False memory task is associated with endorsement of pseudoscientific beliefs (#134344)

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1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?
This is a test of the association between false memory, measured by a misinformation task, and endorsement of pseudoscientific beliefs.
We predict a positive correlation between the number of false memories induced by misinformation and the scores obtained on a scale measuring endorsement of pseudoscientific beliefs.

3) Describe the key dependent variable(s) specifying how they will be measured.
The main variables are the overall false memory scores on the misinformation task and the scores obtained on the scale measuring pseudoscientific beliefs.
The misinformation task (Frenda et al, 2014; Okado y Stark, 2005; Zhu et al., 2010) consists of two events with 4 phases each: (1) Encoding of the original event or picture phase, (2) Misinformation narrative or sentence phase, (3) Memory test and (4) Source monitoring test.

The Overall False Memory (OFM; Zhu et al., 2013) is the endorsement rate for misinformation items presented in the memory test (24 in total, 12 items x 2 events). The items consisted of multiple-choice questions presented in the memory test related to 12 critical slides shown in the picture phase with three response options: One of the options corresponded to correct information presented in one of the critical slides of the image phase (correct answer), other option corresponded to erroneous information given at the sentence phase (misinformation answer), and the third option referred to an aspect not seen in the image phase nor read in the sentence phase (new answer). We examined the response rate of the misinformation answers as the tendency of participants to incorporate sentence misinformation in their responses to critical questions about the images.

The short version of the Pseudoscience Endorsement Scale (sPES) consists of 13 statements aimed to assess the endorsement of pseudoscientific beliefs. Responses are provided on a scale ranging from 0 (i.e., "Strongly disagree") to 4 (i.e., "Strongly agree"). The final score is obtained by averaging the ratings given to the different statements.

4) How many and which conditions will participants be assigned to?
All participants are assigned to the same condition. The order of presentation of the two events on the misinformation task, as well as the version of the critical items on the pictures phase ("tray", Okado y Stark, 2005) of this task, will be counterbalanced across participants.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
We will conduct a correlation analysis between overall false memory (OFM) and the mean scores on the sPES: we expect a significant positive correlation between them.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
There are no a priori exclusion criteria.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.
We will recruit a minimum of 168 participants, which is double the sample size necessary to detect a medium-size effect (r = 0.3) on the critical correlation analysis with a power of 80%.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)
Additionally, we will perform exploratory analyses including the following variables:
1. Robust false memories (RFM). RFM is calculated, for each participant, as the proportion of cases, among those in which the participant chose the misinformation item in the memory task, in which she further answered ''I saw it in the picture only" or ''I saw it in both" on the source memory test.
2. Amount of correct responses in the memory test for the six control items (i.e., questions that were not related to the misinformation provided in the misinformation phase).
3. Intensity of causal illusions developed on a contingency learning task.