

Assessing Children's Peer Relationships

Debra J. Pepler & Wendy M. Craig

Peers have both positive and negative influences on children; therefore, considerable attention has focused on assessing peer relationships and friendships through childhood and adolescence. The present article provides an overview of the main methods of assessing peer relationships. The adaptive nature of children's peer relations has been assessed through four main methodologies: (1) asking the children themselves about elements of peer relations and friendships; (2) asking children about their perceptions of others within the peer group; (3) asking adults (i.e. parents and teachers) about the peer relations skills of children in their care; and (4) directly observing children during interactions with peers. Each of these approaches is described, with attention to relative strengths and weaknesses and their suitability for assessing peer relations in early childhood, middle childhood, and adolescence.

Keywords: Peer relationships; assessment; observations; social adjustment

Assessing children's peer relations

Peer relations refer to the interactions among age-mates (Hartup, 1986). Interest in peer relations has burgeoned in the past three decades due to its developmental significance. There is a clear consensus among parents, educators, and researchers that peer relationships provide a unique and essential contribution to emotional and social development (Asher & Coie, 1990; Hartup, 1986). Hartup (1996) notes that peers affect children's development in two ways. Within the broader peer context, children's developmental course is affected by acceptance or rejection within the peer group. Dyadic relationships, or friendships, also shape children's development in potentially positive (e.g. promoting social skills) and negative ways (e.g. engaging in deviant activities). Given the developmental significance of peer relations, considerable attention has focused on assessing peer relationships and friendships through childhood and adolescence.

The goal of the present article is to provide an overview of the main methods of assessing peer relationships. For this paper, we consider the quality of children's social interactions (i.e. sociability) as a primary indicator of successful peer relations. The adaptive nature of children's peer relations has been assessed through four main methodologies: (1) asking the children themselves about

elements of peer relations and friendships; (2) asking children about their perceptions of others within the peer group; (3) asking adults (i.e. parents and teachers) about the peer relations skills of children in their care; and (4) directly observing children during interactions with peers. Each of these approaches is described, with attention to their relative strengths and weaknesses. A developmental perspective is central to our consideration of the assessment strategies since some approaches are more effective than others for assessing peer relations in early childhood, middle childhood, and adolescence. Table 1 provides a summary of the utility of each approach within each developmental period.

Self-reports

The strategy of asking children to report on their peer relations has often been used in applied research and interventions. Self-report data are based on the assumption that the actor has access to more samples of behaviour than have observers. This methodology can be used to assess children's social and emotional behaviours (e.g. Youth Self Report; Achenbach & Edelbrock, 1991), as well as the qualitative features of friendships, such as the provision of companionship, level of intimacy, and conflict (e.g. Berndt & Perry, 1986; Furman & Buhrmester, 1985; Parker & Asher, 1993).

Debra J. Pepler
York University,
Toronto,
Ontario M3J 1P3,
Canada

Wendy M. Craig
Queen's University,
Kingston,
Ontario K7L 3N6,
Canada

Table 1. Utility of peer assessment methodologies by developmental period

Methodology	Developmental period		
	Early childhood	Middle childhood	Adolescence
Self-reports	No	Yes	Yes
Peer assessments	Yes, if adapted	Yes	Yes
Adult reports	Yes	Yes	Parent, not teacher
Observations	Yes	Yes	Yes, if structured

The advantage of self-ratings is that they are relatively easy and inexpensive to gather and children are able to report on their social experiences across multiple contexts. Self-reports have frequently been used to study the peer relations of aggressive children. For example, self-report questionnaires have been used to determine the frequency of children's bullying behaviour (Charach, Pepler, & Ziegler, 1995; Olweus, 1991) and the quality of their peer relations (Pepler, Craig, & Roberts, 1995). Children's own reports of antisocial behaviours are often more accurate than adults' reports as children's deviant behaviours are often covert and not within the purview of adults (e.g. Olweus, 1991).

The primary disadvantage of asking children to report on their behaviour is the potential for bias. For example, our observations of bullying indicated a higher frequency of this problem behaviour than indicated by children's self-reports (Craig & Pepler, 1997). Children are often reluctant to admit they are causing trouble (Loeber et al., 1989). Given that children's self-reports are subject to social desirability, it is important to present the questionnaire as having no right and wrong answers.

In general, it is important to consider children's level of cognitive and social understanding in relation to their ability to report on their own behaviour. Aggressive children, in particular, are often unreliable in self-reporting. Their self-reports tend to be positive and discrepant from teachers' reports and playground observations (Pepler, Craig, et al., 1995). The lack of reliability in aggressive children's self-reports may derive from social cognitive deficits and biases which affect their ability to recognise an aggressive situation and to evaluate their responses (Dodge et al., 1986).

Developmental considerations are important in the decision to use self-reports. This methodology relies on the cognitive ability to evaluate oneself and to interpret, process, and respond at the level of the questionnaire. Therefore, self-reports are seldom used with preschool children, who tend to hold relatively undifferentiated views of their behaviours in relation to peers (Younger,

Schwartzman, & Ledingham, 1985). In middle childhood, some children may still lack the ability to reflect on their behaviours in comparison to their peers to provide accurate evaluations of their sociability. By adolescence, the cognitive issues are not a concern, but adolescents may be reluctant to share information about their relations to and activities with close friends.

Peer assessments

Researchers often ask children to report on the sociability of their peers (Coie & Dodge, 1988; Masten, Morrison, & Pellegrini, 1985; Putallaz & Wasserman, 1989). Peer assessments include questions about prosocial and aggressive behaviours, social support, friendship, peer acceptance, and sociometric status. Two dimensions of children's sociability are measured by peer assessments: friendships and general acceptance within the peer group. Questions about friendship assess the qualities of the relationship between individual children. In contrast, peer acceptance or rejection is a group referent construct that describes the central tendency for children's relations within the peer group (Parker & Asher, 1993).

There are many advantages to using peer assessments. First, peers spend a great deal of time in each other's company, often away from adult supervision. Therefore, peer reports may be more accurate than adult reports as they are more likely to be present during both prosocial and antisocial interactions (Craig & Pepler, 1995). Second, when measures are obtained from a class of children, as in the case for many peer assessments, it is akin to having multiple informants. The multiple perspectives serve to increase reliability and validity of the assessments of individual children's social behaviours. Third, peer perceptions are important not only for assessing sociability, but also for understanding children's acceptance within the peer group which, in turn, contributes to social adjustment.

There are also disadvantages associated with peer reports. Since peer perceptions are remarkably stable (Hymel, Wagner, & Butler, 1990), they are not likely to be sensitive

to improvements in children's social behaviours following an intervention. This stability is particularly problematic for aggressive children, who tend to see peers as hostile—a perception that is reciprocated by their peers. These biases may support hostile interactions and continuing negative perceptions of aggressive children (Dodge, 1980). The peers' stable and potentially negative perceptions are reflected in the finding that peers tend to assign more deviant scores to extreme groups than do teachers (Ledingham et al., 1982). The stability of the hostile and negative perceptions of the peer group undermines the validity of their reports.

Below, we briefly describe some specific assessment measures of these two constructs in an attempt to highlight trends in the research.

Identification of friends

The traditional method for identifying friendship is with reciprocal nominations (Bukowski & Hoza, 1989). Typically, children are presented with a class list and asked to indicate who is their best friend and/or their three closest friends. If two children independently nominate each other, it can be assumed that these children are friends. This method is limited by the assumption that friends are in the same classroom. With older children, it is possible to ask them to write in any friend's name, regardless of their school placement. In assessing friendship qualities, children are often asked about the activities, conflicts, and loyalties they have with friends (e.g. Armsden & Greenberg, 1987). Children's peer networks (i.e. the group of children with whom they associate) can be derived by examining multiple friendship choices (e.g. Connolly & Konarski, 1994).

Peer sociometrics

Peer sociometrics commonly involve negative and positive nominations that are used to differentiate between likeability (social preference) and social visibility (social impact) (Coie, Dodge, & Coppotelli, 1982). Social preference is the standardised difference of acceptance minus rejection, whereas social impact is the standard sum of acceptance plus rejection. Generally, children nominate three classmates with whom they like to play most and three with whom they like to play least. In addition, they rate how much they like to play with each of their classmates. For young children, pictures of classmates are used to facilitate the nominations. Scores are standardised within classroom yielding five classifications: popular, rejected, neglected, controversial, and average (Asher & Dodge, 1986). The percentage of children in each group varies with age. Sociometric classifications have been validated by studies indicating behavioural differences among groups. In a meta-analysis, Newcomb and his colleagues concluded that rejected children are more aggressive and withdrawn, and less socially and cognitively skilled than average children. Neglected children are more aggressive, disruptive, interact with others less, and display fewer prosocial skills than average children (Newcomb, Bukowski, & Pattee, 1993).

Sociometric assessments rely on some form of negative evaluation of peers. School staff often raise concerns that the negative nominations will lead to increased negative interactions. Observational research with young children found no negative effect of either positive or negative nominations on children's interactions (Hayvren & Hymel, 1984).

Peer nominations

Peer nominations are gathered by asking children to identify children in their class who display certain social characteristics (e.g. gets into fights, is a good leader). One form of peer nomination is the 'class play' methodology in which children assign fictitious social roles to their classmates for an upcoming dramatic performance. Masten et al.'s (1985) version of this method yields scores in three domains: Sociability-Leadership, Aggressive-Disruptive, and Sensitive-Isolated. The Pupil Evaluation Inventory (Pekarik et al., 1976) is a similar measure with three factors: Likeability, Aggression, and Withdrawal. The Peer Nomination Inventory (Perry, Kusel, & Perry, 1988) identifies aggressive and victimised children. The factors derived from this form of peer nomination have strong internal consistency and stability over both short-term and long-term intervals (Masten et al., 1985; Newcomb & Bukowski, 1983; Pekarik et al., 1976).

In summary, there are many advantages to peer assessments. Before choosing a measure, it is essential to review the items of the scales to ensure that they assess the behavioural dimensions of interest. The strength of peer assessments, with ratings from many children, is also a drawback. Unlike reports from individual children or adults, peer assessments with data from whole classes of children are labour-intensive to gather, collate, and analyse.

Adult reports

Traditionally, parents and teachers have been the most important sources of data on children's behavioural, emotional, and social functioning (e.g. Achenbach, McConaughy, & Howell, 1987; Behar & Springfield, 1974; Fagot, 1984; Morris & Arrant, 1978; Tremblay et al., 1992). In clinical settings, adults familiar with the child's behaviour are often the predominant and sometimes the only source for diagnosis and intervention data. Both parents and teachers have close relationships with children in their care and opportunities to observe them for prolonged periods. Given the different contexts in which parents and teachers observe children, they bring different perspectives to the assessments of a child's sociability.

Parent and teacher perceptions of a child's sociability are generally assessed with a checklist. Often both teachers and parents are asked to rate children's behaviours (e.g. Boyle et al., 1993; Glow, Glow, & Rump, 1982; McCombs et al., 1990; Pepler, Craig, et al., 1995). The agreement between parents and teachers on behavioural ratings is

generally moderate. In the Ontario Child Health Study, there were significant correlations (range .41 to .52) between parent and teacher ratings of conduct, oppositional, and attention-deficit disorders (Boyle et al., 1993). In general, parents tend to report more problems than teachers. The advantages and disadvantages specific to parent and teacher reports are briefly summarised below.

Parent reports

Parents are most familiar with their own children. Parents not only observe their children over long periods of time through many developmental stages, but they also observe them in many social circumstances. With this extensive knowledge, parents are in a strong position to provide reports of social, emotional, and behavioural problems of children and adolescents (e.g. Achenbach, 1991a, 1992), as well as reports of social skills (e.g. Gresham & Elliott, 1990).

Parent ratings of children's sociability and behaviour problems must be considered carefully, however, as they may be systematically biased. Fergusson and Horwood (1987) found that mothers who are depressed tend to rate their children more negatively than do nondepressed mothers. Parent ratings may also be positively biased, given the involvement and identification with their children.

Teacher reports

There are several advantages to using teachers to assess children's sociability (e.g. Achenbach, 1991b). Their judgements of an individual child are informed by that child's behaviour and their interactions with peers. With their experience of large numbers of children, teachers are able to judge a child's social development in relation to others of his/her age. Teachers, like peers, have long-term and consistent experiences with children and see them in a variety of school contexts. Because teachers change every year, their ratings may be less susceptible to systematic biases than parent or self-ratings. LaGreca and Silverman (1993) report a generally high response rate for teacher questionnaires, which makes their ratings relatively inexpensive and efficient.

Several cautionary remarks are necessary, however, in relation to teachers' ratings. First, teachers' reports are limited to the behaviour that they observe. When aggressive behaviour of school-age children is of interest, teachers may be less reliable because much of this behaviour is exhibited beyond the watchful eyes of adults. Our research on bullying indicates that teachers are present in the camera frame 11% of the time when a bullying incident occurs and intervene only 4% of the time (Craig & Pepler, 1997). Children's behaviour also varies by context. For example, aggressive behaviour is more likely to occur on the playground than in the classroom (Craig, Pepler, & Atlas, 1997). Therefore, the validity of

teachers' reports depends on both the behaviour of interest and the contexts in which teachers observe children.

Teachers' expectations may also influence their perceptions and ratings of children's behaviour (Rosenthal & Jacobsen, 1968). In our social skills training research, teachers indicated a significant improvement in aggressive children's behaviour problems, whereas classmates' ratings and observations on the playground did not reflect improvement (Pepler, Craig, et al., 1995; Pepler, King, et al., 1995). One speculation is that the teachers' improved ratings may have reflected their hopes and expectations that the aggressive children in their class would improve with social skills training.

There are several developmental considerations in using teacher reports. First, teacher ratings are more effective in preschool and elementary school, where students are with the same teacher all day, than in the upper grades where students are with teachers for a limited period each day. Consequently, with increasing age, teachers have less frequent and consistent exposure to students, which limits the reliability and validity of their ratings. As students become older, teachers may also be less likely to observe interactions among friends. Finally, teachers may be reluctant to rate students due to concerns about labelling and stigmatisation.

In summary, there are many advantages to using adults' reports of children's sociability. They are relatively efficient and inexpensive to gather, and when considered against a background of potential biases and limitations, can provide essential data on children's sociability.

Naturalistic observations

Observations of children's interactions with peers overcome many of the biases and limitations of the strategies discussed above. Children's interactions that index sociability can be viewed and recorded first-hand, with few systematic biases. There are many means of conducting observations (see Altmann, 1974; Cairns, 1979 for reviews). These include: running descriptions, checklists for event sampling (noting a behaviour every time it occurs), checklists for time sampling (e.g. noting what a child is doing every minute or so), computer coding interactions in real time, and videotaping for coding behaviours in detail at a later time. For optimal validity, it is important to consider the frequency at which the behaviour of interest occurs to determine both the frequency of time sampling and the duration of time required to ensure an adequate sample of the behaviour. The optimal amount of data required will vary as a function of the research question, the nature of the setting, the nature of the target behaviours, and the study participants (Odom & Ogawa, 1992). For example, if aggression is the behaviour of interest, it is a low-rate behaviour that occurs less frequently in the classroom than on the playground (Craig et al., 1997). Therefore, the time required to get a representative sample of aggressive

behaviour will be greater than for prosocial behaviour, and more time will be required in the classroom than on the playground.

Observations of children's interactions with peers pose unique challenges for researchers. Although observation checklists of children's activities during timed intervals are useful for questions about children's involvement with peers and the relative ratios of positive and negative behaviours, they do not capture the dynamic quality of interaction. Advanced methodologies are available to code sequences of behaviour to assess not only the type and duration of activities, but also social initiations and responses (e.g. Bakeman & Gottman, 1986; Pepler, Craig, & Roberts, 1998). In our research, the sequential data revealed important relations in interactions between aggressive children and their peers and highlighted the variability of aggressive children's behaviour: at times they were both positive and negative (Pepler et al., 1998).

One question that arises is whether to observe children's peer interactions in natural or laboratory play settings. There are advantages to both. In naturalistic settings, children are able to choose both their playmates and their activities. Consequently, observations provide information on social groupings, as well as on children's withdrawal or exclusion from social interaction. They also provide data on how others, such as peers and teachers, react to a child's social behaviours. In free play settings, when there is limited supervision and structure, aggression is most likely to occur, thereby enabling researchers to assess the negative aspects of peer interaction (Craig et al., 1997). We believe that observations in naturalistic settings often provide the most ethical means by which to investigate the interactions associated with some types of behaviours (e.g. bullying), because such a stressful situation could not be staged in a laboratory setting (Pepler & Craig, 1995). There are other advantages, however, to laboratory observations. The researcher has control over the children's range of movement, their activities, and the composition of the play group. Within these conditions, assessment can be made of specific behaviours, such as aggression, and social problem solving (e.g. Dodge et al., 1990; Rubin, Bream, & Rose-Krasnor, 1991), as well as of peer status and group dynamics (Dodge et al., 1990).

With technological change, there are more choices for conducting observations. For our research on children's aggressive behaviour, we used remote microphones and videocameras (Pepler & Craig, 1995). We chose the remote microphones to distance the observers from the children, so that the adult presence would not inhibit the natural flow of interactions. Although these videotaped observations were excellent for our purposes, there are conditions or environments where live observations are more appropriate than videotapes. Videotapes are inadequate in situations where more than two or three children are present and where children are far apart and cannot be viewed simultaneously (Fagot & Hagen, 1988). Given the limited context provided by the videocamera,

observers are slightly less reliable watching tapes than watching the real-life situations (Fagot & Hagen, 1988). On the other hand, videotapes provide more reliable assessments of the responses to a target's behaviour and the sequences in which interactions unfold. A further caution with videotapes is to avoid developing complex coding systems that overload observers and are costly (Weinrott & Jones, 1985).

There are several drawbacks to observations of children's peer interactions. First, if observations are conducted systematically, they are both labour-intensive and expensive. It takes a long time to collect the data and a long time to train observers to code reliably. Second, observations are intrusive and, as children become older, they become increasingly sensitive to being observed. By early adolescence, participants may express reluctance to be observed, especially in naturalistic settings. Several researchers have relied on structured laboratory tasks for observing adolescents (e.g. Connolly & McNelles, 1995; Dishion, Andrews, & Crosby, 1995). Third, without prolonged observation periods, children may exhibit a limited range of behaviours, with behaviours of interest, such as aggressive behaviours, occurring too infrequently for reliable assessment. Finally, it may be difficult to determine important features of friendships and peer networks simply by observing.

In summary, as with other approaches to assessing peer relations, there are many considerations to conducting observational research. Nevertheless, the insights gleaned from systematically observing children's interaction can augment and extend the understanding gleaned from the perspectives of the children, their peers, and familiar adults.

Conclusion

Peer relations provide an important window on children's social functioning. Children's experiences with their peers are critical throughout childhood and adolescence in the development of adaptive and maladaptive behaviours. Disturbances in peer relationships are common reasons for referrals to children's mental health clinics (Achenbach & Edelbrock, 1981). Given their developmental impact, the earlier children's peer difficulties are assessed and addressed, the more opportunity there is to set troubled children on the right path. The various assessment approaches provide different perspectives on children's peer relations and sociability. In the final analysis, a combination of perspectives will provide the fullest picture of children's social well-being and directions for understanding and supporting positive peer relations.

Acknowledgements

The research that we have conducted on children's peer relations has been funded by the Ontario Mental Health Foundation and the Social Sciences and Humanities Research Council of Canada.

References

- Achenbach, T. M. (1991a). *Manual for the Child Behavior Checklist/4-18 and 1991 profile*. Burlington, VT: Department of Psychiatry, University of Vermont.
- Achenbach, T. M. (1991b). *Manual for the Teacher's Report Form and 1991 profile*. Burlington, VT: Department of Psychiatry, University of Vermont.
- Achenbach, T. M. (1992). *Manual for the Child Behavior Checklist 2/3 and 1992 profile*. Burlington, VT: Department of Psychiatry, University of Vermont.
- Achenbach, T. M., & Edelbrock, C. (1981). Behavioral problems and competencies reported by parents of normal and disturbed children aged four through sixteen. *Monographs of the Society for Research in Child Development*, 46, 82.
- Achenbach, T. M., & Edelbrock, C. (1991). *Manual for the Youth Self Report and profile*. Burlington, VT: University of Vermont, Department of Psychiatry.
- Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescents behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, 101, 213-232.
- Altmann, J. (1974). Observational study of behavior: Sampling methods. *Behavior*, 49, 227-265.
- Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence*, 16, 427-454.
- Asher, S., & Coie, J. (1990). *Peer rejection in childhood*. New York: Cambridge University Press.
- Asher, S., & Dodge, K. (1986). Identifying children who are rejected by their peers. *Developmental Psychology*, 22, 444-449.
- Bakeman, R., & Gottman, J. (1986). *Observing interaction: An introduction to sequential analysis*. New York: Cambridge University Press.
- Behar, L. B., & Springfield, S. (1974). A behavior rating scale for the preschool child. *Developmental Psychology*, 10, 601-610.
- Berndt, T. J., & Perry, T. B. (1986). Children's perceptions of friendship as supportive relationships. *Developmental Psychology*, 22, 640-648.
- Boyle, M. H., Offord, D. R., Racine, Y., Fleming, J. E., Szatmari, P., & Sanford, M. (1993). Evaluation of the Revised Ontario Child Health Study Scales. *Journal of Child Psychology and Psychiatry*, 32, 189-213.
- Bukowski, W. M., & Hoza, B. (1989). Popularity and friendship: Issues in theory, measurement and outcome. In T. J. Berndt & G. W. Ladd (Eds.), *Peer relations in child development* (pp. 15-45). New York: Wiley.
- Cairns, R. B. (1979). *Social development: The origins and plasticity of interchanges*. San Francisco, CA: W. H. Freeman & Company.
- Charach, A., Pepler, D., & Ziegler, S. (1995). Bullying at school: A Canadian perspective. *Education Canada*, 35, 12-18.
- Coie, J. D., & Dodge, K. A. (1988). Multiple sources of data on social behavior and social status in the school: A cross-age comparison. *Child Development*, 59, 815-829.
- Coie, J. D., Dodge, K. A., & Coppotelli, H. (1982). Dimensions and types of social status: A cross-age perspective. *Developmental Psychology*, 18, 557-570.
- Connolly, J. A., & Konarski, R. (1994). Peer self-concept in adolescence: Analysis of factor structure and associations with peer experience. *Journal of Research on Adolescence*, 43, 385-403.
- Connolly, J., & McNelles, L. (1995). *Coding manual for videotape scoring of interpersonal negotiation processes: Intimacy and autonomy*. Toronto: Department of Psychology, York University.
- Craig, W. M., & Pepler, D. J. (1995). Peer processes in bullying and victimization: A naturalistic study. *Exceptionality Education in Canada*, 4, 81-95.
- Craig, W. M., & Pepler, D. J. (1997). Observations of bullying and victimization on the schoolyard. *Canadian Journal of School Psychology*, 13, 41-59.
- Craig, W. M., Pepler, D. J., & Atlas, R. (1997). *Comparisons of naturalistic observations of classroom and playground bullying*. Manuscript submitted for publication.
- Dishion, T., Andrews, D., & Crosby, L. (1995). Antisocial boys and their friends in early adolescence. *Child Development*, 66, 139-151.
- Dodge, K. A. (1980). Social cognition and children's aggressive behaviour. *Child Development*, 51, 162-170.
- Dodge, K., Coie, J., Pettit, G., & Price, J. (1990). Peer status and aggression in boys' groups: Developmental and contextual analyses. *Child Development*, 61, 1289-1309.
- Dodge, K. A., Pettit, G., McClasky, C. L., & Brown, M. M. (1986). Social competence in children. *Monographs of the Society for Research in Child Development*, 51 (2, serial no. 213).
- Fagot, B. (1984). Teacher and peer reactions to boys' and girls' play styles. *Sex Roles*, 12, 471-476.
- Fagot, B., & Hagen, R. (1988). Is what we see what we get? Comparisons of taped and live observations. *Behavioral Assessment*, 10, 367-374.
- Fergusson, D. M., & Horwood, L. J. (1987). The trait and method components of ratings of conduct disorder: I. Maternal and teacher evaluations of conduct disorder in young children. *Journal of Child Psychology and Psychiatry*, 28, 249-260.
- Furman, W., & Buhrmester, D. (1985). Children's perceptions of the personal relationships in their social networks. *Developmental Psychology*, 21, 1016-1022.
- Glow, R., Glow, P., & Rump, E. (1982). The stability of child behavior disorders: A one year test-retest study of Adelaide versions of the Conners teacher and parent scales. *Journal of Abnormal Child Psychology*, 10, 33-66.
- Gresham, F. M., & Elliott, S. N. (1990). *Social skills rating system*. Circle Pines, MN: American Guidance Service.
- Hartup, W. W. (1986). On relations and development. In W. W. Hartup & Z. Rubin (Eds.), *Relationships and development* (pp. 1-26). Hillsdale, NJ: Lawrence Erlbaum.
- Hartup, W. W. (1996). The company they keep: Friendships and their developmental significance. *Child Development*, 67, 1-13.
- Hayvren, M., & Hymel, S. (1984). Ethical issues in sociometric testing: The impact of sociometric measures on interactive behaviour. *Developmental Psychology*, 20, 844-849.
- Hymel, S., Wagner, E., & Butler, L. J. (1990). Reputational bias: View from the peer group. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood*. New York: Cambridge University Press.

- LaGreca, A. M., & Silverman, W. (1993). Parent reports of child behavior problems: Bias in participation. *Journal of Abnormal Child Psychology, 21*, 89–101.
- Loeber, R., Green, S., Lahey, B., & Stouthamer-Loeber, M. (1989). Optimal informant on childhood disruptive behaviors. *Development and Psychopathology, 1*, 317–337.
- Ledingham, J. E., Younger, A., Schwartzman, A. E., & Bergeron, G. (1982). Agreement among teacher, peer, and self-ratings of children's aggression, withdrawal, and likeability. *Journal of Abnormal Child Psychology, 10*, 363–372.
- Masten, A. S., Morrison, P., & Pellegrini, D. S. (1985). A revised class play method of peer assessment. *Developmental Psychology, 21*, 523–533.
- McCombs, T., Forehand, R., Armistead, L., Wierson, M., & Fauber, R. (1990). Cross-informant consistency in externalizing and internalizing problems in early adolescence. *Journal of Psychopathology and Behavior Assessment, 12*, 255–262.
- Morris, J. D., & Arrant, D. (1978). Behavior ratings of emotionally disturbed children by teachers, parents, and school psychologists. *Psychology in the Schools, 15*, 450–455.
- Newcomb, A. F., & Bukowski, W. M. (1983). Social impact and social preference as determinants of children's peer group status. *Developmental Psychology, 19*, 856–867.
- Newcomb, A. F., Bukowski, W. M., & Pattee, L. (1993). Children's peer relations: A meta-analytic review of popular, rejected, neglected, controversial, and average sociometric status. *Psychological Bulletin, 113*, 99–128.
- Odom, S. L., & Ogawa, I. (1992). Direct observation of young children's social interactions with peers: A review of methodology. *Behavioural Assessment, 14*, 407–441.
- Olweus, D. (1991). Bully/victim problems among school children: Some basic facts and effects of a school-based intervention program. In D. Pepler & K. Rubin (Eds.), *The development and treatment of childhood aggression*. Hillsdale, NJ: Lawrence Erlbaum.
- Parker, J. G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology, 29*, 611–621.
- Pekarik, E. G., Prinz, R. J., Liebert, D. E., Weintraub, S., & Neale, J. N. (1976). The pupil evaluation inventory. *Journal of Abnormal Child Psychology, 4*, 83–97.
- Pepler, D. J., & Craig, W. M. (1995). A peek behind the fence: Observations of playground interactions with video cameras and remote microphones. *Developmental Psychology, 31*, 548–553.
- Pepler, D. J., Craig, W. M., & Roberts, W. R. (1995). Aggression in the peer group: Assessing the negative socialization process. In J. McCord (Ed.), *Coercion and punishment in long-term perspectives* (pp. 213–228). New York: Cambridge University Press.
- Pepler, D. J., Craig, W. M., & Roberts, W. L. (1998). Observations of aggressive and nonaggressive children on the school playground. *Merrill-Palmer Quarterly, 44*, 55–76.
- Pepler, D., King, G., Craig, W., Byrd, B., & Bream, L. (1995). The effectiveness of social skills training for aggressive children. *Child and Youth Forum, 24*, 297–313.
- Perry, D., Kusel, S., & Perry, L. (1988). Victims of peer aggression. *Developmental Psychology, 24*, 807–814.
- Putallaz, M., & Wasserman, A. (1989). Children's naturalistic entry behavior and sociometric status: A developmental perspective. *Developmental Psychology, 25*, 297–305.
- Rosenthal, R., & Jacobsen, L. (1968). *Pygmalion in the classroom*. New York: Holt, Rinehart, & Winston.
- Rubin, K., Bream, L., & Rose-Krasnor, L. (1991). Social problem solving and aggression in childhood. In D. J. Pepler & K. Rubin (Eds.), *The development and treatment of childhood aggression*. Hillsdale, NJ: Cambridge University Press.
- Tremblay, R. E., Vitaro, F., Gagnon, C., Piche, C., & Royer, N. (1992). A prosocial scale for the Preschool Behavior Questionnaire: Concurrent and predictive correlates. *International Journal of Behavioral Development, 15*, 227–245.
- Weinrott, M., & Jones, R. R. (1985). Overt versus covert assessments of observer reliability. *Child Development, 55*, 1125–1137.
- Younger, A. J., Schwartzman, A. E., & Ledingham, J. E. (1985). Age-related changes in children's perceptions of aggression and withdrawal in their peers. *Developmental Psychology, 21*, 70–75.