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CSD 590: Research Option II

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## Background

### Aphasia

Aphasia has a significant negative impact on an individual's language skills. According to Bhatnagar (2003), aphasia is defined as "an acquired disorder of language functions secondary to brain disease" (p. 445). It is possible to be diagnosed with a specific type of aphasia and based on where the infarct is located in the brain, language can be affected differently. Though there are various classification systems, aphasia types have often been categorized as Broca's, Wernicke's, Conduction, Global, Anomic, and Transcortical (Bhatnagar, 2013).

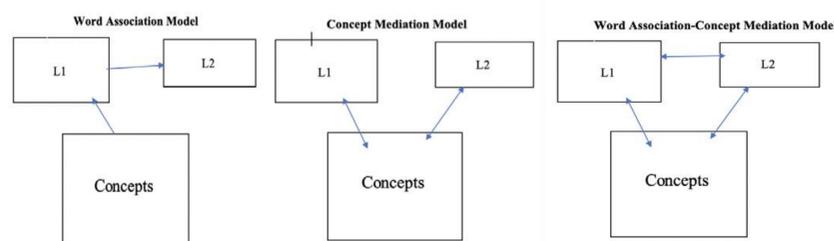
### Bilingualism

An estimated one-fifth of people in the U.S. are bilingual (U.S. Census Bureau, 2019). A person with aphasia (PWA) that is also bilingual will present characteristics that compare and contrast to monolingual speakers. Bilingualism is a complex concept that cannot be defined by a single definition. In the field of speech-language pathology, individuals who use two languages functionally to meet everyday needs are considered bilingual.

### Presentation of Bilingual Aphasia

Approximately one million, or one in every 250 people in the United States are diagnosed with aphasia (National Institute on Deafness and Other Communication Disorders [NIDCD], 2015). One-fifth of people in the United States are bilingual, so it is estimated that 200,000 bilingual individuals in the United States are currently diagnosed with aphasia. A bilingual PWA will present with language deficits in one or both languages (Peñaloza & Kiran, 2017). Language behaviors impacted by aphasia include spontaneous speech, naming, comprehension, repetition, reading, and writing (Bhatnagar, 2013). In bilingual speakers with aphasia, these skills can vary in severity and area of language based on the lesion. *Equal* impairment refers to when both languages are impaired in the same manner and the same degree; in contrast, *differential* impairment refers to when one language is more severely impacted than the other language (Roberts, 2008). *Blended* impairment refers to when an individual mixes features of their languages in any or all of the language areas, regardless of the listener; *blended* impairment typically results in inappropriate code-switching (Roberts, 2008). *Selective* aphasia is when an individual's language skills are only affected in one language (Roberts, 2008). Of the various impairments reported in bilingual PWA, the least common type of impairment appears to be selective aphasia, or preferential loss.

### Lexical Storage Models



Source: adapted from Roberts (2008)

## Purpose

The purpose of the research paper was to identify an evidence-based treatment that will functionally improve a bilingual patient's discourse skills in both of their spoken languages. For the purpose of this research, the focus is on bilingual speakers who speak both Spanish and English. The clinical research questions used are the following:

1. What is the most efficient way to treat deficits in discourse in a bilingual patient with aphasia based on the available literature?
2. Due to the limited research specifically conducted on treating discourse in patients with bilingual aphasia, how can an evidence-based decision be made regarding treatment?

## Methods

A systematic review was conducted to search the literature. The systematic review began by accessing the EBSCO, ERIC, MEDLine and PubMed databases and entering the search terms *bilingual*, *aphasia*, *bilingual aphasia*, *treatment*, *conversation*, and *discourse*. Additionally, evidence on the ASHA Practice Portal was systematically reviewed using the same search terms.

## Conclusions

Literature pertaining to treatment approaches for bilingual PWA to increase discourse skills is scarce. It is necessary to synthesize research about bilingual speakers, treatment for monolingual PWA and discourse skills and treatment approaches for bilingual PWA to make an appropriate evidence-based decision. Evidence given through a body of research substantiates and rationalizes approaches to therapy. In order to make a decision that is both appropriate and effective, it is necessary to use sound clinical judgment. Although clinical judgment is a component of evidence-based practice, it often is not enough to make a fully informed decision. Therefore, the issue of inadequate evidence of treatment to support bilingual PWAs' discourse skills continues to be prevalent. However, it is not appropriate or ethical to refuse a client for treatment.

The research found in the systematic review indicated that when considering treatment for bilingual patients, it can be helpful to identify different conversation patterns between monolingual and bilingual speakers. According to the research found, specific strategies targeting only discourse in PWA are considered inconclusive and preliminary. However, it was stated that treating semantic content in PWA can benefit conversation skills. It can be determined that including foundational semantic naming treatment to a PWA using words from his/her lexicon and/or words related to his/her life can be beneficial. It can also be determined that it would be appropriate to include direct teaching of conversation strategies used by both PWA and common conversation partners if the PWA's cognition is relatively intact to where he/she can comprehend and utilize the strategies effectively. Based on the research and clinical judgment, before teaching specific strategies for conversation, training can be provided, and strategies can be taught to increase executive functions. The research also suggested that it is effective to capitalize on cross-linguistic generalization when possible to maximize use of time. The present research indicated that cross-linguistic generalization was often noted and beneficial, but a majority of the research was deemed preliminary.

A sample therapy plan that considers the research findings is as follows:

Session 1	Conduct patient/family interview to identify common words and phrases used, conversation difficulties and different language use between environments
Session 2	Based on feedback from patient and family, begin semantic naming treatment of high-frequency and highly important words
Session 3	Training and strategy instruction for increasing executive functions
Session 4	Begin introducing direct teaching of conversation strategies for topic initiation and maintenance along in conjunction with executive functions
Session 5	Integrate high-frequency words into role-play activities in therapy using scripts and visuals
Session 6	To increase carryover, use conversation scripts in different environments with therapist present
Session 7	Assess skills in both languages to note if transfer is occurring with treatment

## Discussions

It was required for the researcher to synthesize research about different aspects of bilingual aphasia in order to determine the most appropriate treatment approach. Information about discourse patterns in bilingual speakers, discourse characteristics in PWA and treatment for bilingual PWA should all be considered to effectively produce an appropriate treatment plan. Secondly, this synthesis of information was completed by identifying all important contributing factors of bilingual aphasia and how those factors would affect treatment. Both of these research questions imply that there is not an adequate amount of literature to properly support the evidence base for intervention for improving discourse skills in bilingual PWA.

As the bilingual population continues to grow, it will become increasingly necessary to conduct research on bilingual PWA. Additionally, it is necessary for more research to be available with regard to improving functional language skills and discourse in the aphasia population. The available research provides helpful, foundational knowledge, but most of the literature states that results are considered preliminary. This statement indicates that it is necessary to continue research in the area of discourse for PWA, especially bilingual PWA. In situations similar to the clinical scenario presented in this report, it can be difficult for SLPs to best serve their clients if the evidence base does not include information that is related to the client.

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