Association between sensory modulation and daily activity function of children with attention deficit/hyperactivity disorder and children with typical development

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Abstract

BACKGROUND:
The severity of the functional difficulties of children with attention-deficit/hyperactivity disorder (ADHD) is heterogeneous and may be affected by measurable factors.

AIMS:
To characterize subgroups of children with ADHD with or without sensory modulation difficulties (SMD) and the association between sensory modulation and daily activity function in children with ADHD and children with typical development.

METHODS:
38 children with ADHD and 39 controls (ages 8-11) were recruited and assessed, using the Conner's Parent Rating Scale-Revised: Short Form, the Short Sensory Profile (SSP) and the Children Activity Scale for Parents (ChAS-P).

RESULTS:
The total SSP score of the ADHD group was lower (142.13 vs. 180.08; t=-8.23, p<0.001) with a higher proportion of SMD (65.8% vs. 2.6%, \( \chi^2 = 34.46, p < 0.001 \)). The daily function of children with ADHD was lower than controls (mean ChAS-P: 3.95 vs. 4.78, p<0.001). The difference was significant for children with ADHD and SMD (3.70 versus 4.81, p<0.001), but not significant for children with ADHD and typical SSP (4.42 versus 4.81, p=0.35).

CONCLUSION:
In this pilot study, we found that SMD, in children with ADHD is correlated with daily activity consequences. Hence, it should be evaluated in children with ADHD and addressed in their treatment plan.