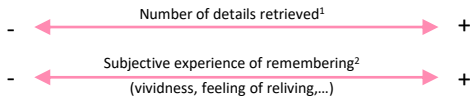# Validation of the French version of the Autobiographical Recollection Test (ART) and exploration of aging on subjective quality of autobiographical memories

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INTRODUCTION

Remembering autobiographical memories (past personal experiences) is subject to large **interindividual differences:**

- ← Number of details retrieved[1] → +

- ← Subjective experience of remembering[2] → +
(vividness, feeling of reliving,…)

While the number of retrieved details decreases with age, subjective memory judgments remain similar or even higher compared to younger people[3]

However, most existing tools assessing autobiographical memory focus on the richness and specificity of the memories recalled, or on the frequency or type of forgetting.[4]

→ **Lack of consideration for the subjective experiences of remembering,** yet important as they are used to make memory decisions[5] and are related to the confidence we have in our memories.[6]

To address this issue:

The Autobiographical Recollection Test (ART)[7]

= Self-report 21-item questionnaire examining interindividual differences in the subjective quality of autobiographical memories through 7 factors:

| Vividness | Narrative coherence | Reliving | Rehearsal |
| Scene | Visual imagery | Life story |
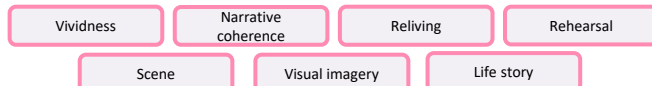
→ Assessment through the degree of agreement with each item on a 7-point Likert scale (0 = strongly disagree; 7 = strongly agree)

Psychometric properties of the original English version of the scale:
- Inter-factors correlations: from .62 to .91
- Test-retest reliability: r = .78
- Internal consistency: from .89 to .95 across studies
- Convergent validity with the episodic subscale of the *Survey of Autobiographical Memory*: r = .60

OBJECTIVES

- To **validate a French version** of the ART, confirming its factorial structure and psychometric properties

- To explore the **correlations** of this scale and its different factors **with age** and **with the participants' perception of their memory functioning**

MATERIALS AND METHODS

Translation of the questionnaire into French using the back-translation method, validated by the authors of the original version

Participants : 373 healthy participants aged from 18 to 87 years old
(M = 44.11 ; SD = 16.44)

Remote administration via a questionnaire online (n = 245), a mobile app (m-Path) (n = 50), and face-to-face in paper form (n=78)*

1) **Demographic information** (age, gender, years of education, occupation)

2) Questions about their **perception of their memory functioning**:

"How satisfied are you with your memory in your daily life?"
(= Satisfaction)

"Compared to the general population, how good is your memory?"
(= Self-comparison to general population)

3) **French version of the ART**

3 weeks later

Second completion of the **French version of the ART** if agreed (n = 108)

*Kruskal-Wallis test revealed no significant difference between the different presentation modes

RESULTS

Confirmatory factor analysis: CFI = .99; TLI = .99; SRMR = .05; RMSEA = .07

Factor loadings

Item	Loading	Factor
Item 1	.74	**Vividness** (M= 4.79; SD = 1.24)
Item 8	.77	
Item 15	.83	
Item 2	.72	**Coherence** (M= 4.76; SD = 1.23)
Item 9	.84	
Item 16	.77	
Item 3	.75	**Reliving** (M= 4.73; SD = 1.38)
Item 10	.82	
Item 17	.77	
Item 4	.76	**Rehearsal** (M= 4.61; SD = 1.24)
Item 11	.65	
Item 18	.46	
Item 5	.78	**Scene** (M= 5.02; SD = 1.16)
Item 12	.59	
Item 19	.73	
Item 6	.81	**Visual** (M= 5.31; SD = 1.19)
Item 13	.89	
Item 20	.83	
Item 7	.90	**Life story** (M= 5.35; SD = 1.20)
Item 14	.70	
Item 21	.73	

Internal consistency: ω = .94

Test-retest reliability: r = .83

Inter-factor correlations

	Vividness	Coherence	Reliving	Rehearsal	Scene	Visual
Coherence	.80					
Reliving	.65	.58				
Rehearsal	.52	.38	.58			
Scene	.65	.61	.55	.44		
Visual	.69	.65	.66	.44	.74	
Life story	.50	.36	.50	.51	.43	.43

Correlations with age and perception of memory functioning

	Age	Satisfaction	Self-comparison to general population
Vividness	.09	.28 ***	.38 ***
Coherence	.08	.27 ***	.40 ***
Reliving	.10	.13 *	.24 ***
Rehearsal	-.06	.07	.15 *
Scene	-.02	.20 ***	.31 ***
Visual	-.01	.17 **	.27 ***
Life story	-.06	.03	.12 *
Full ART	.03	.21 ***	.33 ***

***p<.001 ; **p<.01 ; *p<.05

DISCUSSION

- Confirmation of the factorial structure and good psychometric properties of the ART
- Results consistent with the absence of an age effect on the subjective experience of remembering
- The subjective quality attributed to personal memories, as measured by the ART, is associated with the general perception of memory functioning

Future perspectives: → Exploring whether the subjective quality of memories differs at different stages of life

→ Exploring the clinical value and discriminant validity of the ART by administering it to people with memory difficulties

References:
[1]Palombo et al. (2018). *Trends in Cognitive Sciences, 22*(7), 583-597; [2]Watkins (2018). *Cortex, 105,* 41-52; [3]Folville et al. (2020). *Psychology and Aging, 35*(4), 484-496; [4]Piolino (2006). *Revue Québécoise de Psychologie, 27*(3), 1-20; [5]Johnson (2006). *American Psychologist, 61*(8), 760-771; [6]Yonelinas (2001). *Philosophical Transactions of the Royal Society B: Biology, 356,* 1363- 1374; [7]Berntsen et al. (2019). *Journal of Applied Research in Memory and Cognition, 8*(3), 305-318
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