

Older adults' perceptions of, and preferences for, warning symbols: Familiarity, complexity, and comprehensibility

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Abstract

The current study assessed older adults' perceptions of, and preferences for, warning symbols in terms of familiarity, complexity, and comprehensibility. One hundred and one older adults (50-71 years of age) rated the familiarity ("Please judge how often you have encountered each of the following warning symbols before -- i.e., before today, to what extent have you previously been exposed to each of these symbols?"), complexity ("how complex is this symbol?") and comprehensibility ("How easy would it be to understand this symbol in isolation? That is, without knowing anything else about it, do you think the meaning would be obvious?") of 32 warning symbol triplets (each triplet representing a warning concept such as "biological hazard"). Symbols were either in current use or were existing symbols that were altered to vary complexity and comprehensibility within a triplet. Participants' ratings were made on a scale from 1 to 5 (not at all --- extremely). In a separate task, participants were asked to rank order the three symbols within a triplet, from "best" (assigned a rank of "1") to "worst" (assigned a rank of "3").

The mean familiarity, complexity, and comprehensibility ratings were entered (step-wise) into a linear regression with mean rank as the dependent variable. Rated comprehensibility accounted for 50% of the variance in the mean ranks, while both familiarity and complexity were excluded by the analysis. This result suggests that older adults prefer symbols which are highly comprehensible, and that comprehensibility is more important than either familiarity or complexity in determining preferences. However, examination of the symbol means suggested that older adults' ratings of familiarity and complexity were influenced by comprehensibility – highly comprehensible, but relatively unfamiliar symbols (i.e., those symbols that had been altered), were rated as highly familiar, and, high comprehensibility symbols that were relatively complex, were rated as simple (and vice versa). Correlational analyses and ratings provided by 3 "experts" were consistent with this interpretation and suggest that care must be taken in assessing familiarity and complexity of highly comprehensible symbols.