

# Request #: 445 - PSY - Dissertation

## Executive Functioning Among Children with ASD and Co-Occurring ADHD and ID

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January 28, 2020

### Background

Neurodevelopmental disorders (NDDs), including autism spectrum disorder (ASD), attention-deficit/hyperactivity disorder (ADHD) and intellectual disability (ID), are often accompanied by deficits in executive functioning. When assessing children for ASD, it can be challenging to differentiate ASD from ID and ADHD, as well as determine whether a co-occurring NDD is present. Previous research regarding executive functioning has resulted in numerous theories. One of which (Miyake et al., 2000) indicates that there are three core executive functions: shifting, updating, and inhibition. This study proposes to assess the differences in executive functioning across children with ASD and comorbid NDDs.

### Sample

I PLAN to administer multiple assessments (e.g., executive functioning, intelligence, achievement, adaptive, behavioral) for children that are diagnosed with ASD, ADHD, ID, ASD+ADHD, and ASD+ID.

### Hypothesis

Research Questions: 1) How do children with ASD, ADHD, and ID differentiate with executive functioning?; 2) how does a co-morbid diagnosis of ADHD or ID impact executive functioning among children with ASD?; and, 3) do adaptive, cognitive, and/or achievement abilities predict executive functioning?

Hypotheses: We anticipate that executive functioning abilities will vary across diagnostic groups. Specifically, it is suspected that children with ASD will have worsened cognitive flexibility (Crag et al., 2016; Panerai et al., 2014) and planning (Panerai et al., 2014); children with ADHD and ASD+ADHD will have more attention difficulties (Craig et al., 2016); children with ASD+ID are likely to have more difficulties with structured tasks (Panerai et al., 2014). The differences in executive functioning impairments between ASD and ADHD/ID are hypothesized to lead to more executive functioning deficits in cases where children have ASD and co-occurring ADHD or ID.

### Progress

Beginning to write a proposal for a grant.

### Request

I am looking for advice with planning the experimental design, statistical analysis, and choosing sample size.

### Timeline

Submit grant proposal Feb. 10, submit IRB in May, propose dissertation in August and begin data collection in September.