





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	four	bac	rire
	nonwords	 nal	dour	bamme	rize
Length 2	words	 vite rêve	vol rouge	caisse date	gaz lance
	nonwords	 zit rèze	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



≈ 25,63 years old

30 Older adults



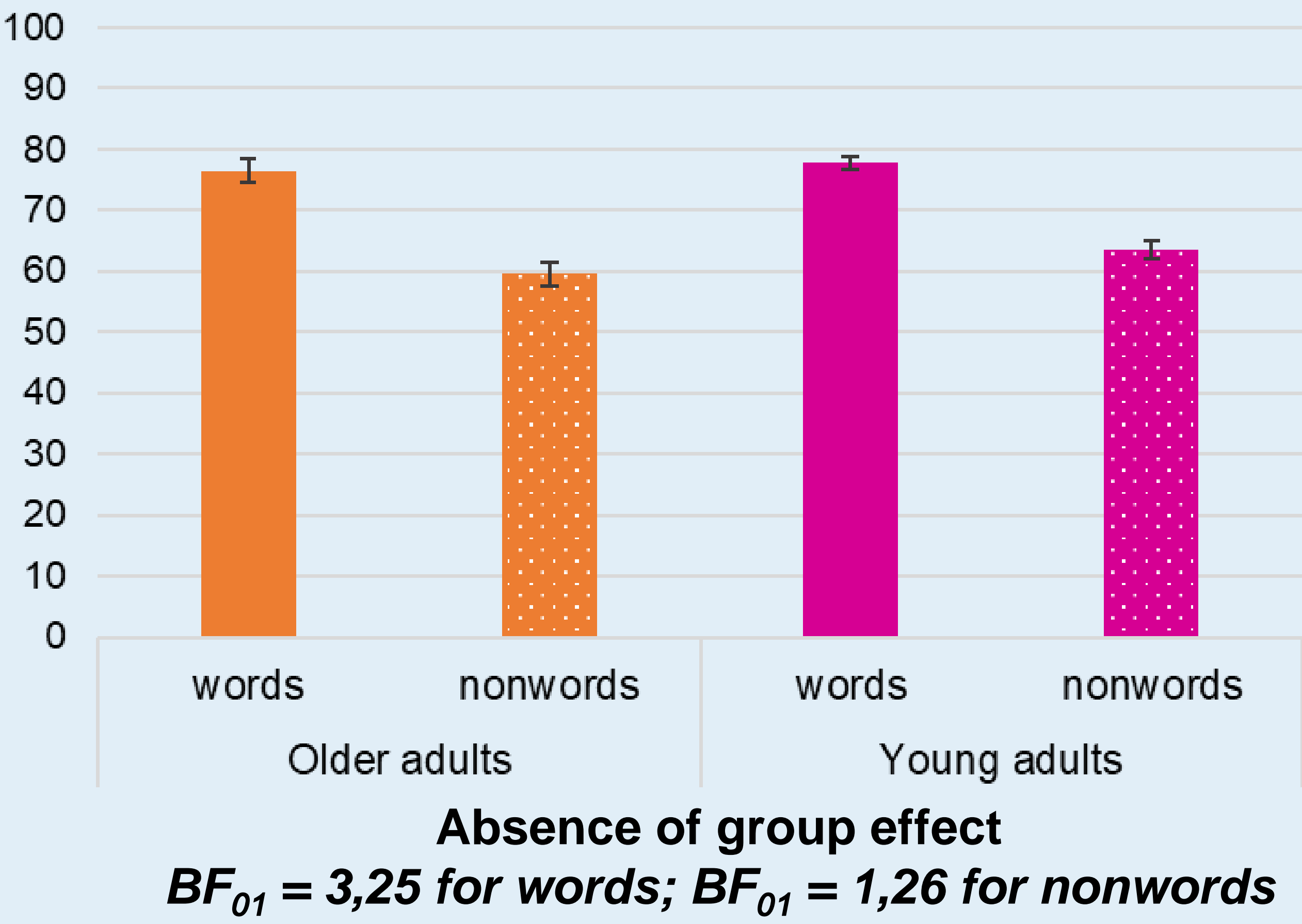
≈ 69,43 years old
MMSE > 27

Matching variables:

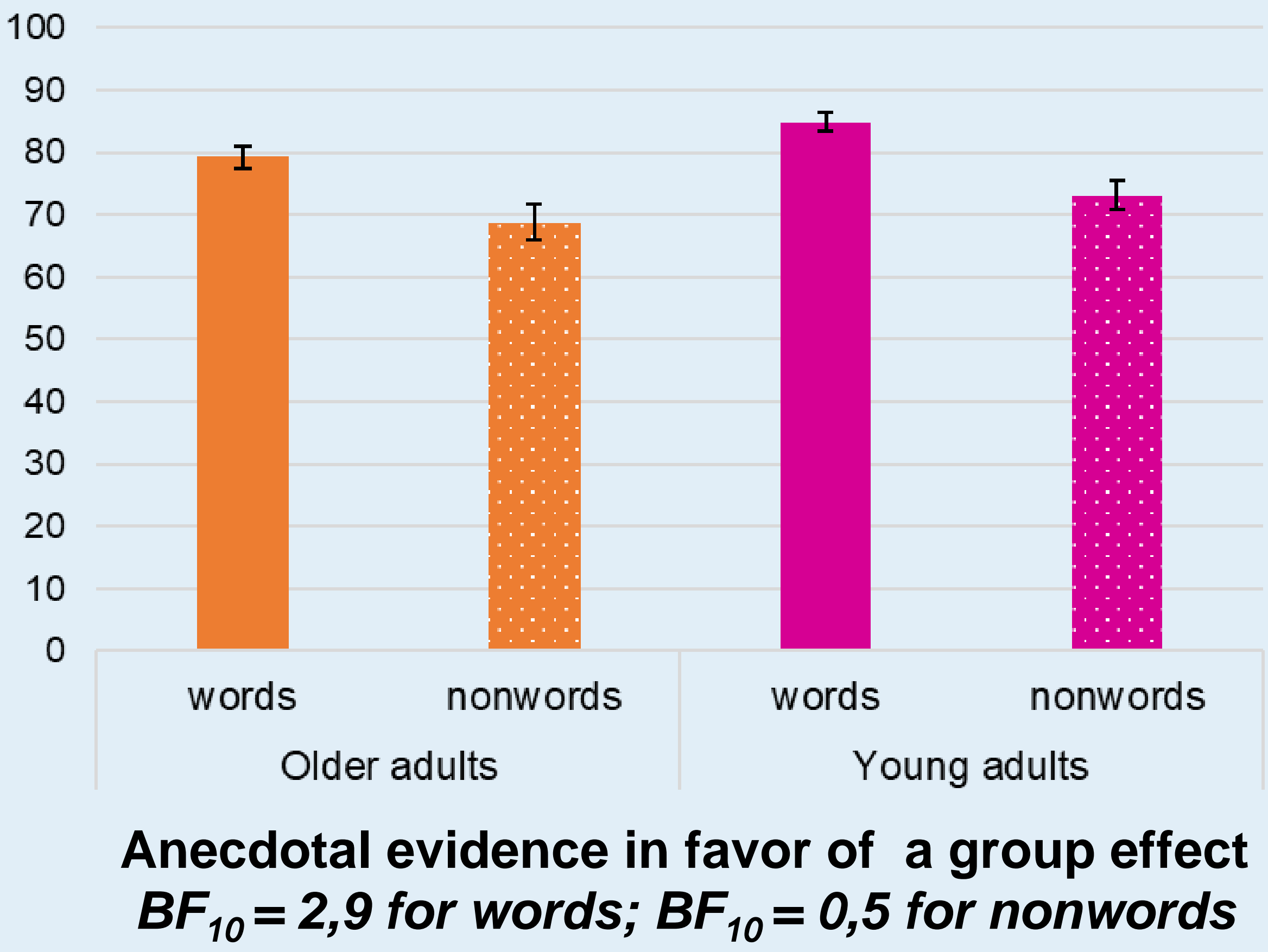
	Education	Vocabulary (Mill-Hill)	Anxiety (HADS)	Depression (HADS)
Young adults	13,83	23,57	6,37	3,5
Older adults	12,83	26,47	5,26	4,63
Bayesian t-test; BF ₀₁ =	1,92	0,57	1,6	1,12

RESULTS

ITEM
score



ORDER
score



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

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Maylor, E. A., Vousden, J. I., & Brown, G. D. (1999). Adult age differences in short-term memory for serial order: Data and a model. *Psychology and Aging*, 14(4), 572.