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## Reporting Null Results

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# Improving Attitudes Toward Refugees in Jordan

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# Null Results Report: Improving Attitudes toward Refugees in Jordan

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# 1 Introduction

Millions of refugees and other migrants have left their home countries in recent years, and they have often faced hostility and backlash in their new homes. This problem underscores the need for additional research on attitudes toward migrants, particularly in countries that are close to conflict zones and host the most refugees. We implemented a survey in Jordan to test strategies for changing attitudes toward Syrian refugees in the country, which currently hosts over 600,000 registered refugees from Syria’s civil war.

Our focus on attitudinal change builds on recent innovative work examining the efficacy of strategies to generate greater openness toward migrant populations (e.g. Facchini et al. 2016; Adida et al. 2018). We designed an experiment to study the impact of small interventions for promoting generosity on attitudes toward refugees, with the interventions and associated mechanisms grounded in the literature on what motivates charitable giving (Bekkers and Wiepking 2011). Specifically, we attempted to improve attitudes toward refugees by priming Jordanians to think about the struggles and needs of Syrian refugees, to feel a “warm glow” associated with their country’s generosity toward Syrian refugees, and to reflect on religious values and their implications for how to treat Syrian refugees.

## 2 Research Design

**Sample:** The survey was implemented by the Center for Strategic Studies at the University of Jordan with a nationally-representative sample of 1,200 Jordanian citizens, in addition to a sample of 300 Jordanians in areas with high refugee density. See the online for details on the sampling process.

**Study Design:** Randomized Experiment. Respondents were randomly assigned with equal probability to a control group or one of three treatments associated with the generosity-inducing mechanisms of: awareness of needs; joy of giving; and religious values. Each treatment included a short paragraph of text followed by a video of approximately two minutes. For **awareness of needs**, respondents read information and watched a video about the suffering experienced by Syrian refugees. For **joy of giving**, respondents were given a thank you note from a Syrian refugee child and watched a video about the gratitude Syrian refugees felt for Jordanians. For **religious values**, respondents read an interpretation of the Quran advocating for generosity toward refugees and listened to a recitation of verses on this subject. The full treatments are shown in the online appendix.

**Hypotheses:** We tested the following primary hypotheses:

- **Awareness of Needs:** Respondents who receive the needs treatment will exhibit more positive and generous attitudes toward Syrian refugees.
- **Joy of Giving:** Respondents who receive the gratitude treatment will exhibit more positive and generous attitudes toward Syrian refugees.
- **Religious Values:** Respondents who receive the values treatment will exhibit more positive

and generous attitudes toward Syrian refugees.

We also pre-registered additional hypotheses about moderating variables that we do not focus on here, but for which details and results can be found in the online appendix.

**Outcomes:** Following these treatments, respondents were asked a series of questions to measure their: (a) attitudes toward Syrian refugees, (b) views of how Syrian refugees have impacted various aspects of Jordanian society, (c) support for refugee-related policies, and (d) behavioral generosity toward refugees. We use principal components analysis to create an aggregate outcome measure consisting of all of these questions, and then additional measures for the four categories of attitudes, impact, policy, and behavior. See the online appendix for details on the outcome measures. The principal components were normalized to have mean = 0 and standard deviation = 1.

### 3 Results

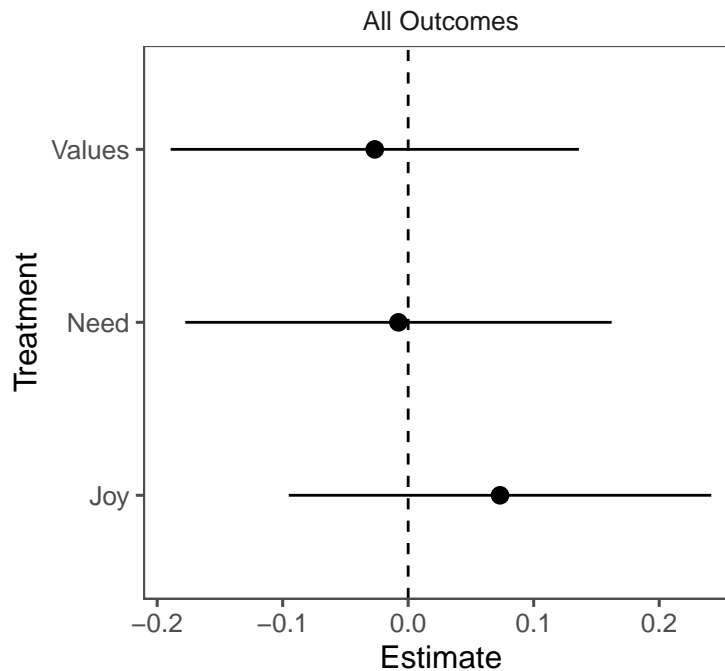


Figure 1: Coefficient plot showing the effect, point estimate and associated 95% confidence intervals, of each treatment on the first principal component of all outcomes.

Results for the aggregate measure across all outcomes are shown in Figure 1, and results for the aggregate attitudinal, impact, policy, and behavioral outcomes are shown in Figure 2. None of the treatments produced significant effects as a whole or for any of the four subcategories. **Joy of giving** generated a slightly positive but not significant effect (see Figure 1), while **awareness of need** and **religious values** resulted in fairly precisely estimated null effects. These patterns were similar across the four outcome categories (see Figure 2).

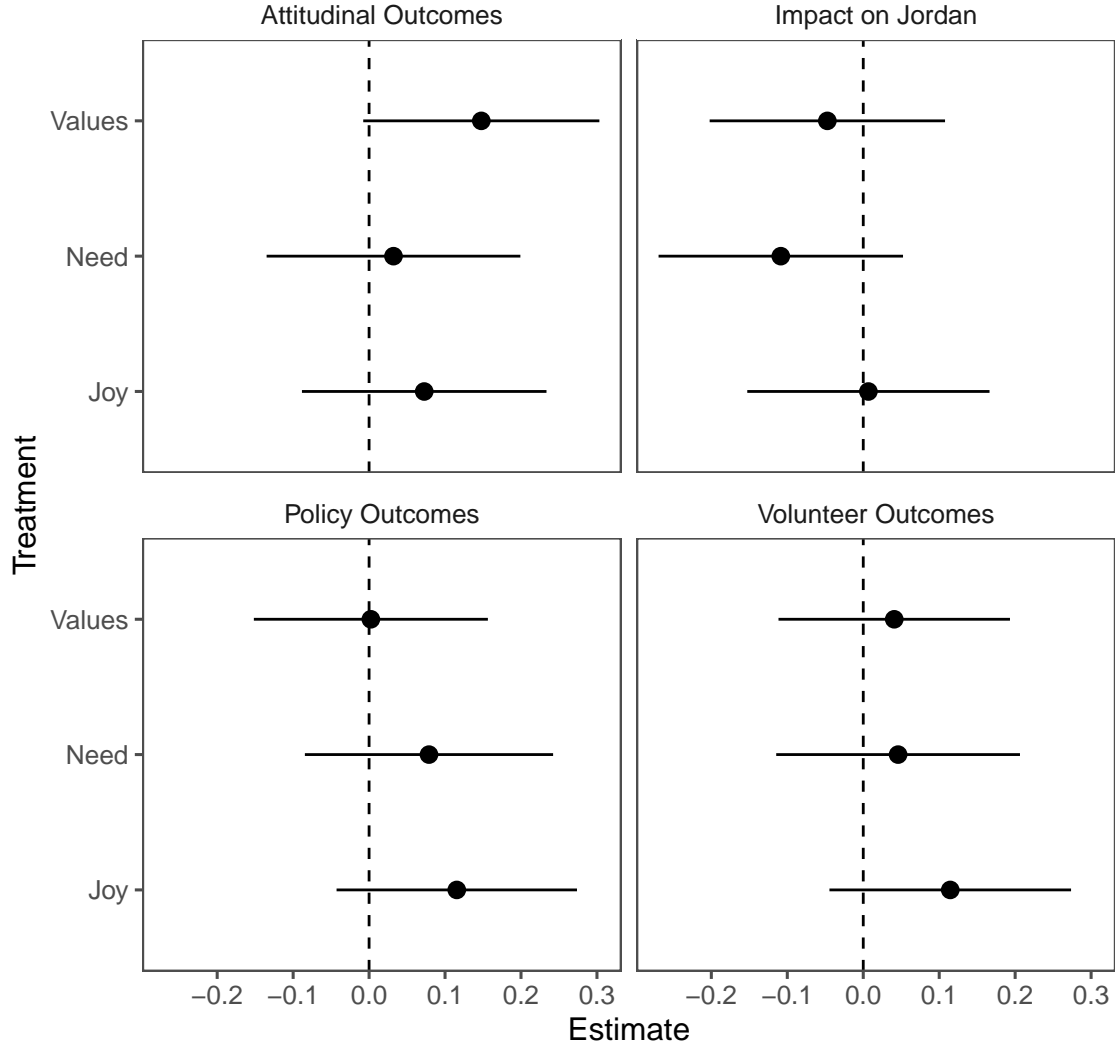


Figure 2: Coefficient plots showing treatment effects, point estimate and 95% confidence intervals, on (1) the first principal component of attitudinal outcomes, (2) the first principal component of respondents' view of the effect of Syrian refugees on Jordan, (3) the first principal component of policy outcome questions, and (4) the first principal component of the two behavioral outcome questions.

## 4 Interpretation

We consider several possible explanations for these findings, covering both methodological and theoretical issues. While we cannot say with certainty why the study returned insignificant results, our evidence suggests that some of the explanations are more credible than others.

### Methodological Explanations

- **Power:** First, it is possible that our face-to-face survey was underpowered. We performed

power calculations that suggested an adequate sample size, and the precisely estimated null effects for **awareness of need** and **religious values** with the aggregate outcome are not indicative of issues related to power (See the online appendix for the power analysis). However, **joy of giving** may have been significant with a substantively larger sample (assuming that the point estimate would remain the same).

- **Measurement:** We do not believe that our results can be explained by imprecise measurement. We included outcome measures that are typical for studies of attitudes toward migrant populations. The use of PCA should also minimize issues associated with noisy measurement.
- **Treatment Design:** There is some possibility that our experiment returned null results due to issues with the implementation of our research design. Survey enumerators reported that respondents often appeared bored and distracted during the videos, which ran for approximately two minutes. While we were able to verify that enumerators were not skipping the videos, it may be that the length of the treatment, or the context in which it was delivered, actually inhibited the message.
- **Spillover:** It is not plausible that spillover from the treatment to the control group could explain our results. Enumerators traveled to neighborhoods, towns, and villages across Jordan to administer the face-to-face survey. While the treatment was assigned at the respondent/-household level, it is very unlikely spillovers from one household to another are responsible for the null effects.

## Theoretical Explanations

- **Differential Effects on Outcomes:** Some of our outcomes appear to have been more affected by the treatments than others. While these results remain insignificant, it is noticeable that effects were generally positive for the attitudinal, policy, and behavioral outcomes, while they were negative or null for the impact outcomes across the three treatments. In hindsight, it is plausible that increasing generosity may not change individuals' assessments of how refugee waves have impacted their country, even if this generosity makes them more favorable toward refugees at the same time.
- **Difficulty of Changing Attitudes:** The treatments were designed to reflect theories about the factors that motivate generosity toward others. We believe it is important that our null findings should not be overinterpreted to call these theories into question, or to suggest that these factors cannot help to improve attitudes toward refugees. Rather, we interpret the results as evidence of the general difficulty of changing attitudes toward vulnerable outgroups, since individuals typically resist updating such attitudes (Tesler 2015). Given the small and insignificant but positive effects for **joy of giving** (and maybe for the other treatments on the outcome categories other than impact) it may be appropriate to consider the contexts in which similar interventions would produce relatively larger or smaller effects, rather than ruling out these approaches entirely.
- **Learning vs. Priming:** There are reasons Jordan may be a particularly difficult environment in which to improve attitudes toward refugees by priming generosity. For one, the magnitude of the crisis suggests that most Jordanians are already thinking about its many dimensions with some frequency. To speculate, it may be more useful in such a context to design interventions that generate new information or new frames through which to understand

the crisis, rather than priming respondents with information of which they may already be aware. Of all of our treatments, the video of Syrian refugees thanking Jordanians came closest to providing information that might be new to respondents, and likewise this treatment was only one that might be somewhat successful in shifting respondents' attitudes toward refugees.

- **Ceiling Effects:** As our findings from the control group show, Jordanians hold quite positive attitudes toward Syrian refugees, especially when considering the intensity of the refugee crisis and the extent to which Jordanian society has responded to the needs of refugees. Given these positive attitudes at baseline, it is possible that our interventions did not increase generosity in this context due to ceiling effects.

## 5 Implications and Next Steps

**Consistently Contradictory Findings:** The prejudice reduction literature, along with the subset of research focused on improving attitudes toward refugees and immigrants, is replete with contradictory effects from one-off interventions that evaluate different strategies for changing attitudes. As mentioned above, one general lesson this literature imparts is that prejudice reduction is difficult to accomplish. Our study supports this conclusion. Yet, plenty of research also suggests that attitudes can change, even if shifts are small. Some of our results are relatively consistent with this dynamic as well, even if effects are not statistically significant.

**Questionable Efficacy of Emotion-Based Interventions:** Another conclusion emphasized by the literature is that attempts to change attitudes by providing information about a minority or vulnerable group are less successful than strategies that seek to manipulate emotions (e.g. Adida et al. 2018). Our study, which sought to prime feelings of generosity, indicates that interventions rooted in emotions can also struggle to move attitudes in a meaningful way.

**Importance of Context:** Social science research testing the effectiveness of different prejudice reduction strategies has important implications for our theoretical understanding of outgroup attitudes and for the design of policies and interventions to counter it. However, the contradictory findings described above suggest that this literature should strive further to understand the contexts in which these strategies are likely to be effective. Yet, existing research has little to say on the conditions under which different strategies are more or less likely to work, and why.

**Need for Larger-Scale Studies:** Finally, if we accept that shifting attitudes is difficult but possible in small doses, we believe it is important to consider the fact that most social science experiments are done at a small scale. If our treatments had been implemented via repeated commercials on popular Jordanian television channels, and if they generated effect sizes similar to those observed in our face-to-face survey, would these still-tiny effects hold meaningful implications for attitudes toward Syrian refugees in the country? Perhaps so, and maybe even in a way that would justify expenses by the government and NGOs for such a campaign. In that sense, identifying substantively small effects on attitude change can still have important consequences for policies aimed at shifting public attitudes. A better understanding of these dynamics, however, would require significantly scaling up the kinds of interventions social scientists conduct.

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## 6 Appendices for Improving Attitudes toward Refugees in Jordan

### 6.1 Appendix I: Sampling Process

We used two-stage clustering to sample respondents. In the first stage, we randomly sampled 150 blocks across all of Jordan's 12 governorates. In the second stage, we conducted a random walk procedure to select 8 houses within each block. In addition, as thirty blocks were among Jordan's top quantile of refugee density areas, we recruited an additional sample of 300 people in each of them. In each surveyed household, respondents were identified using the next-birthday method.

### 6.2 Appendix II: Full Treatments

- **Control:** Some people think that the Jordanian government should focus on meeting the needs of its own citizens before hosting Syrian refugees. Others think that Jordan should host and assist Syrian refugees.
- **Awareness of Needs:** Some people think that the Jordanian government should focus on meeting the needs of its own citizens before hosting Syrian refugees. Others think that Jordan should host and assist Syrian refugees because they are in desperate need: over half of Syria's population has been displaced from their homes, and of those remaining in Syria, nearly 70% face daily hunger. Tens of thousands of Syrians have been killed by barrel bombs alone since the start of the conflict. We would now like you to watch the following two-minute video clip that describes the struggles one Syrian family has faced.

– Link: <https://www.youtube.com/embed/8iq-QWTUOSA?>

- **Psychological Benefits - Joy of Giving:** Some people think that the Jordanian government should focus on meeting the needs of its own citizens before hosting Syrian refugees. Others think that Jordan should host and assist Syrian refugees. Many Syrians feel grateful to Jordanians for hosting and assisting them. As one example, here is a note from a Syrian child thanking Jordanians for their hospitality:

Thank you for hosting me in your beautiful country and without you I would not be living safely. Jordan is a beautiful flower that smells nicely with its perfume and beauty. I hope that Jordan remains safe and stable. And I thank the army soldiers that stay up late to ensure our safety.

We would now like you to watch the following two-minute video clip in which Syrian refugees express gratitude for Jordan's generosity in hosting them.

– Link: <https://www.youtube.com/embed/9cjkFN6dIWg?>

- **Values:** Some people think that the Jordanian government should focus on meeting the needs of its own citizens before hosting Syrian refugees. Some Islamic scholars, however, compare the plight of Syrian refugees today to the plight of Muhajireen during the time of the prophet, and think that Jordan should host and assist Syrian refugees because we have an Islamic duty toward our brothers and sisters from Syria. Prophet Mohammed himself was an immigrant who urged his companions to migrate to Habasha and then Medina to avoid

the oppression in Mecca. They fled without their money and property, in a situation similar to that of Syrian refugees today. As you may know, in Surat Al-Hashr and Surat Al-Anfal, God and his Prophet spoke highly of Ansar in Medina who received the Prophet and the Muhajireen (migrants) and welcomed them into their homes despite their difficult economic circumstances. Please listen to the following two-minute recording of the relevant verse from each Sura.

– Link: <https://www.youtube.com/embed/b1Hfy0067iQ>

### 6.3 Appendix III: Full List of Hypotheses

- H1** Needs: Respondents who receive the needs treatment will exhibit more positive and generous attitudes toward Syrian refugees.
- H2** Gratitude: Respondents who receive the gratitude treatment will exhibit more positive and generous attitudes toward Syrian refugees.
- H3** Values: Respondents who receive the values treatment will exhibit more positive and generous attitudes toward Syrian refugees.
- H4** Competition: Respondents who may be in competition with Syrians for jobs and state resources (below median income or unemployed) will exhibit less positive and generous attitudes as a function of the treatments than other Jordanians.
- H5** Religious Identity: Religious respondents who attend services more frequently (above the median) will exhibit more positive and generous attitudes as a function of religious treatment than other Jordanians.
- H6** Shared Experience: Respondents whose families came to Jordan as refugees (e.g. West Bank Jordanians defined by origin of family) will exhibit more positive attitudes as a function of the needs treatment than other Jordanians.
- H7** Education/Sophistication: Respondents with less education (below the median) and less knowledge of politics (below the median) will exhibit more positive and generous attitudes as a function of the treatments as a result of greater susceptibility to attitude shifts.
- H8** Social Contact - Positive: We will test whether respondents who report higher contact (above the median) with refugees or live in areas with higher refugee density (top 20 percent of sampled districts) exhibit more positive attitudes toward refugees as a function of the treatments due to their increased contact with refugees.
- H9** Social Contact - Negative: We will test whether respondents who report higher contact (above median) with refugees or live in areas with higher refugee density (top 20 percent of sampled districts) exhibit less positive attitudes toward refugees as a function of the treatments due to their increased contact with refugees.

## 6.4 Appendix IV: Outcome Questions

### 6.4.1 Attitudinal Outcomes

A.1 Jordan has obtained financial aid as a result of the Syrian refugee crisis. In your opinion, to what extent has this aid benefitted or harmed Jordanians?

- Greatly benefitted
- Benefitted
- Somewhat benefitted
- Neither benefitted nor harmed
- Somewhat harmed
- Harmed
- Greatly harmed
- Don't know (don't read)
- Refuse to answer (don't read)

A.2 To what extent do you support or oppose Jordan hosting and assisting Syrian refugees?

- Strongly support
- Support
- Somewhat support
- Neither support nor oppose
- Somewhat oppose
- Oppose
- Strongly oppose
- Don't know (don't read)
- Refuse to answer (don't read)

A.2 How do you feel about Syrian refugees in Jordan? A score between 50 to 100 means that you feel favorably toward them, while a score between 0 to 50 means that you feel unfavorably. Choose 50 if you do not feel particularly favorably or unfavorably. There is no right or wrong answer, as people have different opinions on this topic. Please be as honest as possible.

### 6.4.2 Impact outcomes

I.1 In your opinion, to what extent has the impact of Syrian refugees on Jordan been positive or negative?

- Very positive
- Positive
- Somewhat positive

- Neither positive nor negative
- Somewhat negative
- Negative
- Very negative
- Don't know (don't read)
- Refuse to answer (don't read)

I.2 We would now like to understand the impact, if any, you feel Syrian refugees have had on specific aspects of life in Jordan. Please indicate whether each of the following categories has been made better or worse by Syrian refugees coming to Jordan.

- (a) The economy
- (b) Cultural life
- (c) The housing market
- (d) Quality of public services (healthcare, transportation, water, etc.)
- (e) Quality of education
- (f) The level of crime
- (g) The threat of terrorism
- (h) Jordan's image abroad
- (i) The agricultural sector

For these questions, the respondents could answer with one of the following:

- Much better
- Better
- Somewhat better
- Neither better nor worse
- Somewhat worse
- Worse
- Much worse
- Don't know (don't read)
- Refuse to answer (don't read)

### 6.4.3 Policy Outcomes

We would now like to get a sense for how much you support or oppose implementing the following policy measures in Jordan. For each measure, please indicate your degree of support by selecting the appropriate circle.

P.1 Closing the border to all Syrian refugees

P.2 Quarantining all Syrian refugees in camps

P.3 Sending all Syrian refugees back to Syria

P.4 Providing all Syrian refugees with work permits

For these questions, the respondents could answer with one of the following:

- Strongly support
- Support
- Somewhat support
- Neither support nor oppose
- Somewhat oppose
- Oppose
- Strongly oppose
- Don't know (don't read)
- Refuse to answer (don't read)

#### **6.4.4 Behavioral Outcomes**

B.1 The Red Crescent facilitates volunteer opportunities for Jordanians who want to help Syrian refugees. Would you be interested in signing up to volunteer with the Red Crescent?

- Yes, I would be interested in signing up to volunteer with the Red Crescent to help Syrian refugees
- No, I would not be interested in signing up to volunteer with the Red Crescent to help Syrian refugees
- Don't know (don't read)
- Refuse to answer (don't read)

B.2 The UNHCR facilitates opportunities to donate some of your Zakat money to help Syrian refugees. Would you be interested in signing up to donate some of your Zakat money to the UNHCR?

- Yes, I would be interested in signing up to donate some of my Zakat money to help Syrian refugees through the UNHCR
- No, I would not be interested in signing up to donate some of my Zakat money to help Syrian refugees through the UNHCR
- Don't know (don't read)
- Refuse to answer (don't read)

### 6.4.5 Cronbach's Alpha

The outcomes had the following Cronbach Alpha values:

1. All outcomes: 0.87
2. Attitudinal outcomes: 0.63
3. Impact outcomes: 0.84
4. Policy outcomes: 0.76
5. Volunteer outcomes: 0.49

## 6.5 Appendix V: Heterogeneous Treatment Effects Effects

### 6.5.1 Competition

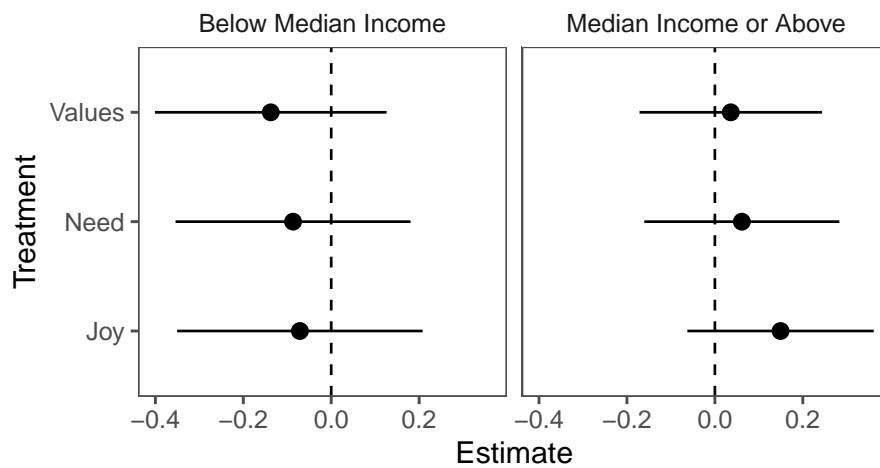


Figure 3: Coef plots showing the effect of the treatments by income group on the first principal component of all outcomes.

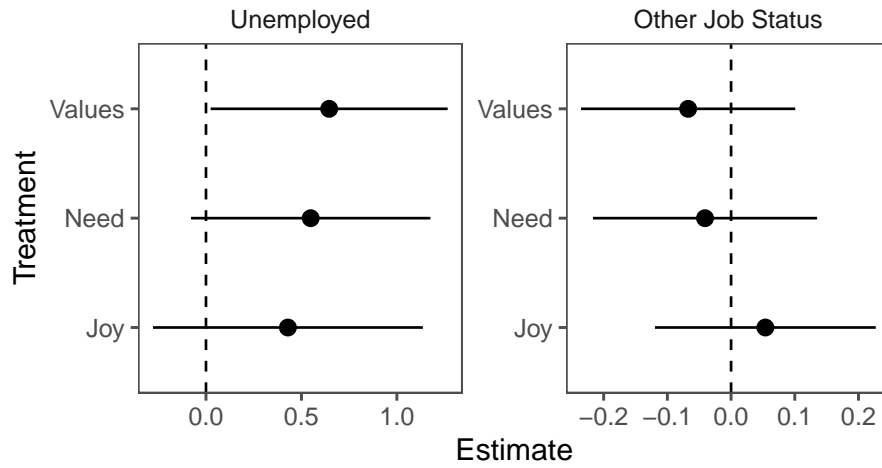


Figure 4: Coef plots showing the effect of the treatments by employment status on the first principal component of all outcomes.

### 6.5.2 Religiosity

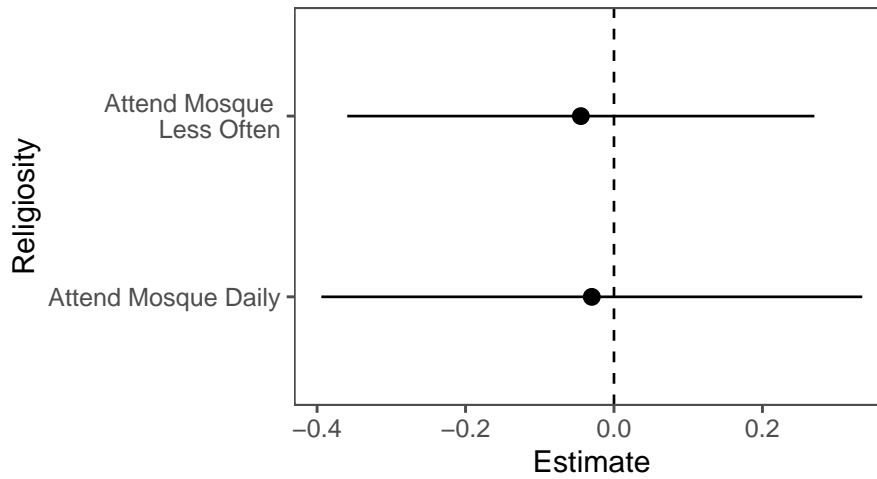


Figure 5: Coef plots showing the effect of the values treatment by religiosity status on the first principal component of all outcomes.

### 6.5.3 Shared experience

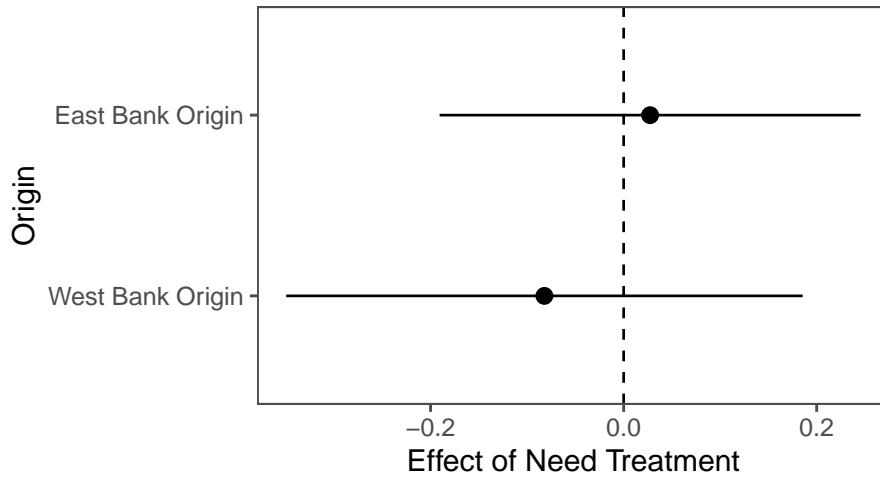


Figure 6: Coef plots showing the effect of the need treatment by the origin of respondents on the first principal component of all outcomes.

### 6.5.4 Education and Political Knowledge

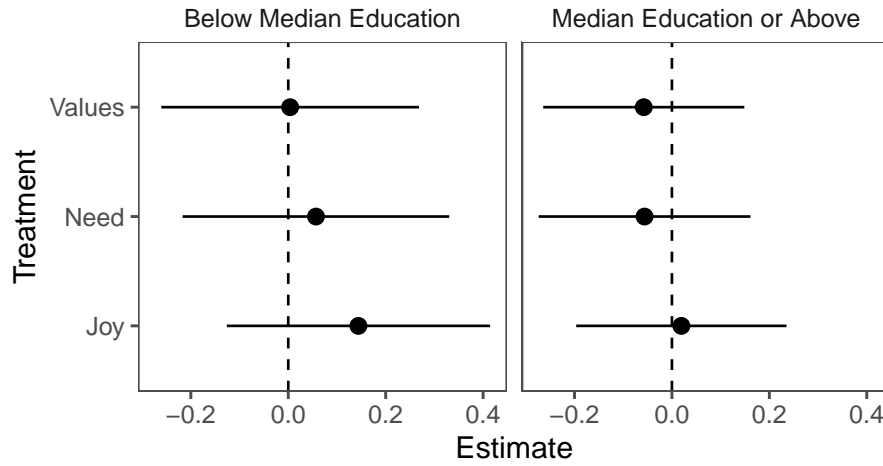


Figure 7: Coef plots showing the effect of the treatments by education level on the first principal component of all outcomes.



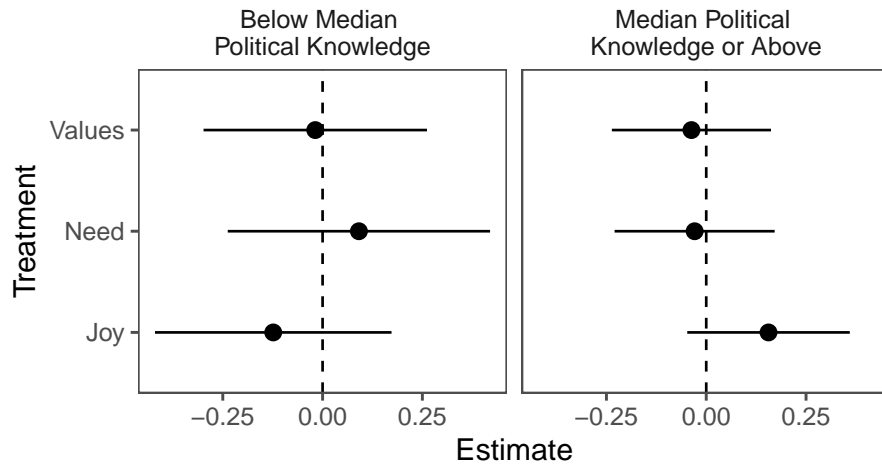


Figure 8: Coef plots showing the effect of the treatments by political knowledge level on the first principal component of all outcomes.

### 6.5.5 Social Contact with Syrians

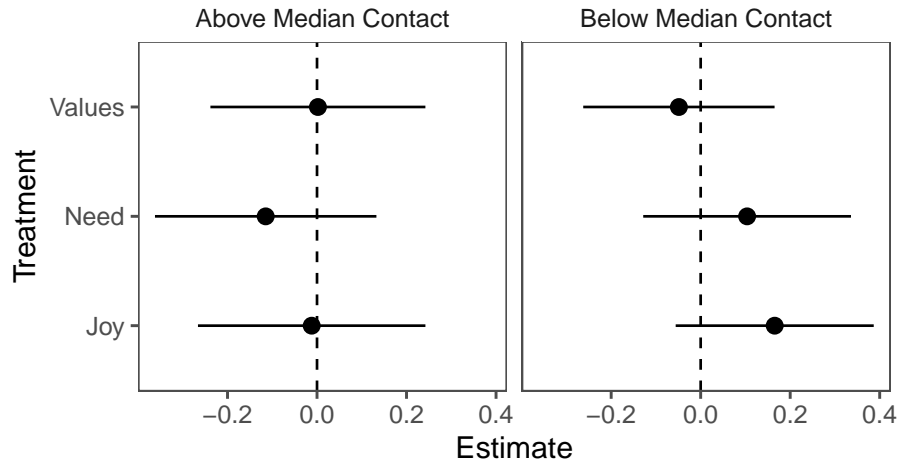


Figure 9: Coef plots showing the effect of the treatments by self-reported contact with Syrian refugees on the first principal component of all outcomes.

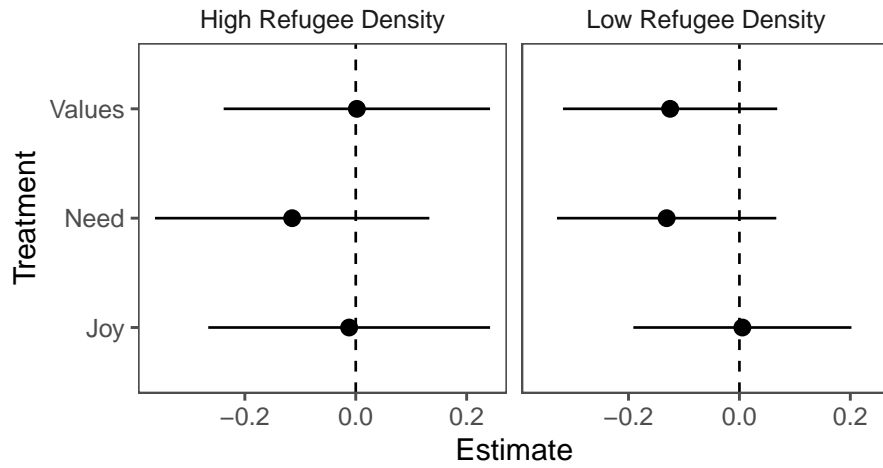


Figure 10: Coef plots showing the effect of the treatments by refugee density on the first principal component of all outcomes. The high density represents the top 20 percent of districts in terms of number of Syrian refugees

### 6.5.6 Young, Urban, and Educated Respondents

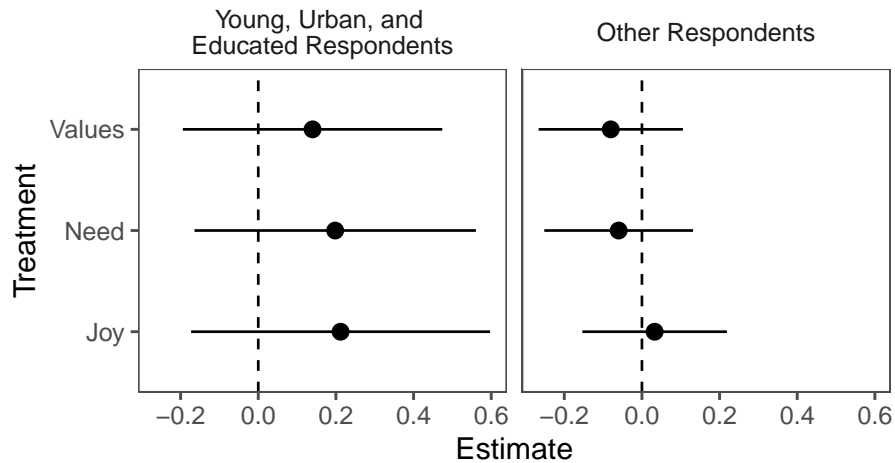


Figure 11: Coef plots showing the effect of the treatments by young, urban, and educated respondents on the first principal component of all outcomes.

6.5.7 Additive Indices

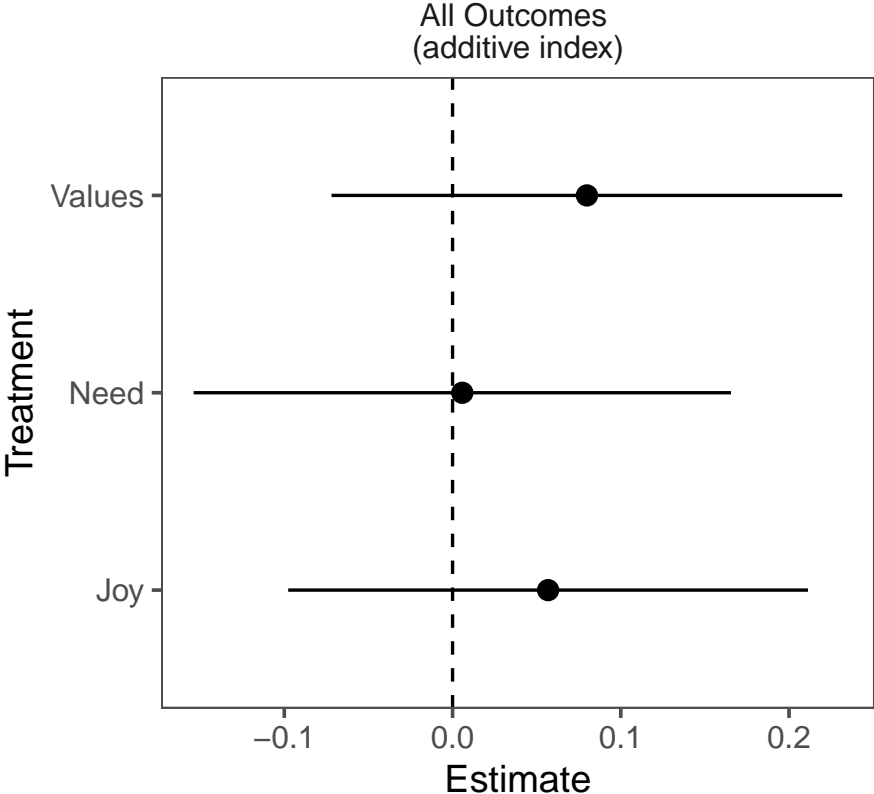


Figure 12: Coef plot showing the effect of the treatments on an additive index of all the outcomes.

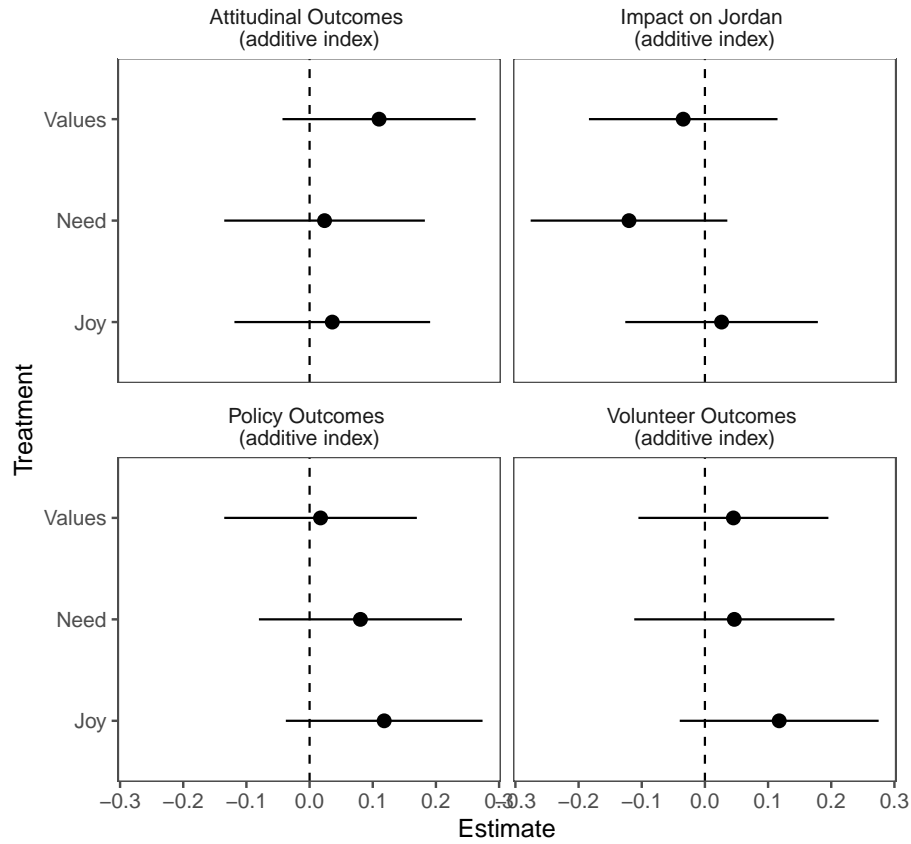


Figure 13: Coef plots showing the effect of the treatments on additive indices of each of the attitudinal, impact, policy and volunteer outcomes.

## 6.6 Appendix VI: Power Analysis

In an online pilot (using a convenience sample), we detected treatment effects across multiple outcomes. To conduct the power analysis, we used the feeling thermometer, for which the control group scored an average of 61 out of 100 and for which we detected a treatment effect slightly larger than 5. Using the information from the pilot, we conducted the following power analysis.

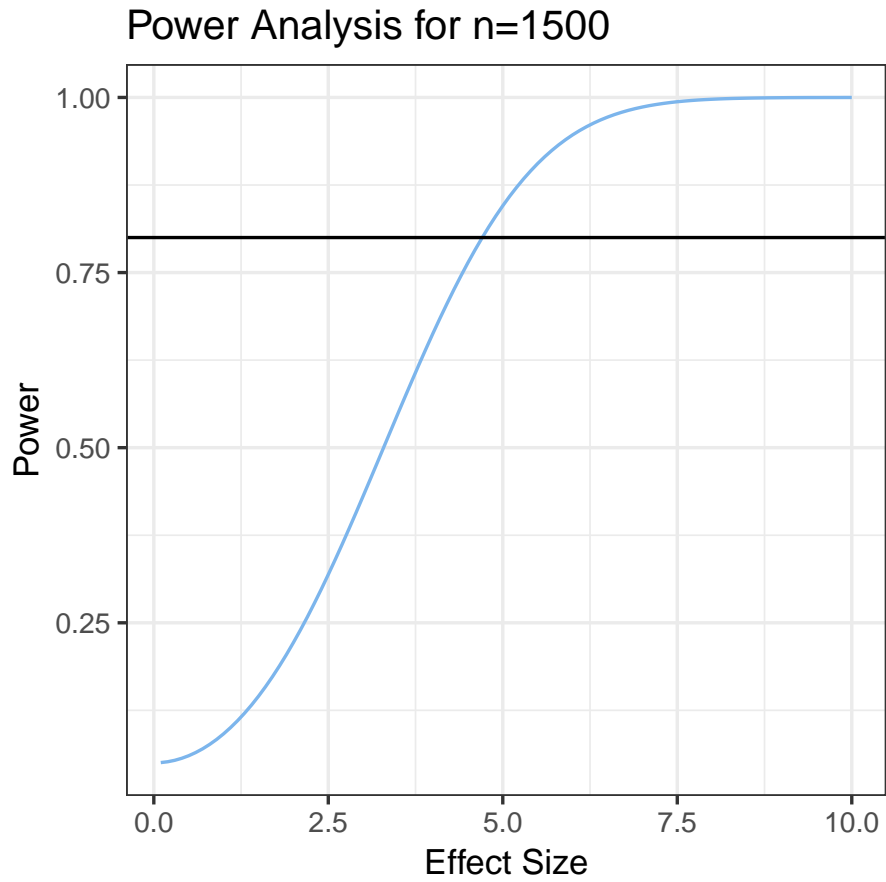


Figure 14: Power analysis for the feeling thermometer outcome. In the pilot study, we detected a treatment effect larger than 5 points on the thermometer outcome. As this figure shows, this study was well powered to detect this effect size.