

A cognitive tool to diagnose predominantly inattentive ADHD behaviour

P. G. Aaron, R. M. Joshi, and Jill Phipps

Poor performance on tests of reading comprehension could be the result of weak word-recognition skills, inconsistent attention (ADD), or a combination of the two. Identifying the source of the reading disability (RD) reliably has been difficult because inconsistent attention interferes with reading and weak word recognition skill makes attention wander.

The situation is further complicated by the fact that there are no objective diagnostic tests for ADD (Breggin, 1998; Diller, 1998). We proposed a new model of differential diagnosis of ADHD-I/RD and field-tested its utility in two studies. The new diagnostic procedure utilizes intra-individual differences seen in the performance of at-risk learners on tasks related to reading that vary in the degree of sustained attention required for successful performance. The hypothesis is that children whose attention is inconsistent would perform more poorly on tests such as listening comprehension, which require sustained attention, than on tests such as reading comprehension, which are more tolerant of inattention. Such differences will not be seen in the test scores of children who have only a reading disability because their performance on reading tests is determined more by the difficulty level of the tests than by the sensitivity of the tests to attention.

The validity of this new model was evaluated by determining the relationship between differences seen in the scores of tests that differ in their attention requirement and the degree of inconsistency in sustained attention as measured by Conners' CPT. The results of the two studies indicate this to be a viable approach. The results of the second study are presented in this report.

Executive function and ADHD: A comparison of children's performance during neuropsychological testing and real-world activities

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Objective: Current understanding of executive function deficits in Attention-Deficit/Hyperactivity Disorder (ADHD) is derived almost exclusively from neuropsychological testing conducted in laboratory settings. This study compared children's performance on both neuropsychological and real-life measures of executive function and processing speed.

Method: The Stroop and Wisconsin Card Sorting Task (WCST) were selected as neuropsychological measures, whereas route tasks in a videogame and at the zoo were used to index real-life measures. Participants comprised a community sample of 22 unmedicated boys with ADHD individually matched on age and IQ with 22 normally developing control boys.

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Results: There were no group differences in executive function on the Stroop or zoo tasks, but the ADHD group exhibited deficits in set-shifting as assessed by the WCST (perseverative errors and responses) and videogame play (fewer challenges completed). Also, the ADHD group showed slowed processing speed on the Stroop (slower colour naming) and zoo activity (longer time to complete task), as well as a slower rate of acquisition of the sorting rule on the WCST (more trials to complete first category). Efficient and flexible videogame play (number of challenges completed) was related positively to efficacy on the Stroop (number of items named correctly in the interference and two control conditions) and inversely related to set-shifting problems on the WCST (perseverative responses and errors). Also, problems in goal-directed behaviour at the zoo (number of deviations from designated route) were related to problems in set shifting on the WCST (perseverative responding).

Conclusions: Children with ADHD exhibit impairments in executive function and processing speed in real-world activities as well as in neuropsychological testing. Cognitive deficits detected by standardized neuropsychological testing are related to performance difficulties in real-world activities.

Knowledge and attitudes about Attention-Deficit Hyperactivity Disorder (ADHD): A comparison between practicing teachers and undergraduate education students

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The knowledge and attitudes of practicing teachers regarding ADHD were compared with those of undergraduate education students. Key elements of studies of American and Canadian teachers by Jerome, Gordon, and Hustler (1994) and Jerome, Washington, Laine, and Segal (1999) were replicated. Information was gathered about participants' demographic background (training in ADHD), attitudes towards ADHD, and knowledge about its diagnosis and treatment.

Results confirmed the existence of some knowledge gaps, although both practicing teachers and undergraduate education students possessed sound information about ADHD. Misconceptions about ADHD primarily concerned dietary treatment. Attitudes and knowledge were significantly correlated and most participants regarded ADHD as a valid diagnosis with implications for the school setting, and expressed a desire for comprehensive training. Despite similar results for both samples, teachers achieved higher accuracy on knowledge-based questions. These results are discrepant from those of Jerome et al. (1999) who found teachers and students to be similar in factual knowledge. Implications of these findings for curriculum development in academia and in-service teacher training are highlighted.

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Quality of life of adolescent males with Attention-Deficit Hyperactivity Disorder

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Most psychosocial research on attention-deficit/hyperactivity disorder (ADHD) has focused on deficits in school, family, or behavioural functioning without incorporating perceived quality of life (QoL) or the adolescents' perspective. The Youth Quality of Life Instrument-Research Version (YQOL-R) was used to assess self-perceived QoL in a community sample of adolescents aged 11-18 years.

Fifty-five adolescent males with a clinical diagnosis of ADHD were compared to a group of 107 adolescents with no chronic conditions (NCC) and a group of 52 adolescents with mobility impairments (MI). The adolescents with ADHD reported significantly lower perceived QoL scores, particularly in the Self and Relationship domains, than the NCC group. Their scores were similar to those from the group with MI, a group previously shown to have a substandard QoL. Interventions to improve self-esteem and social interactions might use QoL outcomes in evaluating effectiveness.