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Morphological Impairment Is Not Unitary: Evidence for Suffix-Selective Vulnerability in Dyslexia

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Abstract

Morphological processing is central to reading and spelling, yet its impairment in developmental dyslexia remains poorly specified. Dual-route accounts predict that morphological difficulties may arise from distinct mechanisms, including degraded stem–affix representations or impaired morphological assembly/conversion. We examined these possibilities in 33 Turkish-speaking individuals with developmental dyslexia, using error-based analyses of morphologically complex word production in a morphologically rich language. Participant-level measures captured overall morphological error severity and error localization, especially whether errors were concentrated in suffixes or stems. We combined exploratory subgroup discovery using PCA and k-means clustering with confirmatory statistical analyses and phonological control measures. Results revealed heterogeneous morphological profiles. One subgroup showed a clear suffix-biased error pattern above chance, elevated morphological error rates, and no corresponding phonological impairment. This dissociation is most consistent with impaired morphological assembly/conversion rather than generalized phonological difficulty. Findings support subgroup-sensitive, error-based approaches for refining cognitive models of morphological processing in dyslexia.