

EMOTIONAL EPISODIC MEMORY FORMATION DURING COVID-19 QUARANTINE: PRELIMINARY RESULTS

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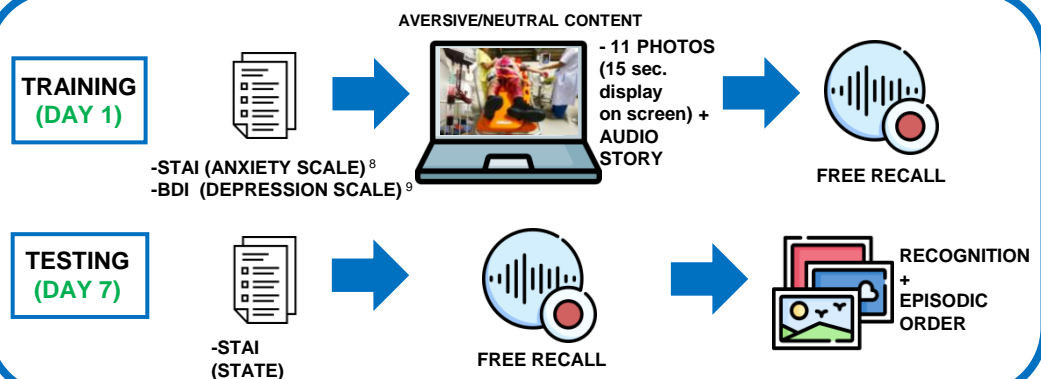
INTRODUCTION

Episodic memory is the ability to recover past experiences and projects ourselves into the future. It is related to contextual information (both spatially and temporally). This type of memory is highly sensitive to aging, the passage of time, forgetfulness, interference and confusion¹. Furthermore, episodic memory processes are modulated by both anxiety and depression^{2,3}. People's mental health has deteriorated due to the Covid-19 pandemic, showing higher levels in both values⁴. There is a general consensus that pleasant or aversive events are better remembered than neutral events⁵. Regarding false memories, there is no such consensus. Some authors found that emotional content generates more false memories⁶, however, it was also found that negative content reduces false memories⁷. In this study we evaluated the effects of emotional variables, such as anxiety and depression, on memory encoding and consolidation of true and false details of aversive and neutral stories.

Main goal: To study if emotional episodic memory encoding and consolidation were impaired in the context of this pandemic.

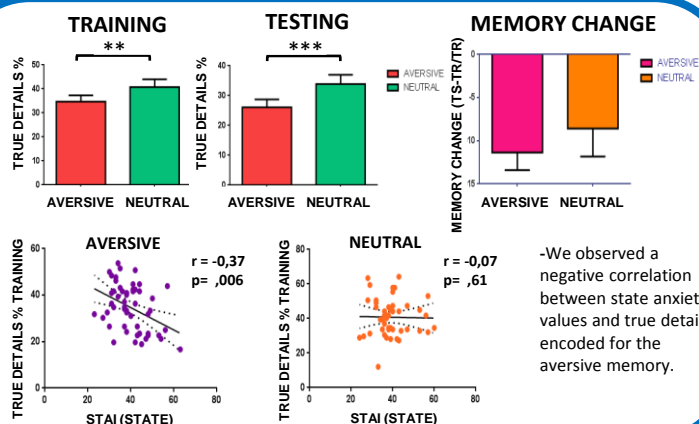
METHODS

- N: 100 (36 FEMALES, 64 MALES)
- AGE: 18-30
- All experiments were done using virtual video calling platforms.
- Training and testing took place at the same time each day.

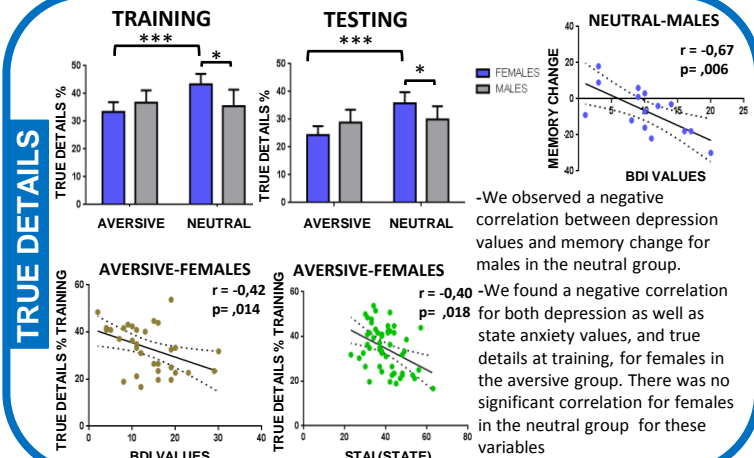
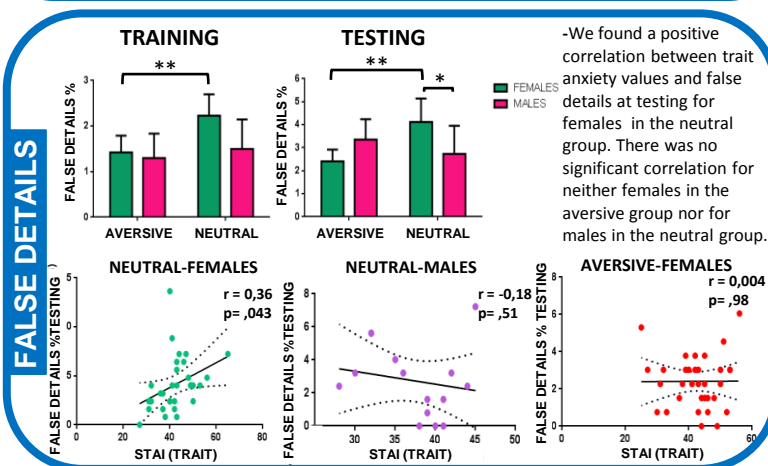
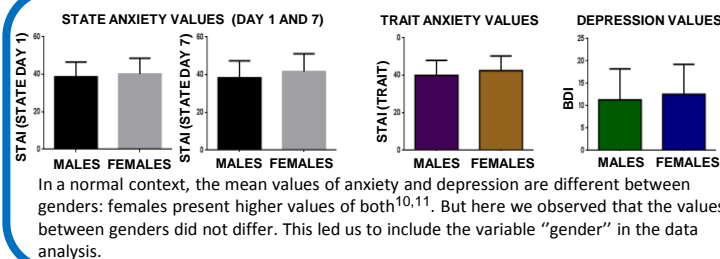
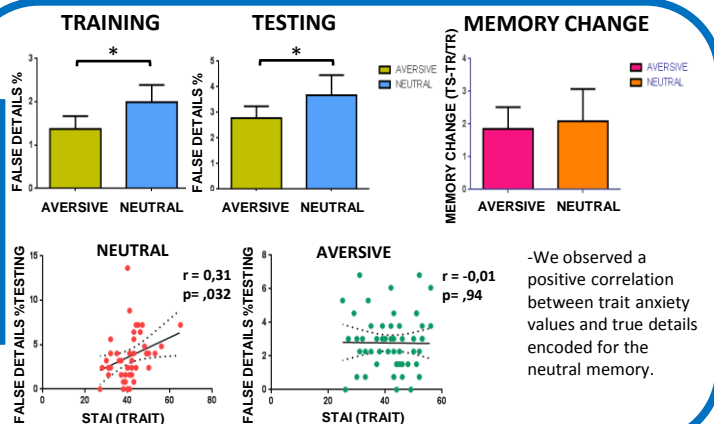


RESULTS

TRUE DETAILS



FALSE DETAILS



DISCUSSION

Contrary to previous studies⁵, we found that the neutral group encoded significantly more true details than the aversive one. Moreover, we observed that the higher the anxiety values, the less encoding of true details for the aversive content. Regarding false details, the neutral group had more false memories than the aversive one. Furthermore, there is a positive correlation between trait anxiety values and encoding for the neutral group. It is important to highlight that there is an optimal anxiety state for emotional memory formation¹². Taking into account that anxiety and depression values are increased during the Covid-19 quarantine⁴, people would be displaced from this optimal value, so the encoding of aversive content could be impaired. Interestingly, in a normal context, females showed higher anxiety and depression values than males^{10,11}. However, while these values are currently increased, we found no significant differences between genders. This could suggest that males could be more affected by the current situation, explaining the impaired encoding, independently of the emotional memory content. Regarding false memories, these results support the hypothesis that false memory formation is related to the amount of details encoded¹³.

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