The cognitive profile of preschoolers at risk for dyslexia and ADHD

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Developmental dyslexia and attention-deficit/hyperactivity disorder (ADHD) co-occur in 15-40% of individuals diagnosed with one disorder. Despite substantial research on the cognitive profiles of preschoolers at risk for either dyslexia or ADHD, studies have neglected children at risk for co-occurring dyslexia and ADHD. Thus, our study compared the cognitive profile of pre-schoolers at risk for dyslexia with the profile of children at risk for co-occurring dyslexia and ADHD. We assessed 50 preschoolers at dyslexia risk (DR), 50 at dyslexia + ADHD risk (DAR), and 48 without risk (NR) (Mage = 67 months). Our assessment encompassed phonological processing, executive functioning (EF), receptive vocabulary, and processing speed. Principal component analysis revealed two distinct components within the measures of EF: a verbal short-term memory and an EF component. ANOVA revealed that the NR group outperformed risk groups across measures, except for cognitive flexibility and delay of gratification. Notably, the DR and DAR groups did not differ in most measures but showed near-significant differences on the EF component, with the DR group having higher composite scores than the DAR group. In conclusion, ADHD risk did not impact the cognitive performance of children at risk for dyslexia but might amplify the EF problems that at-risk preschoolers encounter.