Diagnostic Test for Dyslexia

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I 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 and writing disorder. The idea is that dyslexics cannot consistently identify and pair the sounds letters make with their meaning and physical appearance. There is also research suggesting dyslexics cannot hear certain frequencies at certain durations. Using this information, I developed a two part auditory test that can be given to students at a young age to screen for dyslexia. The first section is a story test, where the tested student listens to an age-appropriate auditory story with classroom noises (i.e. chatter, cellphone ringing) overlaid in the background. After they listened to it, I verbally asked questions to determine how much information they recalled. My hypotheses was that the dyslexics would not be able to process details of the story due to the background noise. The data I collected supported my hypothesis but I had a data set of less than 50 so there is no way to confirm it without more testing. 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, 200hz, 800hz, 1200hz, 3000hz, 5000hz, 8000hz, and 10000hz at durations of 200ms, 400ms, 800ms, and 1 second, all while keeping the volume constant. My hypothesis was that lower frequencies at shorter durations would be harder for the dyslexics to process. My results concluded that there was a trend that validated my hypothesis. The dyslexic participants had a harder time processing the frequencies at shorter durations than the non-dyslexics. With a small sample size of less than 50, I cannot draw a true conclusion.

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