

What do we think about our memory functioning tell us how it really works?

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INTRODUCTION

•Memory complaints can be a first sign about the cognitive disfunctioning; However, the literature has presented contradictory data about their relationship with the actual mnesic functioning.

•The literature has focused mainly on the relationship between autobiographical memory and memory complaints, revealing that memory complaints and the results that individuals present in objective memory tasks often do not coincide and this difference can be explained by several factors.¹

OUR AIM: To better understand the relationship between objective and subjective memory, studying the relationship, in young adults and the older adults, between memory complaints and the results obtained in objective memory tasks.

METHOD

PARTICIPANTS

- 80 participants (40 young adults and 40 older adults).
- Participants** were aged between 18 and 94 years ($M = 52.39$, $SD = 28.53$).
- Three groups were created: **young adults without cognitive decline** ($n = 39$); **older adults without cognitive decline** ($n = 17$); **older adults with cognitive decline** ($n = 24$).

MATERIALS

- Montreal Cognitive Assessment (Portuguese Version²)
- State-Trait Anxiety Inventory (Portuguese Version³)
- Beck Depression Inventory I (Portuguese Version⁴)
- Subjective Memory Complaints Scale - SMC (Portuguese Version⁵)

Objective memory tasks

•Digit Span

Two sequences of two numbers were presented, two sequences of three numbers and so on until completing nine sequences of numbers.

•Memory Words

The procedure adopted was similar to the digit span task, but the words were applied in different orders.

•Colors Memory

Sequences of cubes from different colors and each participant was instructed to reproduce this sequence.

•Corsi blocks test (computerized version)

•Nine blue squares were presented on a white background. With each attempt, certain squares will flash (in yellow), one per second, producing a specific sequence.

•Participants were instructed to reproduce the sequence they pointed to in the squares, in the same order in which they lit up.



Example of Corsi Blocks computerized version.



Example of memory color task.

RESULTS

Correlation between subjective memory complaints and results on objective memory tasks

•The correlation indicated: that higher performance in objective tasks is associated with lower number of memory complaints.

•Existence of significant negative correlations between the subjective complaints and the result in the objective memory tasks.

Objective Tasks

•Older adults performed better in Corsi Blocks and color tasks and young adults in word and digit tasks.

•In the digits there were significant differences between young adults without decline and older adults with cognitive decline.

$$F(2.77) = 33.03, p = <.001, np2 = .46$$

•The same for the color task.

$$F(2.77) = 27.37, p = <.001, np2 = .42$$

•For the word task, there were marginally significant differences between young adults without decline and older adults with decline.

$$F(2.77) = 29.49, p = .05, np2 = .43$$

Memory complaints, anxiety and depression

•The results indicate that **only depression influences memory complaints.**

$$F(2.76) = 2.55, p = .08$$

•It was verified that only the variable depression is significant predictor of memory complaints, contributing to the explanation of 24.9% of the total variance of this variable.

$$F(1.78) = 21.8, p <.001$$

DISCUSSION AND CONCLUSIONS

•Our results suggest, as well as in the literature, that **the performance of the young adults group is significantly higher than the older adults group⁶** and indicate the existence of **differences in SMC between young adults and older adults** (older adults with decline had more SMC compared to older adults without decline and with young people without decline).

•The results revealed differences between the results obtained in objective memory tasks and memory complaints in individuals with and without decline (individuals with cognitive decline had more subjective memory complaints and worse performance on objective memory tasks).

•Our results suggest that **depression seems to be one of the key factors in subjective memory complaints** as the presence of depression symptoms can cause the individual to experience a distorted subjective perception of his memory capacity.⁷

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