Efficacy of Computer-Assisted Treatment for Anomia in Persons with Aphasia

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Introduction

• One of the few connecting threads among the various subtypes of aphasia is difficulty in expressive word-finding, also known as anomia.
• Word retrieval problems are a significant factor in communication breakdown for persons with aphasia (PWA) and their conversation partners (e.g., Basso, 2003; Boyle, 2004; Lesser & Altar, 1995).
• Recent studies have addressed the treatment of anomia with computer-assisted therapy using various programs (e.g., Fink-Brecher, Schwartz, & Robey, 2002; Ramsberger & Marie, 2007; Doesborgh et al., 2004; Raymer, Kohen, & Saffell, 2006). Improvement was noted on confrontational naming tasks, however, no significant data were collected to suggest generalization of word-finding abilities to untrained words with the exception of Raymer, Kohen & Saffell’s 2006 study.

Method

• A one-group single-treatment counterbalanced design (also known as a cross-over design; Hegle, 2003) was employed using 6 participants divided into two subgroups.

1. Introduction

Response Modality

Word Associations

Parrot

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Orthographic Auditory

© & Algar, 1995).

Vocabulary

Users identify features of words, e.g., location, function, appearance, and color. Stimuli are provided with written or spoken functions, users find the appropriate picture. Vocabulary

Category Function

Production

Cognitive Reasoning

Three members in each subgroup attended treatment sessions at the same time and in the same lab. Each participant wore headphones and was positioned in front of either a laptop or desktop computer. The participants were arranged such that they were facing away from other participants.

Dependent Variables

• Significant improvement in confrontation naming ability occurred following computer-assisted treatment.

Confrontation Naming

Word finding abilities during oral discourse did not change.

Social Validity

Participants felt that the treatment employed acceptable procedures and goals, and they expressed overall satisfaction with the intervention program.

Results

Because this study involved only six participants, nonparametric distribution-free statistics were used.

Confrontation Naming

Word finding abilities during oral discourse did not change.

Social Validity

Participants felt that the treatment employed acceptable procedures and goals, and they expressed overall satisfaction with the intervention program.

Conclusion

• Intensive, computer-based treatment for anomia in persons with chronic aphasia resulted in significantly improved ability to complete single-item confrontational naming tasks.

• The computer-assisted treatment using Parrot Software improved word finding abilities at the single word level, but not beyond (i.e., at the sentence or discourse level).

• Participants with aphasia felt that the intervention program used acceptable treatment procedures, methods, and goals, and there was a high satisfaction with the treatment program.

Selected References


Hegle, M. N. (2003). Clinical research on computer software improved word finding abilities at the single word level, but not beyond (i.e., at the sentence or discourse level).

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