

COVID19MisinformationVaccineHesitancyAustralia2020 (#40309)

Created: 05/01/2020 07:59 PM (PT)

Public: 11/04/2020 05:27 PM (PT)

Author(s)

Matthew Nurse (Australian National University) - matthew.nurse@anu.edu.au

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?

Two question sets:

"Question Set 1" -- What is the association between analytic thinking and perceived accuracy/sharing of COVID-19 statements that 1) have been debunked (henceforth: "misinformation") vs 2) have been issued by public health authorities (henceforth: "information")?

"Question Set 2" -- What is the association between vaccine hesitancy, analytic thinking style, and trust in federal government?

3) Describe the key dependent variable(s) specifying how they will be measured.

Question Set 1.

Participants will be presented with five misinformation statements and five information statements in random order. Half of the participants will be asked if they think the statements are accurate. And half of the participants will be asked if they would consider sharing the statements. In both cases, response options will be "yes" and "no". "Yes" responses to misinformation statements will be summed together, and "yes" responses to information statements will be summed together.

The key independent variable is a three-item version of the Cognitive Reflection Test (CRT), which is used as a measure of individual differences in analytic thinking. The number of correct responses to these three questions will be summed together to create a score ranging from 0 to 3.

Question Set 2.

The study is correlational. Key variables are vaccine hesitancy (single item scale), CRT (sum of three items), trust (sum of nine-item scale).

4) How many and which conditions will participants be assigned to?

Question Set 1. As noted above, question set 1 has two conditions ("accuracy" and "sharing"). Participants are assigned to these conditions at random.

Question Set 2. As noted above, question set 2 is correlational.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.

Question Set 1. There are three primary tests:

1) We will use Pearson's correlation to correlate CRT performance with either perceived accuracy or sharing (depending on the condition) separately for misinformation and information. We predict people higher in CRT will have lower accuracy and sharing ratings for misinformation, and higher accuracy and sharing rating for information. The CRT appears in the "primary study" (see below).

2) We will also compute difference scores (based on z-scored means): 1) information minus misinformation for perceived accuracy ("accuracy discernment"), and 2) information minus misinformation for sharing ("sharing discernment"). We will use Pearson's correlations to test two predictions: 1) people higher in CRT will have greater accuracy discernment and 2) people higher in CRT will have greater sharing discernment.

3) In a mixed design ANOVA, mean proportion of "yes" responses will be entered in the following design: 2 (Condition: Accuracy, Sharing) x 2 (Type: Misinformation, Information).

Question Set 2. We use Pearson's correlation to test two hypotheses: 1) high CRT score is associated with low levels of vaccine hesitancy and 2) high trust in federal government is associated with low levels of vaccine hesitancy.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

Question Set 1 and Question Set 2. There are two attention checks in the Multisite Study. Participants will be removed from all analyses described in this pre-registration if they fail either of them.

Participants with missing data for variables being analysed will have their data removed prior to analysis

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.

Question Set 1 and Question Set 2. 2000 participants will be requested from Lucid as part of a very large “Multisite Study” on COVID-19 led by Jay van Bavel (NYU) that includes samples from numerous countries. Requests to Lucid for a particular number of participants usually results in some degree of oversampling -- all additional participants beyond what was requested will be retained for analysis.

Participants first complete the Multisite Study. Next Australian participants are assigned at random to one of two groups that are presented with a different series of questions: Group A (examined in pre-registered analysis plan here) and Group B (not examined in pre-registered analysis plan here, but will appear in exploratory analyses). Consequently, we anticipate that approximately 1000 participants will be assigned to Group A.

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.