

Critical Review:

## Methods

Search Strategy  
Computerized



increase in sentence length in a picture description task.

Despite the positive treatment results, this study

report greater improvement on trained items compared to untrained items. Generalization is influenced by various factors, including the outcome measured used to evaluate generalization, the treatment protocols themselves, and the patient (Mitchum & Berndt, 2007). Comparatively, maintenance is also dependent upon the patient in that maintenance of any newly acquired or reacquired skill requires practice. Thus, by altering treatment items or protocols to make them more salient to the patient's life, maintenance and generalization may be more likely to occur.

Furthermore, three of these six studies (Beard & Prescott, 1989; Koenig-Bruhin & Studer-Eichenberger, 2007; Kohn et al., 1990) utilized a phonological approach to treat the repetition deficit. Although repetition is a primary deficit and characteristic of conduction aphasia, treatment of the repetition deficit in and of itself may not be a valid goal to improve oral expression in persons with conduction aphasia (Kohn et al., 1990). Placed within a neurolinguistic model, such as that proposed by Ellis and Young (1988), repetition as a separate linguistic domain completely bypasses the semantic network and as such is merely repeated through an auditory to phoneme mechanism void of context or meaning. This may help to explain why in cases such as that presented by Beard and Prescott (1989) patients improved their performance on overt repetition tasks; however, gains did not generalize to untrained items, or other language domains. Comparatively, in Kohn et al.'s (1990) study, treating repetition did lead to generalization of increased syllable-to-concept ratio on a picture description task. It is unclear whether this generalization effect could be directly attributed to the repetition treatment or to the combination of the repetition treatment with existing treatment protocols. Koenig-Bruhin and Studer-Eichenberger's (2007) study also reported treatment generalization, however the generalization was measured as increased sentence length in a story retell task, and cannot solely attribute conclusions of treatment generalization.

Additionally, there is a lack of research systematically investigating semantic based treatment approaches in conduction aphasia. This lack of research may be due to the fact that persons with conduction aphasia generally have intact semantic systems, as shown by the relatively spared auditory comprehension (Baldo et al., 2008). Only two studies (Harnish et al., 2008; Kalinyak-Fliszar et al., 2011) provided evidence supporting a multimodal or a combined phonological and semantic treatment approach. Harnish et al.'s (2008) study, although

more rooted in treatment intensity than protocols did provided qualitative evidence of generalization to other language domains; however, Kalinyak-Fliszar et al.'s (2011) treatment, like the other studies, failed to report generalization of gains in phonological STM to untrained items or other language domains.

Future clinical research addressing the unique deficits

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