Research article
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Behaviour assessment and reading ability in second grade greek school children

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Studies on ADHD show high comorbidity with behavioural and learning disorders. However, the specific association of behavioural and attention factors with learning disorders is not clear. The aim of this study is to examine the relationships between hyperactivity, inattention and reading ability in a non-referred sample in Greece. Data were collected from 201 pupils attending second grade in public school in an Athens district. The CBCL was administrated to parents in order to evaluate behavioural disorders, inattention and hyperactivity. Teachers completed the CBCL and the Conner's scale. Reading ability was assessed by a reading test appropriate for second grade. Attention difficulties reported by the teacher were associated with lower reading skills, but hyperactivity and behaviour disorders were not. Correlations of reading skills with CBCL scores were very low, especially through parental ratings. Girls showed better reading skills and less "hyperactivity" than boys. There was consistency in teachers' ratings between the Conner's and the CBCL. Teacher-parent concordance on CBCL was very low or absent. Report of hyperactivity without report of attention problems was not associated with reading difficulties in a non-referred Greek sample of second grade schoolchildren. This observation must be considered when therapeutic and/or educational planning is undertaken.

Key words: attention-deficit hyperactivity disorder, inattention, reading ability, parent-teacher agreement

Introduction

Attention-Deficit Hyperactivity Disorder (ADHD) is one of the most common neurodevelopmental disorders of childhood. Even though a strict definition of this entity is constantly sought, ADHD is an often redefined and reconceptualized syndrome. Many studies discuss the role of inattention in ADHD and its comorbidity with learning difficulties. They point out the lack of agreement between laboratory measures of attention and behavioural manifestations of ADHD,[1] the diversity of attention difficulties within the clinical groups[2] and the stronger association of learning difficulties with inattention than with hyperactivity.[3]

In children with ADHD, the rate of reading disability (RD) is between 25–40%,[4] whereas in RD children, 15–25% meet the criteria for ADHD.[5] Behavioural and genetic studies, in both clinical and community samples, support a partly shared genetic aetiology for this comorbidity.[6–9] In a twin study,[10] RD and ADHD symptoms were more highly heritable if the propand met the criteria for both disorders versus RD or ADHD alone. Environmental factors were also reported to contribute to the link between RD and inattention. Roy and Rutter (2006) suggest that reading performance may also be associated with the experience of being raised "in care".[11] Consequently, environmental influence, such as institutional upbringing, might affect reading performance either directly or indirectly owing to the heightened levels of inattention, which are concomitant with institutional care.

Other studies suggest common cognitive components in RD and ADHD, such as deficits in language impairment,[12] processing speed,[13] reading comprehension,[14–16] time perception and psychoacoustic tasks.[17,18] Willcutt et al (2005) found that children with RD and ADHD showed a combination of deficits observed in RD-only children (deficits on reading and language skills and weaknesses on verbal working memory, processing speed and response inhibition) and ADHD-only children (weaknesses at response inhibition and processing speed tasks and impairment in some measures of reading skills and verbal working memory).[19]

Most studies are clinically based and the high rate of associated problems with ADHD might not be present in non-referred schoolchildren.[20] In addition, studies in the general population are more suitable for cross-cultural and cross-country comparisons than clinical studies, as the factors affecting clinical reference may vary widely according to each country. Thus, the objectives of the present study in a non-referred sample of second grade public school children in Greece are: (i) to study the relationships between tested reading ability and hyperactivity, inattention, and other behavioural difficulties reported by the parents and the teacher; (ii) to examine parent-teacher agreement; (iii) to compare these Greek results to those from other countries.

Material and method

Design

This research took place in a Community Mental Health Centre (CMHC) in Athens, linked to the Psychiatric Department of the University of Athens Medical School. The sample was drawn using stratified sampling: (i) 100% of the schools in the Byron district covered by the CMHC participated; (ii) 100% of the pupils of these schools attending second grade during the period from 01/09/2006 to 15/06/07, aged between 7 years to 8 years (84 το 96 months), were potential participants; (iii) 55% of the above pupils were randomly chosen. The refusal rate of the parents was only 6%.

The sample thus comprised of 201 children, 92 boys (45.8%) and 109 girls (54.2%). The period between the 10th and 15th of December was chosen for testing, in order to allow enough time for every child to adjust to the demands of Grade 2 and to minimize possible influences of teaching methods implemented in Grade 1. We presumed that by this time children would have accomplished different levels in the acquisition and automatisation of reading.

Study instruments

a. *Parent Questionnaire concerning the child's health history*.

b. *Child Behavior Checklist* (*CBCL*): This 118-item parent-rated behavioural inventory on a 3-point scale,

proposes T-scores for 8 first-order factors, 2 second-order factors and a total T score, according to age and gender.[21]

c. *Teacher's Report Form* (*TRF*): This teacher-rated behavioural inventory on a 3-point scale, yields the same T-scores as the parents' CBCL.[22]

d. *Conners-28 item questionnaire*: This assesses behavioural difficulties to be rated by the teacher on a 4-point scale, "not at all", "just a little", "pretty much", and "very much present", coded 0, 1, 2 and 3 respectively. It is suitable for children aged 4 to 17 years and is designed for ADHD screening.[23,24] It has been translated into Greek and standardized on the Greek population.[25]

e. *Reading ability test*: A text based on the Aesopian Myth of "The Wise Frog" was used. It is relevant to the skills, capacities, taught knowledge and interests of 7–8 years old children. The test consists of 95 words (letters' size 16) similar to the letters of the Language Official Handbook (Year 1, Year 2), accompanied by an attractive illustration. The text level corresponds to that of the Official Handbook of Greek Elementary School, Grade 1 and 2.[26] It was administrated by six specially trained teachers. Their evaluations were checked during a preliminary study. There was no statistically significant "teacher" effect.[27] The reading ability was scored for: (1) Time (in seconds), from the initial uttered syllable till reading of the text was completed; (2) Accuracy: number of errors (spelling errors, stress errors, deletions, substitutions, additions, reversals, reiterations of letters, syllables and words, punctuation deletions and skipping rows of text); (3) Comprehension: number of correct answers to 8 specific questions on the text. The test was administered individually. Time needed was about 10 minutes.

Procedure

Before the study, a meeting took place with all members of the research team and teachers involved, to inform them about the aim and the specific procedures of the study. Teachers were then given envelopes with the Conners questionnaire and the Teachers' Report Form to be completed for all the pupils in their class. In addition, members of the research team had meetings with parents in the schools to inform them about the aims of the study, the way to complete the CBCL and to answer possible queries. Every child attending Grade 2 was then given a sealed envelope to take home for their parents, which contained a consent form, a letter for the parents, the CBCL and a questionnaire concerning the child's health history, which were to be filled in and brought back to school. The research team later collected the returned envelopes from the teachers.

Statistical analysis

Statistical analysis used the SAS software. Chi-square test was used for comparison of proportions; Student's t-test and ANOVA for comparison of means; and Pearson's correlation coefficients to test the correlation between two continuous variables. In addition, a Principal Component Analysis with varimax rotation was performed in order to examine the structure of the Conner's Teacher Rating Scale.

Results

Parent's questionnaire concerning the child's history

This questionnaire was completed for 85% (n=170) of the children. It was filled in by the mother in 82% of the cases, by the father, in 14% and by either parents or another person, in 4%. Education level of the mother was low, median or high in 10%, 64% and 26% of the cases respectively, with similar figures for the father.

Concerning declared problems during pregnancy, the parents gave negative answers for "general well-being" in 7.2% of the cases, and positive answers for "health problems", "psychological problems" and "occurrence of a negative event (such as loss of job)" in 13.7%, 5.2% and 16.9% respectively. In 32.1% of the cases the parents reported "caesarean", 8.9% "prematurity" and 11.9% "other" as problems during delivery. "Breast- feeding" (duration's range: 0.3–24 months) was reported in 74.7% of the cases. The parents noted that "my child's health is good" in 98.2%, while "chronic diseases" (includ-

ing allergy) and "acute diseases" were reported in 11.4% and 16.9% cases respectively. According to the parents, 9.4% of the children are left-handers and have received the care and training of day-nursery in 67.6% and preschool (kindergarten) in 95.3%.

Conner's questionnaire (teachers) (N=175)

Teachers do not report behavioural difficulties for the majority of their pupils (they generally answer "never" to most items). Only for item 13 ("Submissive attitude toward authority") the percentage of "sometimes" was higher than the percentage of "never" answers (table 1).

Table 2 shows the results of Principal Component Analyses of the 28 questions of the questionnaire.

Items 6 ("Overly sensitive to criticism"), 13 ("Submissive attitude toward authority"), 20 ("Appears to lack leadership"), and 28 ("Difficulty in learning") were poorly related to the total score (table 2), (F1 unrotated). The four factor structure was chosen as the most appropriate solution and accounted for 64% of the variance. In the four factor solution, items were retained if their loading on the factor was >0.50 after varimax rotation. New variables were then generated, one for each factor, summing up the teacher's answers (i.e, 0, 1 or 2) to the corresponding items. The names of these four new variables were chosen in accordance with the questions they were based on: hyperactivity (10 items), sociability (6 items), inattention (4 items), "sensitivity" (6 items).

Boys presented higher levels of Hyperactivity ($p=0.0006$) and Total problems ($p=0.01$) than did girls.

Reading task (N=201)

The reading time was from 42 to 414 sec, with mean 99.0 sec (SD=47.8). The number of errors var-

Table 1. Analysis by item of the Conners Questionnaire.

	Never	*Rarely*	*Sometimes*	*Very often*
1. Restless in the "squirmy" sense	53.7	29.1	9.7	7.4
2. Makes inappropriate noises when he shouldn't	76.6	12.0	9.1	2.3
3. Demands must be met immediately	73.7	17.1	8.0	1.1
4. Acts "smart" (impudent or sassy)	85.7	9.7	4.6	0.0
5. Temper outbursts and unpredictable behaviour	86.3	6.9	5.1	1.7
6. Overly sensitive to criticism	44.6	33.7	17.1	4.6
7. Distractibility or attention span a problem	50.9	29.7	11.4	8.0
8. Disturbs other children	69.7	18.9	9.1	2.3
9. Daydreams	65.1	19.4	10.9	4.6
10. Pouts and sulks	67.4	20.0	8.6	4.0
11. Mood changes quickly and drastically	79.4	10.9	6.9	2.9
12. Quarrelsome	85.1	10.3	3.4	1.1
13. Submissive attitude toward authority	36.6	20.0	40.0	3.4
14. Restless, always up and on the go	65.7	18.9	10.8	4.6
15. Excitable, impulsive	67.4	17.7	12.0	2.9
16. Excessive demands for teacher's attention	78.9	10.9	8.6	1.7
17. Appears to be unaccepted by the group	86.9	10.9	1.1	1.1
18. Appears to be easily led by other children	67.4	23.4	8.0	1.1
19. No sense of fair play	82.3	13.7	2.3	1.7
20. Appears to lack leadership	64.6	21.7	12.6	1.1
21. Fails to finish things that he starts	76.6	13.1	6.9	3.4
22. Childish and immature	71.4	20.0	4.0	4.6
23. Denies mistakes or blames others	73.1	18.9	6.3	1.7
24. Does not get along well with other children	80.0	14.9	4.0	1.1
25. Uncooperative with classmates	80.0	14.9	3.4	1.7
26. Easily frustrated in efforts	62.9	29.1	5.7	2.3
27. Uncooperative with teacher	87.4	8.6	3.4	0.6
28. Difficulty in learning	70.3	16.0	8.6	5.1

Table 2. Confirmatory Principal-Components Structure for the Conners Teacher Rating Scale.

Item	*F1*	*Varimax rotation (4 factors solution)*			
		F1	F2	F3	F4
1. Restless in the "squirmy" sense	0.77	0.81			
2. Makes inappropriate noises when he shouldn't	0.68	0.77			
3. Demands must be met immediately	0.69	0.72			
4. Acts "smart" (impudent or sassy)	0.64	0.63			
5. Temper outbursts and unpredictable behavior	0.73	0.51			
6. Overly sensitive to criticism	0.39				0.73
7. Distractibility or attention span a problem	0.75			0.70	
8. Disturbs other children	0.77	0.80			
9. Daydreams	0.53				0.62
10. Pouts and sulks	0.66				0.63
11. Mood changes quickly and drastically	0.71				0.61
12. Quarrelsome	0.75		0.56		
13. Submissive attitude toward authority	0.10				0.61
14. Restless, always up and on the go	0.64	0.72			
15. Excitable, impulsive	0.77	0.77			
16. Excessive demands for teacher's attention	0.73	0.64			
17. Appears to be unaccepted by the group	0.65		0.83		
18. Appears to be easily led by other children	0.71				
19. No sense of fair play	0.57		0.61		
20. Appears to lack leadership	0.33				
21. Fails to finish things that he starts	0.59			0.77	
22. Childish and immature	0.67			0.62	
23. Denies mistakes or blames others	0.74	0.60			
24. Does not get along well with other children	0.76		0.83		
25. Uncooperative with classmates	0.71		0.79		
26. Easily frustrated in efforts	0.62				
27. Uncooperative with teacher	0.68		0.58		
28. Difficulty in learning	0.46			0.83	

ied from 0 to 54, with mean 9.7 (SD =8.8). The Score of Comprehension was from 0 to 23 with mean 16.2 (SD=4.8). There was a strong correlation between reading time and reading accuracy (r=0.60, n=201, p<0.001) and a lower (but significant) correlation between comprehension and the two other reading scores, time (r=–0.24, n=201, p<0.001) and accuracy (r=–30, n=201, p<0.001).

Girls had better performances on reading time (t=2.03, df=199, p=0.04) and reading accuracy (t=2.37, df=199, p=0.02).

Correlations with reading scores

Reading scores were not associated with the child's age or questions related to pregnancy, delivery or the child's health. Also, reading scores were not related to the mother's educational level, but there was significant effect with the father's educational level for reading time (p=0.01) and accuracy (p=0.02).

As table 3 shows in relation to the 4 factors of the Conner's questionnaire, only the third, attention/ concentration, was significantly related to the scores evaluating reading.

According to the parents, boys showed more internalizing (p=0.0006) and externalizing (p=0.01) problems than girls, but there was no gender difference in teachers' ratings. Overall, correlations between CBCL and reading scores were low. In the parents' rating, significant correlations were observed with Externalizing Score and Total Score. In the teachers' rating, it was the Internalizing and the Total prob-

Table 3. Correlations of reading with Conners, Parent and Teacher Ratings (CBCL).

	Reading		
	Time	*Accuracy*	*Comprehension*
Conner's			
Hyperactivity	0.10	0.12	0.06
Social problems	0.21	0.12	–0.12
Attention/concentration	0.41*	0.44*	–0.26*
Sensitivity	0.14	0.08	–0.12
Total	0.23	0.20	–0.07
Parent ratings			
Internalizing problems	0.073	0.119	–0.023
Externalizing problems	0.109	0.155*	–0.043
Total problems	0.101	0.169*	–0.061
Teacher ratings			
Internalizing problems	0.167*	0.159*	–0.169*
Externalizing problems	0.143	0.094	–0.099
Total problems	0.241**	0.253**	–0.147

*p<0.05, **p<0.01

lem scores that correlated significantly with reading scores.

When detailed CBCL scores were considered

In the parents' ratings, there were significant correlations between Attention problems (r=0.238, p=0.001), Rule-Breaking behaviour (r=0.244, p=0.001) and reading accuracy.

In the teachers' ratings, there were significant correlations between: (1) Withdrawn and reading time (r=0.337, p<.0001), accuracy (r=0.171, p=0.02) and comprehension (r=–0,189, p=0.041), (2) Social problems and reading time (r=0.227, p=0.003) and accuracy (r=0.199, p=0.009), (3) Attention problems and reading time (r=0.269, p=0.0004) and accuracy (r=0.285, p=0.0002) and (4) Rule-Breaking behaviour and reading time (r=0.187, p=0.01).

When CBCL/6-18-DSM-Oriented scales were considered

In the parents' ratings, Attention Deficit/Hyperactivity Problems (r=0.213, p=0.004), Conduct Problems (r=0.273, p=0.003) and Oppositional Defiant Problems (r=0.155, p=0.04) correlated significantly with reading accuracy

In the teachers' ratings, there were significant correlations between: (1) Affective Problems and reading time (r=0.371, p<.001), accuracy (r=0.248, p=0.001) and comprehension (r=–0.199, p=0.009), (2) Attention Deficit/Hyperactivity Problems and reading time (r=0.213, p=0.005) and accuracy (r=0.267, p=0.0005), (3) Conduct Problems and reading time (r=0.181, p=0.01).

Correlations between Conner's (teacher) and CBCL (Parent or teacher)

As expected, the Conner's scale was more strongly correlated with teachers' CBCL than with parents' CBCL. With teacher ratings of the CBCL, externalizing problems were very strongly related to the Hyperactivity score of the Conner's (r=0.815) and internalizing problems with the Sensitivity factor of the Conner's (r=0.773) (table 4).

Concordance between the parent and the teacher rating for the Achenbach questionnaire

Following the CBCL manual, children can be categorized in 3 groups according to the presence or absence of internalizing problems (presence, borderline, absence), externalising problems and total problems. Out of 151 pupils, 29 (19.20%) were categorised as having (presence and border-line) internalizing problems according to both parents' rating and to teachers' rating. In the same way, 27 (17.88%) pupils

Table 4. Correlations of Conners with Parent and Teacher Ratings (CBCL)

	Conner's				
	Hyperactivity	*Social problems*	*Attention/ concentration*	*Sensitivity*	*Total*
Parent ratings					
Internalizing scores	0.209**	0.113	0.102	0.149	0.183*
Externalizing scores	0.321**	0.259**	0.179*	0.067	0.287**
Total problems	0.325**	0.238**	0.207*	0.117	0.298**
Teacher ratings					
Internalizing scores	0.296**	0.318**	0.419**	0.773**	0.451**
Externalizing scores	0.815**	0.691**	0.563**	0.543**	0.847**
Total problems	0.685**	0.626**	0.697**	0.708**	0.807**

*p<0.05; **p<0.01

were classified as having externalising problems (presence and border-line) according to parents' reports and 18 (11.90%) according to teachers' reports. The parent-teacher concordance for these categorisations (presence, border-line, absence) was low for externalizing problems (weighted kappa= 0.26), and absent for internalizing problems (weighted kappa= 0.05).

Discussion

In this non-referred children, reading scores were not associated with age and questions related to pregnancy, delivery or child's health. In the literature, it is well established that prematurity and low birth weight are correlated to underachievement in verbal, reading and spelling abilities.[28–30]

Reading scores were not correlated with the mother's educational level and there was only a weak effect for father's education. Mother's educational level had a strong effect on the child's reading skills in similar studies in France.[31,32] Such discrepancies suggest that the effect of parental education is indirect. For instance, parental negative school experience, associated with low education in France, but not in Greece, could be a critical factor.

Girls showed better reading skills than boys. In four independent epidemiological studies reviewed by Rutter et al (2004), rates of RD were higher in boys.[33] Biological processes leading to RD may differ between boys and girls.[34]

Also, boys were more hyperactive according to the teachers, and with more internalising and externalising problems according to the parents. The gender question in ADHD is a controversial issue. In clinical settings, male predominance is obvious. Boys with ADHD are prone to more externalizing behaviours, in particular rule-breaking, than girls.[35] Girls with ADHD have less impairment than boys on most scores. They show less disruptive behaviour disorders and have fewer learning disabilities related to reading or mathematics.[36,37] However, other studies[38,39] maintain that the clinical correlates of ADHD are not influenced by gender. Their explanation is that gender differences reported in subjects from clinical settings may be due to referral biases.

The factor structure of the Conner's Questionnaire in the present study is similar to previous analyses,[23,24,40,41] with a four factor structure as the most appropriate solution. Among the four released factors, only one (i.e. Attention/Concentration) was correlated with reading abilities. This is an expected result because, as seen in previous studies, "difficulty in learning" is one of the four items composing the "attention/concentration" factor. When teachers report attention difficulties in a pupil, they also frequentry report "learning difficulties" in the same pupil. This has been observed in Greece,[42] France[43] and elsewhere.[40] On the contrary, the same studies, but also very important longitudinal investigations from Australia and New Zealand,[44] show that

hyperactivity alone is not related to learning and academic difficulties. However, it is likely, as Roy and Rutter (2006) suggest, that the "hyperactivity-inattention-learning difficulties" entity could be much more present in special populations of children, such as those living in institutionsing than in schoolchildren.[11] In a recent study of cognitively impaired children with epilepsy in special institutions, the dominant behavioural profile of these children was ADHD.[45]

On the other hand, although working memory difficulties might be a common factor in ADHD and learning disorders,[1] working memory deficit seems to be more strongly related to symptoms of inattention than to symptoms of hyperactivity-impulsivity.[19,46,47] Reading comprehension difficulties also appear to be related to inattention[48] or slow processing speed.[49] In particular, one study showed that the performance of children with ADHD, without comorbid language impairments, declined as the length of the text increased.[16]

According to Aaron, Joshi, Palmer, Smith and Kirby (2002), both RD and ADHD-I, which is the predominantly inattentive type, are often present in poor reading performance.[50] Children with RD have poor word recognition skills and therefore, focus their attention primarily to the decoding of print. This strategy is particularly ineffectual when they have to read long passages, as they are liable to get frustrated and consequently do not fulfil the task. Thus they give the impression of being "functionally inattentive",[51] because they cannot sustain their attention long enough. Their information-processing is inconsistent and therefore they appear to function like children with RD. Consequently, regardless of the disorder, RD or ADHD-I, the end result is the same, impairment in reading performance.[52]

Parent-teacher agreement on child behaviour was particularly low in the present study. In a previous study with the CBCL in Greece, parent-teacher agreement was also low except for Externalising and Aggressive behaviour for boys and for Attention problems for both sexes.[25] Agreement between parents and teachers is often modest at the symptom, scale or subtype level.[53–55] Discrepancies can arise from behavioural variability in different situations, with both informants correctly assessing behaviour in each context.[56] In a recent study,[57] parental ratings of children diagnosed with and without ADHD were on the whole comparable. On the other hand, teachers assessed that students with ADHD exhibited higher levels of behavioural difficulties, thus outperforming the parental ratings when considering sensitivity, specificity and overall classification accuracy.

In our study, according to the teachers ratings on the CBCL, externalizing problems were very strongly related to the Hyperactivity score of the Conner's. Furthermore, internalizing problems on the CBCL were very strongly related with the Sensitivity factor of the Conner's. This is in accordance with a previous greek study.[42]

The relatively lower correlations obtained between different informants emphasises the need to obtain more than one point of view in building up the picture of a child's behaviour.

A limitation of the study is related to its transversal nature. Longitudinal studies are needed to examine the persistence or, on the contrary, the transitory character of the observed or reported difficulties in schoolchildren.

Conclusions

This study highlights the need to include reading skill measures when conducting assessments for ADHD. Teachers' reports of inattentive behaviour are strongly related to poor reading skills and learning difficulties. Report of hyperactivity, without report of attention problems, was not associated with reading difficulties. These observations must be considered when therapeutic and/or educational planning is undertaken.

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Διερεύνηση της αναγνωστικής ικανότητας και των διαταραχών συμπεριφοράς σε μαθητές του δημοτικού

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Πολυάριθμες μελέτες επιβεβαιώνουν τη συννοσηρότητα της ΔΕΠΥ με τις διαταραχές συμπεριφοράς και τις μαθησιακές διαταραχές. Ωστόσο, ασαφής είναι η ειδική συσχέτιση των συμπεριφορικών και μαθησιακών παραγόντων με τη ΔΕΠΥ. Σκοπός της παρούσας μελέτης είναι να εξετάσει τις σχέσεις μεταξύ υπερκινητικότητας, απροσεξίας και αναγνωστικής ικανότητας σε μη κλινικό δείγμα. Το δείγμα αφορούσε 201 μαθητές δημόσιου δημοτικού σχολείου των Αθηνών. Χορηγηθήκαν τα ερωτηματολόγια του Achenbach για γονείς και δασκάλους και το ερωτηματολόγιο του Conners, προκειμένου να αξιολογηθούν οι διαταραχές συμπεριφοράς, η έλλειψη προσοχής και η υπερκινητικότητα. Η αναγνωστική ικανότητα αξιολογήθηκε από ένα τεστ ανάγνωσης κατάλληλο για μαθητές δημοτικού. Οι διαταραχές προσοχής που αναφέρθηκαν από τους δασκάλους είχαν θετική συσχέτιση με χαμηλότερες ικανότητες ανάγνωσης, αλλά όχι η υπερκινητικότητα και οι διαταραχές συμπεριφοράς. Η συσχέτιση των αναγνωστικών δεξιοτήτων με τα αποτελέσματα από τα ερωτηματολόγια του Achenbach ήταν πολύ χαμηλή, ιδιαίτερα αυτών που απαντήθηκαν από τους γονείς. Τα κορίτσια έδειξαν υψηλότερη αναγνωστική ικανότητα και λιγότερη «υπερκινητικότητα» από τα αγόρια. Παρατηρήθηκε σύμπτωση των απαντήσεων των εκπαιδευτικών στα δύο διαφορετικά ερωτηματολόγια Conner και Achenbach. Αντίθετα, η σύμπτωση μεταξύ γονέων και εκπαιδευτικών στο ερωτηματολόγιο του Achenbach ήταν πολύ χαμηλή. Η ύπαρξη υπερκινητικότητας χωρίς διαταραχή προσοχής δεν συσχετίσθηκε με μειωμένη αναγνωστική ικανότητα. Τα ευρήματα της παρούσας μελέτης μπορούν να συμβάλλουν στο θεραπευτικό και εκπαιδευτικό σχεδιασμό της αντιμετώπισης των παιδιών με αυτές τις δυσκολίες.

Λέξεις ευρετηρίου: διαταραχή ελλειμματικής προσοχής-υπερκινητικότητα, απροσεξία, αναγνωστική ικανότητα, συμφωνία γονέων-εκπαιδευτικών

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