Paper Critique

Lu, Yao, Neeraj Kaushal, Xiaoning Huang, and S. Michael Gaddis. "Priming COVID-19 Salience Increases Prejudice and Discriminatory Intent against Asians and Hispanics." *Proceedings of the National Academy of Sciences* 118, no. 36 (September 7, 2021): e2105125118. https://doi.org/10.1073/pnas.2105125118.

1. Summary

Since its outbreak in early 2020, the COVID-19 pandemic has fueled prejudice and discrimination against racial/ethnic minorities, which has raised global concerns. Apart from the spike of self-reported incidents related to harassment, insults, and hate crimes since the March 2020, the study of Lu et al. attempted to address whether the pandemic increased the less visible, everyday forms of social discrimination against Asians in United States.

To answer this, the study examined the treatment effect of the salience of COVID-19 on prejudice and discriminatory intent towards a hypothetical roommate, where the roommate was randomly selected from one of the major racial/ethnic groups, namely: Whites, Blacks, Hispanics, and Asians.

In the national representative survey launched in August 2020 (n = 5,000), the study found that:
1. The COVID-19 pandemic exacerbated prejudice and discrimination against those of East Asian background (the group that is typically associated with the origin of COVID-19), and that
2. The COVID-19-fueled prejudice and discrimination extends beyond East Asians to South Asians and Hispanics (groups who are often perceived as "foreign") as well. In other words, the authors found that, as a consequence of the COVID-19 pandemic, xenophobic sentiments have elevated more broadly.

2. Methods

2.1 Sampling and Randomization

The survey was conducted online and included 5,000 American adults. The survey was completed in August 2020, a period when the pandemic had spread across the U.S. and was still on the rise. YouGov, a large market research firm, administered the online survey. The sampled participants were weighted using propensity scores to ensure representativeness of the U.S. adult population.

The researchers of the study referred to their randomization procedures as "two-layer". The first layer is the randomization of the treatment and control group; the second layer is the randomization of race/ethnicity group specified names, which were embedded in the roommate-seeking experiment vignette. The names (see Table 1, row c) were selected by examining population-based racial/ethnic naming patterns using New York State birth record data (First Name) and U.S. census data (Last Name). It was not explained why New York State patterned first names were chosen for a national representative study.

2.2 Survey Procedures

The intervention is the priming of a COVID-19 salience vignette text (see Table 1, row a) which described the infections and mortality caused by the COVID-19 pandemic by August 2020. The treatment group was assigned to read the salience vignette text at the start of the survey, while in the control group this was not included. Both treatment and control groups will answer questions related to the impact of COVID-19 on their life. Then, both the groups will read the roommate-seeking email experiment vignette and an email from the hypothetical roommate of a certain racial/ethnic group. The survey respondent is then asked to evaluate the hypothetical roommate candidate on attitude-related questions. The last part of the survey collected the demographic information of the subjects, including race, education level, income, party identification, and geographic residence.

1a. COVID-19 Salience Vignette Text (treatment group only):	"The novel coronavirus, COVID-19, is a global pandemic. By August 3, 2020, worldwide over 18.3 million individuals have tested positive for COVID-19 and 694,235 have died. The United States is one of the hardest hit countries in terms of infections and mortality, with over 4.8 million infections and 158,495 deaths as of August 3. We would like to ask you a few questions about how the pandemic impacted your life."
1b. Roommate-seeking Email Vignette Text	"Now, we would like you to imagine yourself in the following situation. You have decided that you want to move to The Big City and have found full-time employment there. Unfortunately, rent costs are high and buying a new place right now is completely out of the question. You will have to live with a roommate -- you will each get your own bedroom and bathroom but you will still share common areas. You do not have any existing friends or connections in The Big City so your new roommate will have to be someone new to you. You place an ad on a popular website to find a new roommate. You received the following email in response to your ad: Hello, I'm responding to your ad about a roommate. I'm a mid-twenties male/female, a recent college graduate, and am employed full-time. I'd love to chat and meet you. Please let me know if you are still looking for a roommate.

	Thanks! [Name]"
1c. Roommate Vignette Names Male/Female (Race/Ethnicity) Notes: Names were matched with the genders of the respondents and were randomized within each experimental group.	Matthew / Melany McGrath (White) Tyrone / Tyra Washington (Black) Fernando / Camila Vasquez (Hispanic) Michael / Mindy Patil (South Asian, American) Aditya / Anjali Patel (South Asian, Immigrant) Brian / Winnie Chen (East Asian, American) Peng / Jian Chen (East Asian, Immigrant)

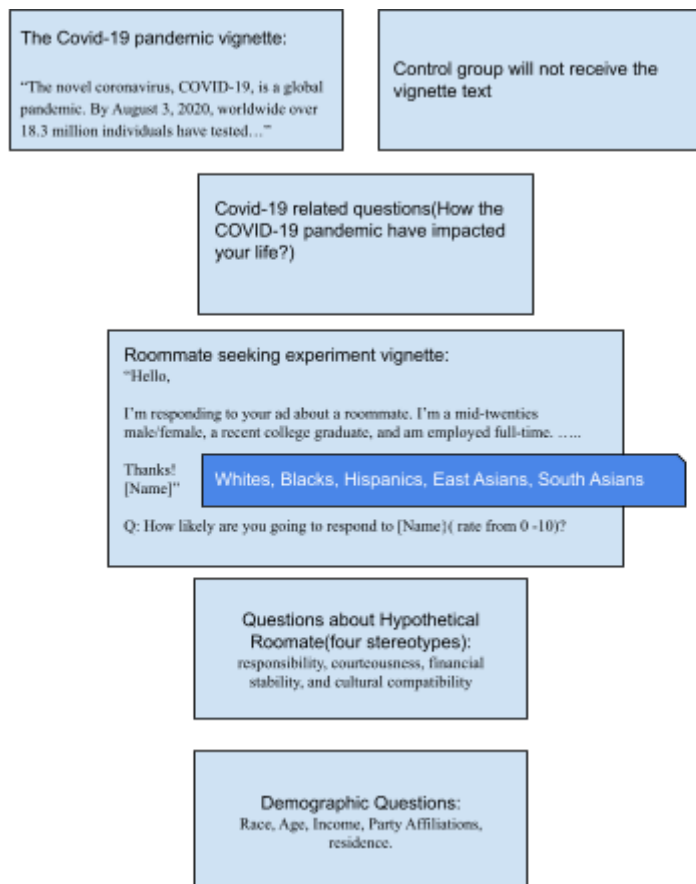Table 1. Vignette Texts in the survey.

Figure 1. The Flow of the Survey

3. Results

The findings of the treatment effects based on the Vignette Experiment showed: compared to the control group, individuals in the treatment group exhibited greater discriminatory intent against three racial/ethnic group. Also, participants in the treatment group were more likely exhibit extremely unfavorable attitudes towards both Asian groups and Hispanic.
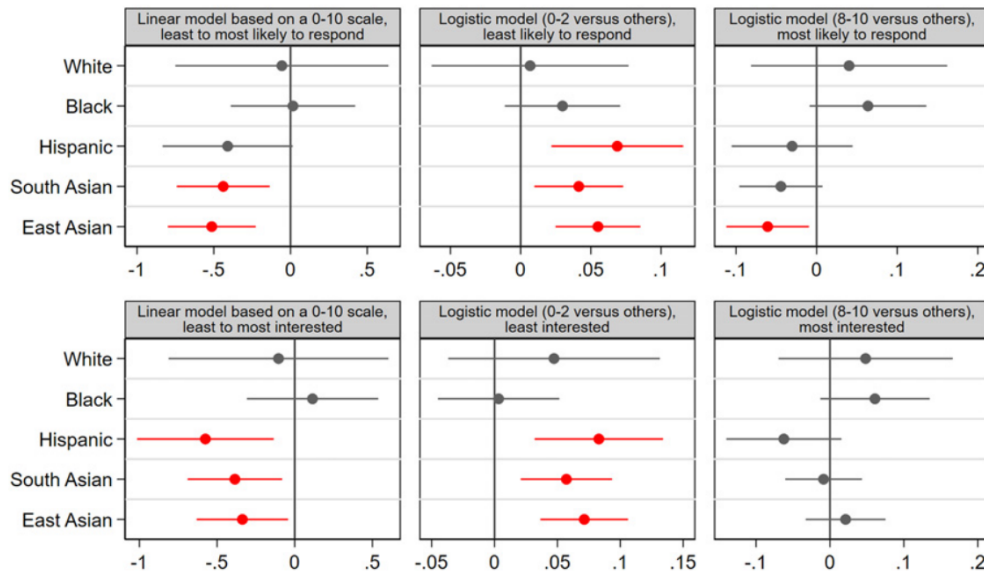

Fig. 2. Each Point is based on a different regression model and provides the treatment effect with 95% confidence interval. The first column presents coefficients based on linear regressions. The second and third columns present the average marginal effects based on logistics regressions. The sample excluded respondents of the same race/ethnicity as the hypothetical room-seeker.

The study also included a formal mediation analysis to investigate the role of the four stereotypes(responsibility, courteousness, financial stability, and cultural compatibility) as mediators in explaining the overall treatment. The researchers performed a multiple-mediator analysis using simultaneous equations and corrected the SEs using bootstrapping and biased-corrected confidence intervals. One alarming issue of the mediator analysis is the mediators are post-treatment variables, which are not randomly assigned factors. The conclusion of the mediator effect may end up with bias.

4. Discussion

One of the primary concerns about this experiment is about how strong the intervention is. Whether the subject reads the vignette text or not, all the subjects in the study are exposed to the pandemic. The researchers indeed mentioned this issue in the paper and stated that the true influence of the pandemic in shaping racial attitudes might be underestimated. However, despite the weak intervention, it is impressive that the COVID-19 salience vignette text still generated a significant treatment effect.

Secondly, the roommate-seeking vignette design assumed that the participants would correctly perceive the race/ethnicity from the names. The researchers provided a thorough explanation of how the names were selected and formed. In addition, they cited evidence in prior research as proof of the validity of this approach. However, there were not any manipulation checks mentioned that verified whether the subjects in this study correctly perceived the racial implications of the names. This issue could be resolved by adding a question at the very end of the survey, or in a follow-up survey. If the survey participants did not correctly perceive the race/ethnicity of the roommate as expected, any measurement of biased attitudes may be undermined.

The survey also didn't include any analyzed heterogeneity of the treatment effect. We can argue that detecting heterogeneity treatment effects is not part of the research question. However, from the dataset, pre-treatment variables about the COVID-19 pendamics' impact on the participants' life were not included in the regression analysis. It's worthy to raise some questions about heterogeneity treatment effects related questions. For example, whether getting the COVID-19 or having closed contacts getting/die from the COVID-19 yield different treatment effects.

The study used roommate-seeking as a scenario as an example of "everyday" social discrimination. It is a situation that may not have been immediately relevant or relateable to all the respondents. The authors of the study stated their reason for the choice of this scenario: first, nearly 6% percent of United States adults currently live with unrelated roommates who are not their romantic partners, and the total number of people who have had similar experiences are much higher. Second, most people have opinions about who they would like to get close to. As a conclusion, the researchers imply that the roommate-seeking scenario is relatable enough for most people and therefore indicative to other potentially discriminatory behavior (or lack thereof). However, the authors didn't state any theoretical or empirical evidence to support this belief.

5. Conclusion and Future Work

Overall, the experiment in this study is designed and conducted in response to the urgency. Despite its limitations, the study still provided valuable early evidence of COVID-19 related prejudice and discrimination. At the time the study was conducted, in August 2020, it was one of the few experimental studies in this domain. To capture the attitude change nowadays, I suggest launching another survey with some modifications of the original survey design.
The COVID-19 vignette should be more up to date. After almost three years learning to live with the pandemic, people may have grown insensitive towards case rates and mortality statistics. Instead, the treatment vignette could adapt to a format of news headlines and photos, which could also simulate how people consume news.

The researchers also clarified that the main focus of the study is to demonstrate negative attitudes towards minority groups in more subtle everyday life circumstances. The roommate

scenario offers a concrete and easily-understood circumstance for the participants to think about their attitudes. In reality, the prevalence of the COVID-19 related prejudice likely varies in different social settings, which remains unexplored. We weren't given any explanations of the mechanism underlying the findings in the roommate seeking vignette experiment, and it's unclear how generalizable they are in other everyday social settings. In addition, it is also crucially important to study how these subtle biases in daily life accelerate into aggression and hostile hate-crimes in public space.