Study 4 - Conspiracy mentality and vaccination (#49617)

Author(s)
Kevin Winter (IWM Tübingen) - k.winter@iwm-tuebingen.de
Lotte Pummerer (IWM Tübingen) - l.pummerer@iwm-tuebingen.de
Kai Sassenberg (IWM Tübingen) - k.sassenberg@iwm-tuebingen.de

1) Have any data been collected for this study already?
It's complicated. We have already collected some data but explain in Question 8 why readers may consider this a valid pre-registration nevertheless.

2) What's the main question being asked or hypothesis being tested in this study?
Research question: Does conspiracy mentality reduce the impact of subjective norms on vaccination intentions?
Hypothesis: The positive relationship between perceived subjective norm to vaccinate and vaccination intention is weaker, the stronger people's conspiracy mentality is.
Alternative hypothesis: Conspiracy mentality negatively predicts the perceived subjective norm to vaccinate which in turn (positively) predicts the vaccination intention.

3) Describe the key dependent variable(s) specifying how they will be measured.
Main DV: Intention to get vaccinated against influenza in the current season measured with 1 item "How likely do you think it is that you will be vaccinated against the flu this season?" (0% = "I will certainly not get vaccinated against the flu" to 100% = "I will definitely get vaccinated against the flu") plus a check-box for "I have already been vaccinated against the flu" which will be coded as 100%. In case of a bimodal distribution of the resulting index, we will apply a rank-based inverse normal transformation.

4) How many and which conditions will participants be assigned to?
No experimental conditions, only measured independent variables:
- IV1: Conspiracy mentality (12 items from Imhoff & Bruder, 2014; 7-point scale; measured 6 months earlier with the same sample = T1)
- IV2: Subjective norm (1 item): "People I care about probably think I should get vaccinated against the flu this season." (1 = do not agree at all, 7 = do fully agree) measured in the upcoming questionnaire together with the DV (T2)

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
To test our hypothesis, we will conduct a multiple regression analysis with vaccination intention (T2) as dependent variable. Conspiracy mentality (T1) and subjective norm (T2) as well as their interaction will be entered as predictors. Both independent variables will be mean-centered prior to analysis. Attitude toward vaccination against the flu (3 items, 7-point scale) and perceived behavioral control (1 item, 7-point scale) will be added as covariates to test the full theory of planned behavior.

The alternative prediction will be tested with PROCESS model 4 (Hayes, 2013). Dependent variable: vaccination intention; mediators: subjective norm, attitudes towards vaccination, behavioral control; independent variable: conspiracy mentality.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
Requirements for inclusion:
- fluent in German (language-sensitive materials)
- no psychology students or psychologists
- no chronic illnesses that speak against getting a vaccination
- successfully completing attention check (1 item)
After excluding participants according to these criteria, data will be checked for outliers using studentized deleted residuals (SDR) from the multiple regression described under (5). Participants with an absolute SDR > 2.59 will be regarded as statistical outliers.

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 are inviting N = 393 participants who filled in a questionnaire 6 months earlier.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)
Explanation to question 1: The first wave of the longitudinal study has been collected. Data collection for the second wave has not started yet. We are preregistering analyses and other details for the second wave here.

Exploratory measures:
- We will assess perceived societal norms with one item ("Most people will probably get vaccinated against the flu this season", 7-point scale) and test it as

a moderator instead of perceived subjective norm.

- We will assess the general attitude toward vaccination (5 items; 7-point scale) and test it as a moderator instead of the specific attitude toward vaccination against the flu.

- We will assess self-reported critical thinking abilities (3 items from Lantian et al., preprint; 7-point scale) in order to explore its mediating role in the hypothesized effect.

- We will assess conspiracy mentality (same scale as under 4) at T2 and test it as a moderator instead of conspiracy mentality from T1

- Country of residence

- Recommendation of flu vaccination by employer

- Previous vaccinations against the flu and potential negative outcomes

- Influence of corona-pandemic on attitude toward flu vaccination

The study will be conducted in German.