Creativity and ADHD: A review of behavioral studies, the effect of psychostimulants and neural underpinnings

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Abstract

Attention deficit/hyperactivity disorder (ADHD) is a debilitating disorder and most research therefore focuses on its deficits and its treatment. Research on the potential positive sides of ADHD is limited, and although a comprehensive overview of empirical studies on this subject is missing, it has been suggested that ADHD is associated with enhanced creativity. To identify important relations, trends and gaps in the literature, we review 31 behavioral studies on creativity and ADHD, distinguishing different research designs, age groups, creativity measurements and effects of psychostimulants, as well as reflecting the potential underlying neural mechanisms of creativity and ADHD. Most studies find evidence for increased divergent thinking for those with high ADHD scores (subclinical) but not for those with the disorder (clinical). The rates of creative abilities/achievements were high among both clinical and subclinical groups. We found no evidence for increased convergent thinking abilities in ADHD, nor did we find an overall negative effect of psychostimulants on creativity. Neuroscientific findings suggest candidate regions as well as mechanisms that should be studied further to increase our understanding of the relationship between creativity and ADHD. We propose research opportunities to boost the knowledge needed to better understand the potential positive side of ADHD.