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Validation of the AAC-Aphasia Categories: Partner Dependent and Independent Communicators

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Document Abstract

The AAC-Aphasia Categories of Communicators is a tool for categorizing interactive communication ability and patterns of AAC strategy use in individuals with severe aphasia. The major delineation in the AAC-Aphasia classification system is between partner-dependent communicators, or those who require cueing or assistance to utilize strategies in addition to or other than speech, and independent communicators, those who can access and utilize strategies without assistance. The current validation asked two groups of raters – speech language pathologists (SLPs) with AAC expertise versus SLPs with limited AAC experience – to classify communicators with aphasia as either partner-dependent or independent. Both groups viewed videotapes, written samples, and communication samples generated by six participants with aphasia. Preliminary results suggest that both expert and naïve SLPs consistently identified communicators with severe aphasia in terms of their membership in either the partner dependent or independent groups.

Research Description

Introduction

Aphasia is a loss of ability to comprehend and use language that results in reduced ability to communicate or understand information, establish and maintain relationships, and fulfill social roles in life (Lasker, Garrett, & Fox, 2007). From a neurogenic perspective, it is caused by a pathology affecting the language-competent half of the brain (Brookshire, 2003). Aphasia ranges widely in severity -- from mild difficulties in conversation to a complete inability to use and understand natural speech.

People with severe aphasia have successfully learned to access, manipulate, and combine graphic symbols (Koul & Harding, 1998; Steele, Weinrich, Wertz, Kleczewska, & Carlson, 1989). In addition, the use of graphic supports and tangible objects has improved the quality of conversation for some people with severe aphasia (Garrett & Huth, 2002; Ho, Weiss, Garrett, & Lloyd, 2005). Some studies have described technology that has been successful in improving conversations and daily interactions for people with aphasia (Lasker & Bedrosian, 2001; Lasker, LaPointe, & Kodras, 2005; McKelvey, Dietz, Hux, Weissling, & Beukelman 2007; van de Sandt-Koenderman, 2004; Waller, Dennis, Brodie,

& Cairns, 1998). Inspection of the participant profiles in these studies revealed that frequently, people with a wide range of internal language competence were recipients of the treatment interventions, thereby making it difficult to draw conclusions about the appropriateness of any particular AAC approach for a particular person with aphasia.

It would be useful for clinicians to describe the communication behaviors of people with aphasia who are most likely to benefit from a particular AAC approach or strategy. However, only recently has there been an effort to systematically select the most appropriate strategies for individual profiles of language and communication abilities.

The authors of this proposal developed the AAC-Aphasia Categories of Communicators (Garrett & Lasker, 2005; available online at <http://aac.unl.edu>) to facilitate the process of systematically matching alternative communication strategies to the competencies of individual communicators with severe aphasia. The system was first introduced in 1992 (Garrett & Beukelman, 1992) and, based on feedback from an informal network of experienced aphasia clinicians, was recently reorganized into two broad tiers: A) Partner Dependent, and B) Independent communicators (Garrett & Beukelman, 2005; Lasker, Garrett, & Fox, 2007). Each of these primary categories is further divided into three subcategories based on behavioral descriptors of individuals with similar profiles. The three subcategories that comprise the Partner Dependent Cluster are: A1) Emerging Communicator, A2) Contextual Choice Communicator, and A3) Transitional Communicator. Three additional subcategories comprise the Independent cluster: B1) Stored Message Communicator, B2) Generative Communicator, and B3) Specific Need Communicator.

Purpose of the Study

The purpose of this study was to empirically validate the Partner Dependent and Independent tiers from the AAC-Aphasia Categories of Communicators. To this end, we are investigating the consistency with which experienced speech-language pathologists categorize participants with aphasia after viewing videotapes of them engaged in a variety of communication tasks, both with and without the assistance of AAC. The primary research question is:

Will experts and naive speech-language pathologists consistently classify communicators with aphasia as either partner-dependent or independent (according to the definitions used to create the AAC-Aphasia framework) when shown videotapes, written samples, and communication samples generated by people with aphasia?

We hypothesized that both experts and speech-language pathologists who are less familiar with AAC would be able to classify communicators with aphasia into the categories of Partner Dependent and Independent given brief instructions, definitions of the categories, and sample materials for each case. We also hypothesized that the percentage of agreement would be greater than 95% when data for the 16 raters and 12 cases were

aggregated.

Methods

Our rater pool of 16 speech-language pathologists consisted of two groups: (1) 8 expert speech-language pathologists with at least 5 years of experience with adult neurogenetics, aphasia, and AAC assessment and intervention, and (2) 8 speech-language pathologists who defined themselves as generalists in adult rehabilitation. This latter group had to have worked with clients with aphasia for at least 3 years but self-identified as having limited knowledge in the area of AAC (i.e., no more than 1 graduate level course in AAC, no specific experience as an AAC clinician, no mentoring in the area).

Six participants with aphasia, whose videotaped interactions, test data, and writing samples comprise the materials used in the classification task, are adults ranging in age from 25 to 85 years. They were diagnosed with aphasia based on neurologic examination, results of brain imaging, and testing with a standardized test of aphasia (e.g., score of < 93.8 on the Western Aphasia Battery (Kertesz, 1982, 2008). All participants were also rated by the principal investigators as meeting the criteria for a severe communication disorder according to a three-part rating scale developed by Garrett and Seale (2006). The individuals were also classified, a priori, into the categories of Partner Dependent and Independent by the investigators who served as the gold standard for this initial round of standardization testing; 3 samples were designated as partner dependent and 3 as independent. The investigators made a purposeful effort to select samples that represented a range of abilities within each of these categories.

Participants reviewed our existing definitions of partner-dependent and independent communicators. They then viewed 2 sets of sample videos and case materials and participated in a practice categorization task involving medicated discussion with the investigators. Each rater then received the 6, randomly-ordered case studies that include the following information: medical information related to diagnosis, needs assessment results, test scores, written samples, videotapes of conversation (supported and unsupported), specific subtests of the Multimodal Communication Screening Test for People with Aphasia, and AAC systems trials. After reviewing both the definitions and case study materials, participants completed forms classifying communicators as either partner-dependent or independent. Rating revisions were allowed as the task progressed, and raters were also allowed to re-watch video segments as often as needed to make a valid judgment.

Percentages of agreement, range, and standard deviations were calculated for each of the raters and rating tasks. Nonparametric statistics were employed to determine if ratings were consistent enough within each of the two divisions to achieve significance. Post hoc focus group interviews further aided the investigators to identify critical behaviors that aided viewers to discriminate between the two groups.

Summary and Conclusions

Preliminary data indicated that both experienced speech-language pathologists and those with minimal AAC experience consistently identified communicators with severe aphasia in terms of their membership in either the partner dependent or independent groups. This initial validation study will be followed by similar investigations into raters' ability to differentiate between the 6 subcategories of communicators on the AAC-Aphasia Categories of Communicators checklist. Clinically, this tool may provide a simple means of guiding interventionists into selecting potentially useful AAC strategies for people with aphasia who cannot communicate via natural language modalities alone.

APPENDIX A - COMPONENTS OF CASE PROFILES FOR CATEGORIZATION TASK

1. Read the (Categorical Assessment form?) document - describes types –category chart – checklist
2. Personal Information on Client
3. Aphasia Quotient, MCST-A Score Sheet, Needs Assessment Info, Written Sample by Client
4. MCST-A [serve as a gift]
5. Clip of Single Hit Message on One Page
6. Clip of Single Hit Message Requiring Page Turn
7. 2-3 symbol Hit
8. Partner Dependent Strategy
9. Independent Strategy Trial

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