

## Communication Partner Training in Aphasia: A Critical Review

An extensive literature exists regarding treatment approaches for aphasia, with general consensus that individuals with aphasia benefit to some extent from language treatment. Although several rigorous systematic reviews of the aphasia treatment literature have been undertaken (Greener et al, 2000; Beeson & Robey, 2007; Robey, 1998; Cherney et al., 2008), “social approaches” to aphasia management have received little attention to date. Social approaches are *explicitly* designed to improve communication, life participation and/or personal well-being. The most common form of treatment within the “social approach” is “communication partner training” (Simmons-Mackie et al., 2008). This presentation describes the procedures and results of a systematic review of the treatment research literature on communication partner training in aphasia.

### Methodology

#### The Literature Search

For purposes of the systematic review, communication partner training was defined as an intervention that provides training to a person or persons *other than* the person with aphasia, with the intent of improving communication, participation and/or well-being of the person with aphasia. Partners were defined as individuals in the environment with whom the person with aphasia might interact, including, but not limited to, family members, friends, volunteers or health care providers. In order to “cast a wide net” in the literature search, intervention was defined broadly to include communication skills training as well as any communication education program or staff training/in-service directed at communication partners. Etiology of aphasia was not restricted; however, participants required a diagnosis of aphasia to be included in the review.

Questions were formulated addressing the interventions and outcomes of interest. Each question addressed the target population (e.g., the person with aphasia, the communication partner, the communication dyad) and the outcome of interest (e.g., language impairment, communication activity/participation, psychosocial adjustment/identity). See Table 1 for the 17 questions that were formulated.

These questions assisted in directing the literature search. A list of key words/search terms were identified and 13 different databases were searched by a research librarian. The search was limited to articles published in English between 1975 and April, 2008. A total of 3519 articles were identified in the initial search. These were narrowed by the research librarian and one member of the review panel by eliminating obvious duplicates, and those that were not written in English, did not contain original data, were not peer reviewed or did not address one or more of the clinical questions. Articles were not excluded because of type of research design since it was expected that many studies would be qualitative or single subject designs.

The 5 member review team then collaboratively categorized the remaining 89 articles according to their relevance to the study questions. A total of 36 articles met the relevancy criteria and were deemed appropriate for full review (i.e., a descriptive review, a quality review, and a review for strength of the evidence).

#### Review for Quality of Research

Three sets of quality criteria were used for the systematic review, based on study design. These included: 1) the **PEDro scale** for rating group studies on 10 well defined quality criteria (<http://www.pedro.fhs.usyd.edu.au>); 2) the **SCED scale** (Tate, McDonald, Perdices, Togher, Schultz, Savage, 2008) for rating single subject experimental designs across 11 quality criteria; and 3) a **Review of Qualitative Research (RQR)** developed by the authors to rate qualitative studies across 14 quality criteria. In addition, two quality criteria were added to all three scales in order to address treatment fidelity and treatment replicability, two factors considered important to research in communication disorders treatment, but not originally included in the scales.

Each of the 36 articles was randomly assigned to two team members who conducted the review blind to one another's results. The review proceeded as follows: 1) reviewers independently identified the appropriate review form (e.g. PEDro, SCED, RQR); 2) reviewers rated articles using the defined criteria; 3) results were collated and discrepancies were returned to reviewers for reconsideration and, if necessary, a third reviewer was consulted to arrive at a final "quality score" for each article.

During this process, 8 articles were further rejected from the review for failure to meet relevancy criteria. In addition, 8 articles were identified as case studies that could not be rated for quality on the designated rating scales. This resulted in a corpus of 20 studies that were reviewed for quality.

### **Descriptive Review**

Raters independently completed a "descriptive" review of assigned articles that included identifying the clinical questions addressed, partner characteristics, person with aphasia characteristics, treatment characteristics, outcome measures used and results. In this way, patterns could be identified relative to subjects, treatments and outcomes.

### **Review for Strength of Evidence**

Research articles were classified using the American Academy of Neurology (AAN) classification of the strength of evidence (Class I indicating strongest and Class IV indicating weakest evidence).

## **Results and Discussion**

### **Quality Review**

Identification of research designs resulted in review of 8 group studies varying from randomized controlled trials to uncontrolled pre-post studies, 7 single subject experimental designs and 5 qualitative research designs. PEDro, SCED and RQR ratings resulted in a wide range in quality scores. For example, PEDro ratings ranged from scores of 1/10 to 7/10; SCED scores ranged from 4/11 to 10/11, while RQR scores ranged from 10/14 to 13/14.

### **Descriptive Review**

A variety of treatment approaches were identified, such as individual training of communication partners, intervention directed towards the dyads, group communication skills training of partners, educational approaches (e.g., lectures) and counseling approaches.

### **Strength of Evidence**

There was a wide range in the strength of the research evidence. A preponderance of the research in partner training for aphasia falls in the weaker AAN evidence strength classes (see table 1). However, 3 studies met the criteria for Class I research. A weakness of the AAN classification is that it does not take into account the quality of studies within each class.

### **Clinical Questions and Research Implications**

Of the 17 research questions listed in Table 1, 10 of them were addressed by data from at least one study. The majority of studies demonstrated positive outcomes with the most positive findings related to "communication related" outcomes, both in individuals with aphasia and in their partners. Partner training also led to some improvements in psychosocial outcomes. Fewer positive changes were reported for language impairment measures in individuals with aphasia, however. No data were available to answer any of the 5 questions related to acute aphasia. In addition, current studies have not addressed the influence of partner training on quality of life in those with chronic aphasia or the influence on the relationship of the dyad when one person has aphasia. These are areas that warrant future research.

## References

- Beeson, P. M. & Robey, R. R. (2007) ANCDs Aphasia Treatment Website. <http://www.u.arizona.edu/~pelagie/ancds/index.html> Accessed 1/16/09
- Cherney, L. R., Patterson, J., Raymer, A., Frymark, T., & Schooling, T. (2008). Evidence-Based Systematic Review: Effects of Intensity of Treatment and Constraint-Induced Language Therapy for Individuals with Stroke-Induced Aphasia. Journal of Speech, Language, and Hearing Research, 51, 1282-1299.
- Greener, J., Enderby, P., & Whurr R. (2000). Speech and language therapy for aphasia following stroke. Cochrane Database Systematic Review, CD000425.
- PEDro scale. <http://www.pedro.fhs.usyd.edu.au>. Accessed 1/16/09.
- Robey, R. R. (1998). A meta-analysis of clinical outcomes in the treatment of aphasia. Journal of Speech Language Hearing Research, 41, 172-187.
- Simmons-Mackie, N., Kagan, A., & Conklin, J. (2008). Reviewing evidence for social approaches to aphasia intervention: An application of A-FROM. Paper presented at the annual Clinical Aphasiology Conference, Jackson Hole, WY.
- Tate, R. L., McDonald, S., Perdices, M., Togher, L., Schultz, R., & Savage, S. (2008). Rating the methodological quality of single-subject designs and *n*-of-1 trials: Introducing the Single-Case Experimental Design (SCED) Scale. Neuropsychological Rehabilitation, 18(4), 385 – 401.

Table 1: Clinical questions addressed in the systematic review.

Questions Regarding Affects on Person(s) with Chronic Aphasia

1. For chronic aphasia, what is the influence of communication partner training on the language impairment of persons with aphasia?
2. For chronic aphasia, what is the influence of communication partner training on measures of communication activity/participation for persons with aphasia?
3. For chronic aphasia, what is the influence of communication partner training on quality of life for persons with aphasia?
4. For chronic aphasia, what is the influence of communication partner training on psychosocial adjustment/identity for persons with aphasia?
5. For chronic aphasia, what treatment outcomes are maintained following partner communication training?

Questions Regarding Affects on Person(s) with Acute Aphasia

6. For acute aphasia, what is the influence of communication partner training on the language impairment of persons with aphasia?
7. For acute aphasia, what is the influence of communication partner training on measures of communication activity/participation for persons with aphasia?
8. For acute aphasia, what is the influence of communication partner training on quality of life for persons with aphasia?
9. For acute aphasia, what is the influence of communication partner training on psychosocial adjustment/identity for persons with aphasia?
10. For acute aphasia, what treatment outcomes are maintained following partner communication training?

Questions Regarding Affects on Communication Partner(s) of Person with Aphasia

11. For communication partners of people with aphasia, what is the influence of communication partner training on partner communication skills?
12. For communication partners of people with aphasia, what is the influence of communication partner training on activity/participation for partners?
13. For communication partners of people with aphasia, what is the influence of communication partner training on psychosocial adjustment/identity for partners?
14. For communication partners of people with aphasia, what is the influence of communication partner training on quality of life for partners?
15. For communication partners of people with aphasia, what treatment outcomes are maintained following partner communication training?

Questions Regarding Affects on the Dyad(s)

16. For chronic/acute aphasia, what is the influence of communication partner training on communication in the dyad in which one person has aphasia?
17. What is the influence of communication partner training on the relationship when one person has aphasia?

Table 2. Number of research articles within each American Academy of Neurology Classification of Evidence Strength

	AAN Class I	AAN Class II	AAN Class III	AAN Class IV	TOTAL
PEDro	3		3	2	8
SCED			2	5	7
RQR				5	5
<b>TOTAL</b>	<b>3</b>		<b>5</b>	<b>12</b>	<b>20</b>