Don’t Judge a Book by its Cover:
Figurative Language Abilities in Individuals with Hearing Impairment

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Challenges of Hearing Impairment

- Communication areas at risk
  - Semantics
  - Morphology
  - Phonology
  - Syntax

- Deficits/Delays in above aspects can create problems with development of metalinguistic abilities

Qualls & Harris (2003)
Current Research

- Hearing impairment (HI) = Greater risk for language impairment (LI)
- Vocabulary deficits $\rightarrow$ metalinguistic difficulties
- Degree of language impairment is positively correlated with degree of hearing loss
- No correlation between lexical knowledge and levels of hearing loss
- No correlation between degree of loss and LI
- Two distinct groups
  - Those with HI and LI
  - Those with HI and typical language abilities

Wake, Hughes, Poulakis, Collins, & Rickards (2004); Berent, Kelly & Porter (2008); Jerger, Damian, Tye-Murray, Dougherty, Mehta, & Spence (2006); Delage & Tuller (2007); Blamey, Sarant, Paatsch, Barry, Bow, Wales, Wright, Psarros, Rattigan, & Tooher (2001); Paatsch, Blamey & Sarant (2004); Gilbertson & Kamhi (1995); Hawker, Ramirez-Inscocoe, Bishop, Twomey, O’Donoghue, & Moore (2008); Rittenhouse & Kenyon (1991); Wolgemuth, Kamhi, & Lee (1998)
Research Question & Hypothesis

How will individuals with hearing impairment perform on a metalinguistic task featuring comprehension of idiomatic expressions?

Individuals with hearing impairment will, with amplification or cochlear implantation, demonstrate typical metalinguistic abilities, specifically on comprehension of idioms task.
Idioms

- Idioms are a form of figurative language
- Occurrence
  - Spoken and written communication
  - Jokes/riddles
  - Classroom communication
  - Books/written materials
- Idioms are the most widely used of all figurative language types
- Idioms are used 4.09 times per minute
- Comprehension of idioms begins in early childhood
  - Continues throughout adulthood
- Repeated exposure to idioms leads to learning them
- Influenced by cultural experience

Method

- Case Studies
- Single-instrument with multiple items
- Participant criteria
  - Inclusionary
    - congenital hearing impairment
    - confirmed through audiological evaluation
    - amplification or implantation
    - MAE as their primary language
  - Exclusionary
    - an identified language impairment
<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Primary Language</th>
<th>Degree of Loss</th>
<th>Education</th>
<th>Amplification</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>59;0</td>
<td>MAE</td>
<td>Severe-profound</td>
<td>High School graduate</td>
<td>Unilateral hearing aid</td>
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<tr>
<td>B</td>
<td>23;11</td>
<td>MAE</td>
<td>Mild-moderate-mild</td>
<td>College graduate</td>
<td>Bilateral hearing aids</td>
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<tr>
<td>C</td>
<td>31;5</td>
<td>MAE/ASL</td>
<td>Severe-profound</td>
<td>Some college</td>
<td>Unilateral hearing aid</td>
</tr>
<tr>
<td>D</td>
<td>41;7</td>
<td>MAE/ASL</td>
<td>Severe-profound</td>
<td>College Graduate</td>
<td>Bilateral hearing aids</td>
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</tbody>
</table>
Procedures

1. Approved IRB
2. Consent form
3. Case history
4. Script
5. Administration of vocabulary assessments
   - Expressive Vocabulary Test-2\textsuperscript{nd} Edition (EVT-2)
   - Peabody Picture Vocabulary Test-4\textsuperscript{th} Edition (PPVT-4)
   - Ten minute break
6. Idiom Task: Designed to assess comprehension using three tasks
   - Multiple choice
   - Matching
   - Fill-In with multiple choices
Multiple Choice Task

What does the following expression mean:

1. “He didn’t bat an eye”?
   a) he didn’t show surprise
   b) he wasn’t happy
   c) he couldn’t see

2. “A dime a dozen”?
   a) common and easy to get
   b) rare and expensive
   c) a baker’s dozen

3. “A piece of cake”?
   a) to include cake with a meal
   b) a sweet scenario
   c) accomplishing a task easily
Matching Task

<table>
<thead>
<tr>
<th>Meaning</th>
<th>Idiom</th>
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<tbody>
<tr>
<td>1. to do whatever it takes to help</td>
<td>___ to run like clockwork</td>
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<tr>
<td>2. to be extremely happy</td>
<td>___ to grin and bear it</td>
</tr>
<tr>
<td>3. to endure something unpleasant</td>
<td>___ to bend over backwards</td>
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<tr>
<td>4. to include everything</td>
<td>___ to order the works</td>
</tr>
<tr>
<td>5. to happen privately</td>
<td>___ to walk on air</td>
</tr>
<tr>
<td>6. to happen smoothly</td>
<td>___ to be behind the scenes</td>
</tr>
</tbody>
</table>
Fill in the Blank Task

Please circle the answer that best completes the idiom:

I’m glad we agree, and we’re on the same _____.
A. team  B. page  C. road

He loves his daughter; she is the _____ of his eye.
A. apple  B. iris  C. light

Since it was her first offense, the judge gave her a slap on the _____.
A. hand  B. foot  C. wrist
Test Results

Scores

EVT (% tile)  PPVT (% tile)  Idiom Task (%)

Participants

Participant A  Participant B  Participant C  Participant D
Discussion

- Idiom comprehension is a receptive task—metalinguistic ability is not dependent upon expressive language

- EVT is not an accurate predictor of idiom comprehension; PPVT is a better predictor

- Speech-language intervention for people with hearing impairment should focus on figurative language and metalinguistic awareness
Comparisons of PPVT and Idiom Task

Participants

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<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<tbody>
<tr>
<td>PPVT (% tile)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Idiom Task (%)</td>
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Limitations & Direction of Future Research

- Small sample size
- Participant criteria should have controlled for:
  - First language
  - Education range
  - Age range
- No control group of typically hearing peers
- Emphasis on lexical knowledge, not exposure to idioms
- Examine exposure to idioms in conjunction with lexical knowledge
- Examine other aspects of language
  - Group design
  - Hearing impaired group
  - Age-matched hearing group
References


