128 - DEVELOPMENT PSICOMOTOR OF SCHOLARS WITH INDICATIVE OF ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

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Introduction

Nowdays, the Attention Deficit Hyperactivity Disorder (ADHD)is recognized as a the most possible diagnosis to explains complaints of those responsible for children, regarding deficits of development of different domains of social intregation (PEREIRA et al.; 2005). ADHD can be defined as a problem of the mental health, a bidimentional disturbance, that involves the attention and the hyperactivity/impulsivity (AMERICAN PSYCHIATRIC ASSOCIATION, 2000).

There is consent among authors that the problem is more common in the boys than in the girls (BARKLEY, 2002; GOLDSTEIN and GOLDSTEIN, 1996; BRAZELTON and SPARROW, 2003; BENCZIK, 2000). According to Kaplan, Sadock and Grebb (2003), that proportion can vary from three to five boys, for each a girl.

ADHD can bring several damages in multiple areas of the child's life, as the adaptation to the academic atmosphere, relationships interpersonal and school acting (ARNOLD and JENSEN apud PASTURA et al. 2005; and BENCZICK, 2000). In relation to the motor development, Barkley apud Pereira et al. (2005), they affirm that about 50% of the children with ADHD possess disturbances of the motor coordination. Kaplan, Sadock and Grebb (2003) and Cypel (2000) associate the upset to a motor compromising, however they are not known that degree and which areas of the motricit are more prejudiced.

Considering the important number of children in school age with ADHD, researches that identify comorbities and development problems associated to the upset are important for best to work with those children, that daily are prejudiced for lack of the teacher's knowledge and parents that little know as to work with them. The researches in Brazil for that population are still very gone back to the clinical area, and few studies it has been developed in the school area.

Knowing about the possibility of ADHD to be associated with motor difficulties, this study had as objective investigates the motor development of students with age between 10 and 12 years, with indicative of Attention Deficit Hyperactivity Disorder (ADHD).

Method

The sample was composed by 20 students, with age between 10 and 12 years, with indicative of ADHD, regularly registred in a school of the municipal net of teaching of São José/SC.

The collection of the data happened in two phases. Firstly the teachers of the school received the protocol for identification of ADHD of the Manual Statistical of the Mental Upset (DSM-IV), by American Psychiatric Association (2000). This Protocol of DSM-IV consists of a questionnaire composed by 18 closed subjects with answers dicotomics (yes our not), and has as objective classifies the child in agreement with the three possible classifications of ADHD, Combined type, Type Predominantly Inattentive and Type Predominantly Hyperactive.

After analysis of the questionnaires, the suitable students for the teachers went by the psicomotor evaluation, through the Battery of the Evaluation of the Child's Movement (Movement ABC) by Henderson and Sugden (1992). This motor acting test was created to detect motor problems in children from 5 to 12 years and it evaluates the children according to pre-certain age groups. For better analysis of the data of the evaluation psicomotor, the sample was divided in two groups, identified for age group 3, for the children with 10 years of age and age group 4, for the children of 11 and 12 years of age. The division happened because, Henederson and Sugden (1992) believe that in each phase of the development the child is capable to accomplish the motor abilities of different ways, and with the increase of the age, is ideal that there is the specialization of the movements, due to the ripening of the nervous system and incentives offered by the middle.

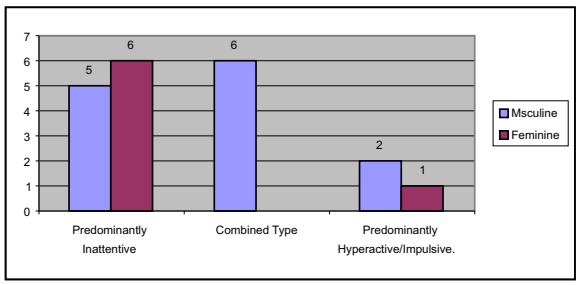
The tabulation of the data was accomplished in the statistical package SPSS, that made possible the making of tables and graphs, for better verification of the results. To accomplish the analysis of the data, the descriptive statistics was used (averages, frequencies, deviations pattern, maxima and minima).

Results

Participated in the research 20 children, seven were girls and 13 were boys. There was not difference between the boy's medium age and girls, being the same of the general average of the sample (10,5 years/s=0,83).

Most of the children was indicated as tends ADHD of the Type Predominantly Inattentive (n=11), 6 were classified with ADHD of the Combined Type, and a small portion (n=3) it received the classification of ADHD of the Type Predominantly Hyperactive/Impulsive. The graph1 show the frequency of the sexes in each classification of ADHD.

Gráfico1: Boy's frequency and girls for each classification of ADHD



Of the 20 participant children of the research, 13 were appraised seconds the criteria of age group 3 of the evaluation psicomotora, for children of 9 and 10 years, and 7 according to age group 4, for children with 11 and 12 years of age. The table 1 brings the frequency and percentile of the sexes divided among the two age groups.

Table 1: Frequency and percentile of the sample in each age group and divided by sex

	N		Masculine		Feminine	
	N	%	N	%	n	%
Age Group 3	13	65	8	61,5	5	71,4
Age Group 4	7	35	5	38,5	2	28,6

In what concerns the differences in the motor abilities between boys and girls, the participants of the masculine sex obtained a better total " result " in the proofs of Abilities with Ball and of Balance. On the other side, in the proofs of Manual Ability the girls presented a better punctuation. The table 2, show the averages and deviations standard of the different motor abilities divided by sex, for each age group.

Table 2 - Averages and deviations standard of the total motor Abilities divided by sex in each age group.

Total motor abilities	Batteries of Test	Sex	Averages	s
Total Manual Ability	Age Group 3	Masculine	5,5	3,44
		Feminine	4,9	3,43
	Age Group 4	Masculine	2,7	2,16
		Feminine	0,5	0,7
Total Abilities with Ball	Age Group 3	Masculine	0,62	1,18
		Feminine	1,8	2,04
	Age Group 4	Masculine	0,9	1,34
		Feminine	1,0	0,00
Total Balance	Age Group 3	Masculine	2,25	1,98
		Feminine	4,2	3,29
	Age Group 4	Masculine	6,8	5,31
		Feminine	7,0	2,82

The scholar's half didn't present motor problems (n=10 / 50%), 5 (25%) they presented Borderline Motor Disturbances and 5 (25%) Definitive Motor Problem. The table 3 brings the frequencies and percentile of each classification, divided in the age groups 3 and 4.

	Batteries of Test	Frequency	Percentage
Normal Motor Abilities	Age Group 3	6	46,2
	Age Group 4	4	57,1
Borderline Motor Disturbances	Age Group 3	4	30,8
	Age Group 4	1	14,3
Definitive Motor Problem	Age Group 3	3	23,1
	Age Group 4	2	28,1

There was not difference inside in the psicomotor evaluation of the different groups of ADHD.

Discussion

The referring results to the number of participants of each sex go to the encounter of the present in the literature, with a number of boys superior to the of girls (BARKLEY, 2002; GOLDSTEIN AND GOLDSTEIN, 1996; BRAZELTON and SPARROW, 2003). however, Kaplan, Sadock and Grebb (2003) they affirm that this proportion can vary from 3:1 to 5:1, result different from the found in this research, that was of approximately two boys for each girl. The found results agree with the exposed for Rohde (2004) where the author explains that the proportion between boys and girls affected it varies of approximately two boys for each girl in population studies, up to nine boys for each girl in clinical studies.

Many studies affirm that usually the type Predominantly Hyperactive/Impulsive, is more common in the sex masculine and Predominantly Inattentive for the feminine sex (KAPLAN, SADOCK and GREBB, 2003; SMITH AND STRICK 2001; VASCONSELOS, et al, 2003), however, the Type Combined, and Predominantly Inattentive was more frequent among the boys than the type Predominantly Hyperactive. Similar to the study of Freire and Pondé (2005) accomplished in the city of Salvador (NANNY), in which one bigger number of boys received the classification Predominantly Inattentive, in relation to the classification Predominantly Hyperactive/Impulsive.

When compared the results obtained inside of each age group, we noticed that, same doesn't tend significant differences in both age groups, the girls presented better results in the proofs of Manual Ability, while the boys went out better in the Abilities with Ball and Balance. Similar results were found by Perez and Sanz (2003), also using the movement ABC. Significant differences were verified in the Manual Ability, also with a favorable result to the girls; and in them Ability with Ball, being a better acting of the boys. Same not having significant differences in the result of the proofs of Balance, in the study of Pérez and Sanz (2003) the boys also reached better results. As it Glues and Glue (2003), on average, the boys of this age tend to be a little more advanced in motive abilities that demand force, while the girls frequently, are excellent in the fine motive abilities, how to draw and to write.

Langendorfer apud Santos et al. (2004), he affirms that possible differences in the pattern of global abilities between boys and girls can be current of the low development presented by the girls, possibly due to cultural reasons.

Still in this direction, Pérez and Sanz (2003) they attribute the differences between the boys' motor abilities and girls, in your sample, to the different sexual stereotypes. These models follow existing as there is a prevalence of tasks influenced by behaviors considered masculine or feminine dictated by the environment in that the children are inserted. Glue and Glue (2003), they also agree, that cultural conceptions of the appropriate activities to the girls can play a great part in these differences of behavior, mentioning examples of the American Culture, where according to the authors the parents encourage more your children men to participate of sports that request larger wide motor abilities.

It was possible to verify that the children's half didn't present motor problems, 25% of the participants of the sample presented light motor problems and 25% serious motor problems, agreeing with the exposed for Barkley apud Pereira et. al (2005), that says that about 50% of the children with ADHD, they possess disturbances of the motive coordination. And with Hechtman et. al apud Pereira, Araújo and Mattos (2005), that says that ADHD can be associated to the incapacity of acquiring fine and global motor aptitudes adequately.

They were not found differences in the motive evaluations in the different types of Classification of ADHD, although Barkley (2002) it shows studies that prove that the motor deficit is larger in children of the inattentive predominant subtype.

Final considerations

The presented results, when compared the other studies with normal populations, they show that children with ADHD have larger tendency to present problems of psicomotor development.

However it is important that measured they are taken for these children to have chance for they be developed in a correct and compatible way with the age and development phase. This way the teachers should be attentive to behaviors that indicate TDAH, as well as to create teaching strategies, where these students feel comfortable and they can be accompanying the other student in class.

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DEVELOPMENT PSICOMOTOR OF SCHOLARS WITH INDICATIVE OF ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

Abstract

This paper had for objective to investigate the psicomotor development of scholls children with indicative of ADHD, with ages between 10 and 12 years. The study was characterized as descriptive. The sample was composed by 20 children with ages between 10 and 12 years, enrolled in a school of São José/SC. Two instruments were used: the protocol of DSM-IV, for the indication of ADHD and the Test for Evaluation of the Child's Movement (ABC). The statistical treatment was accomplished through descriptive statistics. Six children were classified with ADHD of the Combined Type, 11 with the Inattentive Type and 3 with the Type Hyperactive. With relationship to the scholars' motive abilities, it was observed that the girls had better permormance in the proofs of Manual Ability, was not significant while the boys obtained better results in the Balance and Abilities with Ball. Ten children received the classification of Normal Motor Abilities, 5 received the classification Borderline Motor Disturbances and 5 Definitive Motor Problem. The difference among the classifications of ADHD was not significant, with relationship to the motor development. The presented results, when compared with other studies with normal populations, showed wich that children with ADHD are more sencibles to present psicomotor problems.

key Words: Attention Deficit Hyperactivity Disorder (ADHD). Motor Development. Students

DÉVELOPPEMENT PSYCHOMOTEUR D'ÉCOLIERS INDIQUANTS LE TROUBLE DU DÉFICIT D'ATTENTION/HYPERACTIVITÉ (TDAH)

Résumé

Ce travail a eu pour objectif rechercher le développement psychomoteur d'écoliers qui manifestaient le TDAH entre l'âge de 10 à 12 ans. L'étude a été caracterisée comme un descriptif de champ. L'échantillon a été composé par 20 enfants inscrits dans une école municipale de São José/ SC. On a utilisé deux instruments de recherche : le protocole du DSM-IV pour l'indication du TDAH et le Test d'Évaluation du Mouvement de l'Enfant (ABC). Le traitement statistique a été realisé à travers la statistique descriptive. Six enfant ont été classsifiés comme manifestants du TDAH du Type Combiné, onze du Type Innattentif et trois du Type Hyperactif. Par rapport aux habiletés moteurs des écoliers, on a observé que les filles ont obtenu un meilleur résultat dans les examens de Dexterité Manuelle, pendant que les garçons ont obtenu un meilleur résultat dans les tests d'Équilibre et Habileté avec le Ballon. Dix enfants ont reçu la classification d'Habiletés Moteurs Normaux, cinq ont reçu la classification Troubles Moteurs Legers et cinq Troubles Moteurs Graves. Il n'y a pas eu de différence entre les classifications du TDAH par rapport au développement moteur. Les résultats présentés ont montré que les enfants portants le TDAH ont une tendance plus forte à présenter des problèmes psychomoteurs quand comparés aux populations normaux.

Mots-clés : Trouble de Déficit d'Attention/Hyperactivité (TDAH) - Développement moteur - Elève

DESARROLLO PSICOMOTOR DE ESTUDIANTES CON INDICATIVO DE TRASTORNO DE DEFICT DE ATENCION/HIPERACTIVIDAD (TDAH)

Resumem

Este trabajo tuvo como objetivo investigar, el desarrollo psicomotor de estudiantes con indicativo de TDAH, con edad entre 10 y 12 años. El estudio fue caracterizado como descriptivo de campo. La muestra fue compuesta por veinte niños, entre 10 y 12 años, inscritos en una escuela pública de la ciudad de San José/SC. Fueron utilizados dos instrumentos de pesquisa: el

protocolo de DSM-IV, para la indicación del TDAH, y la Prueba para Evaluación del Movimiento de los Niños (ABC). El tratamiento detallado fue realizado por medio de la estadística descriptiva. Seis niños fueron descubiertos con el TDAH del Tipo Combinado, once niños con el Tipo Desatento y tres niños con el Tipo Hiperactivo. Sobre las habilidades motoras de los estudiantes, se observó que las niñas tuvieron mejor desempeño en las pruebas de destreza manual y los niños tuvieron los mejores resultados en las pruebas de Equilibrio y Habilidad con Pelotas. Diez niños recibieron la clasificación de Habilidades Normales, cinco recibieron la clasificación de Motores Disturbios Leves y cinco de Motores Disturbios graves. No tuve diferencia entre las clasificaciones del TDAH sobre el desenvolvimiento motor. Los resultados presentados cuando confrontados con otros estudios con población normal, concluyen que los niños con TDAH pueden presentar mayores problemas de tendencia psicomotoras.

Palabras-claves: Trastorno de Déficit de Atención/Hiperactividade (TDAH), Desarrollo Motor, Estudiantes.

DESENVOLVIMENTO PSICOMOTOR DE ESCOLARES COM INDICATIVO DE TRANSTORNO DE DÉFICIT DE ATENÇÃO/HIPERATIVIDADE (TDAH)

Resumo

Este trabalho teve por objetivo investigar o desenvolvimento psicomotor de escolares com indicativo de TDAH, com idades entre 10 e 12 anos. O estudo foi caracterizado como descritivo de campo. A amostra foi composta por 20 crianças com idades entre 10 e 12 anos, matriculadas em uma escola da rede municipal de São José/SC. Foram utilizados dois instrumentos: o protocolo do DSM-IV, para a indicação do TDAH e o Teste para Avaliação do Movimento da Criança (ABC). O tratamento estatístico foi realizado através de estatística descritiva. Seis crianças foram classificadas com o TDAH do Tipo Combinado, 11 com o Tipo Desatento e 3 com o Tipo Hiperativo. Com relação às habilidades motoras dos escolares, observou-se que as meninas tiveram melhor desempenho nas provas de Destreza Manual, enquanto os meninos obtiveram melhores resultados no Equilíbrio e Habilidades com Bola. Dez crianças receberam a classificação de Habilidades Motoras Normais, 5 receberam a classificação Distúrbios Motores Leves e 5 Distúrbios Motores Graves. Não houve diferença entre as classificações do TDAH, quanto ao desenvolvimento motor. Os resultados apresentados, quando comparados a outros estudos com populações normais, mostram que crianças com TDAH têm maior tendência a apresentar problemas psicomotores.

Palavras chave: Transtorno de Déficit de Atnção/Hiperatividade (TDAH). Desenvolvimento motor. Escolares.