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Early parenting and children's relational and physical aggression in the preschool and home contexts

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Abstract: This study investigated early parent- child relationships and how children's use of relational and physical aggression varies with aspects of those relationships during the preschool years. Specifically, parenting styles, parents' use of psychological control, and parents' report of their children's reunion behaviors were assessed. Analyses revealed significant associations between children's use of both relational and physical aggression and parents' reports of their own and their partner's parenting style, psychological control behaviors, and indicators of the attachment relationship. The results highlight the importance of investigating both mothers' and fathers' parenting and the sex of the child in studies of potential links between parenting behaviors and young children's relational and physical aggression. Findings were considered in the context of each perspective and suggestions for future research and implications for intervention and prevention are discussed.

Keywords: Relational aggression; Physical aggression; Parent-child relationship; Parenting styles; Sex differences; Early childhood

l. Introduction

Researchers have long known the importance of early childhood aggression in the prediction of future social-psychological adjustment problems (Berkowitz, 1993; Parker & Asher, 1987). As a result, there has been much work dedicated to the understanding of factors that are associated with the etiology of aggressive behavior (Coie & Dodge, 1998; Dishion, French, & Patterson, 1995). Although a substantial amount has been learned from work in this area, a more complete understanding of aggression has been delayed because historically attention was directed solely at physical forms of aggressive behavior (Block, 1983; Parke & Slaby, 1983), a form of aggression more characteristic of boys than girls (Crick & Grotpeter, 1995).

More recently, researchers have begun examining a form of aggression called relational aggression. In contrast to physical aggression, which harms others through physical damage or the threat of such damage (e.g., pushing, hitting, and threatening to beat up a peer), relational aggression harms through damage to relationships (e.g., using social exclusion or rumor spreading as a form of retaliation). As a result of this conceptualization, our understanding of the various ways in which children, both boys and girls, can aggress towards one another has been broadened. It is not surprising that sex differences in aggression exist given the sex and gender segregated nature of boys' and girls' play groups during early childhood. Crick & Grotpeter (1995) have argued that, when attempting to inflict harm on others (i.e., aggressing), children do so in ways that are most likely to thwart or damage the social goals of the target. As a result, boys are likely to use physical forms of aggression that hinder the instrumentally oriented dominance goals that tend to be characteristic of boys (Block, 1983). In contrast, Crick & Grotpeter (1995) hypothesized that girls are more likely to use relational forms of aggression because they are effective in hindering the affiliative, intimacy goals that tend to be more typical of girls (Block, 1983).

Studies of relational aggression demonstrate the importance of examining relational aggression when trying to understand children's adjustment difficulties (for a review see Click ct al., 1999). Specifically, studies in this vein have shown that relationally aggressive children are significantly more socially and emotionally maladjusted than their nonrelationally aggressive peers. Studies have found that, in middle childhood, relational aggression is associated with both concurrent and future rejection, and with internalizing and externalizing problems for both boys and girls (Crick, 1996; Crick & Grotpeter, 1995; Crick, Ostrov, & Werner, in press; Rys & Bear, 1997; Zalecki & Hinshaw, 2004). This growing body of work provides evidence that the lack of attention to aggression among girls and forms of aggressive behavior other than physical aggression has greatly impaired our ability to garner a complete

understanding of aggressive behavior and associated aspects of adjustment (i.e., social-psychological functioning) among children. While the association between relational aggression and adjustment seems fairly robust, there is recent evidence to suggest that it is a complex relationship. Specifically, recent work by Nelson, Robinson, & Hart (2005) on peer reports suggests that for some socially skilled preschoolers relational aggression is associated with greater peer status.

Although a great deal of research has been generated recently with respect to relational forms of aggression, a major limitation is the lack of studies focusing on the early childhood period (Crick, Casas, & Ku, 1999). This special issue highlights recent advances being made in this developmental period and underscores the need for more empirical attention to the etiology of relational aggression in order to more fully understand the developmental course and possible outcomes of aggression. Previous studies have shown that by preschool age, relationally aggressive behaviors arc already quite common in peer interactions and that engagement in relational aggression is associated with social-psychological adjustment problems (Bonica, Yeshova, Arnold, Fisher, & Zeljo, 2003; Crick, Casas, & Mosher, 1997; McNeilly-Choque, Hart, Robinson, Nelson, & Olsen, 1996; Ostrov & Keating, 2004; Ostrov, Woods, Jansen, Casas, & Crick, 2004). These studies provide evidence that researchers must look to the early childhood period for a complete understanding of the etiology of relational aggression.

This study explored three perspectives on the parent-child relationship (i.e., parenting styles, psychological control, and attachment theory) that have been implicated in children's use of physical aggression to see if they might also be helpful in understanding the origins of relational aggression as well. The idea that parents play a role in determining their children's behavior is not new (for a review see Maccoby & Martin, 1983). For example, Diana Baumrind (1967, 1971) identified typologies of parenting styles that are differentially associated with various child behaviors, including physical forms of aggression (Hart, Olsen, Robinson, & Mandleco, 1997). This research has found that authoritarian and permissive parenting styles are associated with higher rates of physical aggression in children (e.g., Baumrind, 1967; Maccoby & Martin, 1983; Rubin, Stewart, & Chen, 1995). The precise connections between these styles of parenting and physical aggression have not been clearly delineated. It has been suggested that authoritarian parents who use power assertive behaviors (e.g., corporal punishment) towards their children may teach their children that physically aggressive behaviors are acceptable when interacting with others (Hart DeWolf, Wozniak, & Burts, 1992). Conversely, permissive parents may unwittingly communicate to their children that physically aggressive behaviors are acceptable by not punishing their child when the child physically aggresses towards others. In support of this premise, work by Olweus (1980) has found that relative to a variety of other commonly studied parenting factors, maternal permissiveness of aggression was the best predictor of actual childhood physical aggression. Cross-cultural work by Hart, Nelson, Robinson, Olsen, & McNeilly-Choque (1998), investigating dimensions of parenting styles and relational aggression with preschool samples in Russia, found that maternal and paternal coercion and maternal lack of responsiveness were associated with relational aggression. The present study sought to examine whether there are similar links between such parenting styles and relational and physical aggression for children in the United States.

Work on parenting styles has also shown that authoritarian parents' use of power assertive techniques (e.g., physical punishment, threats, belittling statements) is often interpreted as signs of parental rejection by their children. Moreover, these power-assertive techniques are detrimental because they model aversive behaviors as an effective way of resolving conflict with others (Hart et al., 1992). It has been shown that power assertive techniques are associated with physically aggressive behavior by children towards their peers (Olweus, 1980). What about relational aggression? Some punitive parenting behaviors may be relationally aggressive in nature (e.g., love withdrawal). If a child is frequently exposed to these

parenting behaviors, the child might begin to use these same sorts of behaviors in their interactions with peers (Laible, Carlo, Torquati, & Ontai, 2004). Evidence to support this hypothesis is available from Grotpeter's (1997) study of boys and girls in middle childhood. They reported that children who were relationally aggressive with their peers were also targets of relational aggression from their parents. Another study by Stocker (2000) found that mother-child hostility and lack of parental monitoring were each positively associated with adolescents' use of relational aggression with their peers. While these studies do not unequivocally demonstrate that there is a relation between parenting behaviors and children's subsequent use of relational aggression in the peer group, the findings suggest that children may learn relationally aggressive behaviors from their parents and transfer these behaviors to their own interactions with peers. The present study explored whether these sorts of connections exist in early childhood. Drawing on the limited past research, it was hypothesized that children who have parents characterized as authoritarian or permissive would be more likely to use relationally aggressive behaviors with their peers than children of parents who show an authoritative parenting style.

Studies of psychological control by parents toward their children have also revealed associations with childhood aggression. Control attempts that encroach upon the psychological and emotional development of a child via the manipulation and exploitation of the parent-child bond have been labeled as psychological control behavior (Barber, 1996). Psychological control is an insidious type of control that includes behaviors such as love withdrawal, guilt induction, negative affect-laden expressions such as disappointment and shame, and excessive possessiveness or protectiveness (Barber, 1996; Becker, 1964). Although a few studies have looked at psychological control and childhood aggression, this research has primarily examined links to physical aggression only (for a review see Hart et al., 1998; MacKinnon-Lewis, Volling, Lamb, Dechman, Rabiner, & Curtner, 1994). The work in this area has yielded significant associations between physical aggression and parenting behaviors that are similar to those embodied within the construct of psychological control (for a review see Hart et al., 1998; MacKinnon-Lewis et al., 1994). Studies of psychological control and relational aggression are limited and the emerging evidence has not yielded a clear picture. Hart et al. (1998) and Olsen, Yang, Hart, Robinson, Wu, Nelson et al. (2002) found that maternal psychological control was related to physical forms of aggression but not to relational aggression and that paternal aggression was unrelated to either form of aggression. Conversely, Yang, Hart, Nelson, Porter, Olsen, Robinson et al. (2004; as cited in Nelson & Crick, 2002) reported links between maternal and paternal psychological control and relational aggression for girls in a sample of Chinese preschoolers. Finally, Nelson & Crick (2002) found that parental psychological control was associated with relational aggression in a sample of third grade girls.

Although the links between relational aggression and parental psychological control have not been firmly established, Nelson and Crick (2002) have argued that several pieces of the psychological control construct closely resemble relationally aggressive strategies. For example, love withdrawal and erratic emotional behavior are two highly salient dimensions of psychological control that have at their core the manipulation of the love relationship. Love withdrawal tactics set a highly conditional tone for the parent-child relationship (e.g., "If you don't behave in the store, Mommy is not going to love you anymore"). Erratic emotional behavior only serves to enhance this control, wherein a parent's feelings suddenly change according to the child's compliance demands. A child in that context may feel as if s/he can do nothing right. This could fuel his/her desire to please their parents, thus making the psychological control more effective. The problems can become compounded if the child takes the lessons learned from these interactions with their parent(s) to their relationships with their peers. Through processes such as these, parental psychological control may come to be predictive of children's acquisition and enaction of relationally aggressive strategies. The present study adds to the evolving literature in this area by examining possible connections in the early childhood period with a U.S. sample. Based on this

reasoning, it was predicted that children whose relationship with their parent(s) was characterized by high levels of psychological control would be likely to engage in relationally aggressive behaviors with their peers.

Another perspective that has proved quite inf01mative for our understanding of the early parent-child relationship and subsequent child aggression is attachment theory. According to attachment theorists, children's attachment behavior that is not met with comfort or reliable support on the part of the parents will often arouse feelings of anger and anxiety on the part of the child (Bowlby, 1973). A child whose parents establish a pattern of being inaccessible and unresponsive will often experience feelings of anger due to the pain and frustration caused by the parents' lack of attention and general unresponsiveness (Rubin et al., 1995). Repeated exposure to a pattern such as this, where parents' behavior with a child proves to be more anger- and anxiety-provoking than comforting, often leads a child to form maladaptive working models of relationships (Bowlby, 1973).

Troy & Sroufe (1987) have proposed that infants who show an insecure-avoidant type of attachment, because their early attachment relationship history is characterized by early parental rejection and emotional unavailability, come to perceive peers as potentially hostile and, as a result, will tend to lash out proactively. The available research has consistently found that children with insecure-avoidant parent-child relationships exhibit more hostility, anger, and physically aggressive behaviors than their securely attached counterparts (LaFreniere & Sroufe, 1985; Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989; Troy & Sroufe, 1987).

Although a substantial amount of evidence linking early attachment relationship history and physical aggression in early childhood exists, there is currently no known research that has investigated children's attachment relationship history in association with relational aggression. In the present study, children who had evidenced anxious-avoidant attachments as infants were expected to exhibit physical aggression because of expectations that others will not be available or caring and that social encounters are quite often not pleasant experiences. We propose that these early negative experiences may lead children to think of themselves as unworthy of care. In essence they may internalize the notion of relationships as being unrewarding and as sources of rejection, beliefs they bring into their encounters with peers. The type of rebuffing and rejection experienced by the child early in life may be pivotal in the type of peer relationships that develop later. If the child's experience of rejection is mostly physical in nature, then it is possible that their subsequent behavior will include expressions of physical aggression. If, on the other hand, they are rebuffed mostly in relational ways then it may be more likely that the child will use relationally aggressive strategies in their own encounters with peers. Although this hypothesis is untested at this point, there is evidence that shows young children learn how to be aggressive from their parents. Renken et al. (1989) found that the attachment relationship was "predictive of aggression (in boys) even though it is assessed before aggression is even a part of the child's behavioral repertoire" (p. 275). In other words, the rejecting behavior on the part of the parent precedes aggression on the part of the child. This research suggests that there might be a connection between young children's earliest experiences in their attachment relationship and their subsequent engagement in aggressive behavior. It is also possible that this connection may also be the result of a general hostility that is engendered in the child as a result of the negative experiences in their relationship with their parent(s). This hostility, which can be brought to the peer arena, may be the underlying force that drives the negative interactions with peers and its expression may be a function of the aggression type that the child learns is most effective within their peer group (Crick & Grotpeter, 1995).

Attachment studies have also reported findings that speak to the sex differences frequently found with respect to form of aggression. Specifically, it has been most commonly found that boys with anxious-

avoidant attachment relationships exhibit relatively hostile, antisocial behavior; for the most part this relationship does not hold for girls (LaFreniere & Sroufe, 1985). However, researchers have looked only at physical forms of aggression. That is, links between types of attachment relationships and aggression might be obtained for girls if relational aggression is examined in addition to physical aggression. In fact, LaFreniere & Sroufe (1985) found that anxious-avoidant girls rivaled securely attached girls with respect to assertive behavior, with an important exception being that anxious-avoidant girls expressed their assertiveness in more negative ways and were thus more likely to be rejected by their classmates. Although it is not clear what was meant by negative assertion in this study, some of these behaviors may be similar to relationally aggressive behaviors, which are also associated with rejection by peers in early childhood (Crick et al., 1997). As discussed previously, there is no known existing literature that examined relational aggression and attachment relationship type; therefore this portion of the study was considered exploratory and no a priori hypotheses were made.

In sum, the primary goals of the present study were to examine the different parenting perspectives outlined above to see if they provide insight into preschoolers' use of relational aggression. In addition to potentially extending our understanding of relational aggression, the present study also aimed to provide additional information about aggression by systematically attending to the role of both child and parent sex. Work on parental discipline highlights the value of this sort of approach where both sex of parent and sex of child are considered. Kerr, Lopez, Olson, & Sameroff(2004) in their study on parental discipline found that different developmental processes are associated with externalizing difficulties in boys and girls and that information about fathers adds to our understanding of the etiology of problem behavior. Past studies of childhood aggression have tended to ignore both of these factors, tending to focus on mothers and boys (Crick, 2003). Recently however, investigators have argued for the importance of looking at both mothers and fathers, as well as both boys and girls (Maccoby, 2003). This approach was taken in the present research.

2. Method

2.1. Participants

Parents from 122 families (119 mothers and 85 fathers) and 23 teachers participated in the study. There were 43% male and 57% female (52 boys and 70 girls) children. The children's ethnic breakdown was 87% Anglo American, 9% Asian American, and 4% 'other' ethnicities. Children ranged in age from 2 years, 6 months to 5 years, 10 months *(M* = 51 months, *SD* = 9 months). The participants were primarily middle to upper middle-income families (median annual household income= $60-75K; Range= "0-5K" to "90K or greater"). The participants were recruited from four preschools in two large Midwestern cities. A letter describing the project was sent home to all parents in the participating preschools who had a child age 3-5 years enrolled in the program. While recruiting fathers for this project was a high priority, and they did participate at relatively high levels, many still opted not to participate and the final sample reflects a lower level of father participation relative to mothers.

2.2. Procedures

Each of the participating parents was given a packet of instruments by one of the researchers to complete at home. As an incentive, all of the parents who completed a packet had their name entered into a drawing for a prize (i.e., a Target store gift certificate).

All of the teachers of the participating children completed a rating form that asked the teacher to provide an impression of each participating child's social behavior. Participating teachers were thanked with a Target store gift certificate.

2.3. Measures

2.3.1. Teacher assessment of aggression

A teacher rating measure, the Preschool Social Behavior Scale (Cricket al., 1997), was used to assess children's relational aggression (6 items; e.g., "This child tells others not to play with or be a peer's friend") and physical aggression (6 items, e.g., "This child pushes or shoves other children"). The response scale for each item ranges from 1 ("never or almost never true") to 5 ("always or almost always true") producing a relational aggression score and a physical aggression score that could range from 6 to 30. This measure has been shown to be reliable in past research with Cronbach's alpha of .96 and .94 for the relational aggression and physical aggression scales, respectively (Cricket al., 1997). In the present sample a= .90 for the relational aggression scale and .71 for the physical aggression scale.

2. 3. 2. Parental assessment of aggression

A parent rating measure, the Children's Social Experiences measure (CSE, Crick, Casas et al., 1999; Crick, Werner et al., 1999), was used to assess mothers' and fathers' perceptions of children's relational (2 items; e.g., "Threatens to stop being another child's friend when they are mad at that child") and physical aggression (2 items; e.g., "Hits or kicks other children"). The response scale for each item ranges from 1 ("never true") to 5 ("almost always true"). Children's relational and physical aggression scores are a sum of each parent's responses and therefore range from 2 to 10 for each parent. Although the CSE has a limited number of items, those items parallel the PSBS items with respect to relational and physical aggression.

2.3.3. Parental report of parenting style

Parents also completed the Parenting Practices Questionnaire (PPQ) (Robinson, Mandleco, Olsen, & Hart, 2001). The PPQ yields self-report information from each parent as well as each parent's perceptions of their partners' interactions (when appropriate) with their child. The PPQ is composed of three subscales: An authoritative pattern (27 items; e.g., "Is responsive to our child's feelings or needs"), an authoritarian pattern [1] (20 items; e.g., "Explodes in anger towards our child"), and a permissive pattern (15 items; e.g., "Ignores our child's misbehavior"). The response scale for each item ranges from 1 (never) to 5 (always). Scores for each child on each subscale were computed by summing responses to each item separately for mothers and fathers. This measure has been shown to be reliable in past research with Cronbach's alpha of .91, .86, and .75 for the authoritative, authoritarian, and permissive subscales, respectively (Robinson, Mandleco, Olsen, & Hart, 2001). In the present sample reliabilities for mother self-reports = .83, .80, and .65 for the authoritative, authoritarian, and permissive subscales respectively. For father self-reports a= .85, .72, and .68 for the authoritative, authoritarian, and permissive subscales, respectively.

2.3.4. Parental assessment of psychological control

Parents completed the psychological control scale[2] of the Psychological Control measure (Barber, 1996; Hart et al., 1998; Olsen et al., 2002). This is a self-report measure of each parent's perception of their interactions with their child. The psychological control scale is composed of 7 subscales: erratic emotional behavior (5 items; e.g., "I show erratic emotional behavior around my child"), love withdrawal (5 items; e.g., "I avoid looking at my child when he/she has disappointed me"), guilt induction (12 items; e.g., "I make my child aware of how much I sacrifice or do for him/her"), invalidating feelings (7 items; e.g., "I try to change how my child feels or thinks about things"), personal attacks (7 items; e.g., "I tell my child that he/she is not as good as I was growing up"), directiveness (5 items; e.g., "I tell my child how

he/she should behave"), and constraining verbal expression (3 items; e.g., "I interrupt my child when he/she is speaking"). The response scale for each item ranges from 1 (never) to 5 (always) and is scored by summing each parent's responses for each subscale. This measure has been shown to have favorable psychometric properties in past research (Barber, 2002; Hart & Robinson, unpublished manuscript; Nelson & Crick, 2002). In the present sample reliabilities for mother-reports were .69, .68, .78, .64, .59, .65, and .53 for the erratic emotional behavior, love withdrawal, guilt induction, invalidating feelings, personal attacks, directiveness, and constraining verbal expressions subscales respectively. For father-reports, reliabilities were .66, .66, .79, .60, .72, .68, and .25 for the erratic emotional behavior, love withdrawal, guilt induction, invalidating feelings, personal attacks, directiveness, and constraining verbal expressions subscales respectively. Since the personal attacks (mothers') and constraining verbal expressions (mothers' and fathers') subscales had unacceptable reliabilities (Cronbach's alpha< .60) they were not included in further analyses.

2.3.5. Parental report of child's reunion behaviors[3]

As a proxy for information on the attachment relationship, parents completed the Parent/Child Reunion Inventory (Marcus, 1991). The Parent/Child Reunion Inventory asks parents to report about an everyday separation situation from their child that lasted at least an hour (e.g., while the child is at preschool). Parents are then asked to rate 20 behaviors their children may have shown at the time of reunion. Six of the behavioral items measure "secure attachment" (e.g., "child shows some pleasure at being with the parent") and fourteen of the behavioral items measure "insecure attachment" (e.g., "child moves away from parent"). Each of the behavioral items is rated by the parent as "1 =usually", "2 =occasionally", or "3 =never" occurring. Select items are reverse scored so that higher scores on this measure indicated reunion behaviors characterized as more secure or more insecure. Secure and insecure subscale scores are a sum of each parent's responses and range from 6 to 18 for secure attachment and 14 to 42 for insecure attachment. Scores are computed separately for each parent. The reliability of the secure and insecure subscales has been shown to be adequate, Cronbach' s alpha= . 7 6 and . 77 for the secure and insecure subscales, respectively (Marcus, 1991). In the present sample reliabilities were .55 and . 70 for ratings of secure attachment and insecure attachment to mothers, respectively. For fathers, internal consistency reliabilities were .31 and .67 for secure and insecure attachment respectively. Since the reliability of the secure attachment subscale was not reliable for either mothers' or fathers' reports, (Cronbach's alpha< .60) these secure attachment scores were not included in subsequent analyses.

3. **Results**

3.1. Interinformant correlations

To assess the degree of agreement between informants who rated children's aggressive behaviors, six correlation coefficients were calculated between reports of relational and physical aggression by teachers, mothers, and fathers. The correlations between pairs of informants are presented in Table 1. Significant associations were found between all informants except mother and teacher reports of relational aggression and the correlation between father and teacher reports of relational aggression only approached the level of significance, $p = .06$.

3.2. Descriptive statistics for parent reports of parenting style, psychological control, child's reunion behaviors (attachment) and children's aggression

Means and standard deviations were calculated for mothers' and fathers' reports of their own behaviors and of children's behaviors. Zero order correlations between mothers' and fathers' reports of children's physical and relational aggression and between mothers' and fathers' reports of parenting were computed.

These descriptive statistics are presented in Table 2. As can be seen in Table 2, mothers' and fathers' reports were correlated significantly with one another in all but two instances.

3.3. Associations between parenting style scores and measures of children's relational and physical aggression

The relation between parenting style and aggression was initially assessed through correlational analyses. Analyses were conducted separately by parent sex and child sex and are presented in Table 3. The correlations between parenting styles (as reported by each parent relevant to themselves and reported about their partners) and the child's aggression (as reported by teachers, mothers and fathers) are presented for girls in the left portion of the table and for boys in the right portion of the table. Consistent with expectations, these zero order correlations show that girls' ratings for *relational aggression* by both mothers and fathers were positively correlated with authoritative and permissive parenting styles of mothers and fathers (according to both the parents' own report and often by the report of the partner as well; the teachers' rating of the girls' relational aggression did not correlate significantly with parenting style scores). Furthermore, the correlations between girls' use of *physical aggression* and parenting styles were in the expected direction in that mothers' authoritative parenting was negatively related to daughters' physical aggression according to mothers' self-reports, teachers reports, and father reports about the mothers' parenting.

With respect to associations between boys' aggression and parenting styles, there were fewer associations that reached or approached the level of significance and these were largely limited to physical aggression. Boys' physical aggression seems best predicted by low levels of permissiveness by mothers (as reported by mother themselves and by fathers about the mothers' parenting style). The only significant correlation between parenting style and relational aggression among boys was a positive relationship between mothers' permissive parenting and boys' relational aggression.

Twelve hierarchical regression analyses were then conducted to further evaluate the relationship between parenting styles and physical aggression (see Table 4) and children's relational aggression (reported in Table 5) with scores for girls and for boys analyzed in separate analyses. In each regression analysis, child age was entered at step 1 as a control variable and scores for each of the three parenting styles (authoritarian, permissive and authoritative) were entered simultaneously at step 2. These analyses provide an examination of the relationship between parenting styles and aggression that control both for child age and the variance accounted for by the other parenting styles. Separate regression analyses were conducted using teacher reports, mother's reports, and fathers' reports of child aggression as the dependent variable. Additional regression analyses were not conducted using parent report of partners' parenting styles due to sample size limitations. 4

3.3.1. Mothers' parenting style and children's physical aggression

3.3.1.1. Girls' physical aggression. As reported in Table 3, mother's own report of her authoritative parenting was negatively correlated with reports of the daughter's physical aggression as reported by all three informants, i.e., teachers, mothers, and fathers. A model in which mothers' authoritative parenting predicted teachers' reports of physical aggression for girls approached significance, $F(4, 54)= 2.46$, $p = .056$ (see left portion of Table 4), and the model in which mothers' authoritative parenting predicted girls' physical aggression as reported by fathers was significant, $F(4, 35) = 3.01$, $p < .05$ (see right portion of Table 4); however the beta coefficient only approached the level of significance. In addition, the regression analysis of mothers' permissive parenting style and mothers' reports of girls' physical aggression was also significant, $F(4, 53)= 3.00, p < .05$, indicating that mothers' permissiveness was a

significant positive predictor of girls' physical aggression after variability in physical aggression with child age was taken into account (center portion of Table 4).

3.3.1.2. Boys' physical aggression. As the zero order correlations presented in Table 3 show, the only significant relationship between parenting style and boys' physical aggression was a negative correlation between mothers' self-reported permissive parenting scores and fathers' reports of boys' physical aggression. The correlation between mothers' self-reported permissive parenting and boys' physical aggression also approached significance but the relation was positive, in the opposite direction of the correlation obtained for fathers' aggression reports. The regression analyses, summarized in Table 4, indicated that neither the model in which parenting style predicted fathers' report of physical aggression nor the model in which parenting style predicted mothers' reports of physical aggression was significant, F(4, 28) = 1.61, *p* .199 and F(4, 40) = . 92, *p* = .461 for fathers' report of physical aggression and mothers' reports of physical aggression, respectively (See Table 4).

3.3.2. Mothers' parenting style and children's relational aggression

3.3.2.1. Girls' relational aggression. Recall that the zero order correlations in Table 3 revealed significant relationships between mothers' permissive parenting style and mothers' authoritarian parenting style scores and girls' relational aggression (as rated by mothers). The model examining girls' relational aggression showed that mothers' permissive parenting predicted mothers' reports of girls' relational aggression even after effects due to child age were controlled, F(4, 52)= 3.51, $p < .05$ (see center portion of Table 5).

Based on the zero order correlations that indicated the association between fathers' ratings of girls' relational aggression and maternal permissiveness approached significance, fathers' ratings of girls' relational aggression were regressed on mothers' permissive parenting style scores. The model was not supported, F(4, 35) = *1.56*,*p* = .21 (right portion of Table 5).

Although zero order correlations showed that mothers' reported scores of authoritarian parenting practices were associated with both mothers' and fathers' ratings of girls' relational aggression, regression analyses did not find that mothers' authoritarian parenting styles were significant predictors of either mothers' or fathers' relational aggression reports, F(4, 52)= 3.51, $p < .05$ (model significance attributed to mothers' permissive parenting as discussed above) and F(4, 35) 1.56, *p* = .21 for mothers and fathers respectively (see Table 5).

3. 3. 2. 2. Boys' relational aggression. Zero order correlations indicated that mothers' self-reported permissive parenting style was related to mothers' reports of boys' relational aggression. The regression equation indicated that mothers' permissive parenting scores were predictive of boys' relational aggression (based on mothers' reports) after child age was controlled, F(4, 40) = *2.67*,*p* < .05). However, the beta coefficient for maternal permissive parenting only approached significance (see center portion of Table 5).

3.3.3. Fathers' parenting style and children's physical aggression

3. 3. 3.1. Girls' physical aggression. Fathers' parenting styles were not related to physical aggression scores for girls (see Table 3). There were no significant relationships found through regression analyses.

3.3.3.2. Boys' physical aggression. As can be seen in Table 3, there were no significant correlations between fathers' parenting styles and boys' physical aggression scores as reported by fathers, by mothers, or by teachers. Only one correlation approached the level of significance, the negative relationship between fathers' self-reported authoritative parenting style and mothers' ratings of boys' physical

aggression. However, regression analyses predicting boys' physical aggression revealed no significant association with parenting styles.

3.3.4. Fathers' parenting style and children's relational aggression

3.3.4.1. Girls' relational aggression. Based on the zero order correlations (Table 3) that indicated fathers' authoritarian parenting was positively related to fathers' reports of girls' relational aggression, a model predicting girls' relational aggression from father parenting styles was tested and supported, $F(4, 40) = 2.68, p < .05$ (see right portion of Table 5). The zero order correlation between father's authoritarian parenting and mothers' reports of girls' relational aggression approached significance as well, but the regression analysis did not support the model, $F(4, 38) = 2.02$, p=.ll.

3.3.4.2. Boys' relational aggression. The zero order correlations showed that the relationship between fathers' authoritarian parenting scores and fathers' reports of relational aggression in boys' approached the level of significance (see Table 3). Regression analyses indicated that fathers' authoritarian parenting only approached the level of significance in predicting fathers' reports of boys' relational aggression, $F(4, 30) = 2.26$, $p = .09$.

3.4. Associations between parenting psychological control scores and children's relational and physical aggression

The relation between parental psychological control and children's aggression also was examined through zero order correlational analyses and results are reported in Table 6. These correlations revealed positive associations between mothers' use of each of psychological control strategies and girls' relational aggression. Fathers' self-reported control strategies were often related to girls' relational aggression scores as well. Boys' physical aggression was correlated with both mothers' and fathers' use of psychological control but only fathers' use of love withdrawal was correlated significantly with boys' relational aggression.

Hierarchical regression analyses were conducted, further investigating outcomes of the correlational analyses that indicated significant associations. In each regression analysis, child age was entered at step 1 and psychological control dimensions were simultaneously entered at step 2. These regression analyses enabled the examination of the relationship between psychological control dimensions and aggression while controlling for child age and the variance accounted for by the other psychological control dimensions. As with the correlational analyses, regressions were computed separately by sex of child and sex of parent.

3.4.1. Mothers' psychological control and children's physical aggression

3.4.1.1. Girls' physical aggression. The zero order con-elations showed that girls' physical aggression scores (as reported by fathers) were related to mothers' self-reported use of love withdrawal. Teachers' ratings of girls' physical aggression were con-elated with fathers' self-reported love withdrawal. In addition, the con-elation between mothers' self-reported directiveness and girls' physical aggression approached significance ($p = .054$; See Table 6). When psychological control dimensions were examined simultaneously in a regression analysis, fathers' ratings of girls' physical aggression were significantly predicted by mothers' use of guilt induction, $F(6, 33) = 3.50$, $p < .01$ (see right portion of Table 7). In a similar analysis of mothers' reports of girls' physical aggression, mothers' use of guilt induction was found to be a significant predictor, $F(6, 52) = 2.45$, $p < .05$ (see center portion of Table 7).

3.4.1.2. Boys' physical aggression. As shown in the zero order con-elations (Table 6), boys' mothers' reports of physical aggression were positively related to mothers' erratic emotional behavior and mothers'

use of guilt induction. In addition, mothers' behaviors that invalidate the child's feelings were negatively correlated with teacher reports of boys' physical aggression. Finally, the con-elation between mothers' self-reported invalidating behaviors and mothers' reports of boys' physical aggression also approached significance. Although the bivariate con-elations indicated significant associations, regression analyses (see Table 7) examining these dimensions simultaneously as predictors of mothers' report of boys' physical aggression showed that the model only approached significance, *F(6,* 36) = *1.95,p* = .1 0; mothers' enatic emotional control was the most promising psychological control variable in this analysis. Another model examining teacher reports of physical aggression and mother reports of psychological control strategies was not supported, *F(6,* 31) = *.57,p* = .75 (see Table 7). It is likely that sample size limitations affected the power in these models.

3.4.2. Mothers' psychological control and children's relational aggression

3.4.2.1. Girls' relational aggression. Correlations presented in Table 6 revealed that mothers' reports of girls' relational aggression were related to mothers' self-reported displays of erratic emotions, love withdrawal, guilt induction, invalidating feelings, and directiveness. Somewhat consistent with this pattern, fathers' reports of girls' relational aggression also were correlated with mothers' psychological control through invalidation of feelings and directiveness. Follow-up regression analyses (see center panel of Table 8) indicated that girls' relational aggression was predicted by mothers' love withdrawal and erratic emotional behavior, *F(6,* 52)= 5.11, $p < .001$.

Regression analyses of the girls' relational aggression scores as reported by fathers did not yield a significant model, *F(6,* 33) = 1.56, $p = .19$.

Finally, the bivariate correlational analysis presented in Table 6 indicated that associations between teacher ratings of girls' relational aggression and mothers' self-reported use of guilt induction also approached the level of significance (see left portion of Table 6). A follow-up regression analysis, summarized in the left portion of Table 8, yielded a significant model *F(6,* 53) = 3.22, $p < .01$, that indicated that mothers' use of guilt induction control strategies significantly predicted teachers' ratings of girls' relational aggression once age was controlled.

3.4.2.2. Boys' relational aggression. None of the mother's reported psychological control strategies were related to boys' relational aggression.

3.4.3. Father's psychological control and children's aggression

3.4.3.1. Girls' physical aggression. For girls, teacher reports of girls' physical aggression were positively correlated with fathers' use of love withdrawal (see Table 6). However, when a follow-up regression analysis examined all psychological control dimensions simultaneously, a nonsignificant model emerged. This was the only father psychological control behavior that was correlated to girls' physical aggression scores from any of the three informants.

3.4.3.2. Boys' physical aggression. For boys, the only significant associations between fathers' psychological control strategies and reports of boys' physical aggression were negative correlations between fathers' displays of erratic emotional behavior and boys' physical aggression reported by teachers and by mothers (see Table 6). Follow-up regression analyses, with limited power, yielded no significant findings *[F(7,* 25) = 1.86, $p = .12$] for fathers' psychological control and reports of boys' physical aggression by teachers, *F(7,* 26) = 1.29, $p = .29$.

3.4.4. Fathers' psychological control and relational aggression

3. 4. 4.1. Girls' relational aggression. Significant positive correlations were found for fathers' reports of girls' relational aggression and father's erratic emotional behavior, invalidating feelings, and fathers' self-reported directiveness approached significance as well (see Table 6). Regression analyses considering these variables simultaneously as predictors of girls' relational aggression yielded a model that approached significance, $F(7, 38) = 2.04$, $p = .075$ (see Table 8).

Positive zero order correlations also were obtained for fathers' self-reported use of guilt induction and mothers' reports of girls' relational aggression. Regression analyses yielded a significant model indicating that mothers' reports of girls' relational aggression were significantly predicted by fathers' guilt induction, $F(7, 36) = 2.32$, $p < .05$ (see center portion of Table 8).

3.4.4.2. Boys' relational aggression. For relational aggression, a negative correlation was found between father's use of love withdrawal and teacher reports of boys' relational aggression (see Table 6). Regression analyses did not yield a\ significant model, $F(7, 25) = 1.65$, p .17.

3.5. The relationship of attachment (reunion behaviors) relationship and children's relational and physical aggression

The associations between attachment relationship scores (as reported by the parents) and children's physical and relational aggression ratings were explored through correlational analyses conducted separately by parent sex and child sex. Hierarchical regression analyses were then conducted, where correlational analyses indicated significant associations, to further evaluate the relationship between attachment relationships and aggression. In each regression, child age was entered at step 1 and insecure attachment relationship scores were entered at step 2. As with the correlations all regressions were computed separately by sex of child and sex of parent.

3.5.1. Mothers' reports of insecure attachment and children's physical aggression

3.5.1.1. Girls' physical aggression scores. For girls, physical aggression was positively correlated with insecure attachment relationship scores reported by mothers ($r = .28$, $p < .05$). The regression equation indicated a similar association $\beta = .28$, $p < .026$) but the model only approached significance, $F(2, 61) = 2.99$, $p = .058$, $R^2 = .089$.

3.5.1.2. Boys' physical aggression scores. Maternal reports of boys' insecure attachment behaviors and relational aggression scores were not significantly correlated.

3.5.2. Mothers' reports of insecure attachment and children's relational aggression

3.5.2.1. Girls' relational aggression scores. Mothers' reports of relational aggression and insecure attachment relationship scores were significantly correlated for girls ($r = .41$, $p < .001$). The regression equation indicated a similar association (f?> = .42, $p < .001$) in a significant model, $F(2, 60) = 1\ 0.88$, $p < .001$, $R^2 = .266$.

3.5.2.2. Boys' relational aggression scores. Boys' relational aggression scores and attachment scores were not correlated with insecure attachment relationship scores provided by the mother.

3.5.3. Fathers' reports of insecure attachment and children's aggression

3.5.3.1. Physical aggression. There were no significant correlations found between physical aggression and fathers' reports of insecure attachment behaviors for either boys or girls.

3.5.3.2. Relational aggression. For relational aggression, there was a significant association observed between fathers' reports of insecure attachment behaviors and boys' relational aggression *(r* = .38, *p* < .05). The regression equation indicated a similar association β= *.33,p* = .051) in a significant model, *F(2,* 32) = *3.63,p* < .05, R^2 = .185). There was no correlation between father reports of children's relational aggression and insecure attachment relationships for girls.

4. Discussion

This study provides important information about the early parent-child relationship and its role in the etiology of relational aggression. As expected, the pattern of findings varied by the specific dimensions of the parent-child relationship being assessed, the context (i.e., home or preschool), and the sex of the child and parent.

The analyses examining interinformant agreement about relational and physical aggression indicate that researchers need to be cautious when designing studies and determining who will provide information about children's social behavior. While parents and teachers agreed with one another to a large extent about children's physical aggression, there was much less agreement between the home and school settings with respect to relational aggression (particularly between mothers and teachers). This lack of congruence between parents and teachers for relationally aggressive behaviors is consistent with a previous study by Simon (2002), which found little correspondence between parents and teachers in evaluating relationally aggressive children's psychosocial adjustment difficulties.

The associations between parenting styles and relational aggression were consistent with the hypotheses. Specifically, the correlational analyses indicated that mothers' and fathers' authoritarian and permissive parenting were positively related to children's relational aggression. The sex composition of the parent-child dyad appears to be important in understanding the pattern of relationship between parenting styles and aggression, at least in these young children aged about 2 112-6 years. For boys, mother's permissive parenting and fathers' authoritarian parenting were associated with relational aggression. For girls, authoritarian styles of both parents and permissive parenting by mothers were associated with relational aggression. These findings held for both mothers' self-reports of parenting and fathers' reports of mothers' parenting. These results are consistent with the findings of Hart et al. (1998) who found, with a Russian sample, that maternal coercion was associated with relational aggression for girls.

The only significant finding obtained for mothers' authoritarian or permissive parenting style and physical aggression for girls was between permissive parenting and mother report of girls' physical aggression. However, mothers' authoritative parenting was negatively associated with mother-, father-, and teacher-reports of girls' physical aggression. This finding is consistent with previous work indicating that authoritative parenting is associated with less physically aggressive behavior by children (Hinde, Tamplin, & Barrett, 1993). The findings were mixed for boys.

Results indicated that mothers' permissive parenting was negatively correlated with father-reports of physical aggression but positively correlated with mothers' reports of physical aggression. Mother- and father-reports of physical aggression come from their observations within the same context (i.e., home) and thus may indicate that mothers and fathers are thinking about children's aggression in different ways. It is possible that mothers perseverate on children's physical aggression, perhaps concerned that this behavior will generalize to interactions with peers at school, while fathers may consider physically aggressive behaviors, at least in part, as "boys being boys"; behaviors that they will eventually outgrow. This hypothesis is consistent with past work showing that mothers tend to rate children's aggressive behaviors more highly than do fathers (Maselli, Brown, & Veaco, 1984). Conversely, ratings of physical

aggression by parents may differ because they are spending different amounts of time with the child and are therefore more or less aware of their problematic behavior (Fitzgerald, Zucker, Maguin, & Reider, 1994).

As hypothesized, children whose parents report using psychological control frequently were more likely to behave in relationally and physically aggressive ways. Again, the sex of child and parent proved to be important. For girls, findings are consistent with previous studies that have reported a relationship between parental psychological control (both maternal and paternal) and relational aggression (Nelson & Crick, 2002; Yang, Hart, Nelson, Porter, Olsen, Robinson et al., 2004). The finding that fathers' use of psychological control and girls' relational aggression were related is particularly noteworthy. These findings add to the growing empirical evidence that fathers play an important role in their daughters' lives (Biller & Kimpton, 1997) and in child maladjustment in general (Phares, 1997; Phares & Compas, 1992). While the exact nature and mode of transmission of this parental influence are unclear, it is possible that parents' use of psychological control tactics (e.g., love withdrawal, guilt induction) serves as a primer that makes children more likely to use relational aggression in their peer relationships. Future research will have to more clearly delineate these pathways and should also consider the impact on children's social psychological adjustment. It would seem likely that outcomes would be worse for those children who experience psychological control tactics within the parent-child relationship and who are relationally victimized within the peer context as well. It is worth noting however that for boys, maternal psychological control was not associated with relational aggression; however, paternal psychological control (specifically, love withdrawal) was related to relational aggression but in the negative direction. The reasons for these findings are not clear. However, research has shown that a father who is controlling in parent-child interactions constrains positive interaction and in turn limits the child's ability to gain knowledge of effective social skills (Biller & Kimpton, 1997). Additionally, it is possible that this sort of relationship, in addition to hampering positive social skills, may also foster hostility on the part of the child which gets expressed in sex nonnative ways (i.e., physical not relational aggression for boys). More studies are needed to test this hypothesis, especially in light of the counter-intuitive findings obtained in this study.

With respect to the relationship between parental psychological control and children's physical aggression, findings from this study are somewhat consistent with past research (Hart et al., 1998). Specifically, maternal psychological control was positively associated with both girls' and boys' physical aggression. Here the sex of parent and child continued to emerge as important factors as paternal psychological control was positively associated with physical aggression for girls but negatively associated with physical aggression for boys. These findings for girls again point to the centrality that both mother-daughter and father-daughter relationships should play in future studies for our complete understanding of girls' adjustment. For boys, the picture is less clear. One possible explanation involves findings from a study by Mills & Rubin (1998) that found that mothers who were psychologically controlling were more likely to have children who are behaviorally withdrawn. These findings, assuming that a similar relationship might hold for fathers, may explain why we see that paternal psychological control is negatively associated with both relational and physical aggression for boys.

In a clear extension of previous work, exploratory analyses looking at children's insecure attachment relationship with their mother and engagement in relational aggression yielded findings indicating that relationally aggressive girls, but not boys, were more likely to have an insecure attachment relationship with their mother. Conversely, analyses indicated that children's relational aggression was significantly associated with having an insecure attachment relationship with their father for boys but not for girls. These findings are the first of their kind indicating a relation between children's attachment relationship

with their parent and relational aggression. They are very intriguing but at this point they remain tentative and await future replication.

As for physical aggression, findings indicated that boys' physical aggression was not significantly correlated with having an insecure attachment relationship with either their mother or father. For girls however, having an insecure attachment relationship with their mother, but not their father, was associated with being physically aggressive. These findings are inconsistent with past research that has found insecure attachment relationships to be associated with physical aggression for both boys and girls (Renken et al., 1989), and typically more robustly for boys. Perhaps these inconsistencies are due to the fact that in this study the attachment relationship was assessed by parental reports of reunion behaviors alone. Future work should use more established assessments of the attachment relationship (e.g., Strange Situation; Attachment Q-Set).

As discussed, the findings that sex of both the child and parent are predictive are an important contribution to the literature. This work also complements recent findings that suggest it is the sex of the recipient of the behavior that matters (i.e., girls direct more relational aggression during early childhood to female peers and boys more physical aggression to male peers) (Ostrov & Keating, 2004). The results from this study also underscore the importance of looking at the relations between contexts for a better understanding of the origins of relational aggression. For example, in addition to replicating the current set of findings, future work could explore who the relationally aggressive child targets within the peer group (i.e., male or female victim) and whether that is linked to psychological control tactics experienced by the child at the hands of their mother or father.

Future work should also address other important contexts that can contribute to our understanding of the etiology of relational aggression. For example, work looking at sibling relationships has shown that relational aggression is quite common within this context and could contribute to children's use of relational aggression with peers (O'Brien, 1999; Stauffacher & DeHart, 2005). Future work should also include multiple time points as part of a longitudinal approach while also going beyond teacher and parent-report of aggression to take advantage of observational methods that have been shown to be effective at capturing relationally aggressive behaviors (Ostrov & Keating, 2004; Ostrov et al., 2004). A continuing emphasis on examining the etiology of relational aggression is important; particularly if future research finds that there is a high degree of stability between engagement in relational aggression during the preschool years and relational aggression during the elementary school years and beyond. Longitudinal investigations assessing stability should also be sure to include assessments of social information-processing patterns that are likely to contribute to the maintenance of relational aggression during the early and middle childhood years (Casas & Crick, submitted for publication; Crick, Grotpeter, & Bigbee, 2002) and which are salient for both relationally and physically aggressive children. Finally, in terms of application, the results of this study have important implications for future intervention work. Specifically, professionals looking to intervene now have a growing body of evidence that suggests that interventions must be considered in terms of sex of parent and sex of child and must evaluate relationships in both the home and school contexts, especially with respect to informants.

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Notes

1 Two items of the authoritarian subscale were dropped because they focus on physical abuse.

2 Parents completed only the psychological control scale of the Psychological Control measure to avoid repetition. The other scales on the Psychological Control measure assess authoritative and authoritarian behaviors, the majority of which appear on the Parenting Styles measure.

3 While this measure does not yield the same quality of information as a Strange Situation assessment, this measure has been used to provide information about the attachment relationship (Marcus, 1991).

4 n's for parent informant and sex of child groups were 37 Mothers' only (16 boys, 21 girls), 3 Fathers' only (l boy, 2 girls), and 82 Both parents (35 boys, 47 girls).

Table 1
Pearson product moment correlation coefficients between parent and teacher reports of aggression

	Type of aggression	
Informants	Physical aggression	Relational aggression
Mother and father	.37**	.44**
Mother and teacher	.24*	.06
Father and teacher	.37**	.21†

†$p < .10$. *$p < .05$. **$p < .01$.

Table 2
Descriptive statistics for parent reports of children's aggression, parenting style, parent control strategies, and report of children's attachment reunion behaviors

Measure	*M* (*SD*) for mothers	*M* (*SD*) for fathers	Parent *r*
Aggression type			
Relational	4.29 (1.61)	4.55 (1.48)	.43***
Physical	3.63 (1.39)	3.62 (1.28)	.36***
Parenting style			
Authoritative	59.14 (6.78)	55.62 (7.17)	.32**
Authoritarian	19.88 (4.76)	19.38 (3.83)	.56***
Permissive	10.53 (2.58)	10.56 (2.61)	.05
Psychological control			
Erratic emotional behavior	9.24 (2.31)	8.81 (2.09)	.42***
Love withdrawal	7.34 (1.89)	7.33 (1.66)	.09
Guilt induction	25.01 (5.19)	23.37 (4.80)	.28**
Invalidating feelings	13.01 (2.98)	13.64 (2.86)	.38***
Personal attacks	nr	9.76 (2.42)	cc
Directiveness	12.34 (2.55)	12.00 (2.46)	.34**
Attachment reunion behavior			
Insecure	17.39 (2.62)	17.63 (2.38)	.21†

Note. Mother $n = 119$; Father $n = 85$; nr = subscale not reliable; cc = correlation cannot be calculated.
†$p < .10$. *$p < .05$. **$p < .01$. ****$p < .001$.

Table 3
Correlation coefficients between parenting styles and child's aggression rating by informant, type of aggression, and child sex

	Informant, type of aggression, and child sex											
	T Rel. G	T Phy. G	M Rel. G	M Phy. G	F Rel. G	F Phy. G	T Rel. B	T Phy. B	M Rel. B	M Phy. B	F Rel. B	F Phy. B
Mother self-report												
Authoritarian	−.06	.19	.27*	.15	.30*	.22	.16	−.08	.13	.21	.16	−.28†
Permissive	.04	.10	.38**	.25*	.25†	.23	.06	−.19	.27*	.24†	.25	−.41**
Authoritative	.12	−.35**	−.13	−.26*	−.08	−.31*	.17	.13	.11	−.16	.11	.12
Mother reporting about partner												
Authoritarian	.07	.26†	.35**	.01	.24	.14	.05	.12	.09	.06	.21	−.07
Permissive	.06	.03	.31*	−.08	.14	.08	.20	.21	.19	−.12	−.02	−.04
Authoritative	−.15	−.10	−.07	.09	−.04	−.09	.26	.20	.04	−.17	.07	.23
Father self-report												
Authoritarian	.21	.23	.27†	.09	.42**	.27†	.03	.05	−.04	.15	.29†	.09
Permissive	.19	.00	.04	−.25†	.11	.03	.00	.08	−.08	.15	−.18	−.07
Authoritative	−.22	−.03	−.10	−.02	−.14	−.21	.19	.11	−.01	−.29†	−.16	.08
Father reporting about partner												
Authoritarian	−.05	.19	.36**	.33*	.34*	.21	.25	−.08	.03	.10	.18	.07
Permissive	.09	.05	.35*	.06	.26†	.11	−.04	−.17	−.05	−.03	.05	−.29†
Authoritative	.14	−.34	−.12	−.26†	−.03	−.36*	−.04	.14	.04	−.10	.03	.18

Note. T, M and F represent teacher, mother and father informants, respectively; Rel. and Phy. represent relational aggression and physical aggression ratings, respectively; G and B represent behavior of girls and boys respectively.
†$p < .10$. *$p < .05$. **$p < .01$.

Table 4
Summary of six regression analyses of parenting styles predicting girls' and boys' physical aggression (as reported by teachers, by mothers, and fathers) controlling for child age

	Teacher report				Mother report				Father report			
	Girls		Boys		Girls		Boys		Girls		Boys	
	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2
Mother's self-report												
Step 1: Child age	−.088		−.108		−.103		−.207		.244		−.249	
Step 2: Mother's parenting style												
Authoritative	−.327		.137		−.223†		−.048		−.293†		.102	
Authoritarian	.151		.133		.019		.052		.135		−.003	
Permissive	−.005		−.262		.317*		.150		.168		−.302	
Model		.154†		.065		.184*		.084		.256*		.187
Father's self-report												
Step 1: Child age	−.061		−.036		−.082		−.199		.304*		−.407*	
Step 2: Father's parenting style												
Authoritative	.061		.262		−.134		−.211		−.179		.325	
Authoritarian	.359		.183		.206		.073		.244		.453†	
Permissive	−.132		.083		−.382*		.035		−.186		−.188	
Model		.094		.045		.122		.123		.194†		.211

†$p < .10$. *$p < .05$.

Table 5
Summary of six regression analyses of parenting styles predicting girls' and boys' relational aggression (as reported by teachers, by mothers, and by fathers) controlling for child age

	Teacher report				Mother report				Father report			
	Girls		Boys		Girls		Boys		Girls		Boys	
	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2
Mother's self-report												
Step 1: Child age	.417**		.279†		.224†		.366*		.116		.172	
Step 2: Mother's parenting style												
Authoritative	.080		.302		−.082		.041		−.037		.105	
Authoritarian	−.055		.264		.130		−.053		.295†		.219	
Permissive	−.038		−.020		.300*		.293†		.099		.134	
Model		.182**		.215†		.212*		.211*		.151		.134
Father's self-report												
Step 1: Child age	.417**		.200		.310*		.608**		.149		.187	
Step 2: Father's parenting style												
Authoritative	−.155		.317		.010		−.187		.022		−.034	
Authoritarian	.077		.208		.322†		−.214		.453**		.389†	
Permissive	.030		.064		−.108		.030		−.045		−.331†	
Model		.234*		.113		.175		.347*		.212*		.232†

†$p < .10$. *$p < .05$. **$p < .01$.

Table 6
Pearson product moment correlations between parental psychological control scores and type of aggression by informant, type of aggression, and child sex

	Informant, type of aggression, and child sex											
	T Rel. G	T Phy. G	M Rel. G	M Phy. G	F Rel. G	F Phy. G	T Rel. B	T Phy. B	M Rel. B	M Phy. B	F Rel. B	F Phy. B
Mother psych. control												
Erratic emotions	−.06	−.03	.39**	.08	.20	−.04	.00	−.23	.07	.38**	−.04	−.15
Love withdrawal	.02	.05	.47***	.18	.16	.35*	−.18	−.17	.23	.17	.08	−.09
Guilt induction	.24†	−.02	.39**	−.09	.24	−.08	.10	−.26	.26	.30*	.04	−.27
Invalidate feelings	−.05	−.15	.35**	.15	.33*	.21	−.01	−.32*	.12	.28†	−.05	−.07
Directive	.09	.11	.27*	.24†	.39**	.18	.13	−.20	.12	.22	.09	−.19
Father psych. control												
Erratic emotions	−.04	.03	.11	−.03	.37**	−.06	−.28	−.47**	−.05	−.33*	.11	.05
Love withdrawal	−.19	.34*	.06	.18	.07	.07	−.44**	−.24	−.18	−.06	.04	−.14
Guilt induction	.09	.20	.31*	.01	.24	−.03	.04	.04	.05	−.24	.23	.18
Invalidate feelings	.04	.26†	.27†	.17	.41**	.16	.19	.06	.06	.02	.07	−.10
Personal attacks	.02	.07	.13	.03	.21	−.03	−.02	.17	.15	−.29†	.21	.00
Directive	.03	.28†	.06	.13	.28†	.12	.04	−.07	−.09	.15	.13	.02

Note. T, M and F represent teacher, mother and father informants, respectively; Rel. and Phy. represent relational aggression and physical aggression ratings, respectively; G and B represent behavior of girls and boys respectively.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 7
Summary of six regression analyses of psychological control dimensions predicting girls' and boys' physical aggression (as reported by teachers, mothers, and fathers) controlling for child age

	Teacher report				Mother report				Father report			
	Girls		Boys		Girls		Boys		Girls		Boys	
	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2
Mother's self-report												
Step 1: Child age	−.057		−.034		−.076		−.076		.284†		−.332†	
Step 2: Mother's use of psychological control												
Erratic emotional	.006		−.161		.257†		.489†		.161		−.110	
Love withdrawal	.099		.055		.069		−.240		.205		−.007	
Guilt induction	−.088		.022		−.431**		.220		−.462**		−.385	
Invalidating feelings	−.271		−.224		.202		.108		.287†		.192	
Directiveness	.220		−.034		.259†		−.144		.292†		.111	
Model		.077		.099		.221*		.246†		.389**		.215
Father's self-report												
Step 1: Child age	.090		−.290		−.080		−.098		.402*		−.411†	
Step 2: Father's use of psychological control												
Erratic emotional	−.128		−.537**		−.088		−.369†		−.080		−.009	
Love withdrawal	.323†		−.093		.072		.049		.091		−.155	
Guilt induction	−.002		.154		−.215		.023		−.324		.382	
Invalidating feelings	.212		.083		.436		.110		.389		−.041	
Personal attacks	−.120		.203		.029		−.334		−.075		−.006	
Directiveness	.222		−.129		−.050		.260		.197		−.062	
Model		.230		.342		.124		.258		.270†		.213

†$p < .10$. *$p < .05$. **$p < .01$.

Table 8
Summary of six regression analyses of psychological control dimensions predicting girls' and boys' relational aggression (as reported by teachers, mothers, and fathers) controlling for child age

	Teacher report				Mother report				Father report			
	Girls		Boys		Girls		Boys		Girls		Boys	
	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2	β	R^2
Mother's self-report												
Step 1: Child age	.376**		.400*		.262*		.349*		.153		.242	
Step 2: Mother's use of psychological control												
Erratic emotional	−.232		.174		.264†		−.192		.088		−.188	
Love withdrawal	.018		−.248		.266*		.399†		−.071		.178	
Guilt induction	.342*		.073		.047		.352		−.045		.054	
Invalidating feelings	−.235		−.206		.039		−.232		.251		−.156	
Directiveness	.120		.228		.125		−.091		.321†		.155	
Model		.267**		.245		.371***		.247†		.221		.117
Father's self-report												
Step 1: Child age	.330*		.151		.259		.641**		.131		.289	
Step 2: Father's use of psychological control												
Erratic emotional	−.156		−.079		−.158		.054		.349†		.055	
Love withdrawal	−.204		−.461*		.041		−.135		−.175		.043	
Guilt induction	.280		.017		.548*		−.097		−.034		.140	
Invalidating feelings	.269		.279		.445†		−.120		.327		−.199	
Personal attacks	−.189		−.157		−.147		.004		−.255		.052	
Directiveness	−.158		.076		−.477†		.043		.220		.139	
Model		.244		.316		.311*		.369†		.273†		.139

†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.