

Peer Experiences and Social Self-Perceptions: A Sequential Model

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This study evaluated a social process model describing how aggression and withdrawal lead to negative social self-perceptions. The model posited both direct (i.e., cognitions associated with withdrawal) and indirect (i.e., mediations of negative peer status and peer experiences) influences. Eight- to 10-year-old children ($n = 793$) completed peer assessment measures of aggression, withdrawal, peer status, victimization and affiliations, and self-reports of loneliness, perceived acceptance, and perceived behavior-conduct. As expected, the model was supported for social self-perceptions but not for perceived behavior-conduct. Withdrawn behavior uniquely predicted social self-perceptions. Both negative peer status and peer victimization successively mediated the impact of social behavior on loneliness and perceived acceptance. Classroom affiliations did not mediate social self-perceptions.

Research on children's social self-perceptions has emphasized feelings of loneliness (see Crick & Ladd, 1993) and has consistently shown that rejected children express greater loneliness than their more accepted peers (e.g., Asher, Parkhurst, Hymel, & Williams, 1990; Parker & Asher, 1993). However, considerable within-group variation in reported loneliness has been observed, especially among low-status children (see Asher et al., 1990). Such variability has been the focus of recent research on the heterogeneity of rejected children, who vary in terms of social behavior (e.g., Cillessen, van IJzendoorn, van Lieshout, & Hartup, 1992; French, 1988, 1990). More important, variations in self-perceptions have been systematically linked to differences in social behavior (Boivin, Thomassin, & Alain, 1989; Hymel, Bowker, & Woody, 1993; Parkhurst & Asher, 1992; Patterson, Kupersmidt, & Griesler, 1990). Withdrawn rejected children view themselves negatively on a variety of dimensions and report greater loneliness, whereas aggressive rejected children are less likely to acknowledge their social difficulties and report less loneliness. Given these findings, it becomes important to consider the processes through which social difficulties affect

children's social self-perceptions. This critical but underresearched area is the primary concern of the present study.

There may be multiple processes through which social behavior and peer status affect social self-perceptions. One possibility is that such variations reflect global differences in how individuals view their social world. Indeed, in research with adults, Jones (1982) found that "loneliness is frequently associated with cynical and rejecting attitudes toward other people and life in general" (p. 239) and that "lonely people engage in extensive self-derogation and that they expect to be rejected by others" (p. 246). Thus, withdrawn rejected children, who express greater loneliness than aggressive rejected children, may simply have a more pessimistic view of their social world and interpret their social situation more negatively. Consistent with this hypothesis, Hymel and Rubin (e.g., Hymel, Rubin, Rowden, & LeMare, 1990; Rubin & Mills, 1988) found that early (Grade 2) social withdrawal, but not aggression, predicted negative self-perceptions (low self-concept, depression) 3 years later. A related hypothesis is that withdrawn rejected children are simply more accurate in their self-perceptions than are aggressive rejected children (Hymel et al., 1993). Although both groups are rejected by peers, withdrawn rejected children are more willing to acknowledge their social difficulties. However, this hypothesis fails to account for evidence that aggressive rejected children are willing to acknowledge their inappropriate conduct but not their social problems (Boivin et al., 1989), suggesting that these children are not completely unaware of their behavioral difficulties. Nevertheless, variations in social self-perceptions may simply reflect differential world views that are systematically related to typical social behavior, regardless of one's actual status among peers.

One might question, then, whether the experience of being rejected by classmates contributes to variations in social self-perceptions beyond that determined by behavioral tendencies alone. Unfortunately, research on rejected subgroups has relied primarily on analysis of variance designs (comparing aggressive rejected children, withdrawn rejected children, and average children), thereby confounding the relative influences of social be-

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havior and social status. Studies attempting to separate the effects of rejection and social behavior have indicated that both contribute uniquely to various social outcomes (Coie, Lochman, Terry, & Hyman, 1992; Panak & Garber, 1992; Volling, MacKinnon-Lewis, Rabiner, & Baradaran, 1993), but social self-perceptions have not been considered as an outcome in these studies. However, Renshaw and Brown (1993) found that children's self-reports of loneliness were significantly predicted by both withdrawn (but not aggressive) behavior and overall peer acceptance. Accordingly, peer status and typical social behavior appear to be distinct indexes of social functioning, and each contributes uniquely to social self-perceptions, although their contributions are not necessarily parallel or additive. Researchers have generally assumed that "social behavior is primarily responsible for rejection by peers" (Coie, 1990, p. 366). We propose that some children come to the peer group with particular behavioral tendencies, namely, toward aggressive and withdrawn behavior, and that these two patterns of social behavior, in turn, influence peer attitudes toward the child as assessed by indexes of social status. There is ample evidence to suggest that aggressive behavior is a major correlate if not a direct cause of peer rejection (see Coie, 1990). Withdrawn behavior also leads to peer rejection, especially as children get older and withdrawal comes to be regarded as maladaptive by the peer group (Younger, Gentile, & Burgess, 1993). Thus, we argue that the relation between social behavior and social self-perceptions is mediated (in part) by peer status. The negative social self-perceptions associated with problematic behavior may well reflect cognitive predispositions (i.e., exerting a direct influence on social self-perceptions) but may also be attributable to the negative social situation associated with peer rejection (i.e., is mediated by social status). These hypotheses were examined as an initial focus in the present study.

Indexes of peer rejection, however, only reflect the affective evaluations of the group, attitudes to which the child does not necessarily have direct access. How, then, do peer attitudes influence children's social self-perceptions? Hymel, Woody, Dittner, and LeMare (1988) asked children to identify the cues they used to determine self-evaluations across various domains. Although children relied primarily on objective feedback in the athletic and academic domains (e.g., scores, grades), 80–90% of the children reported that they determined how well they got along with peers through more subjective or inferential sources, especially through consideration of the positive and negative social behaviors peers directed toward them. Thus, we argue that peer attitudes are communicated primarily through peer behavior, and that it is through these peer experiences that children come to evaluate their own social situations, with more negative peer experiences leading to greater loneliness.

There is some evidence to suggest that rejected children experience more limited and more aversive peer interactions (see Hymel, Rubin, et al., 1990). Here again, the processes involved could be multifaceted. On the one hand, the combined effects of social behavior and negative peer status may be to limit the child's social experiences, depriving the child of opportunities to practice or refine social skills and develop social self-confidence. On the other hand, social behavior and negative status may also lead to more aversive peer experiences, such as being the target of peers' aggression and ridicule. Accordingly, we

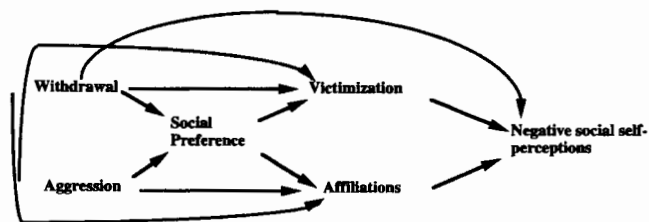


Figure 1. Two-phase mediational model of the paths from social behavior to social self-perceptions.

considered two distinct aspects of peer experience that may influence social self-perceptions: the availability of peers (the number of affiliations) and the degree to which children are victimized. Each of these aspects of peer experience may differ as a function of social behavior and peer status.

Studies have shown that the availability of social affiliations within the peer group varies as a function of both peer status and social behavior. For example, low-status children have fewer friendships than more popular children (Parker & Asher, 1993), and withdrawn rejected children have fewer positive affiliations within their classrooms (Boivin & Côté, 1991) and are more often left out (Hymel et al., 1993) than aggressive rejected children and average children. The social networks of aggressive children, however, are more difficult to characterize as impoverished. Despite their typically negative peer status, research suggests that aggressive children are involved in stable social affiliations or friendships, at least relative to nonaggressive children (Cairns, Cairns, Neckerman, Gest, & Gariépy, 1988). If aggressive children enjoy a rather extensive network of peer affiliations, they may be less likely to feel lonely or view their own social situation as problematic.

Aggression, withdrawal, and peer status may also be associated with differential treatment within the peer group. Perry, Kusel, and Perry (1988) reported significant relations between victimization and acceptance and rejection scores. Parkhurst and Asher (1992) found that, relative to average peers, submissive rejected children reported greater concern about being humiliated or rejected within the peer group. Finally, in research on bullies and their victims, Olweus (1978) described the latter as anxious and socially isolated. Thus, peer rejection and especially withdrawn and submissive behavior may each place children at greater risk for aversive peer experiences. The relation between aggression and victimization is less clear. Although some studies suggest a positive correlation between aggression and negative peer behavior (Boivin & Vitaro, 1995; Dodge & Frame, 1982; see also Olweus, 1978, on provocative victims), this relation has not been consistently observed (Perry et al., 1988; D. G. Perry, personal communication, March 29, 1995). Thus, the specific contribution of aggression to victimization remains open to question, although one might expect a moderate correlation between the two.

Given these arguments, the purpose of the present study was to evaluate the utility of a sequential model describing the social processes through which problematic social behavior (aggression and withdrawal) comes to be linked with negative social self-perceptions. As shown in Figure 1, this model posits that

children's social self-perceptions and feelings of loneliness emerge as a result of multiple direct and indirect influences. We began with the assumption that children come to the peer group with relatively stable behavioral tendencies, particularly toward aggression or withdrawal, behaviors that have been used to distinguish rejected subgroups (as reviewed earlier) and that constitute two independent, broad-band factors underlying adult characterizations of problematic childhood behavior (e.g., Quay, 1986). These behavioral tendencies may be directly associated with particular interpretations of the social world, with withdrawn children reporting more negative self-perceptions. In addition, however, we proposed that both types of social behavior also lead to negative peer status (e.g., greater peer rejection). Both behavioral tendencies and rejection within the peer group, in turn, place the child at risk for having limited opportunities for peer interactions (i.e., fewer peer affiliations) as well as more aversive peer experiences (i.e., victimization by peers), both of which may be more likely for the withdrawn than the aggressive child. It is through these manifest negative peer experiences that children come to develop negative social self-perceptions.

We also hypothesized that the proposed model would hold only with regard to social self-perceptions within the peer domain and would not be applicable to other self-perceptions. By middle childhood, children have the capacity to discriminate between domains of competence (Harter, 1983) and to use different cues to determine their self-evaluations in each domain (Hymel et al., 1988), suggesting that the processes that affect self-perceptions may be domain specific. With this in mind, the relevance of the proposed model was evaluated for three distinct self-perception measures, two of which assessed children's perceptions of their current social situation, and another that assessed children's perceptions of their conduct at school (a domain that is less directly relevant to peer relations). Specifically, the model was first evaluated for self-reported loneliness, a context specific (i.e., with respect to the classroom) and affectively laden self-perception index. The generalizability of the model was then tested with a more general index of children's perceptions of their overall social acceptance (Harter, 1985). We expected that the proposed mediational model would apply in the case of both of these social self-perception outcomes. Finally, the same model was also evaluated with respect to self-perceptions of behavior-conduct. Here we hypothesized that the impact of social behavior would not be mediated by the negative peer experiences associated with peer rejection. Rather, perceived behavior and conduct were expected to be essentially and directly related to aggressive behavior (Boivin et al., 1989).

Method

Participants

French Canadian children (393 girls, 400 boys; mean age = 115 months, range = 8 to 10 years), participated in the study. The children attended third ($n = 315$), fourth ($n = 248$), and fifth ($n = 230$) grades in 10 elementary schools from a variety of socioeconomic environments in Quebec City, Canada, and had 8 months of contact prior to the study. Children's participation required written parental consent. Participation rate was over 98%.

Procedure

The study was conducted within a 6-week period during the spring (April–May). Children participated in a single, individual interview in which sociometric status and peer affiliations within the classroom were assessed, as well as three group testing sessions, during which peer assessments of social behavior and victimization and self-report measures of self-concept and loneliness were administered.

Measures

Peer status. Social status within the classroom was assessed with a picture nomination sociometric procedure for which children were asked to identify three "liked most" (LM) and three "liked least" (LL) choices in each of three situations: playing together, inviting others to a birthday party, and sitting next to others on the bus on a class excursion. Total LM and LL scores were computed by summing the choices each child received from all classmates across all situations. These LM and LL scores yielded good internal consistency ($\alpha = .79$ for LM, $\alpha = .82$ for LL). Following procedures outlined by Coie and Dodge (1983), we first standardized LM and LL scores within each class and then used the scores to compute an index of social preference ($SP = LM - LL$) for each child. These SP scores, standardized within each class, were used as an index of peer status, with higher scores indicative of greater acceptance and lower rejection within the classroom.

Peer assessments of social behavior. Peer perceptions of aggressive and withdrawn behavior were obtained using the Revised Class Play measure (RCP; Masten, Morison, & Pellegrini, 1985). The RCP consists of 30 behavioral descriptors that address three behavioral dimensions: sociability-leadership (15 items), aggression-disruption (8 items), and sensitivity-isolation (7 items). Children were shown a picture roster of all classmates and were asked to choose two classmates who best fit each descriptor. Given arguments that the RCP may yield scores that confound assessments of behavior and acceptance (Rubin, Hymel, LeMare, & Rowden, 1989), indexes of aggression and withdrawal were derived from only a subset of items. Specifically, an aggression score was obtained by summing the nominations received for four items: "gets into a lot of fights," "loses temper easily," "too bossy," and "picks on other kids" ($\alpha = .89$). A withdrawal score was obtained by summing nominations received on two items: "rather play alone than with others" and "very shy" ($\alpha = .73$), both of which have been shown to reflect the construct of withdrawal when used with children (Younger & Daniels, 1992). Both aggression and withdrawal scores were standardized within each class, with higher scores reflecting more extreme levels of each behavior.

Self-concept. Harter's (1985) Self-Perception Profile for Children (SPPC) was used to assess children's self-concept. This 36-item questionnaire assesses self-concept in five domains (scholastic and athletic competence, social acceptance, physical appearance, and behavior-conduct) and assesses general self-worth, with excellent psychometric properties (Boivin, Vitaro, & Gagnon, 1992; Harter, 1985). In this study, only scores obtained for the perceived acceptance and behavior-conduct subscales were considered. Each score was standardized within classes to facilitate comparisons across measures, with higher scores reflecting more positive self-evaluations in each domain.

Loneliness. Children's feelings of loneliness and social dissatisfaction within the classroom were assessed using the 16-item Loneliness and Social Dissatisfaction Questionnaire (Asher & Wheeler, 1985). Previous research has verified the internal reliability and validity of this scale (Asher & Wheeler, 1985; Asher et al., 1990). Loneliness scores were standardized within each class, with higher scores indicating greater loneliness.

Affiliative relationships. The degree to which each child was involved in affiliative relations within the classroom was assessed with procedures developed by Cairns, Perrin, and Cairns (1985) and shown

Table 1
Correlations Among the Social Behavior, Peer Experiences, and Self-Perception Measures

Measure	1	2	3	4	5	6	7	8
1. Withdrawal	—							
2. Aggression	-.10**	—						
3. Social preference	-.39**	-.44**	—					
4. Victimization by peers	.42**	.53**	-.68**	—				
5. No. of affiliative links	-.35**	.05	.35**	-.21**	—			
6. Loneliness	.29**	.12**	-.34**	.34**	-.18**	—		
7. Perceived social acceptance	-.27**	-.04	.28**	-.26**	.18**	-.69**	—	
8. Perceived behavior-conduct	.06	-.32**	.17**	-.17**	-.06	-.35**	.39**	—

** $p < .01$.

to be reliable and valid for children (Cairns, Gariépy & Kinderman, 1986; Boivin & Coté, 1991). Following the procedure of Cairns et al. (1985), we interviewed each child individually, showing the child photographs of all classmates (face down) and giving the following instructions: "You have probably noticed children in your class who often hang around together and others who are more often alone. Could you name the children who often hang around together?" Each time the child associated the names of two or more peers from memory, the interviewer indicated the photographs of these peers and asked the child to put them together. A child could identify as many children or groups as he or she wished. Following Cairns et al. (1985), we used the responses to determine the social network of the class. Given the predominant gender segregation typical of this age group, data from boys and girls were evaluated separately (one matrix for boys and one matrix for girls in each class). Each cell of the matrix included the frequency with which respondents collectively associated each child with each peer (self-assessments excluded). All associations that reached 30% agreement or greater across respondents were retained. This procedure has proven to be as robust as more elaborate mathematical solutions (Cairns et al., 1986) and can be used to reliably identify peer clusters among middle elementary school children (see Boivin & Coté, 1991). In the present study, the number of affiliative relationships reliably identified for each child was computed as an index of his or her social integration within the class.

Victimization by peers. The degree to which children were victimized by peers was assessed with the Victimization subscale of the Modified Peer Nomination Inventory, which has been shown to demonstrate good reliability and validity (Perry et al., 1988). The Victimization subscale includes items that describe aversive peer experiences such as being made fun of, being called names, and getting hit and pushed by other kids. Following the procedures of Perry et al., we allowed each child to nominate up to five peers on each item. A victimization score was computed for each child, based on the sum of nominations received for all seven relevant items ($\alpha = .93$). Victimization scores were standardized within each class to facilitate comparisons across measures.

Results

Correlations Among the Measures

Table 1 presents the correlations among the measures considered in the present study. The correlation between the two social behaviors (withdrawal and aggression) was low and negative, suggesting a lack of overlap. Both social behaviors were negatively correlated with social preference and positively correlated with victimization. Withdrawal, but not aggression, was negatively correlated with the number of affiliative links. Social preference was moderately related to the number of affiliations but

was more strongly and negatively related to victimization by peers. The low negative correlation between affiliation and victimization suggests they are independent aspects of peer experience.

Among the self-perception measures, loneliness was negatively related to both perceived acceptance and behavior-conduct, although more strongly with perceived acceptance. Also, all three self-perception measures were only moderately related to indexes of social behavior and peer experience. The highest correlations observed were between loneliness and perceived acceptance ($r = -.69$) and between victimization and social preference ($r = -.68$). The strong correlation observed between loneliness and perceived acceptance is not surprising given that both assess children's perceptions of their current social situation. The high negative correlation observed between victimization and social preference supports the hypothesis that peer victimization may indeed be a primary means through which children communicate their feelings toward particular peers.

Testing the Mediation Model

Overview. As depicted in Figure 1, the proposed model involves a sequence of mediations in which problematic social behaviors (withdrawal and aggression) lead to negative peer status (first mediator), with these three dimensions predicting social self-perceptions through the mediation of negative peer experiences (i.e., victimization by peers and fewer affiliative links). According to Baron and Kenny (1986), mediation is established only if a series of conditions can be met. The first two conditions require a demonstration in separate regression equations that the independent variables affect both the dependent variable (first condition) and the mediator (second condition). Then, the mediator must be shown to affect the dependent variable after the specific effect of the independent variable on the dependent variable is taken into account (third condition). Once these conditions are met, a comparison is made between the first and third regression equations to determine whether the effect of the independent variable on the dependent variable is reduced when the effect of the mediator on the dependent variable is accounted for (fourth condition). If so, empirical support for mediation is provided.

Baron and Kenny's (1986) procedure was conducted in a series of two steps. We first assessed whether negative peer status mediated the impact of social behavior (aggression, with-

drawal) on social self-perceptions. Social self-perceptions were first regressed on withdrawal and aggression (Equation 1: Condition 1). Then, social preference was regressed on withdrawal and aggression (Equation 2: Condition 2). Finally, social self-perceptions were regressed on withdrawal, aggression, and social preference to evaluate the third and fourth conditions of mediation (Equation 3).

Then, we turned to the second phase of the model in which aggression, withdrawal, and social preference were seen as the independent variables, victimization by peers and the number of affiliative links as mediators, and social self-perceptions as the dependent variable. Information concerning the first condition for the second phase of mediation was given in Equation 3, as described above. Then, the postulated mediators, victimization and affiliation, were each regressed on the two social behaviors and social preference in separate regression equations (Equations 4 and 5). Finally, social self-perceptions were regressed on the two social behaviors, social preference, and the two mediators in the sixth and last equation. Six regressions were conducted for each of the three self-perception dimensions examined in the present study: feelings of loneliness and social dissatisfaction, perceived acceptance, and perceived behavior-conduct.

Testing the sequential mediational model for loneliness. The six hierarchical regression analyses used to test the proposed sequential model for loneliness are presented in Table 2. Gender was systematically used as a covariate. The first regression equation evaluated whether the two social behaviors significantly predicted feelings of loneliness. Gender, aggression, and withdrawal accounted for 11.2% of the variance in loneliness. Boys were slightly more lonely than girls ($\beta = .08$). Withdrawal ($\beta = .31$) and, to a lesser degree, aggression ($\beta = .13$), had unique contributions in predicting loneliness, thus substantiating the first condition for mediation. The second regression equation indicated that a total of 38.5% of the variance in social preference was accounted for by gender and social behavior. Boys were more rejected than girls overall ($\beta = -.12$). Both withdrawal ($\beta = -.44$) and aggression ($\beta = -.47$) were negatively related to social preference, thus meeting the second condition for the mediational role of social preference.

In the third equation, loneliness was regressed on gender, the two social behaviors, and social preference to evaluate the third and fourth conditions for mediation. Results indicated that 14.2% of the variance in loneliness was specifically accounted for by social behavior and social preference. Social preference was negatively related to loneliness ($\beta = -.25$) when the effects of withdrawal and aggression were taken into account, thus meeting the third condition for mediation. Accounting for the effect of social preference reduced the unique contribution of withdrawal (from 9.4% in Equation 1 to 3.1%) and eliminated the unique contribution of aggression (from 1.6% in Equation 1 to 0%).¹ Thus, results of the first three regressions indicated that social preference completely mediated the effect of aggression on loneliness and partially mediated the impact of withdrawal on loneliness.

In the fourth equation, the first of the postulated second-phase mediators, victimization was regressed on gender, aggression, withdrawal, and social preference. Victimization was highly determined by these predictors (59.4% of the variance). Boys

were generally more victimized than girls ($\beta = .13$). Each of the three main predictors had a unique contribution to the prediction of victimization. Withdrawal ($\beta = .31$) and aggression ($\beta = .38$) were positively related to victimization, whereas social preference was negatively related to victimization ($\beta = -.39$). In the fifth equation, the number of affiliative links was similarly regressed on the same variables. A total of 20.9% of the variance in the number of affiliative links was accounted for. Boys were slightly more likely than girls to have a greater number of affiliative links ($\beta = .09$). Both aggression ($\beta = .18$) and social preference ($\beta = .38$) were positively related to affiliations. Withdrawal was negatively related to affiliations ($\beta = -.17$).

In the sixth and last equation, loneliness was regressed on the two social behaviors, social preference, and the two mediators, victimization and affiliation, to evaluate the last two conditions of the mediational process. A total of 15.6% of the variance in loneliness was specifically accounted for by the five main predictors. Victimization was positively related to loneliness ($\beta = .18$) when the effects of the two social behaviors, social preference, and the number of affiliative links were accounted for, thus meeting the third condition for mediation. However, the number of affiliative links did not show any specific contribution to loneliness. Accounting for the effect of victimization (and affiliations) reduced the unique contribution of withdrawal (from 3.1% in Equation 3 to 1.2%) and social preference (from 3.7% in Equation 3 to 1.3%).

In sum, the test of the model for loneliness² indicated that social preference, the posited first-phase mediator, completely mediated the contribution of aggression and partially mediated the contribution of withdrawal. Further, victimization by peers, but not affiliation, the posited second-phase mediators, partially mediated the impact of both withdrawal and social preference on perceived loneliness. The resulting mediational model for loneliness and the values of the path coefficients are illustrated in the top of Figure 2.

Testing the sequential mediational model for perceived acceptance. Three of the six hierarchical regression analyses used to test the sequential mediational model for perceived acceptance are presented in Table 3 (top). The three other regression equations refer to conditions that were already demonstrated in the previous series of analyses (see Equations 2, 4, and 5 in Table 2). Because boys and girls did not differ with respect to per-

¹ In all cases where a reduction of variance of at least 1% was shown, p was less than .01.

² In addition to the gender main effects, we also tested whether the patterns of association were moderated by gender (i.e., gender interactions, Cohen & Cohen, 1983). In general, these moderation effects were of low magnitude, indicating that the general model held for both girls and boys. However, as suggested by the gender interactions, negative peer status appeared to play a stronger mediational role in predicting loneliness for boys than for girls. Specifically, aggression was related to loneliness for boys but not for girls, and this effect was mediated by negative peer status. Furthermore, withdrawal was found to be more related to negative peer status, and negative peer status more strongly related to loneliness, for boys than for girls. On the other hand, withdrawal was more likely to directly lead to loneliness among girls than among boys. Therefore, the negative role of the peer group may be more important for withdrawn boys than for withdrawn girls.

Table 2
Hierarchical Regression Analyses Testing the Two-Phase Mediation Model for Loneliness

Outcome and step	Cumulative R^2	R^2 change	Predictor	sr^2	β
Equation 1					
Loneliness					
1	.006*	.006*	Gender	.006*	.08*
2	.112***	.105***	Withdrawal	.094***	.31***
			Aggression	.016***	.13***
Equation 2					
Social preference					
1	.015***	.015**	Gender	.015***	-.12**
2	.385***	.370***	Withdrawal	.188***	-.44***
			Aggression	.209***	-.47***
Equation 3					
Loneliness					
1	.006*	.006*	Gender	.006*	.08*
2	.148***	.142***	Withdrawal	.031***	.20***
			Aggression	.000	.02
			Social preference	.037***	-.25***
Equation 4					
Victimization					
1	.018***	.018***	Gender	.018***	.13***
2	.594***	.576***	Withdrawal	.073***	.31***
			Aggression	.101***	.38***
			Social preference	.091***	-.39***
Equation 5					
Affiliative links					
1	.008*	.008*	Gender	.008*	.09*
2	.209***	.201***	Withdrawal	.023***	-.17***
			Aggression	.023***	.18***
			Social preference	.087***	.38***
Equation 6					
Loneliness					
1	.006*	.006*	Gender	.006*	.08*
2	.163***	.156***	Withdrawal	.012***	.14***
			Aggression	.001	-.04
			Social preference	.012***	-.16***
			Victimization by peers	.013***	.18***
			No. of affiliative links	.002	-.05

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

ceived acceptance ($\beta = -.02$, *ns*), gender was not used as a covariate in those regression analyses.

In the first regression equation presented in Table 3, aggression and withdrawn behavior accounted for 7.9% of the variance in perceived acceptance. Only withdrawal ($\beta = -.28$) had a unique contribution in predicting low perceived acceptance. When social preference was added in the third equation, a total of 11.2% of the variance in perceived acceptance was accounted for, essentially by withdrawal ($\beta = -.18$) and social preference ($\beta = .23$). There was no main effect for aggression. Accounting for the effect of social preference reduced the unique contribution of withdrawal (from 7.7% in Equation 1 to 2.4%), thus indicating that low social preference partially accounted for the negative impact of withdrawal on perceived acceptance. Finally,

the results of Equation 6 indicated that 12.0% of the variance in perceived acceptance was accounted for by the five main predictors. Victimization was the only postulated mediator significantly related to perceived acceptance ($\beta = -.13$) when the effects of the other main predictors were accounted for, thus meeting the third condition for mediation. The number of affiliations did not have any specific contribution to perceived acceptance. Accounting for the effect of victimization (and affiliations) significantly reduced the unique contribution of withdrawal (from 2.4% in Equation 3 to 1.1%) and social preference (from 3.3% in Equation 3 to 1.3%). There was also a significant but very marginal positive contribution of aggression to perceived acceptance ($\beta = .09$). Thus, the test of the model for perceived acceptance indicated that social preference, the pos-

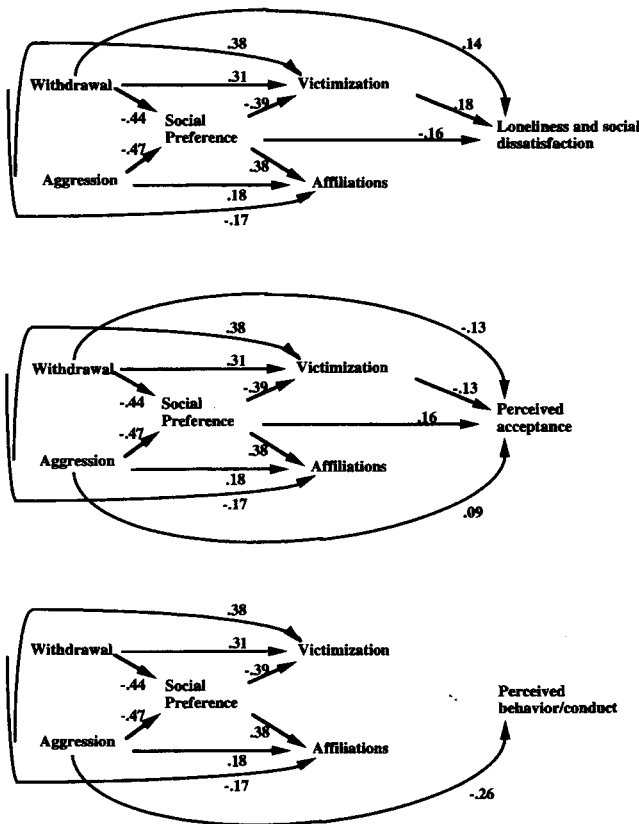


Figure 2. Estimated path coefficients predicting loneliness and social dissatisfaction, perceived acceptance, and perceived behavior-conduct.

ited first-phase mediator, partially mediated the contribution of withdrawal. Again, victimization by peers, but not affiliation, partially mediated the impact of both withdrawal and social preference on perceived acceptance. The resulting mediational model for perceived acceptance is presented in the middle of Figure 2.

Testing the two-phase mediational model for perceived behavior-conduct. Again, only the three regression equations that specifically concern perceived behavior-conduct are presented in Table 3 (bottom). In the first regression equation, gender and the two social behaviors accounted for 11.9% of the variance in perceived behavior-conduct. Boys generally perceived themselves to behave less appropriately than girls ($\beta = -.19$). Aggression ($\beta = -.29$), but not withdrawal, had a unique contribution in predicting perceived behavior-conduct, with aggressive children perceiving themselves more negatively on this dimension. In the third equation, a total of 12.0% of the variance in perceived behavior-conduct was accounted for, again mainly by gender and aggression ($\beta = -.27$). Social preference did not have any unique contribution, which indicates that it could not be considered as a mediator in the model. Finally, the results of the last equation indicated that the five main predictors accounted for a total of 12.2% of the variance in perceived acceptance. Again, only aggression had a unique contribution ($\beta = -.26$) to perceived behavior-conduct, indicating that, with the contributions of all other main predictors

partialled out, aggressive children perceived themselves as behaving less appropriately than their nonaggressive classmates. None of the three postulated mediators (social preference, victimization, and affiliation) had a significant main contribution to perceptions of behavior-conduct. Thus, overall, the test of the model for perceived behavior-conduct (as depicted in the bottom of Figure 2) indicated that aggression was the main predictor. Social behavior was not found to be mediated by the quality of peer experiences but rather directly affected perceived behavior-conduct.

Discussion

Crick and Ladd (1993; Ladd & Crick, 1989) have argued that children's perceptions and feelings about their social situations develop gradually over the course of social interactions, as children attempt to understand the social events to which they are exposed. Thus, although self-perceptions are inherently subjective, they are not necessarily random or unexplainable. Accordingly, the present study evaluated the utility of a social process model specifying how the negative social self-perceptions associated with problematic social behavior are based in reality, in the differential peer experiences to which children are exposed. Overall, the proposed sequential model was supported, although this general conclusion must be qualified, as multiple direct and indirect links were revealed, suggesting that the process leading from social behaviors to self-perceptions was not singular but multifaceted. To understand the contribution of peer experiences to children's socioemotional adjustment, we found it useful to examine the more salient elements of the sequential model evaluated in this study.

An initial focus was on the relative contributions of social behaviors and peer status in predicting loneliness. Consistent with Renshaw and Brown (1993), we found that both withdrawal and negative peer status were uniquely related to loneliness. Thus, observed differences in self-perceptions among rejected subgroups (Boivin et al., 1989; Boivin, Poulin, & Vitaro, 1994; Hymel et al., 1993) were not solely a reflection of variations in social behavior. Further, the present study extends previous research in showing that negative peer status partially mediated the contribution of withdrawal and completely mediated the (modest) contribution of aggression to the prediction of loneliness. Thus, both aggression and withdrawal were associated with feelings of loneliness, but a significant part of these feelings was accounted for by the fact that these children were rejected by peers.

However, negative peer status only reflects the affective evaluations of the peer group toward an individual. These negative evaluations are not necessarily obvious to the child, especially as they refer to a social context often described as ambiguous (Dodge, Pettit, McClaskey, & Brown, 1986), leaving children to infer how well they get along with peers (Hymel et al., 1988). Thus, although negative peer status is part of the social process linking social behaviors and social self-perceptions, we suggest that it does not describe the specific manifest conditions likely to affect children's social self-perceptions. Accordingly, in the second phase of the model, we hypothesized that a low number of affiliations and active victimization by peers reflect the manifest experiences through which aggression, withdrawal, and

Table 3
Hierarchical Regression Analyses Testing the Two-Phase Mediation Model for Perceived Acceptance and Perceived Behavior-Conduct

Equation and step	Cumulative R^2	R^2 change	Predictor	sr^2	β
Mediation model for perceived acceptance					
Equation 1					
1	.079***	.079***	Withdrawal	.077***	-.28***
			Aggression	.005	-.07
Equation 3					
1	.112***	.112***	Withdrawal	.024***	-.18***
			Aggression	.002	.05
			Social preference	.033***	.23***
Equation 6					
1	.120***	.120***	Withdrawal	.011**	-.13**
			Aggression	.004*	.09*
			Social preference	.013***	.17***
			Victimization	.007*	-.13*
			No. of affiliative links	.002	.05
Mediation model for perceived behavior and conduct					
Equation 1					
1	.037***	.037***	Gender	.037***	-.19***
2	.119***	.081***	Withdrawal	.000	.02
			Aggression	.078***	-.29***
Equation 3					
1	.037***	.037***	Gender	.037***	-.19***
2	.120***	.083***	Withdrawal	.001	.04
			Aggression	.051***	-.27***
			Social preference	.001	.05
Equation 6					
1	.037***	.037***	Gender	.037***	-.19***
2	.122***	.085***	Withdrawal	.000	.03
			Aggression	.037***	-.26***
			Social preference	.002	.07
			Victimization	.000	.00
			No. of affiliative links	.002	-.05

Note. The equations are numbered according to the procedure adopted previously for testing the mediation model for loneliness (see Table 2).

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

peer rejection lead to negative social self-perceptions. This second phase of the model was partially supported, as victimization by peers partly mediated the contribution of social behavior (withdrawal) and negative peer status in predicting loneliness. Aggression, withdrawal, and peer rejection were found to exert substantial specific and overlapping contributions to victimization. This pattern of findings is generally consistent with previous studies (Boivin & Vitaro, 1995; Parkhurst & Asher, 1992; Perry et al., 1988) demonstrating links between peer status or social behavior and victimization and extends previous research in revealing that these three dimensions each contributed uniquely to victimization within the peer group. More important, the extent to which withdrawal and rejection contributed to victimization by peers partly accounted for the feelings of loneliness, thus indicating that loneliness was dependent to some degree on the nature of the peer encounters experienced.

Contrary to expectations, a somewhat different pattern of results emerged for peer affiliations, as this aspect of peer experience was not found to predict or mediate social self-perceptions. This lack of prediction is consistent with research by Zakriski and Jacobs (1995), which indicated that the availability

of affiliative relationships did not predict children's perceptions of their own social status within the group. Three alternative explanations could potentially account for this lack of prediction. It may be that having at least one friend is the critical condition mediating feelings of loneliness, regardless of how many affiliations one has (Renshaw & Brown, 1993), or perhaps quality may be more important than quantity in determining the contributions of one's friendships to overall adjustment (Parker & Asher, 1993). Second, in the present study, assessments of loneliness and affiliations were made in reference to the classroom per se. However, a restricted network of classroom affiliations does not necessarily imply that a child also has limited social opportunities outside of class. These external relationships may serve to buffer the child from negative social self-perceptions and therefore might best be conceptualized as a moderator rather than a mediator of the impact of behavior and negative peer status on social self-perceptions. Finally, it may be important to consider the extent to which one's affiliative network is the result of self versus peer-imposed processes. Rubin and Asendorpf (1993; Asendorpf, 1990; Rubin, LeMare, & Lollis, 1990) have repeatedly emphasized the need to

distinguish children isolated by their peers from children who prefer to be alone. A low number of affiliative relationships resulting from a peer-imposed process (e.g., peer rejection) might have a more negative impact on self-perceptions than that emerging from a self-imposed process, especially if not associated with peer rejection.

Interestingly, the number of affiliations was associated with both social behaviors and social preference. Specifically, social withdrawal and peer rejection were predictive of fewer classroom peer affiliations. Consistent with previous research (Cairns et al., 1988), aggression was unrelated to the availability of peer affiliations (see Table 1), a finding that has been interpreted as indicating that aggressive children are involved in available peer networks. However, the present results extend Cairns et al.'s research by demonstrating that aggression was positively related to network membership (affiliations) when withdrawal and negative status were taken into account. Future research may benefit from consideration of whether the relative size of the aggressive child's peer network is in part determined by the type of aggressive behavior typically displayed (e.g., proactive vs. reactive aggression; Dodge & Coie, 1987) and whether these affiliations consolidate or even promote aggression-related behavior, norms, and values.

In sum, then, the present mediational hypotheses were supported for victimization by peers but not for the number of affiliative links. Social self-perceptions were found to be partially anchored in reality, in the aversive experiences associated with peer rejection and negative social behavior. It is important to emphasize, however, that victimization only partially accounted for feelings of loneliness, suggesting that other intraindividual as well as interpersonal processes might be involved. Within the present study, two distinct processes are suggested, one operating at the group level (peer rejection) and the other operating at the individual level (withdrawn tendencies).

At the interpersonal level, the present results indicate that negative peer status still had a unique contribution to loneliness, even after the mediators were considered. Given our arguments that affective evaluations (e.g., peer rejection) are communicated to individuals through social behaviors, perhaps other, more indirect or subtle social experiences may be involved (e.g., cruel gossiping, facial expressions of disdain, and social exclusion; Cowan & Underwood, 1995; Crick, 1995; Leaper & Holliday, 1995). In other words, the manifest peer behaviors that serve to convey peer attitudes must be more fully identified to better understand the processes of rejection.

At the intraindividual level, withdrawal was found to be uniquely related to loneliness, over and above the social process variables considered in the present model. Withdrawn children may be cognitively predisposed to evaluate their social situation more negatively, perhaps due to an underlying disposition toward inhibition and insecurity (see Rubin et al., 1990) or conflicting approach-avoidance social motives (Asendorpf, 1990; Rubin & Asendorpf, 1993). One promising area for future research would be to consider the way in which withdrawn children interpret social events, especially their attributions for social failure. Previous research on loneliness (Anderson, Horowitz, & French, 1983; Bukowski & Ferber, 1987; Renshaw & Brown, 1993) has indicated that lonely individuals across age exhibit a negative bias in their interpretation of social events,

attributing social failure to internal and stable factors. Other studies have demonstrated that this non-self-serving attributional bias characterizes rejected children (e.g., Crick & Ladd, 1993). Future research may benefit from consideration of whether withdrawn children are particularly likely to exhibit such negative attributional patterns and whether such attributional biases are typically associated with social withdrawal or represent a cognitive dimension that is more generally associated with negative social self-perceptions (i.e., not limited to withdrawn children). Support for the latter possibility is found in research in which attributional biases were unrelated to both social behavior and social status, although they did predict negative social self-perceptions (Renshaw & Brown, 1993) or moderated the relation between peer rejection and depression (Panak, Cutrona, & Warrick, 1995; Panak & Garber, 1992).

The pattern of findings observed for social self-perceptions may reflect a coercive process by peers and its impact on the self-concept. It is generally consistent with the view that withdrawn children are at risk for internalizing problems and that these problems may become more entrenched over time because of negative peer experiences. However, these arguments must be qualified by a few additional comments. For instance, as predicted, only social self-perceptions seemed to be affected by the mediational process. That is, reported loneliness, a context-specific social self-perception index, and perceived acceptance, a more general index, both showed a similar pattern of influence, with partial mediations of both social preference and victimization as well as a direct contribution of withdrawal. This was not the case for perceived behavior-conduct, as this dimension was essentially predicted by aggressive behavior. Although perceived behavior-conduct reflects a self-appraisal of a socially relevant behavior, it is more likely to be influenced by adult rather than peer feedback and therefore not mediated by peer experience *per se* (affiliations, victimization). The differential patterns of results obtained across self-perception domains is theoretically reassuring in the sense that the experience of victimization is expected first and foremost to affect the social (peer) aspects of the self-concept. At the same time, these patterns also suggest that the impact of negative peer experiences linked to withdrawal and peer rejection is limited in scope, as it does not appear to affect the self-system as a whole. It is not clear at this point whether repeated exposure to negative peer experiences could eventually be generalized to other dimensions of the self-system, a question that can only be answered through longitudinal studies.

In sum, the present study is congruent with earlier research suggesting that peer rejection is not only a marker of maladjustment (Parker & Asher, 1987) but also plays an active role in the child's concurrent social adjustment. The specific impact of peer rejection and withdrawal on social self-perceptions appears to be mediated in part by actual negative experiences with peers, although other intraindividual and interpersonal processes might also be involved. At the same time, the present findings are limited and some caveats should be underscored. First, we adopted a continuous approach to data analysis, a strategy that departs from previous empirical research on subgroups of rejected children but has the advantage of assessing the unique contributions of the predictors, thus alleviating the possibility of a confound. However, one potential disadvantage of this ap-

proach is that it does not specifically focus on the negative side of the adjustment spectrum, which is of primary interest here.³ Second, the results of the present study were obtained at a single point in time, thus making any inferences about processes somewhat speculative. The present study shows that the proposed model is plausible and fits the data reasonably well. Alternative interpretations are possible. For instance, it has been argued elsewhere that chronic negative peer experiences may also lead to withdrawal through the mediation of negative social expectations (see Asendorpf, 1990). This latter proposition is not necessarily antithetical to the one proposed here, as multiple pathways to internalized problems are likely. However that may be, future longitudinal and prospective studies are needed to provide a more direct evaluation of the causal process identified here. Further, given that the present study relied on a monomethod approach to measurement (peer and self-reports), which is likely to be affected by biased measurement errors, future studies should also assess the concepts from a diversity of perspectives. Finally, it is important to acknowledge that despite the fact that the proposed sequential model was derived explicitly from previous research and theory, only a limited but significant portion of the overall variance in social self-perceptions was accounted for in the present study (i.e., 15.6% for loneliness and 12% for perceived acceptance). Thus, additional processes and contributing factors are likely operative and should be explored in future research. In addition, the present research was limited in its efforts to tap characteristics of the child that may directly contribute to both peer experiences and self-perceptions, although other individual characteristics may also play an important role. Although the present study has emphasized the contributions of peer experiences to children's social self-perceptions, this does not negate the possibility that the lonely child evokes certain reactions from peers. Nevertheless, the results of the present study clearly demonstrate the potential value of this line of research in beginning to unravel the processes involved in the development of self-perceptions.

³ This raises the question of whether the general pattern of findings can be reasonably extended to either side of the distribution. To address this possibility within the present data set, we conducted preliminary analyses in which specific tests of nonlinearity were considered in addition to the main effects and the gender interactions. These were two-way interactions among the main predictors and quadratic effects for each of the main predictors. Few nonlinear relations were found, and when these were revealed, they were generally of low magnitude. Victimization by peers was an exception here, with nonlinear joint and quadratic effects emerging that indicated that victimization was more accentuated for extremely rejected children, especially those who were also aggressive or withdrawn. Thus, it appears that the relation between peer status and victimization is stronger for rejected children than nonrejected children, which could also signify that the mediation effect is stronger among rejected children. In light of these findings, we might reasonably assume that the pattern of results observed can be extended to either side of the distribution and that the mediation effect of victimization is perhaps slightly underestimated among rejected children.

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