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The benefits of self-initiated items to assess episodic memory in older adults

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INTRODUCTION

Memory impairment is the first symptom of Alzheimer's disease and the first complaint in the elderly. (Rouch et al, 2007).

In practice, clinicians rely on standardized psychometric tests to evaluate memory functions. (e.g. RL/RI 16 items, Van der Linden et al, 2004).

However, these tests present several disadvantages:

- lexicon not always known
- risk of illiteracy
- different culture and language
- limited attention span

The "Self-Initiated Items Memory test" or **SIM** is an alternative approach suggested by Noël et al (2014).

SIM addresses these issues by proposing to patients to choose the items they will have to memorize.

HYPOTHESIS

We think both performance and enjoyability on a Self-initiated Items Memory test (**SIM**) to be superior to a version with imposed items.

Our aims :

1. To demonstrate that a SIM test returns more appropriate results.
2. To confirm that SIM tests elicits a more enjoyable experience.

METHOD

PARTICIPANTS (N=25)

- 18 non-demented older participants
- 7 older participants with cognitive impairment

Procedure



MATERIALS

Categories	Initiation 1	Initiation 2	Initiation 3	Delayed recall (20 min)	
City					
Color					
Drink					
Transport					
Celebrity					
Insect					
Total Scores					
Initiation Score			/18	Recall Score	

Initiation Error : _____ (_____ Repetition _____ No response)

Recall Error : _____ (_____ Intrusion _____ Oversight)

Figure 1. The original Self-initiated items Memory test (**SIM**) (Noël et al. 2014)

Categories	Repetition 1	Repetition 2	Repetition 3	Delayed recall (20 min)	
City	Arras	Paris	Lille		
Color	Blue	Green	Red		
Drink	Beer	Water	Wine		
Transport	Bus	Train	Car		
Celebrity	Victor Hugo	Johnny Hallyday	Charles de Gaulle		
Insect	Fly	Bee	Mosquito		
Total Scores					
Initiation Score			/18	Recall Score	

Initiation Error : _____ (_____ Repetition _____ No response)

Recall Error : _____ (_____ Intrusion _____ Oversight)

Figure 2. SIM test with imposed pre-defined items (**Imposed SIM**).

For the imposed SIM, responses from a sample of 38 people living in Northern France (23 with no cognitive impairment and 15 with major cognitive impairment) were used to select the most popular items.

RESULTS

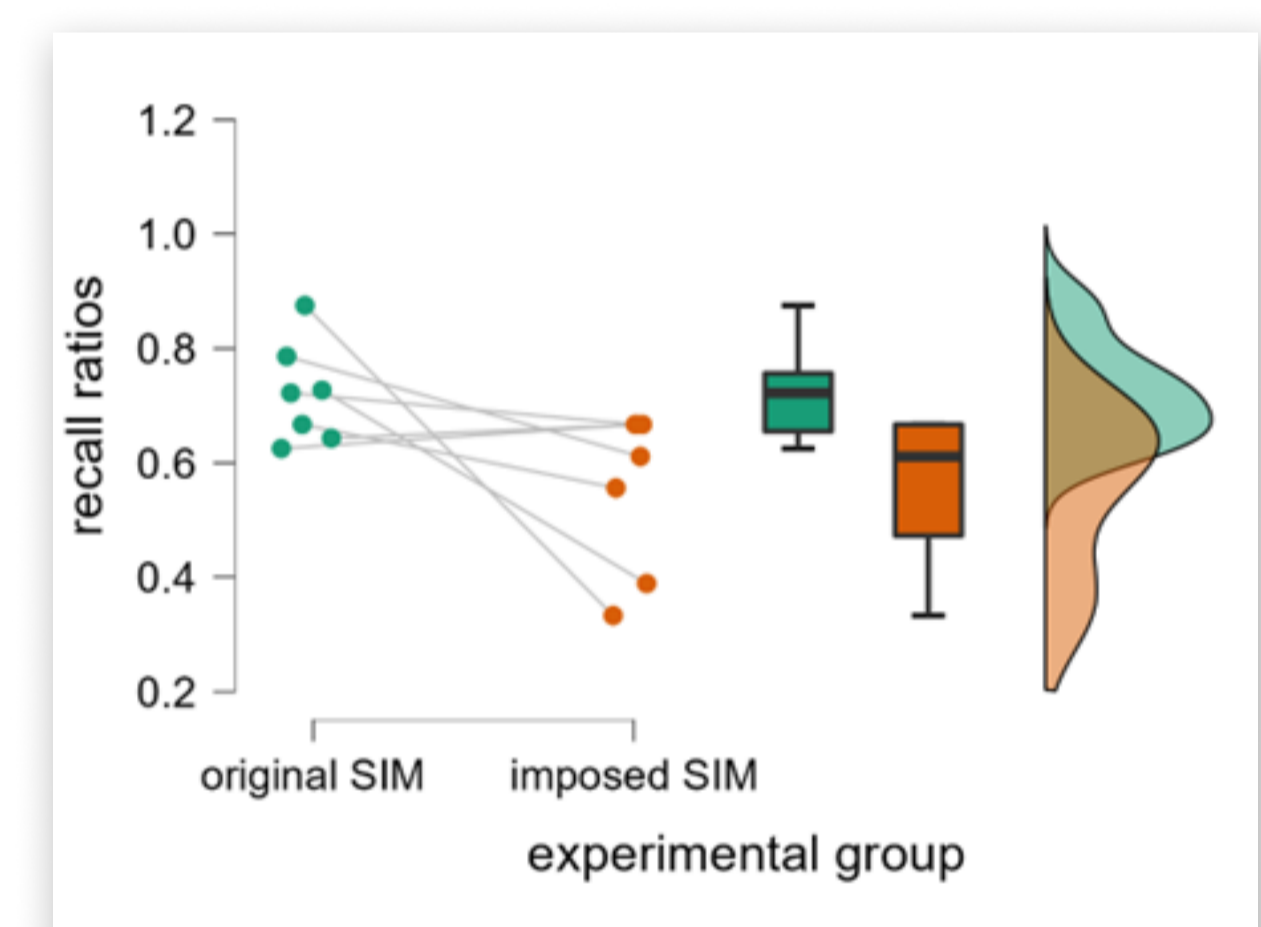
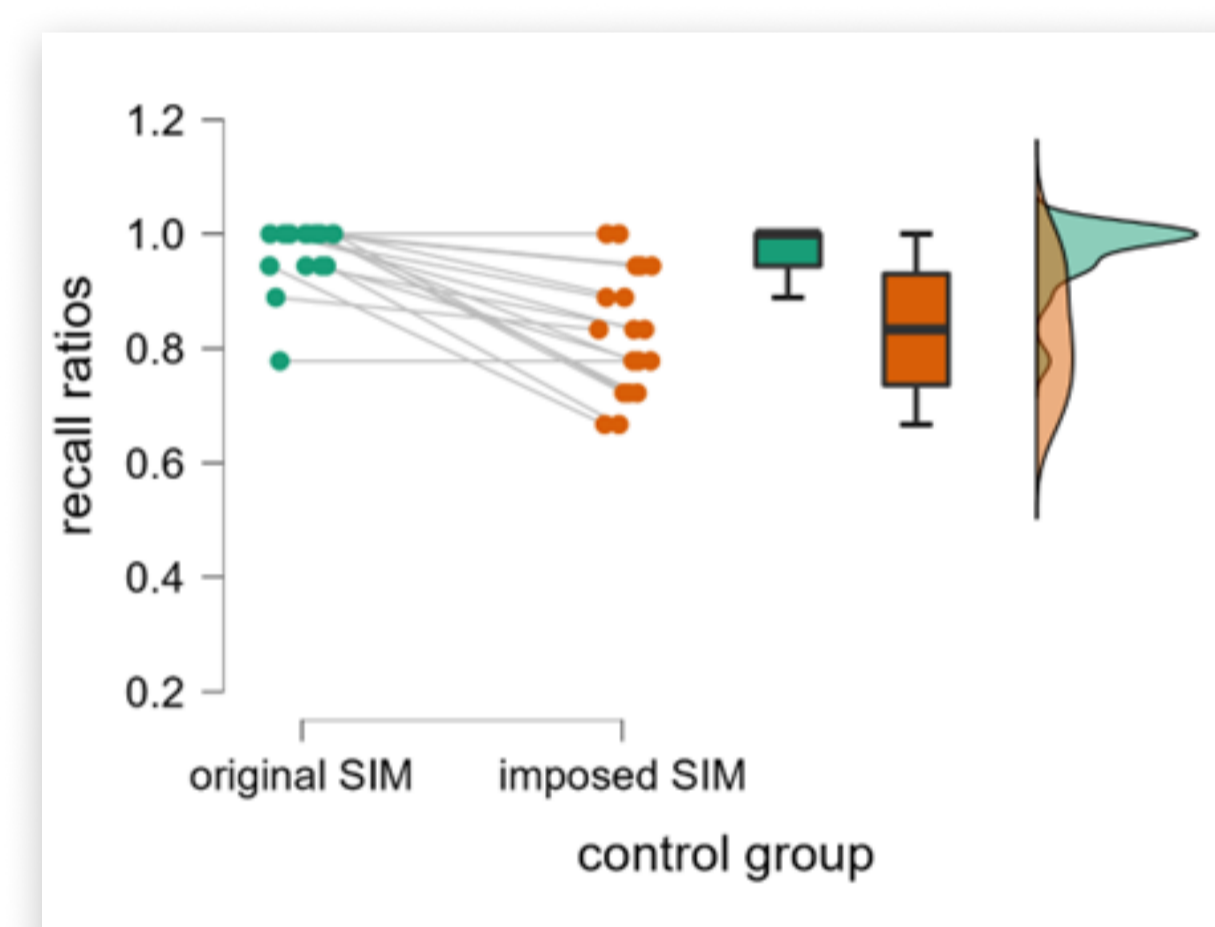


Figure 3. Distribution of recall performance (ratios) according to the group and type of test used.

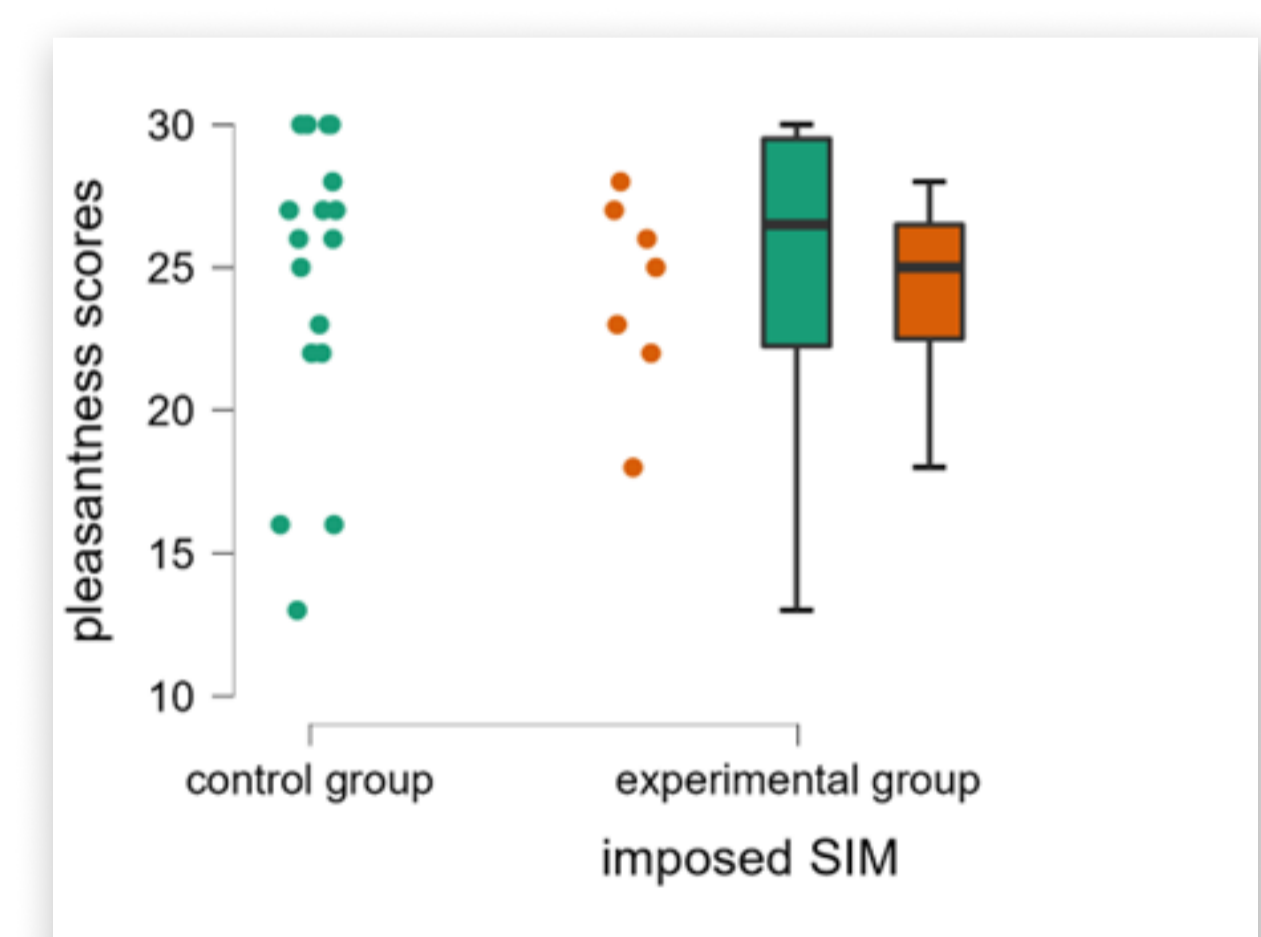
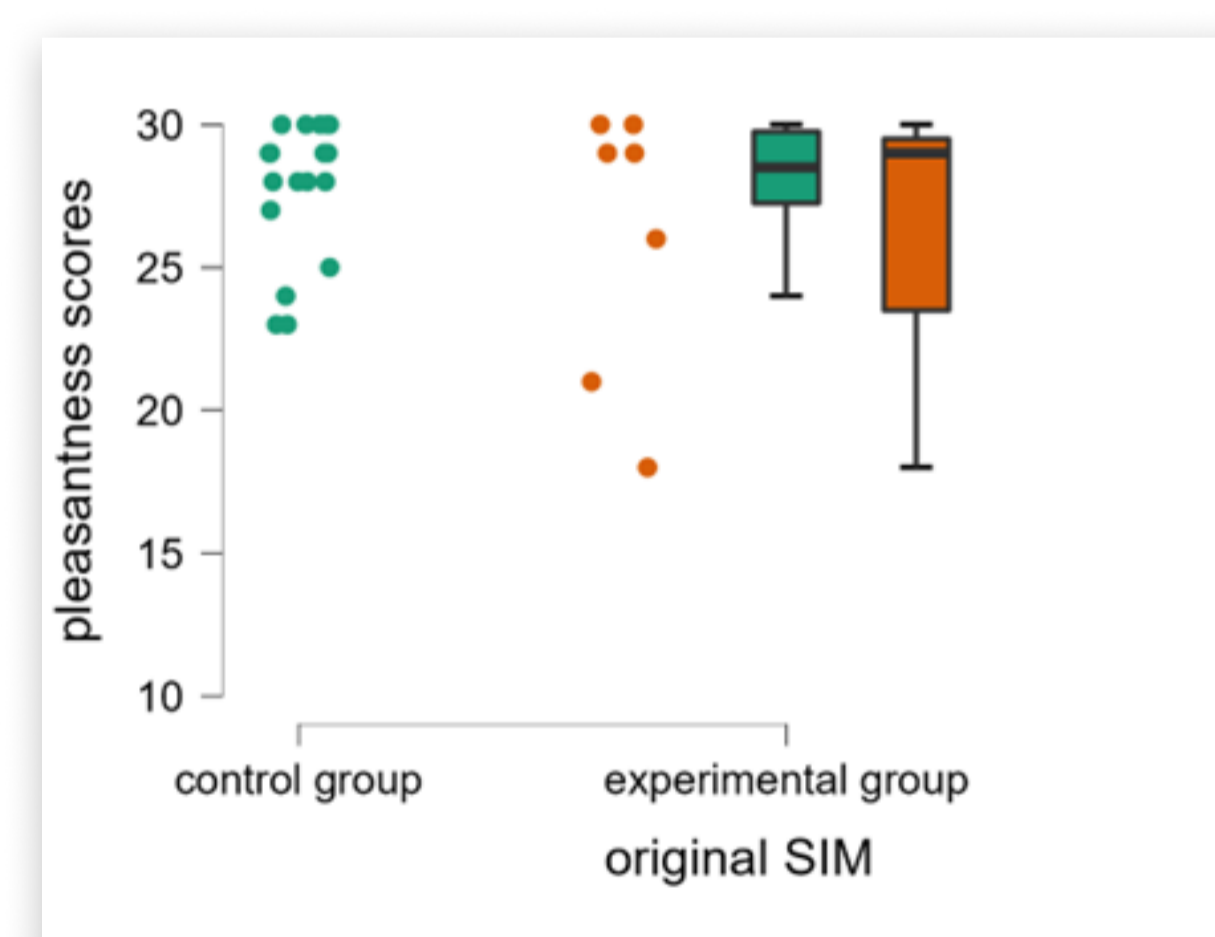


Figure 4. Distribution of subjective agreeableness scores according to group and type of test used.

- The number of recalled items was significantly higher with the self-initiated procedure than with the imposed-items procedure in both groups ($W = 250$; $p < 0,01^*$).
- The subjective ratings of "pleasantness" was also higher when the items were self-initiated, and this effect was similar in both groups ($W = 188,5$; $p < 0,001^*$).

CONCLUSION DISCUSSION

Our study has demonstrated the interest of self-initiation items in effectively evaluating verbal episodic memory in the elderly. The Self-initiated Items Memory test sustains its discriminatory nature, revealing that individuals lacking a diagnosis outperformed those diagnosed with memory impairment. Remarkably, the fun, ease, brevity, and overall enjoyment of the test do not compromise its capacity to detect disorders. These findings underline the relevance of our test, especially in clinical settings where other conventional assessments are impractical.

REFERENCES AND CONTACT

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