Assessing the Long-Term Impact of Aphasia Center Participation

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Thirty-three comprehensive Aphasia Centers in North America offering a range of group experiences:
- Conversation
- Technology
- Outreach Initiatives

Grounded in group interaction and intensive in terms of participation time

(Simmons-Mackie & Holland, 2011)
Five Core Components of LPAA Framework

(LPAA Project Group, 2001)

- The explicit goal is enhancement of life participation
- All those affected by aphasia are entitled to service
- Both personal and environmental factors are targets of assessment and intervention
- Success is measured via documented life enhancement changes
- Emphasis is placed on availability of services as needed at all stages of life with aphasia
LPAA Interventions

- Aphasia group treatment
- Augmentative and alternative communication
- Supportive Conversation™ for people with aphasia
- Self-advocacy training
- Couples and family training
Aphasia Group Treatment Studies Have Shown….

- Increased initiation of conversation and exchanging information (Elman & Bernstein-Ellis, 1999)
- Increased social participation in conversation when trained partners are available (Kagan, 1998)
- Increased social participation and sense of social connectedness (Vickers, 2010)
- Improvement on quality of life measures (Van der Gaag, et. al, 2005)
Potential Benefits of Group Treatment

(Elman, 2007)

Groups may:
- facilitate the improvisational nature of language
- provide a supportive environment with others who share similar issues and feelings
- directly or indirectly improve psychosocial functioning
- provide a vehicle for PWA to work on establishing a new and positive identity
- improve linguistic abilities
What is the long-term impact of participation in programming provided by two community-based centers?
Participants

Alder Aphasia Center
- Maywood, New Jersey
- Established in 2003
- Serves ~80 people with aphasia

Snyder Center for Aphasia Life Enhancement
- Baltimore, Maryland
- Established in 2008
- Serves ~40 people with aphasia
Both Centers…

- Operate on a 15-week trimester schedule allowing members (PWA) to attend twice a week for 8-10 hours
- Allow members to choose the activities in which they wish to participate
- Offer activity-based groups consistent with the LPAA
- Utilize technology and aphasia software programs to facilitate communication
- Utilize SLPs, TR Specialists, and trained peers/volunteers
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tr>
<td>10:00-10:20</td>
<td>Meet &amp; Greet</td>
<td>10:30-11:25</td>
<td>Body Harmony Yoga</td>
<td>11:30-12:15</td>
<td>Knitting</td>
<td>12:15</td>
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<td>11:30-12:15</td>
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<td>Music</td>
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<td>Strategies</td>
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VAST™ Apps

Lingraphica®

Pictello
Proloquo2Go
SmallTalk
SpeakinMotion
Speak it!
Using Technology in Community

SentenceShaper screen
Snippets in the Sentence Row play these segments:
"we took a trip", "to", "Israel", "in", "2003"
Communication Activities of Daily Living (CADL-2; Holland, Frattali & Fromm, 1999)

Western Aphasia Battery-Revised (WAB-R; Kertesz, 2007)

Communicative Effectiveness Index (CETI; Lomas et al. 1989)
Psychosocial Measures

- ASHA Quality of Communication Life Scale (ASHA QCL; Paul et al., 2004)
- Communication Confidence Rating Scale for Aphasia (RIC-CCRSA; Babbit & Cherney, 2010)
- Burden of Stroke Scale (BOSS; Doyle, 2004)
  - Communication Scale
  - Positive Emotion Scale
  - Negative Emotion Scale
Communication Confidence Rating Scale for Aphasia (CCRSA)

1. How confident are you about your ability to talk with people?
   - Not Confident
   - Moderately Confident
   - Very Confident

2. How confident are you about your ability to stay in touch with family and friends?
   - Not Confident
   - Moderately Confident
   - Very Confident

3. How confident are you about your ability to follow news and sports on TV?
   - Not Confident
   - Moderately Confident
   - Very Confident

4. How confident are you about your ability to follow movies on TV or in a theater?
   - Not Confident
   - Moderately Confident
   - Very Confident

5. How confident are you about your ability to speak on the telephone?
   - Not Confident
   - Moderately Confident
   - Very Confident
Subjects

- Members with aphasia resulting from stroke or TBI and who attend two days per week
- Initial testing occurred within six weeks of member starting the center
- Members were retested after one year of center participation
- N=23 (CADL-2, ASHA QCL)
- N=15 (WAB-R)
- N=11 (BOSS, RIC-CCRSA)
### Results - Language/Communication Measures (CADL-2 and WAB-R)

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<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean Difference</th>
<th>Std. Deviation</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
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<tr>
<td>CADL-2*</td>
<td>23</td>
<td>7.57</td>
<td>9.37</td>
<td>3.87</td>
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<td>WAB-R</td>
<td>15</td>
<td>0.29</td>
<td>5.95</td>
<td>0.19</td>
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<td>0.859</td>
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## Results - Psychosocial Measures (ASHA-QCL)

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<tbody>
<tr>
<td>Overall*</td>
<td>23</td>
<td>0.403</td>
<td>0.69</td>
<td>2.76</td>
<td>22</td>
<td>0.011</td>
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<tr>
<td>Socialization/Activities Domain*</td>
<td>23</td>
<td>0.350</td>
<td>0.741</td>
<td>2.27</td>
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<tr>
<td>Confidence/Self-Concept Domain*</td>
<td>23</td>
<td>0.439</td>
<td>0.916</td>
<td>2.30</td>
<td>22</td>
<td>0.031</td>
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<td>Roles and Responsibilities Domain*</td>
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Psychosocial Measures (BOSS)

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<th>BOSS</th>
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<tr>
<td>Communication Difficulty</td>
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<td>17.728</td>
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<tr>
<td>Communication Associated Distress</td>
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<td>21.789</td>
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<td>0.324</td>
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<tr>
<td>Negative Emotions</td>
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<td>23.045</td>
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<td>Positive Emotions</td>
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<td>-0.050</td>
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<td>0.961</td>
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Psychosocial Measures (CCRSA)

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<th>RIC-CCRSA</th>
<th>N</th>
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<th>df</th>
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<tbody>
<tr>
<td>Overall</td>
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<td>6.772</td>
<td>12.449</td>
<td>1.804</td>
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<td>0.101</td>
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</table>
Results

- Results generally demonstrate statistically significant changes in functional communication, as measured by the CADL-2 but not on the impairment measure (WAB).

- Results demonstrate statistically significant changes in quality of life, as measured by the ASHA QCL.

- Several measures in the battery failed to demonstrate statistically significant changes largely due to small N and high variability.
Discussion

- Findings suggest several components included in the assessment battery capture some of the benefits of long-term center participation.
- Some or all of the measures used may not be sensitive to the impact of long-term center participation but a larger N is needed.
- Total administration time of current battery is not prohibitive.
Discussion continued

- Battery is appropriate for various aphasia types and severity levels
- Battery reflects a range of benefits across different centers’ activities and approaches
- Battery can be tailored to meet individual center’s needs
Future Studies…

- Should include larger sample sizes

- Should examine individual differences that may account for varying levels of demonstrated benefits

- This study illustrates the difficulty of obtaining longitudinal data in this kind of setting

- Future collaboration among centers is needed to determine the usefulness of these measures across multiple sites and to identify program components that influence these improvements
Thank you!

Where every voice is heard!