Thought Paper: Attention-Deficit/Hyperactivity Disorder

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Topic

Attention-deficit/hyperactivity disorder (ADHD) is a constant inability to pay attention, and/or control impulses and hyperactivity (American Psychiatric Association, 2013). A diagnosis will be either of the predominantly inattentive presentation, predominantly hyperactive/impulsive presentation, or combined presentation (American Psychiatric Association, 2013). Inattentive focusses on behaviour, with symptoms pertaining to attention span and organization, while hyperactive/impulsive focusses on activity, including symptoms pertaining to excessive movement and hasty action (American Psychiatric Association, 2013). To be diagnosed with ADHD, one must:

1. exhibit six or more (for adults 17 and older, five or more) signs of the inattention and/or hyperactivity and impulsivity categories that have occurred frequently over six months or longer,
2. display several symptoms before the age of twelve,
3. display symptoms in more than one situation (i.e., two different locations),
4. indicate that the symptoms restrict functioning in social, academic, or occupational situations, and
5. demonstrate that symptoms occur outside of other psychotic or mental disorders (American Psychiatric Association, 2013).

Severity ranges from mild to severe depending on the number of symptoms and the effect they have on the person's life (American Psychiatric Association, 2013). Mild cases show no or minimal symptoms above the requirement with only minor effects on functioning; while severe

cases have either many more symptoms than required or exceptionally severe symptoms, or extreme effects on functioning are present (American Psychiatric Association, 2013).

Personal and Real-Life Applications

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Research Question

What is the effect of stimulant medication on executive function in adults with ADHD?

Research Results

In 2010, Biederman et al. conducted a study to find a connection between executive function deficits (EFDs) in adults with ADHD and responses to OROS-methylphenidate (also known as Concerta), a stimulant medication. The specific research questions involved were focused on looking at if EFDs lead to a milder response to methylphenidate and whether EFDs will respond to OROS-methylphenidate in ADHD adults (Biederman, et al., 2011). They gathered 223 male and female participants between the ages of nineteen and sixty years, all of which had ADHD in accordance with the DSM-IV-R ADHD criteria (Biederman, et al., 2011). The Behavior Rating Inventory of Executive Function — Adult Version (BRIEF-A) was used to determine which participants had EFDs, with those scoring greater than 65 considered impaired (Biederman, et al., 2011). A subsample of 87 participants was used for the results, as there was no difference in mean and standard deviation of age (33.6 ± 7.8 vs. 34.1 ± 8.6, $p= 0.8$) or gender (65% ($N= 26$) vs. 57% ($N= 27$) male, $p= 0.5$) (Biederman, et al., 2011). The results showed that there was no substantial three-way interaction between EFDs and the effects of treatment over time, concluding that EFDs do not affect responses to OROS-methylphenidate, and that there is no association between measures of EFDs and response to OROS-methylphenidate (Biederman, et

al., 2011). Results also showed that more than 80 percent of people with EFDs that did not respond to the OROS-methylphenidate and 25 percent of those that did respond to the OROS-methylphenidate did not see a significant improvement in BRIEF-A scores (Biederman, et al., 2011). This concludes that use of the stimulant does improve executive function in the majority of those who respond to it, but that some people who do respond still struggle with EFDs (Biederman, et al., 2011).

References

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