Children and adolescents with attention-deficit/hyperactivity disorder (ADHD) experience significant problems with various aspects of everyday life, including relationships with family members, school performance, leisure activities, and peer relationships. Indeed, research studies from the last 35 years show that children with ADHD are four times more likely to be rejected by their peers than typical children (Campbell & Paulauskas, 1979; Hoza, Mrug, et al., 2005), even after only a few minutes or hours of interaction (Erhardt & Hinshaw, 1994). According to the Multimodal Treatment Study of ADHD (MTA study) conducted with 579 children with ADHD, ages 7 to 9 years, in six American and Canadian sites, 52% of youth with ADHD are rejected by their peers, compared to 14% of typical children. Once established, and from the age of 7 onwards, peer rejection tends to remain very stable regardless of age or gender (Hoza, Mrug, et al., 2005). In addition, apparently at least half of children with ADHD do not have reciprocal friends (Hoza, Mrug, et al., 2005). These problems cause additional difficulties to children above and beyond the well-known consequences of ADHD. For example, children with ADHD and relational problems with their peers are more likely to experience conduct problems, depression, substance abuse, eating disorders, and dropping out of school during adolescence than children with ADHD without peer relationship problems (Mikami & Hinshaw, 2006). Unfortunately, these peer relationship problems remain stable over time and resist treatments currently available, whether it be social skills training, medication, or multimodal treatment (Hoza, Gerdes, et al., 2005). The purpose of this article is to summarize current knowledge about the friendship problems of children with ADHD, a subject often unfamiliar to the general public. The article begins with an overview of the benefits of friendships for children’s development. A summary of the friendship features of children with ADHD follows, with special attention to the presence, stability, and quality of these friendships. Next, is a discussion of the social behaviors that children with ADHD adopt with their friends and a summary of what is known about their friends’ behavioral characteristics. After a brief look at the various possible explanations of the difficulties that children with ADHD encounter in relationships with peers and friends, promising intervention strategies for teachers and parents are suggested.

**Why Is Friendship So Important?**

Having a friend is different than being accepted or liked by a peer group. Friendship is a co-constructed relationship between two specific friends who expect a safe context where they can share intimate and enriching experiences with mutual commitment, support, and reciprocal validation of themselves (Bagwell & Schmidt, 2011). Many long-term benefits are associated with having a close friend (e.g., improved self-esteem, reduced symptoms of depression, and more harmonious family relationships; Bagwell, Schmidt, Newcomb, & Bukowski, 2001). The quality of the friendship, meaning all the positive (e.g., intimacy, support, conflict resolution, emotional proximity, and validation) and negative (e.g., conflict, aggression, rivalry, and jealousy) features of this friendship, often influences the extent of these benefits. Many correlational-designed studies suggest that a good quality friendship is positively associated with improved self-esteem, greater peer acceptance, altruism, sociability, liking school, overall adjustment, satisfaction with the friendship, and friendship continuation (Bagwell & Schmidt, 2011; Rubin, Bukowski, & Parker, 2006). More specifically, results from longitudinal studies indicate that children with stable, high-quality friendships are better adjusted during school transitions (e.g., Ladd, Kochenderfer, & Coleman, 1996). Studies also show that friendships can have a protective effect and reduce the negative impact of peer rejection and bullying at school (Hodges, Boivin, Vitaro, & Bukowski, 1999; Laursen, Bukowski, Aunola, & Nurmi, 2007). However, the experience of friendship is not simply about having or not having friends. One should know that children often choose friends who resemble them demographically, physically, psychologically, and socially. Therefore, children who are less accepted by their peers or who have behavior problems tend to elect one another as friends (Vitaro, Tremblay, Kerr, Pagani-Kurtz, & Bukowski, 1997). Moreover, friends influence each other, which means that their behaviors become more and more similar over time (Dishion, Andrews, & Crosby, 1995). For example, it is well known that children with aggressive friends become more aggressive with time (Dishion et al., 1995). To better understand how friendship can influence children’s and adolescents’ adjustment, it is therefore essential to look at the quality of their friendships and their friends’ characteristics.

**Friendship Features of Children with ADHD**

A growing body of studies during the past two decades indicates that children and adolescents with ADHD have fewer friends than typical youth (Bagwell, Molina, Pelham, & Hoza, 2001; Blachman & Hinshaw, 2002; Erhardt & Hinshaw, 1994; Hoza, Mrug, et al., 2005; Marton, Wiener, Rogers, & Moore, 2012). According to the MTA study, 56% of children with ADHD have no friends, compared to 32% of typical children (Hoza, Mrug, et al., 2005). They also have trouble keeping their

**Continued on page 28**
friends (Blachman & Hinshaw, 2002; Marton et al., 2012; Normand et al., 2013), as demonstrated by the results of a longitudinal study showing that 25% of children with ADHD lose their friends within six months, compared to 9% of typical children (Normand et al., 2013). However, it is interesting to note that youth with ADHD do not generally report more difficulties *themselves* making or keeping friends than other children (Bagwell, Molina, et al., 2001; Marton et al., 2012), which could be due to their tendency to overestimate their social skills (i.e., what researchers refer to as a *positive illusory bias*; Owens, Goldfine, Evangelista, Hoza, & Kaiser, 2007). Nonetheless, the few studies conducted about the friendship quality of children with ADHD reveal that their friendships are characterized by less intimacy, reciprocity, and satisfaction with the relationship, but more conflicts than those of typical children (Blachman & Hinshaw, 2002; Normand et al., 2011, 2013). A concerning fact is that the friends of children with ADHD actually report more conflicts and less and less satisfaction with their friendship over time, the opposite of what is generally expected and observed in typical children’s friendships (Normand et al., 2011). In short, at least half of children with ADHD have no friends and those who do often form shorter relationships of lesser quality.

How Do Children with ADHD Behave with Their Friends?

Current studies emphasize the role that school plays in creating unique social opportunities for interacting with friends. Actually, 60% to 70% of youth with ADHD say that they started interacting with their friends at school (i.e., Normand et al., 2011). Their parents also report this, saying that their children rarely see their friends outside of school (Marton et al., 2012). The few observational studies on their interactions with their friends suggest that children with ADHD are less sensitive to their friends’ needs and preferences, but rather tend to act more based on their own interests, to be more controlling, and to have trouble playing according to the game rules (Normand et al., 2011; 2013). Unfortunately, the work of Normand and his colleagues (2013) suggests that children with ADHD do not rectify their behaviors over time; instead, they become increasingly insensitive toward their friends, unlike what happens between friends without ADHD. In short, the social behaviors of children with ADHD do not facilitate the development of mutually satisfying friendships. These behaviors tend to persist or even worsen over time (Normand et al., 2013).

Who Are the Friends of Children with ADHD?

A few preliminary studies suggest that girls and boys with ADHD are more likely to be friends with other children with ADHD than are typical children (Blachman & Hinshaw, 2002; Normand et al., 2011). In their multimethod study on the interactions between children with ADHD and their friends, Normand and his colleagues (2011) found that about 25% of the friends of children with ADHD met the diagnostic criteria for ADHD, while none of the friends of the typical children did. In addition, the friends of children with ADHD appear to display more oppositional behaviors than the friends of typical children. Similarly, Marton and colleagues (2012) found that boys with ADHD ages between 9 and 12 are more likely to be friends with children with learning disabilities and behavior disorders (43%) than typical boys (16%). Other researchers found that adolescents with ADHD report that their friends have more substance abuse problems than typical adolescents’ friends and that they participate in less conventional school and community activities (Bagwell, Molina, et al., 2001; Marshal, Molina, & Pelham, 2003). In summary, current data suggests that children with ADHD are more likely to be friends with other youth with ADHD and other learning or behavior disorders (e.g., oppositional behavior and substance abuse) than typical children. However, the long-term effects of having friends with ADHD on youth’s general adjustment are still unknown.

Why Do Children with ADHD Have Friendship Problems?

The vast majority of studies regarding the friendships of youth with ADHD have been conducted among school-age boys (ages 6 to 13 years; Bagwell, Molina, et al., 2001; Hoza, Mrug, et al., 2005; Normand et al., 2011; 2013) and the results regarding the effects of the various ADHD presentations (i.e., inattentive, hyperactive-impulsive, and combined presentations) and comorbidities (e.g., oppositional defiant disorder and anxiety disorders) are conflicting (Bagwell, Molina, et al., 2001; Becker, Luebbe, & Langberg, 2012; Blachman & Hinshaw, 2002; Hoza, Mrug, et al., 2005; Normand et al., 2011). It is therefore impossible, according to available scientific data, to draw reliable conclusions about the possible role of gender, age, ADHD presentation, and comorbidities on the friendship challenges faced by youth with ADHD.

Studies on the possible explanations of the specific difficulties experienced by children with ADHD in their close friendships are limited. However, more general literature on the peer relationships of children with ADHD suggests that different deficits within children with ADHD (e.g., inappropriate social behaviors, emotional dysregulation, and recognition and sociocognitive deficits) may prevent them from forming reciprocal and stable friendships. Thus, this section is inspired from this more general literature and shows how it could be applied, whenever possible, to the more specific field of dyadic friendships.

Inappropriate Social Behaviors

Regarding the inappropriate social behaviors, hyperactivity and impulsivity are often associated with violation of game rules, game interruptions, and controlling, intrusive, hostile, emotionally charged, and sometimes aggressive behaviors. Inattentive behaviors in social situations might impair the children’s ability to pay attention to their friends, potentially harming the reciprocity, sensitivity, conflict resolution, and commitment necessary to establish and maintain high-quality friendships. In their observational and longitudinal study of dyadic interactions between children with ADHD and their
friends, Normand and his colleagues (2013) found that the tendency of children with ADHD to not respect the rules when playing with friends and to not take their friends’ needs into account when negotiating, predicted a gradual deterioration in friendship quality over time (Normand et al., 2013).

**Emotional Dysregulation and Recognition**

A large number of studies also show that children with ADHD have trouble managing their emotions, which could interfere with their ability to let go of their own emotions to recognize those of others (Da Fonseca, Seguiur, Santos, Poinso, & Deruelle, 2009). Normand and his colleagues (2013) found that children with ADHD express more negative affect with their friends during a car-race game than typical children (Normand et al., 2013). Interestingly, the negative affect expressed by their friends predicted an increase in the number of game rule violations by children with ADHD six months later, while the opposite happened with typical children (Normand et al., 2013). This finding suggests that children with ADHD possibly do not use the corrective feedback (e.g., negative affect) that their friends give them to adjust their inappropriate social behaviors.

**Sociocognitive Deficits**

Many researchers studied the role that social cognition plays in the peer relationship problems experienced by children with ADHD. First, they report that children with ADHD have trouble understanding a social situation from someone else’s perspective (Marton, Wiener, Rogers, Moore, & Tannock, 2009). Second, as previously indicated, in spite of their significant friendship difficulties, children with ADHD tend to overestimate their social competence more than typical children (Owens et al., 2007). Third, they tend to see their peers’ ambiguous provocations as hostile and to suggest less adaptive strategies to solve hypothetical social conflicts than typical children (Mikami, Lee, Hinshaw, & Mullin, 2008), which could have negative effects on friendship. Fourth, some children with ADHD may prioritize social goals such as sensation seeking and fun over compliance with rules and equity (Melnick & Hinshaw, 1996). These unique social goals may also influence their interactions with friends.

**Efficacy of Traditional Social Skills Training**

Whereas state-of-the-art, empirically supported psychosocial and pharmacological treatments for ADHD symptoms are effective in improving children’s inappropriate behaviors, these treatments rarely lead to increased peer acceptance and befriending (Hoza, Gerdes, et al., 2005). Similarly, there is now a consensus among clinical researchers that social skills training (SST), a typically therapist-led instruction to children about appropriate social behavior, is ineffective for ADHD populations (Evans, Owens, & Bunford, 2014). In her recent authoritative review on the efficacy of SSTs for children with ADHD, Mikami (2014) argues that traditional, clinic-based SSTs may be largely ineffective for children with ADHD because they overly focus on teaching social skills knowledge as opposed to attending the performance barriers that prevent these children from enacting this knowledge in the heat of the moment. Also, Mikami (2014) hypothesizes that traditional SSTs may be ineffective because they fail to consider different peer group factors (e.g., peers’ stigmatizing attitudes, exclusionary behavior, and persistent negative impressions toward children with ADHD) that also contribute to peer impairment for children with ADHD. Based on recently modified versions of SSTs to better address these factors, promising intervention strategies for teachers and parents are presented in the next sections.

**How Can Teachers Help Students with ADHD Make Friends?**

Although children with ADHD certainly contribute to their friendship difficulties due to the above-mentioned possible individual deficits or characteristics, understanding how the broader social context can influence these difficulties is critical and still currently very poorly understood (see Mikami, Lerner, & Lun, 2010). Definitely one of the most important social contexts in a child’s life, school offers unique opportunities for children to develop relationships with their peers (García Bacete, Morande-Perrin, Schneider, & Blanchard, 2014). Unfortunately, the peer group may contribute to the social difficulties of children with ADHD because of the negative stereotypes and impressions peers have about them (Harris, Milich, Johnston, & Hoover, 1990; Hinshaw, 2005). The fact that some peers behaviorally exclude children with ADHD in front of peers may also discourage other children from befriending them (Hoza, Mrug, et al., 2005; Mikami et al., 2013). Nonetheless, teachers can contribute to the development of positive peer relationships for these children. In this section, we identify general strategies that teachers can implement in class to help with this and then briefly review some programs specifically developed and adapted to promote peer acceptance and friendship of children with ADHD in school.

Since the majority of peer influence happens in classrooms, where children spend over 30 hours a week during the school year, teachers can play an essential role by promoting an environment where stereotypes and exclusionary peer behaviors are not tolerated (Mikami et al., 2013). Systematic teacher interventions in cases of peer rejection and aggressive behavior, as well as attention to the various peer subgroups in the classroom, can reduce the risk of peer rejection (Gest, Madill, Zadzora, Miller, & Rodkin, 2014). It is suggested that teachers who value a student’s strengths and differences in class can promote positive peer relationships (Mikami et al., 2010). For example, a teacher who gives positive feedback and praise to a student in front of others is associated with greater social acceptance for this student (Gambone, Klem, & Connell, 2002). Also, the way a teacher perceives a child’s behaviors and reacts to them influences peers’ judgment and behaviors toward this child (Hughes, Cavell, & Willson, 2001; Mikami et al., 2013).

Recent data, more specific to students with ADHD, suggest that teachers can play an important part in preventing peer rejection and facilitating friendship development in this population. Indeed, teachers’ behaviors showing an interest about students with ADHD in front of the class are associated with a reduction in peer rejection and with an increase in peer appreciation for these students. Praising students with ADHD

Continued on page 30
about their strengths in class also reduces peer rejection and increases dyadic friendship development (Mikami & Lerner, 2014). Thus, it is recommended that intervention programs aimed at promoting social acceptance and friendship for youth with ADHD be specifically developed and tested in a context where children interact with their peers (e.g., at school) and to involve teachers. Below is a description of two such programs: **Making Socially Accepting Inclusive Classrooms (MOSAIC)** and **Program for Evaluation and Enrichment of Relational Skills (PEERS)**.

### Making Socially Accepting Inclusive Classrooms (MOSAIC)

MOSAIC, which was developed by Mikami and her colleagues (2013), is implemented in school classrooms by teachers with the intention of developing positive relationships between children with ADHD and their peers. The rationale of MOSAIC is based on the potential influence teachers can have on peers’ perceptions and behaviors. The program integrates behavior management techniques to promote positive social behaviors, as well as techniques developed specifically to help teachers promote inclusive classrooms where peers are tolerant with children with ADHD (Mikami et al., 2013). The efficacy of the program has been tested in a specialized summer camp with children ages 6–9, including 24 with ADHD. The results show that children with ADHD are more accepted by their peers and develop more reciprocal friendships after participating in MOSAIC (Mikami et al., 2013). Considering that current options for improving social relationships and friendships for children with ADHD have a limited efficacy, these findings are promising and warrant further investigation.

### Program for Evaluation and Enrichment of Relational Skills (PEERS)

PEERS (Laugeson & Frankel, 2010) is an adaptation of the *Children’s Friendship Training* program (Frankel & Myatt, 2003), an evidence-based intervention program designed to help school-age children (ages 7–12) who have trouble making or keeping friends. PEERS, however, is a social skills training program intended to improve social competence and develop friendships in adolescents and young adults. This treatment, which lasts 17 weeks, has recently been adapted and tested in schools with adolescents with autism spectrum disorders (Laugeson, Ellingsen, Sanderson, Tucci, & Bates, 2014). Dr. Alyson Gerdes from Marquette University (Milwaukee, Wisconsin, United States) is currently examining this program’s efficacy with adolescents with ADHD. Considering the positive results to date of PEERS with various populations and given the lack of evidence-based intervention programs targeting the friendship problems of adolescents with ADHD, the results of this project are eagerly awaited. More information concerning the various adaptations of PEERS is available at the Semel Institute’s PEERS page (http://www.semel.ucla.edu/peers), including the intervention manual.

### How Can Parents Help Children with ADHD Make Friends?

In addition to the unique role of teachers in influencing children’s peer relationships in various ways, current literature also suggests that parents can also play an important role in this regard. For example, parents who discuss social skills with their children, as well as those who model good examples of social skills in their interpersonal relationships, increase the probability of their children having positive interactions with their peers (e.g., Mikami, Jack, Emeh, & Stephens, 2010). The frequency of play dates organized by parents for their children is associated with improved social skills. Parents can also teach their children how to behave in a way that promotes friendship during play dates (Mikami, Jack, et al., 2010). Unfortunately, the parents of children with ADHD are less naturally inclined to organize play dates to facilitate friendships. In spite of this, the friendship facilitating behaviors of parents during play dates are more strongly related to positive peer relationships for children with ADHD than for typical children (Mikami, Jack, et al., 2010). These results suggest that parents can possibly play an important role in these children’s friendship development. Engaging parents could be a promising and intriguing component to include in programs targeting the friendship problems of children with ADHD.

### Parental Friendship Coaching (PFC)

Parental Friendship Coaching, which was developed by Dr. Amori Mikami from the University of British Columbia, was adapted from well-established parent management training programs (i.e., MTA Cooperative Group, 1999) and from the *Children’s Friendship Training* program (Frankel & Myatt, 2003). In their program, Mikami and colleagues suggest that the parent is the “primary agent of change” in interventions focused on the friendships of children with ADHD (Mikami, Lerner, Griggs, McGrath, & Calhoun, 2010). PFC consists of eight weekly group sessions with two clinicians and the parents of five or six children with ADHD. Intriguingly, the program does not include any direct intervention component with the children. Through the parents, PFC’s main goals are to a) develop a positive parent-child relationship, b) teach children friendship-specific social skills, and c) organize play dates between friends (Mikami, Lerner, Griggs, et al., 2010). The results of a pilot study show that parents see a significant improvement in their children’s social skills and the quality of friendship during play dates. Teachers also note an improvement in peer acceptance and a reduction in social rejection. These results offer a basis for a treatment model that would focus on the parents’ behavior to promote harmonious friendship development for children with ADHD (Mikami, Lerner, Griggs, et al., 2010). Professors Mikami and Normand are currently evaluating PFC’s efficacy in a randomized controlled trial with 200 English- and French-speaking Canadian families from British Columbia, Ontario, and Quebec, Canada. If the results, which are expected in 2018, confirm that PFC is effective, researchers will be able to share the program with clinicians and the public.
In summary, given that positive peer relationships during childhood greatly influence mental health in adulthood (Bagwell, Schmidt, et al., 2001) and considering that the efficacy of treatments targeting the friendship or peer problems of children with ADHD is currently limited (Evans et al., 2014; Hoza, Gerdes, et al., 2005), this article suggests a few very promising intervention methods for teachers and parents to promote the adjustment of children with ADHD throughout their development.

References


Continued on page 32


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