

The preservation of the ability to maintain information over the short-term in healthy aging remains a controversial question. Here we focused on one of the most challenging aspects of verbal working memory, the ability to not only maintain verbal events (like words and nonwords) but to also maintain their serial order of occurrence.

## METHOD

### IMMEDIATE SERIAL RECALL TASK

	Trial 1	Trial 2	Trial 3	Trial 4
Length 1	words: cave	fou	bac	rire
	nonwords: nal	dour	bamme	rize
Length 2	words: vite rêve	vol rouge	caisse date	gaz lance
	nonwords: zit rève	vonne rouck	kèr dabe	daze zance
until Length 6	...	...	...	...

**ITEM score**  
= percentage of items recalled independently of serial position

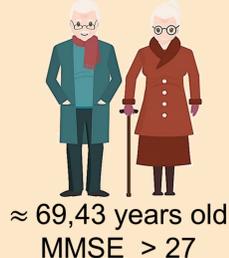
**ORDER score**  
= percentage of items recalled in correct serial position divided by the total amount of items recalled

## PARTICIPANTS

30 Young adults



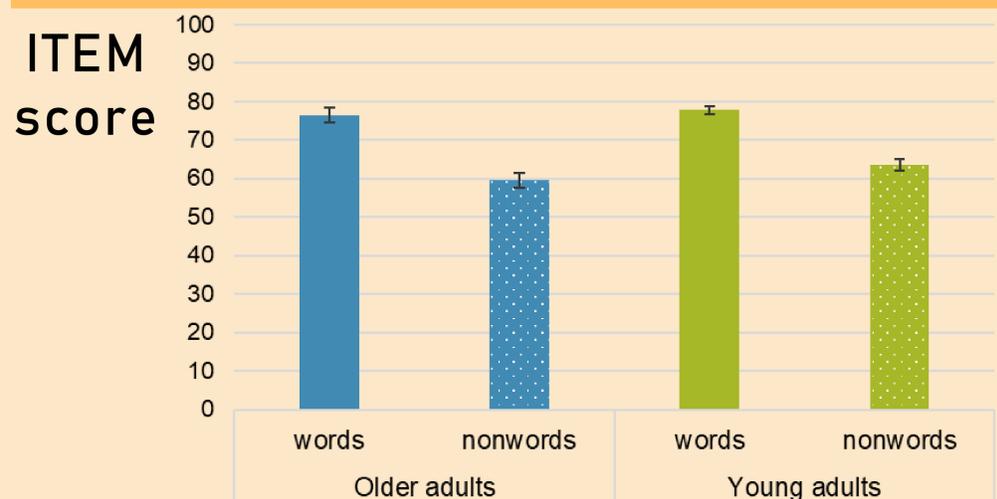
30 Older adults



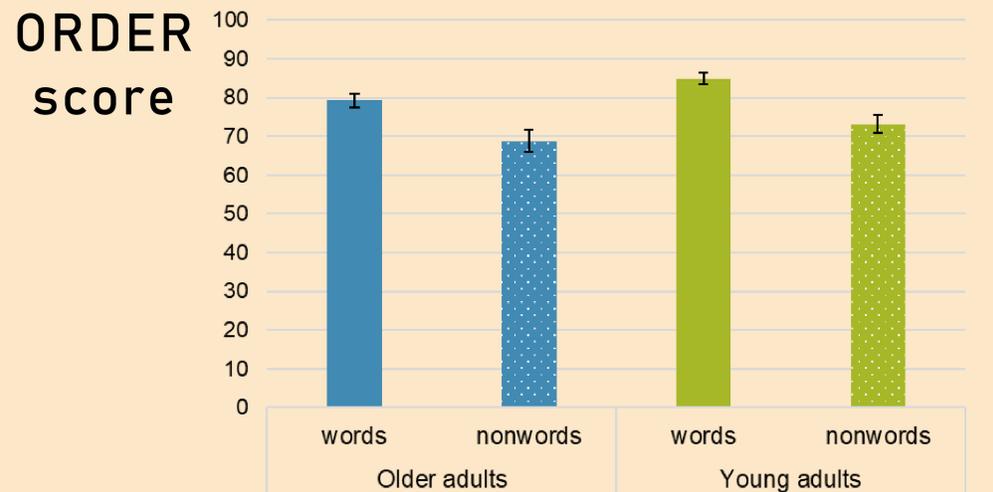
Matching variables:

	Education	Vocabulary (Mill-Hill)	Anxiety (HADS)	Depression (HADS)
Young adults	13,83	23,57	6,37	3,5
Older adults	12,83	26,47	5,26	4,63
Bayesian t-test; BF <sub>01</sub> =	1,92	0,57	1,6	1,12

## RESULTS



Absence of group effect  
BF<sub>01</sub> = 3,25 for words; BF<sub>01</sub> = 1,26 for nonwords



Anecdotal evidence in favor of a group effect  
BF<sub>10</sub> = 2,9 for words; BF<sub>10</sub> = 0,5 for nonwords

## CONCLUSIONS

- ✓ If there is a reduction of verbal WM abilities in healthy aging, it is very small and limited to the maintenance of serial order information.
- ✓ These results may explain the previous inconsistent reports regarding the preservation of verbal WM in healthy aging (Collette et al., 2007) : difficulties in WM tasks may be dependent on the requirements for serial order storage of the specific WM tasks administered
- ✓ Our findings are also in line with other studies suggesting an age-related reduction in the precision of serial order coding in verbal WM (Maylor et al., 1999)

## REFERENCES