EVIDENCE-BASED PRACTICE IN APHASIA REHABILITATION

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Purpose
- To review evidence regarding aphasia interventions for
  - Verbal expression
  - Written expression
  - Reading Comprehension
  - Auditory Comprehension

For Monday Morning...
- You will have the following in your bag of tricks:
  - 2 verbal expression intervention techniques
  - 1 written expression intervention technique
  - 1 reading comprehension intervention technique
  - 2 auditory comprehension intervention techniques
  - 1 idea to facilitate personalization of each intervention
Organization
- Overview
- Verbal Expression -- Jennifer
- Written Expression -- Aimee
- Reading Comprehension -- Aimee
- Auditory Comprehension -- Julie
- Summary
- Q & A

Verbal Expression

ANOMIA
- Discourse?
- Confrontation/generative naming tasks?
Error Forms

- Semantic in nature
- Phonological in nature

Target Words

- Grammatical Categories
- Semantic Categories
- Frequency

CUING HIERARCHY

- It's clothing
- You can button it
- It starts with /bl/
- It sounds like “mouse”
- Written word: “Here is the word”. Blouse “say blouse”

(Raymer, 2005; Hills, 2002)

(St. Johnbaugh, 1997; Raymer et al., 1993)
Phonological Treatments

- Semantic Category Rhyme Therapy (SCRT)
- BIKE → VEHICLE → HIKE

(Spencer et al., 2000)

Semantic Treatments

- Semantic Feature Analysis (SFA)

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<thead>
<tr>
<th>GROUP</th>
<th>USE</th>
<th>ACTION</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>TARGET PICTURE</td>
<td>PROPERTIES</td>
<td>LOCATION</td>
</tr>
</tbody>
</table>

(Boyle, 2001; Boyle, 2004; Coelho, McHugh, & Boyle, 2004; Kiran, & Johnson, 2008; Kiran, 2008; Rider, Wright, Marshall & Page, 2008)

Personalization of Techniques

<table>
<thead>
<tr>
<th>WHO</th>
<th>WHAT</th>
<th>WHEN</th>
</tr>
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(Adapted from Boyle & Coelho, 1995)
SFA: Limitations

- Word level data
- Tx Goal = discourse

Anagram, Copy, & Recall Treatment (ACRT/CART)

- Repeated copying of target words in response to pictured items
  - Confrontation spelling task

- If incorrect → ANAGRAM PUZZLE → COPY 3 times
  - Scrabble tiles
  - Clinician cues, if necessary

- Homework program
  - Consider ‘errorless learning’ principles

(Beeson, 1999; Beeson, Hirsch, & Rewa, 2002; Beeson, Rising, & Volk, 2003; Dojela & Beeson, 2005)
Target: SLEEP
- CUE (SEE RIGHT)
- INCORRECT: Anagram**: P L S E E
- COPY 3 times
- INCORRECT: Anagram + Foils**: P E B L S E F
- COPY 3 times

(Beeson, 1999; Beeson, Hirshc., & Reweaga, 2002; Beeson, Rising, & Volk, 2003; Orjada & Beeson, 2005)

“Sleep. Can you write sleep.”
SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP

1 copy

2 recall
“Sleep. Can you write sleep.”
SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP SLEEP

- REMOVE written work
- RECALL
- INCORRECT: present written model of the word.

(Beeson, 1999; Beeson, Hirshc., & Reweaga, 2002; Beeson, Rising, & Volk, 2003; Orjada & Beeson, 2005)

Homework
- Check homework for accuracy each session
- Daily practice packet with picture and model
- Mastered words
- Copy words 20 times
- Cover & test

(Beeson, Hirshc., & Reweaga, 2002; Beeson, Rising, & Volk, 2003; Orjada & Beeson, 2005)
Reading “Routes”
1. LETTER RECOGNITION
   SEMANTIC ROUTE
   2. GRAPHEME LEXICON
   3. SEMANTICS
   4. PHONOLOGY
   5. BUFFER
   → read aloud

ORLA: 4 stages
- Repeated oral reading
  - Chorally → independently
- Stages at graded reading levels:
  - Sentences
    - Level 1: Simple 3-5 words; 1st grade
    - Level 2: 8-12 words; 3rd grade
  - Paragraphs
    - Level 3: 15-30 words; 6th grade
    - Level 4: 50-100 words; 6th grade

(Cherney, Merbitz, & Grip, 1985; Cherney, 1995, 2004, 2007)
Measuring Reading Levels in Microsoft Word®

- SLP READS TARGET
- CHORAL READING → PT POINTS TO WORDS
  - REPEAT
- SLP READ WORD FOR PT TO I.D.
- SLP POINTS TO WORD → PT READS
Comprehension Approaches
- ‘Bottom Up’
- ‘Top Down’

1. Context based approach
2. Computer Applications

Context Based Approach

**When:**
- Early
- Patients’ deficits are severe

**Premise:**
- Use a conversational context to facilitate comprehension
- Uses a ‘Top Down’ Model

(Marshall, 2008)
Context Based Approach

- **3 steps**

1) Identify and manipulate linguistic and temporal variables

2) Encourage the patient to take responsibility

3) Instruct family and caregivers

Context Based Approach

- Consider the type of context presented
  - Auditory
  - Visual

  - **Context** helps convey the main idea of a message through a top-down method

Context Based Approach

<table>
<thead>
<tr>
<th>Visual Stimuli</th>
<th>Auditory Stimuli</th>
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</thead>
<tbody>
<tr>
<td>• Dimensionality</td>
<td>• Syntax</td>
</tr>
<tr>
<td>• Size</td>
<td>• Stress on Key Words</td>
</tr>
<tr>
<td>• Color</td>
<td>• Slowing Rate of Speech</td>
</tr>
<tr>
<td>• Context</td>
<td>• Use Scripts</td>
</tr>
<tr>
<td>• Size and Form of written materials</td>
<td></td>
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<tr>
<td>• “Aphasia Friendly”</td>
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(Coelho, Sinott & Duffy, 2008 & Brennan, Worrall & McKenna, 2005)
Context Based Approach and AAC

- Low-tech AAC Methods
  - Augmented Comprehension techniques
    - Writing Key Words
    - Yes / No
    - Drawing / Picture Supports
    - Gestures

(Boekel et al., Garrett & Yorkston, 2007 & Garrett & Huth, 2002)

Computer Applications

- What is it?
- Who benefits?
  - Mild-mod impairments in auditory comprehension
  - Individuals who can Self-Monitor

(Katz, 2008)

Computer Applications

- Parrot Software©
  - http://www.parrotsoftware.com/
- Bungalow©
  - http://www.bungalowsoftware.com/

How do these programs target auditory comprehension?
  - Limitations

(Parrot Software© 2007-2009; Bungalow Software Inc.© 1995-2010)
Computer Applications

- Wii™ - Wii™ habilitation
- How do these games target auditory comprehension?

(Wii™ - habilitation & Aphasia Groups, 2009)

Summary

- Errors: semantic or phonological?
  - Helps guide treatment
- Speaking
  - SFA, SCRT
- Writing
  - CART/ACRT
- Reading
  - ORLA

- Listening
  - Wii©
- Make it personally relevant.
  - Pictures
  - Life goals
- Instruct communication partners

??QUESTIONS??

References


