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The Role of Attention-deficit Hyperactivity Disorder in the Self-perceptions of Children with Emotional and Behavioural Difficulties

L'influence du trouble du déficit d'attention avec hyperactivité dans les perceptions de soi chez les enfants ayant des difficultés affectives et comportementales

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Article abstract

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THE ROLE OF ATTENTION-DEFICIT HYPERACTIVITY DISORDER IN THE SELF-PERCEPTIONS OF CHILDREN WITH EMOTIONAL AND BEHAVIOURAL DIFFICULTIES

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ABSTRACT. The present study compared the teacher ratings and self-perceptions of two groups of children with emotional and/or behavioural difficulties: a) Those with attention-deficit hyperactivity disorder (ADHD) and b) those with average or below average levels of hyperactivity and attention. Results showed that the ADHD group was rated more poorly by teachers in academic, social, and behavioural domains. This group also inflated their competency ratings in these domains relative to teacher report more than the comparison group.

L'INFLUENCE DU TROUBLE DU DÉFICIT D'ATTENTION AVEC HYPERACTIVITÉ DANS LES PERCEPTIONS DE SOI CHEZ LES ENFANTS AYANT DES DIFFICULTÉS AFFECTIVES ET COMPORTEMENTALES

RÉSUMÉ. La présente étude compare les différences entre la manière dont les enseignants perçoivent deux groupes d'enfants ayant des difficultés affectives et (ou) comportementales et celle dont les enfants se perçoivent eux-mêmes : a) Un groupe souffrant du trouble d'hyperactivité avec déficit de l'attention (TDAH) et b) Un groupe ayant des niveaux d'hyperactivité et d'attention moyens ou inférieurs à la moyenne. Les résultats ont mis en évidence que le groupe était moins bien noté par les enseignements dans les domaines scolaire, social et comportemental. En comparaison des enseignants, ce groupe a davantage surestimé ses compétences dans ces domaines que le groupe témoin.

The area of positive self-illusions in adults has been the subject of extensive research over the past couple of decades (e.g., Agostinelli, Sherman, Presson, & Chassin, 1992; Alicke, 1985; Brown, 1986; Colvin & Block, 1994; Lewinsohn, Mischel, Chaplin, & Barton, 1980; Taylor & Brown, 1994). Taylor and Brown's (1988) model of mental health maintains that inflated views of both oneself and the future are experienced by most adults and are a normal part of an adult's cognition. This model has been extremely influential in the area of social cognition and suggests that positive self-illusions lead to, or are associated with, improved academic achievement (Wright, 2000), beneficial psychological outcomes, and successful adjustment to stressful events (Taylor, 1989; Taylor & Armor, 1996; Taylor & Brown,

1994). Conversely, other researchers (Colvin, Block, & Funder, 1995) have found that, particularly over the long-term, inflated self-perceptions in young adults are associated with deficits both in coping and interpersonal skills. They maintain that a more realistic self-appraisal contributes to psychological well being in adults.

Positive self-illusions have also been explored among children, particularly those with Learning Disabilities and more recently, Attention-Deficit/Hyperactivity Disorder (ADHD) (Bear, Minke, Griffin, & Deemer, 1998; Cosden & McNamara, 1997; Dumas & Pelletier, 1999; Harter, Whitesell, & Junkin, 1998; Heath & Glen, 2005; Hoza, Pelham, Dobbs, Owens, & Pillow, 2002; Hoza, Pelham, Milich, Pillow, & McBride, 1993). These studies document the tendency of children with Learning Disabilities and those with ADHD to rate themselves more highly in areas such as academic competence, social skills, and behaviour than their actual skill level, as measured by standardized tests and/or teacher and peer reports.

It is important in reviewing the positive illusion literature to make the distinction between discrepancy and distortion, which was well elucidated by Dobson and Franche (1989) in their paper on depressive realism. These authors make the point that a discrepancy is merely a difference between two groups, while a distortion, "refers to a judgment or conclusion reached by the subject which is inconsistent with some measure of objective reality" (p. 422). Dobson and Franche note that much of the literature has mistakenly interpreted discrepancies as distortions, which leads to a faulty conclusion regarding the processes underlying the self-reports. For the purposes of the present review, *discrepancy* refers to differences between the group of students with attention/hyperactivity difficulties and the comparison group, whereas *distortion* is indicated by child self-ratings which are inconsistent with teacher ratings.

Discrepancy studies

The difficulties experienced by children with ADHD in social, academic, and behavioural areas have been well documented (Barkley, 1998; Frick et al., 1991; Hinshaw & Melnick, 1995; Johnston, Pelham, & Murphy, 1985). It might be assumed, then, as was found by Dumas and Pelletier (1999), that these children would have lower self-perceptions of competencies than their peers. However, a number of studies have also shown that boys with ADHD report competency self-ratings similar to those of comparison boys (Diener & Milich, 1997; Hoza et al., 1993; Hoza, Waschbusch, Pelham, Molina, & Milich, 2000; Ohan & Johnston, 2002).

In a study by Hoza et al. (1993), the self-perceptions of 27 elementary-aged boys with ADHD-Combined Type (ADHD-CT) were compared to those of a control group. Results showed that the boys with ADHD viewed themselves

as performing no differently than control boys on scholastic competence, social acceptance, athletic competence, physical appearance, and global self-worth as measured by the Self-Perception Profile for Children (SPPC; Harter, 1985a). A later study by Hoza et al. (2002) replicated this finding. Similarly, in a study by Diener and Milich (1997), boys with ADHD were paired with control boys and instructed to complete a cooperative task. Following the session, boys were asked to rate how much they felt their partner liked playing with them. Boys with ADHD thought their partners enjoyed playing with them significantly more than controls.

A study by Dumas and Pelletier (1999), however, examined self-perceptions among 116 elementary-aged children (20 girls and 37 boys) with ADHD-CT in comparison with controls. Children in both groups participated in an interview during which they completed the SPPC (Harter, 1985a). Results showed that all dimensions of self-perception were lower among children with ADHD-CT than among typical children, with the exception of athletic competence, which was higher.

Findings regarding discrepancies between the self-perceptions of children with and without attention/hyperactivity difficulties are somewhat contradictory. This is likely due in part to differences in samples, particularly the inclusion of girls in the sample. However, the few studies that have mixed-gender samples have not conducted analyses to determine the effect of gender on self-perception (Dumas & Pelletier, 1999).

Distortion studies

Further evidence of the positive illusory bias is shown in a line of research involving the tendency of boys with ADHD to distort their competency ratings in areas such as social skills and academic performance, relative to an objective measure. This is despite the fact that these children have many difficulties in these areas and generally perform worse in them than non-ADHD controls (Hoza et al., 2002; O'Neill & Douglas, 1991; Whalen, Henker, Hinshaw, Heller, & Huber-Dressler, 1991). In a study by Diener and Milich (1997), boys with and without ADHD rated how much they thought their assigned partner liked them following an unstructured task. Distortion was evident only for boys with ADHD; they estimated that their partner liked them significantly more than their partners actually reported.

Similarly, in a study by Hoza et al. (2002), 195 boys with ADHD-CT were compared with 73 control boys on self-perceptions relative to a teacher-rated criterion. Participants completed rating scales that measured their perceptions of competencies in areas such as academics, behaviour, and social skills. Results showed that boys with ADHD-CT rated themselves as performing significantly better than their teachers in the areas of scholastic competence, social acceptance, and behavioural conduct. In addition, difference scores

between teacher and child reports of scholastic competence, social acceptance, and behavioural conduct indicated that, relative to controls, boys with ADHD-CT overestimated their competence in these domains. These findings were replicated in a study by Owens and Hoza (2003) and also in a study by Hoza et al. (2004), where parent reports were also included.

As reviewed above, studies have shown that although boys with ADHD may rate themselves more negatively than non-ADHD peers, they also show evidence of positive distortion in their self-ratings. However, in these studies, boys with ADHD were compared with children who had no learning or behavioural problems. In fact, children were screened carefully in order to ensure that this was the case. Thus the discrepancies reported in these studies may not necessarily be related to the children's attention/hyperactivity difficulties, but may simply be typical of boys who experience major difficulties in the specified areas. Similar to the discrepancy literature, findings in the area of distortion may also be common among children with difficulty in the areas in which they are being asked to self-assess. It is essential to expand this research to include comparison groups which consist of children who are not uniformly problem-free in order to conclude that these findings are specific to those with attention/hyperactivity difficulties.

In summary, researchers have clearly established the tendency of boys with attention/hyperactivity difficulties to overestimate their domain-specific competencies in comparison with their teachers (Dumas & Pelletier, 1999; Hoza et al., 1993; Hoza et al., 2002). However, children with ADHD have only been compared with typically developing peers and not with students with other learning and behavioural difficulties. Thus the present study will examine both distortion (relative to teacher rating) and discrepancy (relative to a comparison group) data on the self-perceptions of children with attention/hyperactivity difficulties in the areas of scholastic competence, behavioural conduct, and social acceptance. Furthermore, the current study is the first to use a comparison group that has behavioural difficulties without attention/hyperactivity difficulties, thus permitting the researchers to determine the degree to which the previous noted overestimations are specific to the attention/hyperactivity difficulties.

The following hypotheses will be tested: (a) Teacher ratings of the domain-specific competencies of children with ADHD will be significantly lower than those with average hyperactivity/average-high attention (comparison group), (b) children with ADHD will rate themselves no differently from children in the comparison group, and (c) there will be a significant difference between the ADHD group's overestimations of their competency ratings and the overestimations of the comparison group. Specifically, the ADHD group will have significantly greater difference scores between child and teacher ratings.

METHOD

Measures

TEACHER REPORT OF ATTENTION. The TRF/5-18 is the teacher version of the Child Behaviour Checklist (CBCL; Achenbach, 1991a) and is a paper and pencil rating scale designed to obtain teachers' reports of the academic performance, adaptive functioning, and behavioural or emotional problems of children between the ages of 5 and 18. Teachers rate the child's academic performance in each subject on a 5-point Likert scale ranging from 1 (far below grade level) to 5 (far above grade level). The behavioural and emotional portion of the TRF/5-18 consists of 118 items comprising eight syndrome scales: Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention Problems, Delinquent Behaviour, and Aggressive Behaviour. Teachers rate the child's behaviour on a 3-point Likert scale ranging from 0 (Not True) to 2 (Very or Often True). The TRF/5-18 scoring profile provides raw scores, *T* scores, and percentiles for Academic Performance, Total Adaptive Functioning, the eight syndrome scales, and three broadband scales reflecting Internalizing Problems, Externalizing Problems, and Total Problems. Internal consistency ranges from .72 to .95 (Achenbach, 1991b).

TEACHER REPORT OF HYPERACTIVITY. The Social Skills Rating Scale consists of 3 scales: Social skills (cooperation, assertion, responsibility, empathy, self-control), problem behaviours (external, internal, hyperactivity) and academic competence. Students are rated on a three-point, Likert-type scale in two areas: how often behaviours occur and how important each behaviour is to the respondent. Scores are calculated for each of the three areas and are rated as being either fewer than average, average or above average according to age norms.

CHILD REPORTED SELF-PERCEPTIONS. The Self-Perception Profile for Children (SPPC; Harter, 1985a) is a 36-item measure that asks children to respond on a 4-point scale to statements that indicate self-perceptions in several areas. For the purposes of this study, the relevant domains include scholastic competence, social acceptance, behavioural conduct, and global self-worth. For each subscale, the answers on the six pertinent questions are averaged, with higher numbers indicating more positive self-perceptions. Internal consistencies for the subscales range from .71 to .86 (Harter, 1985b).

TEACHER REPORTED PERCEPTIONS. Teachers reported the teacher version of the SPPC (Harter, 1985b), on which they are asked to rate the competencies of the children in scholastic competence, social acceptance, and behavioural conduct. The teacher version of the SPPC does not include a rating of global self-worth. Each subscale, on this version, contains three questions that are averaged to obtain a subscale mean for each domain.

Participants

A total of 54 children participated in the study, 27 in each group (19 males and 8 females per group). Children were between the ages of six and thirteen years (*M* = 9.21 years, *SD* = 1.78) and attended regular neighbourhood schools; none were withdrawn for more than 45 minutes/week from their regular education class. All schools were located in a single school board located in a large urban setting in Quebec. Special education services are provided based on need and not on formal identification; therefore, use of school identification codes was not possible.

TABLE 1. *Frequencies of participant characteristics by group*

Variable	Comparison	ADHD
Gender		
• Female	8	8
• Male	19	19
Grade Level		
• 1	3	6
• 2	6	2
• 3	6	9
• 4	7	5
• 6	5	5

The present sample was drawn from a total sample of 129 students who were nominated by their teachers as displaying moderate to severe emotional and/or behavioural difficulties. Thirty-one (24%) of these students met criterion for the ADHD group and, of these, twenty-seven had completed the self-perception measures used in the present study. ADHD criterion consisted of a T score of 67 or above on the attention sub-scale of the CBCL Teacher Report Form, which is the borderline clinical cutoff score (TRF/5-18; Achenbach, 1991b). T scores of less than 67 are considered to be within the normal range. Children in the ADHD group also had to have a ranking of above average hyperactivity on the SSRS (Gresham & Elliott, 1990). CBCL Teacher Report Form attention sub-scale scores for the ADHD group ranged from 68 to 83 with three participants scoring one point above the borderline clinical cut-off. This behaviour pattern is characteristic of children who have been identified with ADHD, the primary characteristics of which include impulsivity, inattention, distractibility, and hyperactivity (American Psychological Association, 2000).

A comparison group of twenty-seven children with scores below the borderline clinical cutoff of 67 on the TRF attention scale as well as a ranking of average or below hyperactivity on the SSRS, and who had also completed the pertinent self-perception measures, were then matched on gender, age, and grade (see Table 1). Analyses of variance (ANOVAs) showed that there

were no significant differences between the two groups on any of these variables. TRF attention sub-scale scores for the comparison group ranged from 52 to 66, with three participants within one point of the borderline clinical cut-off.

Teachers and principals were asked to nominate children who were displaying social, emotional, or behavioural difficulties and list the behaviours that led to their nomination. Of the children who participated, 87% were nominated for externalizing behaviours and 13% for a combination of externalizing and internalizing behaviours. Eighty-one percent of the children in the ADHD group and 93% of the children in the comparison group were nominated for externalizing behaviours with the remainder of children for a combination of externalizing and internalizing behaviours.

Results of the Children's Depression Inventory (CDI; Kovacs, 1992) indicate that all participants in both the ADHD group and the comparison group scored in the average range (see Table 2). Depression was taken into consideration due to previous research, which suggests that depression may play a role in the presence or absence of overestimations (Heath, 1995; Hoza et al., 2002). As ANOVAs revealed no differences, $F(1, 52) = .56$, $p = .46$, between the two groups in the present study, and because all participants scored in the average range, children were not matched on this characteristic.

TABLE 2. *Means and standard deviations of academic and behaviour scores by group*

	Comparison		ADHD	
Measure	M	SD	M	SD
Child Depression Index Scores	51.78	10.05	51.67	10.70
Teacher Report Form (Attention subscale)	60.15_a	6.65	72.74_b	4.22
Social Skills Rating Scale	Average		Above Average	

NOTE. *Means with different subscripts are significantly different from one another at $p < .05$.*

Procedures

During the months of September and October, teachers and principals were asked to nominate children who were displaying social, emotional, or behavioural difficulties using the following criteria:

1. Behaviour that goes to an extreme, that is significantly different from what is normally expected.
2. Behaviour that affects the student's academic performance.

3. A behaviour problem that is chronic and does not quickly disappear.
4. Behaviour that is unacceptable because of social or cultural expectations.
5. Behaviour that cannot be explained by health and sensory difficulties. (Rosenberg, Wilson, Maheady, & Sindelar, 1992)

Written consent was obtained from parents as well as informally from the children themselves at the first session. Once consent was obtained, teachers were given the TRF/5-18, SSRS, and SPPC to complete. The same teachers who nominated their students as having difficulties completed these measures. The children were seen individually and administered the CDI and SPPC. Both measures were read aloud to them in interview format to ensure comprehension.

RESULTS

Teacher ratings

A univariate analysis of variance (ANOVA) was conducted in order to test the hypothesis that teachers would rate children in the ADHD group as performing at a lower level than the comparison group in domain-specific areas on the SPPC. A significant level of .02 was used due to Bonferonni adjustment for multiple comparisons (.05/3). Significant effects were found for scholastic competence, $F(1,53) = 11.14$, $p = .00$, behavioural conduct, $F(1,53) = 5.54$, $p = .02$, and social acceptance domains, $F(1, 54) = 7.43$, $p = .01$. The comparison group was rated as performing higher than the ADHD group in all three areas (partial $\eta^2 = .18$, .10 and .12 respectively).

Self ratings

An ANOVA was performed to investigate the effects of group membership on the self-ratings of children in the domains of scholastic competence, behavioural conduct, social acceptance, and global self-worth. Children in both groups rated themselves as performing similarly, with the highest scores in global self-worth and the lowest scores in scholastic competence.

Difference scores

Finally, difference scores were calculated by subtracting the teacher ratings of the child's competency in scholastic, behavioural, and social domains on the SPPC from the child's self-ratings in each equivalent domain. For example, if a child rated herself as 3.5 and her teacher rated her as 3.0, the difference score would be 0.5, whereas for another student with a self-rating of 2.0 and a teacher rating of 2.5 the difference score would be –0.5. Positive means for each group indicate that child ratings were higher than teacher ratings.

An ANOVA was conducted in order to investigate differences between difference scores as a function of group membership (see Table 3). Results

showed that children in the ADHD group overestimated their performance relative to children in the comparison group in the domains of scholastic competence, $F(1,53) = 7.16$, $p<.01$, partial $\eta^2 = .09$, and social acceptance, $F(1,53) = 5.38$, $p<.02$, partial $\eta^2 = .12$. For the behavioural conduct domain, significance at the .02 level was not achieved, $F(1, 54) = 3.72$, $p < .06$, partial $\eta^2 = .07$.

TABLE 3. *Means and standard deviations for teacher ratings of student competencies and differences between child and teacher ratings of student competencies on the SPPC (Harter, 1985a)*

	Comparison		ADHD	
Measure	M	SD	M	SD
Teacher Ratings				
• Scholastic	2.12_a	0.80	1.54_b	0.57
• Behaviour	2.17_a	0.71	1.70_b	0.67
• Social	2.33_a	0.81	1.78_b	0.68
Differences between child and teacher ratings				
• Academic	0.63_a	0.97	1.18_b	0.78
• Behaviour	0.91	0.96	1.37	0.79
• Social	1.10_a	0.82	1.68_b	0.79

NOTE. *Means with different subscripts are significantly different from one another at $p < .05$.*

DISCUSSION

Teacher ratings

As hypothesised, teachers rated the students in the ADHD group as performing significantly lower than the comparison group in scholastic, behavioural, and social areas. This finding is consistent with previous research in which children with ADHD were found to have deficits in these areas (Barkley, 1998; Frick et al., 1991; Hinshaw & Melnick, 1995; Johnston et al., 1985). However, these results are particularly striking as the children in the ADHD group are being compared with children who also have been nominated as having social and behavioural problems. This suggests that the behaviours which make-up the ADHD profile (i.e., hyperactivity and inattentiveness) may appear particularly negative or disruptive to teachers. This possibility is in agreement with a number of studies, which have shown that teachers liked working with children with ADHD less than other children (Ohan & Johnston, 2002), feel increased stress when teaching students with ADHD (Bussing, Gary, Leon, & Garvan, 2002; Greene, Beszterczey, Katzenstein, Park, & Goring, 2002), and feel unable to teach these children effectively (Reid, Vasa, Maag, & Wright, 1994).

Discrepancies

Children in the ADHD group and children in the comparison group rated themselves as performing nearly identically in every domain, indicating no discrepancy between the two groups. Children with attention/hyperactivity difficulties, then, see themselves as comparable to children with emotional and behavioural difficulties in scholastic competence, social acceptance, and behavioural conduct. A closer examination of the self-ratings of the children in the present sample revealed that means for both groups fell in the normal range (Harter, 1985b). This finding is an important addition to existing research that shows that children with attention/hyperactivity difficulties, like those with emotional and behavioural difficulties, rate themselves similarly to typical comparison children (Diener & Milich, 1997; Hoza et al., 1993; Hoza et al., 2000; Ohan & Johnston, 2002). That children in the ADHD group see themselves as performing at levels similar to those of children in the comparison group, despite their lower teacher ratings, suggests that there may be distortion present in their self-perceptions. However, the lack of discrepancy between the ADHD and comparison groups does not prove that distortions exist, it merely suggests that this may be the case. An examination of difference scores between child and teacher ratings is necessary in order to determine whether or not distortions are present.

Distortions

Difference scores, calculated by subtracting the teacher ratings from the child's self-ratings, were greater for the ADHD group than for the comparison group. This indicates that children in the ADHD group positively distorted their competency ratings more so than children in the comparison group. The tendency of children with attention/hyperactivity difficulties to overestimate their competencies relative to teacher report has been found by previous researchers (Dumas & Pelletier, 1999; Hoza et al, 1993; Hoza et al., 2002; Hoza et al., 2004; Owens & Hoza, 2003). However, these studies compared the distortions of children with ADHD to those of their typically developing peers. That this finding can be replicated when the comparison group is a group of students with emotional and behavioural difficulties who themselves are characterized by some distortion may be explained in a number of ways.

It may indicate, for example, the strong tendency of children with attention/hyperactivity difficulties to overestimate their competencies. However, no differences were found between the self-ratings of children in the ADHD group and the comparison group, and both groups rate themselves in the "normal" range. Thus it is more likely that these greater distortions are a function of the more negative ratings by teachers given to the ADHD group. This hypothesis is supported by the significant differences between the teacher ratings of children in the ADHD group and those in the comparison

group in the areas of scholastic competence, behavioural conduct, and social acceptance. Nevertheless, the more negative teacher ratings may reflect a lower level of functioning for the ADHD group and, regardless, the greater difference between teacher and child ratings reflects a larger distortion on the part of the child.

The positive distortion that is evident among children in the ADHD group suggests a possible reinterpretation of the existing positive illusion literature. Other researchers have examined the positive self-illusory bias among children with high levels of aggression (Hughes, Cavell, & Grossman, 1997) and Learning Disabilities (LD) (Heath, 1995; Heath & Glen, 2005). It is possible that children with the ADHD profile exist in samples of these children and that the positive distortion exhibited by these children is a function of the hyperactive/attention aspect rather than the aggression or learning factors. In a recent study by Heath and Glen (2005), however, this possibility was taken into account as children with attention difficulties were excluded from the LD sample. Results showed that the positive illusory bias remained and that all students rated themselves as performing in the normal range. This finding reinforces the conclusion that students with attention/hyperactivity difficulties view themselves as performing equally to their peers and that their distortions are a result of lower teacher ratings.

The distortion of the competency ratings in the present study, as well as in others (Dumas & Pelletier, 1999; Hoza et al., 1993; Hoza et al., 2002), relies on teacher reports of scholastic competence, social acceptance, and behavioural conduct. The negative attitudes that teachers have towards children with ADHD may prompt them to rate these children as performing at lower levels than is actually the case. It is essential that future studies use more objective measures to determine whether positive distortions are actually taking place.

This issue was addressed in recent studies by Owens and Hoza (2003) and Hoza et al. (2004). The former examined the difference scores between academic self-ratings of children with ADHD and both teacher ratings as well as achievement scores in math and reading. Children with ADHD, hyperactive/impulsive type and/or combined type, overestimated their performance relative to both types of criterion. However, children with ADHD, inattentive type, did not. This supports the suggestion that the children with the behavioural profile characterized by high levels of hyperactivity and low levels of attention present with particular problems in the classroom which can lead to academic difficulties. Hoza et al. (2004) included parent ratings as external criteria and found similar results. Regardless of the criterion used, however, it is clear that children in the ADHD group view their level of performance as radically different from their teachers, and more so than the comparison group of students with emotional and behavioural difficulties.

Limitations and conclusions

It is important to point out, finally, the limitations that exist in the present study. First, we compared our findings to those of studies focusing on children with ADHD. However, children in our ADHD sample did not have a clinical diagnosis. The measures that we used did allow for the identification of children who had borderline to clinical levels of low attention, as well as those with above average hyperactivity. Furthermore, other studies have supported the use of the Child Behaviour Checklist (CBCL) scales, of which the TRF is one, as important and accurate screening tools for ADHD (Chen, Faraone, Biederman, & Tsuang, 1994). Chen et al. (1994) examined the diagnostic accuracy of the CBCL scales and found that the Attention Problems scale, which is used in the present study, had the highest discriminating power for ADHD. The addition of the hyperactivity subscale of the SSRS provides an even greater indication of ADHD symptomatology among the present sample.

This study represents a significant contribution to existing research exploring self-perceptions of children with ADHD. The present study was unique in that children with ADHD symptomatology were compared not with typically developing peers, but with a group of students who had been nominated by their teachers as having moderate to severe behavioural, emotional, and/or social difficulties.

Results have educational and clinical implications as well. Students with ADHD seemed unaware of the difficulties that they are having in the classroom. However, teachers rated these students as significantly worse in social, academic, and behavioural areas, even when compared to students with moderate to severe problems in these areas. In today's diverse classrooms, teachers are increasingly likely to encounter students with ADHD. Intervention programs may be more successful for these students if they focus carefully on providing clear feedback and ensuring that students understand where their efforts can best be placed. For example, it may be helpful for students to keep a written record of teacher feedback for individual assignments or subjects to help them monitor their progress and areas for improvement. While these students typically struggle academically and socially, it is likely their behavioural profile of hyperactivity and low attention that most challenges their teachers. Classroom accommodations such as shortened or segmented seatwork, tasks that allow for physical movement, non-verbal on-task reminders, and low-distraction work areas may help students achieve greater success and assist teachers in managing the behaviour of these students and focusing on academic instruction.

Finally, research in the area should continue to include various school and clinically identified comparison groups in order to further explore the char-

acteristics of students that contribute to positive illusory bias and inflated self-perceptions. As well, examinations of student-teacher interactions, such as those conducted by Jordan and Stanovich (2001; Jordan, Lindsay & Stanovich, 1997) may help in distinguishing between the negative perceptions teachers may have of students with ADHD and the distorted perceptions of competence on the part of these students.

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