**Appendix 2**

The survey included an experimental component examining the impact of a) priming and b) alternative phrasing of the invitation to participate (with two levels), resulting in a 2 x 2 x 2 factorial design.

The first factor was the presence or absence of priming for helping others. Prior to being presented with the hypothetical research study, respondents were randomized to receive either the priming question: *“How important is it for you to help people?”* or the control question *“How important is it for you to get cutting edge treatment?”* We hypothesized that participants who received the priming question about helping others would be more likely to participate in research if the study was introduced as a means of helping others.

The description of the hypothetical research study and the final doctor’s statement were presented via an audio-recording to avoid the potential reading burden. Participants who indicated they could not hear it clearly were presented with the description in text.

The description of the hypothetical study was as follows:

*Imagine you are hospitalized with COVID-19. You have been in the hospital for 5 days and you are getting sicker. You have a high fever. You need tubes in your nose to get enough oxygen. Today, a new doctor tells you about a research study of a medicine that might work for COVID-19. The doctor explains that many patients take this medicine for other problems. Doctors do not know if it will work for COVID-19. Some small studies suggest it might help. However, there is a risk the medicine may cause complications. For example, you could get a urinary tract infection. After answering your questions, the doctor says….*[randomly assigned to one of four versions of statements described below]

Respondents were randomized to one of four versions of the doctor’s final statement (presented via audio-recording) that tested (1) two different approaches to addressing common reasons not to participate in a research study (not trusting the medical system and the burden of participation) and (2) two different approaches to framing the benefits of participation (helping others and accessing medicine that might help). The statement included two parts: 1) statement of empathy which acknowledged either a) the existence of reasons not to trust the medical system or b) that research participation can be difficult and 2) reference to potential benefits of research participation as either a) altruistic (“*a good way of helping others”*) or b) possibly helping oneself *(“a good way to get access to a medicine that might work”*) Crossing these two factors resulted in the following four statements:

1. *“I know there have been reasons* ***not to trust*** *the medical system but taking part in this study is a good way to* ***help others*** *by finding new treatments for COVID-19.”*
2. *“I know there have been reasons* ***not to trust*** *the medical system but taking part in this study is a good way to get* ***a medicine that might work*** *for COVID-19. This medicine is only available to people with COVID-19 if they are in the study.”*
3. *“I know taking part in a* ***research study can be difficult*** *but taking part in this study is a good way to* ***help others*** *by finding new treatments for COVID-19.”*
4. *“I know taking part in a* ***research study can be difficult*** *but taking part in this study is a good way to get* ***a medicine that might work*** *for COVID-19. This medicine is only available to people with COVID-19 if they are in the study.”*

Respondents were then presented with the question, *“Based on the information you have so far, which way are you leaning right now?”* Response options were:

*STRONGLY leaning AGAINST taking part in the study.*

*SOMEWHAT leaning AGAINST taking part in the study.*

*SOMEWHAT leaning TOWARDS taking part in the study.*

*STRONGLY leaning TOWARDS taking part in the study.*

This was followed by an open-ended item: *“Why are you leaning that way?”*

We hypothesized that each of the experimental manipulations would affect respondents’ attitudes about participating in the hypothetical study (main effects for each of the 3 variables: priming, empathy, and benefit). We also hypothesized that those who had received the priming question referring to helping others would be more likely to lean towards participation if the physician mentioned the potential for helping others (the priming by benefits interaction). In addition, we hypothesized that respondents who had expressed a lack of trust in the healthcare system would be more likely to lean towards participating if the provider acknowledged reasons to not to trust the medical system (empathy by trust interaction).

**Statistical Analyses**

Consistent with the approach described in the main body of the paper, we removed participants who provided a text response to the open-ended item about research participation that was discordant from their response to the close-ended item (“*which way are you leaning”)*. Also consistent with the analyses described in the body of the paper we dichotomized the responses to the *“which way are you leaning”* item to reflect leaning towards versus leaning against.

We used logistic regression to test the main effect of the three experimental factors (priming, empathy, and benefit), in models with and without the two interaction terms of interest. We also constructed models with and without adjusting for respondent characteristics and attitudes included in the multivariate models predicting participation as reported in the main paper.

**Results**

The results of the four multivariate logistic regression models investigating the impact of the experimental manipulations are presented in **Supplemental Table 1**. We did not detect an impact of any of the three manipulations. We also found no evidence of an interaction between priming for helping others and whether the hypothetical physician’s statement referred to helping others, or between the respondent’s reported level of trust in medical care and the hypothetical physician’s statement that there are reasons not to trust the healthcare system.

**Supplemental Table 1**. Logistic Regression Models Predicting Intent to Participate in Hypothetical Research Study

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Model 1**  **Main**  **Effects unadjusted** | **Model 2**  **Add interactions**  **unadjusted** | **Model 3**  **Main effects**  **adjusted\*** | **Model 4**  **Add interactions**  **adjusted\*** |
|  | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) |
| Priming |  |  |  |  |
| Help others | Ref | Ref | Ref | Ref |
| Cutting edge treatments | 0.86  (0.67, 1.11) | 0.82  (0.57, 1.18) | 0.89  (0.67, 1.19) | 0.87  (0.58, 1.31) |
| Empathy |  |  |  |  |
| Reasons not to trust | Ref | Ref | Ref | Ref |
| Research participation is difficult | 0.93  (0.72, 1.20) | 0.61  (0.25, 1.50) | 0.82  (0.62, 1.09) | 0.41  (0.15, 1.12) |
| Benefits |  |  |  |  |
| Help others | Ref | Ref | Ref | Ref |
| Way to get medicine that may help | 1.04  (0.81, 1.34) | 1.01  (0.71, 1.45) | 1.08  (0.82, 1.43) | 1.06  (0.71, 1.58) |
| Priming by Benefits Interaction |  | 1.10  (0.66, 1.83) |  | 1.05  (0.59, 1.86) |
| Empathy by Trust in the Healthcare System Interaction |  | 1.17  (0.86, 1.58) |  | 1.28  (0.91, 1.80) |

\**Adjusted models include Age, Race, Ethnicity, Gender, Education, Political affiliation, “Depend on doctor’s advice”, “Depend on certain friends and family”, “trust in the healthcare system” , “Have someone help read medical materials”, and survey mode (online or phone).*