The Effect of American Sign Language on the Recovery of Aphasic Patients

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Introduction

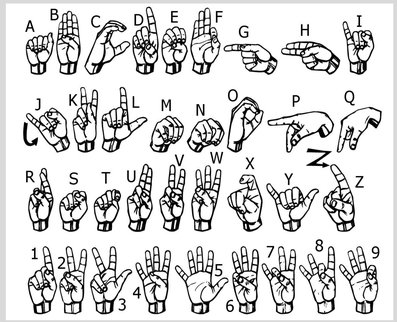
- American Sign Language (ASL) is the language used by deaf individuals as a primary form of communication. ASL is composed of gestures, word signs, hand classifiers, and facial expressions.
- Aphasia is a communication disorder that occurs when damage is done to the portion of the brain that controls language; it impairs a person's ability to hear, speak, read, and write. (American Speech-Language Hearing Association, 2016, para. 1).
- The most common cause of aphasia is a stroke, however any damage done to the left hemisphere (including brain tumors, traumatic brain injury, or progressive neurological disorders) can also cause aphasia.
- This systematic review observes the use of ASL as a rehabilitation technique for aphasic patients and how it affects their recovery time.

Methods

- **Databases**
  - CINAHL, PubMed and ProQuest Medical
- **Keywords**
  - *Aphasia, American Sign Language, Recovery Time, Communication, Aphasic Elderly*
- **Inclusion Criteria**
  - Full text articles
  - Articles dated 1990-2016
  - Written in English
- **Exclusion Criteria**
  - Foreign articles
  - Articles written before 1990

Results

- Treatment typically depends on the severity of a patient's brain damage. Doctors decided that since communication is so complex due to there being a large amount of communication disorders, it is the ability of all partners in communication to adapt, demonstrate understanding, actively listen, and show a willingness to overcome communication barriers (Borthwick, 2012).
- Patients with chronic aphasia were studied and were treated through intensive model-oriented therapy that tailors treatment towards individual deficits. The patient's language function improved due to training their communication strategies in a role play setting using different situations. (Cherney et al., 2011).
- Two right-hemisphere-damaged deaf signers were studied and asked to give a narrative regarding a sequence of photos. They were also given standard spatial cognition tests. This study showed that ASL is processed in the same area of the brain as verbal language (Hickok et al., 1999).
- A single right-handed woman with primary progressive aphasia was studied. The subject described activities in ASL and text-to-speech and the results were compared. ASL provided a bigger increase in correct CIUs (Pattee et al., 2006).
- One deaf signer was observed while signing by the Department of Psychology and Linguistics from the University of Washington. They used cortical stimulation mapping during the study, and concluded that both hemispheres of the brain are used in the production of American Sign Language (Corina & McBurney, 2001).
- A study was done teaching three apahsic patients how to fingerspell using the American Sign Language alphabet (pictured below). It was found that only one of the patients could not fingerspell due to too much damage in their temporal lobe. (Anderson et al., 1992).



Conclusions

- Depending on the severity of brain damage, American Sign Language can have a positive impact on rehabilitation.
- Many studies had one or few participants, jeopardizing the generalizability of the article.
- In order to determine which rehabilitation technique has the best impact on recovery time, more research connecting aphasic patients and American Sign Language must be administered.

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Further information

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