SISTER DISTRICT ACTION NETWORK

Sister District Action Network
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Analysis of the 2022 Values-Matched Messaging Study

Abstract: This study tested the effect on turnout of receiving a handwritten postcard highlighting the policy votes that a voter's state legislative representative cast in opposition to the modeled policy position of the voter. The study design was a randomized controlled trial, with a postcard condition in which voters received a handwritten postcard with issue-specific messaging, a social pressure mailer condition (in which voters received a social pressure, non-issue-specific printed mailer), and a control condition in which voters did not receive any mail. The postcards were sent to Georgia and Pennsylvania voters ahead of the 2022 midterm general elections. Inclusion criteria included a modeled pro-choice support score at/above 70, and having a state representative or senator who voted for anti-abortion bills.

In the analysis, the numbers trended in the expected direction, with voters in the postcard condition voting at a higher rate than voters who did not receive a postcard, but this result did not reach statistical significance ($p = 0.30$). Results indicated that the postcards had a smaller than expected effect (0.24 percentage points higher than the turnout rate of the control condition) but it still exceeded the effect of the social pressure mailers (0.18 percentage points lower than the turnout rate of the control condition, but also not statistically significant with a p-value of 0.53).

There were no statistically significant moderation effects based on the treatment condition interacted with predicted turnout score, pro-choice issue support score, or state.

Takeaways:

- People in the postcard condition had the highest turnout rate of all of the conditions.
    - The turnout for voters who received a postcard was 44.81%, while voters who did not receive anything turned out at a rate of 44.57%. This difference of 0.24 percentage points was not statistically significant in the main model ($p = 0.30$).
    - Interestingly, postcard recipients also voted at a rate that was 0.42 percentage points higher than voters who received social pressure mailers (44.81% for postcard recipients versus 44.39% for social pressure mail recipients). This difference was not statistically significant ($p = 0.20$).
- Postcards appeared to not affect people differently based on their baseline predicted turnout scores.
    - The interaction between condition and predicted turnout scores was not significant for the postcards condition ($p = 0.32$) or the social pressure condition ($p = 0.52$).
- Postcards appeared to not affect people differently based on their modeled issue support scores.

    - This interaction between condition and modeled issue score was not significant for postcards (p = 0.84) or social pressure mailers (p = 0.88).
- These data show that people who received postcards turned out to vote at a slightly higher rate than people who did not receive postcards (by approximately 0.24 percentage points). This difference was smaller than the one we observed when we ran a similar experiment in 2021 (0.67 percentage points). This adds to the evidence that postcards are more effective in quieter election contexts where voters are receiving fewer voter contact touches. The 'noisier' election context in 2022 likely contributed to the smaller observed effect.
- While the postcard treatment effect did not meet the standard threshold for statistical significance, it was associated with higher voter turnout than both no contact and social pressure mail. Further research is needed to determine the boundaries and best applications of the strategy.
- It should be noted that the actual 2022 turnout rate for this sample was lower than expected based on the sample's average modeled midterm election turnout score.
- Voters included in this study fit somewhat narrow inclusion criteria, including being highly likely to support Democrats, being 80% or less likely to turnout to vote in a midterm election (according to predicted scores), and having modeled issue support scores of 70 or higher for pro-choice policies. Further, it included only Georgia and Pennsylvania voters in districts in which state legislators voted on the floor for anti-abortion legislation.

I. Background and Research Question

This work was conducted by SDAN with financial support from the 2022 Innovation grant fund administered by Open Labs USA, The Movement Cooperative, and America Votes. SDAN randomized the sample into study conditions and coordinated social pressure mailers to mirror the mailers used in a similar experiment in 2021, with updated election information. Mailers were paid for with grant funding. SDAN composed the postcard scripts and recruited volunteers to handwrite the postcards, as well as coordinated for them to be sent to voters locally within Georgia and Pennsylvania.

This work was conducted to address the efficacy of constituent knowledge of their state legislative representative voting against their interests delivered via a handwritten postcard on voter turnout in the 2022 general election in Georgia and Pennsylvania. This study was a replication of a study SDAN ran in Virginia in 2021.

II. Study Design

This study was a randomized controlled trial (RCT) designed by SDAN. The study targeted all Georgia and Pennsylvania voters who met the individual-level inclusion criteria detailed below. From this list of voters, one person from each household was randomly selected for the sample. Individuals were then sorted into blocks based on their modeled midterm turnout scores, with each block spanning a 10-point range (i.e., 0-10, 11-20, 21-30, etc.). Targets were randomly assigned to experimental conditions at the block level—that is, participants were randomly assigned to one of the conditions in proportion to the size of their turnout-score block. For example, if the block with the lowest scores, 0-10, constituted 5% of the sample, then 5% of each

treatment group (postcards: 60,000 * 0.05 = 3,000; social pressure mail: 38,000 * 0.05 = 1,900) would consist of people with turnout scores in the 0-10 range, and the remaining people in that block would be assigned to the control group. There were 60,000 people assigned to the postcard condition, 38,000 people assigned to the social pressure condition, and 194,094 people to the control condition. Due to late grant funding, only 41,609 postcards were written and sent to voters (69.4% of those assigned to the postcard treatment condition). We analyzed the data using an intent-to-treat approach that preserved participants in the postcard condition if they were originally randomized into that condition (even those who did not actually receive a postcard). The total number of people enrolled in this study was 292,094. Volunteers completed the postcards according to the scripts, and sent them in bulk to in-state partners in Georgia and Pennsylvania for in-state mailing around October 19-20, 2022. We estimate that they were delivered to homes from October 23-27. After the election, data was matched back to TargetSmart's voter file to determine if voters targeted in this study voted in the 2022 Georgia or Florida general election. When matching back to the voter file, 12,153 people could not be matched. Those people were removed from the analysis since they had no values for the outcome variable (voting). This left a sample of 279,941.

Inclusion criteria: The target universe for this study included voters who met all of the following criteria:

- Lived in legislative districts where 1) a Republican incumbent had voted for both anti-choice bills cited in the postcard message, and 2) was being challenged by a Democratic candidate
- Had modeled midterm election turnout scores from 0-80, partisanship scores of 70+, and pro-choice issue scores of 70+

GA State Senate districts/Republican reps: 1 B Watson, 16 M Harbin, 17 B Strickland, 18 J Kennedy, 27 G Dolezal, 29 R Robertson, 46 B Cowsert, 47 F Ginn, 56 J Albers.

PA State House districts/Republican reps: 6 B Roae, 7 P Wentling, 14 J Marshall, 18 KC Tomlinson, 26 T Hennessey, 28 R Mercuri, 40 N Mihalek, 44 V Gaydos, 50 B Cook, 51 M Dowling, 58 E Davanzo, 60 A Major, 62 J Struzzi II, 69 C Metzgar, 76 S Borowicz, 80 J Gregory, 81 R Irvin, 88 S Delozier, 92 D Keefer, 93 M Jones, 99 David Zimmerman, 102 R Diamond, 120 A Kaufer, 122 D Heffley, 123 T Twardzik, 131 M Mackenzie, 137 Joe Emrick, 143 S Labs, 144 T Polinchock, 145 C Staats, 160 C Williams, 168 C Quinn (absent for SB 106 initial vote but voted for it at a later point so included), 169 K Klunk, 171 K Benninghoff, 176 J Rader, 199 B Gleim.

III. Results

Turnout rate by condition followed the expected trend for postcards, with postcards outperforming no contact and social pressure mail. However, the treatment condition did not have a statistically significant influence on voting, even in the absence of any covariates.

Table 1: Voter turnout by condition

Voted?	Control	Postcard	Social Pressure Mailer
No	103,115	31,738	20,248
Yes	82,899	25,766	16,165
Total	186,014	57,504	36,413
Turnout rate	44.57%	44.81%	44.39%
Rate over control	-	+0.24pp	-0.18pp
Rate over SP mailer	+0.18pp	+0.42pp	-

Main Models

The main model focuses on whether or not the target voted. Linear (OLS) regression analysis was used to assess differences between conditions with respect to voting, after controlling for age, partisanship score, turnout score, pro-choice issue score, race, and gender.

More formally, the central question posed in this analysis is whether there is an association between receiving a postcard, or social pressure mailer, and voting in the general election, while accounting for the effects of covariates that may also be associated with voting.

The main model was also estimated with the treatment condition variable re-coded (i.e., using social pressure as the reference category) to estimate the effect of social pressure mailers vs postcards.

The reported coefficient for the condition variable in the linear regression is an estimate of the treatment effect, expressed in terms of the percentage-point difference in the probability of voting for targets who are sent a postcard or social pressure mailer, compared to targets who did not receive a communication, after controlling for all of the covariates. The threshold for statistical significance used here is $p < 0.05$.

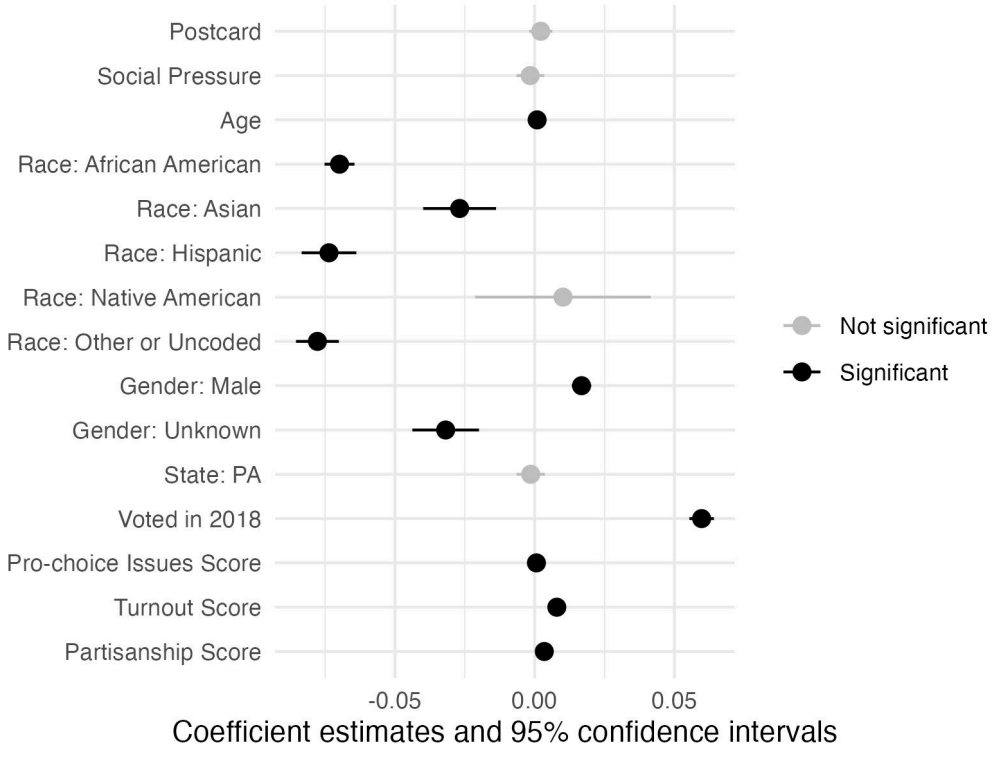
Table 2: Main Model OLS Coefficients

Variable	Coefficient (Robust Std. Err.)	p-value
Treatment condition (Control=0)		
Postcard	0.0022 (0.0021)	0.30
Social pressure mailer	-0.0016 (0.0025)	0.53
Age	0.0009 (0.00005)	<0.001*
Gender (Female=0)		
Male	0.0168 (0.0018)	<0.001*

Unknown	-0.0318 (0.0061)	<0.001*
Race (White=0)		
Black/African-American	-0.0698 (0.0027)	<0.001*
Asian	-0.0268 (0.0067)	0.001*
Hispanic	-0.0736 (0.0050)	<0.001*
Native American	0.0101 (0.0160)	0.527
Uncoded	-0.0777 (0.0039)	<0.001*
State (GA=0)	-0.0014 (0.0026)	0.585
Voted in 2018	0.0598 (0.0022)	<0.001*
Partisanship score	0.0037 (0.0001)	<0.001*
Turnout score	0.0084 (0.00003)	<0.001*
Pro-choice support score	0.0005 (0.0001)	<0.001*

N = 279,931, Adj. R^2 = 0.21

Figure 1: Main model coefficients and confidence intervals



The regression results indicate that people in the postcard condition voted at a higher rate than the people in the control condition, controlling for the covariates, but this effect was not

statistically significant (p = 0.30). People who received the social pressure mailers voted at a lower rate than those in the control condition, but this negative effect was also not statistically significant (p = 0.53). Note that we analyzed the data using an intent-to-treat approach (i.e., as if all voters assigned to the postcard condition actually received a postcard). The observed treatment effect, 0.2pp, is likely a conservative estimate of the effect because we know ~30% of voters in the postcard condition did not actually receive the treatment. Variables included as covariates behaved as expected, with age, race, gender, voting in the 2018 election, turnout score, pro-choice score, and partisanship being significant predictors of voting on their own in most cases.

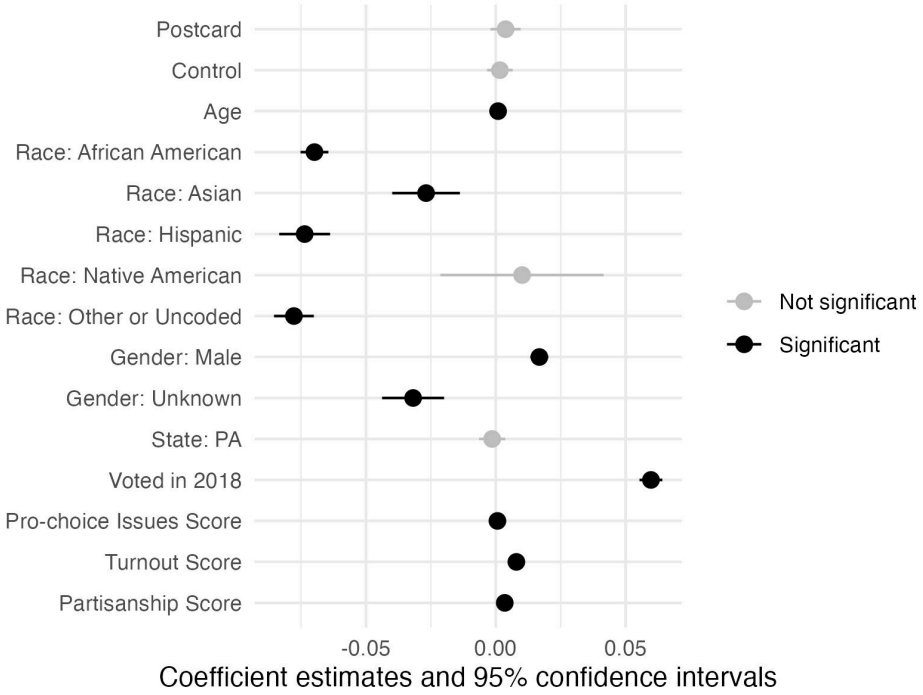
Though there is a difference in raw turnout rates between the postcard and social pressure mailer conditions, a recode of the main model's condition reference group indicates that this difference between conditions is not statistically significant (p = 0.20). See Table 3.

Table 3: Main Model Coefficients: Social pressure condition as reference category

Variable	Coefficient (Robust Std. Err.)	p-value
Treatment condition (SP=0)		
Control Postcard	0.0016 (0.0025) 0.0038 (0.0030)	0.53 0.20
Age	0.0009 (0.00005)	<0.001*
Gender (Female=0)		
Male Unknown	0.0168 (0.0018) -0.0318 (0.0061)	<0.001* <0.001*
Race (White=0)		
Black/African-American Asian Hispanic Native American Uncoded	-0.0698 (0.0027) -0.0268 (0.0067) -0.0736 (0.0050) 0.0101 (0.0160) -0.0777 (0.0039)	<0.001* 0.001* <0.001* 0.527 <0.001*
State (GA=0)	-0.0014 (0.0026)	0.585
Voted in 2018	0.0598 (0.0022)	<0.001*
Partisanship score	0.0037 (0.0001)	<0.001*
Turnout score	0.0084 (0.000037)	<0.001*
Pro-choice score	0.0005 (0.0001)	<0.001*

N = 279,931, Adj. R^2 = 0.21

Figure 2: Main model coefficients and confidence intervals (reference category = social pressure)



Null Result – Main Model: The main model indicated that postcards had a positive effect on voting compared to the other conditions, but it was not statistically significant. Targets who received a postcard, while more likely to vote as indicated by their turnout rate and the coefficient for postcards (+0.2pp), were not statistically significantly more likely to vote (p = 0.30). A recode of the treatment condition variable indicates that the difference in impact between social pressure mailers and postcards does not rise to the level of statistical significance (p = 0.20). Covariates performed as expected, with nearly all covariates achieving statistical significance.

Models with Interaction Terms

The regression results revealed no significant interaction effect for postcards, such that their efficacy did not vary based on the modeled midterm turnout score of the target voters.

Table 4: Coefficients from model with treatment condition x turnout score interaction

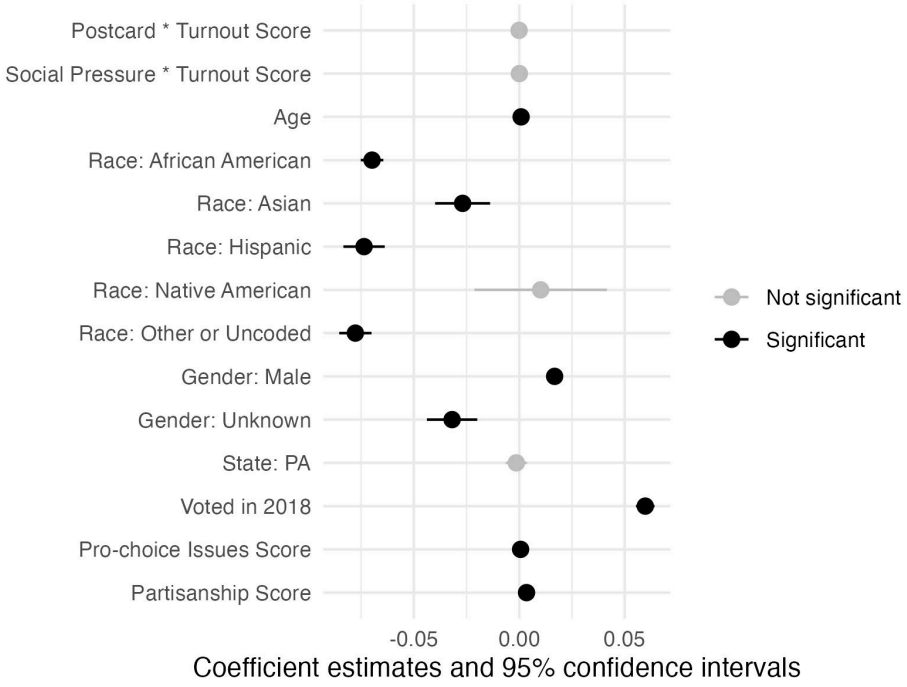
Variable	Coefficient (Robust Std. Err.)	p-value
Condition x Turnout Score (control=0)		

Postcard Social pressure mailer	-0.00007 (0.00007) 0.00006 (0.00009)	0.32 0.52
Age	0.0009 (0.00005)	<0.001*
Gender (Female=0)		
Male Unknown	0.0168 (0.0018) -0.0319 (0.0061)	<0.001* <0.001*
Race (White=0)		
Black/African-American Asian Hispanic Native American Uncoded	-0.0698 (0.0027) -0.0269 (0.0067) -0.0736 (0.0050) 0.0101 (0.0160) -0.0777 (0.0039)	<0.001* 0.001* <0.001* 0.527 <0.001*
State (GA=0)	-0.0014 (0.0026)	0.587
Voted in 2018	0.0598 (0.0022)	<0.001*
Partisanship score	0.0035 (0.0001)	<0.001*
Pro-choice score	0.0006 (0.0001)	<0.001*

N = 279,931, Adj. R^2 = 0.21

The effect of turnout score on voting is very slightly smaller (by ~0.01 percentage points) among voters in the postcard condition compared to the control condition. The impact of turnout score is also extremely small and not statistically significant among voters in the social pressure condition, compared to the control.

Figure 3: Model coefficients and confidence intervals for condition x turnout score interaction



Null Result – Condition x Turnout Score Interaction: The results of the model with the condition x turnout score interaction term indicated that the effect of turnout score on voting did not vary significantly by experimental condition.

Table 5: Coefficients from model with treatment condition x issue support score interaction

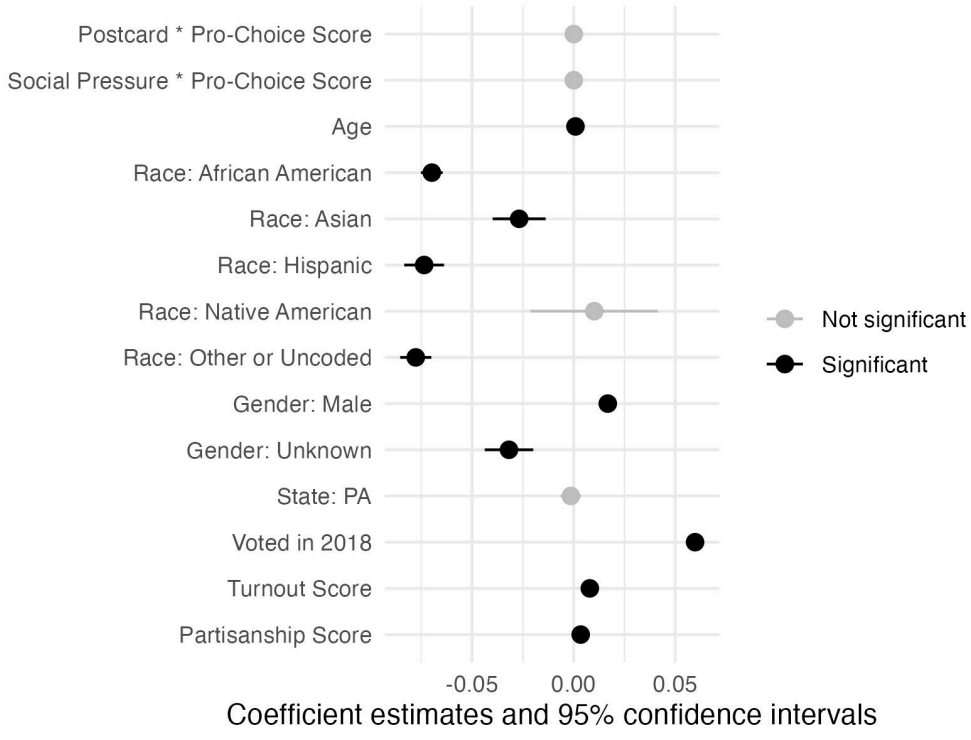
Variable	Coefficient (Robust Std. Err.)	p-value
Condition x Issue Score (control=0)		
Postcard Social pressure mailer	0.00006 (0.0003) 0.00005 (0.0003)	0.84 0.88
Age	0.0009 (0.00005)	<0.001*
Gender (Female=0)		
Male Unknown	0.0168 (0.0018) -0.0318 (0.0061)	<0.001* <0.001*
Race (White=0)		

Black/African-American	-0.0698 (0.0027)	<0.001*
Asian	-0.0268 (0.0067)	0.001*
Hispanic	-0.0736 (0.0050)	<0.001*
Native American	0.0101 (0.0160)	0.527
Uncoded	-0.0777 (0.0039)	<0.001*
State (GA=0)	-0.0014 (0.0026)	0.587
Voted in 2018	0.0598 (0.0022)	<0.001*
Partisanship Score	0.0035 (0.0001)	<0.001*
Turnout Score	0.0079 (0.00004)	<0.001*

N = 279,931, Adj. R^2 = 0.21

The regression results revealed no significant interaction effect for postcards, such that their efficacy did not vary based on the modeled pro-choice support scores of the target voters. The effect of the pro-choice score on voting is trivially larger (by ~0.01 percentage points) among voters in the postcard condition compared to the control condition. The impact of the score is similarly negligible and not statistically significant among voters in the social pressure condition, compared to the control.

Figure 4: Model coefficients and confidence intervals for condition x issue support score interaction



Null Result – Condition x Issue Score Interaction: The model with the issues score by condition interaction indicated that the effect of the pro-choice issue score on voting did not vary significantly by experimental condition.

Table 6: Coefficients from model with treatment condition x state interaction

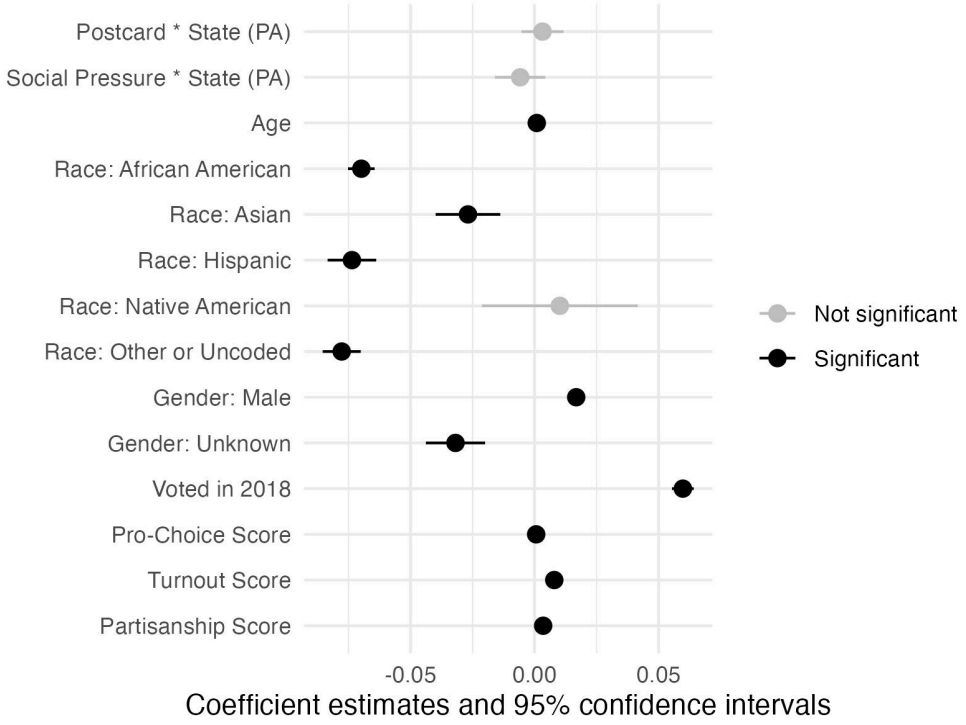
Variable	Coefficient (Robust Std. Err.)	p-value
Condition x State: PA (control=0, GA=0)		
Postcard	0.0032 (0.0043)	0.46
Social pressure mailer	-0.0058 (0.0052)	0.26
Age	0.0009 (0.00005)	<0.001*
Gender (Female=0)		
Male	0.0168 (0.0018)	<0.001*
Unknown	-0.0319 (0.0061)	<0.001*
Race (White=0)		
Black/African-American	-0.0698 (0.0027)	<0.001*
Asian	-0.0268 (0.0067)	0.001*
Hispanic	-0.0736 (0.0050)	<0.001*
Native American	0.0102 (0.0160)	0.526
Uncoded	-0.0777 (0.0039)	<0.001*
Voted in 2018	0.0598 (0.0022)	<0.001*
Pro-choice Score	0.0006 (0.0001)	<0.001*
Partisanship Score	0.0035 (0.0001)	<0.001*
Turnout Score	0.0079 (0.00004)	<0.001*

N = 279,931, Adj. R^2 = 0.21

The regression results revealed no significant interaction effect for postcards, such that their efficacy does not vary too much based on which state the voter lived in (GA vs. PA). However, it is interesting that the coefficients on the interaction terms are different: the postcard treatment had a slightly larger positive impact on voters in PA (again, not significant), but the social pressure treatment had a *negative* impact on voters in PA compared to voters in GA. This difference is also

not statistically significant, but it appears that the negative overall effect of the social pressure mailers observed in the main model results is driven mainly by the effect in PA, not GA.

Figure 5: Model coefficients and confidence intervals for condition x state interaction



Null Result – Condition x State Interaction: The results of the model with the condition x state interaction term indicated that the effect of the treatment on voting did not vary significantly by state (GA vs. PA), but the results suggest that the social pressure mailers had a small negative impact on turnout in PA.

IV Costs

The postcard condition netted approximately **87 votes** total compared to the control condition. Postcards for this study cost approximately $24,965.40 (41,609 postcards - the amount confirmed sent - at $0.60 each) , meaning that each vote cost approximately $285.71. This is a VPK of 3.50. However, the costs for postcards were shouldered by volunteers.

Green and Gerber report an average range of $31-$91 dollars per vote for GOTV tactics like canvassing and phonebanking in mostly academic research (2015), though we know these tactics are generally more effective than postcarding. Industry estimates that SDAN is aware of range from about $15 per vote to more than $250 per vote. This situates this tactic at the high end of the range for cost per vote.

The social pressure mailers did not produce more votes than the control condition, so cost per vote cannot be assessed.

V Conclusions, Limitations, and Future Research

The hypothesis that the people who received postcards would vote at higher rates than people who did not appears to have suggestive evidence, with results trending in the same direction as the original study conducted in 2021. However, none of the treatment effects rose to statistical significance, and results should simply be taken as educational. Neither modeled midterm turnout scores nor pro-choice issue support scores moderated the effect of the treatment condition.

Social pressure mailers appeared to be less effective than postcards, but the effect was not statistically significant in the main model ($p = 0.20$). This indicates that postcards had a stronger positive effect on people in this sample than social pressure mail—widely considered a gold standard of GOTV mail. The results also indicate, when taken in the context of the previous values-matched messaging postcard study results, that the noisier election context of the 2022 midterms probably decreased the efficacy of the values-matched messaging postcards.

However, there are also some limitations to this study. It targeted voters with very specific inclusion criteria, which means that this group of voters is not widely generalizable. It focused only on voters who are modeled to support abortion rights and specifically highlighted abortion in the messaging, so results cannot be generalized to different issue areas. Also, we were only able to treat 69% of the postcard treatment condition participants, meaning that a sizable portion of this condition was not treated at all. Finally, this study is not sufficiently powered to detect results of this size at this baseline turnout level.

Future research should explore this tactic with a wider group of voters to see where the boundaries of the effects are, as well as to explore which populations it is most effective with. It should also be explored with larger sample sizes in more election types. This concept—that we can use issue-support scores to help connect voters with messaging that speaks specifically to them—could also be tested through a variety of modes of contact, including phonebanking, textbanking, and canvassing.

Appendix

Postcard messages

PA:
"Hi <<first name>>,

Your Republican state representative is *anti-abortion*. Voted to:
-Change the PA constitution to exclude abortion rights (SB 106)
-Enact expensive burial requirements for fetal remains (HB 118)

Be a voter Nov. 8!
Vote.PA.gov

<Vol name>"

GA:
"Hi <<first name>>,

Your Republican state senator is *anti-abortion*. Voted to:
-Outlaw abortion after 6 weeks (HB 481)
-Require in-person doctor visits for abortion pills (SB 456)

Be a voter Nov. 8!
georgia.gov/voting

<Vol name>"