

Agreement rates between parents' and teachers' reports on ADHD symptomatology: findings from a Brazilian clinical sample

Concordância entre relato de pais e professores para sintomas de TDAH:
resultados de uma amostra clínica brasileira

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Recebido: 4/9/2008 – Aceito: 27/10/2008

Abstract

Background: ADHD diagnosis in children and adolescents according to DSM-IV criteria demands symptoms to be present in at least two different settings (mainly school and home). Despite the importance in obtaining parents' and teachers' reports, this issue is seldom investigated in Brazil. **Objective:** We set to evaluate agreement rates between parents' and teachers' reports from a Brazilian clinical sample of children and adolescents with ADHD. **Methods:** The sample comprised 44 children and adolescents with age range between 6 and 16 years old (boys: 40; girls: 4) with a clinical diagnosis of ADHD. We compared parents' and teachers' responses in SNAP-IV questionnaire in order to calculate agreement rates among different information sources on ADHD symptomatology. **Results:** Agreement for ADHD diagnosis occurred in nearly half of the sample, with parents' reporting more ADHD symptomatology than teachers. **Conclusion:** Our findings might suggest that recognition of ADHD symptomatology is less clear-cut among school teachers in Brazil, indicating that some educational sessions about this condition should be conducted in schools, taking into consideration the importance of education professionals' reports to diagnose ADHD.

Coutinho G, et al. / Rev Psiq Clín. 2009;36(3):101-4

Keywords: Attention deficit hyperactivity disorder, ADHD, diagnosis, information sources.

Resumo

Contexto: O diagnóstico de TDAH em crianças e adolescentes, segundo os critérios do DSM-IV, requer que os sintomas estejam presentes em, ao menos, dois ambientes distintos (principalmente escola e casa). Apesar da importância do relato de pais e professores, esse tema tem sido pouco investigado no Brasil. **Objetivo:** Investigar a concordância entre os relatos de pais e professores de uma amostra clínica de crianças e adolescentes com diagnóstico de TDAH. **Métodos:** A amostra era composta por 44 crianças e adolescentes com idades variando entre 6 e 16 anos (40 meninos e 4 meninas), com diagnóstico clínico de TDAH. Foram comparadas as respostas de pais e professores no questionário SNAP-IV, visando a calcular taxas de concordância entre diferentes fontes de informação para sintomas de TDAH. **Resultados:** Concordância para o diagnóstico de TDAH ocorreu em aproximadamente metade dos casos; pais relataram mais sintomas de TDAH que professores. **Conclusão:** Os achados aqui apresentados podem mostrar

que informações acerca da sintomatologia de TDAH não são bem divulgadas para professores brasileiros, indicando a necessidade de se investir em sessões educacionais sobre o transtorno, tendo em vista a importância do relato de profissionais de educação para o diagnóstico de TDAH.

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Palavras-chave: Transtorno do déficit de atenção e hiperatividade, TDAH, diagnóstico, fontes de informação.

Introduction

Attention Deficit Hyperactivity Disorder (ADHD) diagnosis in children and adolescents requires examining not only the patient, but interviewing parents and obtaining data from school. Children are usually unable to provide reliable report on their behavior, adolescents often underestimate their symptoms of ADHD¹ and parents are asked about symptomatology not only at home but also at the school setting. Obtaining information from only one source (i.e., parents or teachers) strongly influences the prevalence of the disorder². Teachers are often the first ones to suggest ADHD among children and adolescents at school age³, reinforcing the importance of having teachers' reports for such diagnosis. Some studies demonstrated that correlation between parents' and teachers' reports is only modest⁴ and informants may be best reporting behavior concerning their corresponding settings (parents reporting home behavior and teachers reporting school behavior)⁵. Also, children with ADHD often show different patterns of behavior depending on the environment (school or home); hence parents' report about conduct at school might be imprecise.

Parents' and teachers' reports often disagree on the subtype classification^{2,6}. One study with a clinical sample of children with ADHD showed that the agreement rates between parents' and teachers' reports were better for symptoms of inattention, Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD) than for hyperactive symptoms⁷. Disagreement between different information sources was also shown in a study with a non-clinical sample, with mothers reporting more symptoms of hyperactivity and teachers reporting more symptoms of inattention and disruptive behavior⁸.

To the best of our knowledge, only one Brazilian study has addressed this issue. Serra-Pinheiro et al.⁹ evaluated agreement between parents' and teachers' using a non-clinical sample; the findings revealed that teachers reported more symptoms of inattention whereas parents reported more symptoms of hyperactivity. Moreover, when ADHD diagnosis was considered categorically, i.e., present or not, agreement between information sources was low.

The aim of the current study was to evaluate agreement rates between parents' and teachers' reports of ADHD symptoms in a Brazilian clinical sample of

children and adolescents with a clinical diagnosis of ADHD using a design that mimics what clinicians face in everyday clinical practice. Based on the literature review and in a recent study showing that Brazilian education professionals have little knowledge about ADHD symptomatology¹⁰, we hypothesized parents and teachers would have small to moderate agreement for ADHD diagnosis.

Methods

We retrospectively reviewed the database of a private center specialized in ADHD and Learning Disorders in Rio de Janeiro (Centro de Neuropsicologia Aplicada) and included all children and adolescents aged 6 to 16 years who had received a diagnosis of ADHD in the year 2005. Most were referred by physicians (psychiatrists and neurologists) and psychologists; only a few were referred from schools. The study was approved by the Ethics Committee of the Psychiatry Institute of the Federal University of Rio de Janeiro.

A semi-structured interview based on DSM-IV criteria was presented to parents to verify the presence of ADHD and other comorbid conditions. Interviews were conducted by an intensively trained psychologist (GC), who also took extensive notes about symptomatology and history. All collected data were considered for a final diagnosis by a board-certified psychiatrist (PM).

Parents and teachers were also asked to answer the Brazilian version of the questionnaire SNAP-IV¹¹. Children and adolescents with an estimated IQ (WISC-III)¹² lower than 80 were excluded from the analysis. All were treatment-naïve for ADHD. All data presented in the current study was collected in 2005 and assessed retrospectively through database of Centro de Neuropsicologia Aplicada.

Comparisons between teachers' and parents' reports were made using Pearson's Chi-Square.

Results

Forty-four (40 boys, 4 girls) patients received a first diagnosis of ADHD according to DSM-IV criteria. Mean age was 10 years (SD = 3.03) and the sample had been at school for a mean of 3.41 years (SD = 2.82). From the total sample, only 29 children (65.9%; 27 boys, 2 girls) would be diagnosed with ADHD from teachers' reports

alone. On the other hand, considering only parents' reports, 40 of the 44 patients (90.90%; 37 boys, 3 girls) would have received a correct diagnosis. The profile of the total sample and the positive diagnosis based only in parents' or teachers' reports is shown in Table 1. The ADHD group based only in teachers' reports did not differ in age, IQ, gender or education from the ADHD group based only in parents' reports (Table 1).

Table 1 . Demographic and IQ profile of samples classified as having ADHD based on teachers or parents report

Characteristics	ADHD parents' report (n = 40)	ADHD teachers' report (n = 29)	Total sample (n = 44)
Age mean (SD)	10.4 (3)	9.9 (2.9)	10.1 (3)
Gender	M = 37 F = 3	M = 27 F = 2	M = 40 F = 4
Education mean (DP)	3.7 (2.8)	3.2 (2.7)	3.4 (2.8)
IQ mean (DP)	97.3 (11.3)	98.1 (11.7)	97.2 (10.9)

SD: standard deviation; IQ: intellectual quotient; M: male; F: female.

Twenty-six of the 44 patients (59.09%) were classified as having ADHD by both parents' and teachers' reports. Parents reported positive diagnoses in disagreement to teachers in 14 cases (31.82%), whereas only in 3 cases teachers reported positive diagnoses in disagreement to parents (Table 2). The difference between different report sources was not significant.

In 34 patients (77.27%), parents reported a significant number of inattention symptoms, which were in agreement to teacher's reports in 21 (61.7%). Only in 5 cases (11.36% of the total sample) teachers reported a significant number of inattention symptoms in disagreement to parents. In 24 subjects of the sample (54.54%), parents reported positive hyperactivity-impulsivity symptoms; in 12 (50%) of these cases there was agreement with teachers. Only in 6 cases (16.64% of the sample) teachers reported positive hyperactivity-impulsive symptoms in disagreement to parents.

Table 2 . Number of cases with DSM-IV cut-off for ADHD diagnosis according to each informant source

		Teachers report		Total
		Negative	Positive	
Parents report	Negative	1	3	4
	Positive	14	26	40
	Total	15	29	44

Pearson (chi-square): 0,687; p = 0,162

Discussion

Our sample consisted mainly of boys (ratio = 10/1), as expected in ADHD clinical samples of children and adolescents^{13,14}. Agreement on the diagnosis was moderate, occurring in more than half of the sample (59.09%). When considering only parents' reports, 90.90% of the sample was diagnosed as ADHD. On the other hand, only 65.90% of the children had a positive diagnosis according to teachers' reports. Thus, our findings are in accordance to data presented by others^{13,14}, in that parents reported a higher prevalence of ADHD in comparison to teachers' reports

When inattentive symptoms were considered in separate, the concordance rate was fair. In contrast, when considering only hyperactivity-impulsivity symptoms, concordance was low. This is in line with the findings of other study⁷ that showed parents and teachers have better agreement for symptoms of inattention, ODD and CD than for hyperactive symptoms.

Only one Brazilian study has previously investigated concordance rates between parents and teachers for ADHD symptoms⁹. Using a non-clinical sample, that study found that teachers report more symptoms of inattention whereas parents report more symptoms of hyperactivity. Not surprisingly, our study in a *clinical sample* showed parents reporting more symptoms in both domains. Presumably, these parents had complaints about behavior or academic performance of their children, thus explaining the higher rates of symptom reporting compared to teachers.

Limitations

The findings reported in our study should be viewed in light of some limitations. Because our sample had a high socioeconomical level, our findings may not be generalized to Brazilian population; private centers in Brazil have only patients who must pay for the costly services since health plans do not cover ADHD or Learning Disorders evaluation and treatment. Moreover, the findings of a referred sample might not be generalized to community samples. On the other hand, studying a clinical sample may be advantageous, because it mimics what clinicians see in everyday practice.

Clinical implications

Our findings are in keeping with a recent survey suggesting that Brazilian teachers are not well acquainted with ADHD symptomatology⁹. Taking into consideration the importance of teachers' reports to a further investigation of ADHD symptomatology, it is possible that educational sessions about this condition should be conducted in schools, given that this intervention has already been successfully applied in other countries, with teachers improving their skill to identify children in risk for ADHD¹⁵.

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