A rating measure of ADHD-related neuropsychological impairment in children and adolescents: Data from the Cognition and Motivation in Everyday Life (CAMEL) Scale from population and clinical samples.

Van Liefferinge D, Sonuga-Barke E, Van Broeck N, Van Der Oord S, Lemiere J, Danckaerts M.


Abstract

A new parent-completed questionnaire, the Cognition and Motivation in Everyday Life (CAMEL) scale, was developed to provide a comprehensive assessment of neuropsychological impairment in children related to attention-deficit/hyperactivity disorder (ADHD) across diverse cognitive, motivational and energetic domains. Its psychometric properties were investigated. A total of 60 items were generated to cover a wide range of putative ADHD-related neuropsychological processes. A clinical (n = 142) and community (n = 810) sample of parents with children between 6 and 16 years of age completed the questionnaire. Data on ADHD symptoms were also collected with a commonly-used, validated parent rating scale to explore the associations between CAMEL scores and dimensional measures of child ADHD and conduct problems. Factor analysis identified six factors which we labeled (i) Cognition, (ii) Self-Direction and Organization, (iii) Effort Engagement, (iv) Arousal Regulation, (v) Motivational Responsiveness, and (vi) Cautiousness. Self-Direction and Organization and Arousal Regulation were the strongest predictors for ADHD symptomatology. Self-Direction and Organization was strongly associated with inattention and Arousal Regulation with hyperactivity-impulsivity symptoms. Parents distinguished between broad neuropsychological domains in reliable and plausible ways, making distinctions between key aspects of functioning. However, the boundaries between these domains did not map directly onto the distinctions drawn within traditional models of ADHD deficits. Further research is required to examine the predictive validity and cost-effectiveness of the CAMEL scale compared to direct objective testing using laboratory measures in predicting prognosis and treatment outcome.