

# Executive Function Deficits in Adolescents With ADHD: Untangling Possible Sources of Heterogeneity

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## Abstract

Deficits in executive function (EFDs) are thought to be the mechanisms that underlie a diagnosis of Attention Deficit Hyperactivity Disorder (ADHD). However, prior research has indicated that EFDs are not uniform throughout the ADHD population and it is not clear what factors lead to individual variability in EF abilities. The current study was conducted to (a) elucidate the possible presence of unique patterns in EFDs and (b) identify potential risk factors for clinically significant EFDs. A sample of 256 young adolescents were comprehensively assessed and diagnosed with ADHD, and parents completed the Behavior Rating Inventory of Executive Function (BRIEF). Latent profile analysis (LPA) was conducted to elicit individual-level patterns of ratings across the eight clinical scales of the BRIEF. Chi-square analyses and regression models were also conducted to determine whether ADHD presentation, gender, or comorbid psychopathology was associated with the profiles elicited in the LPA. LPA results demonstrated a consistent trend in relative EF strengths and weaknesses, with patterns differing primarily in the intensity of deficits. Females with ADHD and adolescents with ADHD Combined Presentation or comorbid Oppositional Defiant Disorder exhibited more severe patterns of EFDs based upon group comparisons and regression models. ADHD may be associated with a consistent pattern of relative strengths and weaknesses in EF, although several important factors appear associated with an increased risk of more severe EFDs. These findings carry important clinical implications for the assessment of ADHD in adolescence.