

Evidence For Improvement in Reading with Neuralign

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Report for Neuralign



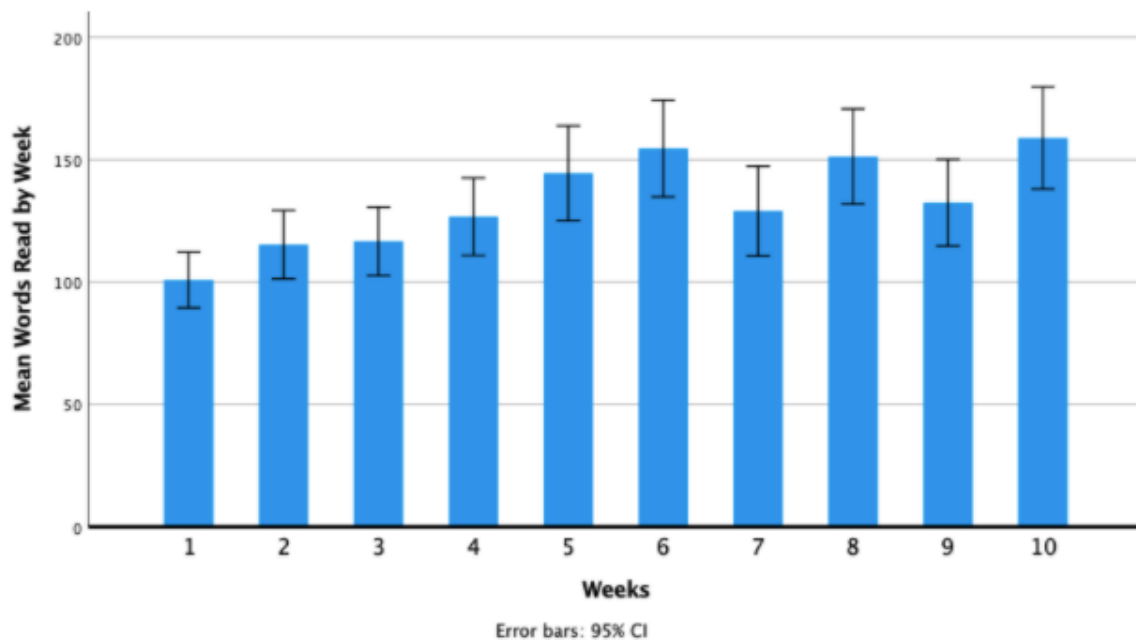
The Neuralign program includes three weeks of cognitive therapy, followed by 10 weeks of reading practice. As part of this practice, students are asked to read a text every day, reading the same text five times before moving to the next one. In this brief report, we analyze two aspects of reading improvement for users of the program. The first measure, reading fluency measure (i.e., number of words read per minute) is described in Part I. In Part II, we compare assessed reading performance before and after the intervention. As described in detail below, users showed significant improvement in reading fluency and in assessed reading performance.

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Part I. Overall Reading Fluency

A total of 116 users who ranged in age from 6 to 18 years (average age of 11) completed the 10 weekly reading fluency tasks. As shown in Figure 1, reading fluency was the number of words read (words per minute) on the first day of each week. The improvement in fluency was statistically significant, $F(9, 107) = 7.37, p < .001$. On average, students read about 50% more words in Week 10 than in Week 1.

Figure 1. Reading Fluency Improvement for Users Across 10 Weeks (Error bars are the 95% Confidence Interval of the Mean)



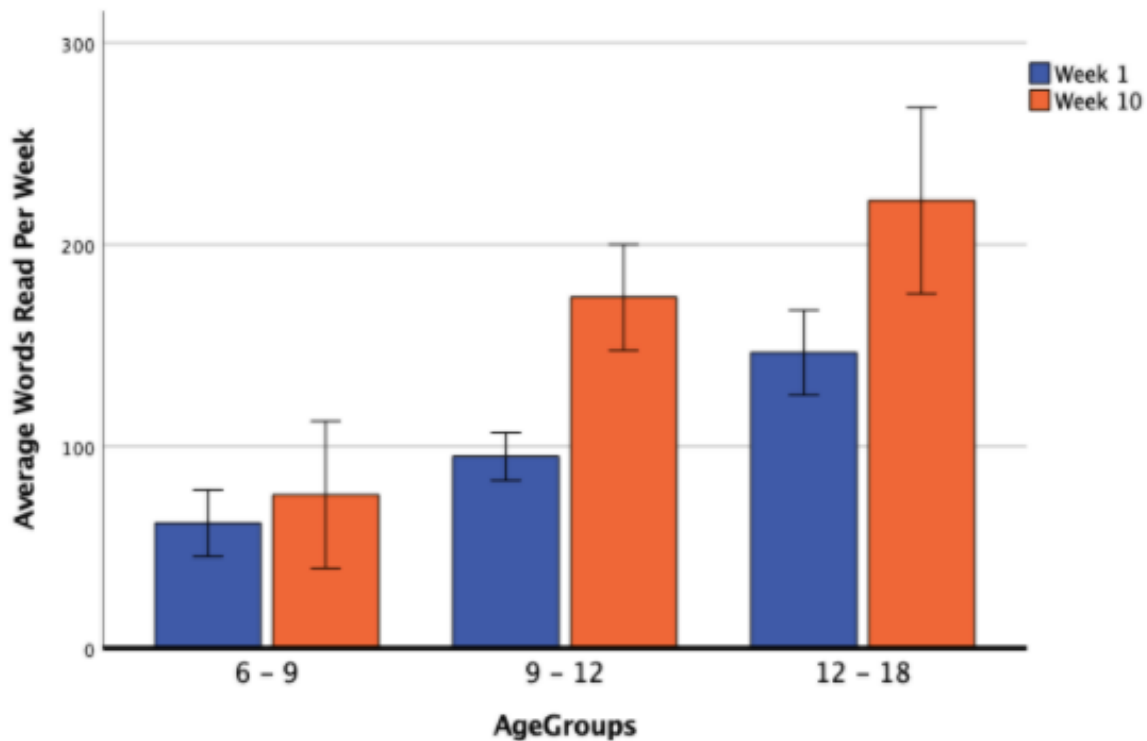
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To determine whether the improvements varied by age of the students, fluency for week 1 and week 10 were analyzed for three age groups: 6- to 9-years, 9- to 12-years, and 12- to 18-years. As shown in Figure 2, the improvements were statistically significant for the two older groups ($p < .001$), but not for the youngest group.

Figure 2. Reading Fluency Improvement from Week 1 to Week 10 by Age Group (Error bars are the 95% Confidence Interval of the Mean)



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Part II: Reading Assessments Score at Baseline, Pre-Test, and Post-Test

The reading performance assessment includes multiple choice questions where students are shown a picture and then read words or sentences to choose the best answer. In comparing students' performance before and after they did the program, we see significant improvement. For 100 students, their pre-program scores averaged 22.4 before the program and 28.6 after, a significant change, $F(1,99) = 24.44$, $p < .001$. Improvements occurred for students at all reading levels, although they were smaller for those at the highest reading level, probably because they were reaching ceiling levels of performance on the assessment.

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