Dear authors,

Thank you for your submission of this Stage 1 Registered Report, where you outline your plans to conduct a replication study of Lerner and Keltner (2001), with the aim to replicate the findings that those who are angry tend to seek out risk and make more optimistic judgments (similar to happy individuals’ optimistic judgment), while fearful individuals tend to be risk averse and make pessimistic judgments.
I’m pleased to see more replication studies in recent years and have looked forward to reviewing yours. Overall, it looks like a well-thought-out design, with some proposed changes to optimize the study where details of the original study were unavailable or would not suit the proposed work. You have provided much detail that benefits both the reader and those interested in replicating this or another study. In my response, I have included some suggestions and comments that I believe will add to the quality of the work and/or are worth considering before commencing the data collecting of this project. In the top are comments/suggestions that require more consideration, with smaller comments/suggestions below that.

With best wishes,

Kelly Wolfe

**Larger comments/suggestions**

1. Under the assumption that you contacted the authors of the original works, the outlined decisions in the manuscript seem reasonable, considering that the original paper does not mention, or make available, many details on its materials (such as the items chosen for aggregated scores). However, a change in the study’s population will provide a different sample from the original study (which had a student sample). Especially considering the COVID-19 pandemic, I see the benefit of using MTurk in terms of the ease (and safety) of collecting data, but I worry that this causes the proposed study to navigate further from its *close* replication effort. I understand that collecting a student sample of 700 is likely not possible due to the current circumstances as well as the replication study being an undergraduate project. Instead, I suggest that the authors consider imposing some further requirements to make the sample more alike to the sample of the original paper, specifically concerning age. This could be in the form of an age range, or a cut-off age (based on median or mean age of US undergraduate students). I did see that participants over 40 years old are excluded at present, but that may still lead to a sample with a higher (mean) age than the original sample.

2. In the manuscript, you propose altering the Asian Disease Problem (Tversky & Kahneman, 1981) to a generalized Pandemic Problem, using larger numbers in the choice options: “*We also adjusted the original estimates of people saved or killed by 1000 times, given that under the current COVID pandemic the original estimate of 600 people killed may not be regarded by our participants to be a true pandemic related decision”.* However, I’ve read some studies that show that the Asian Disease Problem yields similar findings as prior to the pandemic (for example, see <https://www.sciencedirect.com/science/article/pii/S0925753520304628#s0050>). As such, I am wary of changing one of the core materials used in the original study, and would advise not to, unless there’s evidence to support the proposed change.

3. On page 27, in paragraph 3, you describe the following: *“In addition, we added a question checking participants’ familiarity with the framing effect question, and we excluded those indicating previous experience from analyses on that question”.* Considering that the Asian Disease Problem is a commonly used method to assess framing effects, it is likely that participants on MTurk will recognize those type of questions from prior studies. My concern would be that having a set sample size of 700 could lead to you having to remove the data of many participants, resulting in a smaller sample size than expected. Instead, I suggest specifying that you will collect more data if you find that the required exclusions lead to a sample size smaller than you require. If I have misunderstood (i.e., you meant that the sample size is n = 700, after data subject to exclusion has been removed), please let me know, and clarify this in the manuscript.

**Smaller comments/suggestions**

4. p.12, paragraph 2. *“Study 2 showed that the more fearful and happy tend to be more optimistic compared, whereas the angrier tend to be more pessimistic.”* Fearful and angrier should be reversed in this section; in the original paper, it was found that angry was associated with optimism instead of fear.

5. p.16, paragraph 1. You discuss the calculated power in this section and mention having done a sensitivity analysis. Please specify the method you used to calculate this (e.g., GPower, data simulation with pilot data, et cetera).

6. p.16, paragraph 1. The sample size for this study has been increased compared to the original study, but it is unclear what informed this sample size. For example, did you include an expected percentage of excluded data based on your pilot study (e.g., say, 10% of data in the pilot was excluded so the same percentage is applied in the calculation of the study’s sample size), or are you applying a standard additional percentage to your sample size calculation (not informed by your pilot, but perhaps by prior experience)? Please include this in the manuscript.

7. p.21. Please report the reliability of the included measures (based on prior research), where possible.

8. Supplementary materials, p.15, specific criteria 3. “*Participants who reported they were aged 40 or above. The responses for the item “having a mentally gifted child” in the optimism measure will be excluded (Wong et al., 2019).”* This is unclear to me. Can you explain how the age exclusion relates to this item?