

## 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, Bastiaanse, & Hohle, 2015).
- Global coherence is a type of macrolinguistic 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., Andreetta, 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 in PWA and older adults (OA).
- Hypothesis:
  - 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

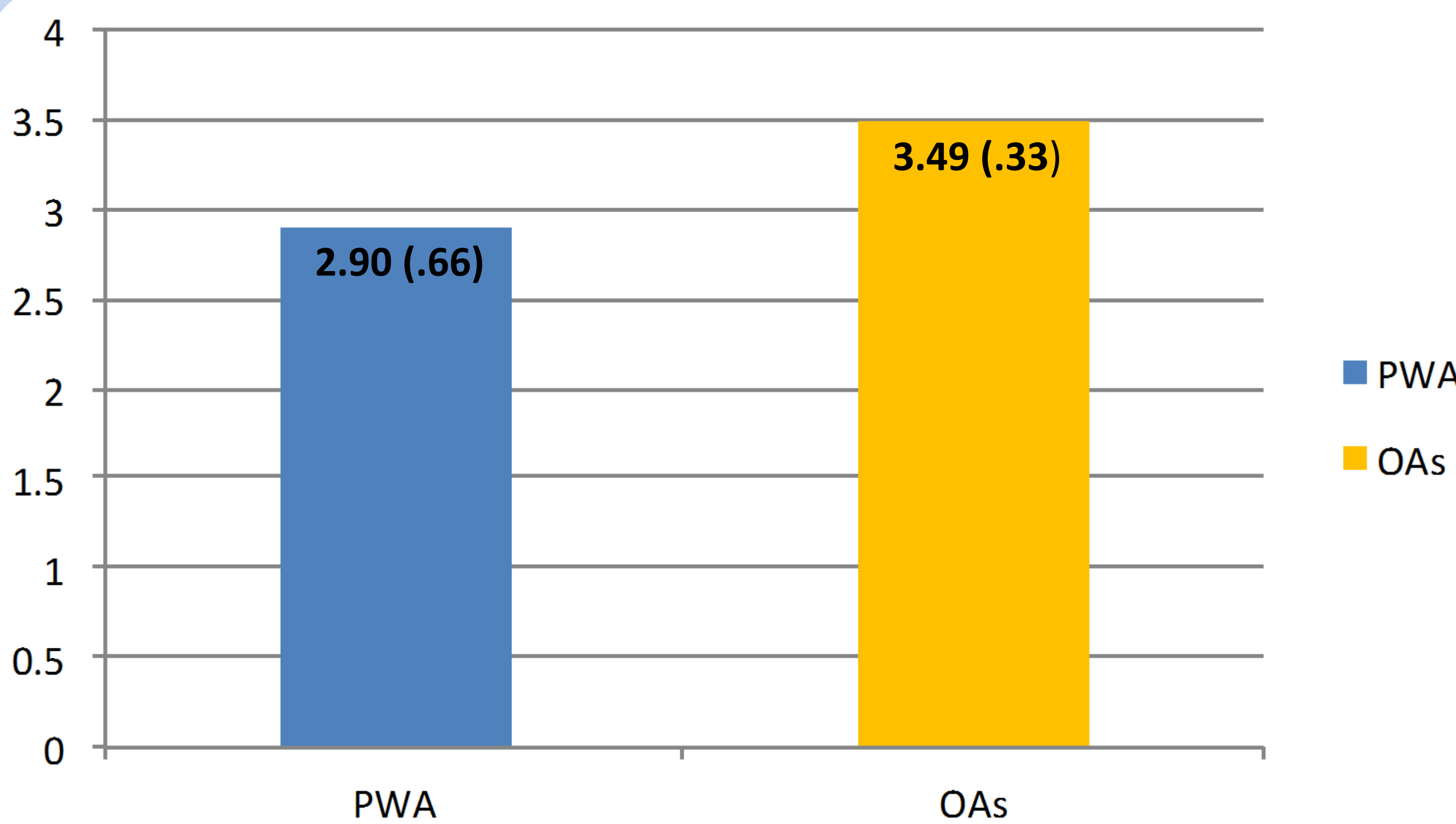
### Procedure

- 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  $F(1, 58) = 19.21, p < .0001$ .

## Global Coherence Means



## Transcript Example

### OA

Utterance	C-Unit	GC Rating
	Okay well I'll tell you about	
1	my heart attack	4
	It was in nineteen ninety	
2	seven	4
	I'd been retired for about	
3	two and a half years	3
	and I was out jogging	
	(be)cause I liked to jog at	
4	that time	4
	and after I jogged about a	
	mile or a mile and a half I	
	first felt some tightness in	
	my chest a little difficulty in	
5	breathing	4

### PWA

Utterance	C-Unit	GC Rating
	it was about seven years ago	
	or eight years ago I don't	
1	even remember	3
	but they were playing out in	
2	the backyard	3
	and my grandson we had	
	apartments at that time that	
	were together my daughter	
	and my grandson and me	
3	and my son okay	1
	but we had shared the same	
4	backyard	1
	and he was the grandson	
5	Mike was a toddler	1

**Four-point global coherence rating scale** (Wright, H., Capilouto, G., & Koutsoftas, 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*.

**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.

## Discussion

- Our results are consistent with other research that has found PWA have lower global coherence than OAs (e.g., Andreetta, 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

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