

# Overt and Relational Aggression and Perceived Popularity: Developmental Differences in Concurrent and Prospective Relations

Amanda J. Rose, Lance P. Swenson, and Erika M. Waller  
University of Missouri—Columbia

Relations of overt and relational aggression with perceived popularity among children and early adolescents were examined in 2 studies ( $N_s = 607$  and  $1,049$ ). Among older youths, positive concurrent relations found between overt aggression and perceived popularity became nonsignificant when relational aggression was controlled, whereas positive associations found between relational aggression and perceived popularity held when overt aggression was controlled. Aggression and perceived popularity were not positively related for the younger participants. The 2nd study also examined the temporal ordering of these relations over 6 months. For older girls, positive relations between relational aggression and perceived popularity were bidirectional. For older boys, relational aggression did not predict increased perceived popularity, but perceived popularity predicted increased relational aggression. Implications for intervention are discussed.

Decades of research indicate relations between aggression and peer rejection (e.g., Coie, Dodge, & Copottelli, 1982; Crick & Grotpeter, 1995; for a review, see Newcomb, Bukowski, & Pattee, 1993). However, recent research suggests that some aggressive youths are perceived as “popular” by peers (e.g., LaFontana & Cillessen, 2002; Rodkin, Farmer, Pearl, & Van Acker, 2000). Research on aggression and perceived popularity has focused primarily on overtly aggressive acts, such as direct physical and verbal aggression. A few very recent studies also indicate associations between relationally aggressive acts, such as excluding and spreading rumors, and perceived popularity (LaFontana & Cillessen, 2002; Lease, Kennedy, & Axelrod, 2002; Xie, Swift, Cairns, & Cairns, 2002). Relational aggression may be especially effective for managing social power in ways that contribute to perceived popularity. Importantly, although overt and relational aggression often co-occur (see, e.g., Crick, 1997), researchers have not systematically examined unique relations between each aggression form and perceived popularity while controlling for the statistical overlap between overt and relational aggression. In two separate studies, we tested whether the relation between overt aggression and perceived popularity could be explained by overlap between overt and relational aggression. In contrast, we expected

relational aggression to be related to perceived popularity even when we controlled for overt aggression.

A second key limitation of the previous research in this area is its focus on concurrent relations. Aggression may be used in a calculated manner to increase perceived popularity over time; however, it is also feasible that perceived popular youths become increasingly aggressive if peers rarely censor them. In one of the two present studies, we tested the temporal ordering of the relations between aggression and perceived popularity over a 6-month period.

A third purpose of the present research was to examine developmental and gender differences. Aggressing in ways related to perceived popularity may require advanced social skills that develop with age, and stronger relations between aggression and perceived popularity may emerge in early adolescence than in childhood. Also, gender differences have been found in the prevalence of overt and relational aggression (e.g., Crick & Grotpeter, 1995), and gender-normative forms of aggression may be related most strongly to perceived popularity. However, it is also possible that the function of overt and relational aggression is similar across genders.

## The Construct of Perceived Popularity

Recently, increased attention has been paid to youths who are perceived as popular by peers (e.g., Gorman, Kim, & Schimmelbusch, 2002; LaFontana & Cillessen, 1998, 1999, 2002; Parkhurst & Hopmeyer, 1998; Rodkin et al., 2000). Although developmentalists refer to well-liked youths as sociometrically popular (e.g., Coie et al., 1982), youths themselves construct a shared understanding of who is popular in their peer group (Adler & Adler, 1998; Eder, Evans, & Parker, 1995). In fact, who is popular is a frequent and emotionally salient conversation topic among youths (Eder et al., 1995), perhaps because many youths aspire to be popular (Butcher, 1986; Jarvinen & Nicholls, 1996). Interestingly, not all youths who are perceived as popular are well liked. Perceived popularity (assessed by students' nominations of “popular” classmates and sometimes also of “unpopular” classmates) is only moderately related to being well liked by peers (assessed by

---

Amanda J. Rose, Lance P. Swenson, and Erika M. Waller, Department of Psychological Sciences, University of Missouri—Columbia.

This research was partially supported by a Research Council Grant and a Research Board Grant from the University of Missouri—Columbia and by National Institute of Mental Health Grant MH 63753–01 awarded to Amanda J. Rose.

We express our appreciation to the students, teachers, administrative assistants, and administrators of the Ashland, Auxvasse, Fayette, Fulton, Mexico, and Moberly public school districts in Missouri. We also thank Wendy Carlson and Holly Deutschmann for their assistance with data collection.

Correspondence concerning this article should be addressed to Amanda J. Rose, 210 McAlester Hall, Department of Psychological Sciences, University of Missouri—Columbia, Columbia, MO 65211. E-mail: RoseA@missouri.edu

students' nominations of classmates they "like most" and "like least"; see, e.g., Lafontana & Cillessen, 1999; Parkhurst & Hopmeyer, 1998).

If perceived popular youths are not uniformly well liked, what are their shared characteristics? Because perceived popularity is a socially constructed reputational variable, developmentalists cannot assign a single definition to the construct. However, studies have identified characteristics typical of perceived popular youths. Perceived popularity is associated with being well-known, attractive, athletic, having desirable possessions, being accepted by others who are perceived as popular, and being desirable to the opposite sex (Adler & Adler, 1998; Butcher, 1986; Eder, 1985; Lease et al., 2002; Merten, 1997; Weisfeld, Bloch, & Ivers, 1983, 1984). Perceived popularity is also associated with both prosocial and aggressive behaviors (e.g., Luthar & McMahon, 1996; Parkhurst & Hopmeyer, 1998; Rodkin et al., 2000). The major purpose of the present research was to provide a better understanding of the relation between aggression and being perceived as popular.

### Overt and Relational Aggression and Perceived Popularity

Most research on peers and aggression has focused on the link between aggression and being disliked (Rubin, Bukowski, & Parker, 1998). In that context, aggression may be thought of as an uncontrolled, inappropriate expression of anger or frustration that leads to negative interpersonal outcomes. However, the functional significance of aggression may be markedly different when considered in the context of perceived popularity. Youths may strategically behave in ways that hurt others in order to control the peer context and achieve, maintain, or display perceived popularity.

In fact, there has recently been increased interest in the relation between perceived popularity and aggression. This research has primarily focused on overtly aggressive acts such as verbal insults and physical aggression. For instance, in a study by Parkhurst and Hopmeyer (1998), early adolescents nominated classmates who were "popular" and who fit descriptions of social behaviors. Youths who were perceived as popular (but not sociometrically popular) were more likely than an average control group to be chosen for an item involving starting fights. In another example, Rodkin and colleagues (2000) identified subgroups of boys who were perceived as popular by peers according to teacher reports,<sup>1</sup> including a group of antisocial popular boys. Youths in the popular antisocial group were especially likely to be nominated by classmates for items involving starting fights, being disruptive, and getting in trouble.

An important limitation of these studies and other studies examining aggression and perceived popularity (e.g., Lease et al., 2002), however, is that they have not taken into account the overlap between overt and relational aggression (e.g., Crick & Grotpeter, 1995). Relational aggression is aimed at damaging relationships or feelings of inclusion and involves acts such as ignoring, excluding, spreading rumors, and threatening to end a friendship (Crick & Grotpeter, 1995). Researchers have proposed that youths may use these types of aggressive acts strategically to manipulate their social worlds in ways they find advantageous (e.g., Cairns & Cairns, 1994; Underwood, Galen, & Paquette, 2001; Xie et al., 2002), and this form of aggression may be an especially effective means by which to achieve and maintain perceived popularity. For instance, excluding and ignoring may be

effective for manipulating relationships and managing social power in that popular youths may maintain and display status by selectively associating with others. Also, compared with overt aggressors, relational aggressors may be more likely to maintain anonymity and avoid appearing mean while damaging others' relationships in order to increase their own social standing (see Merten, 1997; Xie et al., 2002). The conceptual link between overtly aggressive acts and perceived popularity is somewhat less clear because it seems that blatant overt aggression may be as likely to interfere with an individual's status as to enhance it. One possibility is that the previously found relation between overt aggression and perceived popularity is largely due to the overlap between overt and relational aggression.

Some previous findings are consistent with this possibility. Recent research indicates bivariate relations between relational aggression and perceived popularity (LaFontana & Cillessen, 2002; Lease et al., 2002).<sup>2</sup> Other consistent evidence is provided by a study by Xie and colleagues (2002) in which relations between teacher-reported perceived popularity with peers and four types of aggression were examined.<sup>3</sup> In this study, youths told the experimenter about conflicts they had with peers, and participants were considered aggressive if classmates mentioned them as aggressors in a conflict. The four aggression types were physical, verbal, relational (defined as confrontational acts; e.g., explicitly excluding someone), and social (defined as nonconfrontational acts; e.g., gossiping). The unique relation between each aggression type and popularity was examined by statistically controlling for the other types. Consistent with our hypotheses, a unique significant positive relation emerged between relational aggression and perceived popularity. In contrast, neither verbal nor physical aggression was significantly and positively related to perceived popularity when the other types, including relational aggression, were controlled. Of note is that bivariate relations were not reported in this study. Therefore, although the study is consistent with our hypotheses, it does not speak to whether initially positive bivariate relations of direct verbal and physical aggression with perceived popularity disappear when relational aggression is controlled. Also, the present studies assessed popularity with peers using peer reports rather than teacher reports and used peer-report aggression assessments more comparable to those used in other studies of perceived popularity (e.g., LaFontana & Cillessen, 2002; Parkhurst & Hopmeyer, 1998).

<sup>1</sup> In the Rodkin et al. (2000) study, popularity was assessed by having teachers rate the degree to which students were popular with girls, were popular with boys, and had lots of friends. Although having friends is not a direct measure of being perceived as popular by peers, two of the three items assessed the construct defined here as *perceived popularity*.

<sup>2</sup> In the Lease et al. study (2002), peer nominations for relationally aggressive acts were combined with peer nominations for acting snobby (i.e., "looks down on others," "is snobby," and "acts like he or she is better than others").

<sup>3</sup> As in the Rodkin et al. (2000) study, in the Xie et al. (2002) study, popularity was assessed by having teachers rate the degree to which students were popular with girls, popular with boys, and had lots of friends. Having friends is not a direct measure of being perceived as popular by peers, but two of the three items assessed perceived popularity.

### The Importance of Examining Unique Relations for Overt and Relational Aggression

Given that strong significant relations have been found between overt and relational aggression (e.g.,  $r = .54$ , Crick & Grotpeter, 1995;  $r = .63$ , Crick, 1997), the significance of examining unique relations between each aggression form and perceived popularity should also be highlighted. That is, if overt and relational aggression frequently co-occur, why is it useful to consider these unique relations? First, although the aggression forms are strongly related, they are not redundant. Even correlations between overt and relational aggression of .6 or .7 mean that youths' scores on one aggression form account for only about 35%–50% of the variance for the other form. Likewise, extreme group analyses indicate that about 25%–40% of aggressive youths are both overtly and relationally aggressive but that the majority of aggressive youths display primarily one aggression form or the other (Crick & Grotpeter, 1995; Rys & Bear, 1997). When considering youths who primarily display only one aggression form, information regarding the unique relations between each aggression form and perceived popularity is especially relevant.

Moreover, findings demonstrating unique relations between the aggression forms and perceived popularity would provide information about the function of aggression regardless of the degree of overlap between overt and relational aggression. Bivariate relations between overt aggression and perceived popularity might suggest that being physically and verbally tough is a means by which youths establish popularity among peers. However, findings indicating that these relations are accounted for by relational aggression would suggest the very different interpretation that relational aggression may lead to popularity and that the association between overt aggression and perceived popularity is a statistical artifact.

### The Temporal Ordering of Relations Between Aggression and Perceived Popularity

Although numerous studies have examined the social behavioral antecedents of sociometric status (e.g., Bukowski & Newcomb, 1984; Dodge, 1983; for a review, see Rubin et al., 1998), no quantitative studies have addressed the social behavioral antecedents of perceived popularity. Nevertheless, researchers have suggested that youths may aggress to increase their perceived popularity (Adler & Adler, 1998; Lease et al., 2002; Rodkin et al., 2000; Xie et al., 2002). In the current research, relational aggression was proposed to be especially effective for manipulating social relationships in ways that result in increased perceived popularity over time. For instance, youths might spread rumors to damage the reputation of a social competitor. As another example, youths might ignore lower status classmates in an attempt to increase their own integration in a high-status clique. In fact, in his ethnographic research, Merten (1997) observed that youths used relationally aggressive acts "instrumentally to gain a competitive advantage in pursuit or protection of popularity" (p. 175). Accordingly, in one of the present studies, we used a prospective design and tested whether aggression was related to increased perceived popularity over time.

The present research also tested the alternate hypothesis that being perceived as popular leads to increased aggression. Youths who have achieved perceived popularity may become focused on

their own importance in the peer group and feel entitled to have their self-interests served. They may then feel justified in aggressing in the face of frustration or competition. Also, their ability to aggress may be enhanced by their status. This may be especially relevant for relationally aggressive acts, such as rumor spreading and excluding, that require multiple participants. Compared with lower status youths, perceived popular youths may be especially able to enlist help when relationally aggressing (Merten, 1997; Xie et al., 2002). Perceived popular youths may also be in a unique position to aggress without social censure. If others are hesitant to interfere with their behavior, this may contribute to increased aggression over time.

Moreover, these relations may be bidirectional. That is, initial aggression may lead to increased perceived popularity, which in turn may lead to increased aggression, which may further enhance perceived popularity. The prospective analyses were used to provide evidence regarding whether aggression and perceived popularity are involved in reciprocal influence processes.

### Developmental and Gender Differences

Developmental and gender differences in relations between aggression and perceived popularity were also tested. Aggressing in ways that establish or maintain perceived popularity likely requires emotional control and a keen understanding of interpersonal relations. These skills may develop with age, which suggests stronger relations between aggression and perceived popularity for older than for younger youths. Consistent with this proposal is research demonstrating that adolescents show greater attraction to aggressive peers than do children (Bukowski, Sippola, & Newcomb, 2000).

Most past studies of relations between aggression and perceived popularity used early-adolescent (Parkhurst & Hopmeyer, 1998; Xie et al., 2002) or late-childhood (Lease et al., 2002; Rodkin et al., 2000) samples and did not test for developmental differences. However, LaFontana and Cillessen (2002) found that although perceived popularity was negatively related to physical aggression and not related to relational aggression for fourth- and fifth-grade youths, physical and relational aggression were positively related to perceived popularity for sixth- through eighth-grade youths ( $r$ s ranged from .31 to .60). Similar trends were expected in the present studies with third-, fifth-, seventh-, and ninth-grade participants. The present research also provides the first test of developmental differences in prospective relations between aggression and perceived popularity.

In regard to gender, previous research indicates that boys are more directly verbally and physically aggressive than girls (e.g., Coie et al., 1982; Crick & Grotpeter, 1995). Several studies also indicate that girls are more relationally aggressive than boys (e.g., Crick, 1997; Crick & Grotpeter, 1995), although this difference has not always emerged (see, e.g., Henington, Hughes, Cavell, & Thompson, 1998; Tomada & Schneider, 1997). Relations between aggression and perceived popularity may only emerge for youths displaying gender-normative aggression. That is, overtly aggressive girls and perhaps relationally aggressive boys may not be popular because they may be seen as odd or unusual. Another possibility, though, is that both aggression forms serve similar functions across genders. For instance, selectively excluding others may be a means by which both girls and boys increase their social status.

To date, research regarding gender differences in relations between aggression and perceived popularity has produced mixed results. In terms of overt aggression, one study found a stronger relation with perceived popularity for boys than for girls (Parkhurst & Hopmeyer, 1998), a second found a stronger relation for girls than for boys (Lease et al., 2002), and a third found similar relations across gender (LaFontana & Cillessen, 2002). The third study also found similar relations across gender between relational aggression and perceived popularity. Although predictions are difficult to form on the basis of past research, the present research provides a particularly strong test of these gender differences by including two studies with large samples. This research also provides the first test of gender differences in prospective relations between aggression and perceived popularity.<sup>4</sup>

### Summary of Research Purposes

In summary, there were three major purposes of the present research. One was to examine the unique associations of overt aggression and relational aggression with perceived popularity while controlling for the alternate aggression form. The second was to examine prospective relations between aggression and perceived popularity. The third was to examine developmental and gender differences in associations of overt and relational aggression with perceived popularity.

### Method

#### *Participants*

*Study 1.* Participants were third-, fifth-, seventh-, and ninth-grade students from two midwestern school districts. Consent forms on which parents could indicate whether or not they gave their children permission to participate were mailed to the parents of 704 eligible students in these grades. Of these students, 612 received written parental consent to participate. Four students did not participate either because of a learning disability or because they moved away, and sociometric data were unavailable for 1 student. The final sample ( $N = 607$ ) included 144 third-grade (76 girls, 68 boys), 140 fifth-grade (76 girls, 64 boys), 166 seventh-grade (86 girls, 80 boys), and 157 ninth-grade (84 girls, 73 boys) students. The sample was 87% European American, 6% African American, 2% Native American, 1% Asian American, and 1% Hispanic American, with 3% classified as "other" (e.g., biracial).

*Study 2.* Participants were third-, fifth-, seventh-, and ninth-grade students from four midwestern school districts. The study involved two waves of data collection approximately 6 months apart. Before the first wave, consent forms on which parents could indicate whether or not they gave their children permission to participate were mailed to the parents of 1,383 eligible students. Of these students, 1,060 received written parental consent to participate. Twelve students did not participate either because of a learning disability or because they moved away, and sociometric data were unavailable for 7 students. The final Wave 1 sample ( $N = 1,041$ ) included 269 third-grade (137 girls, 132 boys), 285 fifth-grade (135 girls, 150 boys), 211 seventh-grade (107 girls, 104 boys), and 276 ninth-grade (140 girls, 136 boys) students. There was some attrition between the two waves; however, 999 students were also available for the second wave, and 8 students moved to the district between Waves 1 and 2 and received parental consent to participate. Of the Wave 2 participants, sociometric data were unavailable for 10 participants. The resulting Wave 2 sample ( $N = 997$ ) included 261 third-grade (134 girls, 127 boys), 275 fifth-grade (131 girls, 144 boys), 201 seventh-grade (102 girls, 99 boys), and 260 ninth-grade (132 girls, 128 boys) students. All 1,041 participants with Wave 1 sociometric data were used for analyses involving only the Wave 1 data, and all 997 participants with Wave 2 sociometric data were used for

analyses involving only the Wave 2 data. The 992 participants with both Wave 1 and Wave 2 sociometric data were included in analyses examining prospective relations between aggression and perceived popularity over time. When all participants at both waves are considered, the sample was 85% European American, 10% African American, 1% Native American, 1% Asian American, and 1% Hispanic American, with 2% classified as "other" (e.g., biracial).

#### *Procedure*

Questionnaires were group-administered in students' classrooms by the primary investigator or a trained graduate or undergraduate research assistant as part of larger studies on social development. Questionnaires were read aloud to the students, and students followed along and responded to the questions. Research assistants returned to the schools at least once to administer questionnaires to participants who were absent for the assessment except that return visits were not made to one Study 2 school because of school time constraints. For Study 2, participants responded to the same series of questionnaires at Wave 1 and Wave 2.

#### *Measures*

The same peer nominations measure was used in Study 1 and Study 2 and was similar to measures used in past research (e.g., Coie & Dodge, 1983; Coie et al., 1982; Crick, 1997; Parkhurst & Asher, 1992). The measure included 16 items. For each item, participants were presented with a list of classmates and asked to circle the names of three classmates who best fit the item description. Only students with permission to participate were included on the lists.

Items assessing perceived popularity and aggression were of interest. Perceived popularity was assessed by having students nominate classmates who were popular (Parkhurst & Hopmeyer, 1998). Five items assessed overt aggression; students nominated peers who (a) hit, kick, or punch others, (b) say mean things to others to insult them or put them down, (c) call others mean names, (d) push and shove others around, and (e) tell others that they will beat them up unless they do what they want. Five items assessed relational aggression; students nominated peers who (a) try to make another classmate not like others by spreading rumors about them or talking behind their backs, (b) get even by keeping a person from being in their group of friends, (c) ignore others or stop talking to them, (d) tell their friends they will stop liking them unless the friends do what they say, and (e) keep certain people from being in their group when it is time to do an activity (see Crick, 1997).

Because third- and fifth-grade students were in self-contained classrooms, they were given a list of students in their class for each item. The seventh- and ninth-grade students, however, switched classes throughout the day and potentially interacted with any grade-mate. Because grade populations were about 100–200 students, presenting the students with an entire list of grade-mates was not practical. Therefore, as in other peer

<sup>4</sup> Prosocial behavior and sociometric status (i.e., liked-most and liked-least nominations) were also considered as possible moderators of prospective relations between aggression and perceived popularity. However, neither prosocial behavior nor indicators of sociometric status qualified prospective relations between initial aggression and later perceived popularity or between initial perceived popularity and later aggression for the entire sample or for any gender or grade group. Prospective main effects between prosocial behavior or sociometric status and perceived popularity were considered beyond the scope of the present research, which focused specifically on aggression and perceived popularity. Prosocial behavior and sociometric status also were not considered in the concurrent analyses because concurrent relations among perceived popularity, sociometric status, aggression, and prosocial behavior have been examined in prior research (e.g., Parkhurst & Hopmeyer, 1998; Rodkin et al., 2000).

relations research with middle- or high-school students (Gorman et al., 2002; Parkhurst & Asher, 1992; Wentzel & Caldwell, 1997), participants were presented with a random list of a subset of classmates for each item.

Similarly to these previous studies that used random lists of subsets of classmates, each random list included the names of 30 classmates. Thirty names were included on each list so that the number of classmates students assessed was comparable to that assessed by the elementary school students. As recommended by Parkhurst and Asher (1992), a different random list was generated for each item for each participant in order to avoid positive or negative halo effects for students on the lists. A computer program was developed to generate random lists with the constraints that for each item, each participant's name would appear on the lists of 30 classmates and that a participant's name would never appear on his or her own list. In addition, discussions with school personnel indicated that students within a grade knew each other well because of relatively stable community populations and frequent opportunities to interact with grade-mates. Therefore, no procedure for students to indicate that they did not know a classmate was included.

Some students were assessed by fewer than 30 participants because of repeated absenteeism, because students occasionally skipped items, and because in Study 1 a computer program error resulted in random lists of fewer than 30 names for five questionnaires. However, across items, participants were evaluated by an average of 29.1 classmates in Study 1, 27.3 classmates in Study 2 Wave 1, and 26.1 classmates in Study 2 Wave 2.

The method used for seventh- and ninth-grade students was more cognitively demanding than the method used with the younger children because participants were required to evaluate a different subset of classmates for each item. Participants in all grades were given sufficient time to respond to each item. Although using different methods with different grades was not ideal, the peer context differed for younger and older students, and therefore the decision was made to use the method determined to provide the most appropriate assessment for each grade.

For each relevant item, the percentage of nominations participants received from all classmates who had the opportunity to nominate them was calculated. Proportions were used as opposed to the raw numbers of nominations received because, as discussed, in the seventh and ninth grades there was some variability in the number of participants who evaluated each student. As in other research (e.g., Rodkin et al., 2000), log transformations were performed for each item because the proportion scores deviated from normality. The scores were standardized within class for the third and fifth grades and within grade for the seventh and ninth grades. Scores were not standardized within gender; however, preliminary analyses indicated that the same basic pattern of findings emerged regardless of whether the scores were also standardized within gender. Participants each received a perceived popularity score that was their standardized score for the perceived popularity item. Each participant also was given an overt and relational aggression score that was the mean score across the relevant standardized items.

## Results

### *Overt and Relational Aggression and Perceived Popularity: Concurrent Relations*

In this section, we report the results of tests of concurrent relations between aggression and perceived popularity. The relations of overt and relational aggression with perceived popularity were first tested without controlling for the alternate aggression form in order to determine whether the bivariate relations between aggression and perceived popularity in the present study were similar to those found in past research. Next, the relations of overt and relational aggression with perceived popularity were tested while controlling for the alternate aggression form. This was important because overt and relational aggression scores were

significantly and positively correlated in Study 1 ( $r = .65$ ), Study 2 Wave 1 ( $r = .71$ ), and Study 2 Wave 2 ( $r = .69$ ) (all  $ps < .01$ ).

Analyses first tested whether concurrent relations between aggression and perceived popularity should be examined for the entire sample or separately by grade and/or gender. For Study 1, Study 2 Wave 1, and Study 2 Wave 2, three regression analyses tested whether relations between overt aggression and perceived popularity were moderated by grade, by gender, or by both grade and gender. Perceived popularity was the dependent variable in these analyses. One analysis included overt aggression, grade, and the Overt Aggression  $\times$  Grade interaction term as predictors. The second analysis included overt aggression, gender, and the Overt Aggression  $\times$  Gender interaction term as predictors. The third analysis included overt aggression, grade, gender, and all interactions as predictors and tested the three-way interaction among overt aggression, grade, and gender. For each assessment, a parallel set of three regression analyses was performed for relational aggression.

These analyses did not reveal any significant two-way interactions between overt or relational aggression and gender nor any significant three-way interactions among overt or relational aggression, grade, and gender for any assessment. However, the two-way interactions between grade and overt aggression were significant in Study 1,  $F(3, 599) = 3.93, p < .01$ , Study 2 Wave 1,  $F(3, 1033) = 12.55, p < .01$ , and Study 2 Wave 2,  $F(3, 989) = 5.79, p < .01$ . The two-way interactions between grade and relational aggression were also significant in Study 1,  $F(3, 599) = 13.00, p < .01$ , Study 2 Wave 1,  $F(3, 1033) = 22.38, p < .01$ , and Study 2 Wave 2,  $F(3, 989) = 12.78, p < .01$ . Because only the interactions with grade were significant, tests of concurrent relations were conducted separately by grade but with girls and boys together.

Correlations between overt aggression and perceived popularity and between relational aggression and perceived popularity are presented by grade in Table 1. For third-grade youths, overt aggression and relational aggression were generally significantly and negatively correlated with perceived popularity (with the exception that the negative relation involving relational aggression did not reach significance in Study 1). For fifth-grade youths, overt

Table 1  
*Concurrent Bivariate Correlations of Overt and Relational Aggression with Perceived Popularity for Third-, Fifth-, Seventh-, and Ninth-Grade Participants*

Grade and aggression type	Study 1	Study 2, Wave 1	Study 2, Wave 2
Third			
Overt	-.19*	-.27**	-.17**
Relational	-.15	-.22**	-.15*
Fifth			
Overt	-.04	-.09	-.14*
Relational	.02	-.03	-.01
Seventh			
Overt	.12	.16*	.15*
Relational	.33**	.32**	.21**
Ninth			
Overt	.17*	.18**	.08
Relational	.45**	.36**	.33**

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

aggression and relational aggression were generally not related to perceived popularity (with the exception of a significant negative correlation between overt aggression and perceived popularity in Study 2 Wave 2). For seventh- and ninth-grade youths, overt aggression and relational aggression were generally significantly and positively correlated with perceived popularity (with the exceptions that the positive relations involving overt aggression did not reach significance for seventh-grade youths in Study 1 or for ninth-grade youths in Study 2 Wave 2). These findings are largely consistent with past research (LaFontana & Cillessen, 2002) in indicating that positive bivariate relations of overt and relational aggression with perceived popularity emerge for older but not younger youths.

Next, overt and relational aggression served as simultaneous predictors of perceived popularity in an examination of the unique relations between each aggression form and perceived popularity. Of particular interest was whether the significant positive relations between overt aggression and perceived popularity found for older youths would no longer be significant when we controlled for relational aggression. In contrast, the significant positive relations between relational aggression and perceived popularity found for older youths were expected to hold when we controlled for overt aggression. These analyses were conducted separately by grade and are summarized in Table 2.

These results indicated that overt aggression was not a unique significant positive predictor of perceived popularity for any grade in any assessment. This means that the relations between overt aggression and perceived popularity that were significant and positive when relational aggression was not controlled were no longer significant and positive when relational aggression was controlled. Overt aggression was, however, a unique significant negative predictor of perceived popularity in a few cases (for third-grade participants in Study 2 Wave 1, for fifth-grade participants in Study 2 Wave 2, and for ninth-grade participants in Study 2 Wave 2). In contrast, relational aggression was a unique significant positive predictor of perceived popularity for fifth-grade participants in one assessment (Study 2 Wave 2) and for seventh-

and ninth-grade participants in every assessment (Study 1, Study 2 Wave 1, and Study 2 Wave 2). To summarize the results of these analyses, only relational aggression had a unique positive relation with perceived popularity, and this relation emerged consistently across assessments for seventh-grade and ninth-grade participants.

#### *Overt and Relational Aggression and Perceived Popularity: Prospective Relations*

Analyses next tested prospective relations between aggression and perceived popularity with the Study 2 data. In the first subsection, we report the results of analyses testing whether initial aggression predicted later perceived popularity. In the second subsection, we report the results of analyses testing whether initial perceived popularity predicted later aggression. In the third subsection, we summarize the results.

Autoregressive effects were controlled in these analyses. For example, when predicting later perceived popularity from initial aggression, we controlled initial perceived popularity. Therefore, a significant effect would indicate that aggression is related to increased perceived popularity over time. Controlling for autoregressive effects was important because considerable stability was found between Wave 1 and Wave 2 scores for overt aggression ( $r = .78$ ), relational aggression ( $r = .71$ ), and perceived popularity ( $r = .60$ ) (all  $ps < .01$ ).

Because the results of the concurrent analyses demonstrated the importance of controlling for the alternative aggression form when examining relations between overt or relational aggression with perceived popularity, the alternative aggression form was also controlled in all prospective analyses. That is, relational aggression was controlled when examining prospective relations between overt aggression and perceived popularity, and overt aggression was controlled when examining prospective relations between relational aggression and perceived popularity.

*Predicting later perceived popularity from initial aggression.* Regression analyses first tested whether prospective relations between initial aggression and later perceived popularity should be

Table 2  
*Summary of Regression Analyses Examining Concurrent Unique Relations of Overt and Relational Aggression With Perceived Popularity for Third-, Fifth-, Seventh-, and Ninth-Grade Participants*

Grade and aggression type	Study 1			Study 2, Wave 1			Study 2, Wave 2		
	$\beta$	$F$	$df$	$\beta$	$F$	$df$	$\beta$	$F$	$df$
Third									
Overt	-.19	1.90	1, 141	-.25	7.92**	1, 266	-.12	1.39	1, 258
Relational	.00	0.00	1, 141	-.03	0.11	1, 266	-.05	0.23	1, 258
Fifth									
Overt	-.07	0.46	1, 137	-.17	3.54	1, 282	-.27	9.77**	1, 272
Relational	.06	0.31	1, 137	.10	1.25	1, 282	.18	4.55*	1, 272
Seventh									
Overt	-.17	3.18	1, 163	-.09	1.04	1, 208	.05	0.37	1, 198
Relational	.44	20.60**	1, 163	.38	18.19**	1, 208	.19	5.20*	1, 198
Ninth									
Overt	-.14	2.56	1, 154	-.10	1.84	1, 273	-.20	7.46**	1, 257
Relational	.53	37.89**	1, 154	.43	33.27**	1, 273	.45	36.94**	1, 257

*Note.* The  $\beta$ s represent standardized regression coefficients from regression analyses in which overt aggression and relational aggression served as simultaneous predictors of perceived popularity.

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

conducted for the entire sample or separately by grade and/or gender. Three regression analyses tested whether relations between initial overt and relational aggression and later perceived popularity were moderated by grade, by gender, or by both grade and gender. Wave 2 perceived popularity was the dependent variable in these analyses. One analysis included Wave 1 overt aggression, Wave 1 relational aggression, grade, the Wave 1 Overt Aggression  $\times$  Grade interaction term, and the Wave 1 Relational Aggression  $\times$  Grade interaction term as predictors. The second analysis included Wave 1 overt aggression, Wave 1 relational aggression, gender, the Wave 1 Overt Aggression  $\times$  Gender interaction term, and the Wave 1 Relational Aggression  $\times$  Gender interaction term as predictors. The third analysis included Wave 1 overt aggression, Wave 1 relational aggression, grade, gender, all required two-way interactions, and the three-way interactions among Wave 1 overt aggression, grade, and gender and among Wave 1 relational aggression, grade, and gender as predictors. Wave 1 perceived popularity was controlled in these three analyses.

These analyses revealed no significant interactions between overt aggression and grade and/or gender. Therefore, the relation between initial overt aggression and later perceived popularity was examined for the entire sample together. The two-way interaction between relational aggression and gender also was not significant. However, the Relational Aggression  $\times$  Grade interaction was significant,  $F(3, 979) = 3.16, p < .05$ , and was qualified by a significant three-way interaction among relational aggression, grade, and gender,  $F(3, 967) = 2.66, p < .05$ . On the basis of these results, we examined the relations between initial relational aggression and later perceived popularity separately by gender within each grade.

To examine whether overt aggression was a unique predictor of later perceived popularity, we predicted Wave 2 perceived popularity from Wave 1 overt aggression while controlling for both Wave 1 perceived popularity and Wave 1 relational aggression. Overt aggression was a significant negative predictor of later perceived popularity,  $\beta = -.07, F(1, 988) = 4.11, p < .05$ .

Regression analyses were also performed to determine whether initial relational aggression was a unique predictor of later perceived popularity. These analyses were conducted by gender and grade, and the results are summarized in Table 3. In these analyses, we predicted Wave 2 perceived popularity from Wave 1 relational aggression while controlling for Wave 1 perceived popularity and

Wave 1 overt aggression. Relational aggression was not a significant predictor of later perceived popularity for third- or fifth-grade girls but was a significant positive predictor of later perceived popularity for seventh- and ninth-grade girls. Relational aggression was not a significant predictor of later perceived popularity for boys in any grade.

*Predicting later aggression from initial perceived popularity.* Regression analyses also tested whether prospective relations between initial perceived popularity and later aggression should be conducted for the entire sample or separately by grade and/or gender. Three regression analyses tested whether relations between initial perceived popularity and later overt aggression were moderated by grade, by gender, or by both grade and gender. Wave 2 overt aggression was the dependent variable in these analyses. One analysis included Wave 1 perceived popularity, grade, and the Wave 1 Perceived Popularity  $\times$  Grade interaction term as predictors. The second included Wave 1 perceived popularity, gender, and the Wave 1 Perceived Popularity  $\times$  Gender interaction term as predictors. The third included Wave 1 perceived popularity, grade, gender, and all interactions as predictors and tested the three-way interaction among Wave 1 perceived popularity, grade, and gender. Wave 1 overt aggression was controlled in these three analyses to account for autoregressive effects, and Wave 2 relational aggression was controlled to account for shared variance between Wave 2 overt aggression and Wave 2 relational aggression. A parallel set of three regression analyses was performed to examine whether the relation between initial perceived popularity and later relational aggression was moderated by grade and/or gender.

These analyses revealed no significant interactions between perceived popularity and grade and/or gender in predicting overt aggression. Accordingly, the relation between initial perceived popularity and later overt aggression was examined for the entire sample together. The two-way interaction between perceived popularity and gender and the three-way interaction among perceived popularity, grade, and gender in predicting relational aggression were also not significant. However, the two-way interaction between perceived popularity and grade in predicting relational aggression approached significance,  $F(3, 982) = 2.18, p < .10$  (for all other interactions predicting later aggression,  $F$ s were  $< 1$ ). Because this interaction approached significance and the previous analyses indicated important grade differences in the relation between perceived popularity and relational aggression, relations between initial perceived popularity and later relational aggression were examined separately by grade.

To examine the unique effect of initial perceived popularity on later overt aggression, we predicted Wave 2 overt aggression from Wave 1 perceived popularity while controlling for Wave 1 overt aggression and Wave 2 relational aggression. Perceived popularity was not a significant predictor of later overt aggression,  $\beta = -.03, F(1, 988) = 2.82$ .

Regression analyses were also performed to determine whether initial perceived popularity was a unique predictor of later relational aggression. These analyses were conducted separately by grade, and the results are summarized in Table 4. In these analyses, we predicted Wave 2 relational aggression from Wave 1 perceived popularity while controlling for Wave 1 relational aggression and Wave 2 overt aggression. Perceived popularity was not a significant predictor of later relational aggression for third-grade children. In contrast, perceived popularity was a significant positive

Table 3  
Summary of Regression Analyses Predicting Later (Wave 2) Perceived Popularity From Initial (Wave 1) Relational Aggression by Gender and Grade

Grade	Girls			Boys		
	$\beta$	$F$	$df$	$\beta$	$F$	$df$
Third	-.17	2.64	1, 129	-.03	0.05	1, 122
Fifth	-.07	0.50	1, 124	.05	0.24	1, 140
Seventh	.36	12.09**	1, 98	-.02	0.03	1, 95
Ninth	.28	9.41**	1, 128	.06	0.22	1, 124

Note. The  $\beta$ s represent standardized regression coefficients from regression analyses. Initial (Wave 1) perceived popularity scores and overt aggression scores were controlled in all regression analyses.  
\*\*  $p < .01$ .

Table 4  
 Summary of Regression Analyses Predicting Later (Wave 2)  
 Relational Aggression From Initial (Wave 1) Perceived  
 Popularity by Grade

Grade	$\beta$	$F$	$df$
Third	.03	0.74	1, 255
Fifth	.12	9.02**	1, 268
Seventh	.14	7.98**	1, 197
Ninth	.09	4.49*	1, 256

Note. The  $\beta$ s represent standardized regression coefficients from regression analyses. Initial (Wave 1) relational aggression scores were controlled in all regression analyses. Later (Wave 2) overt aggression scores were also controlled in all regression analyses.

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

predictor of later relational aggression for fifth-, seventh-, and ninth-grade participants.

*Summary of prospective relations.* Significant positive relations between overt aggression and perceived popularity did not emerge in the prospective analyses. For boys, relational aggression also did not predict increased perceived popularity over time. However, relational aggression was a significant unique positive predictor of later perceived popularity for seventh- and ninth-grade girls. In addition, for all fifth-, seventh-, and ninth-grade participants, perceived popularity was a significant unique positive predictor of later relational aggression.

## Discussion

The present research examined the unique relations between overt aggression and perceived popularity and between relational aggression and perceived popularity by controlling for the statistical overlap between overt and relational aggression. This approach revealed an important distinction between the association of overt aggression with perceived popularity and the association of relational aggression with perceived popularity that has been masked in previous studies that examined bivariate relations between each aggression form and perceived popularity. Similarly to these past studies, for older seventh- and ninth-grade youths, both overt aggression and relational aggression were generally significantly and positively related to perceived popularity. However, when overt aggression and relational aggression were simultaneous predictors, none of the positive bivariate relations between overt aggression and perceived popularity remained significant. In contrast, all of the positive bivariate relations between relational aggression and perceived popularity remained significant. These findings are consistent with the hypothesis that relationally aggressive acts, which are often more subtle and sophisticated than overt aggression, share an important relation with perceived popularity.

These findings, though, need not undermine the significance of the bivariate link between overt aggression and perceived popularity. The present findings suggest that there may not be many perceived popular youths who are only overtly aggressive (or the relation between overt aggression and perceived popularity would have been significant when relational aggression was controlled). However, the strong relation between overt and relational aggression suggests there should be a sizable number of perceived popular youths who are both relationally and overtly aggressive. This means that a notable proportion of the perpetrators of direct

verbally and physically aggressive acts are likely to be perceived as popular.

The present research also provides new information regarding the temporal ordering of the link between perceived popularity and aggression. The longitudinal analyses indicated that for the older girls in the sample, initial relational aggression predicted increased perceived popularity over time. These findings suggest that some seventh- and ninth-grade girls may use relationally aggressive behaviors such as ignoring, excluding, and spreading rumors to manipulate the peer context in ways that result in their being perceived as high-status and popular. In contrast, relational aggression did not lead to increased perceived popularity for boys. These findings are consistent with the gender-normative proposal. If relationally aggressive acts are considered atypical for older boys, then engaging in these acts may be less likely to lead to increased perceived popularity over time for them (see Crick, 1997, for a related discussion). However, overt aggression also did not lead to increased perceived popularity for either gender. The findings, then, do not provide information about the antecedents of perceived popularity for boys. Learning more about factors that are possible contributors to perceived popularity for boys, such as athletic ability and physical stature, is an important direction for future research.

The longitudinal analyses also indicated that initial perceived popularity predicted increased relational aggression, but not overt aggression, for fifth-, seventh-, and ninth-grade girls and boys. For girls, then, the association between relational aggression and perceived popularity appears to be bidirectional. If relational aggression leads to perceived popularity for girls, then perceived popularity may lead to even greater relational aggression among girls as they attempt to enhance their status further. This possibility is less likely for boys because initial relational aggression did not lead to increased perceived popularity for boys. Perhaps perceived popularity leads to some relationally aggressive acts, such as excluding and ignoring, for both girls and boys because these high-status youths simply do not have time to interact with everyone who would like to spend time with them (see Eder, 1985, for a related discussion). Such behavior could be unintentional. However, given that perceived popular youths likely know that they have the luxury of being selective in their interactions, they may intentionally wield their social power to exclude or damage the reputation of peers who have fallen out of their favor or who anger them (see also Merten, 1997; Xie et al., 2002). Moreover, these youths may become increasingly aggressive if peers are hesitant to interfere with their behavior or give them negative feedback.

Important developmental differences in relations were also evident in the current research. Specifically, positive relations between aggression and perceived popularity emerged only for older participants. These findings are consistent with past research indicating that attraction to aggressive peers increases with age (Bukowski et al., 2000) and, more specifically, with research indicating stronger relations between aggression and perceived popularity for adolescents than for children (LaFontana & Cillessen, 2002). We proposed that the ability to aggress strategically in ways that are socially dominant, that display superiority, and that result in perceived popularity likely requires advanced interpersonal skills that may develop with age. This proposal fits with the findings that initial relational aggression was related to increased perceived popularity over time for seventh- and ninth-grade girls but not for third- and fifth-grade girls.

An alternative interpretation, however, is that these developmental differences are due to structural differences between elementary schools versus middle and high schools. Perceived popularity and aggression may be more likely to co-occur in the larger middle and high school settings than in elementary school settings because, in small groups, the likelihood of each peer being personally victimized is greater. Even if this were the case, the present findings would still reflect the real-world experiences of children moving from small elementary schools to larger middle and high schools. Nevertheless, examining these relations in small school districts in which grade-mates interact throughout their school years would provide a strong test of these associations. Another benefit of such a study would be that the same peer nominations measure would be appropriate for all participants. A limitation of the present research was that different peer nominations measures were required for younger and older students because the peer context differed for younger and older students. The methods used were determined to be the most appropriate for each grade, and although there is no clear conceptual reason why the different methods would produce different results, further support for the present findings would be provided by replicating the results using the same method for all participants.

Replicating the results with other sociometric approaches would also be useful. Whereas the present study and some past research (Parkhurst & Hopmeyer, 1998) used a single popularity item, other research based perceived popularity scores on both "popular" and "unpopular" nominations (LaFontana & Cillessen, 2002). Future studies examining unique relations between aggression and perceived popularity could confirm whether both approaches yield similar results. Also, youths in the present study nominated three peers for each sociometric item. A benefit of this approach is that participants must decide which classmates most closely fit the item description and cannot nominate classmates indiscriminately. However, with an unlimited nominations approach, participants can nominate as many or as few classmates as fit the description. Also, some research suggests that the unlimited nominations approach produces sociometric data with especially reliable measurement properties (Terry, 2000). Accordingly, future research replicating the current findings with unlimited nominations would be useful.

Future studies making finer distinctions in the assessment of aggression and including other variables would also extend the present findings. In the current research, overt aggression items included physical and verbal aggression, and relational aggression items varied in the confrontational nature of the behavior (e.g., threatening to terminate friendship vs. ignoring). Measures designed to distinguish between different aspects of aggression may reveal additional differential relations with perceived popularity. Also, addressing the shared and unique relations of aggression and other characteristics (e.g., prosocial behavior, athleticism, attractiveness, sense of humor) with both sociometric and perceived popularity would provide more information about the correlates of peer status. Moreover, a limitation of the present studies was that only one data source was used (i.e., peer reports), and incorporating other methods (e.g., observation, self-report, teacher report) in such future research would further extend the current findings. And last, in the current research, participants were followed for only 6 months. High stability over 6 months was found for aggression and perceived popularity, and predicting changes over a longer period of time might reveal more significant results.

The applied implications of this research should also be considered. Consistent with other studies (e.g., LaFontana & Cillessen, 2002; Xie et al., 2002), the present research demonstrates links between perceived popularity and aggression. Moreover, perceived popularity was also found to lead to increased aggression for the older participants in the present research. Perceived popular aggressive youths may be unlikely to be targeted for interventions, which tend to focus on youths with both social and behavioral problems. However, excluding perceived popular youths from intervention efforts would likely be a mistake. Victims of overt and relational aggression are at risk for a variety of internalizing and externalizing problems (Crick & Grotpeter, 1996; Hodges & Perry, 1999; Prinstein, Boergers, & Vernberg, 2001), and being aggressed against by a respected, high-status peer may have an especially negative impact on an individual's sense of self-worth and feelings of inclusion. Also, because perceived popular youths are highly influential and emulated (e.g., Eder et al., 1995; Merten, 1997), being the target of a perceived popular youth's aggression could increase victimization of the target by others. Future studies regarding these victims will be important for our understanding of how perceived popular youths impact their peer groups.

It is important to note that if interventions are undertaken, steering perceived popular youths away from aggression would likely be very difficult. Perceived popular aggressors may have little motivation to change if they are not suffering personally. Moreover, intervening only with the individual aggressors and not the larger peer group would likely not be sufficient. Aggression displayed by perceived popular youths is embedded in the larger peer context in that peers likely sanction and perhaps assist with aggression displayed by high-status peers. Youths socially construct who among them are perceived as popular and what behaviors will be tolerated by youths with that status. Consequently, altering the behavior of individual perceived popular youths may require altering what behaviors are rewarded with high status within the peer culture. Whether eliciting such a major change in the dynamics of a peer system is possible is unknown and certainly would be an interesting and ambitious direction for future study.

## References

- Adler, P. A., & Adler, P. (1998). *Peer power: Preadolescent culture and identity*. New Brunswick, NJ: Rutgers University Press.
- Bukowski, W. M., & Newcomb, A. F. (1984). Stability and determinants of sociometric status and friendship choice: A longitudinal perspective. *Developmental Psychology, 20*, 941–952.
- Bukowski, W. M., Sippola, L. K., & Newcomb, A. F. (2000). Variations in patterns of attraction to same- and other-sex peers during early adolescence. *Developmental Psychology, 36*, 147–154.
- Butcher, J. (1986). Longitudinal analysis of adolescent girls' aspirations at school and perceptions of popularity. *Adolescence, 21*, 133–143.
- Cairns, R. B., & Cairns, B. D. (1994). *Lifelines and risks: Passages of youth in our time*. New York: Cambridge University Press.
- Coie, J. D., & Dodge, K. A. (1983). Continuities and changes in children's social status: A five-year longitudinal study. *Merrill-Palmer Quarterly, 29*, 261–282.
- Coie, J. D., Dodge, K. A., & Copottelli, H. (1982). Dimensions and types of social status: A cross-age perspective. *Developmental Psychology, 18*, 557–570.
- Crick, N. R. (1997). Engagement in gender normative versus nonnormative forms of aggression: Links to social-psychological adjustment. *Developmental Psychology, 33*, 610–617.

- Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*, 710–722.
- Crick, N. R., & Grotpeter, J. K. (1996). Children's treatment by peers: Victims of relational and overt aggression. *Development and Psychopathology, 8*, 367–380.
- Dodge, K. A. (1983). Behavioral antecedents of peer social status. *Child Development, 54*, 1386–1399.
- Eder, D. (1985). The cycle of popularity: Interpersonal relations among female adolescents. *Sociology of Education, 58*, 154–165.
- Eder, D., Evans, C. C., & Parker, S. (1995). *School talk: Gender and adolescent culture*. New Brunswick, NJ: Rutgers University Press.
- Gorman, A. H., Kim, J., & Schimmelbusch, A. (2002). The attributes adolescents associate with peer popularity and teacher preference. *Journal of School Psychology, 40*, 143–165.
- Henington, C., Hughes, J. N., Cavell, T. A., & Thompson, B. (1998). The role of relational aggression in identifying aggressive boys and girls. *Journal of Psychology, 36*, 457–477.
- Hodges, E. V. E., & Perry, D. G. (1999). Personal and interpersonal antecedents and consequences of victimization by peers. *Journal of Personality and Social Psychology, 76*, 677–685.
- Jarvinen, D. W., & Nicholls, J. G. (1996). Adolescents' social goals, beliefs about the causes of social success, and satisfaction in peer relations. *Developmental Psychology, 32*, 435–441.
- LaFontana, K. M., & Cillessen, A. H. N. (1998). The nature of children's stereotypes of popularity. *Social Development, 7*, 301–320.
- LaFontana, K. M., & Cillessen, A. H. N. (1999). Children's interpersonal perceptions as a function of sociometric and peer-perceived popularity. *Journal of Genetic Psychology, 160*, 225–242.
- LaFontana, K. M., & Cillessen, A. H. N. (2002). Children's stereotypes of popular and unpopular peers: A multimethod assessment. *Developmental Psychology, 38*, 635–647.
- Lease, A. M., Kennedy, C. A., & Axelrod, J. L. (2002). Children's social constructions of popularity. *Social Development, 11*, 87–109.
- Luthar, S. S., & McMahon, T. J. (1996). Peer reputation among inner-city adolescents: Structure and correlates. *Journal of Research on Adolescence, 6*, 581–603.
- Merten, D. E. (1997). The meaning of meanness: Popularity, competition, and conflict among junior high school girls. *Sociology of Education, 70*, 175–191.
- Newcomb, A. F., Bukowski, W. M., & Pattee, L. (1993). Children's peer relations: A meta-analytic review of popular, rejected, neglected, controversial, and average sociometric status. *Psychological Bulletin, 113*, 99–128.
- Parkhurst, J. T., & Asher, S. R. (1992). Peer rejection in middle school: Subgroup differences in behavior, loneliness, and interpersonal concerns. *Developmental Psychology, 28*, 231–241.
- Parkhurst, J. T., & Hopmeyer, A. (1998). Sociometric popularity and peer-perceived popularity: Two distinct dimensions of peer status. *Journal of Early Adolescence, 18*, 125–144.
- Prinstein, M. J., Boergers, J., & Vernberg, E. M. (2001). Overt and relational aggression in adolescents: Social-psychological adjustment of aggressors and victims. *Journal of Clinical Child Psychology, 30*, 479–491.
- Rodkin, P. C., Farmer, T. W., Pearl, R., & Van Acker, R. (2000). Heterogeneity of popular boys: Antisocial and prosocial configurations. *Developmental Psychology, 36*, 14–24.
- Rubin, K. H., Bukowski, W., & Parker, J. G. (1998). Peer interactions, relationships, and groups. In W. Damon (Series Ed.) & N. Eisenberg (Vol. Ed.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (pp. 619–700). New York: Wiley.
- Rys, G. S., & Bear, G. G. (1997). Relational aggression and peer relations: Gender and developmental issues. *Merrill-Palmer Quarterly, 43*, 87–106.
- Terry, R. (2000). Recent advances in measurement theory and the use of sociometric techniques. In A. H. N. Cillessen & W. M. Bukowski (Eds.), *Recent advances in the measurement of acceptance and rejection in the peer system* (New Directions for Child Development No. 88, pp. 27–53). San Francisco: Jossey-Bass.
- Tomada, G., & Schneider, B. H. (1997). Relational aggression, gender, and peer acceptance: Invariance across culture, stability over time, and concordance among informants. *Developmental Psychology, 33*, 601–609.
- Underwood, M. K., Galen, B. R., & Paquette, J. A. (2001). Top ten challenges for understanding gender and aggression in children: Why can't we all just get along? *Social Development, 10*, 248–266.
- Weisfeld, G. E., Bloch, S. A., & Ivers, J. W. (1983). A factor analytic study of peer-perceived dominance in adolescent boys. *Adolescence, 18*, 229–243.
- Weisfeld, G. E., Bloch, S. A., & Ivers, J. W. (1984). Possible determinants of social dominance among adolescent girls. *Journal of Genetic Psychology, 144*, 115–129.
- Wentzel, K. R., & Caldwell, K. (1997). Friendships, peer acceptance, and group membership: Relations to academic achievement in middle school. *Child Development, 68*, 1198–1209.
- Xie, H., Swift, D. J., Cairns, R. B., & Cairns, B. D. (2002). Aggressive behaviors in social interaction and developmental adaptation: A narrative analysis of interpersonal conflicts during early adolescence. *Social Development, 11*, 205–224.

Received March 31, 2003

Revision received November 10, 2003

Accepted December 31, 2003 ■

### E-Mail Notification of Your Latest Issue Online!

Would you like to know when the next issue of your favorite APA journal will be available online? This service is now available to you. Sign up at <http://watson.apa.org/notify/> and you will be notified by e-mail when issues of interest to you become available!