

Dyslexia Specific Font: A Promised Solution but is it Effective?

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Background

Although dyslexia is a specific learning disability which contributes to a difficulty in word reading and is often due to a phonological deficit, many have believed that it was the result of a visual impairment. Educators and parents alike have been looking for a quick fix for their students with dyslexia. The visual theory of dyslexia has seemingly brought about accommodations to eliminate the effects of the disability. One such quick fix has been the development of a dyslexia specific font.

Purpose

The purpose of this review was to determine if dyslexia specific font benefits individuals with dyslexia.

Research Questions

Research Question 1

Is a dyslexia specific font an effective accommodation for individuals with dyslexia?

Research Question 2

What features of a dyslexia specific font make them different than other fonts?

Research Question 3

Why might a dyslexia specific font matter?

Methods

The study was accomplished by searching three databases using the terms *dyslexia*, *font*, and later adding *spacing* to locate relevant studies for this review.

Studies were limited to only those published in peer-reviewed journals.

Search criteria did not include date, but all relevant studies were post 2000.

The search produced a total of 154 publications of which 33 were flagged for further inspection. 16 of these studies met the search criteria.

Results

Dyslexia Specific Font Studies

| Study | Font Characteristics Manipulated | Age / Grade | Country of Origin / Language | Student Characteristics | Sample Size | Outcome- Accuracy / Rate |
|----------------------------|--|---|----------------------------------|---|--|--|
| Bachmann & Mengheri (2018) | EasyReading/TNR | M = 9.5/ Grade 4 | Italy/ Italian | Varied | n = 533 | Higher for all subjects (due to spacing) |
| Duranovic et al. (2018) | Dyslexie font / TNR /Curlz / letter spacing | M = 10.77 | Bosnia and Herzegovina / Bosnian | Dyslexic; same age; reading matched | n = 69 | Spacing yes Font no |
| French et al. (2013) | Arial / Monotype Corsiva | Age 13 to 16 | United Kingdom/ English | Dyslexic; study control group | n = 275 | 12.8% higher for disfluent font on text retention |
| Galliusi et al. (2020) | Verdana/ Dyslexia friendly Letter spacing/ between word spacing | M = 12.4 | Italy/Italian | Dyslexia Control | n = 64 n = 64 | No difference in font Reduced with letter spacing Increase with between word spacing |
| Hakvoort et al. (2017) | Letter spacing | M = 9.11 (1) M = 9.3/ Grade 3-4 (2) | Netherlands/ Dutch | Dyslexia/ Control (1) Varied (2) | n = 30 n = 30 (1) n = 189 | Fewer errors Rates unaffected (1-2) |
| Korinth et al. (2020) | Letter spacing | Adult | Germany/ German | College students; no mention of disability | n = 24 | Decreased rate for faster readers |
| Kuster et al. (2018) | Dyslexie font/Arial/ TNR | Age 7.4 to 12.4 | Netherlands / Dutch | Dyslexic only Dyslexic and neurotypical | n = 170 (1) n = 147 (2) | No difference (1-2) |
| Marinus et al. (2016) | Dyslexie font/ Arial | M = 9.71 | Australia/ English | At risk | n = 39 | No difference when within word and between word spacing was added to Arial font |
| O'Brien et al. (2005) | Print size | Age 6.4-10.4 Grade 1-4 | United States/ English | Dyslexic Reading matched control | n = 22 n = 12 | Increased critical print size for dyslexics |
| Perea et al. (2012) | Letter spacing | Adult (1) Age 7-8 & 9-10/ Grade 2 & 4 (2) Age 11-13 (3) Age M = 9.3/ Grade 4 (4) | Spain/Spanish | Typical (1) Typical (2) Dyslexia (3) Typical (4) | n = 24 (1) n = 24 (2) n = 18 (3) n = 20 (4) | Increased reading speed (1-4) |
| Powell & Trice (2020) | Dyslexie font/ Arial & TNR adjusted to comparable size and spacing | Age 8-12 Grade 4-5 | United States/ English | Students with SLD-reading | n = 36 | No difference |
| Rello & Baeza-Yates (2013) | OpenDyslexic/ Arial, others | Age 11-50 | Not noted Published in Spain | Dyslexic only | n = 48 | Font impacts readability |
| Sjoblom et al. (2016) | Letter spacing | Adults aged 18-47 | United Kingdom/ English | Dyslexic Control | n = 24 n = 24 | Increased reading speed for both; greater accuracy rates for dyslexic |
| Wery & Diliberto (2017) | OpenDyslexic font/Arial/TNR | Grade 3-6 | United States/ English | Dyslexic | n = 12 | No difference |
| Zascavage et al. (2012) | TNR/ 3D TNR | Age 5 to 7 Grade 1 | United States/English | Not noted (1) Varied by percentile rank (2) | n = 116 (1) n = 214 (2) | 7.6% higher for 3D (1) 1.83% higher for 3D for student under 20% (2) |
| Zorzi et al. (2012) | Letter spacing | Age 8-14 | Italy/Italian France/French | Dyslexic | n = 34 n = 40 | Increased reading speed; fewer errors |

M = mean; n (sample size) = number; TNR = Times New Roman; SLD = Specific Learning Disability

- The findings indicated that added spacing rather than the dyslexia specific font was beneficial for individuals with dyslexia.
- Across studies, when spacing was added to other fonts, although most of the individuals with dyslexia were able to read faster and with greater accuracy, there was no difference between the dyslexia specific fonts and other fonts.

Conclusions and Implications

- There is not evidence that proves that a dyslexia specific font is effective for individuals with dyslexia.
- When spacing is added, dyslexia specific font resembles other existing fonts.
- Although added spacing is beneficial for individuals who are first learning to read, added spacing is actually disadvantageous to the typical reader with more experience with text.
- This matters because both parents and schools have limited budgets and need accommodations and materials that are effective and beneficial for individuals with dyslexia.

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