.28**	-.02	.08	.47***	.21*				17.28	9.13
8. Dys Parenting P	.20*	.18*	.16	.03	.26**	.46***	.48***			12.64	6.28
9. Youth Gender	-.03	-.25**	.07	-.03	.00	-.04	-.12	-.09		--	--
10. Youth Age	-.05	-.05	-.13	-.08	.08	-.11	.22*	.36***	.01	13.50	2.18

Note: C=composite of youth and parent-report using highest item level scores; P= parent-report; Y= youth-report; Dys=Dysfunctional; Gender is coded as 0 = boys and 1 = girls.
**p<.05; **p<.01; ***p<.001*

Figure 1

Psychological Control Mediates the Association between Parental Psychopathology and Relational Aggression

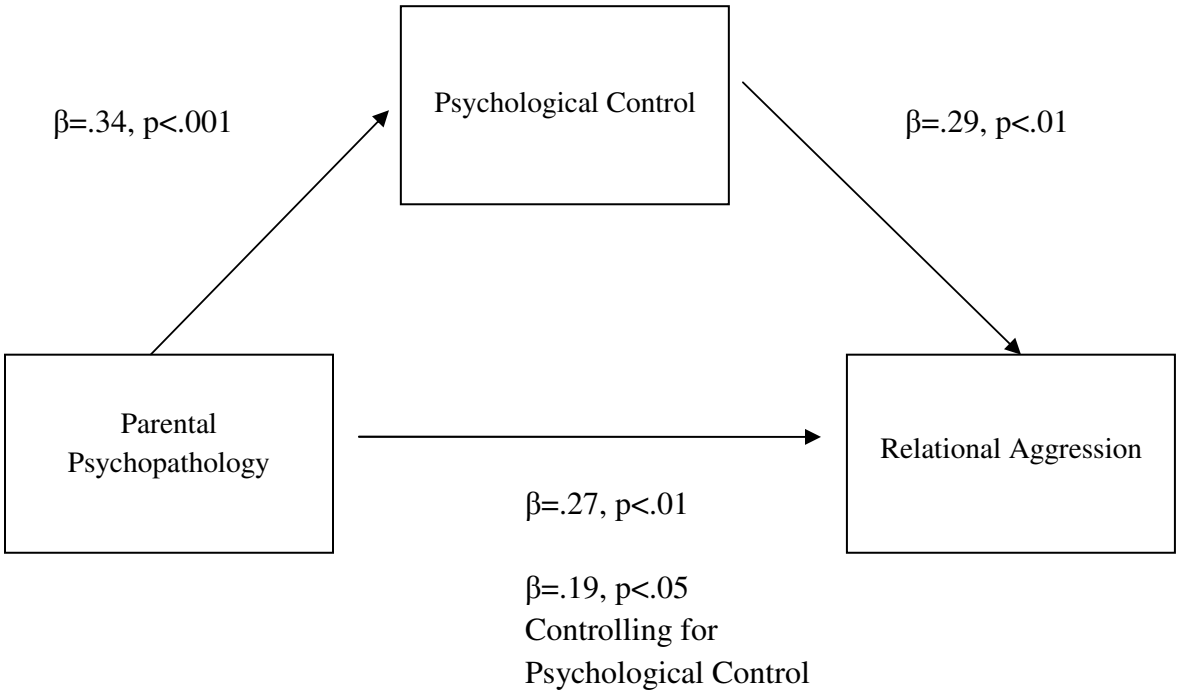

Table 2

Mediating Role of Parent-Reported Psychological Control in the Association between Parental Psychopathology and Relational Aggression

	Model R^2	*t*	*p*	β
Dependent: Relational Aggression				
Model 1				
Psychological Control	.115*	2.40	.018	.224
Parental Psychopathology		2.04	.044	.190
Model 2				
Overt Aggression	.322***	5.90	<.001	.481
Psychological Control		1.70	.093	.141
Parental Psychopathology		.975	.332	.082

Note: *p<.05; ***p<.001

Table 3

Moderating Role of Positive Parenting in the Association between Parental Psychopathology and Relational Aggression

	Model R^2	*t*	*p*	β	semi-partial
Dependent: Relational Aggression					
Model 1					
Psychopathology (GSI)	.14**	3.5	.001	.35	.31
Positive Parenting		-1.8	.080	-.16	-.16
GSI x Positive Parenting		1.9	.066	.19	.17
Model 2					
Overt Aggression	.36*	5.9	<.001	.48	.46
Psychopathology (GSI)		2.3	.026	.21	.18
Positive Parenting		-1.6	.108	-.13	-.13
GSI x Positive Parenting		1.9	.064	.17	.15

Note: GSI = Global severity index on the Brief Symptom Inventory; **p<.01; *p<.05

Table 4

Moderating Role of Gender in the Association between Parental Psychopathology and Relational Aggression

	Model R^2	*t*	*p*	β	semi-partial
Dependent: Relational Aggression					
Psychopathology (GSI)	.155***	4.5	<.001	.70	.39
Gender		-.62	.534	-.05	-.05
GSI x Gender		-3.3	.001	-.52	-.29

Note: GSI = Global severity index on the Brief Symptom Inventory; gender coded as '0'=Males, '1'=Females; ***p<.001

Vita

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