PERFORMANCE IN LINEUPS DURING COVID-19 PANDEMIC: INFLUENCE OF LOCK-DOWN SIDE EFFECTS

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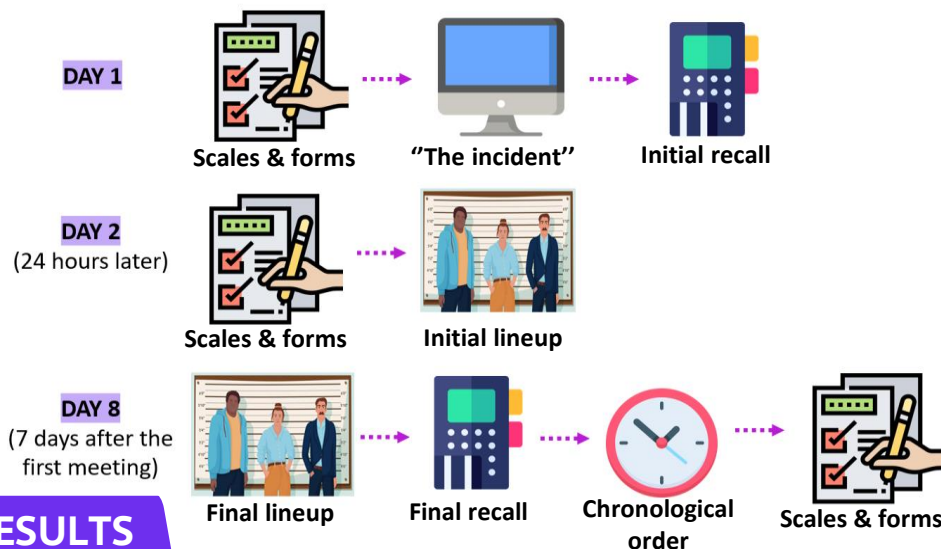3 Innocence Project Argentina, Buenos Aires, Argentina.
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INTRODUCTION

- Since the beginning of the Covid-19 pandemic, there has been great concern about the mental health of the world population.
- The lock-down conditions generated emotional and behavioral effects like those of other stressful situations[1], such as being the victim of a crime[2].
- In the field of eyewitness science, studies showed large discrepancies, possibly due to methodological limitations, one of the most important being the impossibility of mimicking the impact that a real crime has on the witness[3].

Main goal: Our main objective was to study the impact of emotional and behavioral variables in the witnessing processes, using a natural context that generates conditions like those of a real crime.
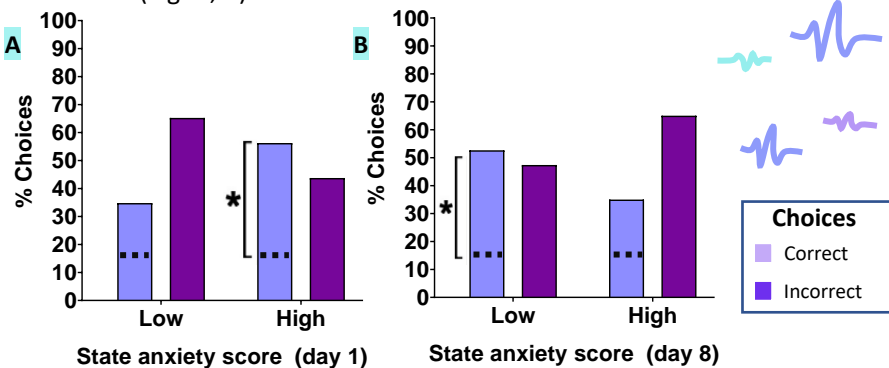
METHODS

DAY 1 — Scales & forms → "The incident" → Initial recall

DAY 2 (24 hours later) — Scales & forms → Initial lineup

DAY 8 (7 days after the first meeting) — Final lineup → Final recall → Chronological order → Scales & forms
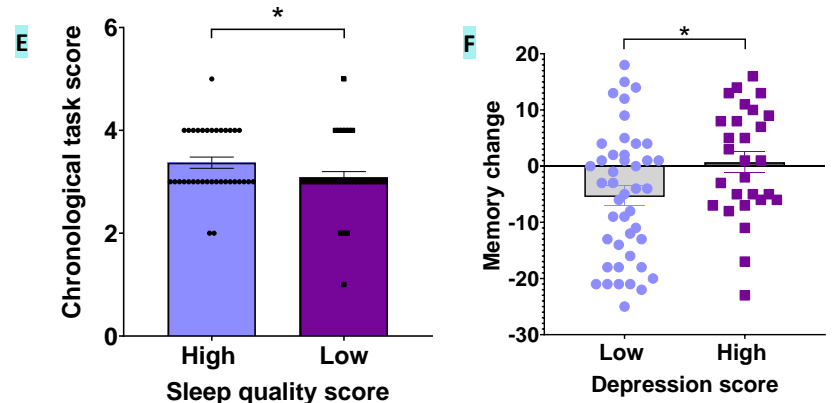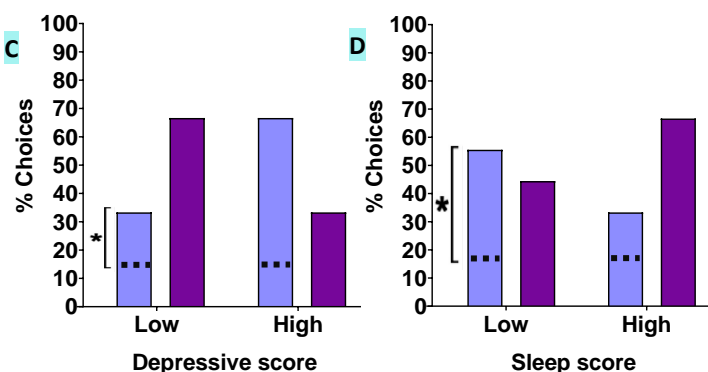
SAMPLE: 72 adults between 18-45 years old, without previous neurological or psychiatric disorders.
SYMPTOMATOLOGY SCALES: BDI II (depression), STAI (anxiety), and PSQI (sleep quality).
VIDEO: "The incident" stands for the video of a male (perpetrator) violently interrupting a conference.
INITIAL LINEUP: Presentation of 6 photos where the perpetrator could be present (With perpetrator group) or absent (Without perpetrator group).
FINAL LINEUP: 6 photos were shown, including the perpetrator's.

RESULTS

Individuals who showed a higher degree of anxiety during day 1, chose correctly in the Final Lineup above the chance level. On the contrary, only those who showed low anxiety on day 8, exceeded the same threshold (Fig. A, B).

A — % Choices — State anxiety score (day 1)
B — % Choices — State anxiety score (day 8)

Choices
Correct
Incorrect

Participants with greater depressive symptoms, and higher quality of sleep also chose correctly above the chance level in the Final Lineup. (Fig. C, D).

E — Chronological task score — Sleep quality score (High, Low) *

F — Memory change — Depression score (Low, High) *

C — % Choices — Depressive score (Low, High)
D — % Choices — Sleep score (Low, High)

Additionally, those subjects with a better quality of sleep had a better performance in the chronological order task (Fig. E)., while those with a higher depressive level had a lower detail loss in their reports between day 1 and day 8 (Fig. F).

CONCLUSIONS

- Accompanying previous results[4], stress seems to predispose the individual to form and store memories, but not to adequately evoke them.
- Adequate sleep quality appears to benefit lineup performance, potentially due to an improvement in encoding, derived from neuronal downscaling that occurred during sleep[5].
- Depression seems to favor performance, possibly due to the negativistic bias in information processing that depressed individuals tend to show[6].

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[1] Brooks SK, Webster RK, Smith LE, Woodland, L, Wessely S, Greenberg N & Rubin GJ (2020). Lancet. 395, 912-20. [2] Dobson M & Markham R (1992). J Gen psychol. 119:4. [3] Morgan III, CA, Southwick S, Steffian G, Hazlett GA & Loftus, E. F. (2013). Int. J. Law Psychiatry. 36:1. [4] Schwabe L, Joëls M, Roozendaal B, Wolf OT & Oitzl MS (2012). Stress effects on memory:an update and integration. Neurosci. Biobehav. Rev. 36:7. [5] Tononi G & Cirelli C (2003). Brain Res. Bull. 62:2. [6] Watkins PC, Vache K, Verney SP, Muller S & Mathews A (1996). Journal Abnorm. Psychol. 105:1.