

## AB104. Validation of the international reading speed texts in a Canadian sample

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**Background:** The International Reading Speed Texts (IReST) were developed in Europe as a standardized measure to assess continuous reading in normally sighted and visually impaired individuals. The IReST is used throughout the United States and Canada to assess reading speed; however, the normative values may not be valid in North America (NA). Additionally there are no normative values for individuals with visual impairments. The aim of this study was to validate the IReSTs in a normally sighted English-speaking NA sample with and without a simulated reduction in visual acuity.

**Methods:** Fifty undergraduate students from Concordia University participated in this study. Participants were systematically assigned to a counterbalanced order of testing conditions and were asked to read all 10 IReSTs aloud. The normal and impaired vision conditions were counterbalanced such that the first set of five IReSTs were read with either the participants normal/corrected-to-normal vision or with a simulated 20/80 visual impairment.

**Results:** Multiple two-sample dependent t-tests using a Holm-Bonferroni correction for multiple comparisons were used to compare the IReST values (means and standard deviations) to the current sample; the results showed statistically significant differences between the current samples mean reading speed and the values provided by the IReSTs. In all cases, P were equal to or less than 0.005. Mean difference scores ranged from 14.87 to 30.05 wpm, with 95% confidence intervals ranging from 4.82 to 43.32. Measures of effect size using bias corrected Hedge's  $g^*$  ranged from 0.83 to 1.32, with 95% confidence intervals ranging from 0.25 to 1.93. Multiple two-sample dependent t-tests using a Holm-Bonferroni correction for multiple comparisons were used to compare the mean reading speed in wpm of the normal and impaired vision conditions; the results showed statistically significant differences between the mean reading speeds of the normal vision condition and the simulated impairment condition on the IReSTs. In all cases, the P were less than 0.001. Mean difference scores ranged from 25.44 to 41.8 wpm, with 95% confidence intervals ranging from 21.66 to 46. Measures of effect size using bias corrected Hedge's  $g^*$  ranged from 2.74 to 3.81, with 95% confidence intervals ranging from 1.97 to 4.74. Further Bayesian analyses revealed BF10 factors ranging from  $1.277 \times 10^7$  to  $7.334 \times 10^{11}$ , indicating decisive evidence for the research.

**Conclusions:** There are statistically significant differences in reading speed between the NA English sample and the normative values established by the IReST; such that reading speeds of the NA English sample are slower than the normative values of the IReST. Additionally, participants in the simulated impairment condition read the IReSTs significantly slower than the normal vision condition.

**Keywords:** International Reading Speed Texts (IReST); reading speed; simulated impairment; assessment

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