

COGNITIVE DEFICITS UNDERLYING DYSGRAPHIA: A REVIEW STUDY

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ABSTRACT

Purpose: *Dysgraphia, a complex and often misunderstood learning disorder, severely disrupts written language production due to multifaceted cognitive deficits. This review delves into the neurological, cognitive, perceptual, and developmental underpinnings of dysgraphia, emphasizing impairments in phonological processing, motor coordination, visual-spatial integration, executive functioning, working memory, and auditory processing. The study highlights the disorder's far-reaching consequences on academic performance, emotional well-being, and professional communication, advocating for early detection and targeted intervention strategies.*

Design: *This review adopts a systematic methodology by synthesizing contemporary evidence from neuroscience, developmental psychology, cognitive neuropsychology, and education research. Drawing upon peer-reviewed journals, conference proceedings, and clinical findings, the paper identifies key etiological pathways, diagnostic complexities, and therapeutic approaches. The study integrates findings on neuroimaging and neurological function to support a shift from motor-centric to cognitively grounded intervention models.*

Findings: *The analysis confirms that dysgraphia arises from interconnected cognitive deficits rather than isolated motor dysfunction. Significant gaps are identified in cultural responsiveness, longitudinal research, and adult-focused interventions. The findings advocate for a multidimensional intervention model blending occupational therapy, cognitive training, and assistive technology.*

Originality/Value: *This paper offers a comprehensive cognitive-neurodevelopmental framework for understanding dysgraphia. By addressing diverse etiologies and intervention strategies, it provides valuable insights for clinicians, educators, and researchers. It champions inclusive, evidence-based, and technologically integrated approaches to empower individuals across all life stages affected by dysgraphia.*

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