The Qualitative Interactions of Children With Conduct Problems and Their Peers: Differential Correlates With Self-Report Measures, Home Behavior, and School Behavior Problems

ELIZABETH A. STORMSHAK
University of Oregon

CAROLYN WEBSTER-STRATTON
University of Washington

This study examined qualitative aspects of the peer relationships of children with conduct problems in a laboratory assessment procedure. The sample consisted of 101 children aged 4 to 7 years identified by parents as having oppositional behavior problems. Positive social skills and negative conflict tactics were coded. Additionally, two categories assessing the reciprocal nature of the relationship were also coded, including behavioral "escalation" and "failure" to use social skills successfully with peers. Relations between observed peer interactions, child self-reports of peer relationships, observed and parent reports of home behavior interactions, and teacher reports of school behaviors were examined. Positive skills and failure to use skills with peers were related to loneliness and teacher reports of social competence, whereas negative behavior and escalation with peers were associated with school problems and home problems, respectively. Results are discussed in a developmental framework that highlights the potential importance of social behaviors within the peer context to later adjustment.

The successful formation of peer relationships is one of the major social–emotional developmental tasks during the preschool years. In early childhood, children learn several important skills in the context of their peer relations, beginning with how

Direct all correspondence to: Elizabeth Stormshak, College of Education, 5251 University of Oregon, Eugene, OR 97403-5251 <bstorm@darkwing.uoregon.edu>.

Journal of Applied Developmental Psychology 20(2): 295–317
ISSN: 0193–3973

to play with a friend using cooperative sharing and turn-taking skills. In addition to learning play skills, peer relationships also provide a context for the development of conflict negotiation strategies and affective regulation (Gottman & Mettetal, 1987; Shantz & Hobart, 1989). The quality of children's peer relations at this age is important in predicting early school experience and later academic success (Ladd & Price, 1987).

However, for some children the ability to form positive peer relationships is not easily accomplished. Multifactorial research linking children's functioning across a number of developmental domains with successful peer relations has highlighted the complexity of this problem. In particular, children who have difficulty forming and maintaining successful peer relations are often characterized by a number of both externalizing and internalizing behavioral problems. Children with peer problems may be both aggressive and hyperactive at home and school, although the disregulated nature of hyperactive behavior problems has been particularly associated with peer rejection at school (Stormshak, Bierman, & the Conduct Problems Prevention Research Group, 1998). Attributional biases may develop as a consequence of peer problems and may serve to maintain negative peer status, preventing the development of prosocial behavior (Crick & Dodge, 1994). These children may also report internal distress, such as loneliness and low self-esteem (Asher, Parkhurst, Hymel, & Williams, 1990; Brooks, 1994; Crick & Ladd, 1988; Kurdek & Krile, 1982). Peer problems in preschool have been consistently shown by researchers to be stable and predictive of a variety of behavior problems and later maladjustment, including peer rejection, school drop-out, and antisocial behavior in adolescence (Cairns, Cairns, & Neckerman, 1989; Campbell & Ewing, 1990; Ladd & Price, 1987; Parker & Asher, 1987; Pope, Bierman, & Mumma, 1991; Taylor, 1989).

In previous research examining the behaviors associated with peer problems at this age, both positive social skills (e.g., helping and sharing) and negative conflict tactics (hitting, yelling) have been correlated with peer relations in both preschool and early elementary school (Hartup, Glazer, & Charlesworth, 1967; Masters & Furman, 1981). Typically, negative behaviors, such as hyperactivity, off-task behavior, and aggression, show stronger associations with peer rejection than do the initiation of positive behaviors (Gottman, 1977; Goldman, Corsini, & deUrioste, 1980; Gottman, Gonso, & Rasmussen, 1975; Ladd, 1983). One possibility for the limited association between positive social skills and peer relations may be that the relationship created by the child and peer, rather than the frequency counts of children's observed behavior, is a more important correlate of behavior problems and peer rejection. Rejected and accepted children may display positive social skills and initiate interactions, but these behaviors are dependent on the response of peers, and peers react to these children negatively (e.g., Hymel, 1986). For example, Dodge, Coie, & Brakke (1982) observed rejected children and found that they initiated more social contact, but were also more likely to be rejected in their social approaches than other children. Thus, although children may have displayed positive social skills, they failed to initiate these skills successfully by achieving a positive reciprocal response from their friends (e.g., acquisition vs. performance deficits; Gresham, 1981). Similarly, children with behavior problems may engage in high rates of popular behaviors such as "rough play" with peers (Dodge, Coie, Pettit, &

Price, 1990; Ladd, 1983), however, when this play escalates to aggression, children experience negative social consequences leading to counter aggression on the part of their peers. Thus, in the context of social interaction, *failure* to use social skills successfully with peers and *escalation* of aggressive behaviors leading to counterattacks by peers (rather than initiation of aggression per se) are the important interactional qualities to assess in young children and may have particular implications for the stability of problems with peers and behavioral difficulties at home and school.

Although detecting young children who are at risk for problems with their peer relationships is clearly important, it has been difficult to identify the most reliable and valid measures for assessing the quality of young children's peer interactions. In general, the literature has emphasized that assessments should include information from multiple sources (e.g., parents, teachers, peers, and independent raters) across different contexts of children's development (e.g., home and school) to provide an integrated picture of a child's functioning. However, correlations across settings and raters are typically of low magnitude (Achenbach, McConaughy, & Howell, 1987), which raises questions about the accuracy of certain types of assessment, particularly with regard to young children.

One reason for limited associations across contexts and measures may be because of the diversity of the behavioral profiles of children and the way in which these children interact within different environmental contexts. In particular, conduct-problem children typically display a range of behavior problems, including both oppositional/aggressive behavior and attention problems (Hinshaw, 1987). Although the literature linking conduct problems with peer relation difficulties is clear, the relation between these specific behavioral subtypes and peer problems is less clear. For example, some forms of aggression are attractive to peers in early childhood and may be "normative" in the context of peer relations (Dodge et al., 1990; Stormshak et al., 1999; Wright, Giammarino, & Parad, 1986). However, children with attention problems are typically disliked by peers, which may be a result of the disregulated nature of these problems and the lack of social skills that accompanies them (Bierman, Smoot, & Aumiller, 1993). As a result, escalation with peers may be more significant for children with attention problems than for those who are oppositional or aggressive.

Several observational coding systems have been developed to assess the quality of children's peer relationships and social skills. Observation coding systems are particularly important in determining the precise nature of children's social difficulties. However, most studies using observational coding systems have used normative samples, limiting the applicability to populations in which children display aggressive behavioral difficulties in the context of peer interactions. For example, Gottman's MICRO and MACRO systems (1983, 1986) extensively assess children's prosocial conversational skills, such as "we" statements and self-disclosure. However, the system is limited in the measurement of negative behaviors, such as various forms of hitting and arguing, that typically occur in the context of the peer interactions of conduct-problem children. Similarly, coding systems in preschool and early childhood have heavily relied on using naturalistic observations of peers on the playground or at school. Unfortunately, many children with peer problems engage in high levels of solitary play (French & Waas, 1985; Ladd, 1983; Rubin & Daniels-

Beirness, 1983), limiting the usefulness of naturalistic observational coding systems as a means of assessing the detailed interactions of children with conduct problems. Thus a coding situation that forces children to engage in peer interaction, measures a variety of specific forms of negative conflict tactics and antisocial behavior as well as prosocial skills, and assesses the success versus failure of children with peers as well as escalation and disruptive behavior is the optimal means of assessing the quality of these interactions (Coie, Dodge, & Kupersmidt, 1990; Coie & Kupersmidt, 1983; Dishion, Andrews, & Crosby, 1995).

In addition to observations of peers, recent research efforts with young children have begun to emphasize the potential importance of self-report measures for understanding the internal states of young children and the quality of children's peer interactions over time (Crick & Ladd, 1993; Ladd, Kochenderfer, & Coleman, 1996). The developmental literature coupled with the studies citing low correlations between child self-report measures and information from other sources led to a lack of confidence in the use of self-report measures with young children (ages 3–7 years) and increasing reliance on parent reports. Previous concerns about the reliability of young children's self-report measures was partly the result of developmental research suggesting that in early childhood, children engage in fantasy and wishful thinking, with a limited ability to distinguish their "real self" from their "ideal self" (Harter, 1986). Similarly, attributional biases associated with aggressive children may also distort self-report ratings because of defensiveness or overinflated self-perceptions (Dodge & Frame, 1982; Hymel, Bowker, & Woody, 1993). The age of the child also affects the degree to which we can have faith in children's self-reports of their peer difficulties, although even here there is disagreement in the research. For example, some studies have found younger children to be in more agreement with their parents about their problems than are older children (Tarullo, Richardson, Radke-Yarrow, & Martinez, 1995), whereas other studies have suggested just the opposite—that there is more agreement between adolescents and their parent's reports than young children and their parents' reports of problems (Edelbrock, Costello, Dulcan, Conover, & Kalas, 1986; Herjanic & Reich, 1982).

Although parents may be the more accurate reporters of their children's conduct problems (Loeber, Green, & Lahey, 1990), their assessments are based on observable behavior at home and may be distorted by their own internal distress, such as depression, anxiety, and marital problems (Webster-Stratton & Hammond, 1988). Moreover, parents do not usually have the opportunity to observe their children with peers in large group settings or to see their children's responses to peer rejection or conflict. Many childhood behaviors and feelings are not easily accessible to parents, thus limiting their value somewhat. Although teacher reports may be more reliable measures of children's peer relationships, children themselves are still the only ones who can report their own internal problems such as loneliness and depression. For example, Cassidy and Asher (1992) suggested that loneliness can be assessed by self-report in a kindergarten and first-grade sample and that feelings of loneliness are associated with difficulties in peer relations. Similarly, self-reports of social cognitive biases and negative attributions have been extensively related to behavioral difficulties and peer rejection across early childhood (Dodge, 1980;

Sobel & Earn, 1985). Clearly, the internal distress and cognitive biases that some children have developed as a result of their peer interactions cannot be assessed by adult raters or observational measures. The extent to which self-report constructs such as loneliness and negative attributions compare with observational ratings with peers in predicting home and school behavior remains unclear.

The present study had several goals. First, the quality of the peer interactions of children with conduct problems were examined using the Peer Problem Solving Interaction Communication Affect Rating Coding System (PPS-I CARE), a peer coding system specifically developed for use with this age group and sample (Webster-Stratton, Hollingsworth, & Rogers, 1991). Based on previous research and clinical observation, the system assessed those behaviors and skills that were relevant to children aged 4 to 7 with conduct problems and peer relationship difficulties, including social skills, negative conflict tactics, failure to use social skills successfully, and behavioral escalation with peers (e.g., children who escalate to various types of aggression in the context of "rough play").

This observational study expands on previous efforts by including two new measures of peer interaction. The first, *failure*, examines not only the child's social skills, but whether the child has used them successfully in the peer context to elicit positive responses from their peers. The second, *escalation*, is measured by assessing the level of behavioral escalation among the two children in the room and is based on disruptive behavior observed by the target child as well as the peer's aggressive response. Both codes are based on the child's behavior in addition to the reaction of the child's best friend.

The second goal of this study involved examining cross-contextual and cross-rater relations between children's observed peer interactions, self-reported loneliness and negative attributions, observed interactions with parents, home behavior, and teacher reports of school behavior to provide validity to the observational codes and examine the relations among these variables. Child self-report measures (including loneliness and negative attributions), observed behavior with peers on the PPS-I CARE and maternal and teacher reports of behavior were grouped into two theoretically distinct categories: social competence and antisocial behavior. Correlations within and between these categories of measures were examined. Based on previous research, measures assessing social competence were anticipated to be correlated. In particular, lack of positive skills and failure to use skills with peers were expected to be associated with both loneliness reported by children and negative attributions as well as lack of social competence reported by teachers. Children who used negative conflict tactics and engaged in escalation with peers were expected to show higher levels of antisocial behavior, including behavior problems at home and at school. Associations between peer codes and self-report measures, parent reports, and teacher reports were used to provide external validity to the coding system.

Of particular interest to this study were factors that may increase the cross-setting relations between observed behavior with peers, home behavior, and school problems. One such factor that has been shown in previous research to be stable and associated with peer problems is hyperactivity, or attention problems. Children who display profiles of behavior problems that include both aggression and inatten-

tion are more rejected by peers than their aggressive classmates who are not inattentive (Bierman et al., 1993; Cillesson, Ijzendoorn, Lieshout, & Harter, 1992). This is likely because of the disregulated, intrusive nature of attentional problems, which is less appealing to peers at this age than typical forms of physical aggression, such as rough play and bullying (Dodge et al., 1990). In the final set of analyses, we examined subgroups of children displaying both escalation with peers and attention problems as rated by parents. We hypothesized that these children would show the highest level of distress, with elevated scores on loneliness and self-report measures as well as problems at school.

Methods

Research Participants

Criteria for study entry were: (1) the child was between the ages of 4 and 7 years old; (2) the child had no debilitating physical impairment, intellectual deficit, or history of psychosis and was not receiving any form of psychological treatment at the time of referral; (3) the primary referral problem was conduct problem behavior (e.g., noncompliance, aggression, or oppositional behavior problems) that had been ongoing for at least 6 months; and, (4) parents reported a clinically significant number of child behavior problems (more than 2 standard deviations above the mean) on the Eyberg Child Behavior Inventory (Robinson, Eyberg, & Ross, 1980). Children were referred by their parents for participation in the study.

The study children included 75 boys and 26 girls, with a mean age of 68.93 months ($SD = 14.38$). Eighty-five percent of the sample was white. Social economic status was calculated with the Hollingshead two-factor index, yielding the following breakdown from highest (I) to lowest (V) class: class I (14.4%), class II (21.6%), class III (37.1%), class IV (18.6%), and class V (8.2%). Children and families participated as part of their preassessment for an intervention project through the Parenting Clinic at the University of Washington. Informed consent was obtained from both parents and children before the assessment.

Assessment

Measures included mother reports and independent observations of parent and child interactions in the home, and independent observations of children's interactions with peers in the laboratory. Teachers also completed rating forms assessing behaviors and social competence. Because of the relatively small sample size, father reports were not included in the major analyses because they were missing for 25% of the families. However, some descriptive information will be provided later as a means of comparison with maternal reports.

Antisocial Behavior

The Dyadic Parent-Child Interactive Coding System-Revised (DPICS-R; Robinson & Eyberg, 1981; Webster-Stratton, 1985) is a widely researched observational measure developed specifically for recording behaviors of conduct-problem children

when interacting with their parents. The DPICS-R, which consists of 29 behavior categories, was used to code the parent–child interactions at home. For this study, we were interested in the Total Child Deviance scores (whining, yelling, crying, physical negative, smart talk, and aggression) with mothers. Home observations of parent–child interactions were made by eight trained observers. Each child was observed in the home for 30 minutes interacting with his or her mother on two evenings during a 1-week period (between 4:30 P.M. and 7:30 P.M.). During these observations, an attempt was made to impose as little structure as possible; family members were asked to "do what you would normally do" (although talking to the observers, watching television, and talking on phone were prohibited). Before conducting home observations, the observers underwent extensive training and were required to maintain 80% reliability with practice tapes. It took approximately 4 to 6 months for observers to become reliable. To maintain accuracy, observers had weekly training sessions at which they coded videotaped interactions and discussed their coding. To assess reliability periodically, a second observer was present for at least 20% of all the home observations. Mean overall interrater agreement was 79% (range = 71–89%) and the product–moment correlation calculated between observers ranged from .80 to .95 for the parent and child behaviors.

Mother and Teacher Reports of Child Behavior

The mother's perceptions of child adjustment were measured by the widely used parent form of the Child Behavior Checklist (Achenbach, 1991). Teachers rated child behaviors using the Teacher Rating Form (Achenbach, 1991). The problem lists of the Child Behavior Checklist–Parent Report Form and the Child Behavior Checklist–Teacher Report Form (Achenbach, l991) each contained a list of 113 behavior problem items that parents or teachers rated on a 3-point scale (0 = not true to 2 = very true or often true). The children in this study were referred for externalizing behavior problems, thus the total externalizing score was used in analyses. To identify children with attention problems, *t*-scores on the Attention Problems subscale were used to form two groups of children (those with and without clinically significant attention problems).

Teachers also rated children on their social competence at school using a teacher version of The Self-Perception Profile for Children (Harter, 1982; 1985). The measure has five subscales that include scholastic competence, social acceptance, athletic competence, physical appearance, and behavioral conduct. These scales were combined to form one measure of social competence for analyses (average correlation between scales, $r = .46$)

Social Competence: Child Self-Reports of Attributions and Loneliness

Child Loneliness and Social Dissatisfaction Questionnaire. The Child Loneliness and Social Dissatisfaction Questionnaire (Asher, Hymel, & Renshaw, 1984; Asher, Parkhurst, Hymel, & Williams, 1990) is a 24-item verbal questionnaire in which children are asked to respond to questions by answering on a 3-point scale "yes," "no," or "sometimes." The 16 primary items include questions regarding children's feelings of loneliness, children's appraisal or their current peer relation-

ships, children's perceptions of the degree to which important relationship provisions are being met, and children's perceptions of their social competence. The questionnaire has been shown in recent research (Cassidy & Asher, 1992) to be understood and reliably assessed in children aged 4 to 7. This measure also discriminates poorly accepted children and those with disruptive behavior problems. The reliability coefficients for the scale was .79 for internal consistency. The measure provides a single loneliness score for each child.

Child's Attributions. The attribution measure is an adaptation of Dodge and Newman's (1981) interview measure for younger children. The measure consists of four different scenarios that are familiar to young children, however the actor's intention is ambiguous. The child is presented with two alternative explanations about what happened, one attributing aggressive intent and the other characterizing the situation as an accident. The child is asked to choose between the two alternatives. The result is one total score ranging from 0 to 4, with 4 indicating the highest level of aggressive attribution.

Independent Observations of Peer Interactions in Laboratory: Peer Problem-Solving Interaction Communication-Affect Rating Coding System (PPS-I CARE)

Each child was asked to come to a play session in the clinic with his or her best friend. The friend was within 2 years of the target child's age and of the same sex. There were two sets of instructions given to the children during the 20-minute observation. For the first period, children were instructed to play cooperatively with their peer with the direction, "Make the best thing you can together." Toys eliciting cooperative play were provided (e.g., Lincoln Logs, Etch-A-Sketch). The second segment consisted of instructions designed to elicit competition. This was accomplished by taking the target child out of the room, ostensibly to show his or her parent a picture. Meanwhile, the friend was given a video game to play and told to play with game for 10 minutes. When the target child returned to the room, the child found the friend involved in an exciting computer game with exclusive control of the game. The situation typically elicited attempts to negotiate the computer control from the other child.

The PPS-I CARE coding system is a derivative of Gottman's MACRO and MICRO friendship observation measures (Gottman, 1986) and was developed by our staff (Webster-Stratton et al., 1991). The system was developed specifically to evaluate skills relevant to conduct-problem children and to provide a sensitive observational measure of behavior with peers. The coding system includes a number of items measuring both positive social skills and negative conflict tactics in the context of peer interactions across both a cooperative and competitive play segment. In the present study, positive social skills during the cooperative segment and negative conflict tactics during the competitive segment were assessed. The discriminant validity of the PPS-I CARE has been established by showing that children with conduct problems have significantly more negative conflict tactics and less positive skills than a matched comparison group (Webster-Stratton & Lindsay-Woolley, 1999).

It took approximately 6 months of weekly training and practice for observers to become reliable. To assess reliability, a second coder analyzed 30% of all videotapes, which were randomly selected. The percent agreement was calculated for each 5-minute segment and was based on occurrence of observed behaviors. Mean overall interrater agreement was 79% (range = 69–92%), and intraclass correlations calculated between observers was .95 for positive skills, .91 for negative conflict tactics, .85 for escalation, and .69 for failure.

Positive social skills were assessed during the cooperative play segment and were based on frequency of occurrence of 14 different behavioral categories that have been used in previous studies to reflect social competence (e.g., praise, agreement, sharing). Negative conflict tactics were assessed during the competitive play segment using 12 different behavior categories designed to be of relevance to children with conduct problems at this age (e.g., hitting and grabbing, see Table 1 for behavioral descriptors of each category).

In addition to positive social skills and negative conflict tactics, two other categories were coded based on frequency of occurrence. The first was labeled "escalation," which was assessed by computing incidences of reciprocal, negative interaction during the less structured cooperative play segment. These included interactions involving reciprocal physical and verbal negative behavior (e.g., grabbing, hitting, threatening). The number of times the child's friend engaged in these activities with the child was computed, thus this category was based on the interaction between children in the room. This category provided a measure of reciprocal aggression consistent with literature suggesting that escalation between children is more predictive of problems than behaviors displayed (Dodge et al., 1990).

Failure with peers was assessed during the competitive task and based on a frequency of times children attempted a positive interaction or social skill but failed with their peer (e.g., sharing but failing, suggestions that failed, requesting the computer game control but failing). This category was based on literature suggesting that children with conduct problems may have the necessary social skills, but peers fail to respond to them in social situations (Dodge et al., 1982; Hymel, 1986). Both the escalation and failure categories were unique in that they assessed the quality of the interaction between the target child and his or her friend. A child's score was based on the friend's reactions to their behavior, thus these categories provided an assessment of other children's responses to the target child. The behavioral descriptors used to score these four peer codes are included in Table 1. Means and standard deviations of the four behavior codes are included in Table 2.

To assess possible gender differences, one-way analyses of variance (ANOVAs) were conducted for each of the four behavior codes by gender. All four analyses were nonsignificant ($p > .10$ for all), suggesting that girls and boys in this sample displayed similar levels of each of these behaviors with their friends. Girls and boys were therefore combined in later analyses.

Results

Intercorrelations were conducted to assess the relations among observed behavior with peers, including positive social skills, negative conflict tactics, escalation, and

Table 1. Behavioral Descriptors of the Four Observed Peer Codes on the PPS I-CARE

Positive Social Skills (During Cooperative Task)
1. Praise of peer (such as "good job")
2. Agreement with peer
3. Asking for feedback or help ("Do you like this?")
4. Asking permission to do something or obtaining approval
5. Giving a reason for disagreeing
6. Making suggestions
7. Making requests
8. Making statements
9. Self-disclosure
10. Sharing
11. Offering (for example, a toy or game)
12. Caring
13. Exploring similarities and differences
14. Suggesting solutions

Negative Conflict Tactics (During Competitive Task)
1. Criticizing or giving negative feedback
2. Demanding attention
3. Negative talk (about parent, room, etc.)
4. Threatening
5. Smart talk
6. Frustration
7. Commanding
8. Grabbing
9. Hitting
10. Physically intrusive
11. Wrestling
12. Destructive behavior

Escalation (During Cooperative Task)
1. Reciprocated grabbing
2. Reciprocated hitting
3. Reciprocated physically intrusive behavior
4. Reciprocated wrestling
5. Reciprocated destructive behavior
6. Reciprocated threatening
7. Reciprocated smart talk
8. Reciprocated disagreements

Failure (During Competitive Task)
1. Asking permission and failing
2. Giving feedback and failing
3. Making request with which peer does not comply
4. Making a suggestion and failing
5. Sharing and failing
6. Offering a toy that peer refuses
7. Demanding attention and failing
8. Caring, not shared by peer
9. Commanding, and peer does not comply
10. Suggesting a solution and failing

Table 2. Means and Standard Deviations of the Four Observed Peer Behaviors on the PPS I-CARE

	Mean	*SD*	*Min*	*Max*
Positive Social Skills	13.09	9.50	0	46
Negative Conflict Tactics	36.84	17.55	0	96
Escalation With Peers	2.72	3.86	0	18
Failure With Peers	4.83	4.59	0	26

failure. The four peer codes were relatively uncorrelated, suggesting that they reflect separate skills at this age that cannot be assessed within a single construct. Only one significant correlation occurred between negative conflict tactics and failure during the competitive task ($r = .42$, $p < .01$), suggesting that failure with peers may lead to the use of more negative conflict tactics. Alternatively, the use of negative conflict tactics may lead to failed negotiation attempts with peers. In either case, the correlation of .42 suggests only moderate overlap in these behaviors and supports keeping the scales separate for analyses (see Table 3). Interestingly, escalation with peers was not correlated with positive social skills even though these two categories were coded during the same segment, suggesting that escalation does not necessarily cooccur with limited positive social skills ($r = -.07$).

Correlations Between Observed Behavior With Peers, Children's Self-Reports of Loneliness and Negative Attributions, and Teacher Ratings of Social Competence

Bivariate correlations were conducted to examine the relations among the measures assessing social competence, including the peer observation categories of positive social skills and failure, self-reported loneliness and negative attributions, and teacher reports of social competence at school. Overall, correlations among these variables were significant (see Table 3). Children's self-reports of loneliness were positively correlated with failure and negatively correlated with the positive social skills during observed peer interactions, suggesting that children who lack positive social skills and fail to negotiate play successfully with peers experience feelings of sadness and loneliness. Failure with peers in the observational task was associated negatively with teacher ratings of social competence at school. Children's negative attributions were associated with limited positive social skills and with negative teacher ratings at school.

Correlations Between Observed Behavior With Peers, Behavior Problems at Home, and Teacher Ratings of Behavior Problems at School

Observed antisocial behavior with peers, including negative conflict tactics and escalation, were correlated with school and home behavior problems, respectively. Escalation with peers was correlated with parent-rated behavior problems, suggesting that children who are unable to regulate their interactions with peers are also identified by parents as children who have externalizing behavior problems.

Table 3. Correlations Between Social Competence and Antisocial Behavior Observed With Peers, at Home, at School, and Measured With Child Self-Report

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
Social Competence									
Child Reports									
1. Loneliness	—								
2. Negative Attributions	.21*	—							
Observations With Peers (PPS-I CARE)									
3. Positive Social Skills	−.34**	−.25*	—						
4. Failure With Peers	.31**	.11	−.01	—					
Teacher Ratings at School									
5. Social Competence	−.13	−.27**	.07	−.20*	—				
Antisocial Behavior									
Observations With Peers (PPS-I CARE)									
6. Negative Conflict Tactics	−.01	−.16	.11	.42***	−.03	—			
7. Escalation	.18†	.24*	−.07	.11	−.04	.06	—		
Maternal Reports and Home Behavior									
8. Child Deviance (Observed)	−.11	.09	.10	.25**	−.01	.06	.13	—	
9. Externalizing Behavior	.04	.12	.04	.05	−.10	−.04	.28**	.01	—
Teacher Ratings at School									
10. Externalizing Behavior	.20*	.26**	−.11	.11	−.65***	.20*	.09	.07	.22*

Note: † $p \leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Negative conflict tactics were associated with teacher ratings of externalizing problems. Teacher and maternal ratings of externalizing problems were also moderately correlated. Interestingly, maternal reports of externalizing behavior and home observations of child deviance were uncorrelated, suggesting that the mothers' ratings of their children's behavior are not consistent with the behavior children seem to be engaging in with them during interactions.

Correlations Between Social Competence Variables, Including Self-Reports by Children and Observations With Peers, With Antisocial Behavior Observed With Peers, at Home, and at School

To compare the relations among social competence measures and measures of antisocial behavior, a series of correlations were conducted. First, the relation between children's self-report ratings and home (mother reports of externalizing behavior problems and observations of deviance at home on the DPICS) and school behavior (teacher-reported externalizing problems) was examined. Children's self-reports of loneliness and negative attributions were not associated with observed parent–child interactions or parent reports of externalizing behavior problems. However, both loneliness and negative attributions were related to teacher ratings of externalizing problems at school. Loneliness and negative attributions were also related to escalation with peers, suggesting that children who escalate to aggression with peers not only may develop negative attributions, but experience loneliness as well.

Failure with peers was correlated with increased deviance with parents as rated by home observers on the DPICS, suggesting that children who are unable to solve social problems with peers may also have difficulty solving problems with parents and thus engage in deviant behavior at home. Interestingly, the two observed behaviors with peers that were related to negative teacher ratings were negative conflict tactics during the competitive peer interaction sequence and failure to use skills successfully with peers. Negative conflict tactics were associated with externalizing problems at school, whereas failure was related to lower ratings of social competence. Children who use negative problem solving with peers may be unable to regulate their behavior in the school context, and these behavioral problems are apparent to teachers. These results are presented in Table 3.

In summary, the four observed behaviors with peers were associated with both social competence measures and antisocial behavior at home and at school in addition to self-reports of social competence by children. Self-report measures, including loneliness and negative attributions, showed the strongest associations with observed peer behavior with the exception of negative conflict tactics, which was uncorrelated with self-report measures. Self-report measures and observed behavior with peers were associated differentially with home and school behavior. Negative attributions, negative conflict tactics, and failure with peers were associated with teacher-rated social and behavior problems, whereas escalation and failure with peers during the observations were associated with parent-rated and observed home behavior problems. The exception was observed positive social skills with peers. These positive skills appeared to show limited association across contexts.[1]

Group Comparisons of Children With Attention Problems at Home and/or Escalation With Peers

The goal of the final set of analyses in this study was to examine more specifically children who displayed both attention problems and oppositional behavior problems (vs. those showing only oppositional behavior problems) and children who engaged in escalation with their peers during their visit to the clinic. Children were labeled as "escalators" if their frequency of escalations with peers was above the mean in this sample. Children were identified as having problems with hyperactivity and inattention if their score on the Child Behavior Checklist Attention problems scale was above a *t*-score of 65. We anticipated that children who were escalators with peers in addition to having high parent ratings of attention problems would show the highest levels of behavior problems at home and school in addition to higher levels of distress on self-report forms. A series of one-way ANOVAs were used to compare children in the three high-risk groups on their self-reported loneliness and negative attributions, observed behavior at home, and teacher reports of behavior problems and social competence at school. To make direct comparisons between high risk groups, children who were low on attention problems and did not escalate with peers were excluded from these analyses. Although these children did not exhibit either attention problems or escalation with peers, they did display other conduct problems that resulted in their referral to the clinic and inclusion in this sample. Thus these children did not represent a low problem group, but a group of children with other diverse problems, limiting their usefulness as a comparison group in these analyses.[2]

The results are presented in Table 4. In each analysis, the children who escalated with peers and were rated by parents as having attention problems showed the highest levels of self-reported loneliness, negative attributions, observed deviance at home, and school problems. In particular, children who were high on both escalation and inattention rated themselves as moderately more lonely than children who displayed attention problems without escalation. The same pattern emerged when group comparisons were made on negative attributions. In contrast, teachers rated escalating or inattentive children higher on behavior problems and lower on social competence than children who showed patterns of escalation only with peers (without comorbid attention problems). Children showing only attention problems at school (without escalation with peers) were not significantly different from children who showed both escalation with peers and attention problems. Observed deviance with mothers was highest in the escalation and inattentive group and was significantly different from both the other two groups of children.

Discussion

Peer relationship difficulties and the behavior problems associated with these difficulties are important to assess in early childhood because they are predictive of later maladjustment (Parker & Asher, 1987). Despite the importance of understanding these relationships for intervention and research, few behavioral observation systems have been designed specifically for children who have been identified with

Table 4. Group Comparisons of Children With Attention Problems at Home, Escalation With Peers

	Mean Scores for Groups of Children			
Dependent Variables	*Escalates/Inattentive (n = 15)*	*Escalates Only (n = 16)*	*Inattentive Only (n = 18)*	*F-Test (df 3,98)*
Self-Report				
Loneliness (LSDQ)	27.20 (6.5)[a]	23.86 (6.8)[ab]	21.61 (6.3)[b]	2.97†
Negative Attributions (AGG)	2.06 (1.5)[a]	1.75 (1.4)[ab]	.89 (1.1)[b]	3.61*
Home Problems				
Home Deviance (Observed)	19.78 (15.34)[a]	8.75 (7.6)[b]	11.26 (10.4)[b]	3.80**
School Problems				
Externalizing Problems (TRF)	69.20 (9.9)[a]	58.50 (12.9)[b]	62.59 (12.0)[ab]	3.24*
Social Competence (SPPC)	26.01 (6.2)[a]	33.76 (8.0)[b]	29.54 (9.1)[ab]	3.73*

Note: [a,b,ab] Means with different superscripts indicate significant differences using Duncans comparisons.
† $p \leq .10$. * $p \leq .05$. ** $p \leq .01$.

conduct problems. Most observational coding systems that have been designed to assess qualitative aspects of peer relationships have used normative samples or naturalistic coding schemes, which do not help us understand the specific social difficulties concerning children with conduct problems or develop interventions to target this population.

The PPS-I CARE, an observational coding system developed by Webster-Stratton et al. (1991), was used specifically to examine the qualitative interactions of children and their peers in preschool and early elementary school. The coding system has a number of advantages over previous systems in that it examines specific types of negative conflict tactics and social skills in a laboratory situation under conditions that require a child and his or her friend to use social skills and conflict management (Coie et al., 1990). With this system, in addition to coding positive social skills and negative conflict tactics, we were able to assess behavioral "escalation" with peers, and "failure" to negotiate conflict with peers, codes that assessed the reciprocal nature of these relationships. These four observational scales were differentially related to children's own self-report measures, home behavior, and school behavior problems (as reported by teachers).

Measures in this study were organized into two broad domains: social competence and antisocial behavior. Correlations within and between these domains were examined. Correlations among variables assessing social competence were generally significant, with observed social competence with peers (positive skills and failure) related to loneliness, negative attributions, and teacher ratings of social competence. Antisocial behavior with peers (negative conflict tactics and escalation) was associated with both school and home behavior problems, respectively.

Correlations between domains were then examined to compare the relations among social competence and antisocial behavior with peers, at home, and at school. Interestingly, children's self-reports of loneliness and negative attributions did not relate to parent reports of behavior problems at home or interactions observed between parents and children. The results suggest that these child self-report measures have little relevance to children's behavioral interactions with their parents. However, negative attributions were related to teacher-rated externalizing behaviors and lower social competence. Perhaps negative attributions have more impact on observable behavior at school, as children interpret their behavior and children's responses negatively, involving teachers in these disputes. Loneliness, however, was not associated with either teacher- or parent-reported social behavior. As other research has suggested (Boivin & Hymel, 1997; Williams & Asher, 1987), lonely children may be withdrawn, submissive, or victimized at school, and thus are less likely to capture teacher's attention as a child with behavior problems.

In contrast to self-report measures, when the relation between observed peer behavior, home behavior, and school behavior was examined, a different pattern of results emerged. Observations of children's escalation and failure with peers were related to parent reports of behavior problems at home as well as observations of children interacting with their parents. However, neither escalation nor failure were related to teacher reports of externalizing problems. Failure was associated with teacher reports of low social competence. Negative conflict tactics, however, were related to teacher-reported externalizing problems. Thus overall, negative

conflict tactics and failure with peers in addition to self-reported negative attributions were related to teacher reports of problems at school, whereas escalation with peers and failure with peers were related to behavior problems at home. The results suggest that different types of behavior are important in different contexts.

Perhaps children who engage in escalation with peers are also likely to do so with parents, but less likely to engage teachers in these exchanges because they have not yet generalized this behavior to school. It is interesting that both escalation and failure were associated with home behavior problems given the reciprocal nature of these two codes (e.g., scores were dependent on the reaction of the friend in the lab). It may be that children with conduct problems elicit similar responses from people with whom they have close relationships, such as parents and friends. However, negative conflict tactics and negative attributions may directly impact teachers as they observe these negative conflicts with peers that require intervention. Parents, on the other hand, have less exposure to children's peer experiences and are thus less likely to identify children with these problems.

Thus, in early childhood, some of the behavior problems that children have at home appear in the context of peer relationships before they generalize to school. Peers at this age may serve an important developmental function in providing the relationship context for the transfer of behavior problems from home to school. That is, as behavior problems develop in the context of parent–child relationships, children learn these patterns of interaction and begin using them in their other close relationships. One example is failure with peers, which was associated with both parent–child interactions and teacher ratings of social problems. This model is similar to research and theory that has suggested that in early adolescence, interactions with parents lead to the development of aggressive behavior and the formation of a deviant peer group, which becomes the context for the development of antisocial behavior and substance abuse (Dishion, Duncan, Eddy, Fagot, & Fetrow, 1994; Dishion, Patterson, & Griesler, 1994).

The quality of children's peer relationships also appears to impact a child's own self-perceptions and social cognitions. Observations with peers were related to self-reported feelings of loneliness and negative attributions. Thus, although failure and escalation with peers were not strongly related to teacher-reported behavior problems, they were associated with children's negative attributions, and attributions were related across contexts to school behavior. Additionally, failure with peers was related to both loneliness and limited social competence at school. The relation between the peer experience and later behavior problems may be mediated by children's own self perceptions and social cognitions. In particular, social cognitive biases may organize children's behavioral responses, leading to increased externalizing behavior at school (Crick & Dodge, 1994). Although not longitudinal, our data are consistent with this model.

Previous research has suggested that loneliness in childhood is related to peer rejection, with children who are not accepted by peers reporting increased loneliness (e.g., Asher & Wheeler, 1985). In this study, children's self-reports of loneliness were significantly related to low positive social skills as well as to failed attempts to use social skills successfully with peers. The results have some interesting implications for the assessment of peer relations at this age. Not only does this relation

between perceived loneliness and actual observations of children's interactions with peers validate the coding system, but the results suggest that understanding a child's internal feelings is also important in assessing peer relations of children with conduct problems. Interestingly, loneliness was related to low social skills and failed attempts but not to negative conflict tactics or escalation with friends during peer interactions. This does not necessarily mean that these children are not lonely, rather, they do not report loneliness on the self-report measure. There are several possible interpretations of these findings. Perhaps children who display more overt behavioral problems with peers are less self-aware, and this is reflected in their responses to self-report measures, or perhaps these children do not feel lonely (Hymel et al., 1993; Zakriski & Coie, 1996). In either case, the relation between loneliness and lack of positive social skills, but not with negative conflict tactics, suggests specificity in the relation between loneliness and peer interactions. Future longitudinal research should examine the contributions of observed positive social skills and loneliness in the prediction of later peer rejection and conduct problems.

Previous methodological research examining the relation among child behaviors in different situations (with peers, at home, and at school) has typically supported an ecological model. That is, young children vary in their behaviors across different ecological contexts as a function of the environment and their relationships in those contexts. Cross-situational relations between children's behavior may also vary based on a child's individual factors or behavioral profile. For example, some behaviors may be more strongly associated across contexts than others, and children with more severe behaviors likely experience higher cross-setting stability (Loeber, 1982; Loeber & Dishion, 1984). One such behavior is hyperactivity, or attention problems, which can impact not only a child's peer behavior but also children's behavior with parents and teachers. Thus children who display attentional behavior problems may be more likely to show increased relations between behavior in different contexts. In the last set of analyses, we examined subgroups of children showing attention problems and difficulty interacting with their peers. To limit the number of analyses, a peer behavior closely associated with attention problems (escalation) was examined. Indeed, children who displayed both escalation with peers and attention problems (rated by parents) showed moderately higher levels of loneliness, home behavior problems, school behavior problems, and lower social competence.

Differences between subgroups on self-report, home behavior, and school behavior were also interesting. Children who were high on escalation and attention problems differed from children who were high on attention problems without escalation on self-report measures, but they did not differ from children who were high in terms of their escalation with peers and low in terms of their parent-rated attention problems. In contrast, children high on both escalation and attention problems differed from children who were high on escalation with peers and low on attention problems on teacher reports of behavior and social competence, but they did not differ from those children high on attention problems and low on escalation. The results suggest that escalation is more important in children's ratings of their own behavior and their social cognitions, whereas attention problems are more important to teachers in their perceptions of child problems. The results also suggest that examining subgroups of children who are displaying more severe forms

of conduct problems may increase relations across contexts. Not only are these children at greater risk, but relations among types of assessments used as well as across different environments (school and home) increases when examining behavior within this particular subgroup.

In previous research, the PPS-I CARE system was sensitive to treatment effects when used as a basic measure of positive and negative peer behaviors (Webster-Stratton & Hammond, 1997). Results from this study also have implications for peer interventions with this age group and these particular behavior problems. Children who display attentional problems combined with conduct problems are obviously at greatest risk, with higher levels of self-reported distress as well as home and school problems. Additionally, this type of coding system allows for intervention efforts to be aimed specifically at the behaviors exhibited with friends. Children can bring their friends in to the clinic for a preassessment, and specific play skills, deficits, or both can be targeted in the intervention. Ongoing assessment during intervention can be conducted, and children can be given specific feedback and coaching during their interactions with friends. Interventions could even be targeted directly at a child's "best friendship" to increase support and stability of at least one significant peer relationship that may lead to feelings of support and decreased overall risk (Renshaw & Brown, 1993).

Several limitations of this research warrant discussion. Data were collected at the same time, thus predictability of the measure cannot be examined. A second limitation is the lack of classroom observations of peers, target children, and classroom behavior. Classroom observations would have strengthened the validity of teacher reports and provided a naturalistic comparison with our lab assessments. A third limitation involved the use of a conduct problem sample. As previously discussed, children with conduct problems typically have difficulty making friends. However, in this study, the children chose a friend to participate in the task with them, thus the child's choice of friend may also have impacted the results. That is, children with conduct problems may have chosen more aggressive peers to bring to the clinic, limiting the generalizability of this peer interaction to other interactions with children. Additionally, the range on measures was likely restricted, and generalizability is limited to high-risk samples of children. Future research should examine the stability of the PPS-I CARE over time in addition to the predictability of these observations to ongoing conduct problems in later years.

Acknowledgments: This research was supported by funding from the Prevention Research Branch of the National Institute of Mental Health and Research Scientist Development Award MH00988-05 from NIMH. The authors are grateful to a number of people who assisted in extensive work related to child assessments and data collection: Kate Calhoun, Wendy Froman, Karrin Grutz, Doris Harkness, Terri Hollingsworth, Nat Houtz, Vivian Magrams, Susan Reanier, Kathy Rogers, Jenny Tsai, and Aaron Wallis. Special appreciation to Lois Hancock for directing this project and to Mary Hammond for data management.

Notes

1. Fathers were not included in the presentation of the data because of the limited sample size and the high correlation between father and mother reports ($r = .69, p < .0001$). However, correlations

between fathers' ratings and the measures were conducted to confirm that the pattern would be similar to those of mothers. Fathers' ratings of externalizing behavior were related to both observed peer escalation ($r = .32$, $p < .01$) and negative attributions ($r = .24$, $p < .05$). No other significant correlations emerged from these analyses.

2. Means of the dependent variables from the low/low group are provided here for comparison and are as follows: loneliness ($M = 25.07$, $SD = 7.82$); negative attributions ($M = 1.55$, $SD = 1.4$), home deviance ($M = 17.07$, $SD = 14.97$), teacher-rated externalizing behavior ($M = 63.17$, $SD = 11.62$), teacher-rated social competence ($M = 31.68$, $SD = 8.60$). Note that in all cases, these means are lower than the escalates and inattentive group, but not substantially lower than the other two groups.

References

Achenbach, T. M. (l991). *Integrative guide for the 1991 CBCL/4-18, YSR and TRF profiles.* Burlington: University of Vermont.

Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin, 101*, 213–232.

Asher, S. R., Hymel, S., & Renshaw, P. D. (1984). Loneliness in children. *Child Development, 55*, 1456–1464.

Asher, S. R., Parkhurst, J. T., Hymel, S., & Williams, G. A. (1990). Peer rejection and loneliness in childhood. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 253–273). New York: Cambridge University Press.

Asher, S. R., & Wheeler, V. A. (1985). Children's loneliness: A comparison of rejected and neglected peer status. *Journal of Consulting and Clinical Psychology, 53*, 500–505.

Bierman, K. B., Smoot, D. L., & Aumiller, K. (1993). Characteristics of aggressive-rejected, aggressive (non-rejected), and rejected (non-aggressive) boys. *Child Development, 64*, 139–151.

Boivin, M., & Hymel, S. (1997). Peer experiences and social self-perceptions: A sequential model. *Developmental Psychology, 33*, 135–145.

Brooks, R. B. (1994). Children at risk: Fostering resilience and hope. *American Journal of Orthopsychiatry, 64*, 545–553.

Cairns, R. B., Cairns, B. D., & Neckerman, H. J. (1989). Early school dropout: Configurations and determinants. *Child Development, 60*, 1437–1452.

Campbell, S. B., & Ewing, L. J. (1990). Follow-up of hard to manage preschoolers: Adjustment at age 9 and predictors of continuing symptoms. *Journal of Child Psychology and Psychiatry, 31*, 871–889.

Cassidy, J., & Asher, S. R. (1992). Loneliness and peer relations in young children. *Child Development, 63*, 350–365.

Cillesson, A. H., Van Ijzendoorn, H. W., Van Lieshout, C. F., & Hartup, W. W. (1992). Heterogeneity among peer rejected boys: Subtypes and stabilities. *Child Development, 63*, 893–905.

Coie, J. D., Dodge, K. A., & Kupersmidt, J. B. (1990). Peer group behavior and social status. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 17–59). New York: Cambridge University Press.

Coie, J. D., & Kupersmidt, J. B. (1983). A behavioral analysis of emerging social status in boys' groups. *Child Development, 47*, 400–413.

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*, 74–101.

Crick, N. R., & Ladd, G. W. (1988, March). *Rejected and neglected children's perceptions of their peer experiences: Loneliness, social anxiety, and social avoidance.* Paper presented at the Southeastern Conference on Human Development, Charleston, NC.

Crick, N. R., & Ladd, G. W. (1993). Children's perceptions of their peer experiences: Attributions, loneliness, social anxiety, and social avoidance. *Developmental Psychology, 29*, 244–254.

Dishion, T. J., Andrews, D. W., & Crosby, L. (1995). Antisocial boys and their friends in adolescence: Relationship characteristics, quality, and interactional processes. *Child Development, 66*, 139–151.

Dishion, T. J., Duncan, T. E., Eddy, M. J., Fagot, B. I., & Fetrow, R. (1994). The world of parents and peers: Coercive exchanges and children's social adaption. *Social Development, 3*, 255–268.

Dishion, T. J., Patterson, G. R., & Griesler, P. C. (1994). Peer adaptations in the development of

antisocial behavior: A confluence model. In L. R. Huesmann (Ed.), *Aggressive behavior: Current perspectives* (pp. 61–95). New York: Plenum.

Dodge, K. A. (1980). Social cognition and children's aggressive behavior. *Child Development, 51*, 162–170.

Dodge, K. A., Coie, J. D., & Brakke, N. P. (1982). Behavior patterns of socially rejected and neglected preadolescents: The roles of social approach and aggression. *Journal of Abnormal Child Psychology, 10*, 389–410.

Dodge, K. A., Coie, J. D. , Pettit, G. S., & Price, J. M. (1990). Peer status and aggression in boys' groups: Developmental and contextual analyses. *Child Development, 61*, 1289–1309.

Dodge, K. A., & Frame, C. L. (1982). Social cognitive biases and deficits in aggressive boys. *Child Development, 53*, 620–635.

Dodge, K. A., & Newman, J. P. (1981). Biased decision making processes in aggressive boys. *Journal of Abnormal Psychology, 90*, 375–379.

Edelbrock, C., Costello, A. J., Dulcan, M. K., Conover, N. C., & Kalas, R. (1986). Parent-child agreement on child psychiatric symptoms assessed via structured interview. *Journal of Child Psychology and Psychiatry, 27*, 181–190.

French, D. C., & Waas, G. A. (1985). Behavior problems of peer-neglected and peer rejected elementary age children: Parent and teacher perspectives. *Child Development, 56*, 213–224.

Goldman, J. A., Corsini, D. A., & deUrioste, R. (1980). Implications of positive and negative sociometric status for assessing the social competence of young children. *Journal of Applied Developmental Psychology, 1*, 209–220.

Gottman, J. M. (1977). Toward a definition of social isolation in children. *Child Development, 48*, 513–517.

Gottman, J. M. (1983). How children become friends. *Monographs of the Society for Research in Child Development, 48*(2, Serial No. 201).

Gottman, J. M. (1986). The observation of social process. In J. M. Gottman & J. G. Parker (Eds.), *The conversations of friends: Speculations on affective development* (pp. 51–100). New York: Cambridge University Press.

Gottman, J. M., Gonso, J., & Rasmussen, D. (1975). Social interaction, social competence, and friendship in children. *Child Development, 46*, 709–718.

Gottman, J., & Mettetal, G. (1987). Speculations about social and affective development: Friendship and acquaintanceship through adolescence. In J. M. Gottman & J. G. Parker (Eds.), *The conversations of friends: Speculations on affective development* (pp. 192–240). New York: Cambridge University Press.

Gresham, F. M. (1981). Assessment of children's social skills. *Journal of School Psychology, 19*, 120–133.

Harter, S. (1982). The Perceived Competence Scale for Children. *Child Development, 53*, 87–97.

Harter, S. (1985). *Manual for the Self-Perception Profile for Children.* Denver, CO: University of Denver.

Harter, S. (1986). Cognitive-developmental processes in the integration of concepts about emotions and the self. Special Issue: Developmental perspectives on social-cognitive theories. *Social Cognition, 4*, 119–151.

Hartup, W. W., Glazer, J., & Charlesworth, R. (1967). Peer reinforcement and sociometric status. *Child Development, 38*, 1017–1024.

Herjanic, B., & Reich, W. (1982). Development of a structured psychiatric interview for children: Agreement between child and parent on individual symptoms. *Journal of Abnormal Child Psychology, 10*, 307–324.

Hinshaw, S. P. (1987). On the distinction between attention deficits/hyperactivity and conduct problems/aggression in child psychopathology. *Psychological Bulletin, 101*, 443–463.

Hymel, S. (1986). Interpretations of peer behavior: Affective bias in childhood and adolescence. *Child Development, 57*, 431–445.

Hymel, S., Bowker, A., & Woody, E. (1993). Aggressive versus withdrawn unpopular children: Variations in peer, teacher and self-perceptions in multiple domains. *Child Development, 64*, 879–896.

Kurdek, L. A., & Krile, D. (1982). A developmental analysis of the relation between peer acceptance and both interpersonal understanding and perceived social self-competence. *Child Development, 53*, 1485–1491.

Ladd, G. W. (1983). Social networks of popular, average, and rejected children in school settings. *Merrill-Palmer Quarterly, 29*, 282–307.

Ladd, G. W., Kochenderfer, B. J., & Coleman, C. C. (1996). Friendship quality as a predictor of young children's early school adjustment. *Child Development, 67*, 1103–1118.

Ladd, G. W., & Price, J. P. (1987). Predicting children's social and school adjustment following the transition from preschool to kindergarten. *Child Development, 58*, 16–25.

Loeber, R. (l982). The stability of antisocial child behavior: A review. *Child Development, 53*, 1431–1446.

Loeber, R., & Dishion, T. J. (l984). Boys who fight at home and school: Family conditions influencing cross-setting consistency. *Journal of Consulting and Clinical Psychology, 52*, 759–768.

Loeber, R., Green, S. M., & Lahey, B. B. (1990). Mental health professionals perceptions of the utility of children, mothers, and teachers as informants on childhood psychopathology. *Journal of Clinical Child Psychology, 19*, 136–143.

Masters, J. C., & Furman, W. (1981). Popularity, individual friendship selection, and specific peer interaction among children. *Developmental Psychology, 17*, 344–350.

Parker, J. G., & Asher, S. R. (1987). Peer relations and later personal adjustment: Are low accepted children at-risk? *Psychological Bulletin, 102*, 357–389.

Pope, A. W., Bierman, K. L., & Mumma, G. (1991). Aggression, hyperactivity, and inattention-immaturity: Behavior dimensions associated with peer rejection in elementary school boys. *Developmental Psychology, 27*, 663–671.

Renshaw, P. D., & Brown, P. J. (1993). Loneliness in middle childhood: Concurrent and longitudinal predictors. *Child Development, 64*, 1271–1284.

Robinson, E. A., & Eyberg, S. M. (1981). The dyadic parent-child interaction coding system: Standardization and validation. *Journal of Consulting and Clinical Psychology, 49*, 245–250.

Robinson, E. A., Eyberg, S. M., & Ross, A. W. (1980). The standardization of an inventory of child conduct problem behaviors. *Journal of Clinical Child Psychology, 9*, 22–28.

Rubin, K. H., & Daniels-Beirness, T. (1983). Concurrent and predictive correlates of sociometric status in kindergarten and grade one children. *Merrill-Palmer Quarterly, 29*, 337–352.

Shantz, C. U., & Hobart, C. J. (1989). Social conflict and development: Peers and siblings. In T. J. Berndt & G. W. Ladd (Eds.), *Peer relationships in child development* (pp. 71–94). New York: Wiley.

Sobel, M. P., & Earn, B. M. (1985). Assessment of children's attributions for social experience: Implications for social skills training. In B. H. Schneider, K. H. Rubin, & J. E. Ledingham (Eds.), *Children's peer relations: Issues in assessment and intervention* (pp. 93–110). New York: Springer-Verlag.

Stormshak, E. A., Bierman, K. L., Bruschi, C., Dodge, K. A., Coie, J. D., & the Conduct Problems Prevention Research Group. (1999). The relation between behavior problems and peer preference in different classroom contexts. *Child Development, 70*, 169–182.

Stormshak, E. A., Bierman, K. L., & the Conduct Problems Prevention Research Group (1998). The implications of four developmental patterns of disruptive behavior problems for school adjustment. *Development and Psychopathology, 10*, 451–467.

Tarullo, L. B., Richardson, D. T., Radke-Yarrow, M., & Martinez, P. E. (1995). Multiple sources in child diagnosis: Parent-child concordance in affectively ill and well families. *Journal of Clinical Child Psychology, 24*, 173–183.

Taylor, A. (1989). Predictors of peer rejection in early elementary grades: Roles of problem behavior, academic achievement, and teacher preference. *Journal of Clinical Child Psychology, 18*, 360–365.

Webster-Stratton, C. (1985). Mother perceptions and mother-child interactions: Comparison of a clinic-referred and a non-clinic group. *Journal of Clinical Child Psychology, 14*, 334–339.

Webster-Stratton, C., & Hammond, M. (1988). Maternal depression and its relationship to life stress, perceptions of child behavior problems, parenting behaviors, and child conduct problems. *Journal of Abnormal Child Psychology, 16*, 299–315.

Webster-Stratton, C., & Hammond, M. (1997). Treating children with early-onset conduct problems: A comparison of child and parent training interventions. *Journal of Consulting and Clinical Psychology, 65*, 93–109.

Webster-Stratton, C., Hollinsworth, T., & Rogers, K. (1991). *The peer problem-solving interaction communication-affect rating coding system (PPS-I CARE).* Unpublished manuscript, University of Washington.

Webster-Stratton, C., & Lindsay-Woolley, D. (1999). Social competence conduct problems in young children: Issues in assessment. *Journal of Clinical Child Psychology, 28*, 25–43.

Williams, G. A., & Asher, S. R. (1987, April). *Peer- and self-perceptions of peer rejected children: Issues in classification and subgrouping.* Paper presented at the biennial meeting of the Society for Research in Child Development, Baltimore, MD.

Wright, J. C., Giammarino, M., & Parad, H. W. (1986). Social status in small groups: Individual-group similarity and the social "misfit". *Journal of Personality and Social Psychology, 50*, 523–536.

Zakriski, A. L., & Coie, J. D. (1996). A comparison of aggressive-rejected and nonaggressive-rejected children's interpretations of self-directed and other-directed rejection. *Child Development, 67*, 1048–1070.