Annotated Bibliography: The Effect of ADHD on Cognition

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PSYC 319: Cognitive Psychology

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November 14, 2024

Abstract

TODO: Write abstract.

Annotated Bibliography: The Effect of ADHD on Cognition

For the introduction to the paper, I am planning on using Faraone et al. (2015) for an overview of ADHD. Then, I plan on giving an overview of how ADHD affects the different parts of cognition that we have talked about in class.

Working Memory & Short-Term Memory

In this section, I have a few papers that I am going to use to expand upon working memory.

1. The first is Fabio et al. (2020). This paper is an empirical study that investigates three hypotheses:

   (a) children with ADHD show higher levels of DD (Delayed discounting—paradigms used to study the process leading to a choice) than control subjects,

   (b) once the memory load increases, deferring a reward becomes harder for both children with ADHD and with TD (typical development), and

   (c) the performances of children with ADHD are significantly worsened by the addition of a memory load compared to the control group.

   The researchers operationalize studying these independent variables by involving goal-directed actions during distractions and dual task paradigms. In other words, the participants were to listen and repeat an assigned sequence of numbers, while also evaluating which amount of money to take—e.g., some now, or more later. The distraction was the digit recall. Though, the results of this study should be taken with a grain of salt: It has a small sample size ($N = 32$), and the study was conducted in Italy, where they used different tests like the ADHD Rating Scale for Teachers (SDAI).

2. The second is Raiker et al. (2019). Through the lens of levels of processing, the researchers discuss the importance of remedying the deficit that the orthographic to

phonological encoding places upon the phonological loop.

3. The third is from Friedman et al. (2017). They have also found that the orthographic to phonological encoding is critical for reading. They found that children with ADHD have a deficit in this area.

4. The fourth is Kofler et al. (2020). Due to highly varied results in the literature, the authors employed both visuospatial and phonological working memory tasks (bifactor model) to assess the working memory of children with ADHD. They found that a significant number of children with ADHD ($d = 1.62$–2.03), whether exhibiting inattentive or hyperactive-impulsive symptoms, displayed high percentages of cognitive impairment (75%–81%).

   An important point to see between both Raiker et al. (2019) and Kofler et al. (2020) is that while Kofler et al. (2020) did not think ADHD has an effect upon the phonological loop, Raiker et al. (2019) did. That is, Raiker et al. (2019) found that (visuospatial-based) orthographic to phonological recording was to blame for a deficit in phonological performance.[1]

[1] I feel like throughout this section, I am focusing on things that are not relevant to my research question. Given that most of the available research is dedicated to clinical applications, trying to extrapolate the results to a general population is difficult.

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