Vague Language Usage in Adults with Severe Traumatic Brain Injury

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Introduction

• Traumatic brain injury (TBI) can cause damage to language centers in brain leading to issues with pragmatic language, including vague language use.1,2
• Pragmatic language is governed by Grice’s Cooperative Principles3
• Currently, vague language is assessed with gestalt ratings of a full language sample as one of several rated items
• People with TBI have more:4,5,6
  - Vague lexical selection
  - Word-finding difficulties
  - Provision of insufficient information
  - (At times) cohesion challenges in discourse
• Vague language has rarely been assessed at the utterance level in people with severe TBI
• Aims: To identify differences in vague language use in adults with & without TBI

Methods

Step 1: Narrative transcripts7,8
• Story retell task
• Transcription
Step 2: Coding
• Training
• Coding with scale
• Refining manual

Examples of Vague and Precise Language

Example of Vague Language

He went to the place
Amount: He
Type: the place
Error in vague language due to an insufficient amount or the wrong type of information2

Example of Precise Language

The prince went to Cinderella’s house
Amount: The Prince
Type: Cinderella’s house
No errors or variations in language2

Vague Language Use (VAGUE) Scale

The VAGUE scale was used to rate vagueness at the utterance level. Note: an additional code of “B” was applied to the following conditions:
• Unintelligible utterance
• Trailings off or abandoned utterance
• Exclamations or expressions

<table>
<thead>
<tr>
<th>VAGUE</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type and amount of information insufficient, vague, and hard to understand which leads to an insignificant utterance.</td>
<td></td>
</tr>
<tr>
<td>Relevance is unclear.</td>
<td></td>
</tr>
<tr>
<td>Message is hard to understand</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Type and amount of information insufficient and /or vague but the message contributes to the story.</td>
<td></td>
</tr>
<tr>
<td>Contains one vague word.</td>
<td></td>
</tr>
<tr>
<td>Contains two vague pronouns (or one inaccurate pronoun)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Type and amount of information is normal or a slight deviation from normal. The type and amount of information is sufficient.</td>
<td></td>
</tr>
<tr>
<td>Contains one vague pronoun.</td>
<td></td>
</tr>
<tr>
<td>No issues or the message is slightly vague.</td>
<td></td>
</tr>
<tr>
<td>Contributes to the story</td>
<td></td>
</tr>
</tbody>
</table>

Mean Ranks for Average Vagueness Scores

<table>
<thead>
<tr>
<th>TBI (n=46)</th>
<th>NBI (n=46)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (SD)</td>
<td>Range</td>
</tr>
<tr>
<td>Age (years)*</td>
<td>36.28 (11.43)</td>
</tr>
<tr>
<td>Education (years)</td>
<td>13.67 (3.08)</td>
</tr>
</tbody>
</table>

Number of Participants Below 1 and 2 Standard Deviations (SD) in Each Group

<table>
<thead>
<tr>
<th>TBI</th>
<th>NBI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 SD below mean</td>
<td>27</td>
</tr>
<tr>
<td>2 SD below mean</td>
<td>14</td>
</tr>
</tbody>
</table>

Chi-squared tests revealed significant between-group differences in the number of participants who scored at least 1SD below the mean, (χ²(1, N=92) = 20.84, p < .001), and at least 2 SD below the mean (χ²(1, N=92) = 10.895, p < .001)

Mean-Whitney U test revealed significant between-group differences in mean ranks, U = 531, p < .001

Results

Future Directions

• The TBI group scored significantly lower on the VAGUE scale, indicating more use of vague language
• A significantly larger proportion of the TBI group scored ≥1 SD below the NBI mean

Acknowledgements

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References