Influence of Emotionality on Belief, Feb 2025 (#225584)

Author(s)
This pre-registration is currently anonymous to enable blind peer-review.
It has 2 authors.

Pre-registered on: 2025/04/29 - 06:52 AM (PT)

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?
Does the emotionality of (mis)informative claims impact belief in those claims?

We hypothesise that (mis)informative claims with high emotionality will lead to higher belief in those claims compared to emotionally low ones (H1). Additionally, we also hypothesise that Cognitive Reflection Test (CRT) scores will moderate the effect of emotionality on truth discernment (i.e. ability to distinguish between true and false claims/headlines), such that individuals with higher CRT scores will be less influenced by emotionality and show better truth discernment than those with lower CRT scores (H2).

3) Describe the key dependent variable(s) specifying how they will be measured.
DV: self-reported belief in the headlines.

Participants would be asked: "To the best of your knowledge, how accurate is the claim in the headline?" (Response options: 0: not at all accurate - 10: very accurate).

4) How many and which conditions will participants be assigned to?
The stimuli consist of pairs of true and false headlines (representing true and misinformation on the internet) which differ on the basis of emotionality i.e. high and low/neutral. The stimuli are fact-checked prior to use.

Each participant will be exposed to 16 headlines in total (4 high emotional true, 4 high emotional false, 4 low emotional true, 4 low emotional false).

However, although it is a within-subjects design, it has been counterbalanced in a way that no one person will see the high emotionality and low emotionality headline pair of the same claim.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
We will run multilevel models to account for random effects (i.e. random slope + intercept) of participant and item, and each participant is assessing multiple different claims.

The outcome variable will be participants' reported belief in each claim. Predictors will include CRT scores of the participants, and two dummy-coded variables: emotionality of the claim (high vs. low) and claim veracity (true vs. false)

The model will be run in R, with the following syntax:
Belief ~ emotionality * veracity * CRT + (1 + emotionality * veracity | participant) + (1 | item)

The model accounts for fixed effects of emotionality, veracity and CRT along with their interactions. Main effect of emotionality on belief would be a test of H1, which claims that high emotionality headlines will lead to higher belief in those claims.

The effect of the interaction term emotionality × veracity indicates the effect of emotionality on truth discernment (i.e., the difference in belief between true and false headlines). Whereas, a 3-way interaction term (emotionality × veracity × CRT would imply that the effect of emotionality on truth discernment (emotionality × veracity) depends on CRT levels of individuals (H2). Simple slopes would be plotted to figure what this effect looks like specifically for high and low CRT individuals.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
No responses will be excluded, all complete observations (with no missing data) will be retained.

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.
Based on the monetary resources available for the study, the sample size is determined to be 105.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

Nothing else to pre-register.