Countering Misperceptions to Reduce Prejudice: An Experiment on Attitudes toward Muslim Americans

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Abstract

Muslim Americans constitute one of the United States’ most vulnerable minority groups, facing frequent discrimination from both the public and the government. Despite this vulnerability, few studies evaluate interventions for reducing prejudice against Muslim Americans. Building from an insightful literature on the sources of prejudice against Muslim Americans, this paper tests whether attitudes can be improved with information countering misperceptions of the community as particularly foreign, threatening, and disloyal to the United States. The experimental treatment modestly improved attitudes, including among some subgroups predisposed to prejudice against Muslim Americans. However, the treatment struggled to change policy views, and it demonstrated some vulnerability to social desirability bias and priming on terrorism threats. The findings suggest that information campaigns addressing misperceptions can help to reduce prejudice on the margins, but primarily in less politicized contexts.

Keywords: prejudice reduction; Muslim Americans; experiments; American politics

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1 Introduction

Muslim Americans constitute one of the United States’ most vulnerable minorities, facing prejudice and discrimination from both the public and the government (Howell and Jamal 2009; Mogahed and Pervez 2016). Negative attitudes toward the community have remained high for decades (Kalkan et al. 2009; Panagopoulos 2006), but this vulnerability has worsened in the context of the War on Terror, and more recently following the 2016 election (Calfano, Lajevardi, and Michelson 2017; Haddad and Harb 2014). While scholars have developed a substantial body of research on the causes of prejudice against Muslim Americans, relatively few studies in the prejudice reduction field consider interventions to mitigate prejudice against this minority group.\(^1\) Building on insights from these literatures, this paper reports results from an experiment designed to improve attitudes toward Muslim Americans.

Prejudice is a complex phenomenon with many contributing factors, but scholars have long recognized its connection to ignorance about the other (Fiske 1998). Unfamiliarity with an out-group can encourage a focus on perceived dissimilarities and negative stereotypes, which then activates prejudice by exacerbating feelings of threat and fear (Stephan and Stephan 2000). This dynamic appears relevant to prejudice against Muslim Americans. Unfamiliarity with Muslims is relatively common in the United States (Pew 2017a, 2010), and research shows that prejudiced views are related to inaccurate beliefs that the Muslim community is “different” in ways that pose both cultural and security threats to the country. For instance, Muslims in the United States are seen by many as a foreign minority that resists assimilation and falls outside of the country’s cultural mainstream (Kalkan et al. 2009; Panagopoulos 2006; Pew 2017a). However, the vast majority of Muslim Americans are well inte-

\(^1\)A small number of studies test interventions to reduce prejudice against Muslim Americans. See Appendix Section 1 for an overview of these studies and additional literature on Muslim Americans.
grated and proud of their American identity (Lajevardi and Oskooii 2018; Mogahed and Pervez 2016; Pew 2017b). Attitudes toward Muslim Americans are also tied to fears of terrorism: Muslims are stereotyped as violent and threatening (Hellwig and Sinno 2016; Morey and Yaqing 2011; Piazza 2015; Sides and Gross 2013), and their loyalty to the United States is often questioned (Braman and Sinno 2009; Haddad and Harb 2014). Yet, Muslim Americans are just as likely as other Americans to reject political violence (Mogahed and Pervez 2016), and they have often played a crucial role in assisting US law enforcement, even while experiencing discrimination from these institutions (Aziz 2016). In other words, prejudice is linked to inaccurate views of Muslims as “enemy Others” (Jamal 2008) — a community that is foreign, threatening, and disloyal to the United States. 

Can information countering these misperceptions help to reduce prejudice? Changing attitudes is difficult, because people are frequently motivated to resist information that counters their existing beliefs (Taber and Lodge 2006). This difficulty extends to prejudice reduction, since prejudiced attitudes tend to be deeply held (Paluck 2009; Tesler 2015), including toward Muslim Americans (Lajevardi and Oskooii 2018). As a result, even successful interventions often produce only modest effects (Stangor 2009). However, negative attitudes can and do shift, as demonstrated by several recent studies that attempt to reduce prejudice against vulnerable groups (e.g., Bonilla and Mo 2018; Broockman and Kalla 2016; Facchini et al. 2016). To the extent that ignorance contributes to prejudice by fostering perceptions of threatening differences with the other, interventions that seek to downplay or disprove these differences provide a potential method for reducing prejudice, and research suggests this approach can be successful (Fiske 1998; Paluck and Green 2009; Stangor 2009). Since prejudice against Muslim Americans appears to be rooted partially in misper-

2It is important to note that Muslim Americans should not have to assimilate or cooperate with law enforcement to dispel prejudice against them.
ceptions about how the community differs from the American mainstream, I test whether this prejudice can be lessened by information demonstrating that Muslim Americans’ identities, hobbies, and attitudes toward political violence are similar to those of other Americans.

The experiment generated modest improvements in respondents’ attitudes, particularly among some groups predisposed to prejudice against Muslim Americans. However, the results also demonstrated potential vulnerabilities to competitive information environments and social desirability bias. The findings contribute to the literature on prejudice reduction by addressing a particularly vulnerable but understudied minority group, by suggesting certain contexts in which attitude improvement is more or less likely to occur, and by providing additional survey-experimental evidence in a field that has relied primarily on non-experimental or lab-based research (Paluck 2016). The paper also has practical implications for attempts to reduce prejudice, since the intervention builds on common efforts to mitigate prejudice against Muslim Americans and other groups.

2 Research Design

2.1 Sample

The experiment was conducted simultaneously on three nationally representative omnibus surveys implemented online in Qualtrics via Survey Sampling International (SSI) in March 2017. Each survey included different questions on various political and social topics in the United States, but the experimental intervention was identical, and the surveys were split only because of the funding arrangement for the project.\(^3\)

\(^3\)Results are generally consistent across the three surveys. See Appendix Section 8.3.
The total sample included 3,267 respondents after 458 speeders were dropped. More details on the sample composition can be found in Appendix Section 2.

### 2.2 Experimental Design

Two-thirds of respondents were randomly assigned to the treatment group. These respondents were exposed to a prompt with information addressing misperceptions about Muslim Americans. The remaining one-third of respondents in the control group received no prompt. The treatment is shown here:

> Most Americans say they do not know any Muslims. To help address this unfamiliarity, two research centers (ISPU and the Pew Research Center) have compiled information comparing Muslim Americans to other Americans. Some of this information is shown below. Does any of the information here surprise you? Please check the boxes that you find surprising.

- □ Muslim Americans have the same hobbies as other Americans: 48 percent of Muslim Americans watch pro or college sports regularly, compared to 47 percent of the general American public.

- □ Muslim Americans oppose violence against civilians as much as other Americans: 81 percent of Muslim Americans say violence against civilians is never justified, compared to 84 percent of Protestant-Americans.

- □ Muslim Americans value their American identity as much as other Americans: 85 percent of Muslim Americans say that being an American is very or somewhat

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4Results are consistent with or without speeders. See Appendix Section 8.2. Speeders were defined as respondents who completed the survey in half of the median response time.

5Half of the treated were randomly assigned an additional sentence in the introductory prompt stating that “if you have misperceptions about Muslim Americans, you could be contributing to prejudice against this vulnerable minority group.” This statement reduced the size of the treatment effect, but the differences were small and insignificant. As a result, aggregated treatment effects are reported in the paper. See Appendix Section 12 for these additional results.
important to their identity, compared to 84 percent of Protestant-Americans.

The first statement is from a poll conducted by Pew (2010) on the Muslim American community, and the other two statements are taken from a 2016 poll of American faith communities conducted by the Institute for Social Policy and Understanding (ISPU), a research and advocacy group focused on Muslim Americans.⁶ These comparisons have been used by ISPU in publications and messaging campaigns aimed at reducing prejudice against Muslim Americans (e.g. Mogahed and Pervez 2016), providing the information with a degree of practical relevance.

Respondents were asked to mark any of the statements they found surprising to encourage them to read the information more closely and to provide a check about misperceptions. For those who received the treatment, 42 percent were willing to admit that at least one of the statements surprised them. The experiment combined the statements to ensure a relatively strong treatment – given the difficulty of shifting prejudiced attitudes – and because real-world efforts at prejudice reduction typically combine multiple messages in this way. However, one limitation of this design is the inability to determine whether the information contained in some of these statements matters more than others for attitude change.

The experiment included two additional manipulations intended as robustness checks. First, prejudice reduction strategies must compete with environmental cues and deliberate messaging that promote prejudice. This contestation can make it more difficult to shift attitudes (Chong and Druckman 2007; Garrett, Nisbet, and Lynch 2013), so it is important to test the robustness of interventions to competitive information environments (Lazarev and Sharma 2017). Regarding Muslim Americans, media and political actors often promote misperceptions, particularly about Muslims and terrorism (Akram 2002; Powell 2011). As a result, I evaluated the treatment’s

⁶ISPU also polled Catholics and Jews. I chose to use Protestants as the comparison because Protestants arguably continue to be the dominant cultural group in the United States.
robustness to an environment in which fear of terrorism was present by randomly assigning half of respondents to a question priming terrorism threats. For those assigned to the prime, it was the first component of the survey module they viewed. These respondents were reminded of recent ISIS attacks in the West and asked to rate the threat terrorism posed to the United States.

Second, to evaluate the effects of social desirability bias, half of respondents were randomly assigned to a statement licensing them to voice non-politically correct views. This sentence was embedded in the instructions for the first outcome question, following the terrorism prime and information treatment but preceding any responses to the outcomes. It stated that “People have different opinions about Muslim Americans, so you should not feel like you need to be politically correct.”

To summarize the survey procedure, respondents were first exposed to the terrorism prime or not, they were then provided with the information treatment or not, and finally they were assigned to the non-PC license or not in the outcome instructions, at which point they responded to the questions. The full survey module can be found in Appendix Section 3, and additional details about the randomization can be found in Appendix Section 5. Balance on a range of covariates was attained across all manipulations. See Appendix Section 6 for balance tables.

### 2.3 Outcomes

Respondents answered five outcome questions meant to capture both perceptions of Muslim Americans and views of how the government should treat Muslim Americans (Lajevardi and Abrajano 2018). Regarding perceptions, respondents rated Muslim Americans on a feeling thermometer, and they were also asked if Muslim Americans were just as patriotic as other Americans. Regarding policies, respondents were asked about their support for increasing surveillance of Muslim Americans, banning refugees
from Muslim countries, and requiring Muslim Americans to register with the government. All three policies would be harmful to the Muslim American community, all three were mentioned by presidential contenders during the 2016 campaign (Hobbs and Lajevardi 2019), and all three have sometimes found meaningful support among the American public (Jamal 2008; Panagopoulos 2006).

The questions have a high degree of internal consistency, with a Cronbach’s alpha of 0.85. I also aggregate the questions with principal components analysis (PCA) and use the first component as an additional outcome. See Appendix Section 4 for details about the PCA results and summary statistics for all outcome measures.

2.4 Hypotheses

The primary hypothesis of the study is that respondents exposed to the information treatment would on average demonstrate more favorable attitudes toward Muslim Americans. I also explore heterogeneous effects among subgroups predisposed to hold prejudiced views. Practically speaking, interventions to reduce prejudice aim to change attitudes of the prejudiced, so it is important to understand the reactions of subgroups with more negative attitudes toward Muslim Americans. Because people resist information that conflicts with their beliefs (Taber and Lodge 2006), attempts to reduce prejudice may “preach to the converted” (Fiske 1998), with the treatment influencing those who already hold relatively favorable attitudes (Adida et al. 2018), or perhaps backfiring among those it was designed to persuade (Nyhan and Reifler 2010). As a result, it is possible that treatment effects will be weaker or even negative among subgroups that tend to view Muslim Americans poorly. On the other hand, the treatment is intended to improve attitudes by providing new information that reduces misperceptions about differences with Muslim Americans. These misperceptions should be more common among groups with more prejudiced attitudes (Fiske
1998), suggesting they also have more to learn from the treatment. It is therefore possible that they react to the treatment more strongly. Previous research indicates that negative attitudes toward Muslim Americans are especially pronounced among Republican, older, and white Americans who do not know any Muslims (Chalabi 2015; Pew 2017a), so I look at heterogeneous effects for these groups.

3 Results

Exposure to the information treatment appears to have generated modest improvement in attitudes toward Muslim Americans. Main effects are analyzed using two-sample t-tests: these results are shown in Figure 1, with higher outcomes indicative of less prejudiced views. The average value of the PCA component increased by 0.13 standard deviations \((p = 0.000)\). Favorability on the feeling thermometer increased from 59.2 to 64.4 \((p = 0.000)\), equivalent to a one-fifth standard deviation increase. Likewise, respondents who described Muslim Americans as equally or more patriotic increased from 63.2 percent to 67.9 percent \((p = 0.008)\), equivalent to a one-tenth standard deviation increase. While the effect sizes are relatively small, they are substantively important. For instance, if a shift of 5 percentage points on the feeling thermometer occurred among the public, the gap between attitudes toward Muslim and Protestant Americans would decrease by 30 percent (Pew 2017a).

However, effects for the policy outcomes were inconsistent, indicating less success at increasing opposition to policies that would harm Muslim Americans. For surveillance, the average increased from 2.58 to 2.71 \((p = 0.000)\), equivalent to 0.13 standard deviations. Yet, responses for the refugee ban moved only from 2.85 to 2.89 \((p = 0.255)\), an increase of 0.04 standard deviations. Similarly, responses for regis-

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7Results are robust to other estimation strategies. See Appendix Sections 7 and 8.
Figure 1: Main Effects for Information Treatment

Note: Higher average values are equivalent to less prejudiced responses. The PCA component ranges from -3.76 to 2.56. The thermometer ranges from 0 to 100. The patriotism outcome is a binary variable for just as or more patriotic vs. less patriotic. The policy outcomes are four-point scales with higher values indicating opposition. 95% c.i.

Furthermore, the main effects demonstrate some vulnerability to the competitive information environment, as well as social desirability bias. These results are displayed in Figure 2. For the competitive information environment, the left panel shows the treatment effect among respondents not exposed to the terrorism prime, the treatment effect among respondents who were exposed to the prime, and the increase rose from 2.47 to 2.53 (p = 0.109), an increase of 0.05 standard deviations.

8See Appendix Sections 10 and 11 for the full results.
teraction between the treatment and the prime. Because the interaction terms were insignificant, it cannot be concluded that the treatment became less effective when respondents were first primed to think about terrorism (Gerber and Green 2012). However, in general the treatment appeared to weaken: the coefficients for all interaction terms were negative, and the treatment effect was only significant at 0.05 for the thermometer and surveillance outcomes among respondents exposed to the prime.

To evaluate robustness to social desirability bias, the right panel of Figure 2 shows the treatment effect without the non-PC license, the effect with the license, and the interaction between the treatment and the license. The results suggest that social desirability bias contributed to some – but not all – of the observed effects. Five of the six interaction terms were negative. Only the interaction for the registration outcome was significant at 0.05, but the other four negative interactions indicated a substantively meaningful decrease in the magnitude of the treatment effect when respondents were told they did not need to be politically correct. In addition, the treatment effects were only significant for the thermometer and patriotism outcomes in the presence of the non-PC license, and not for the policy outcomes. This pattern sheds light on the results for the main effects, where the treatment improved perceptions of Muslim Americans but struggled to reduce support for harmful policies.

Analysis of heterogeneous effects for subgroups predisposed to prejudice against Muslim Americans suggests that some of these groups actually responded more strongly to the treatment, in contrast to expectations that they should be more resistant to updating their beliefs favorably. These results are reported in Figure 3, using OLS regressions with robust standard errors to evaluate the significance of the interaction terms. Because the subgroup characteristics are not randomly assigned, the regression models control for age, race, gender, education, news interest, conservative ideology, Republican party ID, and whether the respondent reported knowing any Muslims in
Figure 2: Robustness Checks for Main Effects

Note: Plots show treatment effects with and without the terrorism prime (left) and non-PC license (right). The coefficients for “Difference” are the interactions from ordinary least squares (OLS) regression models that interact the treatment with the prime / license. PC refers to “Politically Correct.” 95% c.i.

the United States, as well as respondents’ exposure to the terrorism prime and non-PC license. Each plot shows coefficients for the treatment, the relevant demographic characteristic, and the interaction term.
The interaction between the treatment and elderly respondents was positive and significant at 0.05 for five of the six outcomes, and the interaction with white respondents was positive and significant for three of the outcomes, with two others
Thus elderly and white respondents seem to have been affected more strongly by the treatment. On the other hand, the interactions with not knowing Muslims were positive but insignificant, and the Republican interactions were primarily negative, though only the interaction for the registration outcome was significant. While not conclusive, these results suggest that Republicans were slightly more resistant to updating their beliefs following exposure to the information.

4 Conclusion

This paper finds that information countering misperceptions about how Muslim Americans differ from other Americans can somewhat decrease the expression of negative attitudes toward the community, at least in the short term. While the modest effects make it clear that this approach is no panacea for prejudice reduction, the results do suggest that advocates can acquire incremental benefits from pursuing informational campaigns carefully constructed to counter common but inaccurate beliefs about differences between the majority and a vulnerable minority.

A potential strength of the treatment was its relative success among white and elderly Americans, given their predisposition to negativity toward Muslim Americans. On the other hand, the fact that Republicans were somewhat less likely to respond to the treatment is more in line with expectations that prejudice toward Muslim Americans will be deeply held and difficult to change (Lajevardi and Oskooii 2018). A possible explanation for the difference between these subgroups could be that hostility toward Muslims is associated with one’s Republican identity because of positions adopted by the party. Prejudiced Republicans might be particularly motivated to maintain their attitudes after exposure to information countering their

Elderly respondents were defined as those older than 60. The same pattern holds using the continuous age variable or a cutoff of 65. See Appendix Section 9.
misperceptions, since accepting such information would threaten their identity (Nyhan and Reifler 2019). In other words, some prejudiced people will be more motivated to hold onto their attitudes than others, but attempts to reduce prejudice need not always result in preaching to the converted.

One limitation of the treatment was its difficulty in shifting respondents’ policy attitudes, a finding that is consistent with experimental studies demonstrating that information often struggles to move policy preferences, even if it can change other attitudes (e.g. Grigorieff et al. 2016; Lawrence and Sides 2014). This divergence highlights the fact that improving attitudes toward a minority group does not necessarily translate into reduced support for policies that would harm the group. In part, this pattern may occur because views of salient policies are more closely tied to partisan identities that undermine respondents’ willingness to change their attitudes (Flynn, Nyhan, and Reifler 2017). Particularly since the treatment weakened slightly when confronted by even a modestly competitive information environment, the partisan and policy dynamics in the study suggest that attempts to reduce prejudice will face an uphill battle as long as political and media actors seek to promote and benefit from misperceptions that Muslim Americans are different in ways that pose both cultural and security threats to the United States.

References


Aziz, Sahar. 2016. Countering violent extremism programs are not the solution to Orlando mass shooting. June 29. Brook-


