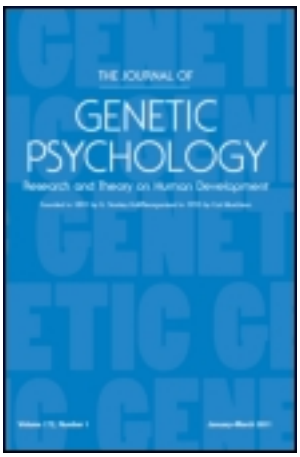

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Behavior Problems and Peer Rejection in Preschool Boys and Girls

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Behavior Problems and Peer Rejection in Preschool Boys and Girls

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ABSTRACT. The authors tested the hypothesis that deviant behaviors within a preschool peer group would be linked with peer rejection, irrespective of child gender. Seventy-six children, aged 3 to 5 years, participated. Teachers rated children's behavior on the Child Adaptive Behavior Inventory, and children provided sociometric ratings. For a subsample of children (n = 47), observers coded aggressive, noncompliant, and withdrawn behavior using a time-sampling system. For both boys and girls, noncompliance, hyperactivity, and social withdrawal were associated with peer rejection; overt aggression was associated with peer rejection for boys, but not for girls. Analysis revealed that approximately half of the variance in sociometric and teacher ratings of peer rejection was accounted for by aggression and social withdrawal for both boys and girls. The results suggest that the association between behavior problems and peer rejection emerges at a very early age.

Key words: externalizing behavior, gender differences, peer rejection, social withdrawal

MANY CHILDREN HAVE their first experience in a cohesive peer group when they enter preschool. Consequently, the study of preschool peer groups provides researchers with a window into peer problems at a very early stage of development. However, there are gaps in the literature in the area of peer relationships in the preschool age group, especially with regard to the unique social processes that govern patterns of acceptance and rejection among young boys and girls. In particular, the role of behavior problems for preschool girls' peer status remains unclear.

Numerous researchers have found that externalizing behavior (i.e., aggression, noncompliance, and hyperactivity) is linked with peer rejection for preschool boys, but not for girls (Eisenberg et al., 1993; Fabes, Shepherd, Guthrie, & Martin, 1997; Olson & Hoza, 1993). However, it is not clear whether these findings reflect mean-

ingful differences or artifacts of study methodology. In a study of 57 preschool children, Fabes and colleagues found that teachers' ratings on a scale of externalizing behavior (a measure primarily tapping overt aggression) were associated with boys' but not with girls' sociometric ratings. These researchers speculated that the low base rate of teacher-rated externalizing behavior for girls may have been responsible for the nonsignificant association with sociometric ratings for girls. Fabes and colleagues suggested that other forms of externalizing behavior that are distinct from overt aggression (and thus have higher base rates among girls) may still be associated with peer rejection for girls. Our goal in this study was to compare the strength of association between several different problem behaviors and sociometric ratings in a sample of normally developing preschool girls and boys.

Crick and Grotpeter (1995) have proposed that specific externalizing behaviors that are relevant to girls' peer groups are likely to be linked to peer rejection for girls. In contrast to the previously mentioned studies in which researchers found that measures of externalizing behavior do not covary with peer status for young girls (e.g., Eisenberg et al., 1993), Crick, Casas, and Mosher (1997) found that relational aggression, a form of covert antisocial behavior that involves undermining friendships and pitting peers against one another, was associated with peer rejection in preschool girls. On the basis of Crick's findings and the speculations of Fabes and colleagues, we developed a working model for this study in which we expected deviant behaviors with a moderate base rate within either gender group to be linked with peer rejection among preschoolers.

Overt aggression has been found to be very uncommon in normally developing preschool girls (cf. Keenan & Shaw, 1997). Researchers have suggested that girls engage in other forms of externalizing behavior, such as noncompliance, more frequently than they engage in overt aggression (e.g., Honig & Park, 1993). Furthermore, whereas young boys are generally more likely to be described as hyperactive than are young girls, the discrepancy may not be as dramatic in early childhood as it is in later years. For instance, in a nationwide prevalence study, McDermott (1996) found a ratio of 62% male to 38% female children aged 5 to 8 years who scored above the 85th percentile on a teacher-rating measure of hyperactivity.

In preschool girls, hyperactivity and noncompliant behaviors occur more frequently than overt aggression. Therefore, these two behaviors may be more salient to preschool girls and may have more influence on girls' peer acceptance and rejection. However, this hypothesis cannot be confirmed by existing data. Most studies of the behavioral correlates of peer rejection in preschool have used measures of externalizing behavior that are very broad and that combine overt

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aggression, noncompliance, and hyperactive behaviors (e.g., Eisenberg et al., 1993; Fabes et al., 1997; Olson & Hoza, 1993). The use of such broad measures has made it impossible for researchers to determine if specific externalizing behaviors that are somewhat more common among girls than overt aggression (e.g., noncompliance) do in fact covary with peer rejection. In light of the vague nature of broad behavioral measures, Coie, Dodge, and Kupersmidt (1990) have encouraged investigators to focus on more specific behavior problems in future studies of the correlates of peer rejection. It seemed plausible that if we dismantled broad externalizing behavior measures into constituent subscales and used them to measure specific problem behaviors, we would find that the problem behaviors more common to preschool girls would be associated with peer rejection.

In addition to externalizing behavior, social withdrawal and isolation may contribute to peer rejection (Rubin, LeMare, & Lollis, 1990). Children who engage in frequent solitary play have fewer opportunities for positive interactions with their peers and may, in extreme cases, be largely ignored and "invisible" to their peers. Few extant findings shed light on the relation between social withdrawal and peer rejection among preschool children. Rubin (1982) did not find such a link in his preschool sample. Travillion and Snyder (1993) found a modest correlation between ratings of anxiety and withdrawal and negative sociometric nominations among preschoolers. We also found no studies that looked at withdrawal–rejection linkages separately for preschool boys and girls. Researchers of school-age children have suggested that social withdrawal is linked with peer rejection for both boys and girls, independent of the association between aggression and rejection (French, 1988, 1990). In keeping with our working model, we hypothesized that social withdrawal (a behavior with a moderate base rate in both gender groups) would be linked with peer rejection for both boys and girls. We expected that this linkage would be independent of (that it would not covary entirely with) the aggression–rejection linkage.

According to our working model, we expected that any deviant behavior with a moderate base rate within either gender group would be linked with peer rejection. The following are specific predictions stemming from this model: (a) for both boys and girls, social withdrawal, noncompliance, and hyperactivity will be associated with peer rejection; (b) for only boys, overt aggression will also be associated with peer rejection; and (c) for both boys and girls, social withdrawal will be associated with peer rejection above and beyond any association between aggression and rejection (as French, 1988, 1990, has found with school-age children).

Method

Participants

Participants were 76 children (40 boys and 36 girls) attending four classes at a university-based nursery school. Two of the classes served primarily

children of university staff and two served primarily children from the local community.

We sent an informational letter to parents, and the participation rate was 81%. Children averaged 4.5 years of age (range 3.4 to 5.5 years). Slightly more than half of the participants were Caucasian (55%); the remaining were Asian American (24%), Hispanic (11%), and African American (11%). Although we did not collect information on family socioeconomic status (SES), we reviewed the school records (containing information about parents' occupations) and noted that participating children came from a range of socioeconomic backgrounds. Using Duncan's (1961) socioeconomic index to rate parental occupations on a 0 to 100 scale (0 representing low SES), we calculated occupation scores for participating parents that ranged from 8 to 81 ($M = 63.2$, $SD = 19.0$). These scores indicated that the sample was primarily middle class, yet somewhat socioeconomically diverse.

Teacher Ratings

Teachers completed a revised version of the Child Adaptive Behavior Inventory (CABI) for each participating child. The CABI originally created by Schaefer and Hunter (1983) contained 60 items. The modified version (Cowan, Cowan, Heming, & Miller, 1991) includes 106 items and has a greater focus on antisocial behavior and peer relationships than the original. Researchers have used this version of the CABI in recent studies of young children's social behavior and have found it to have good construct validity (e.g., Cowan, Cohn, Cowan, & Pearson, 1996; Katz & Gottman, 1996; McHale & Neugebauer, 1998).

The 106 items of the CABI are grouped into 24 rationally derived subscales. Each item is rated on a 4-point Likert-type response scale: (1) *not at all like*, (2) *very little like*, (3) *somewhat like*, and (4) *very much like*. Teachers completed the entire inventory; but for this study, we selected 5 CABI subscales to measure social withdrawal, noncompliance, hyperactivity, peer rejection, and aggression. The Social Isolation subscale (6 items) measures socially withdrawn behavior (sample item: "This child usually plays or works alone"). The Antisocial subscale (5 items) measures noncompliant behavior (sample item: "Tends to disobey or break rules"). The Hyperactivity subscale (7 items) measures behavior characterized by overactivity and difficulty with impulse control (sample item: "Is restless, can't sit still"). The Peer Rejection subscale (4 items) measures low peer social status (sample item: "Other children actively dislike this child and reject him/her from their play"). We also created an a priori Aggression subscale by summing the 2 items from the CABI that measure aggressive behavior ("Gets into fights with other children" and "Is deliberately cruel to others"). Cronbach's alphas for the Social Isolation, Antisocial, Hyperactivity, Peer Rejection, and Aggression subscales were .87, .80, .84, .82, and .88, respectively.

Sociometric Ratings

Sociometric ratings were collected through individual child interviews. We obtained ratings, as opposed to nominations, because ratings may be more reliable than nominations with preschool children (Asher, Singleton, Tinsley, & Hymel, 1979; Bullock, Ironsmith, & Poteat, 1988; Howes, 1987). We showed each child pictures of his or her classmates and asked the child to rate how much he or she played with the classmate in the picture. We interviewed the children using Ramsey's (1995) procedure, which is a modification of the method described by Asher et al. (1979). The procedure yields a 4-point scale after three binary groupings are completed. First, we asked the children to rate whether they "play a little" or "play a lot" with each of their peers. If the children said they "play a little" with a peer, then they were asked to rate if they "never play with" that peer (rated as 4) or if they "play with him/her a little" (rated as 3). The peers who children rated as "play with a lot" were subdivided into "friends" (rated as 2) or "best friends" (rated as 1).[1] We averaged the sociometric ratings from all peers in the classroom for each child, then converted these mean scores to standard scores separately within each classroom. Higher scores on the Sociometric Ratings Scale reflect more peer rejection.

Sociometric ratings are generally well accepted as a measure of peer rejection. Although such systems are not based merely on negative nominations, which some researchers regard as the clearest measure of peer rejection (Coie et al., 1990), there is evidence for the construct validity of sociometric rating scales (Asher, 1990). Several researchers have found that the scales were moderately to highly correlated with both positive and negative sociometric nominations in both school-age and preschool populations (cf. Bullock et al., 1988). Sociometric rating scales may be seen as measuring "a continuum of degree of likeability or popularity, ranging from highly accepted but nonrejected children to highly rejected and unaccepted children" (Hymel, 1983, p. 252).

Behavioral Observations

Behavioral observations were obtained in the two classrooms in which children from the community attended ($n = 47$). Trained observers, either alone or in pairs, coded children's behavior from an unobtrusive vantage point in the school-

[1]Ramsey's (1995) 4-point scale uses mixed terminology (i.e., two anchors used the term "friend" and two used the term "play with"). Therefore, we tested an alternate 3-point scale that uses only "play with" anchors. As noted, children begin the sociometric interview by rating their classmates as "play with a lot" or "play with a little." Thus, the scale may be reduced to a 3-point scale of (1) *play with a lot*, (2) *play with a little*, and (3) *never play with* that does not distinguish between "friend" and "best friend" categories. This 3-point scale is almost identical to the 4-point scale ($r = .99$, $p < .01$, $n = 76$). We chose to use the 4-point scale rather than the 3-point scale for comparability with other research using Ramsey's (1995) sociometric rating method.

yard over several days. We used a time-sampling procedure: Each observer (a) tracked children from a list of names in random order (with 5 s allotted to find each child); (b) observed each child for 5 s; and (c) recorded a behavioral code (within 3 s); then the observer moved on to the next child on the list (Hinshaw, 1993). Observers listened to a tape recording of instructions that provided the proper timing for observing and coding behavior. Of all the observations, 15% were made by two observers on the behavior of the same child at the same time. This procedure allowed us to assess interrater reliability. Observers were blind to the results of the sociometric tests and the teacher ratings, all of which were collected concurrently over the course of approximately 2 weeks.

The categories of behavior that observers coded in the time-sampling procedure were adapted from Hinshaw, Han, Erhardt, and Huber (1992) and Hinshaw (1993). In brief, each 5-s unit of observed behavior was classified into one of six categories: (a) *Appropriate social/rule following* was the default category that included general compliance with the rules of the activity the child was engaged in; (b) *prosocial* was coded for episodes of sharing, initiating peer contact, or demonstrating leadership; (c) *noncompliance* was coded when a child broke a school rule or disrupted group activities (e.g., hoarding all of the crayons during a group art project); (d) *aggression* was coded when a child hit, kicked, grabbed, or pushed another child; (e) *appropriate–solitary* was coded when a child was playing alone, engaged in parallel play, or watching other children play; and (f) *solitary–disengaged* was coded when a child was alone and disengaged from school activities. Following Hinshaw et al. (1992), we combined scores from the appropriate–solitary category and the solitary–disengaged category into an aggregate *social withdrawal* category.

An average of 163 five-s observations were recorded for each child. The interrater reliability of each rating category was computed as a kappa coefficient. Kappas ranged from .74 to .93, signifying acceptable interrater reliability.

Results

Table 1 contains means and standard deviations for sociometric ratings, CABI teacher ratings, and observational measures for girls and boys. Observational ratings were reported as prorated mean frequencies based on an average of 163 five-s observations per child. Thus, the frequencies reported in Table 1 reflect the mean number of observations (of the 163) in which observers rated children as aggressive, noncompliant, and socially withdrawn. For example, observers rated boys as socially withdrawn in 21.9 of the 163 five-s episodes, on average.

We examined gender differences with *t*-test comparisons of girls' and boys' mean scores (see Table 1). Boys' mean scores were higher than those of girls on sociometric and teacher ratings of peer rejection, and boys' scores were higher on all behavior problem indices for which there were significant gender differences. Boys' mean scores were also higher than those of girls for behavior observations

TABLE 1
Means and Standard Deviations for Sociometric, Observational, and Teacher Ratings Measures

Construct/measure	Boys		Girls		
	M	*SD*	*M*	*SD*	*t*
Peer rejection					
Sociometric ratings[a]	0.30	0.96	−0.36	0.89	3.10**
CABI Peer Rejection subscale[b]	0.33	1.03	−0.40	0.75	3.49**
Aggression					
Observed aggression[c]	3.38	3.39	0.64	1.21	3.66**
CABI Aggression subscale[b]	0.21	0.91	−0.21	1.03	1.91
Noncompliance and hyperactivity					
Observed noncompliance[c]	14.50	6.50	9.30	5.50	3.00**
CABI Antisocial subscale[b]	0.12	0.85	−0.11	1.12	1.01
CABI Hyperactivity subscale[b]	0.23	0.97	−0.30	0.90	2.43*
Social withdrawal					
Observed social withdrawal[c]	21.90	11.70	15.10	8.90	2.27*
CABI Social Isolation subscale[b]	0.24	0.88	−0.30	1.00	2.49*

Note. For sociometric and CABI measures, boys' $n = 40$ and girls' $n = 36$. For observational measures, boys' $n = 23$ and girls' $n = 24$.
[a]Mean sociometric rating score from classmates, standardized within class. Higher scores reflect more negative ratings. [b]CABI = Child Adaptive Behavior Inventory, completed by teachers; values are standardized subscale scores. [c]Prorated behavior observation frequencies (based on an average of 163 five-s observations per child).
*$p < .05$. **$p < .01$.

of aggression, noncompliance, and social withdrawal and CABI teacher ratings of hyperactivity and social isolation. Levene's test for equality of variances indicated that the variances in the observational measures of aggression and the teacher ratings of peer rejection were significantly higher for boys than they were for girls. Low mean frequencies of observed aggression were found for both boys and girls ($M = 3.38$ and 0.64, respectively). Particularly low frequencies of observed aggression were measured for girls: 17 of 24 girls (compared with 7 of 23 boys) were not observed in a single act of aggression in the 163 five-s observations.

Intercorrelations Among Teacher Ratings and Observational Measures of Externalizing Behavior and Social Withdrawal

Table 2 contains correlations among measures separately for boys (below the diagonal) and for girls (above the diagonal). We found moderate to strong relationships between teacher reports and observational measures, which were similar for boys and girls. Observer frequency counts of noncompliance were significantly correlated with scores of all three CABI teacher rating scales for

TABLE 2
Intercorrelation Matrix Among Sociometric Ratings, Behavioral Observation Measures, and CABI Teacher Rating Scales

Construct/measure	1	2	3	4	5	6	7	8	9
Peer rejection									
1. Sociometric ratings	—	.46**	.03[b]	.38*	.19	.47**	.57**	.35*	.38*
2. CABI Peer Rejection subscale	.64**	—	.08[a]	.46**	.44*	.49**	.55**	.58**	.65**
Aggression									
3. Observed aggression	.41*[b]	.57**[a]	—	.61**	.65**	.63**	.58**	−.24	−.36*
4. CABI Aggression subscale	.29*	.66**	.35*	—	.75**[a]	.88**	.79**	.00	−.10
Noncompliance and hyperactivity									
5. Observed noncompliance	.52**	.44*	.73**	.40*[a]	—	.77**	.79**[a]	.13	−.13
6. CABI Antisocial subscale	.27*	.56**	.72**	.70**	.59**	—	.86**	.13	−.10
7. CABI Hyperactivity subscale	.40**	.75**	.63**	.68**	.49**[a]	.74**	—	.05[a]	−.02
Social withdrawal									
8. Observed social withdrawal	.34*	.59**	.23	.40*	.16	.37*	.55**[a]	—	.53**
9. CABI Social Isolation subscale	.44**	.59**	.26	.28*	.26	.03	.30*	.31	—

Note. Above the diagonal: girls. Below the diagonal: boys. For correlations involving observational measures, boys' $n = 23$, girls' $n = 24$. For all other correlations, boys' $n = 40$ and girls' $n = 36$. CABI = Child Adaptive Behavior Inventory.
[a]Boys' and girls' correlation coefficients differed in magnitude at the $p < .05$ level, based on Fisher's z' transformation. [b]Boys' and girls' correlation coefficients differed in magnitude at the $p < .10$ level, based on Fisher's z' transformation.
*$p < .05$, one-tailed. **$p < .01$, one-tailed.

externalizing behavior: Aggression, Antisocial, and Hyperactivity (r = .40 to .59 for boys; r = .75 to .79 for girls). Observations of aggression were also significantly related to these same three externalizing dimensions (r = .35 to .72 for boys; r = .58 to .63 for girls). Observational measures of social withdrawal were significantly correlated with CABI teacher ratings of social isolation for girls (r = .53, $p < .01$) but were only marginally related for boys (r = .31, $p < .10$).

In general, measures of externalizing behavior were not highly correlated with measures of social withdrawal for girls or boys; although there were several modest significant correlations between observed social withdrawal and CABI teacher ratings of hyperactivity, antisocial behavior, and aggression for boys (see Table 2). However, most measures of social withdrawal and externalizing behavior were uncorrelated, particularly for girls, suggesting that there was minimal overlap between children engaging in these two different forms of school behavior.

Correlates of Peer Rejection

Overt aggression and peer rejection. The correlation between the Sociometric Ratings Scale scores and the CABI Peer Rejection subscale scores were strong for boys (r = .64, $p < .01$) and moderate for girls (r = .46, $p < .01$; see Table 2).

Although teacher ratings of aggression were associated with peer rejection for both boys and girls, observed aggression was only associated with rejection for boys. The CABI Peer Rejection subscale scores were significantly correlated with the CABI Aggression subscale scores for boys and girls (r = .66 and .46, respectively). However, although the CABI Peer Rejection subscale scores were significantly correlated with behavioral observations of aggression for boys (r = .57), the relation was not significant for girls. Fisher's z' transformation test indicated that the correlation between teacher ratings of peer rejection and observations of aggression was significantly different ($p < .05$) for boys and girls.

We obtained a similar pattern of results for sociometric ratings and measures of aggression. Sociometric ratings were significantly correlated with the CABI Aggression subscale scores for boys and girls (r = .29 and .38, respectively). However, sociometric ratings were significantly associated with behavioral observations of aggression for boys (r = .41), but not for girls. Fisher's z' test indicated that the correlation between observed aggression and sociometric ratings was marginally significantly different ($p < .10$) for boys and girls.

Noncompliance, hyperactivity, and peer rejection. We found consistent relationships between teacher reports of peer rejection and measures of noncompliance and hyperactivity, and these relationships were similar for boys and girls. The CABI Peer Rejection subscale scores were significantly correlated with the CABI Hyperactivity subscale scores (r = .75 for boys and .55 for girls), the CABI Antisocial subscale scores (r = .56 for boys and .49 for girls), and observer frequency

counts of noncompliance (r = .44 for both boys and girls). Fisher's z' test revealed no significant differences between boys and girls for this set of correlations.

We obtained a similar pattern of findings for sociometric ratings, which were significantly correlated with CABI teacher ratings of hyperactivity (r = .40 for boys and .57 for girls) and antisocial behavior (r = .27 for boys and .47 for girls). Sociometric ratings were significantly correlated with behavioral observations of noncompliance for boys (r = .52), but not for girls. Fisher's z' test revealed no significant differences between boys and girls for these correlations. In summary, this pattern of results indicated that boys and girls who were viewed by their teachers as hyperactive or noncompliant, and who were observed engaging in noncompliant behavior more than other children, tended to be rejected by their peers.

Social withdrawal and peer rejection. We found consistent relationships between teacher reports of peer rejection and measures of social withdrawal, and these relationships were similar for boys and girls. The CABI Peer Rejection subscale scores were significantly correlated with the CABI Social Isolation subscale scores (r = .59 for boys and .65 for girls) and observer frequency counts of social withdrawal (r = .59 for boys and .58 for girls). Fisher's z' test revealed no significant differences between boys and girls for this set of correlations.

Sociometric ratings were significantly correlated with CABI teacher ratings of social isolation (r = .34 for boys and .38 for girls) and behavioral observations of social withdrawal (r = .34 for boys and .35 for girls). Fisher's z' test revealed no significant differences between boys and girls for these correlations. This pattern of results suggested that boys and girls who were viewed by their teachers as being withdrawn and isolated, and who were observed engaging in solitary play more frequently than other children, tended to be rejected by their peers.

Unique Associations Between Social Withdrawal, Aggression, and Peer Rejection

We used hierarchical regression analyses to test whether social withdrawal and aggression were independently associated with peer rejection in preschoolers, (cluster analyses have revealed this association for school-age children; French, 1988, 1990). Two regression analyses were conducted, one with sociometric ratings as the dependent variable and the other with CABI ratings of peer rejection as the dependent variable. In each regression, dummy-coded gender was entered first, followed by aggression variables, social withdrawal variables, and Gender × Aggression interactions. Only Gender × Aggression interaction terms were included because no other outcome measure showed a gender difference in univariate analyses. The first regression model included both observer and teacher ratings of aggression and withdrawal. However, to prevent spurious findings due to shared method variance, only observer ratings were used to predict CABI peer rejection in the second regression model.

TABLE 3
Summary of Hierarchical Regression Analyses for Variables Predicting Sociometric Ratings and CABI Peer Rejection Subscale Scores (n = 47)

Step/variable	β	ΔR^2
Model 1 (DV = sociometric ratings)		
Step 1		
Gender	.16	.19**
Step 2		
CABI Aggression subscale	.20	
Observed aggression	.22	.11*
Step 3		
CABI Social Isolation subscale	.38**	
Observed social withdrawal	.03	.15**
Step 4		
Gender × Observed Aggression	.01	.00
Model 2 (DV = CABI Peer Rejection)		
Step 1		
Gender	.08	.20**
Step 2		
Observed aggression	.39*	.17**
Step 3		
Observed social withdrawal	.51**	.23**
Step 4		
Gender × Observed Aggression	.02	.00

Note. Beta values are from the final step of each model. DV = dependent variable. CABI = Child Adaptive Behavior Inventory.
*$p < .05$. **$p < .01$.

In Model 1 (see Table 3), the block of social withdrawal variables (Step 3; CABI social isolation and observed social withdrawal) contributed 15% of unique variance to sociometric ratings even after the block of aggression variables (CABI aggression and observed aggression) were entered in Step 2. Betas from the final step of the model indicated that only CABI social isolation was significantly associated with sociometric ratings (β = .38). The Gender × Aggression term did not account for additional variance in sociometric ratings after controlling for the other variables in the model. The full model accounted for 44% of the variance in sociometric ratings.

In Model 2, observed social withdrawal (Step 3) contributed 23% of unique variance to CABI peer rejection even after observed aggression was entered in Step 2. Both observed social withdrawal and observed aggression were significant (β = .51 and .39, respectively) in the final step of the model. The Gender ×

Aggression term did not account for additional variance in CABI peer rejection ratings after controlling for the other variables in the model. The full model accounted for 60% of the variance in CABI Peer Rejection subscale scores. (In addition, a more complete set of regression analyses was conducted with the other externalizing variables and all possible gender by behavior interaction terms as predictors. The pattern of results was very similar to those of the initial analyses; Social withdrawal remained a robust predictor of peer and teacher ratings of rejection when we controlled for any combination of externalizing varibles, whereas the gender by behavior interaction terms did not contribute additional explained variance to any of the models.)

Discussion

Previously, researchers have suggested that the behavioral correlates of peer rejection may differ for young boys and girls and that externalizing behavior (i.e., aggression, noncompliance, and hyperactivity) may not be linked with rejection for preschool girls (Eisenberg et al., 1993; Fabes et al., 1997; Olson & Hoza, 1993). In this study, in four classrooms of normally developing preschoolers, the only gender difference that emerged was a stronger association between overt aggression (but not other externalizing behaviors) and peer rejection for boys than for girls. This finding appears to be related to the low frequency of overt aggression among preschool girls rather than to fundamentally different social processes governing peer acceptance for boys and girls.

The results generally support the hypothesis that any problem behavior with a moderate base rate would be associated with peer rejection for both boys and girls. With one exception (i.e., observed noncompliance for girls), measures of externalizing behavior distinct from overt aggression (i.e., noncompliance and hyperactivity) were significantly correlated with peer rejection for both girls and boys. In addition, social withdrawal was associated with peer rejection for boys and girls, even after controlling for aggressive behavior. As Fabes and colleagues (1997) have speculated, studies that have combined aggression with other problem behaviors into a broad measure of externalizing behavior (i.e., Eisenberg et al., 1993; Fabes et al.; Olson & Hoza, 1993) may have masked associations between peer rejection and particular problem behaviors that are more common among girls.

Preschool girls, compared with preschool boys, appear to engage in substantially less overt aggression (Keenan & Shaw, 1997). This behavior pattern was replicated in the present study, in which observers rated boys as engaging in physically aggressive behaviors about five times more often than girls. As stated previously, the girls in this study engaged in an average of .64 episodes of physical aggression per 163 five-s observations (the average number of observations per child), and 17 of 24 girls were not observed engaging in a single act of aggression. Given this low frequency, and the low variability associated with it, we were

surprised to find some evidence of construct validity for the observational measure of aggression for girls, which was moderately correlated with teacher ratings of aggression. Nonetheless, the low variability in the observational measure of aggression would make it unlikely to covary strongly with measures of other constructs, such as peer rejection. This may explain why there was a negligible correlation between observed physical aggression and peer rejection for girls.

In contrast to the observational measure of aggression, the teacher rating measure of aggression was associated with both sociometric ratings and teacher ratings of peer rejection for girls. Notably, mean scores and variances for boys and girls did not differ on the teacher rating measure of aggression. Perhaps when measures of aggression have reasonable base rates and variability, aggression will also be found to correlate with peer rejection for preschool girls. Crick et al. (1997) also found that teacher ratings of overt aggression were associated with peer ratings (sociometric nominations) of rejection for preschool girls. Moreover, in the present study, girls' noncompliance and hyperactivity were related to peer rejection. In sum, these findings are consistent with the viewpoint that externalizing behavior that is relevant to (or common among) preschool girls will be associated with peer rejection and will not be tacitly accepted by female peers (Crick & Grotpeter, 1995; Fabes et al., 1997).

It is not clear why teachers rated girls as engaging in approximately as much aggression as boys, when observers clearly saw substantial differences. Perhaps teachers expect boys to be more aggressive than girls, so aggressive incidents with girls are particularly salient and overrated. Whatever the reason, these findings demonstrate the importance of obtaining data from multiple informants. The findings also suggest that different forms of aggression (i.e., physical, verbal, and relational) and externalizing behaviors (i.e., noncompliance and hyperactivity) should be measured separately and should not be aggregated in future studies of peer rejection among preschool children—a suggestion made by other investigators (Coie et al., 1990; Crick et al., 1997).

For the boys in this study, all observational and teacher-rated measures of aggression, noncompliance, and hyperactivity were significantly associated with sociometric and teacher ratings of peer rejection. The observational measure of physical aggression had a fairly low base rate for boys (an average of 3.38 episodes of observed aggression of 163 five-s observations total, comprising 2.1% of all coded intervals), but most boys (16 of 23) were observed to engage in at least one act of aggression. Considering the effect that even a single act of aggression may have on one's relationships, it seems likely that some of the boys in this sample engaged in physical aggression frequently enough for this form of aggression to have a significant impact on their peer social status.

Social withdrawal, as reflected by high levels of solitary play, was associated with peer rejection even after we controlled for the possible confounding effect of aggression (i.e., aggressive children may be forced to play more by themselves because their behavior has already caused them to be rejected). Unique associa-

tions between aggression, withdrawal, and peer rejection have also been found among school-age children (French, 1988, 1990). Rubin, Stewart, and Coplan (1995) proposed that, because of the frequency of solitary and parallel play in the preschool age group, socially withdrawn behavior would not be considered abnormal by other children and thus would not be cause for peer rejection. However, the few studies that have investigated this link have yielded inconsistent results (Rubin, 1982; Travillion & Snyder, 1993; see also Coie et al., 1990, for a review of older studies). The present results indicate that even though solitary play may be more common among preschoolers than it is among older children, high levels of such play (relative to solitary play by other children) might prevent the formation of close friendships and result in lower peer acceptance ratings. Our working model indicates that the moderate base rate of withdrawal in this sample made higher than average levels of withdrawal noticeable to peers; children who withdrew socially were, therefore, more conspicuous and likely to be rejected by their peers. Of course, the alternate interpretation of this finding, that rejected children tend to go off by themselves, cannot be discounted on the basis of correlational data.

Summary and Implications

We found a strong relationship between externalizing behavior and peer rejection among preschool boys and girls, which suggests that the externalizing–rejected pattern found so consistently in school-age children (Parke et al., 1997; Pettit, Clawson, Dodge, & Bates, 1996) may predate elementary school and begin in preschool or earlier. Once established, this pattern has been found to be fairly stable, and it is predictive of poor young adult outcomes (Hinshaw & Anderson, 1996).

We offer several potentially fruitful explanations for the present results. According to the skill deficit model (cf. Hymel, Wagner, & Butler, 1990), children may enter the preschool peer group with social deficits that put them at risk for rejection, such as poor behavioral regulation. Jacobvitz & Sroufe (1987) found that preschool children whose mothers engaged in distracting physical play and set poor limits were more likely to exhibit hyperactive behavior in kindergarten. Thus, early parenting behavior may affect children's behavioral regulation and, potentially, subsequent peer acceptance or rejection early in school. According to attachment theory, an early insecure attachment could also lead to the development of a negative social schema, which might then promote hostile or withdrawn peer-group behaviors that result in rejection (Lyons-Ruth, Easterbrooks, & Cibelli, 1997; Rubin et al., 1990; Shaw, Owens, Vondra, & Keenan, 1996). Longitudinal research on the temporal sequencing of early caregiving experiences, social behavior problems, and peer rejection would be very informative.

Because of the relatively small sample size and the cross-sectional design, these results should be considered preliminary. Nonetheless, this study revealed

several noteworthy trends in the social development of young children. First, even in children's earliest experiences with peers in a school setting, deviant behaviors appear to be strongly associated with peer rejection. Second, although previous researchers have suggested that externalizing behavior is not associated with peer rejection for preschool girls, the results of this study show that when specific forms of deviant behavior are examined, externalizing behaviors that occur with sufficient frequency and variability within girls' peer groups do appear to be associated with peer rejection for girls. Third, as has been found with older children, both social withdrawal and aggression may contribute uniquely to peer difficulties in the preschool age group. Programs aimed at altering the developmental trajectories of children at risk for clinical disorders may be well advised to address the social functioning and peer status of preschool boys and girls as well as their emotional and behavioral symptoms, given the strong interrelationship between these two areas of adjustment that was suggested by this study.

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