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## Why are Girls Less Physically Aggressive than Boys? Personality and Parenting Mediators of Physical Aggression<sup>1</sup>

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**Abstract:** *The primary goal of the present analysis was to determine whether the commonly observed gender difference in physical aggression could be accounted for by gender differences in selected personality and social contextual factors. Eighty-nine adolescents (M age = 16.0; 52% female; 53% European-Americans, 38% Latinos) completed self-report measures, including sympathy (empathic concern and perspective taking) and parental involvement (support and monitoring). Mediation analyses revealed that relatively high levels of both empathic concern and parental monitoring accounted for relatively low levels of physical aggression. In addition, sympathy (for males) and parental involvement (males and females) were negatively related to physical aggression. Discussion focused on theoretical and practical implications of these findings.*

Aggressive behavior (i.e., behavior aimed at harming or injuring another person or persons; see Coie & Dodge, 1998) is a pervasive problem in the U.S. Children and adolescents are increasingly both perpetrators and victims of physical aggression (APA Commission on Violence and Youth, 1993). At all

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ages, males are more likely than females to commit major acts of violence and be arrested and incarcerated (U.S. Department of Justice, 1995). In addition, national polls suggest that minor acts of violence and physical aggression are common among male adolescents, including those growing up in "middle America" (e.g., Benson, 1993). Social and developmental researchers have found that consistent (albeit modest) gender differences in physical aggression are present from early childhood and remain relatively stable through adolescence. The tendency for males to engage in more physical aggression than females at all ages is revealed in both longitudinal research (e.g., R.B. Cairns, B.D. Cairns, Neckerman, Ferguson, & Gariepy, 1989) and meta-analytic reviews of cross-sectional studies (Eagly, 1987; Eagly & Steffen, 1986; Hyde, 1984; Knight, Fabes, & Wilson, 1996) employing multiple methods of data collection. What are some of the factors that may account for the disparity in physical aggression between males and females?

A number of explanations for the observed gender differences in aggressive and anti-social behaviors have been proposed. Although there may be a biological basis for these differences, as revealed by biological and evolutionary approaches, learning also plays a key role (for a review of theories of aggression, see Parke & Slaby, 1983). Gender differences in physical aggression have been linked to culture-specific, differential gender socialization resulting in physical aggression becoming associated with the male gender role (Maccoby & Jacklin, 1974). According to socialization theorists (Maccoby & Martin, 1983; Ruble & Martin, 1997), males are exposed to parenting practices that promote rough-and-tumble, physically aggressive behaviors whereas females are exposed to parenting practices that promote caring and close interpersonal relationships (Gilligan, 1982). These differential socialization practices appear to foster physical aggression to a greater extent in males than in females (however there is evidence that females engage in more relational aggression than males; see Coie & Dodge, 1998; Crick & Grotpeter, 1995).

Scholars have proposed that personality and social contextual (e.g., parenting styles) variables can serve as protective or risk factors for aggressive behaviors in adolescence (Garmezy & Masten, 1991; Kurdek, 1981). Thus it is possible that gender differences in personality and social contextual variables might account for gender differences in physical aggression. For this to be true, however, there must be gender differences in specific personality and social contextual variables and these constructs must relate to physical aggression in a theoretically consistent manner. To our knowledge, this possibility has not been examined empirically; the current analysis was intended to fill that gap.

Sympathy and parental involvement were identified as potential mediators of the relation between gender and physical aggression. As detailed below, these variables were selected based on theory and prior research (e.g., Coie & Dodge, 1998; Miller & Eisenberg, 1988). The primary purpose of the present study was to examine whether the relations between gender and these personality and social contextual variables accounted for gender related patterns in physical aggression.

Sympathy is a multidimensional individual characteristic that has been linked to aggressive behavior. Davis (1983) and others (Eisenberg, 1986; Hoffman, 1983) have identified two components of sympathy, empathic concern (i.e., feelings of concern or sorrow for a needy other) and perspective taking (i.e., the ability to understand another person's point of view).

S. Feshbach and N. D. Feshbach (1986) proposed that sympathetic individuals are less aggressive because of their emotional sensitivity and capacity to understand the potential negative consequences of aggression for self and others (see also Staub, 1986). Although the findings from individual studies have been somewhat mixed, in a meta-analysis, Miller and Eisenberg (1988) found an overall significant negative relation between sympathy and aggressive behaviors.

A number of theorists have proposed that biological and socialization pressures predispose and nurture sympathetic tendencies to a greater degree in females than in males (Eisenberg, 1986; Hoffman, 1983). Consistent with these arguments, Zahn-Waxler, Cole and Barrett (1991) summarized research findings revealing that parents were more likely to use "empathy training" with girls than boys, and that girls were more likely than boys to exhibit empathy. Furthermore, in a meta-analytic review, Eisenberg and Lennon (1983) found an overall significant gender difference in sympathy favoring girls (although this finding varied as a function of type of measure).

Parental support and monitoring have also been identified as protective factors against aggressive behavior. Parents who are supportive tend to be accepting of their child, promote interpersonal closeness, and encourage egalitarianism. These characteristics provide a secure relationship that fulfills the child's needs and allows the child to attend and respond to others' needs (Barnett, 1987). Parents can also limit their child's opportunities for engaging in problem behavior by monitoring their child's activities (Parke & Slaby, 1983). The combination of support and monitoring that characterizes authoritative parents (Baumrind, 1991; Maccoby & Martin, 1983) has been linked to lower involvement in aggressive and problem behaviors (Lamborn, Mounts, Steinberg & Dornbusch, 1991; Maccoby & Martin, 1983; Patterson, DeBaryshe & Ramsey, 1989).

Socialization and relational theorists have hypothesized that parents treat their sons and daughters differently (e.g., Chodorow, 1974; Maccoby & Martin, 1983), and there is evidence supporting this assertion (see Lytton & Romney, 1991). Traditionally, girls are encouraged to remain closer to home, given less freedom to explore their surroundings, and are monitored more closely than boys (Huston, 1983). Research with young children indicates that daughters receive more positive affect than sons (Brody, 1985, 1993), and among tenth graders and college students, females rated their mothers higher on support than males (Furman & Buhrmester, 1992).

In light of past theory and research, sympathy (empathic concern and perspective taking) and parenting factors (support and monitoring) fit the criteria for potential mediators of gender differences in physical aggression, as these factors differ for male and female adolescents, and have each been linked to physical aggression. Three sets of hypotheses were formulated. First, we hypothesized that there would be gender differences in physical aggression, sympathy, and parental involvement. Second, we hypothesized that physical aggression would be related negatively to sympathy and parental involvement. Finally, we predicted that gender-related patterns in physical aggression would be accounted for by gender-related patterns in sympathy and parental involvement.

## METHOD

### *Participants*

Participants were 89 students (46 females, 43 males) from one public middle school and one public high school in a mid-sized Midwestern city ( $M$  age = 16.0 years,  $SD$  = 1.81, range 12 - 19). Fifty-three percent were of European-American origin and 38% were of Latino origin (9% of other ethnic origin). Most of the adolescents were from intact families (intact = 61%, non-intact = 39%), most of their parents had some college education (average of mother's and father's education;  $M$  = 3.5,  $SD$  = 1.8 on a 7-point scale where 3 = some college or technical school and 4 = graduated from two-year college or technical school), and most adolescents regarded religion as moderately important (rated on a 5-point scale from not at all important to very important;  $M$  = 3.2,  $SD$  = 1.45).

### *Procedure*

Recruitment letters were sent to parents with the cooperation of school personnel, and parental consent and student assents were obtained prior to

participation. Surveys were administered in small groups in a separate classroom during school hours and took approximately forty minutes to an hour to complete. Participating classrooms received small monetary donations.

### *Measures*

The survey consisted of demographic items and a number of scales, all of which had been previously used with adolescents. The survey included the following scales:

*Sympathy.* Students completed the empathic concern and perspective taking subscales from the Interpersonal Reactivity Questionnaire (Davis, 1983). Both the empathic concern scale (Cronbach's  $\alpha = .79$ , in the present study; sample item, "I often have tender, concerned feelings for people less fortunate than me") and the perspective taking scale ( $\alpha = .71$ ; sample item, "I sometimes find it difficult to see things from the 'other person's' point of view") consisted of seven items. Items were rated on a five-point scale ranging from "does not describe me" to "describes me very well."

Because perspective taking and empathic concern are theoretically and empirically related (Davis, 1983; Eisenberg, 1986) and because preliminary analysis indicated that the two scales were significantly correlated,  $r(89) = .61, p < .001$ , the two scales were averaged to form a sympathy scale ( $\alpha = .85$ ). Reliability and construct validity of the measure has been demonstrated in prior research with adolescents (Carlo, Eisenberg, & Knight, 1992; Eisenberg, Miller, Shell, McNalley, & Shea, 1991).

*Adolescents' Perception of Parent Involvement.* Students completed a shortened version of the parent scale of the Inventory of Parent and Peer Attachment (IPPA) (Armsden & Greenberg, 1987) and the Parental Monitoring scale (Small & Luster, 1994), with reference to their closest parent or parent figure. The IPPA consisted of 12 items ( $\alpha = .88$ ), four from each of the three original subscales (trust, communication and alienation; sample item, "My parent respects my feelings"). The seven-item Parental Monitoring scale ( $\alpha = .86$ ) assessed parental knowledge of their child's activities and whereabouts (e.g., "my parent knows what I am doing after school"). Items on both scales were rated on a five-point scale, ranging from never to always. An index of parental involvement that reflected the quality and behavioral aspects of the parent-adolescent relationship was computed. The IPPA and Parental Monitoring scale were significantly interrelated,  $r(89) = .47, p < .001$ , and thus the scale scores were averaged to form a Parental Involvement scale ( $\alpha = .90$ ).

*Aggression.* To assess both trait and behavioral aggression, the Suppression of Aggression subscale from the Weinberger Adjustment Inventory (Wein-

berger, 1991) was combined with two behavioral fighting items. The items were: "During the past year, how many times were you in a physical fight in which weapons were present" ( $M = 1.52$ ,  $SD = 1.21$ , range from 1 to 6) and "when no weapons were present?" ( $M = 1.74$ ,  $SD = 1.34$ , range from 1 to 6). The fighting items were rated on an 8-point scale (from 0 = 0 to 8 = 12 or more times). The five Suppression of Aggression items were rated on a five-point scale ranging from "does not describe me" to "describes me very well" (sample item, "I lose my temper and 'let people have it' when I'm angry"). Both the Suppression of Aggression scale ( $\alpha = .84$ ) and the two fighting items ( $\alpha = .89$ ) were converted to z-scores and averaged to form a seven-item index of physical aggression ( $\alpha = .83$ ). Weinberger and colleagues (Weinberger, 1995; Weinberger & Bartholomew, 1996; Weinberger & Gomes, 1995) have reported adequate psychometric properties, including test-retest reliabilities and external validity, of the Suppression of Aggression subscale in samples of adolescents. Furthermore, prior researchers have found that self-report measures of aggression are associated significantly with behavioral, teacher, and peer ratings of aggression (e.g., Achenbach, 1991).

## RESULTS

### *Preliminary Analyses*

Means, standard deviations, and ranges of the main variables are presented in Table I. A series of ANOVAs was conducted to examine gender differences in these variables. As shown in Table I, females scored higher than males on empathic concern, perspective taking, sympathy, parental monitoring, and parental involvement. In contrast, males scored higher than females on aggression. There was no gender difference in parental support. As can be seen in Table II, the pattern of correlations among the predictor and criterion variables was consistent with prior research findings. Parental involvement was related negatively to physical aggression and related positively to sympathy. Finally, physical aggression was related negatively to sympathy. The correlations between sympathy, parental involvement, and gender (the predictors) were from low to moderate.

### *Tests of Mediation*

Because we were primarily interested in explaining the relations between gender and physical aggression, we conducted mediation analyses to examine whether the predictors (sympathy and parental involvement) accounted

Table 1. Means, Standard Deviations, and Ranges for Sympathy, Parental Involvement, and Aggression<sup>a</sup>

	Empathic Concern	Perspective Taking	Sympathy	Parental Support	Parental Monitoring	Parental Involvement	Aggression
Males ( <i>n</i> = 43)							
Mean	3.27	3.23	3.25	3.42	3.30	3.46	2.86
SD	.70	.63	.57	.71	.88	.65	1.05
Range	1–4.6	1.6–4.4	1.3–4.5	2.1–4.8	1.6–5.0	2.2–4.8	1.0–5.0
Females ( <i>n</i> = 46)							
Mean	4.13 <sup>c</sup>	3.63 <sup>b</sup>	3.88	3.53	4.19 <sup>c</sup>	3.86 <sup>b</sup>	2.23 <sup>b</sup>
SD	.61	.66	.58	.81	.68	.68	.99
Range	2.3–5.0	2.3–4.7	2.3–4.7	1.6–4.8	2.1–5.0	2.0–4.9	1.0–5.0
Overall ( <i>N</i> = 89)							
Mean	3.71	3.44	3.58	3.48	3.85	3.67	2.53
SD	.78	.67	.65	.76	.85	.69	1.06
Range	1.0–5.0	1.6–4.7	1.3–4.7	1.6–4.8	1.6–5.0	2.0–4.9	1.0–5.0

<sup>a</sup>For ease of interpretation, raw scores for aggression are presented.<sup>b</sup>*p* < .005, significant gender difference.<sup>c</sup>*p* < .001, significant gender difference.

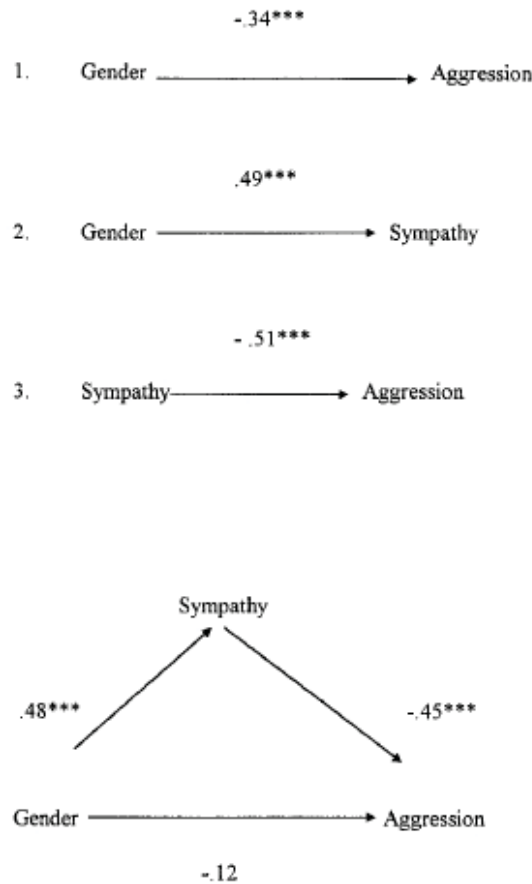


Table II. Correlations Among Variables Used in Mediation Analyses

	Empathic Concern	Perspective Taking	Sympathy	Parental Support	Parental Monitoring	Parental Involvement	Aggression
Gender <sup>a</sup>	.56 <sup>d</sup>	.30 <sup>d</sup>	.49 <sup>d</sup>	.07	.41 <sup>d</sup>	.29 <sup>c</sup>	-.34 <sup>d</sup>
Empathic Concern		.61 <sup>d</sup>	.91 <sup>d</sup>	.20	.40 <sup>d</sup>	.35 <sup>d</sup>	-.51 <sup>d</sup>
Perspective Taking			.88 <sup>d</sup>	.22 <sup>b</sup>	.41 <sup>d</sup>	.37 <sup>d</sup>	-.40 <sup>d</sup>
Sympathy				.23 <sup>b</sup>	.45 <sup>d</sup>	.40 <sup>d</sup>	-.51 <sup>d</sup>
Parental Support					.47 <sup>d</sup>	.84 <sup>d</sup>	-.30 <sup>c</sup>
Parental Monitoring						.87 <sup>d</sup>	-.51 <sup>d</sup>
Parental Involvement							-.48 <sup>d</sup>

<sup>a</sup>For gender, males were coded as 0 and females were coded as 1.<sup>b</sup> $p < .05$ , <sup>c</sup> $p < .005$ , <sup>d</sup> $p < .001$ , two tailed.

for gender-related patterns in physical aggression. Following the procedure outlined in Baron and Kenny (1986; see also James & Brett, 1984), a set of regression analyses was conducted. We examined whether the predictors met the criteria necessary for mediation. Both sympathy and parental involvement were identified as potential mediators of the relation between gender and physical aggression. As Figure 1 shows, gender was related significant-

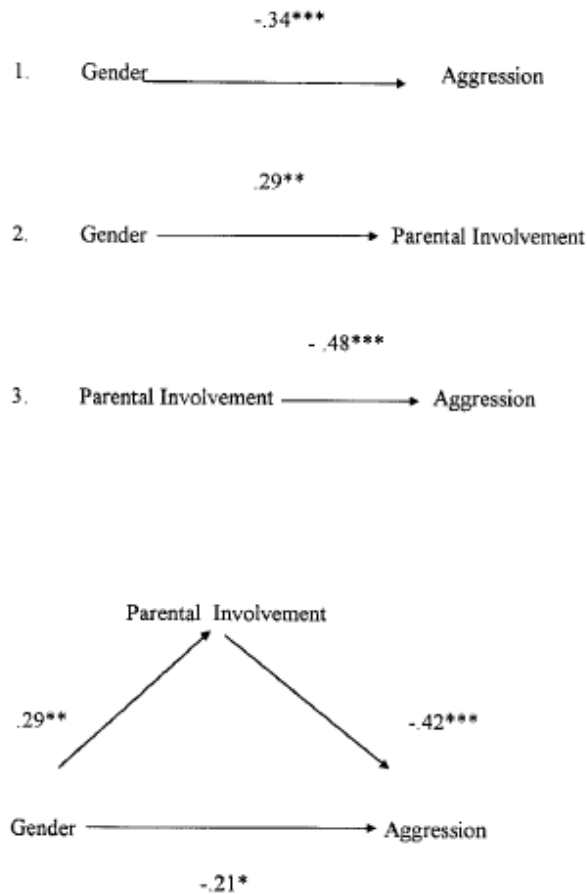


*Note.* Figure shows the final regression coefficients for the full mediation model.  $N = 89$ .

$*** p < .001$ .

**Fig. 1.** Direct relations among gender, sympathy, and aggression and the model of the mediating effect of sympathy on the relations between gender and aggression.

ly to both physical aggression and sympathy, and sympathy was related significantly to physical aggression. When sympathy was entered into the equation, the standardized regression coefficient between gender and physical aggression dropped to nonsignificance, from .34 to .12,  $R^2$  change = .16,  $F$  change (1, 86) = 18.50,  $p < .001$  (Multiple  $R^2 = .27$ ). Similarly, as shown in Figure 2, gender was related significantly to both physical aggression and pa-



Note. Figure shows the final regression coefficients for the full mediation model.  $N = 89$ .

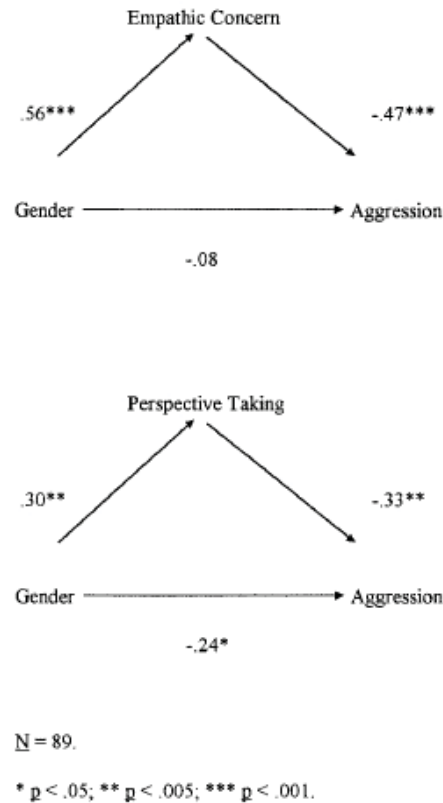
\*  $p < .05$ ; \*\*  $p < .005$ ; \*\*\*  $p < .001$ .

Fig. 2. Direct relations among gender, parental involvement, and aggression and the model of the mediating effect of parental involvement on the relations between gender and aggression.

rental involvement, and parental involvement was related to physical aggression. However, when parental involvement was entered into the equation, the standardized regression coefficient between gender and physical aggression remained significant (although it dropped from 2.34 to 2.21),  $R^2$  change = .16,  $F$  change (1, 86) = 18.70,  $p < .001$  (Multiple  $R^2 = .27$ ). These findings indicated that sympathy, but not parental involvement, substantially accounted for the relation between gender and physical aggression.

To examine whether gender-related patterns in the cognitive or emotional components of sympathy accounted for gender-related patterns in physical aggression, two additional mediation analyses were conducted. In the first analysis, the relations among empathic concern, gender, and physical aggression were examined. Gender was related significantly to both empathic concern (standardized beta = .56,  $p < .001$ ) and physical aggression (standardized beta = 2.34,  $p < .001$ ), and empathic concern was related significantly to physical aggression (standardized beta = 2.51,  $p < .001$ ). As Figure 3 shows, when both empathic concern and gender were entered simultaneously into the equation predicting physical aggression, the standardized regression coefficient between gender and physical aggression became nonsignificant (dropping from 2.34 to 2.08),  $R^2$  change = .15,  $F$  change (1, 86) = 17.48,  $p < .001$  (Multiple  $R^2 = .26$ ). In the second analysis, the relations among perspective taking, gender, and physical aggression were examined. Gender was related significantly to both perspective taking (standardized beta = 2.30,  $p < .01$ ) and physical aggression (standardized beta = 2.34,  $p < .001$ ), and perspective taking was related significantly to physical aggression (standardized beta = 2.40,  $p < .001$ ). However, when both perspective taking and gender were entered simultaneously into the equation predicting physical aggression, the relation between gender and physical aggression remained significant (see Figure 3),  $R^2$  change = .10,  $F$  change (1, 86) = 10.68,  $p < .002$  (Multiple  $R^2 = .21$ ). These analyses revealed that the relation between gender and physical aggression was accounted for by the relations between gender and empathic concern rather than the relation between gender and perspective taking.

Similar mediation analyses were conducted to examine whether gender-related patterns in parental monitoring or support accounted for gender-related patterns in physical aggression. In the first analysis, gender was related significantly to both parental monitoring (standardized beta = .41,  $p < .001$ ) and physical aggression (standardized beta = 2.34,  $p < .001$ ), and parental monitoring was related significantly to physical aggression (standardized beta = 2.51,  $p < .001$ ). As Figure 4 shows, when both parental monitoring and gender were entered simultaneously into the equation predicting physical aggression, the standardized regression coefficient between gender and physical

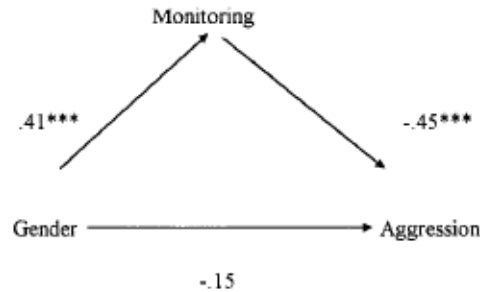


**Fig. 3.** Models of the mediating effects of empathic concern and perspective taking on aggression.

aggression became nonsignificant (dropping from 2.34 to 2.15),  $R^2$  change = .17,  $F$  change (1, 86) = 19.80,  $p < .001$  (Multiple  $R^2 = .28$ ). In contrast, preliminary analysis indicated that parental support did not meet the criteria for mediating the relations between gender and physical aggression (there were no significant relations between gender and parental support). Thus, parental monitoring but not parental support substantially accounted for the relation between gender and physical aggression.

## DISCUSSION

The main goal of this analysis was to examine whether the relations between gender and physical aggression could be accounted for by the relations between gender and personality and social contextual variables. Based



$N = 89$ .

\*\*\*  $p < .001$ .

Fig. 4. Model of the mediating effect of parental monitoring on aggression.

on prior theory and research, three sets of hypotheses were formulated and tested. As predicted in the first set of hypotheses, gender was significantly associated with adolescents' perceptions of parental involvement and self-reported sympathy (females scored higher than males on these variables), and physical aggression (females scored lower than males). The second set of hypotheses was partially confirmed. Sympathy (for males) and parental involvement (males and females) were negatively related to physical aggression. Finally, we predicted that gender-related patterns in physical aggression would be accounted for by gender-related patterns in sympathy and parental involvement. This hypothesis was also partially supported; relatively high levels of sympathy, but not parental involvement, accounted for relatively low levels of physical aggression. These findings may have both theoretical and practical implications.

The present findings suggest the considerable strength and importance of sympathy as a mitigator of physically aggressive behaviors. Past research has shown that both sympathy and aggression have cognitive and emotional components; however, the form of these components may vary. For example, sympathy is considered a well-regulated emotional response (Eisenberg & Fabes, 1992) and often requires a coordinated cognitive understanding of the situation of others (i.e., perspective taking). On the other hand, aggression has been linked to deficient cognitive processing skills (Crick & Dodge, 1994) and to low levels of perspective taking (Eisenberg, 1986).

Given prior evidence of gender differences in perspective taking in ad-

olescence (e.g., Carlo, Eisenberg, & Knight, 1992) and of gender differences in emotionality (e.g., Brody, 1985; Buck, Miller, & Caul, 1974), it is possible that the relations between gender and physical aggression are linked to gender-related patterns in these correlates. Results showed that when sympathy was broken down into its components, empathic concern but not perspective taking was a mediator. Thus although perspective taking and empathic concern are often correlated (Davis, 1983; Eisenberg, 1986), the present findings suggest that the emotional, and not the cognitive, component of sympathy was important in accounting for the relations between gender and physical aggression.

The present analyses also revealed that higher levels of perceived parental involvement were associated with lower levels of physical aggression. This confirms prior findings that adolescents whose parents are supportive and exert control are less likely to engage in physically aggressive behaviors. Of particular interest was the fact that parental monitoring, but not parental support, partially mediated gender-related patterns in physical aggression. That is, adolescents who reported lower levels of physical aggression reported that their parents were more likely to keep track of their activities, whereabouts, and companions. Although gender-related patterns in parental support did not significantly account for the relations between gender and physical aggression, the fact that parental support and monitoring were interrelated is consistent with the notion that parental support may help foster and maintain a close relationship that facilitates effective monitoring.

There are a number of shortcomings that limit the present findings. First, although the sample was ethnically diverse the families were relatively well educated and intact, so we cannot extend our findings to adolescents from impoverished or non-intact families. Studies with larger, more representative samples are needed to examine the generalizability of the present findings. Second, the analyses were based on self-report measures. Results might differ if different data collection measures (e.g., observations, peer nominations) had been used. Indeed, gender differences in sympathy were found to be strongest when self-report measures were used in prior studies (Eisenberg & Lennon, 1983). And third, as the present findings suggest, parental involvement and sympathy are linked and it is difficult to discern the direction of relations from the present study. However, based on prior longitudinal (Patterson et al., 1989) and empathy training (Iannotti, 1978) studies, there is evidence that parents and empathy causally influence aggressive behaviors. It is also possible that these relations are bi-directional; that is, aggressive children may elicit lower levels of parental involvement and may be less prone to be sensitive to the needs of others. Additional studies utilizing lon-

itudinal designs and multiple assessment techniques would be useful to further address these cause-and-effect issues.

Keeping in mind these limitations, the present findings add to the current literature on the association between gender and aggression by directly examining the mediating role of selected personality and parenting variables on physical aggression. Although sympathy and parental involvement were useful in accounting for gender-related patterns in physical aggression, theorists have not postulated on the link between sympathy and parental involvement and other forms of aggression that are more typical of females. For example, girls have been found to engage in higher levels of relational aggression (i.e., attempts to exclude peers from group participation, to blemish another's reputation, and gossip about the negative attributes of others) and to exhibit higher levels of sympathy and close parental involvement than boys (e.g., Crick & Grotpeter, 1995; Eisenberg & Lennon, 1983; Furman & Buhrmester, 1992; Huston, 1983). It is unlikely that gender differences in sympathy and parental involvement would account for gender differences in relational aggression because higher levels of sympathy and parental involvement should mitigate, rather than exacerbate, relational aggression. Thus, the fact that females exhibit higher levels of these variables, would suggest that different mechanisms are needed to account for gender differences in relational aggression. Research on other potential mediating variables such as peer interaction styles, quality of peer relationships, and peer group norms and expectations might prove more useful in accounting for gender differences in relational aggression. Furthermore, although parental support and perspective taking were not found to be mediators of the relations between gender and physical aggression, future research might explore the possible moderator roles of these variables. The potential mediating and moderating role of these and other variables could be investigated using analytic techniques similar to those utilized in the present study.

The analyses suggest the need for an overarching theoretical frame work that integrates the links among gender, personality, social contextual factors, and aggression. For example, our findings were consistent with theories of emotion regulation (e.g., Eisenberg & Fabes, 1992) that imply an interplay among aggression, sympathy and parental practices. By definition, sympathy is considered a well-regulated emotional response (Barnett, 1987). Moreover, theorists (e.g., Cichetti, Ganiban, & Barnett, 1991; Eisenberg & Fabes, 1992; Kopp, 1982) have argued that parental practices (e.g., support and monitoring) are external forms of emotion regulatory processes. Presumably warm and nurturing affective displays which often reflect both sympathy and parental involvement are models of well-regulated emotional responding for



both children and adolescents. In contrast, some forms of aggression (particularly reactive aggression) have been linked to over arousal and emotion dysregulation (Dodge, 1991). The present findings showed that both sympathy and parental involvement, in contrast to aggression, are well-regulated emotional processes. Thus, an emotion regulation framework maybe needed to help explain the link between gender and aggression.

On an applied level, the findings suggest at least two avenues of intervention for reducing physical aggression among adolescents. First, taken together with prior sympathy-related training studies (e.g., Iannotti, 1978), the present findings suggest that promoting sympathy in children and adolescents might reduce aggressive tendencies. However, in the current study, the gender-related pattern in physical aggression was due to the emotional (i.e., empathic concern), not the cognitive (i.e., perspective taking), component of sympathy. Perspective taking might be a necessary but insufficient condition for mitigating physical aggression. That is, the emotional component of sympathy might provide the motivational basis for refraining from physically aggressive behaviors. Thus, intervention programs might want to focus on enhancing both the cognitive and emotional components of sympathy. Alternatively, the findings were consistent with some theorists' (e.g., Feshbach, 1987) suggestion that perspective taking may lead to antisocial behaviors under certain circumstances. Therefore, perspective-taking inductions, in and of themselves, might have limited utility in reducing levels of physical aggression. Second, because high levels of perceived parental involvement were associated with low levels of physical aggression, the success of intervention programs might be enhanced by parent training to increase involved parenting (see .g., Patterson, 1982; Patterson, Reid, & Dishion, 1992). Because parental monitoring, but not parental support, accounted for the gender-related pattern in physical aggression, it might be worthwhile to promote close parental monitoring of their adolescents' activities and whereabouts. Although such comprehensive programs are likely to benefit males and females, a focus on males would likely be necessary given the continued association of physical violence with the male gender in U.S. society.

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