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Dyscalculia and dyslexia in adults: cognitive bases of comorbidity.

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Summary: The developmental learning disabilities dyscalculia and dyslexia have a combined prevalence of 10% or more, and a co-occurrence (comorbidity) rate of around 40%. The causes and consequences of this comorbidity are poorly understood, despite implications for identification and remediation. We examined the cognitive bases of MDRD comorbidity in four groups of 85 adults (dyscalculia only, dyslexia only, comorbid and control), controlling for IQ and attentional difficulties. We used a computerized testing battery including core components of mathematics and reading, plus domain general capacities. Our results provide one of the first descriptions of dyscalculia symptoms in adults, showing that impairment on core numerical tasks continues into adulthood. Dyscalculia and dyslexia showed independent domain specific deficits, however we also found evidence for domain general symptoms associated with both disorders. We argue that the presence of multiple underlying and additive impairments supports complex multifactorial models of comorbidity.

Classification: C40 D70 C80
Keywords: dyscalculia; dyslexia; mathematical learning disability; comorbidity; learning disabilities
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