

Attention deficit and hyperactivity: a comparison in persons with and without mental retardation.

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One of the chief characteristics of Attention Deficit Hyperactivity Disorder (ADHD) is impulsivity or the lack of ability to inhibit inappropriate responses. Inattention and hyperactivity are the other characteristic behaviors of ADHD. In persons with Mental Retardation (MR) however, both hyperactivity and impulsivity may be present as a consequence of some organic syndrome or psychiatric disorder and not readily attributable to the same pathology as ADHD.

Similar to persons with ADHD, individuals with MR may have difficulty sustaining attention, but differ in their perseverative responses and "cognitive inertia."

The aim of the present study is twofold: (1) to investigate the nature of ADHD behaviors in children and adolescents diagnosed with MR (both with and without additional diagnoses of organic or psychiatric disorders); and (2) to compare the performance of children and adolescents with MR who exhibit ADHD behaviors with the performance of typical children and adolescents with ADHD on different tests of attention. The sample of the study consisted of 109 subjects, with 37 diagnosed with ADHD, 31 diagnosed with borderline intelligence, and 41 diagnosed with MR, subdivided into three age groups (6-10, 11-14, and 15-17) paired by mean IQ. Some of the borderline and MR subjects had additional diagnoses of organicity or psychiatric disorder. A computerized test was used to assess different skills of attention for all subjects on selective attention tasks (simple and multiple choice reaction times); auditory, visual and spatial continuous performance tasks; digit span; divided attention tasks-dual task; color-word interference tasks-Stroop test; and shifting of attention tasks with both verbal and visual targets.

The results of the study demonstrated statistically significant differences for all attention tasks between the ADHD group and the borderline IQ group as well as the MR group, with the MR group showing the greatest difference. While differences were found across all the groups for all attention tasks, the effect size varied the greatest when comparing the ADHD group with the MR group on tasks of attention span and shifting attention. In addition, organic pathology present in subjects with MR had a greater impact on tasks of attention than did psychiatric syndromes, which affected only a few attention skills including simple reaction times, spatial continuous performance tasks and resistance to Stroop interference. Another interesting finding involved impulsivity and lack of control characteristic of ADHD behavior, where a negative correlation between speed and accuracy of performance was found, particularly when subjects were asked to choose a target from among many distractors.

Beyond the direct findings of the study, implications for education and rehabilitation of children and adolescents with MR and ADHD are offered for consideration.

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