What is Known About the Treatment Methods of Bilingual Aphasia?

Presenter: Alexis LaRose, B.S.

Faculty Advisor: Ethan Kristek, M.S.

Fontbonne University-Department of Communication Disorders and Deaf Education

Abstract

The growing prevalence of bilingual speakers creates a need for speech language pathologists to determine ethical and evidenced based treatment methods for this population. According to a current research study, approximately 45,000 new bilingual aphasia cases are expected per annum in the United States (Paradis, 2001). This session will provide an overview of the unique recovery process people with bilingual aphasia present with and the current evidence-based treatment methods of semantic feature analysis, video-implemented script training and model driven intervention, and their efficacy on improving communicative abilities. Future research is needed to enhance efficacy of established treatment methods for people with bilingual aphasia.

Defining Aphasia

- Aphasia is an acquired language disorder than affects a person's ability to comprehend and/or produce language. It is not a cognitive disorder and does not affect a person's intellectual abilties.

Recovery Considerations

- **Dynamic process:** The impact of each person's individual language processing and bilingualism trajectory on the aphasia profile is unique. (Kiran, et al., 2012).
- **Language Dominancy:** A person's dominant language prior to the brain injury that resulted in aphasia may not be their dominant language after. Language immersion and attrition should be considered during evaluation.
- **Active Language Systems:** There is greater likelihood of interference among the languages during word retrieval tasks (Kiran, et al., 2012).
- **Patterns of Recovery:** parallel recovery (when both languages are recovered simultaneously), selective recovery (when only one language slowly comes back and the other is never recovered) and successive recovery (when one language improves before the other) (Fabbro, 2001).

Choosing a Language

Treating one language does not mean you are jeopardizing the other language

Consider the client's language background and relative

Make informed decisions about code-switching and translation

Consider clients' personal preferences

(Kiran, et al., 2012)

Semantic Feature Analysis

- **Semantic Feature Analysis**: therapy technique that focuses on the meaning-based properties of nouns. People with aphasia describe each feature of a word in a systematic way by answering a set of questions.
- Generalization to untreated semantically related and unrelated items in each language was measured during periods of therapy first in one language, and then in the other (Kiran & Roberts, 2009).

Efficacy of Semantic Feature Analysis
- Studies show the feasibility of using semantic treatment to facilitate lexical retrieval and generalization to semantically related untrained items across three languages.
- All patients improved their naming ability
- The treatment has the potential to benefit items in the untrained language (Kiran & Roberts, 2009).

Video-Implemented Script Training

- **Script training:** targets the production of scripted material, resulting in an increase in accurate production of words from the target script, improved grammatical output, and increased speaking rate.
- In addition to in-person rehearsal of script content with a clinician, computer-based approaches for script training have proven beneficial (Grasso, et al., 2019).

Efficacy of Script Training
- The treatment resulted in improved production of scripted material and improved facility in word retrieval and grammar
- Findings offer evidence that both languages can benefit from treatment, with a clear advantage for this participant's stronger postmorbid and first acquired language (Grasso, et al., 2019).

Model Driven Intervention

- **Model-based intervention:** uses the Switch Back Through Translation (SBTT) approach which seeks to exploit preserved internal suppression mechanisms within the translation schema, to overcome involuntary switching by translating the word in the non-target language into the target language (Ansaldo, et al., 2010).

Efficacy of Model Driven Intervention
- The results with SBTT show a significant improvement on naming and translation tasks in Spanish, and no cross-linguistic effects to English
- SBTT resulted in efficient naming with treated nouns and verbs
- Regarding translation, SBTT resulted in significant improvement with treated words. Further, there was a generalization effect to untreated Spanish verbs

Cross Language Generalization

- **Which language benefits?** Cross-language generalization cannot be equally anticipated from therapy. However, with the semantic/lexical connections, there is a further proposal of asymmetry, whereby connections from L2 to L1 are stronger than those from L1 to L2 (Croft, et al., 2011).
- **Which language to treat?** Treating the less proficient language may show no cross-language generalization effects to the untreated, more proficient language. Regarding semantic naming treatments specifically, training the nondominant language may be more beneficial in facilitating crosslinguistic generalization than training the dominant language (Edmonds & Kiran, 2006).
- **Discourse production:** improvements in the untreated language may occur as a result of generalization from the treated language, even when the treated language does not improve (Lerman, et al., 2019).
- **Variability:** generalization appears to be influenced by language proficiency, use and patient's current language environment (Kiran, et al., 2013).

Conclusion and Future Research

- **Conclusion:** As the bilingual population in the nation continues to grow, it is important for speech-language pathologists to address the gaps in the literature to determine the best way to provide efficient intervention.
- **Future Research:** Focus on neurogenic communication disorders in minority adults to address service needs among bilingual speakers. This includes valid assessment tools, interpreter-assisted clinical services, and sociocultural attitudes towards disabilities (Centeno & Ansaldo, 2016).

References

SCAN ME

Fontbonne UNIVERSITY