



The Prevalence of Dyslexia: A New Approach to Its Estimation

Adapted from:

Wagner, R. K., Zirps, F. A., Edwards, A. A., Wood, S. G., Joyner, R. E., Becker, B. J., ... & Beal, B. (2020). The prevalence of dyslexia: A new approach to its estimation. *Journal of Learning Disabilities*, 53(5), 354-365. DOI: 10.1177/0022219420920377.

This study proposes a new approach to operationalizing dyslexia in prevalence estimates:



As noted in the article, the International Dyslexia Association specifies that:

- Dyslexia is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities.
- These difficulties are often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction.



To capture the "unexpected" nature of dyslexia, this study operationalizes dyslexia as a substantial difference between an individual's listening comprehension and reading (1.5 SDs).

A model-based meta-analysis and simulation based on this definition found:



Individuals with a substantial difference between their listening and reading comprehension can be found throughout the reading ability spectrum.



Some individuals with a substantial difference in listening and reading comprehension may not exhibit low reading performance.



In a sample of poor readers (below the 20th percentile), most readers will not be expected to have dyslexia because they will have similar levels of listening and reading comprehension ability.