EFFECTS OF PICTURE NAMING ACCURACY AND SPEED ON PICTURE DESCRIPTION
WORD SELECTION
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Word-retrieval difficulties commonly occur in aphasia and are considered one of the most pervasive symptoms affecting everyday communication. Both the assessment and often the treatment of aphasia involves confrontation naming tasks, which makes the assumption that performance in picture naming tasks reflects word retrieval in connected speech tasks. While some studies investigating the relationship between confrontation naming and connected speech tasks have been published in the aphasiological literature (Feyereisen et al., 1991), there is a dearth of studies probing this connection in unimpaired population (e.g. Griffin & Bock, 1998). One variable which may be critical in determining whether words retrieved in isolation can also be retrieved within the time demands of fluent speech is naming latency, or speed of naming in confrontation naming (Conroy et al., 2009; Crerar, 2004).

24 neurologically intact, monolingual English speaking participants were asked to carry out first a complex picture description task and, after a 10 minute break, a picture naming task. The picture description task involved the description of 3 busy pictures (i.e. pictures with many objects and events), while the picture naming task involved the confrontation naming of 100 isolated items included in the previously described busy pictures.

Regarding the speed variable, for the picture naming task naming latencies were measured using the E-Prime software, while for the picture description task, participants’ descriptions were recorded and then the time elapsed from the beginning of the description to the production of each target item was measured.

A statistically significant negative correlation was found between picture naming latencies and accuracy in picture descriptions ($r = -0.320$, $p = 0.001$) implying that words more quickly named in picture naming were more likely to be produced in descriptions. Also a statistically significant positive correlation was found between mean picture naming latencies and mean retrieval latencies within composite picture descriptions ($r = 0.202$, $p = 0.047$). This implied that words produced faster in picture naming were also produced earlier in narratives.

The finding regarding the negative correlation is both theoretically and clinically important. Theoretically, it indicates that speed of word retrieval is an important factor which has some measurable influence on the easy availability of words in connected speech. As for the clinical outcomes, we believe that this can contribute to establish greater clarity in
understanding the relationship between improvements in picture naming and functionally beneficial gains in the quality of aphasic participants’ expressive language. As for the positive correlation, if we make the assumption that words produced first in picture description and named faster in picture naming are more easily retrieved than those produced later or named slower, the above correlation indicates that the impact of pragmatic factors (e.g. attention or attraction to specific stimuli) on word retrieval during complex picture description may be only as important as the influence of the purely linguistic factor of easiness of word retrieval.

Significantly, this study corroborated our hypothesis that words more quickly named in picture naming were more likely to be produced in narratives. It also found unexpectedly that words produced faster in picture naming were also produced earlier in descriptions.

References