An Analysis of Dyslexia and Degree of Handedness

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About 90 percent of humans are right handed. Left-handedness has previously been linked with dyslexia (Geschwind and Behan). However, the connection between handedness and dyslexia has only been hypothesized. For this study, I correlated handedness quotients (a quantification of right- or left-handedness) with scores from five tests used to evaluate several aspects of reading skill (single real-word reading, pseudoword reading, phonemic awareness, reading fluency, and passage comprehension) in both dyslexic and control participants. I used data from a retrospective study that was approved by an Institutional Review Board. Data were collected from 90 children (40 dyslexic, 50 control), both right- and left-handed, with a mean age of 9.23. I found that there was no significant correlation between handedness and reading ability. The results of this study suggest that left-handed participants should be included with right-handed participants in behavioral language studies, in order to create more representative samples. My results also suggest that, while there is a known link between dyslexia and left-handedness and between dyslexia and reading difficulty, there is no association between reading difficulty and left-handedness. Therefore, there must be a confounding variable causing the relationship between dyslexia and handedness.

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