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# Relational and Physical Forms of Peer Victimization in Preschool

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Although relatively neglected in the past, research on peer victimization has been increasing at a rapid rate. Studies in this area have provided a convincing case for the negative role played by peer maltreatment in children's social development and psychological adjustment. Relative to their nonvictimized peers, victimized children have been shown to be significantly more depressed, anxious, lonely, and rejected by peers; to experience greater school adjustment problems; and to hold more negative perceptions of their own competence (e.g., Boulton & Smith, 1994; Boulton & Underwood, 1992; Crick & Bigbee, 1998; Crick & Grotpeter, 1996; Kochenderfer & Ladd, 1997; Olweus, 1984, 1993; Perry, Kusel, & Perry, 1988; Schwartz, Dodge, & Coie, 1993). In addition, research by Olweus has shown that victimization in childhood predicts future adult adjustment problems (i.e., depression; for a review, see Olweus, 1993). These studies demonstrate the significance of research on peer victimization for increasing understanding of the social contributors to children's developmental difficulties.

Despite the recent advances in knowledge of peer maltreatment, important limitations are apparent. For example, the majority of past studies focused on physical forms of peer victimization, a type of maltreatment more commonly experienced by boys than girls (e.g., Boulton & Underwood, 1992; Crick & Grotpeter, 1996; Schwartz, Dodge, Pettit, & Bates, 1997). Although studies of this form of peer victimization are extremely important, recent evidence indicates that assessment of both relational and physical forms of victimization is necessary to understand the negative peer treatment experiences of both girls and boys (i.e., because relational victimization has been shown to be relatively more common among girls than boys; Crick & Bigbee, 1998; Crick & Grotpeter, 1996).

In contrast to physical victimization, in which children are harmed and controlled through physical damage or by the threat of such damage (e.g., being pushed or shoved, being threatened with physical harm unless a peer's request is obeyed), relationally victimized children are harmed through peers' attempts to damage or control their relationships with others (e.g., being excluded from an important event such as a birthday party when a peer's request is not obeyed, being the target of a hostile rumor within the peer group; Crick & Bigbee, 1998; Crick & Grotpeter, 1996). Evidence indicates that children view relationally aggressive acts as commonly occurring aggressive events within their peer groups, particularly for the interactions of girls with other girls (Crick, Bigbee, & Howes, 1996), findings that have gained additional support through naturalistic observations of children's actual peer provocations (Fabes, Eisenberg, Smith, & Murphy, 1996). In addition, recent studies have shown that, similar to physically aggressive children, children who are the frequent targets of relational aggression are significantly more likely than nonvictimized peers to be socially and psychologically maladjusted (e.g., more depressed, lonely, socially anxious, and rejected; Crick & Bigbee, 1998; Crick & Grotpeter, 1996). Furthermore, this research has shown that relational victimization predicts maladjustment above and beyond physical victimization and also predicts adjustment problems above and beyond both physical and relational aggression. These findings provide important evidence for the salience of relational victimization experiences in children's lives, and they demonstrate that the assessment of relational victimization may provide unique information about children's adjustment (i.e., knowledge that is not gained through the study of aggression or physical forms of victimization).

One important gap in the knowledge of both relational and physical forms of victimization is the lack of information about young children. Existing studies of peer victimization have focused largely on school-age children and adolescents (for an exception, see a study of physical victimization in a preschool sample conducted by Troy & Sroufe, 1987) or have included preschool-age children but have focused on aggression rather than victimization (Crick, Casas, & Mosher, 1997; McNeilly-Choque, Hart, Robinson, Nelson, & Olsen, 1996). Given the significance of early identification of children's social difficulties for intervention and prevention efforts (Levy-Shiff & Hoffman, 1989; Olson & Lifgren, 1988; Wasik, 1987), the present research was designed as the first study of both relational and physical victimization among preschool-age children (3–5-year-olds).

Recent studies of aggression among young children have shown that, as has been demonstrated for school-age children, relational aggression is a relatively frequent hostile event in many preschool classrooms (Crick et al., 1997; McNeilly-Choque et al., 1996). However, as one would expect due to the vast cognitive, emotional, and social changes that occur from preschool to the school-age period, developmentally related age differences are apparent in the types of relationally aggressive behaviors exhibited by children of these two age groups. Although the manifestation of relational aggression during the preschool years is similar in many ways to that of school-age children, it also includes unique features (Crick et al., in press). For example, when preschoolers engage in

relationally aggressive acts, they tend to do so in relatively simple, direct ways that typically involve a current situation or provocation (e.g., telling a peer that he or she will not be the peer's friend unless the peer gives him or her a crayon). In contrast, older children are more adept at using more complex and subtle forms of relational aggression that may reflect a response to a situation or transgression that occurred in the past (e.g., purposely excluding a peer from a party because the peer did not invite him or her to the peer's party last month). Despite these differences in form, the relationally aggressive acts of older and younger children have in common the use of relationships as a vehicle of harm, and when this harm is frequently directed toward the same children (i.e., the victims), it is likely to be an aversive experience for preschoolers as well as school-age children.

In support of this hypothesis, relationally aggressive behaviors have been shown to be highly salient and aversive to young children (Crick et al., 1997). Thus, some preschoolers who are the frequent targets of relational aggression may be at risk for developing internalizing adjustment difficulties because of the hostile peer environment to which they are frequently exposed (e.g., being excluded from numerous peer activities through relational aggression may lead to feelings of anxiety or depressed affect). For other children, adjustment difficulties may lead to their victimization because of their negative reputations within the peer group. That is, peers may tend to direct aggressive behaviors at children they particularly dislike or find unrewarding (e.g., those who are rejected in the peer group, who fail to provide reinforcement to peers through prosocial behaviors, or who are overactive and difficult to engage in play). Troy and Sroufe (1987) proposed that victimized children may exhibit an anxious vulnerability (e.g., by appearing worried, sad, or afraid) that signals to aggressors that they are an easy mark.

Although evidence to support these hypotheses has been generated for school-age children (e.g., Crick & Grotpeter, 1996; Perry et al., 1988), no research has yet been conducted with preschoolers. Given that the preschool years mark the beginning of the stabilization of children's sentiments toward particular peers (e.g., as reflected in the stability of their ratings or nominations of peer acceptance or rejection over time; e.g., Denham, McKinley, Couchoud, & Holt, 1990), it seems likely that peer victimization experiences (and accompanying adjustment difficulties) also begin to stabilize and become focused on particular children during this age period. Accordingly, the first goal of the present research was to evaluate whether peer victimization is associated with social-psychological adjustment difficulties as early as the preschool years. Indexes of social difficulties (peer acceptance and rejection, loneliness, lack of engagement in prosocial behavior, lack of positive treatment by peers), internalizing problems (depressed affect and anxiety), and overactivity were used as indicators of children's adjustment and reputations in the peer group.

The second objective of this study was to provide the first evaluation of gender differences in physical and relational victimization during the preschool period. Past studies of physical victimization in older samples have demonstrated that boys are more victimized than girls (Boulton & Underwood, 1992; Crick & Grotpeter, 1996; Perry et al., 1988). In contrast, studies of relational victimization in older samples have demonstrated either no gender difference or a tendency for girls to be more victimized than boys (Crick & Bigbee, 1998; Crick & Grotpeter, 1996). Studies of physical and relational aggression in preschool-age samples have shown girls to be more relationally aggressive and less physically aggressive than boys regardless of whether aggression assessments were obtained through teacher reports or naturalistic observations of children's behavior (Crick et al., 1997; Fabes et al., 1996; McNeilly-Choque et al., 1996). Given that children's peer interactions tend to be segregated by sex during the preschool years (Fagot & Patterson, 1969; for reviews, see Maccoby, 1988; Rubin, Bukowski, & Parker, 1998; Ruble & Martin, 1998), it seems likely that boys will most often direct their aggressive acts (i.e., physical aggression) toward other boys whereas girls will most often direct their aggressive behaviors (i.e., relational aggression) toward other girls. Thus, we hypothesized that, similar to results obtained with school-age samples, boys would be more physically victimized and girls would be more relationally victimized in our preschool sample.

The last goal of this study was to assess the association between aggression and victimization. Past studies of school-age children have shown that although some overlap is apparent, targets of aggression and perpetrators of aggression tend to be different individuals (e.g., Crick & Bigbee, 1998; Perry et al., 1988). It is not clear whether the same association is true of preschoolers. For example, it is possible that because of the more transitory nature of young children's interaction patterns, relative to those of school-age children, victims and perpetrators of aggression will more often trade roles (e.g., the victim of an aggressive act may retaliate with an aggressive counterattack and thus be identified as both aggressive and victimized). We addressed these goals through evaluation of the association

between aggression and victimization and also through the assessment of the short-term stability of both aggression and victimization (i.e., to evaluate whether the victim role has crystallized during the preschool period or is more flexible in nature).

To address our objectives, a new teacher-report measure of physical and relational victimization was developed. Although peer-nomination instruments have typically been the assessment tool of choice in studies of aggression and victimization among school-age children, teacher reports of relational and physical aggression have been shown to correlate significantly with naturalistic observations for preschool-age populations ( McNeilly-Choque et al., 1996) and have been considered more valid than peer reports for this age group ( Crick et al., in press). Teacher-report instruments developed in past research could not be used because in addition to being inappropriate for use with preschoolers, they also assess victimization in a way that is too general to allow for the specific assessment of relational versus physical victimization (e.g., items such as “has mean things done to him/her”; Kochenderfer & Ladd, 1996; Perry et al., 1988). Development of the new instrument was based on prior research on relational and physical victimization with older children, past studies of research on relational and physical aggression among preschoolers, and pilot research. Social–psychological adjustment was assessed through multiple informants (i.e., self-reports, peer reports, and teacher reports) by using instruments developed in past research.

## ***Method***

### **Participants**

Participants included 129 children (67 boys and 62 girls) ranging in age from 3 years 1 month to 5 years 6 months ( $M = 4$  years 6 months,  $SD = 8$  months) and their teachers who were recruited from three preschools (nine classrooms) located in a moderately sized midwestern town. Class sizes ranged from 12 to 18 children. The sample included 44% African Americans, 44% European Americans, 10% Asians, and 2% other ethnicities. All children had written parental consent to take part in the study (consent rate was 87%).

Because the sample included a diversity of ages, two age groups were identified for use in subsequent analyses. Specifically, children whose age was below the sample median were classified into a younger age group ( $M = 4$  years 0 months, range = 3 years 1 month to 4 years 6 months), whereas those whose age was above the sample median were classified into an older age group ( $M = 5$  years 0 months, range = 4 years 7 months to 5 years 6 months).

### **Administration Procedure**

The teaching staff at the three participating preschools completed teacher rating measures of aggression, victimization, and social–psychological adjustment for each of their participating students. Following procedures developed in prior research ( Crick et al., 1997), these instruments were completed jointly by the teachers within each classroom (i.e., each classroom had two teachers). Specifically, the two teachers for a particular classroom held a meeting to discuss the ratings that should be given to each child for each item, and the measures were completed at this meeting (i.e., on the basis of joint consensus). Unlike most classrooms in elementary schools, preschools generally have more than one teacher per class. Because of this unique situation, each of the teachers may develop a different degree of knowledge and familiarity with each child. Thus, we asked the teachers to complete the rating forms as a group to help ensure that the most complete and reliable information possible was obtained for each child (only one copy of each measure was completed per child, and the ratings on this form reflected the consensus opinion). One month after these instruments were completed, a subset of the teachers ( $n = 26$ ) completed the measures again so that short-term stability could be evaluated. Peer-report measures of adjustment and a self-report measure of loneliness were individually administered to children by trained graduate and undergraduate

research assistants in two 15–20-min interviews conducted in private rooms at each of the participating preschools.

### **Assessment of Victimization and Aggression**

A teacher rating measure of peer victimization (Preschool Peer Victimization Measure—Teacher Report) was developed for use in the present study through a two-part process. First, letters were sent to nonparticipating preschool staff asking them to generate typical anecdotes of peer victimization that they had observed in their classrooms. Second, this information was used to adapt a victimization instrument that was previously developed for use with older children (Crick & Bigbee, 1998) to make it appropriate for use with preschool-age children. The resultant measure assessed relational victimization (3 items; e.g., “This child gets left out of the group when someone is mad at them or wants to get back at them”), physical victimization (3 items; e.g., “This child gets pushed or shoved by peers”), and being the recipient of prosocial behavior (3 items; e.g., “This child gets invited to join a group of playmates when he/she is playing alone”). The response scale for each item on this instrument ranges from 1 (*never or almost never true*) to 5 (*always or almost always true*).

A teacher rating instrument developed in prior research, the Preschool Social Behavior Scale—Teacher Form (Crick et al., 1997), was used to assess relational aggression (6 items; e.g., “This child tells others not to play with or be a peer's friend”), physical aggression (6 items; e.g., “This child pushes or shoves other children”), prosocial behavior (2 items; e.g., “This child says or does nice things for other kids”), depressed affect (3 items; e.g., “This child looks sad”), acceptance by same-sex peers (1 item; i.e., “This child is well liked by peers of the same sex”), and acceptance by opposite-sex peers (1 item; i.e., “This child is well liked by peers of the opposite sex”). The response scale for each item on this measure ranges from 1 (*never or almost never true*) to 5 (*always or almost always true*). Cronbach's alphas were .83 for the Relational Aggression scale, .87 for the Physical Aggression scale, .76 for the Prosocial Behavior scale, and .64 for the Depressed Affect scale for this sample.

Children's teacher-assessed relational and physical aggression scores were used to identify extreme groups of aggressive and nonaggressive children. Children with relational aggression scores greater than a standard deviation above the sample mean were classified as relationally aggressive ( $n = 22$ ; 18 girls and 4 boys), and children with scores lower than this criterion were classified as nonrelationally aggressive ( $n = 107$ ; 44 girls and 63 boys). Children with physical aggression scores greater than a standard deviation above the sample mean were classified as physically aggressive ( $n = 20$ ; 9 girls and 11 boys), and those with scores below this criterion were classified as nonphysically aggressive ( $n = 109$ ; 53 girls and 56 boys).

### **Assessment of Social–Psychological Adjustment**

Peer nominations of acceptance (i.e., “like to play with nominations”) and rejection (i.e., “don't like to play with nominations”) as well as the peer-report Prosocial Behavior scale (4 items; e.g., “kids who are nice to other kids”) of the Preschool Social Behavior Scale—Peer Form (Crick et al., 1997) were used to evaluate peers' perceptions of children's social adjustment. For each of the peer acceptance–rejection items and the prosocial behavior items, children nominated up to three classmates who best fit the description provided. Procedures developed in past research for the use of peer-nomination instruments with young children (McCandless & Marshall, 1957) were also followed in this study (e.g., pictures of all participating classmates were provided and children pointed to the pictures of their three choices for each item). The number of nominations each child received from classmates for each item was computed and then standardized within each classroom. The standardized scores for each item on the prosocial behavior scale were then summed to yield total scores.

Five items from Cassidy and Asher's (1992) Loneliness scale were used to evaluate children's self-reports of feelings of loneliness and social dissatisfaction (5 items; e.g., "Can you find a friend when you need one?"; Cronbach's  $\alpha = .75$ ). The response scale for each item on this measure ranges from 1 (*no*) to 3 (*yes*).

Several of the teacher-report scales described above were also used as indexes of children's adjustment: being the recipient of prosocial behavior, prosocial behavior, acceptance by same-sex peers, acceptance by opposite-sex peers, and depressed affect. In addition, to assess children's tendencies to appear anxious and vulnerable, the Fearful–Anxious (4 items; e.g., "fearful or afraid") and Hyperactive–Distractible (4 items; e.g., "restless") subscales of the Children's Behavior Scale were used, a teacher rating instrument with demonstrated reliability and validity (Ladd & Profilet, 1996). The response scale for each item on this instrument ranges from 1 (*doesn't apply*) to 3 (*certainly applies*). Both subscales proved to be reliable for the present sample, with Cronbach's alphas equal to .65 for the Fearful–Anxious subscale and .88 for the Hyperactive–Distractible subscale.

## **Results**

To evaluate the proposed objectives, we conducted five sets of analyses, including (a) evaluation of the psychometric properties of the victimization instrument, (b) evaluation of the short-term stability of victimization and aggression, (c) assessment of the association between physical and relational forms of victimization and aggression, (d) evaluation of gender differences in physical and relational victimization, and (e) evaluation of the relation between victimization and social–psychological adjustment.

### **Psychometric Properties of the Victimization Measure**

Because the victimization instrument was newly developed, we first sought to evaluate its psychometric properties. First, we conducted a factor analysis (principal components with varimax rotation) of teachers' responses to the peer victimization instrument. This analysis yielded the three hypothesized factors (see Table 1 for the items and factor loadings). The first factor (eigenvalue = 4.9), Physical Victimization, accounted for 55% of the variation; the second factor (eigenvalue = 1.3), Receiving Prosocial Treatment, accounted for 15% of the variation; and the third factor (eigenvalue = 0.8), Relational Victimization, accounted for 9% of the variation in children's scores. One relational victimization item loaded on both Physical and Relational Victimization, and it was dropped from subsequent analyses (see Table 1). In addition, a verbal insult item that loaded on the Physical Victimization factor was dropped for conceptual reasons (i.e., so that a more "pure" measure of physical victimization could be created). Cronbach's alpha revealed that the resultant scales were internally consistent, with alphas of .77 for the Relational Victimization scale, .88 for the Physical Victimization scale, and .85 for the Recipient of Prosocial Behavior scale.<sup>2</sup>

The associations among the three scales included in the victimization measure were evaluated with correlation coefficients computed separately for boys and girls. Analyses of the association between relational and physical victimization yielded correlations of .61 ( $p < .001$ ) for boys and .49 ( $p < .001$ ) for girls. The correlations between relational victimization and being the recipient of prosocial behavior were  $-.55$  ( $p < .001$ ) for boys and  $-.36$  ( $p < .01$ ) for girls. Finally, the relations between physical victimization and being the recipient of prosocial behavior were  $-.57$  ( $p < .001$ ) for boys and  $-.37$  ( $p < .01$ ) for girls.

Children's relational and physical victimization scores were used to identify extreme groups of victimized and nonvictimized children. Children with relational victimization scores greater than a standard



deviation above the sample mean for their age group were classified as relationally victimized ( $n = 15$ ; 7 girls and 8 boys), and children with scores lower than this criterion were classified as nonrelationally victimized ( $n = 114$ ; 55 girls and 59 boys). Children with physical victimization scores greater than a standard deviation above the sample mean for their age group were classified as physically victimized ( $n = 21$ ; 5 girls and 16 boys), and those with scores lower than this criterion were classified as nonphysically victimized ( $n = 108$ ; 55 girls and 53 boys).

The overlap between relational and physical forms of peer victimization was evaluated by examining the number of victimized children classified into each group. This analysis revealed that of all the preschoolers identified as victimized, 53% were physically victimized (but not relationally victimized), 34% were relationally victimized (but not physically victimized), and 13% were the victims of both forms of aggression. These findings indicate that the majority of preschool victims were the target of only one form of aggression.

### **Evaluation of the Short-Term Stability of Victimization and Aggression**

#### **Peer victimization**

Evaluation of short-term stability (1-month interval) for the entire subsample ( $n = 26$ ; 13 per age group) yielded correlations of  $.63$  ( $p < .001$ ) for relational victimization and  $.37$  ( $p < .05$ ) for physical victimization. However, correlations computed separately by age group revealed substantial differences as a function of age. Specifically, for the younger age group, short-term stabilities were  $.76$  ( $p < .001$ ) for relational victimization and  $.09$  ( $ns$ ) for physical victimization. For the older age group, short-term stabilities were  $.50$  ( $p < .05$ ) for relational victimization and  $.61$  ( $p < .05$ ) for physical victimization.

#### **Peer-directed aggression**

Evaluation of short-term stability (1-month interval) for the entire subsample ( $n = 26$ ; 13 per age group) yielded correlations of  $.64$  ( $p < .001$ ) for relational aggression and  $.64$  ( $p < .001$ ) for physical aggression. Correlations computed separately by age group yielded short-term stabilities of  $.68$  ( $p < .01$ ) for relational aggression and  $.52$  ( $p < .05$ ) for physical aggression for the youngest age group. Stabilities for the oldest age group were  $.61$  ( $p < .05$ ) for relational aggression and  $.72$  ( $p < .01$ ) for physical aggression.

### **Association Between Aggression and Victimization**

The association between aggression and victimization was first evaluated with correlation coefficients computed separately for boys and girls. For boys, analyses yielded correlations of  $.45$  ( $p < .001$ ) for the association between relational victimization and relational aggression and  $.65$  ( $p < .001$ ) for the association between physical victimization and physical aggression. For girls, analyses yielded correlations of  $.58$  ( $p < .001$ ) for the association between relational victimization and relational aggression and  $.60$  ( $p < .001$ ) for the association between physical victimization and physical aggression.

Next, the overlap between extreme groups of victimized and aggressive children was examined by calculating the percentage of children who were classified as victims, aggressors, or both. These descriptive analyses showed that for relational forms of aggression and victimization, 81% of children were classified as either aggressive or victimized (29% victimized vs. 52% aggressive), whereas 19% were classified as both aggressive and victimized. For physical forms of aggression and victimization, 59% of children were classified as either aggressive or victimized (31% victimized vs. 28% aggressive), whereas 41% were classified as both aggressive and victimized. These results indicate substantial nonoverlap in victimization and aggression for both relational and physical forms of aggression and

victimization (i.e., the majority of children were classified as either aggressive or victimized but not both).

### **Gender Differences in Victimization**

To assess gender differences in peer victimization, we conducted two (gender) analyses of covariance in which children's victimization scores served as the dependent variables. To control for the correlation between the two forms of victimization, physical victimization served as the covariate for analyses of relational victimization and vice versa. Results indicated that girls ( $M = 4.96$ ,  $SD = 1.58$ ) were significantly more relationally victimized than boys ( $M = 4.43$ ,  $SD = 1.82$ ),  $F(1, 126) = 4.29$ ,  $p < .05$ , whereas boys ( $M = 4.68$ ,  $SD = 1.83$ ) were significantly more physically victimized than girls ( $M = 3.90$ ,  $SD = 1.57$ ),  $F(1, 126) = 9.73$ ,  $p < .01$ .

### **Victimization and Social–Psychological Adjustment**

Prior to conducting analyses, we first examined the intercorrelations among the social–psychological adjustment indexes. Several of the teacher-report measures were moderately or highly correlated, and these indexes were combined to form conceptually meaningful composites (the intercorrelations of the individual scales comprising a particular composite ranged from .58 to .75). Specifically, the Anxious–Fearful scale and the Depressed Affect scale were combined to create an internalizing problems measure. In addition, the Prosocial Behavior scale, the Receipt of Prosocial Behavior scale, and the two Peer Acceptance scales were combined to form a positive peer relations measure. Prior to the creation of these two composite measures, children's scores for the individual scales were transformed into  $z$  scores to account for differences in response scales and number of items comprising each scale.

To evaluate the relationship between victimization and social–psychological adjustment, we conducted 2 (relational victimization group)  $\times$  2 (physical victimization group)  $\times$  2 (gender)  $\times$  2 (age group: younger vs. older) analyses of variance (ANOVAs) in which children's peer, teacher, and self-reports of adjustment served as the independent variables (the four-way interactions were suppressed because of small cell sizes; see Tables 2 and 3 for main effect means and standard deviations by victimization group). In all of the analyses described below, all significant main effects and interactions are described (i.e., those in which  $p$  was shown to be less than .05).

### **Peer reports of adjustment**

Analyses of children's peer acceptance scores yielded a significant effect of relational victimization,  $F(1, 114) = 5.04$ ,  $p < .05$ , indicating that relationally victimized children were less accepted by peers than were other children. Furthermore, both relationally victimized children,  $F(1, 114) = 6.02$ ,  $p < .05$ , and physically victimized children,  $F(1, 114) = 4.27$ ,  $p < .05$ , were more rejected by peers than were nonvictimized children. Analyses of children's prosocial behavior scores showed that girls ( $M = 0.92$ ,  $SD = 2.92$ ) were more prosocial than boys ( $M = -0.85$ ,  $SD = 2.59$ ),  $F(1, 114) = 11.17$ ,  $p < .001$ . Results also revealed a significant interaction between relational victimization and gender,  $F(1, 114) = 3.84$ ,  $p < .05$ , for prosocial behavior. Further analyses of this interaction (i.e., simple effects ANOVAs conducted separately by gender) revealed that relationally victimized boys ( $M = 3.41$ ,  $SD = 1.92$ ) were significantly less prosocial than nonrelationally victimized boys ( $M = -0.51$ ,  $SD = 2.48$ ),  $F(1, 65) = 10.14$ ,  $p < .01$ . In contrast, the prosocial behavior scores of relationally victimized girls did not differ from those of other girls.

### **Self-reports of adjustment**

No significant effects were obtained for children's self-reports of loneliness.

## Teacher reports of adjustment

Analyses of teacher reports of children's adjustment yielded significant main effects of both relational victimization,  $F(1, 114) = 6.75, p < .05$ , and physical victimization,  $F(1, 114) = 7.45, p < .01$ , for internalizing difficulties, indicating that the victims of both forms of aggression had more internalizing difficulties than nonvictims. Younger children ( $M = 0.29, SD = 2.13$ ) had more internalizing problems than older children ( $M = -0.25, SD = 1.48$ ),  $F(1, 114) = 4.60, p < .05$ .

Victims of physical aggression,  $F(1, 114) = 16.65, p < .001$ , and victims of relational aggression,  $F(1, 114) = 16.90, p < .001$ , were reported by teachers to have less positive peer relations than nonvictims. Furthermore, a significant interaction between physical victimization and grade was obtained for children's positive peer-relations scores,  $F(1, 114) = 4.32, p < .05$ . Additional analyses of this interaction (i.e., simple effects ANOVAs conducted separately for physical victims and nonvictims) indicated that younger physically victimized children ( $M = -6.16, SD = 3.75$ ) had significantly less positive peer relationships than older physically victimized children ( $M = -1.40, SD = 1.90$ ),  $F(1, 114) = 15.21, p < .001$ . In contrast, the scores of older and younger nonvictims did not differ significantly.

Results for children's Hyperactive–Distractible scale scores revealed that victims of physical aggression,  $F(1, 114) = 14.19, p < .001$ , were rated by teachers as more likely to exhibit these problems than nonvictims. Furthermore, boys ( $M = 7.34, SD = 2.68$ ) were rated as more hyperactive and distractible than girls ( $M = 6.14, SD = 2.37$ ),  $F(1, 114) = 4.61, p < .05$ .

## The Unique Contribution of Relational Victimization to the Prediction of Social–Psychological Adjustment

To evaluate the unique contribution of relational victimization to the prediction of social–psychological adjustment, we conducted 2 (relational victimization group)  $\times$  2 (gender)  $\times$  2 (age group: younger vs. older) analyses of covariance in which children's peer, teacher, and self-reports of adjustment served as the independent variables and physical victimization served as the covariate (the four-way interactions were suppressed because of small cell sizes; see Table 4 for adjusted main effect means and standard deviations by relational victimization group). Simple effects ANOVAs were used to further investigate significant interaction effects.

## Peer reports of adjustment

After controlling for physical victimization, analyses of peer reports of adjustment indicated that relative to other children, relationally victimized children were significantly less accepted,  $F(1, 120) = 4.00, p < .05$ , and more rejected by peers,  $F(1, 120) = 4.72, p < .05$ , than were nonvictims. Girls ( $M = 0.80, SD = 2.92$ ) were more prosocial than boys ( $M = -1.88, SD = 2.59$ ),  $F(1, 123) = 10.43, p < .01$ .

In addition to these significant main effects, analyses of children's peer rejection scores yielded significant interactions between relational victimization and gender,  $F(1, 120) = 4.72, p < .05$ , and between relational victimization and grade,  $F(1, 120) = 3.90, p < .05$ . Further analyses of the relational victimization by gender interaction (i.e., simple effects ANOVAs conducted separately by gender) revealed that relationally victimized boys ( $M = 1.02, SD = 1.42$ ) were significantly more rejected by peers than were nonrelationally victimized boys ( $M = -0.06, SD = 0.94$ ),  $F(1, 62) = 7.80, p < .01$ . Analyses of girls' scores did not yield any significant effects. Follow-up analyses of the relational victimization by grade interaction (i.e., simple effects ANOVAs conducted separately by grade) showed that younger relationally victimized children ( $M = 1.02, SD = 1.26$ ) were significantly more rejected than younger nonrelationally

victimized children ( $M = -0.01$ ,  $SD = 0.88$ ),  $F(1, 54) = 7.44$ ,  $p < .01$ . Analyses of older children's scores did not yield any significant effects.

Analyses of peer reports of adjustment also yielded a significant interaction between relational victimization and gender for children's prosocial behavior,  $F(1, 120) = 4.55$ ,  $p < .05$ . Simple effects ANOVAs conducted separately by gender revealed that relationally victimized boys ( $M = -3.20$ ,  $SD = 1.92$ ) were significantly less prosocial than nonrelationally victimized boys ( $M = -0.56$ ,  $SD = 2.48$ ). Analyses of girls' prosocial behavior scores did not yield significant effects.

### **Self-reports of adjustment**

No significant effects were obtained for children's self-reports of loneliness.

### **Teacher reports of adjustment**

After controlling for physical victimization, analyses of teacher reports of adjustment yielded significant main effects of relational victimization for children's positive peer relationships,  $F(1, 120) = 11.42$ ,  $p < .001$ , and internalizing problems,  $F(1, 120) = 4.22$ ,  $p < .05$ , indicating that victims of relational aggression had less positive peer relationships and more internalizing difficulties than nonvictims.

## ***Discussion***

Results of this study provide the first evidence of the importance of both physical and relational victimization in the lives of young children. These findings contribute significantly to knowledge of peer victimization by demonstrating that maltreatment by age-mates starts much earlier than middle childhood, the age group that has most often been the focus of victimization research (e.g., Crick & Bigbee, 1998; Perry et al., 1988).

The results of the factor analysis and the correlational analyses of children's peer victimization scores indicated that relational and physical forms of peer maltreatment were relatively distinct. That is, the two forms of victimization loaded on two separate factors (with the exception of one cross-loading item) and were shown to be only moderately correlated. In addition, evaluation of extreme groups of physically and relationally victimized preschoolers revealed relatively little overlap in the two groups (less than 13% of the victims were the targets of both forms of aggression). These findings provide initial support for the importance of including both forms of peer victimization in studies of young children. This hypothesis was further supported by analyses that revealed that despite a significant association between physical victimization and children's adjustment, relational victimization accounted for a significant proportion of the variation in adjustment scores beyond that accounted for by physical victimization (see below for further discussion of adjustment). These findings are consistent with the hypothesis that assessment of relational victimization provides information about maladjusted preschoolers who might otherwise be overlooked.

Evaluation of the short-term stability of victimization and aggression revealed that for both older and younger children, relational aggression, relational victimization, and physical aggression were highly stable across a 1-month period. However, physical victimization was stable for the older age group only. These findings indicate that the victim role may not begin to crystallize until 4 or 5 years of age for the targets of physical aggression. Given the relatively high frequency of physically aggressive acts during the early preschool years (see Coie & Dodge, 1998, for a review), it is also possible that teachers may have difficulty discerning which children are the most frequent targets of physical aggression during this

age period (i.e., because it may appear that everyone gets hit or shoved at one time or another). Additional research is needed to clarify this issue (observational research would be particularly useful). These findings also provide the first evidence that relational aggression and relational victimization may become relatively consistent social patterns for individual children as early as the preschool years.

Assessment of the distinctiveness of peer victimization during the preschool years was evaluated through investigation of the association between victimization and aggression. Recent studies have documented the salience of relational and physical aggression for young children (Crick et al., 1997; Fabes et al., 1996; McNeilly-Choque et al., 1996). Given the relatively high levels of aggression that occur among preschoolers (Coie & Dodge, 1998), it is possible that peer victimization is simply the mirror image of aggression at this age (e.g., “victims” may be those who aggress against others and then get aggressed against in return). The present results do not support this premise. Rather, they indicate that, as has been documented for older children, peer victimization is relatively distinct from aggression for young children. These findings indicate the importance of including indexes of victimization and aggression in future studies of the social development of preschool-age children.

As has been demonstrated for school-age children, the results revealed that preschool boys were more likely to be the victims of physical aggression whereas preschool girls were more often the victims of relational aggression. As discussed previously, these gender differences are likely due to the gender-segregated nature of children's peer interactions during the preschool period (Fagot & Patterson, 1969; for reviews, see Maccoby, 1988; Rubin et al., 1998; Ruble & Martin, 1998), combined with the gender-differentiated patterns of aggression observed during this age period (i.e., girls are more relationally aggressive, whereas boys are more physically aggressive; Crick et al., 1997; McNeilly-Choque et al., 1996). If so, young girls and boys are likely exposed to very different peer environments, which may have important implications for their future development. For example, girls may become more sensitive or attentive to behaviors that involve manipulation of relationships, whereas these behaviors may be less important or salient for boys. Support for such a gender difference has been obtained in studies of older children (Crick, 1995; Paquette & Underwood, in press). Future research with preschool children may provide important information about the origins or development of this gender difference.

Analyses of children's adjustment provided further support for the salience of peer victimization in young children's lives. Although causal conclusions cannot be made because of the correlational design of this research, the results are consistent with the hypothesis that young victimized children exhibit characteristics or hold reputations that make them attractive targets for aggressive children. Both relationally victimized and physically victimized children were shown to exhibit behaviors that are likely to make them appear different or vulnerable to peers (internalizing problems). These findings support the “anxious vulnerability” hypothesis (Troy & Sroufe, 1987) described earlier, and they indicate the need for intervention with peer victims at younger ages than previously documented. Of course, it is also possible that these characteristics are consequences rather than antecedents of peer victimization (e.g., victimized children may exhibit internalizing problems because they are worried about being the targets of future episodes of maltreatment). Future studies with longitudinal or experimental designs are needed to address the issue of causality.

Further support for the difficulties experienced by preschool peer victims was provided through analyses of peer and teacher reports of children's peer relationships. Findings indicated that both relationally victimized and physically victimized preschoolers exhibited low peer status and had difficult relationships within the peer group. These characteristics may lead aggressive children to assume that victims of their aggressive acts are unlikely to fight back or to have relationships with supportive peers who might intervene on their behalf. Given evidence from past research that peer reputations begin to crystallize

during the preschool years ( Denham et al., 1990), this relatively neglected age period may provide the best window of opportunity for understanding the origins and early development of peer victimization.

Results also indicated that gender may moderate the association between peer victimization and adjustment in some instances. For example, relationally victimized boys were shown to exhibit greater peer relationship problems than nonvictimized boys for some adjustment indexes (i.e., peer reports of prosocial behavior and rejection). Given the gender-segregated nature of preschoolers' peer interactions discussed earlier and the propensity for girls to exhibit higher levels of relational aggression than boys, it seems possible that relationally victimized boys are primarily the targets of girls' relational aggression at this age. If so, these boys are likely interacting or playing with girls with greater frequency than other boys, a play pattern that is relatively nonnormative at this age. Past research has indicated that preschool boys who engage in cross-gender behaviors typically experience negative reactions from peers ( Fagot, 1977), and it seems likely that this process may have operated in the present study.

Analyses of the association between gender and adjustment also indicated that girls were less hyperactive than boys, a finding that is highly consistent with past studies ( Ladd & Profilet, 1996). These types of difficulties have been shown to be two to five times as prevalent in boys relative to girls, and the onset of such problems tends to be during the preschool years (i.e., the ages studied here; for a review, see Barkley, 1996). Evaluation of gender differences also indicated that girls were viewed as more prosocial than boys. Findings regarding gender differences in prosocial behavior have been mixed in past studies, but past results indicate that teachers and peers, the informants used here, tend to view girls as more prosocial than boys (for a review, see Eisenberg & Mussen, 1989). Finally, evaluation of age differences in adjustment revealed that younger children were more internalizing than older children. This finding likely reflects the emotional immaturity of the younger children relative to the older children (i.e., because the internalizing scale included items such as “cries easily” that are likely to be exhibited more often by younger children).

A number of limitations of the present study should be considered. First, although evidence for a significant association between naturalistic observations and teacher reports of relational aggression have been provided in past research ( McNeilly-Choque et al., 1996), an observational study of relational victimization has not yet been conducted. Research in this area is needed to provide validation for the teacher-report instrument developed in this study. The use of other informants (e.g., parents, peers) to assess peer victimization during the preschool years would also be informative. Second, although the subsample used to assess short-term stability of aggression and victimization was relatively balanced in terms of age and gender, the number of participants was small ( $n = 26$ ), and the time interval was relatively short (1 month). Research with larger samples and longer time intervals (e.g., 6 months) is needed. Third, although the total sample included in this study ( $n = 129$ ) was adequate relative to past studies of the social development of preschool-age children, it was not large enough to test the interaction of relational victimization, physical victimization, gender, and age group in analyses of children's social-psychological adjustment. Given the evidence reported here supporting the importance of all four of these variables for understanding preschoolers' adjustment and given support obtained in past studies documenting the significant changes that occur in children's social lives during the preschool period, it seems important to consider the possible moderating role of the interaction of these four variables in future studies of young children's adjustment. Finally, some of the obtained findings may actually be weaker than they appear because of shared-method variance (e.g., results based on teachers' assessments of adjustment and teachers' assessments of victimization). These findings should be interpreted with some degree of caution.

## Footnotes

<sup>1</sup> Although this eigenvalue is below the often used criterion of 1.0, a scree plot revealed a clear break in the curve between this factor and the next (six additional factors emerged in the analysis, and the eigenvalues for these factors ranged from 0.17 to 0.53).

<sup>2</sup> Because dropping items left us with two 2-item scales, we used Tabachnick and Fidell's (1983) guidelines to assist with the interpretation of these scales. Evidence of discriminant validity was obtained by showing that the in-trait correlations (range = .62 to .79) were larger than the inter-trait correlations (range = .36 to .55). In addition, the high internal consistency of the 2-item factors provided support for the reliability of these scales.

**Table 1**  
*Factor Analysis of the Victimization Measure*

Item	Factor		
	Physical Victimization	Relational Victimization	Receipt of Prosocial Behavior
This child gets hit, kicked, or pinched by peers.	.91		
This child gets pushed or shoved by peers.	.80		
This child is called mean names (e.g., baby). <sup>a</sup>	.73		
This child gets ignored by playmates when they are mad at him/her.		.87	
This child gets left out of the group when someone is mad at them or wants to get back at them.		.76	
This child gets told "you aren't my friend/buddy" if they do not comply with a playmate's request.	(.68)	.45	
This child gets invited to join a group of playmates when he/she is playing alone.			.83
This child gets help from peers when he/she needs it.			.86
This child gets cheered up by playmates when he/she is sad or upset about something.			.82

*Note.* Cross-loadings with a magnitude greater than .40 are shown in parentheses.

<sup>a</sup> This item was dropped for conceptual reasons.

**Table 2**  
*Social–Psychological Adjustment Scores by Relational Victimization Group*

Index of social–psychological adjustment	Relational victimization group			
	Nonvictims		Victims	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Peer acceptance (peer report)	0.08	0.95	−0.58*	0.92
Peer rejection (peer report)	−0.08	0.88	0.63*	1.37
Prosocial behavior (peer report)	0.18	2.79	−1.38	3.34
Loneliness (self-report)	7.72	2.50	6.90	1.45
Hyperactive–distractible (teacher report)	6.55	2.53	7.93	2.84
Positive peer relations (teacher report)	0.45	3.16	−3.43***	3.79
Internalizing difficulties (teacher report)	−0.17	1.72	1.32**	2.10

*Note.* Asterisks refer to mean differences.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .



**Table 3**  
*Social–Psychological Adjustment Scores by Physical Victimization Group*

Index of social–psychological adjustment	Physical victimization group			
	Nonvictims		Victims	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Peer acceptance (peer report)	0.07	0.97	−0.34	0.88
Peer rejection (peer report)	−0.08	0.96	0.41*	0.95
Prosocial behavior (peer report)	0.21	2.90	−1.10	2.59
Loneliness (self-report)	7.57	2.32	8.11	3.02
Hyperactive–distractible (teacher report)	6.31	2.49	8.76***	2.19
Positive peer relations (teacher report)	0.54	3.23	−2.76***	3.30
Internalizing difficulties (teacher report)	−0.17	1.80	0.85**	1.70

*Note.* Asterisks refer to mean differences.  
 \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**Table 4**  
*Social–Psychological Adjustment Scores by Relational Victimization Group Adjusted for Physical Victimization*

Index of social–psychological adjustment	Relational victimization group			
	Nonvictims		Victims	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Peer acceptance (peer report)	0.01	0.95	−0.52*	0.92
Peer rejection (peer report)	−0.02	0.88	0.49*	1.37
Prosocial behavior (peer report)	−0.02	2.79	−1.06	3.34
Loneliness (self-report)	7.79	2.50	6.73	1.45
Hyperactive–distractible (teacher report)	6.92	2.53	7.34	2.84
Positive peer relations (teacher report)	−0.11	3.16	−2.85***	3.79
Internalizing difficulties (teacher report)	0.07	1.72	1.01*	2.10

*Note.* Asterisks refer to mean differences.  
 \*  $p < .05$ . \*\*\*  $p < .001$ .

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