Exploration Experiment (#32541)

Author(s)

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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?

H1: We will test whether participants in a confirmatory mindset (vs. control) will be less likely to seek results outside of those that would confirm their prediction (i.e., to seek the results of an interaction, as opposed to simply the predicted main effect).

H2: We will test whether participants in a confirmatory mindset (vs. control) will be less likely to (a) discover an interaction effect and (b) report this interaction effect in their write-up.

H3: We will also test whether reminding those placed in a confirmatory mindset, that they can still explore the data (i.e., that pre-registering one's hypotheses does not mean you can't conduct exploratory analyses), mitigates the effects above.

H4: We predict that these effects may be stronger among participants who received their PhD after 2011 (when significant discussions about open science started to emerge in social psychology; Bem, 2011).

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

Participants will be provided with information about a dataset and with a list of potential analyses they could run on the data. They will be asked to select all analyses that they would like to view the results of. Then on the next page they will see these results, and be asked to select which results they would like to report in the final write up. Our key dependent variables will be:

1. The number of analyses that participants select to view from the list (H1; H3)

2. Whether participants select that they want to view the results of a 2x2 ANOVA investigating the interaction of gender X yoga on happiness (0=no; 1=yes) (H2; H3)

3. Whether participants select that they would report the results of the 2x2 ANOVA investigating the interaction of gender X yoga on happiness (0=no; 1=yes) (H2; H3)

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

Participants will be randomly assigned to one of three conditions:

• Control = Participants will read about the dataset and then complete the hypothetical data analysis task.

• Confirmatory = Participants will read about the dataset, then read over and click to 'submit' a pre-registration for this dataset. This pre-registration will specify that the main analysis is a t-test looking at differences in happiness by yoga. Then participants will complete the hypothetical data analysis task.

• Confirmatory + exploration reminder = Participants will read about the dataset, then read over and click to 'submit' a pre-registration for this dataset. This pre-registration will specify that the main analysis is a t-test looking at differences in happiness by yoga. Then participants will complete the hypothetical data analysis task. While completing this task, participants will see a note at the top of the page that reads "REMEMBER: Pre-registering doesn't mean you can't explore the data!"

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

To examine our main hypotheses, we will conduct three primary analyses:

1. We will conduct a negative binomial regression predicting the number of analyses that participants selected to view from the list from their assigned condition.

2. We will conduct a binary logistic regression predicting whether or not participants selected that they wanted to view the results of the 2x2 ANOVA from their assigned condition.

3. We will conduct a binary logistic regression predicting whether or not participants selected to report the results of the 2x2 ANOVA from their assigned condition.

For all of the above analyses we will conduct special contrast comparing confirmatory vs. control (to address H1 and H2) and exploratory vs. confirmatory and exploratory vs. control (to address H3).

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

None.

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 send this survey link to an email list containing approximately 7,000 emails. We will also post this to the SPSP Student group, ACR and AOM listservs. We will consider all responses collected within 1 week from posting this survey to the email groups to be our sample size.

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

We will also investigate whether there is a significant interaction between condition and whether participants received their PhD before vs. after 2011 (when significant discussions about open science started to emerge in social psychology; Bem, 2011) for these effects.

Further, we will explore additional potential moderators:

• Demographic characteristics (gender, years since PhD, current role)

• Exploration anxiety (6-item scale)

• Pre-registration practices (% of studies pre-registered)

We will also conduct our primary analyses on the sub-group of participants who report that one of the primary methods that they use in their research is experiments (lab or field).

NOTE: We are submitting this pre-registration within hours of posting our survey to the SPSP student group. Thus, we have a few observations at the time of submission, but we will not look at the data until data collection is complete.