Attention-Deficit/Hyperactivity Disorder: A Historical Neuropsychological Perspective.

Mahone EM, Denckla MB.


Abstract

The behavior patterns of hyperactivity, impulsivity and inattention that would ultimately become recognized as Attention-Deficit Hyperactivity Disorder (ADHD) have been described for centuries. Nevertheless, in the past 35 years, advances in diagnostic methods, identification of biomarkers, and treatments have advanced at an exponential rate. ADHD is now recognized as the most common behavioral disorder of childhood, with risks extending well into adulthood for both males and females, leading to its identification as a significant public health issue. This historical neuropsychological review of ADHD emphasizes scientific highlights in the past 35 years related to ADHD, including the evolution of the diagnosis (from Hyperkinetic Reaction of Childhood to ADHD), influential theories (executive functions, cognitive-energetic, delay aversion), landmark treatment studies (Multimodal Treatment of ADHD [MTA] and Preschool ADHD Treatment Study [PATS]), and advances in brain mapping techniques (anatomic, functional, and resting state magnetic resonance imaging, diffusion tensor imaging). The review concludes by highlighting the challenges of studying and treating a heterogeneous neurodevelopmental disorder like ADHD, with emphasis on associated disorders and conditions (learning disabilities, sluggish cognitive tempo), special populations (girls, preschoolers, adults), and recommendations for scientific inquiry in the next 35 years. Neuropsychologists are well positioned to address the clinical and research challenges of the next generation of studies, especially involving advances in understanding the sexual dimorphism, full developmental course, and dynamic risks associated with ADHD.