Global Coherence in Personal Narratives: Comparing People with Aphasia to Older Adults

Michell Thavarajah, BA; Katie Scott, BS; Yvonne Rogalski, PhD, CCC-SLP
Department of Speech-Language Pathology and Audiology, Ithaca College

Background

- Discourse is communication beyond a single sentence.
- Due to acquired language impairments associated with aphasia, people with aphasia (PWA) can experience breakdowns in discourse (Linnik, Bastianne, & Hohle, 2015).
- Global coherence is a type of macro linguistic analysis that measures topic maintenance in discourse (Glosser & Deser, 1991).
- Past studies comparing global coherence in PWA to older adults (OAs) have found PWA have lower global coherence than OAs (e.g., Andreeta, Cantagallo, & Marini, 2011; Christiansen, 1995; and Wright & Capilouto, 2012).
- Analysis of personal narratives such as a stroke or an illness narrative provides ecological validity for assessment and treatment methods, as personal stories are instrumental for daily communication (Armstrong & Ulatowska, 2007).
- This study investigates global coherence, or topic maintenance, in personal narratives of PWA and older adults (OA).
- Hypothesis: 1. PWA will have lower global coherence scores than older adults in personal narrative discourse tasks.

Methods

Participants

- 30 illness story transcripts of OA (M = 70.71 years of age, SD = 14.64). Exclusion criteria for OA was:
  - Memory or cognitive impairment as measured by the Mini-Mental State Examination (MMSE; Folstein, Folstein, & McHugh, 1975).
  - History of stroke, head injury, neurological condition, or diagnosis of communication disorder
- 30 stroke story transcripts of PWA (M = 68.44 years of age, SD = 11.52). Controlled criteria for PWA was:
  - Fluent, mild-moderate aphasia as measured by the Western Aphasia Battery Revised (WAB-R; Kertesz, 2005); cutoff score = 51
  - Left- hemisphere CVA
  - No concomitant motor speech disorders

Procedure

- Transcripts from the AphasiaBank (MacWhinney et al., 2011) were blinded by third author.
- First and second authors segmented transcripts into conversational units (c-units) and rated for coherence.
- A four-point coherence scale was used to analyze coherence (Wright et al., 2013).

Results

- No differences were found between groups in terms of age (t = -.67, p = .51) or education (t = .41, p = .68).
- A one-way analysis of variance (ANOVA) was calculated on ratings of global coherence. Results indicated that PWA had significantly lower ratings of GC than OAs F(1, 58) = 19.21, p < .0001.

Discussion

- Our results are consistent with other research that has found PWA have lower global coherence than OAs (e.g., Andreeta, Cantagallo, & Marini, 2011; Christiansen, 1995; and Wright & Capilouto, 2012).
- This study supports Linnik et al.’s (2015) call for methodological consistency in discourse studies of people with aphasia by using existing methodology: 4-point rating scale (see: Wright et al., 2013).
- To our knowledge, this study is one of the first studies to use the 4-point scale on a task with ecological validity (i.e., stroke/illness story) while controlling for aphasia type, severity, and duration.
- Future studies should further investigate global coherence across different aphasia types in narrative discourse tasks.

References

- Kertesz, A. (2007). Western Aphasia Battery (Revised) PsychCorp. San Antonio, TX.

Transcript Example

- Utterance is overtly related to the stimulus as defined by the mention of actors, actions and/or objects present in the stimulus which are of significant importance to the main details of the stimulus.
- Utterance is entirely unrelated to the stimulus or topic; it may be a comment on the discourse or tangential information is solely used.

Global Coherence Means

- PWA: 2.90 (66)
- OAs: 3.49 (33)

Four-point global coherence rating scale (Wright, H., Capilouto, G., & Koutsoufas, A., 2013, p.252):

- 4 – The utterance is overtly related to the stimulus as defined by the mention of actors, actions and/or objects present in the stimulus which are of significant importance to the main details of the stimulus.
- 3 – The utterance is overtly related to the stimulus or topic; it may be a comment on the discourse or tangential information is solely used.
- 2 – The utterance is overtly related to the stimulus or topic; it may be a comment on the discourse or tangential information is solely used.
- 1 – The utterance is entirely unrelated to the stimulus or topic; it may be a comment on the discourse or tangential information is solely used.