

# Attention-Deficit/Hyperactivity Disorder and the Challenges of Close Friendship

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## Abstract

**Introduction:** Much has been learned about the social rejection of children with Attention-Deficit Hyperactivity Disorder (ADHD) by their schoolmates. Although these group processes are clearly important, recent advances in theory and research have revealed the importance of close friendship. **Method:** In this paper, we review the current knowledge about the close friendships of children with ADHD. **Results:** Although children with ADHD tend to be excluded from close friendship, the data on the features of the friendships they do have are too limited and too flawed to permit conclusions about patterns of interaction between children with ADHD and their friends. Few data are actually available to indicate why children with ADHD have difficulty keeping the friends they do have. **Conclusion:** We conclude by briefly discussing some implications for pharmacological treatments and peer-relations interventions.

**Key words:** Attention-Deficit Hyperactivity Disorder, close friendships, pharmacological treatment, peer-relations interventions

## Résumé

**Introduction:** Il est désormais reconnu que les enfants avec un Trouble de déficit d'attention/hyperactivité (TDAH) soient rejetés par leurs pairs. Quoique ces processus de groupe soient importants, de récents développements théoriques et empiriques soulignent l'importance de l'amitié intime. **Méthodologie:** Dans cette revue de littérature, il est question de résumer les connaissances entourant les amitiés intimes des enfants avec TDAH. **Résultats:** Bien que les enfants avec TDAH aient tendance à ne pas avoir d'ami intime, les données sur les caractéristiques de leurs amitiés sont trop limitées pour permettre d'émettre des conclusions sur les patrons d'interaction entre ces enfants et leurs amis. Il existe actuellement peu de données indiquant la raison pour laquelle les enfants avec TDAH ont de la difficulté à conserver les amis qu'ils possèdent. **Conclusion:** Nous terminons en discutant brièvement de certaines implications pour les traitements pharmacologiques et pour les interventions orientées vers les pairs.

**Mots clés:** Trouble de déficit d'attention/hyperactivité; amitiés intimes; traitement pharmacologique; interventions orientées vers les pairs.

Researchers have clearly established that children with Attention-Deficit Hyperactivity Disorder (ADHD) tend to be socially rejected by their peer groups at school (e.g., Pelham & Bender, 1982). Less is known about the close friendships of these children. Some theoretical (Sullivan, 1953) and empirical (e.g., Newcomb & Bagwell, 1995) writings have emphasized the specific importance of close friendship. Friendship is a voluntary bond co-created by two friends who expect to share intimate, mutually rewarding experience, with mutual commitment, support and validation of each other's selves (Schneider et al, 1994). Children and adolescents usually select friends who resemble themselves (e.g., Aboud & Mendelson, 1996) and friendship skills are thought to prepare children and adolescents for intimate relationships as adults according to Sullivan's (1953) influential theory and some longitudinal data (Bagwell et al, 2001). Having a close friend is also known to mitigate the consequences of being rejected by a larger peer group (Parker & Asher, 1993) and is associated with important indicators of overall well-being (Newcomb & Bagwell, 1995).

Researchers also have recently demonstrated that friendship problems – such as being friendless, having low-quality friendships, having short-lived or unstable friendships or having antisocial friends – often jeopardize children's academic, behavioural and socio-emotional adjustment (for a review, see Rose & Asher, 2000). Children with such friendship problems are more likely to experience difficulties in school (e.g., Ladd et al, 1996), to engage in deviant behaviour (e.g., Vitaro et al, 1997), to be victimized by bullies (e.g., Hodges et al, 1999), and to feel lonely (e.g., Parker & Seal, 1996) than children without friendship difficulties. Inattention, hyperactivity, and impulsivity, core features of ADHD, are likely to interfere with the communication skills needed to establish and consolidate any social relationship, and even more, a friendship. Given the potential deleterious influences that the core features of ADHD may have on children's friendships and

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given the growing corpus of research demonstrating the adverse consequences of having friendship problems, a better understanding of ADHD children's friendships is needed. The main objectives of this paper are to review current knowledge about the friendships of children with ADHD and to consider some implications for pharmacological treatments and peer-relations interventions.

The criteria children typically use in the selection of friends represent challenges for children with ADHD at all ages of development. However, cross-sectional studies indicate reasons for suspecting that ADHD may constitute a more formidable obstacle as children reach middle childhood and adolescence. The distractibility, hyperactivity and impulsivity of children with ADHD may affect their abilities to form and maintain friendships during the middle-childhood period. Although unconstrained, uninhibited behaviour may be well tolerated by kindergarteners (Mendelson et al, 1994), this tolerance does not persist into the elementary-school years. The impulsivity of children with ADHD may result in displays of temper that are disliked by potential friends and may detract from their companions' enjoyment of the time spent with them. They may attend insufficiently to the rules of games and to the wishes of their play partners regarding choice of activities.

The symptomatology of ADHD manifests itself differently as children reach adolescence (Barkley et al, 1990). Impulsivity and hyperactivity may no longer be the primary obstacles to friendship, whereas inattentiveness may become a very substantial liability. In addition, inattention to the needs and feelings of the friend or potential friend may impede the reciprocity, sensitivity, conflict resolution and commitment that are required to form and maintain friendships. It is widely agreed that deficits in executive functions are evident in ADHD (for a review, see Barkley, 1997). Executive functions are the processes that regulate an individual's ability to organize thoughts and activities, prioritize tasks, manage time efficiently, and make decisions. Cognitive flexibility is the hallmark of these processes. Cognitive flexibility, as evidenced in the Wisconsin Card Sorting Task, has been shown to be associated with the ability to co-operate with peers by 7-year-old

children (Bonino & Cattellino, 1999). This suggests that, as friendship becomes increasingly dependent on cooperative behaviour as it does in middle childhood, children with ADHD may encounter increasing difficulties in maintaining friendships. This may also restrict them to making friends mainly with peers showing the same deficits.

### **Studies on the Friendships of Children with ADHD**

Current knowledge about the close friendships of children with ADHD can be summarized as "almost nothing" (Blachman & Hinshaw, 2002, p. 126). Most published studies to date deal with the *existence* of friendships among children having ADHD, but not with their quality and stability nor with the characteristics of their friends. Typically, peers are asked to indicate which of their associates they would consider friends. However, should the respondents not understand friendship as an intimate and mutually satisfying dyadic relationship, the responses may indicate little more than liking of the individual. The results of such studies invariably indicate that children with ADHD have fewer friends than nondisordered comparison groups (Hoza et al, 2005). Gresham and colleagues (1998) found that fully 70% of elementary-school children with comorbid ADHD and conduct problems had no reciprocated friends in their school classes. A few studies indicate that these reciprocal friendships are very short lived (e.g., Blachman & Hinshaw, 2002).

Probably the only detailed observational data on children with ADHD in *interaction with their real-life friends* come from a comparison by Tyler (1993) of 12 dyads of school-age friends, neither of whom had ADHD and 12 other dyads consisting of one child with ADHD and his friend. Tyler invited each of the initial participants to recruit a good friend to play with for the purposes of the project. The non-ADHD dyads progressed from playing on their own to cooperating, whereas the ADHD-friend dyads did not, often regressing away from associative play. In the non-ADHD dyads, intimate sharing by one friend was frequently matched by subsequent sharing by the other; this did not occur in the ADHD-friend dyads. These and other findings suggest that the friendships of children with ADHD are characterized by less intimacy

and reciprocity, and that their play is less associative and cooperative, as compared with their nondisordered peers. Tyler's study (1993), though seminal, is limited by its small sample size, single time point, exclusive reliance on externally observable behaviour, and non-inclusion of participants on medication.

In a few other studies, children with ADHD have provided self-reports about their friendships. Some of these studies indicated that children with attention problems report having friendships lacking in intimacy and feelings of validation (e.g., Rielly, 2004). In contrast, ratings of the friendships by the girls with ADHD studied by Blachman and Hinshaw (2002) indicated relational aggression between the friends but no significant shortcomings in companionship, validation, or support. These results may not generalize to the full population of children with ADHD, only a small minority of which are girls. However, similar results emerged from a second study by Tyler conducted with both boys and girls (Tyler, 1998). Unfortunately, none of these researchers reported either observational data or friendship ratings by the *friends* of children with ADHD. The exclusive reliance on self-reports is insufficient for measuring friendship in any population, but is particularly problematic when studying children with externalizing disorders such as ADHD: Researchers found minimal concordance between self-reports of social behaviour by children with ADHD and other reliable sources of information (e.g., Smith et al, 2000). In summary, although children with ADHD tend to be excluded from close friendship, the data on the features of the friendships they do have are too limited and too flawed to permit conclusions about patterns of interaction between children with ADHD and their friends. Few data are actually available to indicate why children with ADHD have difficulty keeping the friends they do have.

### **Implications for Treatment** ***Effects of Pharmacological Treatment on Peer Relations and Friendship***

Psychostimulant medication is the first-line medication treatment for ADHD (see Connor, 2006). There has been no study of the effects of psychostimulant medication specifically on the interactions of children with ADHD and their close friends. However, some studies indicate

that stimulant medication improves the general peer status of children with ADHD, including increased nominations of boys with ADHD as friends in some data (e.g., Whalen et al, 1989). These medication-related improvements, although important, do not normalize peer approval: Peers still dislike children with ADHD even after a course of medication. If medication does no more than "set the stage" by reducing some of the obnoxious, impulsive behaviours that drive potential friends away, its contribution is of considerable value; a relationship cannot proceed to the more intimate stages (Selman, 1980) if it does not get off the ground.

Nevertheless, it cannot be assumed that medication-related decrease in obnoxious behaviours will help consolidate friendship. Friendship depends not only on the absence of obnoxious behaviour but also on such positive qualities as sharing, support, reciprocal help, and maintenance of confidences. As prosocial behaviour predicts friendship ratings whereas aggression strongly predicts negative nominations (Pelham et al, 2002), the impact of psychostimulants on peer relationship and friendship is likely to be a function of both effects.

There is some doubt that medication improves prosocial and helpful behaviours. In a double-blind study with direct classroom observations, Hinshaw et al (1989) found no effect of MPH on such prosocial behaviours as initiation of contact, mediation of conflict and prolonged dyadic interaction despite medication-related improvements in negative social behaviour.

Stimulant medication seems not to improve the deficits in cooperative functioning associated with ADHD (e.g., Hubbard & Newcomb, 1991). Pelham et al (2001) found that MPH did not improve behavioural and cognitive skills in a task in which boys with ADHD were instructed to "try to get the other kid to like you". In another study, Pelham et al (2002) found that MPH had no effect on the dysfunctional self-serving mental attributions of children with ADHD in social interactions. Therefore, Pelham et al (2001, p. 433) concluded that "we...would expect that MPH would not help ADHD in their interactions with peers in natural settings analogous to this [experimental] task – for example meeting new children, entering new social groups in a socially appropriate fashion, and engaging in dyadic conversations". In

summary, medication has probably failed to help children with ADHD in their friendship interactions, despite the decrease in obnoxious, impulsive behaviours and some reduction in general peer rejection. Previous data did not include friends, are often flawed by the complexity of the tasks used, the fixed dosage and the lack of a placebo condition.

### **Peer-relations interventions and the friendships of children with ADHD**

**Social skills training.** Almost all interventions targeting peer relations have been designed to increase general acceptance by peers rather than close friendship. Several different types of social skills training have been applied to ADHD populations (e.g., Mrug et al, 2001). The purpose of this training is to teach directly the basic social skills children need to interact more effectively with their peers (Mrug et al, 2001). However, the consensus by this point is that social skills training brings very limited benefit, as documented in an authoritative meta-analysis by Kavale et al (1996), who focused on learning disabilities. Furthermore, this approach has not yielded promising results with the ADHD population (Landau et al, 1998). Given that peer reputations change slowly because they are heavily influenced by stereotypes peers are known to hold about ADHD (e.g., Price & Dodge, 1989) and by first impressions (e.g., Hoza et al, 2003), enhancing close friendship may be a viable and perhaps more realistic intervention goal (Mrug et al, 2001).

**Pair therapy** (Selman & Schultz, 1990) is an innovative modality of intervention inspired by Selman's model of interpersonal understanding (Selman, 1980), which specifies a sequential stage progression from friendship based on unilateral benefit to friendship based on reciprocal needs and, finally, to friendship based on shared intimacy and commitment. Pair therapy is a semi-structured intervention involving an adult therapist working with two children or adolescents who have the potential to become friends. The general focus of this deeper, developmentally-based psychosocial approach is to enhance by positive experience children's repertoire of social strategies needed to make and keep friends. It aims to reorganize children's basic understanding of friendship and other intimate relationships (Selman & Schultz, 1990).

Pair therapy has been found to engender significant progression toward the higher stages of friendship understanding in Selman's model (e.g., Selman, 1980). Evaluation has yet to establish that pair therapy leads to changes in the real-life friendships of antisocial children and youth; it has yet to be tried systematically on populations with ADHD.

**"Buddy" pairing.** Another promising approach to friendship intervention involves pairing potential friends as "buddies" who share recreational activities and earn special privileges by interacting positively with each other. Hoza et al (2003) paired the "buddies" during the second week of a summer camp based on mutual ratings of liking and friendship as well as other factors such as similarities in sports and academic interests and abilities. The essence of this approach is to provide opportunities for dyadic interaction in a systematic fashion. It also incorporates into the camp program systematic practice in problem-solving within the "buddy" dyad (Hoza et al, 2003). Unfortunately, the data were not suitable for assessing the effectiveness of the intervention because the "buddy" program was camp-wide, meaning that there was no control group and that the effects of the dyad-specific intervention could not be separated in any way from the effects of the entire special summer program.

**Peer pairing.** Simply pairing two children for intensive social interaction, with no other adult intervention, has sometimes been used to enhance children's interpersonal relationships. Socially competent children are typically paired with unpopular children in order to help the rejected children to improve their behaviours and social status (Frankel, 2005). Some important beneficial effects of peer pairing have been reported in terms of reduced aggressive behaviour by disliked children, but not, unfortunately, friendships (e.g., Frankel, 2005).

It should be noted that it is not necessary to work with dyads to "coach" children on the skills they will need to make and keep friends. Individual, group, and parent-mediated interventions have been also used to teach friendship skills, with improvements on some important measures; their effects on friendship have yet to be evaluated (e.g., Murphy & Schneider, 1994). Multifaceted intensive prevention programs (e.g., The Fast Track Program, CPPRG,

1992; The Early Risers "Skills for Success", August et al, 2003), involving different components - such as prosocial behaviour and friendship skills, emotional understanding and self-control skills, communication and conflict resolution skills, problem-solving skills, parent training, social skills training, parent-child sharing, home visiting, peer pairing, and academic tutoring - have been of benefit to the general adjustment of children with other forms of externalizing disorder and may also eventually prove to be of some benefit in facilitating the friendships of children with ADHD.

### Future Directions in Research and Practice

Many fundamental questions about the friendships of children with ADHD remain to be answered. First, researchers should determine the proportion of children with ADHD who actually have reciprocal friends. Second, given that children and their friends ordinarily display similar positive and negative behavioural characteristics (for a review, see Newcomb & Bagwell, 1995), children with ADHD may tend to have more disruptive and aggressive friends than their counterparts (Mrug et al, 2001). These friendships may subject them to the heightened risk of disruptive behaviours in school (Berndt & Keefe, 1995), gang membership (Lahey et al, 1999) and delinquency (Vitaro et al, 1997) that has been demonstrated among children whose friends are aggressive and disruptive. Thus, more research is clearly needed in order to clarify the behavioural and social characteristics of the friends of children with ADHD. Third, not enough is known about whether the naturally occurring friendships of children with ADHD differ from those of peers without ADHD in terms of quality (e.g., supportiveness, equity of power, satisfaction). Fourth, finding out whether children with ADHD maintain their friendships over time to the same extent as do their peers without ADHD and whether the quality of their friendships improves or deteriorates is also very important. This is because negative peer reputation in childhood predicts mental-health status in early adulthood very strongly (Cowen et al, 1973). Fifth, future investigations may also be targeted at identifying the features of the friendships that predict the stability or dissolution of the relationships, to determine the

clinical predictors of these features, and how they vary across the age span. Sixth, it is also imperative that efforts be made to ensure that friendship-enhancing interventions be targeted in some way at helping children with ADHD make friends with models of adaptive social behaviour. Hence, by fostering friendship with non-deviant peers, it might be possible to prevent affiliation with a deviant peer group and its adverse outcomes.

Researchers evaluating the potential benefits of friendship-enhancing interventions in which children with ADHD might be congregated in dyads or groups need to contemplate possible iatrogenic effects when designing their studies. There may be less reason to be concerned about such effects in the case of pair therapy (Selman & Schultz, 1990), for example, than in group training because in pair therapy the interactions of the participants are closely monitored and facilitated by the therapists. Hopefully, such studies will lead to improved multi-modal interventions based on clearer knowledge of the specific potential of both medication and friendship-oriented therapy to enhance the close friendships of children with ADHD.

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### References

- Aboud, F. & Mendelson, M. J. (1996). Determinants of friendship selection and quality: Developmental perspectives. In W.M. Bukowski, Andrew F. Newcomb & W. W. Hartup (Eds.), *The company they keep: Friendship in childhood and adolescence* (pp. 87-112). New York: Cambridge University Press.
- August, G. J., Egan, E. A., Realmuto, G. R., & Hektner, J. M. (2003). The Early Risers early age-targeted preventive intervention: Four-year effects on aggressive children's peer relations. *Behavioral Therapy, 34*, 453-470.
- Bagwell, C. L., Schmidt, M. E., Newcomb, A. F., & Bukowski, W. M. (2001). Friendship and peer rejection as predictors of adult adjustment. In D. W. Nangle & C. A. Erdley (Eds.), *The role of friendship in psychological adjustment. New directions for child and adolescent development, Vol. 91* (pp. 25-49). San Francisco: Jossey-Bass.
- Barkley, R. A. (1997). *ADHD and the nature of self-control*. New York: The Guilford Press.
- Barkley R. A., McMurray M. B., Edelbrock C. S., & Robbins K. (1990). Side effects of methylphenidate in children with attention deficit hyperactivity disorder: a systemic, placebo-controlled evaluation. *Pediatrics*,

- 86, 184-192.
- Berndt, T. J., & Keefe, K. (1995). Friends' influence on adolescents' adjustment to school. *Child Development, 66*, 1312-1329.
- Blachman, D. R., & Hinshaw, S. P. (2002). Patterns of friendship in girls with and without attention-deficit/hyperactivity disorder. *Journal of Abnormal Child Psychology, 30*, 625-640.
- Bonino, S., & Cattellino E. (1999). The relationship between cognitive abilities and social abilities in childhood: a research on flexibility in thinking and cooperation with peers. *International Journal of Behavioral Development, 23*, 19 – 36.
- Connor, D. F. (2006). Stimulants. In R.A. Barkley (Ed.). *Attention-Deficit/Hyperactivity Disorder: A handbook for Diagnosis and Treatment, 3rd Ed*, (pp. 608-647). New York: The Guilford Press.
- Cowen, E. L., Pederson, A., Babigian, H., Izzo, L. D. & Trost, L. A. (1973). Long-term follow-up of early detected vulnerable children. *Journal of Clinical and Consulting Psychology, 41*, 438-446.
- CPPRG (1992). A developmental and clinical model for the prevention of conduct disorder: The FAST Track Program. *Development and Psychopathology, 4*, 509-527.
- Frankel, F. D. (2005). Parent-assisted children's friendship training. In E. D. Hibbs & P. S. Jensen (Eds.), *Psychosocial treatments for child and adolescent disorders* (pp. 351-376). Washington D.C.: American Psychological Association.
- Gresham F. M., MacMillan D. L., Bocian K. M., Ward S. L., & Forness S. R. (1998). Comorbidity of hyperactivity-impulsivity-inattention and conduct problems: risk factors in social, affective, and academic domains. *Journal of Abnormal Child Psychology, 26*, 393-406.
- Hinshaw, S. P., Henker, B., Whalen, C. K., Erhardt, D., & Dunnington, R. E. Jr. (1989). Aggressive, prosocial, and nonsocial behaviour in hyperactive boys: Dose effects of methylphenidate in naturalistic settings. *Journal of Consulting & Clinical Psychology, 57*, 636-643.
- Hodges, E. V. E., Boivin, M., Vitaro, F., & Bukowski, W. M. (1999). The power of friendship: Protection against an escalating cycle of peer victimization. *Developmental Psychology, 33*, 1032-1039.
- Hoza, B., Mrug, S., Gerdes, A. C., Hinshaw, S. P., Bukowski, W. M., Gold, J. A. et al. (2005). What aspects of peer relationships are impaired in children with ADHD? *Journal of Consulting and Clinical Psychology, 73*, 411-423.
- Hoza, B. Mrug, S., Pelham, W.E. Jr., Greiner, A. R., & Gnagy, E. M. (2003). A friendship intervention for children with Attention-Deficit/Hyperactivity Disorder: Preliminary findings. *Journal of Attention Disorders, 6*, 87-98.
- Hubbard J. A., & Newcomb A. F. (1991). Initial dyadic peer interaction of attention deficit-hyperactivity disorder and normal boys. *Journal of Abnormal Child Psychology, 19*, 179-195.
- Kavale, K. A., Mathur, S. R., Forness, S. R., Rutherford, R. B., & Quinn, M. M. (1996). Effectiveness of social skills training for students with behaviour disorders: a meta-analysis. In T. Scruggs & M. Mastropieri (Eds.), *Advances in learning and behavioral disabilities (Vol.11)*. Greenwich, CT: JAI Press.
- Ladd, G. W., Kochenderfer, B. J., & Coleman, C. (1996). Friendship quality as a predictor of young children's early school adjustment. *Child Development, 67*, 1103-1118.
- Lahey, B. B., Gordon, R. A., Loeber, R., Stouthamer-Loeber, M., & Farrington, D. P. (1999). Boys who join gangs: A prospective study of predictors of first gang entry. *Journal of Abnormal Child Psychology, 27*, 261-276.
- Landau, S., Milich, R., & Diener, M. B. (1998). Peer relations of children with attention-deficit hyperactivity disorder. *Reading and Writing Quarterly: Overcoming Learning Difficulties, 14*, 83-105.
- Mendelson, M. J., Aboud, F. E., & Lanthier, R. P. (1994). Kindergartners' relationships with siblings, peers, and friends. *Merrill-Palmer Quarterly, 40*, 416-435.
- Mrug, S., Hoza, B., Gerdes, A. C. (2001). Children with attention-deficit/hyperactivity disorder: Peer relationships and peer-oriented interventions. In Nangle, D. W. & Erdley, C. A. (Eds.), *The role of friendship in psychological adjustment* (pp. 51-77). San Francisco: Jossey-Bass.
- Murphy, K., & Schneider, B. H. (1994). Coaching socially rejected preadolescents regarding behaviours used by peers to infer liking: A dyad-specific intervention. *Journal of Early Adolescence, 14*, 82-94.
- Newcomb, A. F., & Bagwell, C. L. (1995). Children's friendship relations: A meta-analytic review. *Psychological Bulletin, 117*, 306-347.
- Parker, G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology, 29*, 611-621.
- Parker, J. G., & Seal, J. (1996). Forming, losing, renewing, and replacing friendships: Applying temporal parameters to the assessment of children's friendship experiences. *Child Development, 67*, 2248-2268.
- Pelham, W. E. & Bender, M. E. (1982). Peer relationships in hyperactive children: description and treatment. In K.D. Gadow & I. Bailer (Eds.), *Advances in learning and behavioral disabilities* (Vol. 1, pp. 365-436). Greenwich, CT: JAI.
- Pelham, W. E., Hoza, B., Pillow, D. R., Gnagy, E. M., Kipp, H. L., Greiner, A. R. et al. (2002). Effects of methylphenidate and expectancy on children with ADHD: behaviour, academic performance, and attributions in a summer treatment program and regular classroom settings. *Journal of Consulting and Clinical Psychology, 70*, 320-335.
- Pelham, W. E., Waschbusch, D. A., & Hoza, B. (2001). Effects of methylphenidate and expectancy on performance, self-evaluations, persistence, and attributions on a social task in boys with ADHD. *Experimental and Clinical Psychopharmacology, 9*, 425-437.
- Price, J. M., & Dodge, K. A. (1989). Peers' contributions to children's social maladjustment: Description and intervention. In T. J. Berndt & G. W. Ladd (Eds.), *Peer relationships in child development* (pp. 341-370). Oxford, England: John Wiley & Sons.
- Rielly, N. E. (2004). *Girls and Boys Identified with a Subclinical Cutoff for Attention Problems: Behavioural, Emotional and Social Characteristics*. Dissertation Abstracts International: Section B: The Sciences & Engineering, 65(5-B). (UMI No. NQ92411)
- Rose, A. J., & Asher, S. R. (2000). Children's friendships. In C. Hendrick & S. S. Hendrick. (Eds.), *Close rela-*

- tionships: A Sourcebook* (pp. 46-57). New York: Sage Publications.
- Schneider, B. H., Wiener, J., & Murphy, K. (1994). Children's friendships: The giant step beyond peer acceptance. *Journal of Social and Personal Relationships, 11*, 323-340.
- Selman, R. (1980). *The growth of interpersonal understanding: developmental and clinical analyses*. London: Academic Press.
- Selman, R. & Schultz, L. H. (1990). *Making a friend in youth: developmental theory and pair therapy*. Chicago: University of Chicago Press.
- Smith, B. H., Pelham, W. E., Gnagy, E., Molina, B., & Evans, S. W. (2000). The reliability, validity and unique contributions of self-report by adolescents receiving treatment for Attention-Deficit Hyperactivity Disorder. *Journal of Consulting and Clinical Psychology, 68*, 489-499.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.
- Tyler, A. L. (1993). *Mutuality and intimacy in Attention Deficit Hyperactivity Disorder and Normal Boys' Friendship Relations*. Unpublished master's thesis, University of Richmond, VA.
- Tyler, A. L. (1998). *The contributions of hyperactivity-impulsivity, inattention, and aggression-oppositionality to children's peer and friendship relations*. Dissertation Abstracts International: Section B: The Sciences & Engineering, 59(1-B). (UMI No. 9821564).
- Vitaro F., Tremblay, R. E., Kerr, M., Pagani, L. & Bukowski, W. M. (1997). Disruptiveness, friends' characteristics, and delinquency: A test of two competing models of development. *Child Development, 68*, 676-689.
- Whalen, C. K., Henker, B., Buhrmester, D., Hinshaw, S. P., Huber, A., & Laski, K. (1989). Does stimulant medication improve the peer status of hyperactive children? *Journal of Consulting & Clinical Psychology, 57*, 545-549.