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Source: *Child Development*, Jun., 1995, Vol. 66, No. 3 (Jun., 1995), pp. 710-722

Published by: Wiley on behalf of the Society for Research in Child Development

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Relational Aggression, Gender, and Social-Psychological Adjustment

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CRICK, NICKI R., and GROTPETER, JENNIFER K. *Relational Aggression, Gender, and Social-Psychological Adjustment.* CHILD DEVELOPMENT, 1995, **66**, 710–722. Prior studies of childhood aggression have demonstrated that, as a group, boys are more aggressive than girls. We hypothesized that this finding reflects a lack of research on forms of aggression that are relevant to young females rather than an actual gender difference in levels of overall aggressiveness. In the present study, a form of aggression hypothesized to be typical of girls, relational aggression, was assessed with a peer nomination instrument for a sample of 491 third- through sixth-grade children. Overt aggression (i.e., physical and verbal aggression as assessed in past research) and social-psychological adjustment were also assessed. Results provide evidence for the validity and distinctiveness of relational aggression. Further, they indicated that, as predicted, girls were significantly more relationally aggressive than were boys. Results also indicated that relationally aggressive children may be at risk for serious adjustment difficulties (e.g., they were significantly more rejected and reported significantly higher levels of loneliness, depression, and isolation relative to their nonrelationally aggressive peers).

Because of the deleterious effects of conduct problems on children's development (see Parker & Asher, 1987, for a review), a great deal of research has been conducted on aggression in the past decade (e.g., see Dodge & Crick, 1990; Parke & Slaby, 1983, for reviews). Although significant advances have been made in our understanding of childhood aggression, one limitation of this research has been the lack of attention to gender differences in the expression of aggression (cf. Robins, 1986). Prior studies demonstrate that, as a group, boys exhibit significantly higher levels of aggression than do girls (see Block, 1983; Parke & Slaby, 1983, for reviews), a difference that persists throughout the life span (Eagly & Steffen, 1986; Hyde, 1986; Kenrick, 1987). Not surprisingly, these findings have been interpreted as an overall lack of aggressiveness in girls' peer interactions. However, an alternative explanation is that the forms of aggression assessed in past research are more salient for boys than for girls. If so, young females may exhibit unique forms of aggression, forms that have been overlooked in past research.

Although specific definitions have varied over the years, aggression has been generally defined by most authors as behaviors that are intended to hurt or harm others (e.g., Berkowitz, 1993; Brehm & Kassin, 1990; Gormly & Brodzinsky, 1993; Myers, 1990; Vander Zanden, 1993). We propose that, when attempting to inflict harm on peers (i.e., aggressing), children do so in ways that best thwart or damage the goals that are valued by their respective gender peer groups. As past research has consistently shown, boys tend to harm others through physical and verbal aggression (e.g., hitting or pushing others, threatening to beat up others). These behaviors are consistent with the types of goals that past research has shown to be important to boys within the peer-group context, specifically, themes of instrumentality and physical dominance (see Block, 1983, for a review). These types of concerns are not as salient for most girls, however. In contrast to boys, girls are more likely to focus on relational issues during social interaction (e.g., establishing close, intimate connections with others) (see Block, 1983, for a review). In the present study,

This research was funded by a grant from the University of Illinois Research Board to the first author. Portions of this study were presented at the meeting of the Society for Research in Child Development, March 1993, New Orleans. The authors would like to thank the principals, teachers, and students of Coppenbarger, Garfield, Harris, and Stevenson Elementary Schools for their assistance with the study. Special thanks also to Aaron Ebata for his invaluable comments on earlier drafts of this article. Please send correspondence regarding this manuscript to the first author at Human Development and Family Studies, 1105 West Nevada Street, University of Illinois, Urbana, IL 61801.

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we hypothesized that aggressive behavior among girls would be consistent with their social concerns, similar to the pattern found for boys. Specifically, we hypothesized that girls' attempts to harm others would focus on relational issues and would include behaviors that are intended to significantly damage another child's friendships or feelings of inclusion by the peer group (e.g., angrily retaliating against a child by excluding her from one's play group; purposefully withdrawing friendship or acceptance in order to hurt or control the child; spreading rumors about the child so that peers will reject her). Thus, we expected that girls would be most likely to harm peers through relational aggression (i.e., harming others through purposeful manipulation and damage of their peer relationships) whereas boys would be most likely to harm peers through overt aggression (i.e., harming others through physical aggression, verbal threats, instrumental intimidation).

Although gender differences in the forms of aggression that children exhibit were postulated years ago (Feshbach, 1969), very little relevant research has yet been conducted. In one of the earliest studies on this topic, Feshbach (1969) observed first graders' responses to unfamiliar peers. She found that girls were significantly more likely than boys to respond to the unfamiliar peer with behaviors that, although referred to by the author as "indirect aggression," appear similar to those specifically defined here as relational aggression (e.g., rejection and social exclusion).

This pattern of results has also been documented for older children. In a more recent study, Cairns, Cairns, Neckerman, Ferguson, and Gariepy (1989) asked fourth through ninth graders to describe recent conflicts with peers. Content analysis of children's responses revealed that same-gender conflicts among girls were significantly more likely than boys' conflicts to involve themes of social alienation and manipulation of peer acceptance (i.e., themes that are consistent with relational aggression). Using a Finnish sample of fifth graders, Lagerspetz, Bjorkqvist, and Peltonen (1988) used a peer-rating scale to assess gender differences in children's use of several types of behaviors, some of which were relationally aggressive. Although their instrument confounded relational aggression with nonverbal aggression, their results were similar to those of the previously described research (i.e., girls exhibited significantly higher levels of relational/nonverbal aggression than did boys).

These investigations provide initial support for the hypothesis that relationally aggressive behaviors are present in children's peer interactions and that girls are more likely than boys to exhibit them. However, despite the conduct of hundreds of studies on the general topic of childhood aggression in the past several decades (see Dodge & Crick, 1990; Parke & Slaby, 1983, for reviews), no systematic research has been conducted on relational aggression. Thus, no information has yet been generated on the correlates of relational aggression or the characteristics of the children who exhibit it (i.e., other than the previously described gender differences). Given the potentially serious consequences of aggression for children's adjustment (see Parker & Asher, 1987, for a review), it seems important to initiate research in this relevant, but unexplored domain. This is particularly true given that this form of aggression may be most characteristic of young females, a group whose behavioral difficulties have received scant attention in past research. The present research was designed as an initial attempt to address these issues.

We had four goals for the present study: (1) to develop a reliable measure of relational aggression, one that did not confound relational aggression with other forms of aggression; (2) to assess gender differences in relational aggression; (3) to assess the degree to which relational aggression is distinct from overt aggression (i.e., physical and verbal aggression as assessed in most of the past research in this area); and (4) to assess whether relational aggression is related to social-psychological maladjustment. We hypothesized that relational aggression would be related to, but also relatively distinct from, overt aggression. Further, we expected girls to be more relationally aggressive than boys. Also, similar to overtly aggressive children (Bukowski & Newcomb, 1984; Coie & Kupersmidt, 1983; Dodge, 1983; Parker & Asher, 1987), we expected relationally aggressive children to be more socially and psychologically maladjusted than their nonaggressive peers.

To address our goals, a peer nomination scale was constructed and used to assess relational aggression and overt aggression. Peers were selected as informants for two reasons. First, peer nominations have been used extensively in past research to identify aggressive children (e.g., Coie & Dodge, 1983; Dodge, 1980; Dodge & Frame, 1982; Perry, Perry, & Rasmussen, 1986). Second, it was thought that relationally aggressive

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behaviors, because of their relatively indirect nature and focus on peer relationships, might be difficult for those outside the peer group (e.g., teachers, researchers) to reliably observe and evaluate in naturalistic settings (cf. Lagerspetz et al., 1988). Thus, it was judged that peers would be the best informants, a method that has the additional advantage of providing multiple assessments of behavior (i.e., because each child is evaluated by all of his or her classmates as opposed to only one teacher, for example). In addition to the peer nomination instrument, subjects also completed several instruments designed to assess social-psychological adjustment (i.e., peer status, depression, loneliness, social anxiety, social avoidance, and perceptions of peer relations). These aspects of adjustment were chosen because past research has shown them to be predictive of concurrent and/or future socio-emotional difficulties (e.g., Asher & Wheeler, 1985; Crick & Ladd, 1993; Franke & Hymel, 1984; Kovacs, 1985; Parker & Asher, 1987). Thus, they would allow for an assessment of the adjustment risk status of relationally aggressive children.

Method

Subjects

A total of 491 third- through sixth-grade children from four public schools in a moderately sized midwestern town participated as subjects.[1] The sample included 128 third (65 girls and 63 boys), 126 fourth (56 girls and 70 boys), 126 fifth (57 girls and 69 boys), and 111 sixth graders (57 girls and 54 boys). Approximately 37% of the sample was African-American, 60% was European-American, and 3% represented other ethnic groups. Each subject had parental consent to participate in the study (consent rate was above 82%).

Peer Assessment of Relational Aggression and Other Aspects of Social Adjustment

A peer nomination instrument was used to assess social adjustment. This instrument, which consisted of 19 items, included a peer sociometric and four subscales designed to assess social behavior: relational aggression, overt aggression, prosocial behavior, and isolation. These particular indices were selected because they represent the constructs that have been used most extensively in past research to evaluate children's social adjustment (i.e., peer status, aggression, withdrawal, prosocial behavior) (Crick & Dodge, 1994).

Overt aggression was assessed with a three-item peer nomination scale. The items included in this scale assessed physical and verbal aggression and were drawn from those used in prior research (e.g., Asher & Williams, 1987; Coie & Dodge, 1983; Dodge, 1980; refer to Table 1 for a description of the items). Relational aggression was assessed with a five-item nomination scale that was developed for use in the present project (refer to Table 1 for item descriptions). Items included in this scale describe behaviors that represent purposeful attempts to harm, or threats to harm, another's peer relationships (e.g., telling a friend that you will not like her anymore unless she does what you tell her to do). A pool of relational aggression items, designed to fit the proposed definition, was initially generated by the authors. Selection of the subsequently chosen items and specific wording of each was based on pilot testing with grade-school-age children.

The prosocial behavior scale consisted of five items (e.g., peers who help others), and the isolation scale consisted of four items (e.g., peers who play alone at school, peers who seem lonely at school). The items included in these scales were based on those used in past research (e.g., Asher & Williams, 1987; Crick & Dodge, 1989). The peer sociometric consisted of two items, nominations of liked and disliked peers (positive and negative nominations). These items have been used extensively in past research to assess peer acceptance and rejection (see Crick & Dodge, 1994, for a review).

During the administration of the peer nomination instrument, children were provided with a class roster and were asked to nominate up to three classmates for each of

[1] Due to practical constraints at the participating schools, we were not able to collect complete information for the self-report measures for some of the children who were absent during the class sessions or who skipped a question during testing (i.e., we were able to do make-up sessions with some, but not all, of these subjects). Because we had no reason to suspect bias in the part of the sample with incomplete information, we used all of the available subjects with complete information for a particular analysis. The total number of children who completed each instrument varied from 462 to 491 (refer to the residual degrees of freedom for each analysis to determine the number of subjects for each analysis).

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TABLE 1

FACTOR LOADINGS FOR THE PEER NOMINATION INSTRUMENTS

ITEM	FACTOR			
	Prosocial/ Happy	Overt Aggression	Relational Aggression	Isolation/ Unhappy
Good leader	.789	...	...	...
Does nice things for others	.884	...	...	...
Helps others	.899	...	...	...
Cheers up others	.855	...	...	...
Seems happy at school	.832	...	...	...
Hits, pushes others	...	.906	...	...
Yells, calls others mean names	...	.823	...	...
Starts fights	...	.884	...	...
When mad, gets even by keeping the person from being in their group of friends	...	...	.763	...
Tells friends they will stop liking them unless friends do what they say	...	...	.772	...
When mad at a person, ignores them or stops talking to them	...	...	.837	...
Tries to keep certain people from being in their group during activity or play time	...	...	.727	...
Plays alone a lot	...	...	...	.911
Seems sad at school	...	...	...	.916
Seems lonely at school	...	...	...	.916

NOTE.—All other factor loadings were less than .300 except for two items with loadings of .380 and .376. These were considered insubstantial given the relatively high loadings presented above.

the items. The number of nominations children received from peers for each of the items (for each child, these scores could range from 0 to the total number of children in his or her class minus 1) was summed and then standardized within each classroom. The standardized scores for the overt aggression, relational aggression, prosocial behavior, and isolation scales were summed to yield four total scores (e.g., children's standardized scores for each of the three items on the overt aggression scale were summed to create a total score).

Classification of aggressive groups.—Children's relational (RAGG) and overt (OAGG) aggression scores were used as continuous variables in subsequent analyses and also to identify groups of aggressive versus nonaggressive children. Children with scores one standard deviation above the sample means for RAGG, OAGG, or both (RAGG *and* OAGG) were considered aggressive, and the remaining children were considered nonaggressive. This procedure allowed for the identification of children high and low in relational aggression and children high and low in overt aggression, resulting in four distinct groups: (1) nonaggressive (RAGG and OAGG both low); (2) overtly aggressive (RAGG low, OAGG high); (3) relationally aggressive (RAGG high, OAGG low); and (4) combined overtly and relationally aggressive (RAGG and OAGG both high). This procedure resulted in the identification of 371 nonaggressive children, 41 overtly aggressive children, 46 relationally aggressive children, and 33 overtly plus relationally aggressive children.

Classification of sociometric status groups.—The positive and negative sociometric nominations children received from their classmates were used to identify five sociometric status groups, popular, average, neglected, rejected, and controversial children, using the procedure described by Coie and Dodge (1983) (except for those in the average group who were identified using the criteria described by Coie, Dodge, & Coppotelli, 1982). This procedure resulted in the identification of 63 popular, 153 average, 69 neglected, 56 rejected, and 26 controversial status children.

Self-Report Social-Psychological Adjustment Indices

Loneliness.—The Asher and Wheeler (1985) loneliness scale was used to assess children's feelings of loneliness and social

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dissatisfaction. This scale, an instrument with demonstrated reliability and validity (e.g., Asher & Wheeler, 1985; Asher & Williams, 1987; Crick & Ladd, 1993), consists of 16 items that assess loneliness at school (e.g., I feel alone at school) and eight filler items (e.g., I like music). Possible responses to each item range from 1 (Not at all true about me) to 5 (Always true about me). Children's responses to the loneliness items were summed yielding total scores that could range from 16 (low loneliness) to 80 (high loneliness). Cronbach's alpha for children's responses to the loneliness scale was .91.

Social anxiety and avoidance.—The Franke and Hymel (1984) social anxiety scale, an instrument with demonstrated reliability and validity (e.g., Crick & Ladd, 1993; Franke & Hymel, 1984), was used to assess social anxiety and social avoidance. This instrument consists of two subscales, social anxiety (e.g., I usually feel nervous when I meet someone for the first time) and social avoidance (e.g., I often try to get away from all the other kids), each of which include six items. Possible responses to each item range from 1 (Not at all true about me) to 5 (Always true about me). Children's responses to the items were summed for each subscale yielding total scores that could range from 6 (low anxiety/avoidance) to 30 (high anxiety/avoidance). Cronbach's alpha for children's responses to the social anxiety and social avoidance scales was .69 and .74, respectively.

Depression.—The Children's Depression Inventory (CDI) was used to assess children's feelings and symptoms of depression (Kovacs, 1985). This measure consists of 27 items, all of which assess depression. Each item consists of three related statements, and children respond by selecting the one statement that best fits how they feel (e.g., I am sad once in a while vs. I am sad many times vs. I am sad all the time). Items are scored from 0 to 2, with higher scores indicating more evidence of depression. Two modifications were made to this instrument prior to its use in the present study, both of which were motivated by ethical concerns. First, two items were dropped from the measure due to content that was considered too sensitive for use in the participating schools (i.e., an item that focused on suicidal ideation and an item concerned with self-hate). Second, five positively toned filler items that were neutral in content were added to the instrument (e.g., I like swimming a lot vs. I like swimming a little vs. I do not like swimming) in an attempt to balance the negative tone of the CDI items. Cronbach's alpha for children's responses to the 25 depression items was .85.

Perceptions of peer relations.—An adaptation of the Children's Peer Relations Scale (Crick, 1991) was used to assess children's perceptions of their peer interactions. This instrument is designed to assess six aspects of children's perceptions of their interactions with peers at school: perceived peer acceptance, isolation from peers, negative affect, engagement in caring acts, engagement in overt aggression, and engagement in relational aggression. Specifically, the perceived peer acceptance subscale (three items) assesses the degree to which children feel liked by peers at school (e.g., Some kids have a lot of classmates who like to play with them. How often do the kids in your class like to play with you?). The isolation from peers subscale (two items) assesses the degree to which children perceive themselves as loners at school (e.g., Some kids play by themselves a lot at school. How often do you do this?). The negative affect subscale (three items) assesses the degree to which children feel lonely, sad, or upset at school (e.g., Some kids feel upset at school. How often do you feel this way?). The engagement in caring acts subscale (four items) assesses children's perceptions of the degree to which they direct prosocial behaviors toward their peers (e.g., Some kids try to cheer up other kids who feel upset or sad. How often do you do this?). The engagement in overt aggression subscale (three items) assesses children's perceptions of the degree to which they direct overtly aggressive acts toward their peers (e.g., Some kids hit other kids at school. How often do you do this?). The engagement in relational aggression subscale (five items) assesses children's perceptions of the degree to which they direct relationally aggressive behaviors toward their peers (e.g., Some kids tell their friends that they will stop liking them unless the friends do what they say. How often do you tell friends this?). The last two subscales, engagement in overt and relational aggression, were designed to parallel those included in the peer-nomination measure of aggression.

Possible responses to the items on the Children's Peer Relations Scale range from 1 (Never) to 5 (All the time). Responses to the items in each subscale were summed to yield total scores. Due to substantial item content overlap with other measures used in this study (e.g., CDI), children's negative affect scores were not analyzed. An analysis of

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internal consistency showed that children's responses to the items were reliable with Cronbach's alpha = .74, .76, .66, .82, and .73 for the perceived acceptance, caring acts, peer isolation, overt aggression, and relational aggression subscales, respectively for the present sample. Support for the construct validity of the Children's Peer Relations Scale (CPRS) has also been demonstrated in past research (e.g., rejected, overtly aggressive children report significantly higher levels of overt aggression on the CPRS relative to peers; rejected, withdrawn children report significantly higher levels of isolation and lower levels of peer acceptance relative to peers) (Crick, 1991).

Administration Procedures

The previously described instruments were completed by subjects during two 60-min group assessment sessions (session A and session B) conducted within children's classrooms. These sessions were conducted by the authors, who employed standardized procedures. During each session, children were trained in the use of the response scales prior to administration of the instruments. Each item of every instrument was read aloud by the administrator, and assistants were available to answer children's questions. Sessions A and B were administered to classrooms in a random order, and the two sessions occurred approximately 1 week apart.

During session A, children completed the peer sociometric and behavior nomination measure, the Asher and Wheeler (1985) loneliness scale, the Franke and Hymel (1984) social anxiety scale, and one additional instrument that was not part of the present study. The peer nomination instrument was always administered first (to help insure that children would not be focused on the nominations they gave to others at the end of the session), however, the order of the loneliness and social anxiety scales was determined randomly. During session B, children completed the Children's Peer Relations Scale (Crick, 1991), the Children's Depression Inventory (Kovacs, 1985), and two additional instruments that were not part of the present study. The four instruments included in session B were presented in a random order.

Results

Assessment of Relational Aggression

A principal components factor analysis with VARIMAX rotation of the factors was first conducted on the scores children received from the peer nomination instrument to assess whether relational aggression would emerge as a separate factor, independent of overt aggression. This analysis yielded the four predicted factors (prosocial behavior, overt aggression, relational aggression, and isolation), and these factors accounted for 79.1% of the variation in the scores. Specifically, the prosocial factor accounted for 34.0% of the variation (eigenvalue = 5.10), the overt aggression factor accounted for 23.9% (eigenvalue = 3.59), the relational aggression factor accounted for 13.5% (eigenvalue = 2.02), and the isolation factor accounted for 7.6% (eigenvalue = 1.14). Based on the results of the factor analysis, two items were dropped from the scales. Specifically, one isolation item (i.e., gives in easily to others) was dropped because it had a much lower factor loading than did the other items on this scale (.54 relative to the other items which loaded above .90). Further, one relational aggression item (i.e., tells mean lies or rumors about a person to make other kids not like the person) was dropped because, although it loaded on relational aggression (.64), it also cross-loaded with overt aggression (.49). Factor loadings for the items of the resulting four subscales were relatively high, ranging from .73 to .92 (refer to Table 1). Computation of Cronbach's alpha showed all scales to be highly reliable (alpha = .94, .83, .91, .92 for overt aggression, relational aggression, prosocial behavior, and isolation, respectively).

The relation between relational and overt aggression was further assessed with a correlation coefficient, $r = .54$, $p < .01$. The moderate magnitude of this correlation is what one would expect for two constructs that are hypothesized to be *different* forms of the *same* general behavior (i.e., there should be a moderate association rather than a low or high association). Overall, these analyses provide initial evidence that relational aggression is a distinct construct, and that, although related, it is relatively independent of overt aggression.

Gender

It was next of interest to assess gender differences in relational aggression. First, a descriptive analysis was conducted of the percentage of boys versus girls who could be classified as either nonaggressive, overtly aggressive, relationally aggressive, or both overtly and relationally aggressive. Results showed that approximately equal numbers of each gender were classified as nonaggres-

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sive (73.0% of the boys and 78.3% of the girls). However, boys and girls were not evenly distributed among the remaining three aggressive groups. Rather, the overtly aggressive group consisted primarily of boys (15.6% of the boys vs. 0.4% of the girls); the relationally aggressive group consisted primarily of girls (17.4% of the girls vs. 2.0% of the boys); and the combined group consisted of both boys and girls (9.4% of the boys and 3.8% of the girls). One implication of these findings is that, contrary to prior research, aggressive boys and girls may be identified with almost equal frequency (27% of the boys vs. 21.7% of the girls in this study) when relational as well as overt forms of aggression are assessed.

To assess further the relation between gender and aggression, two analyses of variance were conducted in which gender and grade served as the independent variables and children's scores for the relational aggression and overt aggression scales served as the dependent variables. Both analyses yielded a significant main effect of gender, $F(1, 483) = 7.8$, $p < .01$, for relational aggression and $F(1, 483) = 68.1$, $p < .001$, for overt aggression. Specifically, girls ($M = .42$, SD = 3.4) were significantly more relationally aggressive than boys ($M = -.40$, SD = 2.9) whereas boys ($M = .77$, SD = 3.1) were significantly more overtly aggressive than girls ($M = -1.09$, SD = 1.6). These findings are consistent with the results of the descriptive analyses previously described.

Relational Aggression and Social-Psychological Adjustment

In order to assess the relation between relational aggression and social-psychological adjustment, two sets of analyses were performed. First, analyses of covariance were conducted in which relational aggression group (two levels: relationally aggressive vs. nonrelationally aggressive) and sex served as the independent variables, overt aggression served as the covariate, and the social-psychological adjustment indices served as the dependent variables (i.e., peer nominations of acceptance, rejection, prosocial behavior, and isolation/unhappiness; self-reports of depression, loneliness, social anxiety, social avoidance, and perceptions of peer relations).[2] Due to the moderate correlation between overt and relational forms of aggression, children's overt aggression scores were employed as a covariate to insure that any significant effects obtained were relatively independent of this form of aggression.[3] Student-Newman-Keuls post hoc tests ($p < .05$) were conducted as appropriate to investigate further significant effects (refer to Table 2 for adjusted cell means and standard deviations by relational aggression group).

Peer nominations of status, prosocial behavior, and isolation.—Analyses of children's peer acceptance and rejection scores yielded a significant main effect of relational aggression group, $F(1, 486) = 12.3$, $p < .01$, for peer rejection. Specifically, relationally

[2] Grade was initially included as an independent variable in these analyses (in order to avoid small cell sizes, the third and fourth graders were combined into one level of grade and the fifth and sixth graders were combined into a second level of grade). However, with two minor exceptions, none of the interactions involving grade were significant, and thus grade was excluded from the presented analyses (i.e., grade main effects for the dependent variables studied here have been assessed in prior research and were not of interest here). Both significant interactions involving grade were from analyses of the Children's Peer Relations Scale. The first was the grade × relational aggression group × sex interaction for the caring subscale. Inspection of cell means showed that the youngest (i.e., third and fourth grade), relationally aggressive males reported less engagement in caring acts than did all other groups. The second interaction was the grade × sex interaction for the peer isolation subscale. Inspection of cell means showed that the youngest girls reported more isolation from peers than did the oldest girls and the boys.

[3] A set of 2 (relational aggression group) × 2 (overt aggression group) ANOVAs were also conducted (sex could not be included as a factor because resulting cell sizes were too small in some cases). Results for the relational aggression group were comparable to those reported in the text. Significant effects of overt aggression were also obtained in some cases. Specifically, overtly aggressive children were significantly more rejected than other children. Further, analyses of the self-report instruments showed that, in sharp contrast to relationally aggressive children, whenever overtly aggressive children differed significantly from nonaggressive peers, they reported *higher* levels of social-psychological adjustment (e.g., significantly less social anxiety; higher levels of perceived peer acceptance; lower levels of social isolation) than other children. In addition, overtly aggressive children reported significantly more frequent use of overt aggression than did their peers. These findings provide further support for the distinctiveness of overt and relational aggression.

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TABLE 2

CELL MEANS AND STANDARD DEVIATIONS FOR SOCIAL-PSYCHOLOGICAL ADJUSTMENT INDICES BY RELATIONAL AGGRESSION GROUP ADJUSTED FOR OVERT AGGRESSION

MEASURE	RELATIONAL AGGRESSION GROUP	
	Nonaggressive	Aggressive
Peer nominations:		
Peer acceptance	.0 (1.0)	.2 (.9)
Peer rejection	.0 (.8)	.4 (1.2)**
Prosocial behavior	.0 (4.5)	−.2 (3.3)
Isolation	−.4 (2.8)	−.1 (2.1)
Self-reports:		
Depression	8.6 (7.4)	10.4 (6.1)*
Loneliness	29.9 (12.1)	34.6 (14.1)**
Social anxiety	18.4 (5.3)	19.5 (4.7)
Social avoidance	12.2 (4.7)	12.5 (4.8)
Perceived peer acceptance	11.8 (3.0)	11.2 (3.2)*
Peer isolation	4.0 (1.9)	4.4 (2.1)*
Caring acts	14.0 (3.3)	13.2 (3.4)
Overt aggression	7.2 (2.9)	7.3 (3.3)
Relational aggression	9.1 (3.4)	9.6 (4.3)

NOTE.—Standard deviations are in parentheses.
* $p < .05$.
** $p < .01$.

aggressive children were significantly more disliked by peers than were their nonrelationally aggressive peers.

Analyses of children's peer-assessed prosocial behavior and isolation yielded a significant main effect of sex, $F(1, 486) = 45.6$, $p < .001$, and a significant interaction of sex and relational aggression group, $F(1, 486) = 8.8$, $p < .01$, for prosocial behavior. Specifically, girls ($M = .62$, SD = 4.8) were viewed by peers as significantly more prosocial than were boys ($M = -.84$, SD = 3.2). However, follow-up tests on the significant interaction indicated that this effect varied as a function of relational aggression group. Specifically, nonaggressive girls ($M = 1.47$, SD = 5.1) were viewed as significantly more prosocial than children in the other three groups, nonaggressive boys ($M = -1.53$, SD = 3.2), aggressive girls ($M = -.22$, SD = 3.3), and aggressive boys ($M = -.15$, SD = 2.9). In contrast, nonaggressive boys were viewed as significantly less prosocial than children in the other three groups. The prosocial scores of relationally aggressive boys and girls were in between these two extremes and did not differ from each other.

Self-reports of social-psychological adjustment.—The ANOVA conducted on children's loneliness scores yielded a significant main effect of relational aggression group, $F(1, 457) = 10.6$, $p < .01$, and a significant interaction effect, $F(1, 457) = 4.3$, $p < .05$. Specifically, relationally aggressive children were significantly more lonely than were their nonrelationally aggressive peers. However, follow-up analyses of the interaction effect showed that the main effect was apparent for girls only. That is, relationally aggressive girls ($M = 37.0$, SD = 14.5) reported significantly higher levels of loneliness than did nonrelationally aggressive boys ($M = 31.0$, SD = 12.7) and girls ($M = 28.8$, SD = 11.4). In contrast, the loneliness scores of relationally aggressive boys ($M = 32.2$, SD = 12.5) did not differ from those of their nonaggressive peers. The analysis of children's social anxiety scores and social avoidance scores did not yield significant effects. The analysis of children's responses to the Children's Depression Inventory yielded a significant main effect of relational aggression group, $F(1, 458) = 4.8$, $p < .05$, and a significant main effect of sex, $F(1, 458) = 4.2$, $p < .05$. Specifically, relationally aggressive children reported significantly higher levels of depression than did nonrelationally aggressive children. Also, boys ($M = 9.7$, SD = 7.8) reported significantly higher levels of depression than did girls ($M = 9.3$, SD = 6.5).

Analyses of the subscales of the Children's Peer Relations Scale also yielded significant findings. Specifically, the analysis of

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children's perceived peer acceptance scores yielded a significant main effect of relational aggression group, $F(1, 464) = 5.7$, $p < .05$, and a significant interaction effect, $F(1, 464) = 4.3$, $p < .05$. Specifically, relationally aggressive children perceived themselves to be more poorly accepted by peers than did their nonaggressive counterparts. However, this effect was qualified by the interaction effect. Specifically, post hoc analyses indicated that relationally aggressive girls ($M = 10.6$, SD = 3.0) reported poorer acceptance by peers than did nonaggressive girls ($M = 12.0$, SD = 3.0), nonaggressive boys ($M = 11.7$, SD = 3.0), and relationally aggressive boys ($M = 11.7$, SD = 2.6). In contrast, the perceived acceptance reported by relationally aggressive boys did not differ from that reported by nonaggressive children.

Analysis of the peer isolation subscale yielded a significant main effect of relational aggression group, $F(1, 464) = 4.9$, $p < .05$, and a significant relational aggression group by sex interaction, $F(1, 464) = 5.4$, $p < .05$. That is, relationally aggressive children reported significantly greater isolation from other children than did their peers. However, this effect was qualified by the interaction effect. Specifically, follow-up tests showed that relationally aggressive girls ($M = 5.0$, SD = 2.0) reported significantly more isolation from peers than did nonaggressive girls ($M = 4.0$, SD = 2.0) and boys ($M = 4.0$, SD = 1.8, for nonaggressive and $M = 3.8$, SD = 1.8 for aggressive boys). Analysis of the caring acts subscale produced a significant main effect of sex, $F(1, 464) = 24.0$, $p < .001$, with girls ($M = 14.6$, SD = 2.9) reporting significantly more engagement in prosocial acts than boys ($M = 12.6$, SD = 3.5).

The ANOVA conducted on children's self-reports of overt aggression and relational aggression yielded a significant main effect of sex for each variable, $F(1, 464) = 13.2$, $p < .001$, and $F(1, 464) = 5.7$, $p < .05$, respectively. Boys reported significantly higher use of overt aggression ($M = 7.6$, SD = 3.1) and of relational aggression ($M = 9.6$, SD = 4.0) than did girls ($M = 7.0$, SD = 2.6 and $M = 9.1$, SD = 2.9 for overt aggression and relational aggression, respectively).

Sociometric status classifications.—Because sociometric status group has been considered an important social adjustment indicator in numerous prior studies (see Coie, Dodge, & Kupersmidt, 1990; Parker & Asher, 1987), the second set of analyses was designed to assess the relation between relational aggression and status group membership. Toward this end, an analysis of variance was conducted in which status group (popular, average, neglected, rejected, controversial) served as the independent variable and children's relational aggression scores (i.e., from the peer nomination instrument) served as the dependent variable (note that a covariate was not used for these analyses). This analysis yielded a significant effect for sociometric status, $F(4, 362) = 11.6$, $p < .001$. A Student-Newman-Keuls post hoc test ($p < .05$) indicated that controversial status children were significantly more relationally aggressive than all other status groups, including rejected children (refer to Table 3 for cell means and standard deviations). However, rejected children were significantly more relationally aggressive than popular and neglected children. Also, neglected children were significantly less relationally aggressive than were average status children. A comparable ANOVA was conducted of children's overt aggression scores for comparison purposes. This analysis also yielded a significant effect of status group, $F(4, 362) = 8.3$, $p < .001$. A Student-Newman-Keuls post hoc test ($p < .05$) indicated that controversial and rejected children were significantly more overtly aggressive than popular, average, and neglected children, a finding that is consistent with past research (see Coie et al., 1990, for a review).

Discussion

Results of the present study provide evidence for the validity of a relational form of aggression. As hypothesized, relational aggression appears to be relatively distinct from overt aggression, and it is significantly related to gender and to social-psychological adjustment in meaningful ways. These findings contribute uniquely to our understanding of children with adjustment difficulties, particularly young females.

As predicted, relational aggression appears to be more characteristic of girls than of boys. Results indicated that (1) as a group, girls were significantly more relationally aggressive than boys and (2) when relatively extreme groups of aggressive and nonaggressive children were identified, girls were more likely than boys to be represented in the relationally aggressive group. Interestingly, a parallel set of findings was obtained for boys and overt aggression. That is, on average, boys were significantly more

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TABLE 3

CELL MEANS AND STANDARD DEVIATIONS FOR RELATIONAL AGGRESSION AND OVERT AGGRESSION BY SOCIOMETRIC STATUS GROUP

Status Group	Relational Aggression Score	Overt Aggression Score
Popular	−.66 (2.9)	−.95 (1.8)
Average	−.11 (2.9)	−.34 (2.4)
Neglected	−1.36 (1.8)	−.75 (1.9)
Rejected	.76 (3.8)	1.11 (3.5)
Controversial	2.82 (3.0)	1.19 (3.2)

NOTE.—Standard deviations are in parentheses.

overtly aggressive than girls and were more likely to be represented in the extreme group of overtly aggressive children, findings that are consistent with prior research on gender differences in aggression (see Block, 1983; Parke & Slaby, 1983, for reviews). The present study provides evidence that the degree of aggressiveness exhibited by girls has been underestimated in these prior studies, largely because forms of aggression relevant to girls' peer groups have not been assessed.

The paucity of research on girls' aggression may exist partly because of the complexity and subtleness of the behaviors involved, characteristics that make them more difficult to study than overt aggression. For example, reliably assessing overt aggression in an interaction where one child hits another is significantly less complex than assessing relational aggression in an interaction where one child seems to exclude a peer from an activity. To competently judge the latter interaction, knowledge is needed that goes beyond the immediate situation (e.g., information about the relationship history of the aggressive child involved so that one can distinguish an excluded friend from a peer who simply never plays with the target child). Thus, when assessing relational aggression, the relevant behaviors may be overlooked unless informants are employed who can access information about friendships and other relationships within the relevant peer group. This issue was addressed in the present study through the use of children's peers as informants, an approach that, based on the current findings, appears promising.

Support for the distinctiveness of relational versus overt aggression was obtained in a number of ways. First, the factor analysis of the peer nomination instrument yielded separate factors for overt and relational aggression, with items that loaded highly on each factor and cross-loaded insubstantially. Second, the classification of children into extreme groups of aggressive children showed that, although some of the children identified as high in aggression exhibited both forms (i.e., the combined group), the majority of aggressive children exhibited solely overt or relational forms of aggression. Specifically, of the 121 children identified as high in aggression, only 27.3% (n = 33) exhibited both relational and overt forms of aggression. The majority of aggressive children (72.7%) exhibited either relational or overt aggression, but not both. In addition, as will be discussed in more detail below, relational aggression was significantly related to social-psychological maladjustment, independent of overt aggression. These findings provide evidence that, although overt and relational aggression are likely related constructs (i.e., because both constitute harmful, aggressive acts), they each provide unique information about children's social behavior.

Findings from the peer-assessments as well as from the self-report instruments indicate that, as has been found in past research for overtly aggressive children (Parker & Asher, 1987) relationally aggressive children also experience significant social problems. Specifically, relationally aggressive children were significantly more disliked than other children. In addition, the peer status groups who exhibited the highest levels of relational aggression were the rejected and controversial groups (i.e., classifications that indicate impaired peer relationships; Coie et al., 1990). Moreover, relational aggression was significantly related to social maladjustment (i.e., peer nominations of rejection and self-reports of poor peer acceptance), independent of overt aggression (i.e., the relations were significant even though overt

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aggression, the best known behavioral predictor of peer rejection, was employed as a covariate). These findings indicate that relational aggression provides unique and important information about children's social difficulties that cannot be accounted for by overt aggression alone.

It is possible that engaging in relationally aggressive behaviors, because of their aversive nature, leads to being disliked by peers. Support for this particular temporal relation between rejection and aggression has been established in past research for overt aggression (Coie & Kupersmidt, 1983; Dodge, 1983). However, it is also conceivable that rejection by one's peers may precede relational aggression. For example, a rejected child may attempt to harm peers' relationships with others in an effort to compensate (or retaliate) for her own lack of success in those relationships. In either case, the association found between relational aggression and rejection significantly enhances our knowledge of the social adjustment difficulties of girls. To date, relatively few studies have focused on the correlates of rejection for girls (cf. Coie & Whidby, 1986), and these studies have not established a relation between aggression and rejection for young females (Coie & Whidby, 1986; French, 1990). The present study provides initial evidence for such a relation.

The significant relation obtained between relational aggression and controversial status group membership is particularly interesting. Controversial children, by definition, are highly disliked by some peers and highly liked by other peers. It is possible that aggressive, controversial status children direct their relationally aggressive behaviors disproportionately among their peers (i.e., so that some peers are frequently victims of these behaviors whereas other peers are never victims of these acts). If so, it seems likely that controversial children may receive disliked nominations from peers who have been the targets of their relationally aggressive acts (e.g., children that they exclude from peer interactions) whereas they may receive liked nominations from peers who have escaped this maltreatment. Relative to other sociometric status groups, much less is known about the peer relationships of controversial children, except that they tend to be more overtly aggressive than their better accepted peers (present study; see Coie et al., 1990, for a review of past studies with similar findings). However, the present pattern of findings for relational aggression suggests that this group of children may play a critical role in controlling the structure and nature of peer group interactions (e.g., controlling who is included in peer activities; deciding who receives social approval). Their popularity with some peers may give these children the "social authority" and control necessary to successfully manipulate peer group relationships. Investigation of these hypotheses in future research seems warranted, particularly since research on controversial children is lacking. One direction for future study would be an assessment of specific perpetrator-victim relationships within the peer group (e.g., to determine whether the disliked nominations received by controversial children are provided by the peers that they victimize).

Findings from the self-report social-psychological adjustment instruments provide further evidence that relational aggression is significantly related to maladjustment (e.g., depression, loneliness, social isolation). These findings indicate that relationally aggressive children feel unhappy and distressed about their peer relationships. These significant relations between psychological maladjustment and relational aggression were apparent even after level of overt aggression was taken into account. It may be that frequent engagement in relationally aggressive behaviors exacerbates, if not generates, feelings of social-psychological distress because these acts potentially limit children's access to peer relationships (e.g., excluding peers results in fewer peers with which to play or interact). However, it may also be that feelings of psychological distress lead to engagement in relational aggression. For example, children who feel lonely or poorly accepted by peers may use relational aggression as a way to retaliate against peers (e.g., "You rejected me, now I'll get even by rejecting you") or to make themselves feel better (e.g., they may feel more competent or in control if they exclude or put down others).

Results also demonstrate that the nature of the relation between social-psychological adjustment and relational aggression varies as a function of sex. That is, the present results indicate that it is stronger or more pervasive for girls than for boys (i.e., for some of the adjustment indices, only the scores of relationally aggressive girls differed from those of their nonaggressive peers). One goal for future research will be to employ longitudinal designs that assess whether re-

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lational aggression is predictive of future, as well as concurrent, social-psychological problems.

In sum, results of the present study provide support for the hypothesis that, on average, *both* girls and boys are aggressive but tend to exhibit distinct forms of the behavior (relational aggression for girls and overt aggression for boys). They also indicate that further study of relational aggression is warranted, particularly given that this form of aggression is significantly associated with social-psychological adjustment problems. It will be important in future research to develop further our understanding of the correlates, antecedents, and consequences of relational aggression as well as knowledge of the function it serves in children's peer groups.

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