Linking font legibility and preference

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Legibility plays an important role in font selection (Arditi & Cho, 2005, Bigelow, 2019, Minakata et al, 2023) and preference for fonts. (Grobelny & Rafał Michalski, 2014, Doyle & Bottomley, 2004). However, existing research has not systematically examined factors that increase preference, nor their relevance with legibility. To identify factors that can increase legibility and preference in fonts to examine their relationship we manipulated. The independent variables in this study are size, serif, and contrast between thin and thick strokes, which are systematically adjustable and decorative elements of a font (Amare & Manning, 2012). At two letter size levels (0.3º, 0.5º), three contrast levels of serif (0 [sans-serif], medium, long) and three levels of contrast (low, medium, high) were combined with variations of the Noto serif font, resulting in a total of nine fonts. A lexical decision task was applied to 6-character strings using these fonts, and legibility was measured by calculating the proportion of correct responses. Under the same conditions, preference was measured using a 4-point Likert scale by increasing the duration of the string presentation. Results showed that regarding legibility, larger fonts were more legible than smaller fonts. Regarding preference as well, larger fonts were preferred to the smaller fonts. For the small font of 0.3º, sans-serif was least legible at high contrast, followed by low contrast, and most legible at medium contrast ($p<0.05$). For medium and long serifs, with higher contrast, the legibility got higher ($p<0.001$). For the large fonts of 0.5º, there were no significant legibility differences for all serifs and contrasts. At both font sizes preference increased with contrast ($p<0.001$). Last but not least, legibility and preference showed a positive linear relationship (smaller; $r2= 0.8196$, larger; $r2 = 0.3354$). These results suggest that fonts with higher legibility are preferred, in case of small fonts.

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