Does Phonological Treatment That Improves Picture-naming Generalize to Discourse Production?

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Introduction

Anomia is a universal symptom of aphasia and consequently many treatments for aphasia are aimed at improving word-finding abilities. However, it is important to ask if positive outcomes in the treatment of naming generalize to improved communication beyond the ability to name objects presented in pictures. This study examines the relationship between outcomes of picture naming and discourse production following treatment to improve word finding ability.

Methods

Participants. Participants were six English speakers with chronic aphasia who demonstrated impaired phonological processing based on the Standardized Assessment of Phonology in Aphasia (Kendall, Brookshire & Nadeau, 2011). Participants who exhibited severe apraxia of speech were not included.

Treatment. Participants received 60 hours of individual phonological treatment to improve overall naming. In each session, a therapist provided cues from multiple modalities (e.g., auditory, graphemic, descriptions of movement and pictures of the tongue/mouth position) to elicit productions of isolated phonemes, nonwords, and real words.

Outcome measures. A positive outcome in naming for the purposes of this study was defined as improved confrontation naming on a set of non-practiced real words immediately following treatment. Generalization to discourse was measured by analyzing participants’ responses to a set of conversational probes about their medical problems, daily activities and mood. The sessions were audio recorded and transcribed. The transcriptions were coded on a set of 12 discourse measures to gauge productivity, grammatical form, meaningfulness and efficiency. A change of 20% or more from the pre- to post-treatment assessment was taken to be suggestive of a clinically important change (Kempler and Goral, 2011).

Results

Three of the six participants named significantly more real words following treatment compared to pre-treatment. Three showed no improvement in picture naming. The discourse analyses showed that three participants produced more verbal output following treatment. One of these individuals also produced a greater proportion of grammatical sentences. There was no change in percent of utterances with new information for any of the participants. Critically, there was no evidence of a change in ability to find words in discourse, as measured by a change in various
indications of word-finding ability, including the number of false starts, self-corrections and interjections (uh, uhm). There was no evidence that the individuals who improved in naming produced a different quality of discourse than the others, either before or following treatment.

Conclusions

Individuals who responded positively to a word-access treatment protocol as measured by a naming test did not perform better on the discourse measure than individuals who did not respond to the same treatment. These data indicate that treatment focused on single-word retrieval, even when successful, likely does not generalize to positive changes in connected speech, suggesting that the source of difficulty in discourse production is not simply access to word production.

References
