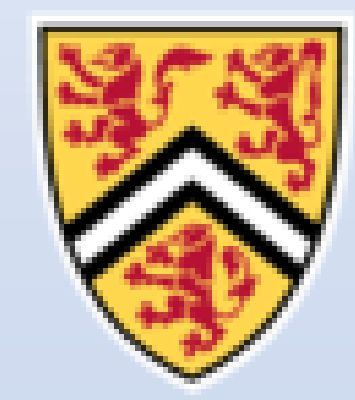


Enhancing Memory using Enactment in Stroke Patients: Assessing the Role of Semantic Integration and Cognitive Planning



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Introduction

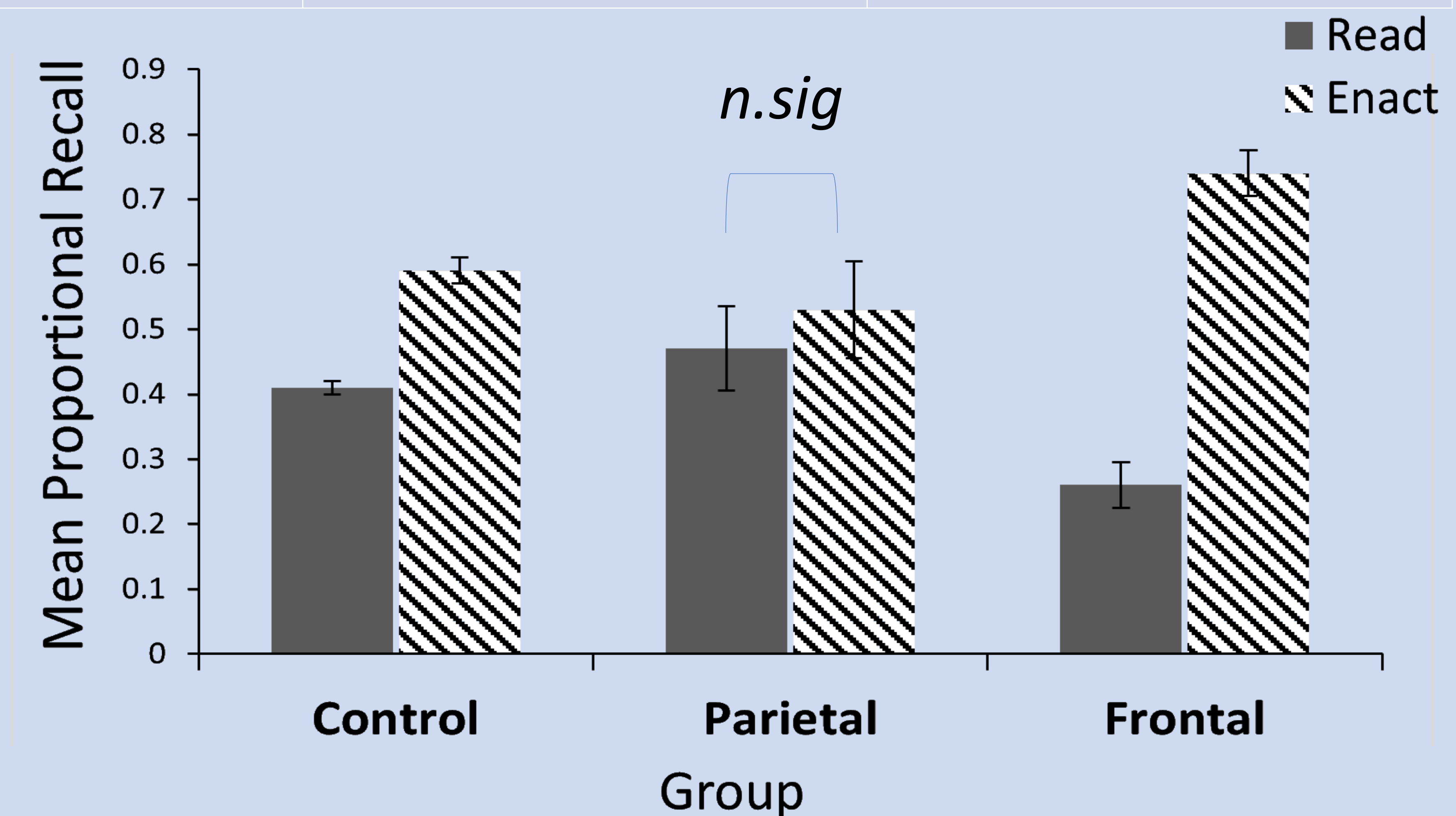
- Enactment Effect** - Performing a meaningful action at encoding benefits memory relative to silent reading^{1,2}
- Posterior Parietal lobe** – a critical integration hub for verbal and motoric information – is thought to underlie this memory benefit^{3,4}
- Some studies attribute the Enactment effect to cognitive planning of motoric actions (**Frontal lobe**)⁵

Objective: Infer the neural basis of Enactment by comparing the magnitude of the Enactment effect in patients following stroke to the Frontal or Parietal lobes.

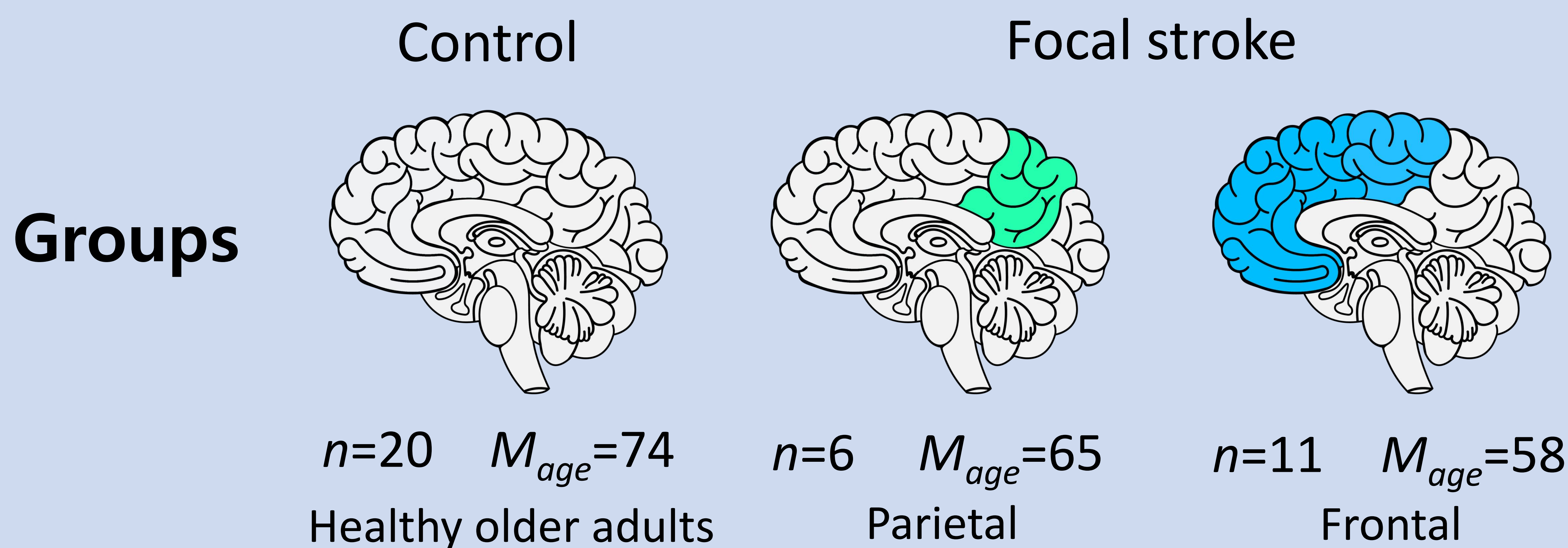


Results

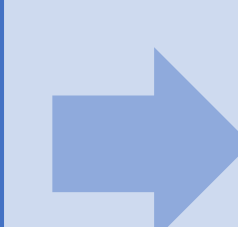
Group	Mean Read Recall	Mean Enact Recall
Control	3.80	5.60
Parietal	3.33	4.33
Frontal	1.55	3.36



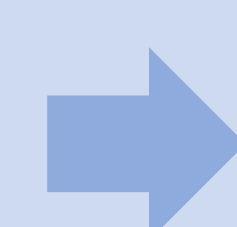
Methods



Intermixed Encoding
of Trial Types



Retrieval



Neuropsychological
Measures

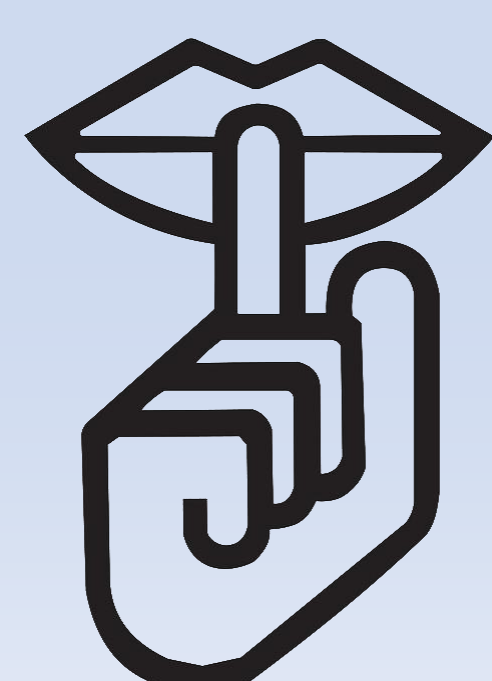
Enact Silently Read

Free Recall Aloud
(60s)

- Tulia
- Category Fluency
- Tower of London
- Digit Span
- MoCA
- MHVS



20 words



20 words



Conclusions

- Parietal Group did not benefit from Enactment of words at encoding
- We observed a significant positive relation between category fluency (measure of planning) and overall recall; $r = 0.46$, $p = .005$



Findings reveal that somatosensory integration mediated by the Parietal lobe underlies the Enactment benefit to memory.

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