

# Nature of inhibition abilities in aging: A multimodal working memory approach.

## Preliminary results

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The unitary versus non-unitary aspect of inhibitory abilities remains poorly understood. Are age-related inhibitory deficits domain-general or are they more important in certain areas (verbal) than others (visual)? This study uses a working memory approach to study inhibitory abilities in young and older adults in phonological, semantic and visual domains at the same time.

### METHOD

#### WORKING MEMORY TASK



#### PARTICIPANTS

24 Young adults

24 Older adults



≈ 27,63 years old



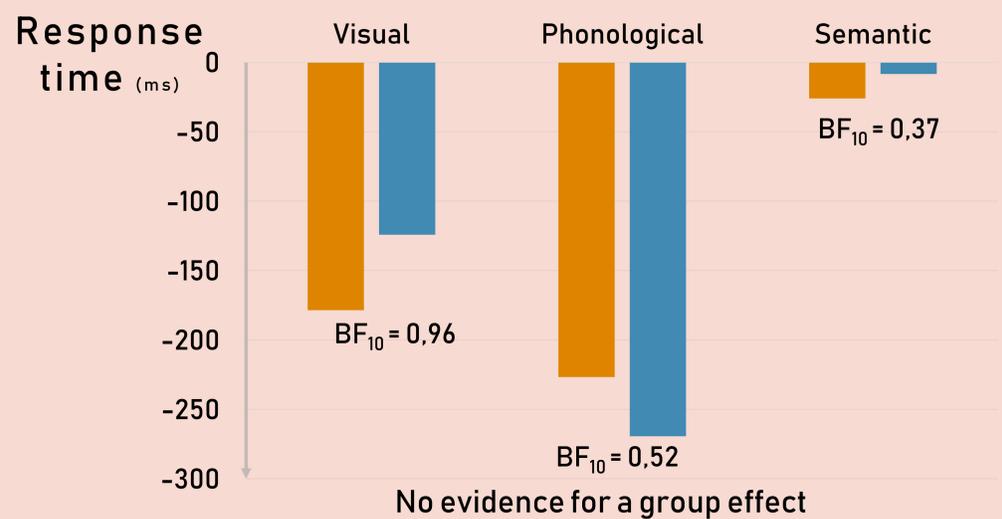
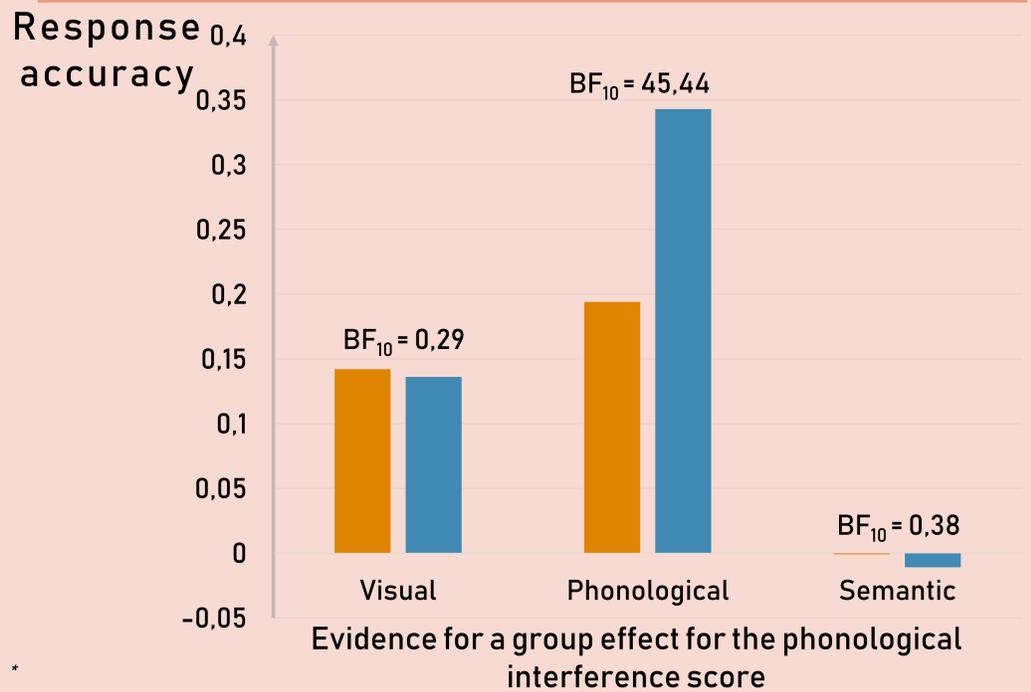
≈ 69 years old  
MMSE > 27

#### Matching variables

	Inhibition (STROOP)	Flexibility (Plus-Minus)	Updating (2-Back)
Young adults	0,40	1,04	24,25
Older adults	0,49	0,75	23,65
Bayesian t-test BF <sub>01</sub> =	0,56	3,23	2,84

### RESULTS

INTERFERENCE score = (neutral - inhibition)



### CONCLUSIONS

- Both groups are similarly affected by phonological and visual interference whereas there is no interference effect in the semantic condition. At the same time, phonological but not visual interference appears to have a greater impact in elderly participants.
- These results are in line with previous studies suggesting the existence of domain-specific inhibitory processes and domain-specific age-related deficits (Guerreiro et al., 2010; Hamilton & Martin, 2007).
- More sensitive measures need to be developed to investigate interference effects in the semantic condition by using longer lists and stronger semantic associations.

### REFERENCES

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