The Use of LSVT for Dysarthrias other than Parkinson’s Disease

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Overview of the Lee Silverman Voice Treatment (LSVT)

- Developed for Parkinson’s Disease (PD)
- “Think Loud”
- Works on increasing volume and intonation, speaker “calibration”, and reducing hoarse vocal quality through phonation exercises
- Intense Program
- Shown to increase intelligibility
- Generalized effects across motor symptoms
- Effects found to last up to 2 years
- studies using LSVT with neurologic disorders other than PD are needed as the treatment program gains popularity
LSVT Effects on Traumatic Brain Injury
Mixed Hypokinetic- Spastic Dysarthria

- Case study of a 23 year old male
  - **Combination Treatment**
    - combination of LSVT and PT exercises that targeted the upper chest wall due to abnormal respiratory function during speech
  - **Results:**
    - Sound pressure level (SPL) and loudness increased substantially to a normal conversational level
    - resting & speech breathing improvements
    - Sentence intelligibility did not change after LSVT alone but increased from 71% to 89% after Combination Treatment
    - intelligibility improved to a functional level
  - **Conclusion:**
    - Combination Treatment, including LSVT, respiration treatment, and physical therapy, is recommended for individuals with mixed hypokinetic-spastic dysarthria regardless of etiology.

(Solomon, McKee & Garcia-Barry, 2001)
LSVT Effects on Traumatic Brain Injury
Moderate Hypokinetic Dysarthria with Mild Spastic Features

- Case study of a 58 year old male
- **Combination Treatment**
  - nonspeech and speech breathing Breathing-for-Speech Treatment (BST)
  - LSVT treatment
- **Results**
  - score on Voice Handicap Index (VHI) decreased from substantial handicap to minimal disability after LSVT
  - increased loudness to a conversational level
  - improved speech breathing
  - consistently improved speech intelligibility
- **Conclusion**
  - BST and LSVT is recommended for individuals with hypokinetic-spastic dysarthria

(Solomon,Makashay,Kessler & Sullivan, 2004)
Effects on Ataxic Dysarthria

- Case Study of a 48 year old woman
- Results:
  - Perceptual Ratings of improved articulatory precision and intonation
  - Decreased Rate, Increased Intelligibility
  - Acoustic Measures all increased beyond 1 SD
  - Increased Level of Employer Satisfaction
  - Positive Self-Assessment Outcomes

## Treatment of Dysarthria following TBI and Stroke

Wenke, Theodoros, & Cornwell (2008)

<table>
<thead>
<tr>
<th>Participant</th>
<th>Etiology</th>
<th>Dysarthria Type</th>
<th>Severity</th>
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<tbody>
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<td>Flaccid-Spastic</td>
<td>Moderate</td>
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<tr>
<td>2</td>
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<tr>
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<td>10</td>
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</table>
Results of TBI and Stroke Study

- **Perceptual Analysis**
  - Increased word and sentence intelligibility (AIDS) at post-treatment
    - Changes not maintained at Follow-Up
  - Increased loudness and articulatory precision
- **Acoustic Analysis**
  - Increased loudness
- **Self Report/ Communication Partner Report**
  - Reduced slurring of speech
  - Increased intonation
  - Partners: Increased understanding, conversation initiation, and overall communication rating.

Wenke, Theodoros, & Cornwell (2008)
Conclusion

- Although developed for the PD population, LSVT appears to be efficacious in treating other types of dysarthria as well.
- More research is needed to understand the efficacy in specific populations.
Works Cited


