Attention deficit hyperactivity disorder and disordered eating behaviors: links, risks, and challenges faced

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Abstract:
Attention deficit hyperactivity disorder (ADHD) is a neurodevelopmental disorder that often persists in adulthood. It is defined by inattention and/or hyperactivity–impulsivity. ADHD is associated with many comorbidities, including eating disorders (EDs). In the last decade, studies have reported that ADHD is linked with binge EDs, bulimia nervosa, and anorexia nervosa. Many postulates have been proposed to explain the association: 1) impulsive behavior in ADHD patients leads to disordered eating behavior; 2) other psychologic comorbidities present in ADHD patients account for eating behavior; 3) poor eating habits and resulting nutritional deficiencies contribute to ADHD symptoms; and 4) other risk factors common to both ADHD and EDs contribute to the coincidence of both diseases. Additionally, sex differences become a significant issue in the discussion of EDs and ADHD because of the higher incidence of bulimia nervosa and anorexia nervosa in females and the ability of females to mask the symptoms of ADHD. Interestingly, both EDs and ADHD rely on a common neural substrate, namely, dopaminergic signaling. Dopaminergic signaling is critical for motor activity and emotion, the latter enabling the former into a combined motivated movement like eating. This linkage aids in explaining the many comorbidities associated with ADHD. The interconnection of ADHD and EDs is discussed from both a historical perspective and the one based on the revealing nature of its comorbidities.