

# Assessing Aggressive and Depressed Children's Social Relations With Classmates and Friends: A Matter of Perspective

Mara Brendgen,<sup>1,4</sup> Frank Vitaro,<sup>2</sup> Lyse Turgeon,<sup>3</sup> and François Poulin<sup>1</sup>

*Received March 22, 2002; revision received August 8, 2002; accepted August 12, 2002*

This study examined aggressive, depressed, and aggressive–depressed children's peer relations from the children's own and from their peers' perspective. Participants were 819 fourth through sixth graders (50.2% girls) who were assessed twice during the same school year. Measures included children's aggression and depression, self-rated and peer-rated social acceptance, number of reciprocal friends, and self-rated and friend-rated friendship quality. Analyses revealed different patterns, depending on the perspective considered. Depression but not aggression was significantly related to difficulties with the peer group and with dyadic friends from the children's own perspective, whereas the opposite pattern was found according to the peers' view. The co-occurrence of aggression and depression entailed significant difficulties with peers regardless of perspective. The implications of these results for the links between children's aggression and depression and their interpersonal relationships are discussed.

**KEY WORDS:** aggression; depression; social acceptance; friendship quality; over- and underestimation.

## INTRODUCTION

Children's relations with their peers play an essential role in their psychosocial development (Kupersmidt, Coie, & Dodge, 1990). Consequently, it is critical for researchers and practitioners to understand the factors that impede the development of healthy peer relations during childhood. Perhaps the most extensively studied factor linked to peer relationship difficulties is children's aggressive behavior (e.g., Coie, Dodge, & Kupersmidt, 1990). Another, albeit less studied factor that might present an obstacle for establishing satisfying social relationships with others is children's depression. As suggested by the

interactional theory of depression (Coyne, 1976a, 1976b), depressed individuals exhibit certain maladaptive behaviors in interpersonal interaction, such as frequent complaints or a focus on negative themes, which may induce a negative mood in others. This might eventually cause others to reject the depressed person and to avoid future interactions. Both aggression and depression may thus promote relationship difficulties with peers.

When examining children's peer relations, researchers usually distinguish two relational contexts that are uniquely related to a child's psychosocial development (Bukowski & Hoza, 1989). The first refers to the child's social standing in the peer group as a whole and is indicated by his or her level of social acceptance by the members of that peer group, usually the classmates. The second context refers to the child's dyadic friendship experiences and is characterized by the number of dyadic friendships the child is involved in and by the quality of these friendships. Although the two types of relationship contexts are positively related to each other (Parker & Asher, 1993), some children may nevertheless experience satisfactory relationships in one context (e.g., on the dyadic level) but

<sup>1</sup>Department of Psychology, Université du Québec à Montréal, Montreal, Quebec, Canada.

<sup>2</sup>Research Unit on Children's Psychosocial Maladjustment, University of Montreal, Montreal, Quebec, Canada.

<sup>3</sup>Centre de Recherche Fernand Seguin; currently at the School of Psycho-Education, University of Montreal, Montreal, Quebec, Canada.

<sup>4</sup>Address all correspondence to Mara Brendgen, Université du Québec à Montréal, CP 8888, Succ. Centre-Ville, Montreal, Quebec, Canada H3C 3P8; e-mail: [brendgen.mara@uqam.ca](mailto:brendgen.mara@uqam.ca).

not in another (e.g., on the group level; Hartup, 1992). In order to establish a complete picture of aggressive children's and depressed children's relationships with their peers it is thus critical to examine the children's social standing in the peer group as a whole as well as their success in dyadic friendships.

Another critical issue when examining aggressive children's and depressed children's peer relations refers to the question of whose perspective should be considered. One approach used in many studies is to ask for the *children's own perceptions* about their social relations with others. However, children's own perceptions may be influenced by generalized positive or negative views about themselves, wishful thinking, or other related factors. Indeed, aggressive children have been found to show a lack of sensitivity to self-directed negative feedback from others (Zakriski & Coie, 1996) and to underestimate their own aggressive behavior (Lochman & Dodge, 1998). In contrast, depressed children are overly sensitive to negative social information (Shirk, Boergers, Eason, & Van Horn, 1998) and display generalized pessimistic expectations about social interactions with others (Rudolph, Hammen, & Burge, 1994). It is, therefore, necessary to also consider the *peers' perceptions* when comparing aggressive children's and depressed children's peer relations, because the peers' views may afford very different conclusions than those based on the children's own perceptions. Finally, given the potential discrepancies between the children's own and their peers' perspective, it is important to assess the degree to which the two perspectives differ. For example, some studies not only suggest that both depressed children and their peers evaluate depressed children's peer status rather negatively, but also that depressed children perceive their own peer status even more unfavorably than their peers do (Cole, Martin, Peeke, Seroczynski, & Hoffman, 1998). The *degree of concordance of own versus others' evaluations* thus describes the extent to which aggressive and depressed children display a positive or negative bias in evaluating their peer relations.<sup>5</sup> In the following paragraphs, we first describe previous research findings in regard to aggressive children's and depressed children's relations with their peer group in general and with their dyadic friends (a) from the children's own perspective, (b) from their peers' perspective, and (c) with respect to the degree of concordance between the two. We then elaborate on the specific goals and hypotheses of the present study.

<sup>5</sup>As noted by Kruglanski (1989), a comparison of perspectives does not imply a specific judgement's superiority over another. The terms "perceptual bias" as well as "over- and underestimation" used hereafter are not meant to convey a perceptual error but the relation between own and others' perspectives.

## Previous Research Findings

### *Own Perspective*

Based on the children's own perspective, empirical findings suggest that depression, but not necessarily aggression is related to problems in social relationships. Indeed, aggressive children often hold very positive perceptions about their own social and behavioral competence (Hymel, Bowker, & Woody, 1993) and perceive themselves as at least as accepted by their peers as nonaggressive children do (Zakriski & Coie, 1996). In contrast, depressed children view themselves as significantly less liked by their peers than nondepressed children, and children who are both aggressive and depressed seem to resemble depressed-only children in this respect (Capaldi, 1992; Rudolph & Clark, 2001). In regard to children's friendship relations, however, the pattern is less clear. Although aggressive children are sometimes found to have fewer friends than nonaggressive children (Newcomb & Bagwell, 1996; Parker & Seal, 1996), other accounts suggest that aggressive children do not differ from nonaggressive youth in this respect (Cairns, Cairns, Neckerman, Gest, & Garipey, 1988). Similarly, aggressive and disruptive behavior has been related to a lower friendship quality in some studies (Berndt, 1996), whereas at other times aggressive children resemble well-adjusted children in their favorable evaluations of their friendship quality (Patterson, Kupersmidt, & Griesler, 1990). The results concerning depressed children's dyadic friendship relations are also somewhat ambiguous. Thus, Hogue and Steinberg (1995) found that anxious-depressed adolescents in Grades 9 through 11 did not nominate fewer friends and did not evince less stability in their nominated friendships over a 1-year period than their nondistressed counterparts. Other studies with clinically depressed children showed, however, that these youngsters report poorer friendships (as indicated by a combination of number of friends, friendship duration, and friendship quality) than nondepressed children (e.g., Goodyer, Wright, & Altham, 1990).

### *Peers' Perspective*

In contrast to the pattern emerging from the children's own perspective, aggressive as well as depressed children seem to experience problems in their social relations with peers from the peers' point of view. Thus, basically all empirical studies agree that aggressive children receive lower social acceptance scores from their peer group than other children (see Newcomb, Bukowski, & Pattee, 1993, for a meta-analytic review). In addition,

existing research suggests that depressed children might also be less accepted and more rejected by their peer group than their nondepressed counterparts (e.g., Cole, 1991; Dumas, Neese, Prinz, & Blechman, 1996; Kennedy, Spence, & Hensley, 1989; Peterson, Mullins, & Ridley-Johnson, 1985). Aggressive and depressed children were not always explicitly distinguished from children with comorbid problems, however, although epidemiological data indicate that up to 40% of children and adolescents suffering from internalizing problems also show externalizing problems (Angold, Costello, & Erkanli, 1999). It is thus not entirely clear to what extent the findings are unique to aggression or depression, respectively. Moreover, no study, to our knowledge, has examined whether the dyadic friends of aggressive children and the friends of depressed children show similarly negative evaluations of their relations with these children as the peer group in general. Examining this issue is important, however, because children who are unpopular in the larger peer group may nevertheless be much liked by their dyadic friends and may have friendships of good quality. This, in turn, may buffer the children at least partly from the negative effects associated with negative peer group status (Parker & Asher, 1993).

#### *Degree of Perceptual Concordance*

The discussed findings suggest that a considerable contrast exists between aggressive children's and depressed children's own perceptions of their social relations with peers and their peers' view in this regard. Several studies have directly compared aggressive children's views of their social acceptance in the peer group with their actual social acceptance as rated by their peers. These studies found that aggressive children considerably overestimate their social standing in the peer group (Hymel et al., 1993; Patterson et al., 1990; Zakriski & Coie, 1996). Studies examining depressed children's perceptual bias in regard to their peer status often did not explicitly assess the peers' view but used teacher reports of children's peer relations as a reference instead. Nevertheless, the existing findings support the cognitive distortion model of depression, which suggests that depressed children perceive their social relations with peers more negatively than is warranted based on others' perceptions (Cole et al., 1998; Kendall, Stark, & Adam, 1990; Rudolph & Clark, 2001).

Whether aggressive children and depressed children also show biased perceptions with respect to their dyadic friendships is not clear, however. Some indication for the existence of a positive bias in aggressive children's friendship perception is given by the finding that rejected children, many of whom are aggressive, tend to overestimate

the quality of their friendships compared to their friends' view (Brendgen, Little, & Krappmann, 2000). However, no study has directly examined whether aggressive children and depressed children evince biased perceptions only with respect to their general social standing in the peer group or whether this bias extends to their dyadic friendships as well. This latter point is important because children may be more accurate in encoding social cues from close friends than from others with whom they interact less frequently. As a result, children may show greater concordance with their friends' views than with the views of the peer group as a whole.

#### *The Present Study*

Despite some slight inconsistencies, the existing research clearly suggests that an examination of aggressive and depressed children's peer relations might yield very different results, depending on whose perspective is considered. The first goal of the present study was, therefore, to compare aggressive, depressed, and aggressive-depressed children's peer experiences with those of well-adjusted children, first from their own perspective and then from their peers' perspective. In order to provide a more complete picture of children's peer relations than has been given in previous studies, we examined children's relations with the peer group as a whole as well as children's dyadic friendships. Based on previous findings, we expected that aggressive children would resemble well-adjusted children in their own account of their relations both with their peer group and with their friends, whereas depressed children should report significantly more problems in these respects. No definite prediction could be made for aggressive-depressed children, however. A different pattern was anticipated from the peers' perspective. Specifically, given their disturbing interpersonal behavior, aggressive as well as aggressive-depressed children should be perceived significantly more negatively by their peer group and by their friends than well-adjusted children. In line with theoretical accounts of depression (Coyne, 1976a, 1976b), we anticipated that peers would also perceive their relations with depressed children more negatively than their relations with well-adjusted children. In general, these patterns of results were expected to hold equally for boys and girls.

Although insightful, a concurrent assessment of aggressive and depressed children's peer relations does not provide a conclusive test of whether aggression and depression are indeed uniquely predictive of problems in children's relationships with the peer group and dyadic friends, as is maintained by theoretical models of aggression and depression (e.g., Coyne, 1976a, 1976b; Dishion,

Patterson, & Griesler, 1994). Therefore, we tested the unique and joint effects of aggression and depression on subsequent peer relations in a short-term longitudinal design, while controlling for initial levels of children's peer relations. As with the concurrent assessment of children's relations with their peer group and their dyadic friends, this longitudinal analysis included both children's own and their peers' perspectives.

The second goal of the present study was to examine to what degree, compared to the peers' view, aggressive children and depressed children show a cognitive bias in their perception of the relations with the peer group and with dyadic friends. In line with the findings discussed previously, it was expected that aggressive-only children would exhibit a positive bias whereas depressed-only children should display a negative bias in their perceptions about their social acceptance in the general peer group. Whether aggressive-depressed children would more resemble the former or the latter group in this respect was not clear, however. Of specific interest in this context was whether the children's perceptual bias would be equally strong across types of relationships (i.e., across children's relations with the general peer group and their dyadic friendships) or whether children would show more biased perceptions in one relationship type compared to the other. On the one hand, due to the intimacy of close friendships, children might be able to interpret their friends' interpersonal behavior more accurately than the behavior of other classmates. As a consequence, they might also evaluate the quality of their friendships in a less biased fashion than their social standing in the peer group at large. On the other hand, because aggressive as well as depressed individuals have been found to display distorted views in multiple domains (e.g., Cole et al., 1998; Hymel et al., 1993), it is possible that their respective cognitive biases are generalized across the relationships. As such, no specific prediction could be made in this context. Again, the patterns of results were expected to hold equally for boys and girls.

## METHOD

### Participants

Participants of the study came from a pool of 1149 fourth through sixth graders (580 girls) from 37 schools in low to average SES areas in Montreal, Canada, for whom data on aggression and depression were available. More than 80% of the participants were Caucasian. The data for the present study were collected in fall and in spring during the same school year. Participants' ages ranged from 8 to 13 years at T1 ( $M = 10.3$  years). Parental permis-

sion was obtained for all participants. At both T1 and T2, only classes where at least 75% of all students had received parental consent were considered for participation in the study to ensure valid data for the peer nomination procedure (see description below). Of the participants assessed at T1, 125 (11%) participants were lost from the study, because they were absent during the second wave of data collection. An additional 205 (20%) had to be excluded from the study sample because they did not have valid data on their dyadic friendships (i.e., because they either failed to provide intelligible information regarding their friends' names, because they nominated school friends from younger grades than were targeted in the study, or because the friends they nominated were absent during data collection or had not received parental permission to participate in the study). Bonferroni-corrected  $t$ -tests for independent samples revealed that the remaining participants ( $N = 819$ , 427 girls) differed from those who were lost in that the former were better accepted by their peers and perceived themselves as more accepted by their peers. Notably, the children in the remaining sample were more aggressive than those who were excluded.

### Procedure

Data were collected in school during regular class hours. The research assistant read the instructions out loud and made sure that each participant understood the instructions. Throughout the procedure, the children were reminded to maintain confidentiality of their responses. All instruments were administered in French. Following the procedure suggested by Vallerand (1989), instruments that were originally written in English were translated into French and then translated back into English. Bilingual judges verified the semantic similarity between the back-translated items and the original items in the questionnaire. The research questions and instruments were submitted to, and approved by, the Ethics Committee of the Fernand Seguin Research Center and the school board administrators.

### Measures

#### *Aggression*

Children's aggression at T1 and T2 was measured through five peer-rated items taken from the Pupil Evaluation Inventory (PEI; Pekarik, Prinz, Liebert, Weintraub, & Neale, 1976), from the Proactive and Reactive Aggression Scale (Dodge & Coie, 1987), and from the Indirect Aggression Scale (Bjoerkqvist, Oestermann, & Kaukiainen, 1992): "Those who start a fight over nothing," "say they

can beat everybody up," "make fun of people," "say bad things behind others' backs," "get other children to gang up on a peer." These items were chosen to reflect a variety of aggressive behaviors including physical aggression and indirect aggression.<sup>6</sup> Peer nominations of aggression were elicited by presenting a list of the names of all children in a given class to the participants who were then asked to nominate up to four classmates of the same or the opposite sex who best fit each behavioral descriptor. Individual aggression scores were computed by summing the total number of received nominations for the five items, separately for T1 and T2, and scores were then *z*-standardized within each classroom and sex (Cronbach's  $\alpha = .91$  at T1 and at T2).

### Depression

Participants' depression was assessed using the Children's Depression Inventory (CDI; Kovacs, 1985). The CDI is a self-rated 27-item scale assessing affective, cognitive, motivational, and somatic symptoms of depression. In the present study, the suicidal ideation item was eliminated for ethical reasons. Individual item scores ranged from 0 to 2 with higher ratings indicating more severe symptoms (total range: 0–52). The CDI has relatively high internal consistency and stability and has been validated using normative and clinic-referred samples (Finch, Saylor, & Edwards, 1985; Fundulis et al., 1991). Internal consistency was high in this sample ( $\alpha = .85$ ,  $M = 10.11$ ,  $SD = 7.10$  at T1; and  $\alpha = .87$ ,  $M = 9.40$ ,  $SD = 7.42$  at T2).

### Social Acceptance Among Peers

Children's social acceptance among classmates at T1 and T2 was assessed from the children's own perspective and from the peers' perspective. Following the procedure by Vernberg (1990), *Self-Perceived Social Acceptance* among peers was measured through the social acceptance subscale of the Self-Perception Profile for Children (SPPC; Harter, 1985). The subscale is comprised of six items, which were scored from 1 to 4 with higher

scores reflecting a more positive self-image. The SPPC has shown good internal consistency, test-retest reliability, and factorial and convergent validity with third through sixth graders (Boivin, Vitaro, & Gagnon, 1992). Cronbach's  $\alpha$  for the self-perceived social acceptance scale was .75,  $M = 3.07$ ,  $SD = 0.70$  at T1; and  $\alpha = .80$ ,  $M = 3.17$ ,  $SD = 0.72$  at T2. To render the scale comparable to the *z*-standardized peer-rated social acceptance measure (see below), the self-perceived social acceptance scale was *z*-standardized across the sample.

Children's *Peer-Perceived Social Acceptance* was assessed through peer nominations. Specifically, a list of the names of all children in a given class was handed out to the participants. The children were then asked to nominate three children of the same or opposite sex they most liked to play with (positive nominations) and three other children of the same or opposite sex they least liked to play with (negative nominations). The criteria outlined by Coie, Dodge, and Coppotelli (1982) were used to compute the social acceptance score for each participant, separately for each time. Specifically, the total number of received positive nominations was calculated for each participant and *z*-standardized within classroom and sex to create a total Liked-Most-score (LM). Similarly, the total number of received negative nominations was calculated for each participant and *z*-standardized within classroom and sex to create a total Liked-Least-score (LL). The LL-score was then subtracted from the LM score to create the Social Acceptance score, which was again *z*-standardized within classroom and sex.

To operationalize the degree of perceptual difference between children's own evaluations of their social acceptance and their peers' view in this respect, we computed a standardized *Social Acceptance Residual Score* by regressing children's self-rated social acceptance in the peer group at T1 on their peer-rated social acceptance at T1 (Cole et al., 1998). As such, a residual score above zero represented a more positive perception of their social acceptance from the children's own perspective than from their peers' perspective. In contrast, a residual score below zero represented a more negative perception of their social acceptance from the children's own perspective than from their peers' perspective.

### Presence of Reciprocal Friendships

Participants were asked to nominate up to five best friends who also attended the same school. School friends were targeted to increase the pool of true reciprocal friends. A participant was considered to have a reciprocal friend when the peer the participant had nominated among his or her five best school friends had in turn rated the participant

<sup>6</sup>Notably, previous studies on aggressive children's positive illusions usually focused on physical aggression, thus potentially putting excessive emphasis on boys. In the present study, we aimed at obtaining a measure of aggression that comprised behaviors typical of both genders. Indeed, both types of aggression usually show moderate to strong correlations ( $r$ s between .4 and .8) and are used by both genders, but physical aggression is more frequent in boys whereas indirect aggression is more prevalent in girls (see Crick et al., 1999). To the extent that both types of aggression reflect the same disposition, namely to harm another person, we did not expect the different types of aggressive behaviors captured to compromise the obtained pattern of results.

as one of his or her five best school friends. Of the 819 in the study sample, 696 (85%) participants had at least one reciprocal friend at T1 ( $M = 1.65$ ,  $SD = 1.14$ , with a maximum of five reciprocal friends) and 684 (83.5%) participants had at least one reciprocal friend at T2 ( $M = 1.65$ ,  $SD = 1.19$ , again with a maximum of five reciprocal friends). Girls and boys did not differ in their likelihood of having at least one reciprocal friend at T1 or at T2,  $\chi^2(1) = 0.38$ , *ns*, at T1; and  $\chi^2(1) = 1.56$ , *ns*, at T2. For those who had at least one reciprocal friend at T1, a *Proportional Friendship Stability Score* was computed by dividing the number of reciprocal friendships that stayed stable over the 6-month period from T1 to T2 by the total number of reciprocal friends at T1 ( $M = 0.50$ ,  $SD = 0.41$ ).

### Friendship Quality

After nominating their five best friends in school, participants were asked to describe the quality of the friendship with their first nominated (i.e., very best) school friend using a short version (27 items) of the Friendship Quality Questionnaire (FQQ; Parker & Asher, 1993). The items of the FQQ assess five dimensions (Companionship and Recreation, Help and Guidance, Validation and Caring, Intimate Exchange, Conflict Resolution, and Conflict). The children were asked to indicate how true a specific item description was for the relationship with their best friend, ranging from 0 (*not at all true*) to 4 (*really true*). The FQQ has been extensively used for third through sixth grade children and has shown good internal consistency, as well as good factorial and convergent validity with third through sixth graders (Parker & Asher, 1993). Following procedures adopted in previous studies (e.g., Brendgen, Markiewicz, Doyle, & Bukowski, 2001), a higher order global positive and negative friendship quality scale, respectively was computed for each participant by averaging the individual item scores of the positive and negative quality dimensions, respectively, separately for T1 and T2. Internal consistency for these two scales was satisfactory at both times, Cronbach's  $\alpha = .93$  for positive friendship quality and  $\alpha = .77$  for negative friendship quality at T1, and  $\alpha = .93$  for positive friendship quality and  $\alpha = .78$  for negative friendship quality at T2. To obtain a measure of global friendship quality, we then subtracted for each individual the  $z$ -standardized negative quality dimension from the  $z$ -standardized global positive quality dimension such that positive scores indicated a more positive overall friendship quality and negative scores indicated a more negative overall friendship quality.

For participants whose very best friendship nomination was reciprocated at the same level it was possible to obtain not only their own but also their reciprocal best friend's evaluation of the friendship quality (see descrip-

tion of sample size in Results section). For these children, a *Friendship Quality Residual Score* was computed by regressing children's own global friendship quality evaluation on their best friends' global friendship quality evaluation. Thus, values above zero indicated a more positive evaluation of friendship quality from the child's own perspective compared to the friend's perspective, whereas values below zero indicated a more negative evaluation of friendship quality from the child's own perspective compared to the friend's perspective.

### Group Composition and Preliminary Analyses

The aggression and depression scores at T1 were dichotomized to identify aggressive and depressed children, respectively. For this purpose, the cut-off was set at the 75th percentile of the respective distributions of aggression and depression, which corresponded to a cut-off score of 14 for depression. The 75th percentile cut-off was chosen (a) because a similar cut-off has been used in previous studies to distinguish between children with aggressive or depressive behavior symptoms from others (e.g., Rudolph & Clark, 2001; Vitaro, Tremblay, Kerr, Pagani, & Bukowski, 1997), and (b) because it ensured sufficient sample size for subsequent analyses. Notably, the cut-offs and group classifications were based on the variable distributions in the initial sample to ensure the respective groups were representative of the sampled population, even though the relative number of participants in the final study sample who were categorized as aggressive was not 25%. This was due to the mentioned difference in mean levels of aggression between the final sample and those who were lost from the study. The participants were then categorized into one of four groups: Nonaggressive–Nondepressed (NA–ND), Aggressive–Nondepressed (A–ND), Nonaggressive–Depressed (NA–D), and Aggressive–Depressed (A–D).<sup>7</sup> The four identified groups did not differ in age, but group membership varied significantly between girls and boys,  $\chi^2(3) = 14.93$ ,  $p < .01$ . The number of participants in each group is depicted in Table I, separately for the two sex groups.

<sup>7</sup>Subsequent analyses (see below) showed that the mean levels of depression in the depressed-only group and in the aggressive–depressed group were above 19, using our 26-item version of the CDI. Notably, a cut-off of 19 on the CDI using all 27 items has been used in previous studies to discriminate between clinically depressed and dysphoric children using DSM-III criteria (e.g., Knight, Hensley, & Waters, 1988). Although this suggests that many children in the depressed-only group and in the aggressive–depressed group showed clinical levels of depression, it should be kept in mind that none of the children in these two groups were clinically diagnosed with depression. For the purpose of simplicity, however, we will use the terms depressed-only group and aggressive–depressed group when referring to these children.

**Table I.** Number of Participants in the Four Behavior Groups by Sex

	NA-ND	A-ND	NA-D	A-D
Boys ( <i>n</i> = 392)	180	134	46	32
Girls ( <i>n</i> = 427)	223	95	63	46
Total ( <i>N</i> = 819)	403	229	109	78

Note. NA-ND = nonaggressive-nondepressed; A-ND = aggressive-nondepressed; NA-D = nonaggressive-depressed; A-D = aggressive-depressed.

To certify (a) whether aggression scores were comparable between the A-ND and the A-D groups and (b) whether depression scores were comparable between the NA-D and the A-D groups, a 2 (Sex) × 4 (Group) MANOVA with repeated measures was performed to compare the groups with respect to their aggression and depression scores at T1 and T2. Using Pillai's criterion, results from the repeated measures MANOVA revealed a significant multivariate effect of Sex,  $F(2, 810) = 6.60, p < .001$ , Group membership,  $F(6, 1622) = 354.49, p < .001$ , as well as a significant interaction between Sex and Group membership,  $F(6, 1622) = 2.45, p < .05$ . In addition, there was a significant multivariate effect of Time,  $F(2, 810) = 32.83, p < .001$ , as well as a significant interaction between Group membership and Time,  $F(6, 1622) = 22.20, p < .001$ . Subsequent univariate analyses of variance and Dunnett T3 post hoc comparisons indicated that, even though group differences diminished slightly over the 6-month assessment period, the differences among the four groups regarding aggression and depression were exactly as expected, not only at T1 but also T2. Given that Group membership was based on T1 scores only, the temporal stability of behavioral differences is noteworthy. In Table II, the means and standard deviations of aggression and depression at T1 and T2 are presented, separately for the four groups and by sex.

As can be seen, aggression scores at T1 and T2 did not differ between the A-ND group and the A-D group, and the scores did not differ between the NA-ND group and the NA-D group. However, both groups of aggres-

sive children (i.e., A-ND and A-D) significantly differed from both groups of nonaggressive children (i.e., NA-ND and NA-D) with respect to their aggression scores at T1 and T2,  $ps < .001$ . This pattern was evident in both sex groups, but it was somewhat more pronounced for boys than for girls. Group differences with regard to depression also followed the expected pattern. Specifically, depression scores at T1 and T2 did not differ between the NA-D group and the A-D group, and the scores did not differ between the A-ND group and the NA-ND group. As would be expected, however, both groups of depressed children (i.e., NA-D and A-D) significantly differed from both groups of nondepressed children (i.e., NA-ND and A-ND) with respect to their depression scores at T1 and T2,  $ps < .001$ . This pattern was the same for both sex groups.

**RESULTS**

The main analyses were conducted in two steps. First, potential group differences were examined using only T1 measures as dependent variables. This allowed us to examine whether the various aspects of children's peer relations varied concurrently as a function of children's aggression and depression profile and of the perspective considered. Second, group differences were examined using T2 measures as dependent variables while controlling for previous levels of these measures at T1. This allowed us to examine whether children's aggression and depression profile would predict changes in their own perceptions about their relation with the peer group and their dyadic friendships as well as changes in their peers' and friends' views in this context. These longitudinal analyses thus allowed us to disentangle the directionality of the associations found in the first set of analyses. Because the participants varied greatly in age and because age was related to many dependent variables, age was used as a control variable in all analyses. Due to varying selection criteria (see description below), sample size varied across analyses.

**Table II.** Means and Standard Deviations of Aggression and Depression at T1 and T2 by Group and Sex

	NA-ND ( <i>n</i> = 403)		A-ND ( <i>n</i> = 229)		NA-D ( <i>n</i> = 109)		A-D ( <i>n</i> = 78)	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
T1 aggression	-0.29 (0.40) <sub>a</sub>	-0.14 (0.40) <sub>a</sub>	1.18 (0.48) <sub>b</sub>	1.12 (0.47) <sub>b</sub>	-0.28 (0.41) <sub>a</sub>	-0.08 (0.31) <sub>a</sub>	1.19 (0.55) <sub>b</sub>	1.25 (0.30) <sub>b</sub>
T2 aggression	-0.25 (0.54) <sub>a</sub>	0.14 (0.65) <sub>a</sub>	0.92 (0.70) <sub>b</sub>	0.98 (0.88) <sub>b</sub>	-0.20 (0.69) <sub>a</sub>	0.11 (0.58) <sub>a</sub>	0.98 (0.66) <sub>b</sub>	1.06 (0.86) <sub>b</sub>
T1 depression	6.37 (1.75) <sub>a</sub>	6.18 (3.61) <sub>a</sub>	7.18 (3.68) <sub>a</sub>	5.73 (3.65) <sub>a</sub>	19.50 (5.26) <sub>b</sub>	19.10 (5.12) <sub>b</sub>	19.31 (4.28) <sub>b</sub>	20.46 (5.10) <sub>b</sub>
T2 depression	6.14 (5.44) <sub>a</sub>	6.28 (5.30) <sub>a</sub>	6.56 (5.41) <sub>a</sub>	6.23 (5.34) <sub>a</sub>	14.41 (7.64) <sub>b</sub>	15.02 (8.61) <sub>b</sub>	17.31 (8.35) <sub>b</sub>	16.26 (7.00) <sub>b</sub>

Note. Group membership is based on T1 scores (see text). Standard Deviations are given in parentheses. Means with different subscripts differ significantly from each other at  $p \leq 0.05$ . NA-ND = nonaggressive-nondepressed; A-ND = aggressive-nondepressed; NA-D = nonaggressive-depressed; A-D = aggressive-depressed.

## Relations With the Larger Peer Group

### Concurrent Links at T1

To examine group differences with respect to self-rated and peer-rated social acceptance at T1, a 2 (Sex)  $\times$  4 (Group)  $\times$  2 (Source of rating, i.e., self vs. peers) ANCOVA with repeated measures on the last factor was performed. The results revealed a significant main effect of group,  $F(3, 811) = 28.27, p < .001, \eta^2 = .10$ , but no other main effects were found. As expected, however, there was a significant interaction effect between group and source of rating,  $F_{\text{Hyunh-Feldt}}(3, 811) = 42.35, p < .001, \eta^2 = .14$ , indicating that the groups' respective levels of social acceptance differed depending on whether children's own or their peers' perspective was considered. To more closely examine this interaction effect, two 2 (Sex)  $\times$  4 (Group) between-subjects ANCOVAs were performed with (a) self-rated social acceptance at T1, and (b) peer-rated social acceptance at T1 as dependent variables. Using Pillai's criterion, the results showed a significant main effect of Group on each of the two dependent variables,  $F(3, 810) = 55.46, p < .001, \eta^2 = .17$ , for self-rated social acceptance at T1, and  $F(3, 810) = 14.48, p < .001, \eta^2 = .05$ , for peer-rated social acceptance at T1. The raw and adjusted mean scores of all variables concerning children's peer group relations at T1 are presented in Table III, separately for the four groups.

Simple contrasts with the nonaggressive/nondepressed children as the comparison group revealed that aggressive-only children perceived themselves, on average, as significantly *better* accepted by their peers than did nonaggressive/nondepressed children,  $p < .01$ . In contrast, both depressed-only and aggressive-depressed children generally viewed themselves as significantly *less* ac-

cepted by their peers than did nonaggressive/nondepressed children,  $ps < .001$ . A notably different pattern emerged for peer-rated social acceptance. Specifically, aggressive-only children and aggressive/depressed children were, on average, significantly less accepted by their peers than were nonaggressive/nondepressed children,  $ps < .001$ . Depressed-only children, however, did not differ from nonaggressive/nondepressed children in terms of their peer-rated social acceptance,  $p = .55$ .

### Predictive Links From T1 to T2

We next examined whether the group differences with respect to peer-rated and self-perceived social acceptance at T1 would still hold 6 months later, even when controlling for T1 levels of these variables. For this purpose, two 2 (Sex)  $\times$  4 (Group) between-subjects ANCOVAs were performed with (a) self-rated social acceptance at T2, and (b) peer-rated social acceptance at T2, respectively, as dependent variables. The respective values at T1 were included as control variables. The results showed no effect of group membership on peer-rated social acceptance at T2 once peer-rated social acceptance at T1 was taken into account,  $F(3, 809) = 1.92, ns$ . However, group membership was significantly related to self-perceived social acceptance at T2 even after controlling for children's self-perceptions at T1 in this regard,  $F(3, 809) = 9.09, p < .001, \eta^2 = .03$ . The raw and adjusted mean scores of all variables concerning children's peer group relations at T2 can also be seen in Table III, again separately for the four groups. Simple contrasts revealed that aggressive-only children did not differ from nonaggressive/nondepressed children with respect to their self-perceived social acceptance at T2,  $p = .41$ , whereas both depressed-only and aggressive-depressed children perceived themselves as significantly less accepted than

**Table III.** Raw and Adjusted Means of Variables Concerning Children's Social Acceptance by the Peer Group at T1 and T2 by Group

	NA-ND ( $n = 403$ )	A-ND ( $n = 229$ )	NA-D ( $n = 109$ )	A-D ( $n = 78$ )
T1 self-rated social acceptance	0.14 (0.94) 0.14 (0.05)	0.35 (0.80) 0.37 (0.06)* $d = 0.64$	-0.78 (0.94) -0.79 (0.09)* $d = 1.06$	-0.68 (1.04) -0.67 (0.11)* $d = 0.94$
T1 peer-rated social acceptance	0.19 (0.93) 0.19 (0.05)	-0.22 (1.00) -0.22 (0.07)* $d = 0.45$	0.10 (0.95) 0.12 (0.10) $d = 0.08$	-0.45 (1.17) -0.45 (0.11)* $d = 0.67$
T2 self-rated social acceptance	0.14 (0.90) 0.06 (0.04)	0.32 (0.82) 0.11 (0.05) $d = 0.07$	-0.79 (1.08) -0.35 (0.08)* $d = 0.33$	-0.57 (1.05) -0.18 (0.09)* $d = 0.27$
T2 peer-rated social acceptance	0.16 (0.97) 0.08 (0.04)	-0.15 (0.93) -0.02 (0.06)	-0.04 (1.03) -0.10 (0.08)	-0.35 (1.18) -0.12 (0.10)

*Note.* Raw means are presented above adjusted means. Standard deviations are in parentheses behind the raw means. Standard errors are in parentheses behind the adjusted means. T1 adjusted means are corrected for age; T2 adjusted means are corrected for age and respective T1 scores (see text). Adjusted means with an asterisk (\*) are significantly different from the respective mean value of the Nonaggressive-Nondepressed group (see text). For dependent variables where significant main effects of group membership were found, Cohen's  $d$  is provided for the contrast comparisons of the adjusted means. NA-ND = nonaggressive-nondepressed; A-ND = aggressive-nondepressed; NA-D = nonaggressive-depressed; A-D = aggressive-depressed.

did nonaggressive/non-depressed children,  $p < .001$ , and  $p < .05$ , respectively.

### Dyadic Friendship Relations

#### *Concurrent Links at T1*

With respect to children's concurrent dyadic friendship relations, we first examined in preliminary analyses whether the groups differed with respect to the number of reciprocal friends they had at T1. For this purpose, we performed a 2 (Sex)  $\times$  4 (Group) between-subjects ANCOVA with the number of reciprocal friends at T1 as the dependent variable. The results showed a main effect of Group,  $F(3, 810) = 4.08$ ,  $p < .01$ ,  $\eta^2 = .02$ , but no other main or interaction effects were statistically significant. Subsequent simple contrasts revealed that aggressive-only children as well as depressed-only children did not differ significantly from nonaggressive/nondepressed children in regard to the number of reciprocal friends they had at T1,  $p = .12$ , and  $p = .09$ , respectively. In contrast, aggressive-depressed children had significantly fewer reciprocal friends than did nonaggressive/nondepressed children,  $ps < .05$ .

For those children who had their very best friendship nomination reciprocated at the same level, that is, who were in return also chosen as very best friend by their nominated very best friend ( $n = 237$  or 29%; 60% girls), it was possible to examine group differences with respect to self-rated and friend-rated friendship quality. Not surprisingly, the 237 children who had their very best friendship nomination reciprocated at the same level at T1 differed from the initial study sample of 819 in that they were more accepted by their peers both at T1 and T2 and they also perceived themselves as more accepted by their peers at both times. Notably, the fact that self-ratings as well as friend-ratings were provided by the same pool of participants resulted in interdependent data. Moreover, in some cases the target child and the friend were even members of the same group (e.g., both were classified as nonaggressive/nondepressed). In these cases, we randomly excluded one member of the dyad. Although this strategy did not solve the problem of dependent data within the sample as a whole, it at least eliminated the problem of redundant data within groups. Overall, 48 children (20.7%) were excluded. With the remaining 189 children (62% girls), a 2 (Sex)  $\times$  4 (Group)  $\times$  2 (Source of rating, i.e., self vs. peers) ANCOVA with repeated measures on the last factor was performed using friendship quality as the dependent measure. The results revealed a significant main effect of sex,  $F(1, 180) = 26.64$ ,  $p < .001$ ,  $\eta^2 = .13$ , and of group,  $F(3, 180) = 4.84$ ,  $p < .01$ ,  $\eta^2 = .08$ . As ex-

pected, there was also a significant interaction effect between group and source of rating,  $F_{\text{Hyunh-Feldt}}(3, 180) = 3.41$ ,  $p < .05$ ,  $\eta^2 = .05$ , indicating that the groups' respective levels of friendship quality differed depending on whether children's own or their friends' perspective was considered. To further examine this interaction effect, two 2 (Sex)  $\times$  4 (Group) between-subjects ANCOVAs were performed with (a) self-rated friendship quality at T1, and (b) friend-rated friendship quality at T1 as dependent variables. Based on Pillai's criterion, the results showed that girls' self-rated and friend-rated friendship quality was significantly higher than that of boys,  $F(1, 180) = 17.79$ ,  $p < .001$ ,  $\eta^2 = .09$ , and  $F(1, 180) = 12.76$ ,  $p < .001$ ,  $\eta^2 = .07$ , respectively. In addition, group had a significant main effect on each of the two dependent variables,  $F(3, 180) = 5.46$ ,  $p < .001$ ,  $\eta^2 = .08$ , for self-rated friendship quality, and  $F(3, 181) = 2.99$ ,  $p < .05$ ,  $\eta^2 = .05$ , for friend-rated friendship quality. The raw and adjusted mean scores of all variables concerning children's dyadic friendship relations at T1 are presented in Table IV, separately for the four groups.

Simple contrasts with the nonaggressive/nondepressed children as the comparison group revealed that aggressive-only children and aggressive-depressed children did not differ from nonaggressive/nondepressed children in their self-rated friendship quality. In contrast, depressed-only children perceived their friendship quality significantly less positively than did nonaggressive/nondepressed children,  $p < .001$ . The reverse pattern was found from the friends' perspective. Specifically, the friends of aggressive-only children as well as the friends of aggressive-depressed children rated their friendship quality as less positive than did the friends of nonaggressive/nondepressed children,  $p < .01$ , and  $p < .05$ , respectively. In contrast, the friendship quality ratings of depressed-only children's friends did not differ from those reported by the friends of nonaggressive/nondepressed children.

#### *Predictive Links From T1 to T2*

In the next set of analyses, we examined whether the group differences with respect to children's dyadic friendship relations at T1 could still be found at T2, even when controlling for T1 dyadic friendship relations. In this context, we again performed preliminary analyses to investigate potential group differences with respect to the number of reciprocal friends at T2 and the stability of children's reciprocal friendships from T1 to T2. For this purpose, we first conducted a 2 (Sex)  $\times$  4 (Group) between-subjects ANCOVA with the number of reciprocal friends at T2 as dependent variable and the number of

**Table IV.** Raw and Adjusted Means of Variables Concerning Children's Dyadic Friendship Relations at T1 and T2 by Group

	NA-ND ( <i>n</i> = 403)	A-ND ( <i>n</i> = 229)	NA-D ( <i>n</i> = 109)	A-D ( <i>n</i> = 78)
T1 number of reciprocal friends	1.67 (1.11)	1.69 (1.16)	1.47 (1.11)	1.37 (1.21)
	1.66 (0.06)	1.81 (0.08) <i>d</i> = 0.12	1.45 (0.11) <i>d</i> = 0.17	1.37 (0.13)* <i>d</i> = 0.23
T2 number of reciprocal friends	1.74 (1.17)	1.67 (1.20)	1.46 (1.15)	1.42 (1.32)
	1.73 (0.05)	1.62 (0.07)	1.55 (0.10)	1.56 (0.12)
Percentage of stable friendships T1-T2	0.50 (0.43)	0.45 (0.42)	0.51 (0.43)	0.38 (0.45)
	0.50 (0.03)	0.45 (0.03)	0.50 (0.05)	0.44 (0.07)
	<i>n</i> = 89	<i>n</i> = 53	<i>n</i> = 31	<i>n</i> = 16
T1 self-rated friendship quality	0.14 (0.94)	-0.08 (0.97)	-0.32 (1.15)	0.10 (1.03)
	0.09 (0.10)	-0.10 (0.13) <i>d</i> = 0.21	-0.85 (0.21)* <i>d</i> = 0.95	0.07 (0.24) <i>d</i> = 0.02
T1 friend-rated friendship quality	0.15 (0.99)	-0.23 (1.12)	0.12 (0.69)	-0.32 (1.01)
	0.14 (0.10)	-0.29 (0.13)* <i>d</i> = 0.40	-0.13 (0.21) <i>d</i> = 0.35	-0.39 (0.24)* <i>d</i> = 0.53
	<i>n</i> = 110	<i>n</i> = 69	<i>n</i> = 35	<i>n</i> = 25
T2 self-rated friendship quality	0.18 (1.00)	-0.05 (0.96)	-0.26 (1.00)	0.01 (0.96)
	0.14 (0.10)	-0.06 (0.12) <i>d</i> = 0.21	-0.41 (0.19)* <i>d</i> = 0.55	0.03 (0.22) <i>d</i> = 0.11
T2 friend-rated friendship quality	0.15 (1.02)	-0.16 (0.94)	-0.09 (1.09)	-0.05 (0.96)
	0.11 (0.10)	-0.17 (0.12)	-0.16 (0.19)	0.09 (0.22)

*Note.* Raw means are presented above adjusted means. Standard deviations are in parentheses behind the raw means. Standard errors are in parentheses behind the adjusted means. Adjusted means for self-rated and friend-rated friendship quality are corrected only for age at both times (see text). Adjusted means with an asterisk (\*) are significantly different from the respective mean value of the Nonaggressive-Nondepressed group (see text). For dependent variables where significant main effects of group membership were found, Cohen's *d* is provided for the contrast comparisons of the adjusted means. NA-ND = nonaggressive-nondepressed; A-ND = aggressive-nondepressed; NA-D = nonaggressive-depressed; A-D = aggressive-depressed.

reciprocal friends at T1 as a covariate. Using Pillai's criterion, the results showed a significant effect of the number of reciprocal friends at T1 on the number of reciprocal friends at T2,  $F(1, 809) = 244.82$ ,  $p < .001$ ,  $\eta^2 = .18$ . No other main or interaction effects were found, however, indicating that group membership was only concurrently, but not longitudinally related to the number of reciprocal school friends. Next, another  $2(\text{Sex}) \times 4(\text{Group})$  between-subjects ANCOVA was performed using the proportional friendship stability score from T1 to T2 as dependent variable. Again, no main effects or interaction effects were found, indicating that the groups also did not differ with respect to the proportion of reciprocal friendships that stayed stable from T1 to T2.

At T2, 289 children (35.3%; 62% girls) had their very best friendship nomination reciprocated at the same level. As was the case at T1, the children who had their very best friendship nomination reciprocated at the same level at T2 differed from the initial study sample of 819 in that they were more accepted by their peers both at T1 and T2 and they also perceived themselves as more accepted by their peers at both times. Unfortunately, only 132 children had their very best friendship reciprocated at the same level at both T1 and T2. Therefore, after random elimination of duplicate dyads from this subsample, the cell sizes were too small to carry out analyses on T2 self-rated and friend-rated friendship quality while controlling for

T1 levels of these variables. It was possible, however, to examine whether the pattern found at T1 for these variables could also be found at T2, even though we could not disentangle the directionality of effects. Specifically, two  $2(\text{Sex}) \times 4(\text{Group})$  between-subjects ANCOVAs were performed with self-rated friendship quality at T2 and friend-rated friendship quality at T2, respectively, as dependent variables. These analyses were conducted with 237 children (62% girls) who were retained after the random elimination of redundant information from duplicate dyads within groups at T2. Using Pillai's criterion, the results showed that girls' self-rated friendship quality at T2 was significantly higher than that of boys,  $F(1, 228) = 6.27$ ,  $p < .01$ ,  $\eta^2 = .03$ . Group had also a main effect on self-rated friendship quality,  $F(3, 228) = 3.08$ ,  $p < .05$ ,  $\eta^2 = .04$ . In contrast to the results for T1, however, neither sex nor group membership was significantly related to friend-rated friendship quality at T2. The raw and adjusted mean scores of all variables concerning children's dyadic friendship relations at T2 are also presented in Table IV, again separately for the four groups.

Simple contrasts for self-rated friendship quality at T2 showed the same pattern as at T1. Specifically, aggressive-only children and aggressive-depressed children did not differ from nonaggressive/nondepressed children in their self-rated friendship quality at T2, whereas depressed-only children perceived their friendship quality

at T2 significantly less positively than did nonaggressive/nondepressed children,  $p < .01$ .

### Degree of Perceptual Concordance Across Types of Relationships

The previous analyses clearly suggest that aggressive children's as well as depressed children's own perceptions about their relations with the peer group at large and with their dyadic friends differ from their peers' view in this respect. Therefore, we next examined the degree to which aggressive children and depressed children evince a cognitive bias in their perception of the relations with the peer group and with dyadic friends, and whether such a positive or negative bias would be similar across types of peer relationships (i.e., with respect to their general social acceptance in the peer group and with respect to the quality of their dyadic friendships). For that purpose, we first performed a 2 (Sex)  $\times$  4 (Group)  $\times$  2 (Relationship) ANCOVA with repeated measures on the last factor using the residual scores regarding social acceptance at T1 and the residual scores regarding friendship quality at T1 as dependent variables. Because both scores were  $z$ -standardized, the scales were directly comparable in the repeated measures analysis. This analysis was conducted with the subsample of 189 participants with valid and nonredundant friendship data at T1 used in the previous T1 analysis of the friendship quality data. The results revealed a significant interaction effect between Relationship and Group,  $F_{\text{Huynh-Feldt}}(3, 180) = 4.22$ ,  $p < .01$ ,  $\eta^2 = .07$ , indicating that children's overly positive or negative perceptual tendencies varied across types of relationships.

To disentangle the interaction effect, two 2 (Sex)  $\times$  4 (Group) between subjects ANCOVAs were performed on the residual scores regarding social acceptance at T1 and friendship quality at T1, respectively, as dependent variables. The analysis for the residual score regarding social acceptance showed a main effect of group,  $F(3, 180) = 10.44$ ,  $p < .001$ ,  $\eta^2 = .15$ , but no other effects were significant. Subsequent mean level analyses and simple contrasts showed that the nonaggressive/nondepressed group's perceptions of their social acceptance were, on average, rather concordant with their peers' views,  $M$  residual = 0.02. In comparison, aggressive-only children showed a significant positive bias,  $M$  residual = 0.48,  $p < .01$ , Cohen's  $d = 0.61$ , and depressed-only children showed a significant negative bias with regard to their social acceptance,  $M$  residual =  $-0.79$ ,  $p < .001$ , Cohen's  $d = 0.86$ . Aggressive-depressed children showed a slight negative bias in the perception of their social acceptance, but this tendency did not reach statistical signifi-

icance,  $M$  residual =  $-0.43$ ,  $p = .08$ , Cohen's  $d = 0.47$ . The analysis for the residual score regarding friendship quality also revealed a main effect of group,  $F(3, 180) = 5.04$ ,  $p < .01$ ,  $\eta^2 = .08$ . Subsequent mean level analyses and simple contrasts showed that, again, nonaggressive/nondepressed children's perceptions of their friendship quality were, on average, rather concordant with their friend's view in this respect,  $M$  residual = 0.06. Aggressive-only children as well as aggressive-depressed children also did not evince any significantly biased views about their friendship quality,  $M$  residual = 0.03,  $ns$ , Cohen's  $d = 0.10$ , for aggressive-only children and  $M$  residual = .17,  $ns$ , Cohen's  $d = 0.12$ , for aggressive-depressed children. Depressed-only children, however, displayed a pronounced negative bias in the perception of their friendship quality compared to their friend's view,  $M$  residual =  $-0.84$ ,  $p < .001$ , Cohen's  $d = 0.94$ .<sup>8</sup>

## DISCUSSION

Theoretical accounts of aggression and depression suggest that both may be related to difficulties in children's peer relationships (e.g., Coyne, 1976a, 1976b; Dishion et al., 1994). Previous research findings suggest, however, that an examination of this topic might lead to different conclusions, depending on whether the children's own or their peers' perspective is considered. In line with this notion, the present results offered different conclusions about aggressive versus depressed children's peer relations, depending on the specific perspective considered. From the children's own point of view, depression but not aggression was significantly related to multiple difficulties with peers. Thus, depressed-only children perceived themselves as significantly less accepted by their peer group and they also reported a lower friendship quality with their best friends than did well-adjusted children. In contrast, and in line with previous findings (e.g., Hymel et al., 1993; Patterson et al., 1990; Zakriski & Coie, 1996), aggressive-only children perceived their relations with the peer group at large and with their dyadic friends at least as positively as did well-adjusted children. These patterns remained stable over the 6-month period assessed in

<sup>8</sup>Additional analyses of variance were conducted to examine whether the overly positive or negative perceptual tendencies regarding social acceptance or friendship quality observed at T1 in the different groups could still be found at T2. Notably, when analyzing the residual score of social acceptance at T2, T1 levels of this variable were controlled. For the analysis using the residual score of friendship quality at T2, however, no control of T1 levels was possible due to the sample size restrictions mentioned previously. The results showed essentially the same pattern of over- and underestimations in the different groups at T2 as observed at T1.

the present study. Indeed, our longitudinal analyses with respect to social acceptance suggest that depressed-only children's own views of their peer relations became even more pessimistic as the school year progressed. A different picture was revealed, however, when the peers' perspective was considered. From the peers' point of view, children in the depressed-only group did not experience significant problems in their relations with the peer group at large or in their dyadic friendships but they were rather comparable to well-adjusted children in these respects. In contrast, peers had considerably less positive things to say about aggressive-only children. Specifically, aggressive-only children were significantly less liked by their peer group than were well-adjusted children, and even their dyadic friends expressed less positive views about their relationship with these children than did the friends of well-adjusted children. Notably, the fact that group membership did not predict changes in peer-rated social acceptance and friendship quality from T1 to T2 may not necessarily mean that children's behavior profiles have no influence on how they are viewed by their peers. Instead, once developed, peers' views probably stay rather stable and were thus not likely to change much over the 6-month period assessed in the present study. The stability of peers' views with regard to children's social acceptance in the peer group has been demonstrated previously (e.g., Brendgen, Vitaro, Bukowski, Doyle, & Markiewicz, 2001), and it may also extend to children's friendship relations. Specifically, given stability of the child's behavior, a friendship relation with this child might be evaluated rather similarly over time or by different friends.

The differential pattern of results obtained from the children's own perspective and that of their peers clearly shows that the use of different sources can lead to different conclusions when assessing aggressive children's and depressed children's peer relations. The present results also suggest that depressive feelings per se may not always be related to negative reactions from others, at least not for children without clinical levels of depression such as the ones assessed in the present sample. One possible explanation may be that peers sympathize with these children if there is an external, "objective" reason for their negative feelings. Thus, third- and fourth graders have been found to evaluate unfamiliar depressed children who apparently experienced stressful life events less negatively than depressed children without obvious stressors (Peterson et al., 1985). Some of the children with elevated depressed mood in the present study may have experienced an apparent recent stressful life event such as illness, the divorce of parents, or the loss of a loved one. If the peers were familiar with these children's specific circumstances, they may have evaluated this subset of children rather favor-

ably. Another explanation could be that peers may not be bothered too much by the behavior displayed by children with depressed feelings as long as the children's behavior is not coupled with aggression. This latter notion is supported by the fact that aggressive-only children as well as aggressive-depressed children were significantly less accepted by their classmates than were well-adjusted children, whereas depressed-only children were not evaluated differently by their peers. Finally, it is also possible that peers may not always detect a noticeably different behavior in children with depressed feelings as long as these children do not exhibit clinical levels of depression and do not become too withdrawn, as was probably the case with most children in the depressed-only group in the present study.

Although an elevated depressed mood was not significantly related to peer relationship difficulties from the peers' perspective in the present study, children suffering from depressed feelings had a more pessimistic view of this issue. As such, our data suggest that the depressed children's negative views of their personal relationships with peers do not reflect a realistic pessimism but a negative bias, which is in line with previous studies in this context (Cole et al., 1998; Rudolph & Clark, 2001). As indicated by the present results, this negative perceptual tendency generalizes across different types of peer relationships, extending from the rather global relationship with the larger peer group to the dyadic relationship with the very best friend. In light of the more positive views of their peers, is depressed children's negative perceptual bias a cause for alarm at all?

One indication that depressed children's negatively biased view might be harmful for their developmental adjustment lies in the fact that children's perceived acceptance or rejection by peers is a stronger predictor of emotional well-being than the actual acceptance or rejection manifested by the peer group (Kistner, Balthazor, Risi, & Burton, 1999; Panak & Garber, 1992). In addition, however, depressed children's overly negative perceptions of their relationships with classmates and friends are likely to have a negative impact on the course of those relationships (Furman, 1996). Thus, children who expect negative behavior or rejection from their peers may become overly sensitive to even minor signs of rejection from others (Downey, Lebolt, Rincon, & Freitas, 1998). As a result, these children may either gradually withdraw or act with anger and hostility toward others (Renouf & Harter, 1990). In line with this notion, depressed children's interactions with peers are characterized by more conflict and less collaboration than the interactions of nondepressed children (Altmann & Gotlib, 1988; Rudolph et al., 1994). Eventually, such behavior may elicit true negative feedback

and rejection from peers (Boivin & Hymel, 1997). Indeed, interaction partners have been shown to report more dissatisfaction after interacting with depressed children (Baker, Milich, & Manolis, 1996) and they also believe that depressed children did not like interacting with them (Rudolph et al., 1994). Such a negative reaction from peers, in turn, may reinforce depressed children's negative views about themselves and their interpersonal relationships, thus setting into motion a vicious cycle of negative views, negative behavior, and negative social feedback. Some indication in this direction is evident in the fact that, although children in the depressed-only group did not have fewer reciprocal friends than well-adjusted children, their mean value in this respect resembled more that of aggressive-depressed children. As such, depression may indeed lead to interpersonal difficulties, as suggested by the interpersonal theory of depression (Coyne, 1976a, 1976b). This process may develop only gradually, however, and may thus be more easily visible in children suffering from clinical levels of depression than in the subsample of children with depressive feelings assessed in the present study.

In contrast to depressed children, aggressive children evinced a clear positive perceptual bias, at least with respect to their relation with the peer group as a whole. Can these overly positive perceptions also pose a threat to aggressive children's peer relations? It has been suggested that mildly self-aggrandizing perceptions are characteristic of mental health and successful developmental adaptation, because they may facilitate goal-attainment and promote emotional well-being (e.g., Taylor & Brown, 1988). Thus, a positive evaluation about their social experience with peers should encourage children to approach and interact with others without fear or restraint. This, in turn, should facilitate the establishment and maintenance of social relationships with others. A case in point is the present finding that aggressive-only children did not have fewer friends than well-adjusted children. Eventually, however, aggressive children's overly positive views of their interpersonal relationships with peers may backfire. The overly positive evaluation of one's peer relations may lead to high expectations about friendly behavior from others, such as the provision of instrumental or emotional support. If these expectations are not met because the peers do not perceive the relationship as equally positive, anger and frustration may result. The fact that aggressive children tend to underestimate their own aggression while at the same time blaming others for behaving aggressively (Lochman, 1987) may not only exacerbate aggressive children's feelings of resentment but also prevent them from changing their behavior. Eventually, this may further compromise aggressive children's relations with others. In line

with this notion, aggressive children who had a highly positive perception of their own social acceptance were found to be even less liked by their peers 30 months later than were aggressive children with a more realistic view about their social standing in the peer group (Hughes, Cavell, & Prasad-Gaur, 2001). Notably, aggressive children did not evince a generalized overestimation of friendship quality as they did with respect to their social acceptance. However, those aggressive children who do evaluate their friendship quality more positively than their friend may eventually experience problems also in their dyadic friendships. Indeed, although aggressive-only children's dyadic friendships were not less stable than other children's friendships over the 6-month period assessed in the present study, studies examining longer time frames did reveal a more rapid disintegration of aggressive children's friendship relations (e.g., Dishion, Andrews, & Crosby, 1995; Poulin, Dishion, & Medici, 1998).

Notably, children who were both aggressive and depressed did not evince any particularly bias in their perceptions of the relationship with the larger peer group and with their dyadic friends. The negative perceptual bias of depressed-only children and the positive perceptual bias of aggressive-only children thus seems to be leveled out in the case of aggressive-depressed children, who possess both behavioral characteristics and, therefore, might possess both perceptual tendencies—or none of them. However, the absence of a distinct perceptual bias does not mean that aggressive-depressed children were able to accurately perceive how others viewed them. This is evident in the weak correlation between aggressive-depressed children's and their peers' perceptions regarding social acceptance in the peer group,  $r = .19$ , *ns*, and regarding friendship quality,  $r = -.05$ , *ns*. Despite this discordance on the individual level, the mean level analyses showed that the aggressive-depressed children themselves as well as their peers were of the opinion that aggressive-depressed children had problems in their relationships with other children. This was also reflected in the fact that aggressive-depressed children were the only group who had significantly fewer friends than well-adjusted children in the present study. Although there was no indication that aggressive-depressed children's friendships were less stable than well-adjusted children's friendship relations, the 6-month time frame of the present study may have been too short to detect such a pattern. In light of the problems aggressive-depressed children encounter both in their relations with the general peer group and with their dyadic friends, it is not surprising that aggressive-depressed children have the worst prognosis of all groups in terms of their developmental adjustment in adulthood (Harrington, Fudge, Rutter, & Pickles, 1991).

Overall, the present study has important advantages over previous research on the peer relations of aggressive versus depressed children. Specifically, examining children's relations with the peer group as a whole as well as with their dyadic friends allowed us to obtain a more complete picture of children's peer relations than in many previous studies. In this context, the distinction between aggressive-only, depressed-only, and aggressive-depressed children not only controlled for the overlap between aggression and depression, but also made it possible to explicitly examine the unique and joint relations of aggression and depression with children's peer relationship experiences. Despite these advantages, however, the present study also has some limitations, which need to be considered when interpreting the findings. First, it has to be kept in mind that the children in the study sample did not evince clinical levels of depression or conduct problems. The participants were also liked better by their peers and perceived themselves as better liked than those who were lost from the study. As such, those who were most troubled and had the most problems with their peer group were not included in the analyses. This limits the generalizability of the findings, in particular with respect to the specific mean levels obtained for self-rated and peer-rated social acceptance. The obtained overall pattern of results in the different groups, however, was not likely to be overly biased as a result of attrition because the mean difference in self-rated and peer-rated social acceptance between the study sample and the attrition sample did not vary as a function of group membership. Second, although we extended friendship nominations to the whole school, we could only consider nominations of those friends who participated in the study themselves for identifying reciprocal friendship relations. Therefore, although the study sample was very similar to the original sample, the fact that children whose friends did not participate in the study were excluded from the analyses also limits the generalizability of the findings.

Another limitation concerns the extremely small number of children whose very best friendship nomination was reciprocated at the same level at both times. This made it impossible to control for perceived friendship quality at T1 when examining the relation between group membership and friendship quality at T2. Therefore, in contrast to the analyses regarding acceptance in the peer group, the directionality of effects between aggression/depression and friendship quality as perceived from the children's own and their friends' perspective could not be disentangled. The rather limited time frame of 6 months covered in the present study may also have precluded the detection of many predictive effects from aggression and depression to children's self-rated and peer-rated peer relations at T2.

The strong autocorrelations that can be expected when controlling for previous levels of a relatively stable variable (such as social acceptance in the peer group) over a 6-month period may leave very little residual variance to be explained by another independent variable. Extending the temporal framework over a longer period may thus reveal more pronounced directional links between aggression and/or depression and children's peer relationship experiences than were found in the present study.

A final but important point that needs to be considered is that the present findings may have been influenced by the fact that different sources were used to measure depression and aggression. Thus, the finding that (self-reported) depressive symptoms were related to a negative perceptual bias whereas (peer-reported) aggressive behavior was related to a positive perceptual bias may, at least in part, reflect a source effect that may have led to some overestimation of the links found in the present study. Although we believe that self-reports are most appropriate to assess internalizing problems and that external sources are best suited for measuring externalizing problems, it is essential that the present findings be replicated with a single source (e.g., teacher-reports) for assessing the independent variables before definite conclusions can be drawn.

Despite its limitations, the present study offers important insights into aggressive children's and depressed children's relationships with their peers. Specifically, the question of whether aggression and depression are linked to peer relationship difficulties may be a matter of perspective. When we ask the children themselves, depression rather than aggression seems to entail troubled relationships with peers, whereas the opposite is true from the peers' point of view. The co-occurrence of both behaviors, however, almost certainly brings about serious problems with other children. To be sure, the effects between children's behavioral characteristics and their peer relations are likely bidirectional, and especially depressive feelings have been predicted by self-perceived negative peer experiences such as rejection by the peer group or low quality friendships (Oldenburg & Kerns, 1997; Panak & Garber, 1992). More research is needed to examine the mechanisms underlying the links between aggressive children's and depressed children's cognitive distortions in viewing themselves and their relations with others, their interpersonal behavior, and the actual social feedback received from their peers. In this context, macro-level as well as micro-level processes will have to be studied in a longitudinal framework in order to gain a full understanding of the particular mechanisms involved. Eventually, such insight might contribute to the improvement of intervention strategies that are specifically geared toward the social

situations of aggressive children and depressed children, respectively, to help offset even more serious social adjustment problems for these children in the future.

## ACKNOWLEDGMENTS

This research was made possible by grants from the Conseil Québécois de la Recherche Sociale and the Social Sciences and Humanities Research Council of Canada. We wish to thank the authorities and directors of schools at the Montreal and Pointe de l'Île School Board as well as the teachers and children for their collaboration. Lucie Brousseau, Jacqueline Langlois, and Elise Chartrand deserve our thanks for their participation in data collection or management.

## REFERENCES

- Altmann, E. O., & Gotlib, I. H. (1988). The social behavior of depressed children: An observational study. *Journal of Abnormal Child Psychology*, *16*, 29–44.
- Angold, A., Costello, E. J., & Erkanli, A. (1999). Comorbidity. *Journal of Child Psychology and Psychiatry*, *40*, 57–87.
- Baker, M., Milich, R., & Manolis, M. B. (1996). Peer interactions of dysphoric adolescents. *Journal of Abnormal Child Psychology*, *24*, 241–255.
- Berndt, T. J. (1996). Exploring the effects of friendship quality on social development. In W. M. Bukowski, A. F. & Newcomb (Eds.), *The company they keep: Friendship in childhood and adolescence*. Cambridge studies in social and emotional development (pp. 346–365). New York, NY, US: Cambridge University Press.
- Bjoerkqvist, K., Oesterman, K., & Kaukiainen, A. (1992). The development of direct and indirect aggressive strategies in males and females. In K. Bjoerkqvist & P. Niemelae (Eds.), *Of mice and women: Aspects of female aggression* (pp. 51–64). San Diego, CA: Academic Press.
- Boivin, M., & Hymel, S. (1997). Peer experiences and social self-perceptions: A sequential model. *Developmental Psychology*, *33*, 135–145.
- Boivin, M., Vitaro, F., & Gagnon, C. (1992). A reassessment of the Self-Perception Profile for Children: Factor structure, reliability, and convergent validity of a French version among second through sixth grade children. *International Journal of Behavioral Development*, *15*, 275–290.
- Brendgen, M., Little, T. D., & Krappmann, L. (2000). Rejected children and their friends: A shared evaluation of friendship quality? *Merrill-Palmer Quarterly*, *46*, 45–70.
- Brendgen, M., Markiewicz, D., Doyle, A. B., & Bukowski, W. M. (2001). The relations between friendship quality, ranked friendship preference, and adolescents' behavior with their friends. *Merrill-Palmer Quarterly*, *47*, 395–415.
- Brendgen, M., Vitaro, F., Bukowski, W. M., Doyle, A. B., & Markiewicz, D. (2001). Developmental profiles of peer social preference over the course of elementary school: Associations with trajectories of externalizing and internalizing behavior. *Developmental Psychology*, *37*, 308–320.
- Bukowski, W. M., & Hoza, B. (1989). Popularity and friendship (issues in theory, measurement, and outcome). In T. J. Berndt & G. W. Ladd (Eds.), *Peer relationships in child development* (pp. 15–45). New York: Wiley.
- Cairns, R. B., Cairns, B. D., Neckerman, H. J., Gest, S., & Garipey, J.-L. (1988). Peer networks and aggressive behavior: Social support or social rejection? *Developmental Psychology*, *24*, 815–823.
- Capaldi, D. M. (1992). Co-occurrence of conduct problems and depressive symptoms in early adolescent boys: II. A 2-year follow-up at Grade 8. *Development and Psychopathology*, *4*, 125–144.
- Coie, J. D., Dodge, K. A., & Coppotelli, H. (1982). Dimensions and types of social status: A cross-age perspective. *Developmental Psychology*, *18*, 557–570.
- Coie, J. D., Dodge, K. A., & Kupersmidt, J. B. (1990). Peer group behavior and social status. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood*. (pp. 17–59). New York: Cambridge University Press.
- Cole, D. A. (1991). Preliminary support for a competency-based model of depression in children. *Journal of Abnormal Psychology*, *100*, 181–190.
- Cole, D. A., Martin, J. M., Peeke, L. G., Seroczynski, A. D., & Hoffman, K. (1998). Are cognitive errors of underestimation predictive or reflective of depressive symptoms in children: A longitudinal study. *Journal of Abnormal Psychology*, *107*, 481–496.
- Coyne, J. C. (1976a). Depression and the response of others. *Journal of Abnormal Psychology*, *85*, 186–193.
- Coyne, J. C. (1976b). Toward an interactional description of depression. *Psychiatry*, *39*, 14–27.
- Crick, N. R., Werner, N. E., Casas, J. F., O'Brien, K. M., Nelson, D. A., Grotzger, J. K., et al. (1999). Childhood aggression and gender: A new look at an old problem. In D. Bernstein (Ed.), *Gender and motivation. Nebraska Symposium on Motivation* (Vol. 45, pp. 75–141). Lincoln, NE: University of Nebraska Press.
- Dishion, T. J., Andrews, D. W., & Crosby, L. (1995). Antisocial boys and their friends in early adolescence: Relationship characteristics, quality, and interactional process. *Child Development*, *66*, 139–151.
- Dishion, T. J., Patterson, G. R., & Griesler, P. C. (1994). Peer adaptations in the development of antisocial behavior: A confluence model. In L. R. Huesmann (Ed.), *Aggressive behavior: Current perspectives* (pp. 61–95). New York: Plenum.
- Dodge, K. A., & Coie, J. D. (1987). Social-information processing factors in reactive and proactive aggression in children's peer groups. *Journal of Personality and Social Psychology*, *53*, 1146–1158.
- Downey, G., Lebolt, A., Rincon, C., & Freitas, A. L. (1998). Rejection sensitivity and children's interpersonal difficulties. *Child Development*, *69*, 1074–1091.
- Dumas, J. E., Neese, D. E., Prinz, R. J., & Blechman, E. A. (1996). Short-term stability of aggression, peer rejection, and depressive symptoms in middle childhood. *Journal of Abnormal Child Psychology*, *24*, 105–119.
- Finch, A. J., Saylor, C. F., & Edwards, G. L. (1985). Children's Depression Inventory: Gender and grade norms for normal children. *Journal of Consulting and Clinical Psychology*, *53*, 424–425.
- Fundulis, T., Berney, T. P., Kolvin, O., Famuyiva, O. O., Barrett, T., Bhat, S., et al. (1991). Reliability and validity of two rating scales in the assessment of childhood depression. *British Journal of Psychiatry*, *159*, 36–40.
- Furman, W. (1996). The measurement of friendship perceptions: Conceptual and methodological issues. In W. M. Bukowski, A. F. Newcomb, & W. W. Hartup (Eds.), *The company they keep: Friendship in childhood and adolescence* (pp. 41–65). New York: Cambridge University Press.
- Goodyer, I. M., Wright, C., & Altham, P. (1990). The friendships and recent life events of anxious and depressed school-age children. *British Journal of Psychiatry*, *156*, 689–698.
- Harrington, R., Fudge, H., Rutter, M., & Pickles, A. (1991). Adult outcomes of childhood and adolescent depression: II. Links with antisocial disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, *30*, 434–439.
- Harter, S. (1985). *The self-perception profile for children: Revision of the perceived competence scale for children*. Denver, CO: University of Denver.

- Hartup, W. W. (1992). Friendships and their developmental significance. In H. McGurk (Ed.), *Childhood social developmental: Contemporary perspectives*. (pp. 175–205). Hillsdale, NJ: Erlbaum.
- Hogue, A., & Steinberg, L. (1995). Homophily of internalized distress in adolescent peer groups. *Developmental Psychology, 31*, 897–906.
- Hughes, J. N., Cavell, T. A., & Prasad-Gaur, A. (2001). A positive view of peer acceptance in aggressive youth risk for future peer acceptance. *Journal of School Psychology, 39*, 239–252.
- Hymel, S., Bowker, A., & Woody, E. (1993). Aggressive versus withdrawn unpopular children: Variations in peer and self-perceptions in multiple domains. *Child Development, 64*, 879–896.
- Kendall, P. C., Stark, K. D., & Adam, T. (1990). Cognitive deficit or cognitive distortion of childhood depression. *Journal of Abnormal Child Psychology, 18*, 255–270.
- Kennedy, E., Spence, S. H., & Hensley, R. (1989). An examination of the relationship between childhood depression and social competence amongst primary school children. *Journal of Child Psychology and Psychiatry, 30*, 561–573.
- Kistner, J., Balthazor, M., Risi, S., & Burton, C. (1999). Predicting dysphoria in adolescence from actual and perceived peer acceptance in childhood. *Journal of Clinical Child Psychology, 28*, 94–104.
- Knight, D., Hensley, V. R., & Waters, B. (1988). A validation of the Children's Depression Scale and the Children's Depression Inventory with a prepubertal sample. *Journal of Child Psychology and Psychiatry, 29*, 853–863.
- Kovacs, M. (1985). The Children's Depression Inventory. *Psychopharmacology Bulletin, 21*, 995–998.
- Kruglanski, A. W. (1989). The psychology of being "right": The problem of accuracy in social perception and cognition. *Psychological Bulletin, 106*, 395–409.
- Kupersmidt, J. B., Coie, J. D., & Dodge, K. A. (1990). The role of poor peer relationships in the development of disorder. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 274–308). New York: Cambridge University Press.
- Lochman, J. E. (1987). Self- and peer perceptions and attributional biases of aggressive and nonaggressive boys in dyadic interactions. *Journal of Consulting and Clinical Psychology, 55*, 404–410.
- Lochman, J. E., & Dodge, K. A. (1998). Distorted perceptions in dyadic interactions of aggressive and nonaggressive boys: Effects of prior expectations, context, and boys' age. *Development and Psychopathology, 10*, 495–512.
- Newcomb, A. F., & Bagwell, C. L. (1996). Children's friendship relations: A meta-analytic review. *Psychological Bulletin, 117*, 306–347.
- 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.
- Oldenburg, C. M., & Kerns, K. A. (1997). Associations between peer relationships and depressive symptoms: Testing moderator effects of gender and age. *Journal of Early Adolescence, 17*, 319–337.
- Panak, W. F., & Garber, J. (1992). Role of aggression, rejection, and attributions in the prediction of depression in children. *Development and Psychopathology, 4*, 145–165.
- Parker, J. G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology, 29*, 611–621.
- Parker, J. G., & Seal, J. (1996). Forming, losing, renewing, and replacing friendships: Applying temporal parameters to the assessment of children's friendship experiences. *Child Development, 67*, 2248–2268.
- Patterson, C. J., Kupersmidt, J. B., & Griesler, P. C. (1990). Children's perceptions of self and of relationships with others as a function of sociometric status. *Child Development, 61*, 1335–1349.
- Pekarik, E. G., Prinz, R. J., Liebert, D. E., Weintraub, S., & Neale, J. M. (1976). The Pupil Evaluation Inventory: A sociometric technique for assessing children's social behavior. *Journal of Abnormal Child Psychology, 4*, 83–97.
- Peterson, L., Mullins, L. L., & Ridley-Johnson, R. (1985). Childhood depression: Peer reactions to depression and life stress. *Journal of Abnormal Child Psychology, 13*, 597–609.
- Poulin, F., Dishion, T. J., & Medici, N. (1998). *Antisocial behavior and relationship fluidity in childhood and adolescence*. Paper presented at the XVth biennial meetings, Berne, Switzerland, July 1998.
- Renouf, A. G., & Harter, S. (1990). Low self-worth and anger as components of the depressive experience in young adolescents. *Development and Psychopathology, 2*, 293–310.
- Rudolph, K. D., & Clark, A. G. (2001). Conceptions of relationships in children with depressive and aggressive symptoms: Social-cognitive distortion or reality? *Journal of Abnormal Child Psychology, 29*, 41–56.
- Rudolph, K. D., Hammen, C., & Burge, D. (1994). Interpersonal functioning and depressive symptoms in childhood: Addressing the issues of specificity and comorbidity. *Journal of Abnormal Child Psychology, 22*, 355–371.
- Shirk, S. R., Boergers, J., Eason, A., & Van Horn, M. (1998). Dysphoric interpersonal schemata and preadolescents' sensitization to negative events. *Journal of Clinical Child Psychology, 27*, 54–68.
- Taylor, S. E., & Brown, J. D. (1988). Illusions and well-being: A social psychological perspective on mental health. *Psychological Bulletin, 103*, 193–210.
- Vallerand, R. J. (1989). Vers une méthodologie de validation transculturelle de questionnaires psychologiques: Implications pour la recherche en langue française [Toward a methodology for the transcultural validation of psychological questionnaires: Implications for research in the French language]. *Canadian Psychology, 30*, 662–680.
- Vernberg, E. M. (1990). Psychological adjustment and experiences with peers during early adolescence: Reciprocal, incidental, or unidirectional relationships? *Journal of Abnormal Child Psychology, 18*, 187–198.
- Vitaro, F., Tremblay, R. E., Kerr, M., Pagani, L., & Bukowski, W. M. (1997). Disruptiveness, friends' characteristics, and delinquency in early adolescence: A test of two competing models of development. *Child Development, 68*, 676–689.
- Zakrski, A., & Coie, J. D. (1996). A comparison of aggressive-rejected and nonaggressive-rejected children's interpretations of self-directed and other-directed rejection. *Child Development, 7*, 1048–1070.