

Investigation of an Effective Intervention Approach for Bilingual Children with Childhood Apraxia of Speech (CAS)

Katarzyna Glowik, B.A., Brenda Gorman, Ph.D., CCC-SLP



Background Information

- CAS is a neurologic and developmental motor programming speech sound disorder.
- Characteristics include inconsistent speech sound productions, groping, and inappropriate prosody.
- Bilingualism does not cause confusion or speech sound disorders.

Rapid Syllable Transition (ReST)

- Motor planning intervention approach
- Intervention used pseudo words and tactile cues to improve accuracy in consonant production.
- Research demonstrated effectiveness of approach on *monolingual* speakers

Integrated Phonological Awareness (IPA)

- Linguistic intervention approach
- Intervention used linguistic tasks in order to improve phoneme knowledge.
- Research demonstrated effectiveness of approach on *monolingual* speakers

Clinical Scenario

- Kamila is a bilingual (Polish and English) typically developing 6 year old with moderate to severe CAS.
- Dorota is a bilingual speech language pathologist (SLP) who will be the first SLP to begin treating Kamila's CAS in the public schools.

Clinical Research Question

For bilingual individuals with CAS ranging from ages 3 to 21, is a motor planning treatment approach of ReST more or less effective than a linguistic approach of IPA based on a child's intelligibility?

Evidence Based Decision

- Appraisal of ReST article = 22/24
- Appraisal of IPA articles = 14/24
- Current research supports a motor planning approach of ReST over a linguistic approach for a *bilingual* individual with CAS.
- Pseudo words enhances motor planning of the linguistic patterns which facilitates generalization into connected speech.
- Generalization would be observed in *both languages* specifically in the shared phonemes.

Methodology for Intervention

- Semester Overview:
 - 3 weeks of English, 3 weeks of Polish alternating for 18 weeks in a semester
- Session Overview:
 - Welcome and overview
 - Training Phase
 - Break
 - Practice Phase
 - Probing
- Stimuli during sessions include 20 English pseudo words and 20 Polish pseudo words

Discussion

- ReST intervention program with specific considerations for the unique needs of Polish bilingual speakers provides the most effective intervention approach.

References

- Murray, E., McCabe, P., & Ballard, K. J. (2014). A systematic review of treatment outcomes for children with childhood apraxia of speech. *American Journal of Speech-Language Pathology*, 23(3), 486-504. doi: 10.1044/2014_AJSLP-13-0035
- McNeill, B.C., Gillion G.T., & Dodd, B. (2010). The longer term effects of an integrated phonological awareness intervention for children with apraxia of speech (CAS). *Asia Pacific Journal of Speech, Language, and Hearing*, 13(3), 145-161. doi:10.1179/136132810805335074