

# Can the Gender Gap in Political Ambition Be Reduced? Evidence from High School Students \*

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## Abstract

The under-representation of females in American politics can likely be explained, at least in part, by a gender gap in political ambition. By college, men express markedly greater interest in running for office than women, with long-term effects on the composition of elected officials. We analyze a program for high school students in which participants spend a weekend lobbying their Members of Congress. First, we find that even among participating students, there is a gender gap in political ambition. Second, by leveraging longitudinal survey data about the participants and a difference-in-differences design, we find that the program successfully increased political efficacy and ambition among both male and female participants. Furthermore, we find that the program caused the post-treatment level of female political ambition to match the pre-treatment level of male ambition, suggesting that more targeted lobbying programs could successfully close the gender gap in political ambition among the broader population.

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The paucity of female candidates and office-holders, both in the United States and around the world, is well-documented (e.g., Carroll and Fox, 2018; Murray, 2010; Rosenbluth, Kalla, and Teele, 2015; Paxton and Hughes, 2015). Numerous explanations have been offered for this under-representation of female candidates and office-holders, including the absence of role models (Campbell and Wolbrecht, 2006; Kalla, Rosenbluth, and Teele, 2018), the “gendered psyche” (Preece, 2016), gender differences in attitudes toward participating in competitive elections (Kanthak and Woon, 2015; Preece and Stoddard, 2015), challenges in fundraising (Jenkins, 2007; Thomsen and Swers, 2017), the amount and tone of media coverage (Kahn, 1992; Kittilson and Fridkin, 2008; but see Hayes and Lawless, 2016), among other explanations. These accounts are not mutually exclusive, nor do they foreclose a different explanation: A gender-based gap in political ambition. At least since Schlesinger (1966), scholars have emphasized that running for office requires a larger amount of political ambition than observed in the broader population. As Fox and Lawless (2004, 2010, 2014) have shown more recently, the gender-based gap in ambition plays a role in the inordinately small number of female candidates, despite the absence of overt sex-based discrimination they face at the ballot box (Lawless and Pearson, 2008; Seltzer, Newman, and Leighton, 1997; Teele, Kalla, and Rosenbluth, 2018).

In this paper, we examine the effects of a political program for high school students on political ambition. The program draws both male and female participants; we pay special attention to the effects of the program on the gender gap in political ambition. We are not the first researchers to investigate possible ways of narrowing the gender gap in political ambition and engagement. Foos and Gilardi (2019) report conducting an experiment on female university students, some of whom were randomly assigned to attend a professional workshop with female politicians. Ultimately, the researchers are unable to detect effects on a behavioral measure of political ambition. On the other hand, Preece (2016) describes treatments that narrowed the gender gap in interest in politics. Outside of electoral politics, not to mention the United States,

Beaman et al. (2012) exploit the random assignment of gender quotas in Indian village councils to conclude that the introduction of female role models had long-term effects on women's professional (though not exclusively political) ambitions.

The program we study here, "L'Taken," is administered by the Religious Action Center of Reform Judaism (known as the RAC), the political advocacy arm of the Union for Reform Judaism. On six weekends a year, thousands of high school students descend on Washington, D.C. to participate in L'Taken. On the first day, the students receive extensive training in political persuasion and advocacy, during which they time they manage a mock political action committee, communicate with mock legislators, and organize simulated social media campaigns. On the second day, participants meet with their U.S. Members of Congress or their staffers, during which time they express their concerns about policy issues of interest to them. Almost every L'Taken participant meets with a staffer from his or her district's House member's office, as well as staffers from both of his or her Senators' offices. Several parts of the program could plausibly increase participants' political ambition: the program provides participants with civic skills training; it exposes them to political role models, including same-sex role models; and it connects them directly to their political representatives, potentially increasing their sense of efficacy.

To study whether such a program could increase political ambition, in 2019, we surveyed subjects before and after they participated in L'Taken, asking about political ambition, political efficacy and their sense of Jewish identity. Prior to participation, we gathered demographic data, including sex. Participants received invitations to take each survey via text message. By leveraging the as-if randomness of the weekend during which an individual participated matched to multiple pre- and post-participation surveys, we are able to conduct a difference-in-differences analysis to estimate the effect of participating in a high school lobbying program.

Prior to the program, we observed a gender gap in political ambition. While prior work

has found greater levels of political ambition among a national random sample of male high school and college students (Fox and Lawless, 2014), the gender gap we observe here is among the self-selected group of high school students wanting to lobby their Members of Congress. That we detected a gender gap even among this population of “self-starters” (Kalla, Rosenbluth, and Teele, 2018)—people who, at an early age, express their political opinions and choose to participate in a program offering political training—testifies to the prevalence of the gender gap.

Participation in the program, however, substantially boosted female political ambition, to the point at which it became indistinguishable from male political ambition observed prior to participation. In other words, women who completed the program were roughly as politically ambitious as men reported being before they participated in the program. To be clear, a gender gap remained after the program was complete. Yet we had no reason to expect a co-gender program would increase ambition *only* for women. To the best of our knowledge, we offer the first quasi-experimental evidence demonstrating a possible means of mitigating the gender gap in political ambition.

In the rest of the paper, we explain why the existing literature suggests a religious-based political program for adolescents may be capable of increasing political ambition and efficacy; discuss details of the L’Taken program and the surveys we administered; and describe our results.

## **Politics, Adolescence and the Gender Gap in Political Ambition**

If the gender gap in political ambition is to be reduced, strong evidence indicates that high schoolers should be targeted. First, adolescence stands out as an especially crucial time in the political life cycle (Jennings and Niemi, 1974, 1981). Partisan attachments, transmitted via the parents, are often solidified during this time (Niemi and Jennings, 1991). Participation in

voluntary associations during this period, such as student council, religious organizations and drama clubs, powerfully predict adult political participation (McFarland and Thomas, 2006). Broadly speaking, it is during these “impressionable years” (Krosnick and Alwin, 1989) that one can acquire the civic skills necessary for subsequent participation in political life (Brady, Verba, and Schlozman, 1995).

Adolescence is also where the gender gap in political ambition begins to emerge. According to one recent national survey, by high school, more men than women indicate some consideration of running for office. In college, the gap only intensifies, with twice as many men than women reporting thinking about running for office “many times” (Fox and Lawless, 2014; Lawless and Fox, 2014). Some of these differences may be related to familiarity with the political profession; the same survey shows that the gender gap in interest in eventually working as a Congressional staffer follows a nearly identical pattern.

Thus understood a variety of ways, the gender gap is quite large by college. With that in mind, intervening in high school to mitigate the gender gap appears especially promising. Not only is this general period one of heightened impressionability, with attitudes developed then remarkably stable over time (Krosnick and Alwin, 1989), but the ambition gap is generally smaller during this time. Moreover, the development of the civic skills necessary for later political involvement begins during this time period (Brady, Verba, and Schlozman, 1995). Given its exclusive focus on high school students, the L'Taken program fits the bill as a possible means of reducing the ambition gap at a crucial time.

Other specific features of the L'Taken program make it an alluring testing ground. As the program directly connects high school students to Congressional staffers, it may heighten participants' familiarity with politics. Doing so, in turn, might enhance their level of political efficacy—their sense that they are able to make a difference in politics. A sense of political efficacy has repeatedly been described as a prerequisite for political ambition and activity (Bobo

and Gilliam, 1990; Fox and Lawless, 2010). The L'Taken program schedules meetings between participants and their Members of Congress or staff, and then lets them advocate for an issue of importance to them. As we discuss in detail below, these are not children conscripted on behalf of one particular partisan or interest group cause. Instead, participants are given the training and opportunity to advocate for an issue of their choosing, heightening the amount of political efficacy. For many participants, a meeting with their representatives and representatives' staff members might constitute the first time they have had "voice"—that crucial political variable (e.g., Schlozman, Verba, and Brady, 2012)—particularly in front of an audience of national representatives.

The religious aspect of the program also may increase its ability to increase ambition. Previous studies have shown that adolescents involved with religious organizations are more politically active than their less religious counterparts (e.g., Andolina et al., 2003). Furthermore, the program explicitly linked the Jewish values of the participants to political involvement, religious and values-based rhetoric grounded that might prove particularly effective (Blankenship, Wegener, and Murray, 2012; Margolis, 2018).

Finally, the participants received intensive civic training prior to meeting their representatives. As we describe in detail below, this training gives them the opportunity to learn about how to publicly advocate about political issues, attempt to persuade pivotal legislators, and administer a mock political action committee. This training may impart precisely the sort of civic and political skills necessary for political action (Brady, Verba, and Schlozman, 1995). Of course, meeting with actual representatives also imbues participants with skills, as they learn how to discuss policy issues with representatives who may or may not share their preferences. Both the training and meeting with representatives may also increase self-confidence about politics, which stands out as an especially powerful predictor of political ambition for high school women (Fox and Lawless, 2014).

Yet even though the program is grounded in theoretically-informed insights to increase political ambition *in general*, evidence about females in particular leads to more mixed expectations. On the one hand, if they meet with female representatives or staffers, those representatives might serve as role models who fuel their own ambition. Previous work gives strong indication that there may be just such a role model effect (e.g., Campbell and Wolbrecht, 2006; Beaman et al., 2012; Bonneau and Kanthak, 2018). In addition, the training and meetings with staffers might upend expectations they have about their own social roles, overcoming gendered stereotypes that politics is a masculine domain (Schneider and Bos, N.d.). When female L'Taken participants receive political training and meet with political staffers, they can learn that they are suitable for roles related to politics.

On the other hand, participation in L'Taken might reduce the political ambition of female participants for four reasons. First, if in order to succeed in politics, females need to be substantially more qualified than their male counterparts (Anzia and Berry, 2011; Besley et al., 2017; O'Brien and Rickne, 2016), this exposure to superstar female Members of Congress and staff may present role models who are unrelatable and whose successes are unattainable. This exposure could unintentionally demoralize and backfire (Asgari, Dasgupta, and Stout, 2012; Lockwood and Kunda, 1997). Second, when female politicians speak candidly about their experiences in politics, including the challenges they faced, they fail to increase political ambition (Foos and Gilardi, 2019). Third, exposure to lobbying may teach participants that politics demands competition, reinforcing female participants' aversion to electoral competition (Kanthak and Woon, 2015). Finally, participation in L'Taken may communicate to participants that political ambition requires self-promotion, which they may have been otherwise socialized to avoid (Rudman, 1998; Moss-Racusin and Rudman, 2010).

## Study Design

To examine the effect of L'Taken on political ambition, we conducted a pre-registered (E-GAP ID #20190113AB) difference-in-differences analysis, leveraging longitudinal data of participants' political ambitions gathered before and after their participation in the program.

Coming from the Hebrew phrase 'l'taken olam,' meaning "to repair the world," L'Taken is a weekend program for U.S. high school students put on by the Religious Action Center of Reform Judaism (known as the RAC), the political advocacy arm of the Union for Reform Judaism. There are often six L'Taken programs a year, as there were in 2019, when this study was conducted. High school students affiliated with Reform synagogues across the United States come to Washington, D.C. for L'Taken. Participants learn about policy issues important to the Reform Jewish movement, receive training in political advocacy and lobby their Congressional representatives or those representatives' staff members on a policy issue. Students can choose which issue to lobby on from a list provided to them by the RAC.<sup>1</sup> A day of training precedes the lobbying efforts. In the training portion of the program, dubbed "Kesef Kocha Politica," Hebrew which translates as "money, power and politics" in English, participants are enlisted in a political simulation about an issue of the day. The subject of the simulation changes every year; in 2019, the subject was gun control. Over each 2019 L'Taken weekend, during Kesef Kocha Politica, participants were randomly assigned into one of two (fictitious) groups, either "Jews Against Guns," a Jewish pro-gun control group, or the "Jewish Rifle Association," a Jewish analogue to the NRA. They are then broken into smaller teams in which they focused on their respective group's messaging and campaign contribution strategy. Specifically, students chose to join teams focused on trying to directly persuade (mock) legislators, draft social media content and television advertisements, organize rallies, and even manage the campaign

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<sup>1</sup>In 2019, the issues were gun violence, climate change, LGBTQ rights, reproductive rights, immigration reform, disability rights, criminal justice, Israel, campaign finance reform, church and state issues, the minimum wage, voting rights and refugee resettlement. The RAC did not record which students lobbied for which issues.



contributions of their side's political action committee. While framed as a competition over a gun control bill, at the end of the competition it is revealed that the "Jewish Rifle Association" always had more funding, which ensured the failure of the bill.

For "lobbying day," which takes place the day after, program participants travel to Capitol Hill and split up based on the issues they have chosen and their state and Congressional districts. In each congressional office, program participants deliver 3-5 minute "speeches" which they have pre-written with the RAC's assistance. Every participant delivers at least part of a speech; the speeches are frequently delivered by multiple participants. Participants meet with their House member or that member's staff, as well as their state's two senators or the senators' staffs. Most meetings last between fifteen and thirty minutes. By the end of the L'Taken program, every program participant has met with three Congressional offices and delivered at least part of one speech.

Participants primarily met with congressional staffers and had substantial exposure to same-sex role models. Among the female participants who took a baseline survey, only 1.1% met with at least one female Member of Congress and 89.2% met with at least one female staffer. Among the male participants who took a baseline survey, 6.1% met with at least one male Member of Congress and 88.2% met with at least one male staffer. Given the limited exposure to Members of Congress and the lack of variation in exposure to same-sex staffers, we are not able to compare the effectiveness of L'Taken on individuals who were exposed to a same-sex role models to those who were not.

L'Taken is not designed for the express purposes of increasing political ambition and efficacy, let alone reducing the gender gap. In expectation, certain elements of the program may be more conducive to ambition and efficacy increases than others. The lobbying day would seem to represent a possible means of increasing both outcomes; for many participants, those interactions may represent the first instance of engagement they have had with their national

representatives. On the other hand, the “Kesef Kocha Politica” training program’s overriding focus on the role of money in politics may cultivate cynicism among participants, as may have also occurred inadvertently during the intervention of Foos and Gilardi (2019).

To investigate the effects of the overall program on political ambition and efficacy, in 2019 we surveyed L’Taken participants before and after they participated in the program. The first L’Taken program occurred on January 11 while the last took place on March 15, with four in between. The weekend during which an individual participated was determined based on the scheduling availability of their Members of Congress. More ambitious individuals could not select into participating earlier; the weekend during which an individual participated was therefore as-if random. We administered our first survey on January 3rd and administered our last on April 1, for a total of six surveys. The number of surveys that one was asked to complete before participating in L’Taken, and the number one was asked to complete after participating, varied based on the L’Taken program date one signed up for. For example, those who participated in L’Taken on the weekend of March 15th answered three “pre-treatment” surveys and only one post-treatment surveys, while those who participated on the weekend of January 11th were only asked to complete one pre-treatment survey but five post-treatment surveys. A full schedule of surveys and L’Taken dates appears in the supplementary materials. Overall, 916 individuals completed an average of 2.2 surveys each.<sup>2</sup>

The surveys were distributed to program participants via text message. The text messages were identified as originating from the RAC and directed recipients to follow a link to complete a survey. Though they were not offered compensation, the RAC did organize a raffle of \$50 Amazon gift cards for each survey, with eligibility determined by survey completion. The complete text of communications sent to recipients appears in the appendix. To increase survey uptake, during each L’Taken weekend the RAC staff urged all participants to complete the sur-

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<sup>2</sup>Because of an error, we did not administer a post-treatment survey on March 20th, deviating from our Pre-Analysis Plan.

veys they would soon receive. Although participants were aware that researchers were studying the L'Taken program, RAC staff members did not disclose the purpose of the study to program participants.

To measure political ambition, we asked subjects three questions. We asked them, “How likely is it that, someday, when you’re older, you might want to...” and then presented them with 1-7 likelihood scales. Specifically, we asked them about how likely it would be that they would “run for political office,” “work on a political campaign,” and “work for the government.” Higher values signaled greater likelihood. In order to reduce measurement error, we report an index of the average value across these three items (Ansolabehere, Rodden, and Snyder, 2008). We also report the effect specifically on “run for political office,” as this has been the primary outcome of interest within the political ambition literature (e.g., Fox and Lawless, 2004, 2010, 2014). All outcome measures were pre-specified in our pre-analysis plan. For interpretability, we transform all measures to have mean 0 and standard deviation 1.

To measure political efficacy, we presented subjects with two statements and asked them to state their levels of agreement on 1-7 scales, with higher values signaling greater agreement. The statements were “Ordinary citizens can do a lot to influence the government in Washington if they are willing to make the effort” and “It’s important to me to let my political representatives know how I feel about the issues.” Again, we combined these two items into a political efficacy index by taking the mean and standardizing.

In the pre-treatment surveys, we find that attitudes towards political ambition and efficacy are highly stable. Across the first two pre-treatment survey waves, the ambition index has a correlation coefficient of 0.86 and the efficacy index has a correlation coefficient of 0.59. The high temporal stability of these two measures suggests that the difference-in-differences may be a valid design.

Finally, to measure gender, we asked subjects if they identified as male, female, or other,

and provided a text box for those who chose the third option. We only measured gender on surveys administered before L'Taken participation.<sup>3</sup>

## Results

Tables 1, 2, and 3 display results for our three pre-registered and primary outcomes: the ambition index, the efficacy index, and whether an individual expresses an interest in running for office. We present overall results for each outcome, as well as results by gender. (Note that these estimates reflect our standardized scale to have mean 0 and standard deviation 1, with higher values corresponding with higher levels of political ambition and efficacy.) Figures showing response by treatment status over time, and tables attesting to the sample size by time and treatment status, can be found in the appendix.

Our results are clear: L'Taken increased political ambition and efficacy across genders, and it bolstered both genders' interest in eventually running for office. On the ambition index, participation caused a .19 standard deviation increase ( $p < 0.001$ ); on the efficacy index, the increase was .15 standard deviations ( $p = 0.03$ ). Interestingly, prior to treatment, female respondents reported higher levels of efficacy than male respondents. Although this difference was narrowed by L'Taken, it was neither eliminated nor reversed.

Focusing on the run for office outcome, we detect an effect of .20 standard deviations ( $p < 0.001$ ). Substantively, on this last item, we find that the program increased the number of participants who reported being “Extremely likely,” “Moderately likely,” or “Slightly likely” by 8.5 percentage points ( $p = 0.001$ ), as seen in Table 4. There was no reason to suspect that the program would affect members of one gender more than another, and indeed that was not the

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<sup>3</sup>11 individuals identified as a gender other than male or female and 208 individuals only took the post-treatment surveys and therefore for whom we have no self-reported gender data. For the results presented in the main text, we limit our analyses only to those participants who took at least one pre-treatment survey as the inclusion of these pre-treatment survey measures is likely to reduce bias and increase precision. In the supplementary materials we report results with all participants.

case. Additional robustness tests are reported in the supplementary materials.

Table 1: Effect on Ambition Index

	Overall	Female Only	Male Only
Estimate	0.191	0.233	0.120
SE	0.046	0.062	0.067
p-value	0.000	0.000	0.074

\* The p-value on the difference between the female and male effects is 0.668

Table 2: Effect on Efficacy Index

	Overall	Female Only	Male Only
Estimate	0.152	0.157	0.135
SE	0.069	0.084	0.125
p-value	0.028	0.062	0.280

\* The p-value on the difference between the female and male effects is 0.917

Table 3: Effect on Run for Office

	Overall	Female Only	Male Only
Estimate	0.200	0.248	0.108
SE	0.048	0.061	0.077
p-value	0.000	0.000	0.167

\* The p-value on the difference between the female and male effects is 0.604

Table 4: Effect on Run for Office: Binary Measure

	Overall	Female Only	Male Only
Estimate	0.085	0.106	0.046
SE	0.026	0.034	0.041
p-value	0.001	0.002	0.260

\* The p-value on the difference between the female and male effects is 0.605

To better understand our results insofar as they relate to the gender gap in political ambition, consider the following. Prior to program participation, 36% of male participants stated

they were “Extremely likely,” “Moderately likely,” or “Slightly likely” to run for office. Among female participants, the mean was 25%. After participation, the mean response to the same question for female participants was 32%. In other words, after participating in the program, women were about as interested in running for office as men were *before* participating, essentially closing the gender gap in political ambition. This is not to say, however, that L’Taken reduced the *post*-treatment gender gap in ambition to run for office; after participating, a 12 percentage point gap remained. Ambition for elected office increased among both genders.

In addition to examining political efficacy and ambition, we also investigated whether participation in L’Taken increased feelings of Jewish identity. In the surveys we asked participants three questions on to what extent they feel: “a connection to the American Jewish community,” “a connection to the Jewish community where you live,” and “A connection to Jewish customs and traditions.” We also asked respondents whether they agree or disagree that their “political beliefs are connected to [their] Jewish identity.” As this was not a primary research interest, we did not include a discussion of these items in our pre-analysis plan. However, we analyze them using the same approach that we pre-specified for our efficacy and ambition outcomes.

On the three outcomes about Jewish connection, we find small and statistically insignificant findings. The effect on “American Jewish community” is 0.08 standard deviations ( $p = 0.23$ ); on “where you live” it is 0.02 standard deviations ( $p = 0.78$ ); and on “Jewish customs and traditions” it is 0.03 standard deviations ( $p = 0.58$ ). We see no statistically significant differences between male and female participants. These null findings on Jewish identity are consistent with the results on political efficacy and ambition not being driven by demand effects; the difference-in-differences design used here is capable of producing null results.

However, on the outcome linking political beliefs to participants’ Jewish identity, we do find meaningful effects. We find that participation in L’Taken, a program that explicitly links political engagement to Jewish identity, increases respondents beliefs that their politics and Judaism

are linked by 0.17 standard deviations ( $p < 0.01$ ), with similar effects for both male and female respondents. While our design does not allow us to isolate the effect of the Jewish component of L'Taken from the trainings and lobbying, this result suggests that religious values may be an important mechanism through which a community can instill civic values and encourage political ambition.

## Conclusion

Our results portray L'Taken as capable of increasing political ambition and efficacy among participants. While the effects are not restricted to women, it is the case that *after* participating, women were about as interested in running for office as their male counterparts were before participating.

We cannot say with any certainty what, specifically, worked about the L'Taken program, given the program included multiple components that were theoretically expected to increase political ambition. It may have been the lobbying experience of meeting with a Member of Congress or their staff and being heard on an issue important to them; it may have been the training participants received beforehand, teaching them essential skills for politics. By the same token, certain aspects of the program may have diminished the observed effects, such as cynicism about the role of money in politics. Future research should disentangle that various aspects of the program.

This is not the only limitation of the current work. There are two concerns of internal validity. First, as this was not a randomized experiment but instead relied on a difference-in-differences design, we may be worried about violations of parallel trends. Second, given that the surveys were fielded by the RAC, we may worry that participants, in response to demand effects, overstated their post-treatment political ambition. However, the null findings on the Jewish identity items helps assuage concerns about demand effects. No less importantly, the extent to

which our findings generalize to non-religious political programs for adolescents is unclear. We do not know whether the program's effectiveness at increasing ambition is inextricable from its religious background. Adolescents involved in religious groups are already more prone to political activity than their counterparts (e.g., Andolina et al., 2003), which may have made them especially susceptible to this program.

Still, our findings indicate that, despite the obstacles facing women in the development of political ambition, their political ambition can be increased nonetheless. Future research should further unpack the independent effects of exposure to political officials, lobbying them, and gaining political skills on increasing political ambition, and should study whether female-only programs modeled on L'Taken could replicate the program's successes—and reduce the gender gap not only among religious, politically-motivated high schoolers, but among the broader U.S. adolescent population.

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# Supplementary Materials for Can the Gender Gap in Political Ambition Be Reduced

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## Outcome Measures

These outcome measures were all pre-specified in our pre-analysis plan. On each survey, we ask two questions about political efficacy and three questions about political ambition.

Our efficacy questions are:

- Ordinary citizens can do a lot to influence the government in Washington if they are willing to make the effort.
- It's important to me to let my political representatives know how I feel about the issues.

Responses range from Strongly Agree to Strongly Disagree using a 7 point scale. We code each question using a -3 to +3 scale. Our outcome measure is an index (referred to as `efficacy_index`) in which we average together respondents' answers on these two questions.

Our ambition questions are, "How likely is it that, someday, when you're older, you might want to...":

- Work on a political campaign?
- Work for the government?
- Run for political office?

Responses range from Extremely Likely to Extremely Unlikely using a 7 point scale. We code each question using a -3 to +3 scale. Our outcome measure is an index (referred to as `ambitions_index`) in which we average together respondents' answers on these three questions.

For additional interpretability, we define `ambitions_2_binary` as 1 if the respondent answered positively on the 7-point likelihood scale and 0 for all other responses.

In addition, we are also interested in just the effect on "Run for political office". In code, we refer to this variable as `ambitions_2`. For additional interpretability, we define `ambitions_2_binary` as 1 if the respondent answered positively on the 7-point likelihood scale and 0 for all other responses. Other than this binary measure, all other survey measures were standardized to have mean 0 and standard deviation 1.

## Gender Measure

On each of the pre-treatment surveys, we asked individuals their self-identified gender. For the purposes of the analysis, we use individuals first self-reported gender. Overall, we have responses from 435 female participants, 262 male participants, and 0 participants who identify as neither male nor female. In addition, we have data from 0 individuals who only took the post-treatment surveys and therefore for whom we have no self-reported gender data.

## Summary of Data

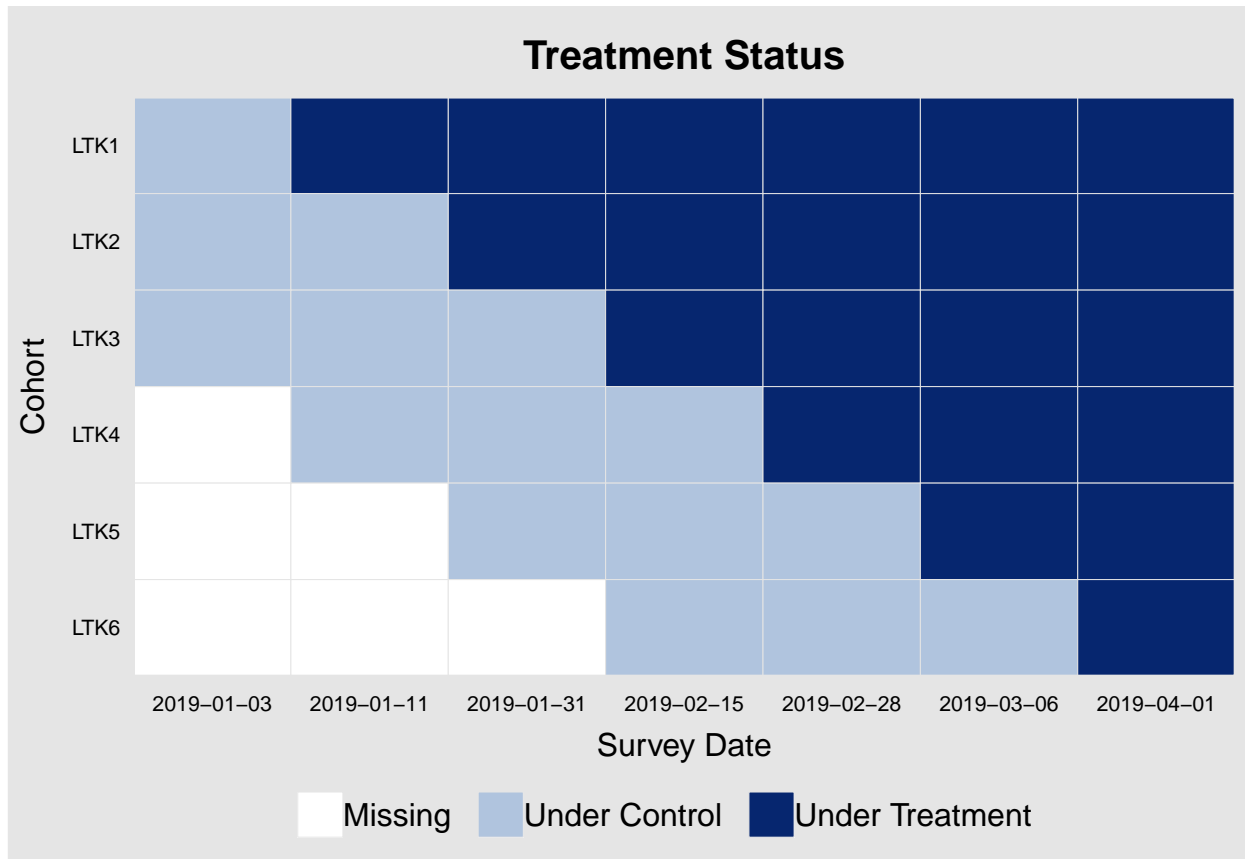
The below table summarizes the data, including the date of each session and survey as well as the sample sizes.



Table 1: Summary of Data

Survey Date	Cohort	Sample Size	Percent Female	Post Treatment
2019-01-03	LTK1	130	0.592	0
2019-01-11	LTK1	82	0.636	1
2019-01-31	LTK1	55	0.568	1
2019-02-15	LTK1	26	0.526	1
2019-02-28	LTK1	23	0.333	1
2019-03-06	LTK1	16	0.538	1
2019-04-01	LTK1	6	0.500	1
2019-01-03	LTK2	130	0.592	0
2019-01-11	LTK2	81	0.642	0
2019-01-31	LTK2	119	0.612	1
2019-02-15	LTK2	77	0.519	1
2019-02-28	LTK2	45	0.595	1
2019-03-06	LTK2	39	0.586	1
2019-04-01	LTK2	38	0.600	1
2019-01-03	LTK3	99	0.586	0
2019-01-11	LTK3	51	0.569	0
2019-01-31	LTK3	60	0.633	0
2019-02-15	LTK3	94	0.636	1
2019-02-28	LTK3	61	0.659	1
2019-03-06	LTK3	42	0.613	1
2019-04-01	LTK3	40	0.469	1
2019-01-11	LTK4	70	0.629	0
2019-01-31	LTK4	35	0.686	0
2019-02-15	LTK4	37	0.514	0
2019-02-28	LTK4	91	0.649	1
2019-03-06	LTK4	60	0.600	1
2019-04-01	LTK4	42	0.704	1
2019-01-31	LTK5	66	0.697	0
2019-02-15	LTK5	39	0.744	0
2019-02-28	LTK5	57	0.684	0
2019-03-06	LTK5	58	0.675	1
2019-04-01	LTK5	37	0.679	1
2019-02-15	LTK6	41	0.585	0
2019-02-28	LTK6	33	0.606	0
2019-03-06	LTK6	21	0.429	0
2019-04-01	LTK6	28	0.524	1

The below plot provides a similar summary of how treatment status changes over time.



## Analysis

Per our pre-analysis plan, we use the below code for our primary analysis. We deviate slightly from our pre-analysis plan in how R and Stata treat clustered standard errors in panel data, clustered at the level of the individual respondent. As implemented below, we use the bias-reduced linearization standard errors (Bell and McCaffrey 2002) following code from Pustejovsky (2016).<sup>1</sup>

```
make.result.table <- function(dv, caption, first_post = FALSE, must_have_pre = FALSE) {
  #data <- subset(data, data$respondent_female == 1 | data$respondent_male == 1)
  if(first_post == TRUE){
    # Limit to pre-treatment data and the first post-treatment survey
    data <- subset(data, data$first_post == 1)
  }
  if(must_have_pre == TRUE){
    # Limit to individuals who took the pre-treatment survey
    data <- subset(data, data$took_pre_post == 1)
  }
  overall <- plm(data[,dv] ~ post + as.factor(date), data = data,
    index = "id", model = "random", effect = "individual")
  overall.result <- as.matrix(coef_test(overall, vcov = "CR2", test = "Satterthwaite"))[2,-3]

  female.data <- subset(data, data$respondent_female == 1)

  female <- plm(female.data[, dv] ~ post +
    as.factor(date), data = female.data,
    index = "id", model = "random", effect = "individual")
  female.result <- as.matrix(coef_test(female, vcov = "CR2", test = "Satterthwaite"))[2,-3]

  male.data <- subset(data, data$respondent_male == 1)

  male <- plm(male.data[, dv] ~ post +
    as.factor(date), data = male.data,
    index = "id", model = "random", effect = "individual")
  male.result <- as.matrix(coef_test(male, vcov = "CR2", test = "Satterthwaite"))[2,-3]

  # Is there a difference between the female and male coefficients?
  # See
  # https://stats.stackexchange.com/questions/93540/testing-equality-of-coefficients-from-two-different
  Z = (female.result[1] - male.result[1]) / sqrt((female.result[1]^2 + male.result[1]^2))
  p.value <- 2*pnorm(-abs(Z))

  table <- data.frame(cbind(overall.result, female.result, male.result),
    row.names = c("Estimate", "SE", "p-value"))

  return(kable(table,
    col.names = c("Overall", "Female Only", "Male Only"),
    caption = paste0("Effect on ", caption), digits = 3) %>%
    kable_styling(latex_options = c("striped", "HOLD_position")) %>%
    add_footnote(paste0("The p-value on the difference between the female and male effects is ",
      round(p.value, 3)), notation="symbol"))
}
```

<sup>1</sup>See <https://www.jepusto.com/clubsandwich-for-crve-fe/>

# Results

## Respondents with Pre-Treatment Data

While not specified in our pre-analysis plan, our preferred analysis is to include data only from participants who took at least one pre-treatment survey. This allows us to do the full difference-in-difference analysis. The below tables suggest our results are robust to examining only those individuals who completed at least one pre-treatment survey.

Table 2: Effect on Ambition Index

	Overall	Female Only	Male Only
Estimate	0.191	0.233	0.120
SE	0.046	0.062	0.067
p-value	0.000	0.000	0.074

\* The p-value on the difference between the female and male effects is 0.668

Table 3: Effect on Efficacy Index

	Overall	Female Only	Male Only
Estimate	0.152	0.157	0.135
SE	0.069	0.084	0.125
p-value	0.028	0.062	0.280

\* The p-value on the difference between the female and male effects is 0.917

Table 4: Effect on Run for Office

	Overall	Female Only	Male Only
Estimate	0.200	0.248	0.108
SE	0.048	0.061	0.077
p-value	0.000	0.000	0.167

\* The p-value on the difference between the female and male effects is 0.604

Table 5: Effect on Run for Office: Binary Measure

	Overall	Female Only	Male Only
Estimate	0.085	0.106	0.046
SE	0.026	0.034	0.041
p-value	0.001	0.002	0.260

\* The p-value on the difference between the female and male effects is 0.605

## All Respondents

Below we present results across our three main outcomes: the ambition index, the efficacy index, and whether an individual expresses an interest in running for office. Note that the overall results are larger because they

include both respondents who self-identify as neither male nor female as well as respondents who did not take the pre-treatment surveys and for whom we therefore have no gender data.

Table 6: Effect on Ambition Index

	Overall	Female Only	Male Only
Estimate	0.169	0.156	0.123
SE	0.041	0.057	0.063
p-value	0.000	0.007	0.055

\* The p-value on the difference between the female and male effects is 0.868

Table 7: Effect on Efficacy Index

	Overall	Female Only	Male Only
Estimate	0.154	0.095	0.178
SE	0.056	0.070	0.113
p-value	0.006	0.177	0.115

\* The p-value on the difference between the female and male effects is 0.68

Table 8: Effect on Run for Office

	Overall	Female Only	Male Only
Estimate	0.150	0.145	0.096
SE	0.043	0.057	0.072
p-value	0.000	0.012	0.185

\* The p-value on the difference between the female and male effects is 0.777

Table 9: Effect on Run for Office: Binary Measure

	Overall	Female Only	Male Only
Estimate	0.060	0.058	0.043
SE	0.022	0.031	0.038
p-value	0.007	0.057	0.259

\* The p-value on the difference between the female and male effects is 0.827

## First Post-Treatment Survey

While not specified in our pre-analysis plan, a second robustness test is to use only the first post-treatment survey data. We may fear that taking the same survey multiple times introduces artificial persistence. The below tables suggest our results are robust to examining only the first survey.

Table 10: Effect on Ambition Index

	Overall	Female Only	Male Only
Estimate	0.148	0.138	0.127
SE	0.046	0.064	0.077
p-value	0.001	0.031	0.104

\* The p-value on the difference between the female and male effects is 0.95

Table 11: Effect on Efficacy Index

	Overall	Female Only	Male Only
Estimate	0.134	0.108	0.153
SE	0.055	0.068	0.114
p-value	0.015	0.112	0.182

\* The p-value on the difference between the female and male effects is 0.81

Table 12: Effect on Run for Office

	Overall	Female Only	Male Only
Estimate	0.141	0.132	0.100
SE	0.048	0.064	0.084
p-value	0.003	0.041	0.235

\* The p-value on the difference between the female and male effects is 0.848

Table 13: Effect on Run for Office: Binary Measure

	Overall	Female Only	Male Only
Estimate	0.063	0.061	0.052
SE	0.024	0.032	0.045
p-value	0.009	0.058	0.250

\* The p-value on the difference between the female and male effects is 0.902

## Bivariate Results

Another way to examine these results is comparing the average value on each outcome measure for both the pre-treatment and post-treatment data.

Table 14: Effect on Ambition Index

	Pre	Post
Overall	-0.097	0.099
Female	-0.090	0.082
Male	-0.112	0.111

Table 15: Effect on Efficacy Index

	Pre	Post
Overall	-0.050	-0.008
Female	0.085	0.140
Male	-0.266	-0.211

Table 16: Effect on Run for Office

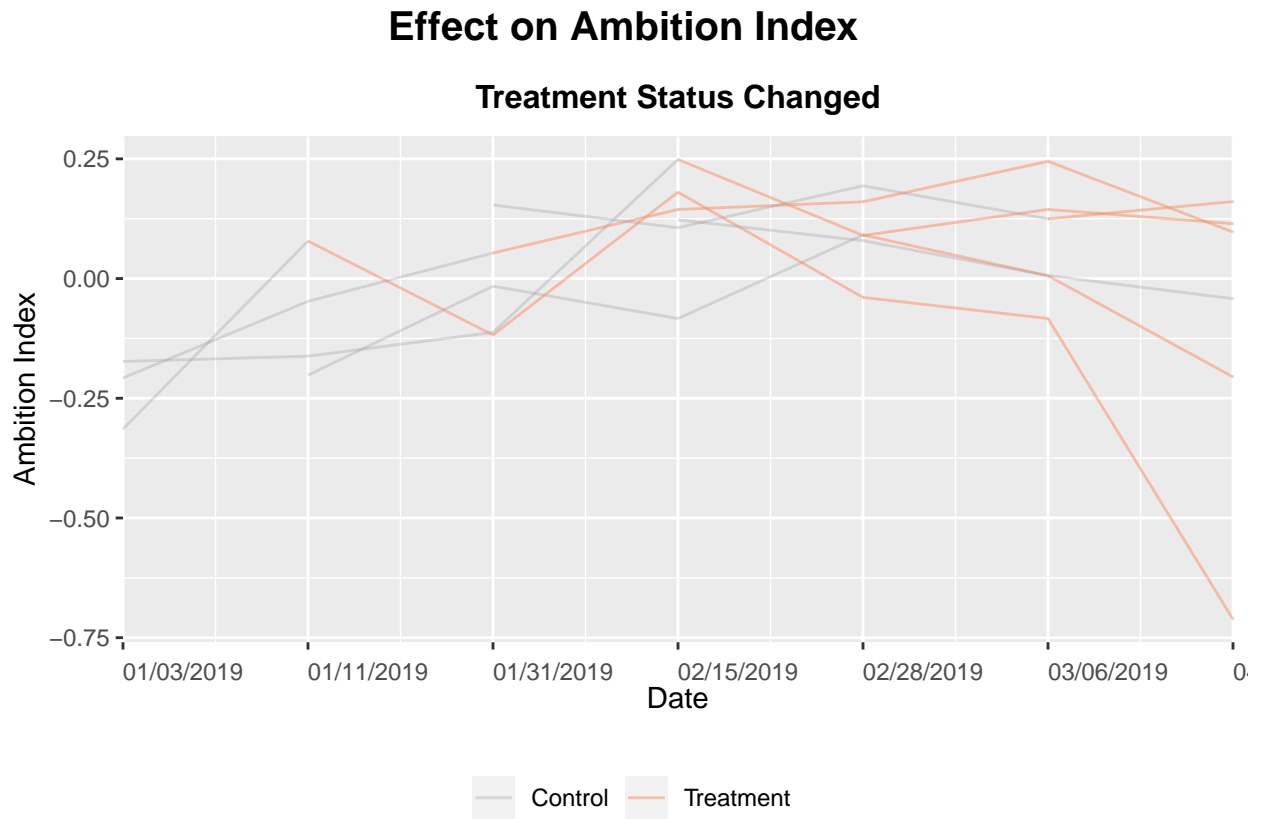
	Pre	Post
Overall	-0.096	0.108
Female	-0.141	0.039
Male	-0.018	0.200

Table 17: Effect on Run for Office: Binary

	Pre	Post
Overall	0.292	0.368
Female	0.249	0.319
Male	0.355	0.439

# Figures

Effect on ambition index

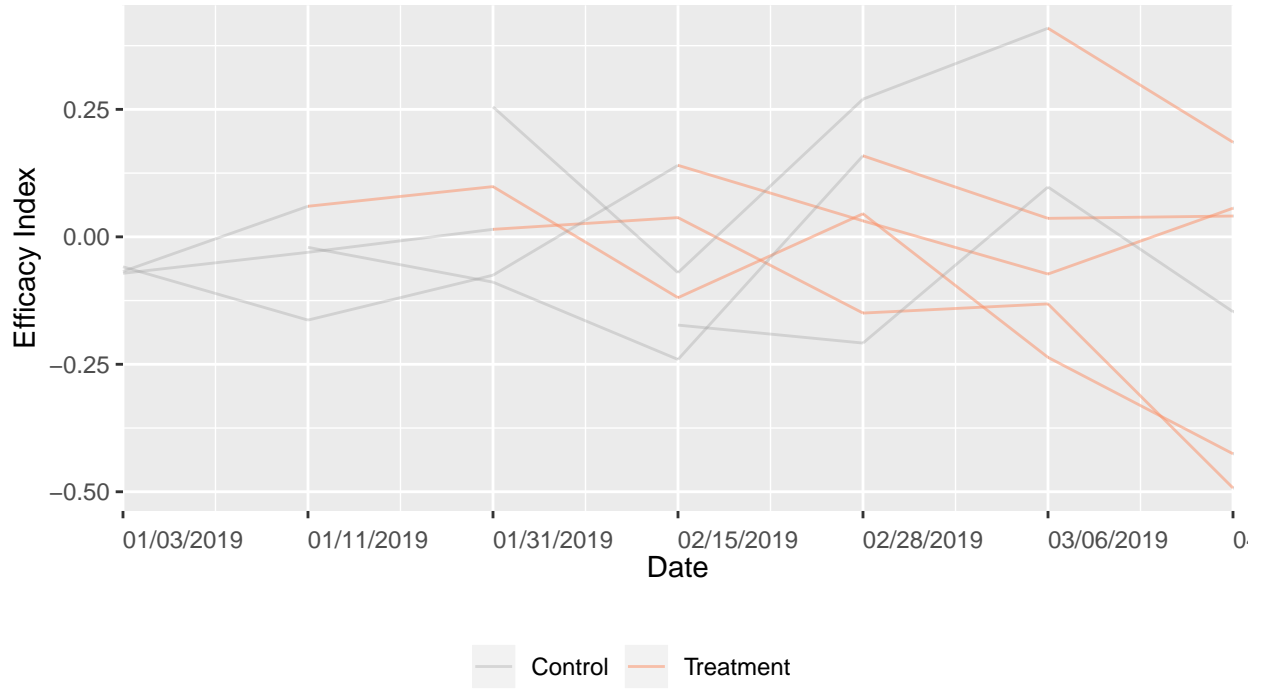




Effect on efficacy index

## Effect on Efficacy Index

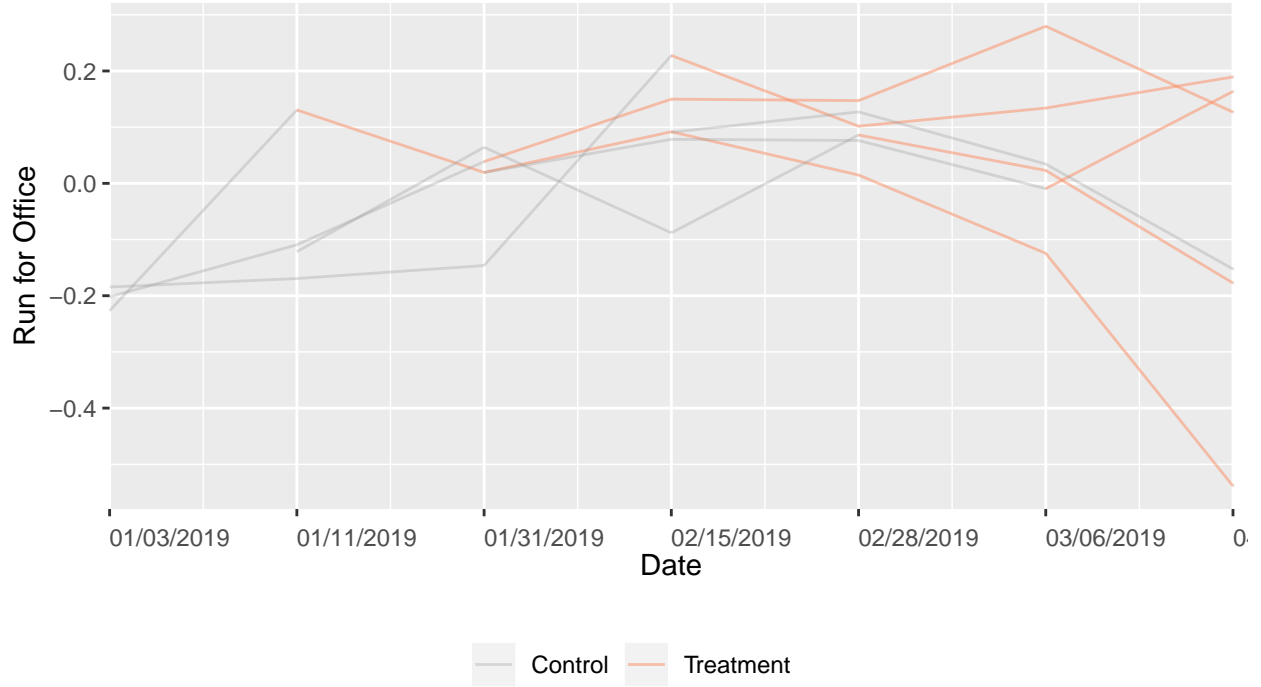
Treatment Status Changed



Effect on running for office

### Effect on Run for Office

#### Treatment Status Changed



## Effect on Jewish Identity Items

In each survey, we asked four questions related to respondents Jewish identity:

- To what extent do you feel: “A connection to the American Jewish community?” (4 point scale from Not at all; A little; Somewhat; Very much)
- To what extent do you feel: “A connection to the Jewish community where you live?” (4 point scale from Not at all; A little; Somewhat; Very much)
- To what extent do you feel: “A connection to Jewish customs and traditions” (4 point scale from Not at all; A little; Somewhat; Very much)
- Do you agree or disagree with the following statements? “My political beliefs are connected to my Jewish identity.” (7 point scale from Strongly disagree; Disagree; Somewhat disagree; Neither agree nor disagree; Somewhat agree; Agree; Strongly agree)

The training repeatedly connected Jewish values to political effectiveness; the different groups competing in the simulation were penalized/rewarded in part based on the extent to which their behavior during the simulation made some kind of Jewish-based appeal. For example, the students who focused on social media were criticized/lauded depending on how much their social media content had some overt Jewish content. Given this explicit connection to Jewish values and politics, we expect to see movement on the fourth question about Jewish identity but not on the first three items, since these items are not about Jewish values and politics. Note that we did not pre-register these expectations.

Table 18: Effect on A connection to the American Jewish community

	Overall	Female Only	Male Only
Estimate	0.081	0.041	0.180
SE	0.068	0.084	0.118
p-value	0.234	0.627	0.132

\* The p-value on the difference between the female and male effects is 0.45

Table 19: Effect on A connection to the Jewish community where you live

	Overall	Female Only	Male Only
Estimate	0.019	0.094	-0.104
SE	0.069	0.085	0.118
p-value	0.783	0.273	0.380

\* The p-value on the difference between the female and male effects is 0.158

Table 20: Effect on A connection to Jewish customs and traditions

	Overall	Female Only	Male Only
Estimate	0.031	0.069	-0.026
SE	0.057	0.070	0.102
p-value	0.582	0.326	0.803

\* The p-value on the difference between the female and male effects is 0.199

Table 21: Effect on My political beliefs are connected to my Jewish identity

	Overall	Female Only	Male Only
Estimate	0.170	0.181	0.12
SE	0.064	0.074	0.12
p-value	0.009	0.016	0.32

\* The p-value on the difference between the female and male effects is 0.778

## Within-Subject Correlations

```
data_wide <- read.dta13("../Data/clean_data/corr_data.dta")
ambition_corr <- round(cor(data_wide$ambitions_index1, data_wide$ambitions_index2, use = "complete.obs"), 3)
efficacy_corr <- round(cor(data_wide$efficacy_index1, data_wide$efficacy_index2, use = "complete.obs"), 3)
```

Within the pre-treatment surveys, the ambition index has a correlation of 0.864 across two survey waves and the efficacy index has a correlation of 0.593.

## Who did participants meet with?

Among the 435 female participants who took a baseline survey, 1.1% met with at least one female Member of Congress and 89.2% met with at least one female staffer.

Among the 262 male participants who took a baseline survey, 6.1% met with at least one male Member of Congress and 88.2% met with at least one male staffer.

## **Text Messages to Program Participants**

The following messages were used to invite participants to take the surveys. Cell phone numbers were acquired during the registration phase.

### **First pre-program message**

“Hey [First name], glad you’re coming to DC with your synagogue for the RAC’s L’Taken seminar. We need your help—can you take a short survey? If you complete it, you’ll be eligible to win a \$50 Amazon gift card. Thanks! [Link to survey]”

### **First post-program message**

“Hey [First name], we’re interested in learning about your experiences at L’Taken in DC. Can you take this short survey again? If you complete it, you’ll be eligible to win a \$50 Amazon gift card. Thanks! [Link to survey]”

### **Follow-up surveys, for both pre- and post-program participants**

“Hey [First name], we know you might’ve already filled out this survey but the RAC needs your help again. If you complete the survey again, you will be re-entered to win a \$50 Amazon gift card. Thanks! [Link to survey]”

## Pre-Analysis Plan (filed with EGAP)

## Pre-Analysis Plan for a Difference-in-Difference Design on Increasing Political Ambition and Efficacy in High School Students

We are conducting an ongoing difference-in-difference design to measure the efficacy of a high school lobbying program. In this program, high school students from across the country come to Washington, D.C. to lobby their federal elected officials and/or their staffs on a variety of topics relevant to them. Students also receive briefings and participate in trainings on federal policymaking.

We are measuring whether this program can increase the political ambition and feelings of political efficacy among its participants. In particular, we will measure whether this program reduces the gender gap in political ambition.

Our analysis is limited to a difference-in-difference design due to programmatic constraints. The partner organization is unable to implement a randomized experiment. Nonetheless, our analysis will be a difference-in-difference design in which we compare the pre- and post-participation attitudes using surveys of participating high school students. We are leveraging the fact that there will be six cohorts of participants spread over January-March 2019 for which we will have multiple pre- and post-surveys, as summarized in the below table (with approximate dates for fielding the surveys):

	Jan 11 Cohort	Jan 25 Cohort	Feb 8 Cohort	Feb 25 Cohort	March 1 Cohort	March 15 Cohort
Pre-Survey #1	1/3	1/3	1/3	1/18	1/28	2/15
Pre-Survey #2	n/a	1/18	1/18	1/28	2/15	2/28
Pre-Survey #3	n/a	n/a	1/28	2/15	2/28	3/6
Post-Survey #1	1/18	1/28	2/15	2/28	3/6	3/20
Post-Survey #2	1/28	2/15	2/28	3/6	3/20	4/1
Post-Survey #3	2/15	2/28	3/6	3/20	4/1	TBD
Post-Survey #4	2/28	3/6	3/20	4/1	TBD	TBD
Post-Survey #5	3/6	3/20	4/1	TBD	TBD	TBD
Post-Survey #6	3/20	4/1	TBD	TBD	TBD	TBD
Post-Survey #7	4/1	TBD	TBD	TBD	TBD	TBD

On each survey, we will ask two questions about political efficacy and three questions about political ambition.

Our efficacy questions are:

- Ordinary citizens can do a lot to influence the government in Washington if they are willing to make the effort.
- It's important to me to let my political representatives know how I feel about the issues.

Responses range from Strongly Agree to Strongly Disagree using a 7 point scale. We will code each question using a -3 to +3 scale. Our outcome measure will be an index in which we average together respondents' answers on these two questions.

Our ambition questions are, “How likely is it that, someday, when you’re older, you might want to...”:

- Work on a political campaign?
- Work for the government?
- Run for political office?

Responses range from Extremely Likely to Extremely Unlikely using a 7 point scale. We will code each question using a -3 to +3 scale. Our outcome measure will be an index in which we average together respondents' answers on these three questions.

Our principal hypothesis is that participation in the program will increase political ambition and efficacy.

Our analysis will take the following form:

$$Y_{i,t} = \gamma_t + \tau\omega_{i,t} + \alpha_i + \mu_{i,t},$$

where  $Y$  is our outcome measures (efficacy and ambition indices),  $\gamma_t$  is an indicator for the survey time period,  $\omega_{i,t}$  is an indicator for whether individual  $i$  participated in the lobbying program before  $t$  (such that as soon as an individual participates between  $t-1$  and  $t$ , this indicator is set to 1 and then is then always coded as participated thereafter),  $\alpha_i$  is an individual-level fixed effect,  $\mu_{i,t}$  are the idiosyncratic errors clustered at the individual level, and  $\tau$  is the treatment effect of participating that we are estimating. The identification strategy of the differences-in-differences design rests on the fact that we have precise measures of participants' views both before and after they participate.

In addition, because of the large literature on a gender gap in political ambition (which we replicate in our 3 January survey), we will examine whether the program is particularly effective at increasing political ambition among female participants. In addition to the two indices described above, we will also examine effects solely on the “Run for political office” outcome measure since that is a primary outcome in that literature. We will examine whether there is an interaction between post-program political ambition and efficacy with gender. While we will report what we find, we are treating this matter as an open research question, not a directional hypothesis.

Finally, in the first survey immediately following the program, we will ask respondents a free response question on what they learned from the weekend. We will use these responses to these open-ended questions to qualitatively investigate potential mechanisms for any attitude changes.

Note that we are filing this PAP after the 3 January survey but prior to any post-program survey. Thus we are blind to all results at this time.