



Do teacher rated child ADHD symptoms conditionally effect the relationship between executive functioning and writing abilities?

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Introduction

- Children with ADHD demonstrate impairments across multiple writing domains: (Re & Comolli, 2010; Levy et al., 1989; Noda et al., 2013)
 - Written Expression
 - Spelling
 - Writing Fluency
- Pediatric ADHD is linked with impairment in executive functions (EF): (Kofler et al., 2018)
 - Working Memory (WM)
 - Inhibitory Control (IC)
 - Set Shifting (SS)
- All three EF have been linked with child writing skills (Chenoweth & Hayes, 2003; Ibbotson & Kearvell-White, 2015; Hooper et al., 2002)
- Unclear whether EF and writing skills are associated in pediatric ADHD and, if so, whether there is specificity in these relations.

Participants

- 91 children (37 female) ages 8 to 13 years old ($M = 10.60$, $SD = 1.25$) recruited through community resources
 - 51 ADHD
 - 40 Non-ADHD (26 TD)
- Ethnicity/Race breakdown:
 - 62 White/Non-Hispanic
 - 11 Black
 - 10 Multiracial
 - 7 Hispanic
 - 1 Asian

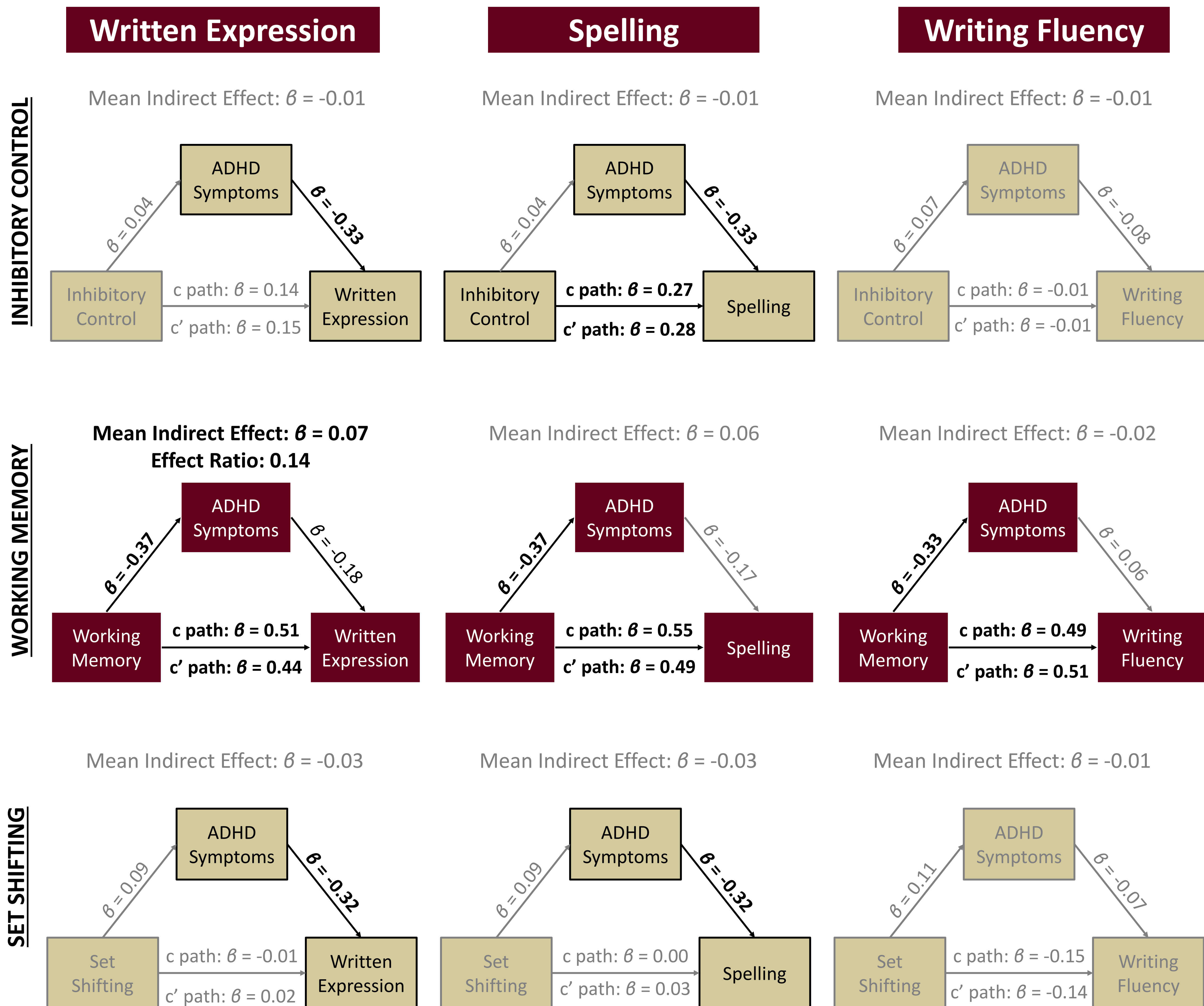
Current Study

- Examined relations between:
 - 3 core EF: WM, IC, & SS
 - ADHD symptoms
 - 3 core writing skill domains:
 - Written Expression
 - Spelling
 - Writing Fluency

Measures

- EF Tasks:**
- WM:** Rapport WM Reordering Tasks
 - WM:** Letter Updating
 - IC:** Stop Signal
 - IC:** Go/No-go
 - SS:** Global-Local
 - SS:** Number-Color
- ADHD Symptoms:** (raw scores)
- ADHD Rating Scale (ADHD-RS-4/5) (Du Paul et al.)
- Writing Skills:** (standard scores)
- Kaufman Test of Educational Achievement (KTEA-3) subtests (Kaufman & Kaufman, 2014)
 - Written Expression
 - Spelling
 - Writing Fluency

Results



Note: **Bold** = Significant; **Grey** = Non-significant Path

Discussion

- Replicates evidence linking EF and ADHD symptoms with writing skills (Casas et al., 2013)
- Provides evidence for specificity in the relations between EF and writing skills:
 - WM** → written expression, spelling, writing fluency
 - IC** → spelling
 - SS** → no significant relations

Clinical Implications

- Findings suggest multiple, interdependent pathways to writing skill deficits in children with ADHD.
- Provides possible implications for targeted intervention in writing skills.

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