

Diagnostic Test for Dyslexia, Year Three

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Over the last three years, I have developed a new diagnostic screening test for dyslexia. My test is based on research that suggests dyslexia is an auditory processing disorder rather than simply a reading disorder. My theory is that dyslexics cannot consistently identify and pair the sounds letters make with their meaning. There is also research suggesting dyslexics cannot hear certain sound frequencies at certain durations. Using this information, I developed a two-part auditory test that can be given to students starting at a young age to screen for dyslexia. This years project included two age-appropriate auditory stories, one with classroom noises and one without, rather than last years single story with classroom noises. After listening to each story I verbally asked the student questions to determine how much information they recalled, giving them a quantitative score which I used for my statistical analysis. The second portion of my test is similar to the hearing tests given to students when they are entering kindergarten. I played sounds at frequencies of 50hz, 75hz, 100hz, 150hz, 175hz, and 200hz at durations of 200ms, 400ms, 800ms, and 1 second, all while keeping the volume constant. My hypothesis is that dyslexic participants would score substantially lower on the story with background noises than the one without as well as having a harder time processing the sound frequencies at shorter durations than the non-dyslexics. As I hypothesized, trends in the data suggested that dyslexics struggled with audio processing in both sections of my test.

Awards Won:

Second Award of \$2,000