COVID-19 Self-Testing Preferences Linked to Political Perspectives: Social Determinants in the U.S. Pandemic

Jessica Fishman, PhD, Cedric H. Bien-Gund, MD, Gregory P. Bisson, MD, Yeonsoo Baik, PhD

From the 1Message Effects Lab, University of Pennsylvania, Philadelphia, Pennsylvania; and 2Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania

Address correspondence to: Jessica Fishman, PhD, Message Effects Lab, University of Pennsylvania, 3620 Walnut Street, Philadelphia PA 19104. E-mail: jessica.fishman@pennmedicine.upenn.edu.
INTRODUCTION

Throughout the pandemic, partisanship has been strongly associated with COVID-19 vaccination status and other pandemic behaviors, such as mask wearing.\(^1,2\) It is unknown if political perspectives are also associated with SARS-CoV-2 testing preferences. This research letter examines if political perspectives in the U.S. are associated with a preference for self-testing at home versus testing in clinical settings.

METHODS

Qualtrics hosted a web-based survey. The authors hired Prolific in December 2021, to enroll a non-probability sample of U.S. adults (≥18 years) who were unvaccinated for COVID-19, as this population has higher COVID-19 mortality and morbidity risks. Participants reported socio-demographic characteristics and indicated their political perspectives using 3 items, each with 5-point, standardized scales measuring: political party identification, favorability towards President Biden, and favorability towards former President Trump. These 3 political items that were highly correlated were aggregated into 1 variable with categories we labeled “strong left” to “strong right,” with a neutral middle point (Figure 1).

Participants were instructed to imagine they decided to test for COVID-19, and to select a single testing option representing their testing preference. A randomly ordered list was provided that included clinical, home, and work site testing options. These methods of measuring preference for a hypothetical scenario have demonstrated predictive validity for future behavior.\(^3–7\)
In a multivariable logistic regression analysis, testing preference was modeled as a binary outcome comprising home versus clinical setting. Those who preferred testing at work, which may not be mutually exclusive with self-testing or clinical testing, were excluded. The model was adjusted for age, gender, and ethnicity, which, based on chi-square tests, were related with testing preference. A chi-square test for trend was conducted to test the relationship between the political spectrum and the proportion preferring self-testing.

**RESULTS**

Only 143 respondents (3.2%) preferred testing at work. Otherwise, a significant majority of respondents (3,084/4,299; 71.7%) preferred testing in a clinical setting (Appendix Table 1). The adjusted odds of self-testing preference were higher among the political “right” (OR=1.57, 95% CI=1.25, 1.97 for strong “right,” and OR=1.36, 95%CI=1.08, 1.72 for lean “right”) and the political “center” groups (OR=1.28, 95% CI=1.00, 1.65), compared to the odds among those on the “left” of the political spectrum (Figure 1). In sensitivity analysis, the findings did not change after adding education and income as covariates (data not shown). Using the categories of the political spectrum defined as strong left, left, center, right, and strong right, the proportion with self-testing preferences increased with chi-square test for trend $p=0.06$.

**DISCUSSION**

Compared to those with “left” politics, those with “right” and “center” politics were more likely to prefer self-testing. Given such preferences, the availability of self-testing kits could be prioritized in conservative counties, where most adults and youth have been unvaccinated.\textsuperscript{1,2} Relatedly, communities that prefer self-testing may experience underreporting of COVID-19
cases. While most clinic-based test results are reported to public health authorities, many rapid self-test results are not.⁸

**Limitations**

This study has notable limitations. In particular, it was designed to examine preferences and not actual testing behavior, which can be influenced by other factors, such as access.⁹ For example, the availability of self-testing kits can vary. However, when the preferred option is available, it is reasonable to expect that preferences elicited through scenario-based methods are related to future behavior and demonstrate external validity.³–⁷ Additional research is needed to understand the specific beliefs driving political differences in testing preferences. This study focused on a high-risk population, and the HIV self-testing literature has demonstrated that a similar approach can help determine which service delivery models are effective for key populations.⁹ Before concluding whether the current results are generalizable to other populations, additional research would be needed.

**CONCLUSIONS**

The associations reported in this study support the growing scientific effort to identify social determinants of health disparities. In this study, partisanship had stronger associations with outcomes than several traditional socio-demographic measures, but such tests have been relatively rare.²,¹⁰ The authors are not aware of research that is similar to the current study: the self-testing literature has focused on HIV and, to the authors’ knowledge, it has not investigated political beliefs.⁹ Brief political measures can be implemented more widely to examine how limited public health resources may be allocated most effectively.
Author Statement:

Jess Fishman: Conceptualization, Methodology, Investigation, Funding acquisition, Writing-Original draft, Editing, Supervision

Cedric Bien-Gund: Visualization, Review and Editing, Funding acquisition

Gregory Bisson: Visualization, Supervision, Review and Editing

Yeonsoo Baik: Data curation, Methodology, Formal analysis, Visualization, Software, Validation, Review and Editing

ACKNOWLEDGMENTS

This research was supported by funding from the NIH:R01HL151292-01S1.

The authors do not report conflicts of interest or financial disclosures.

REFERENCES


   

   

    
    [https://doi.org/10.1111/j.1467-9566.2011.01339.x](https://doi.org/10.1111/j.1467-9566.2011.01339.x).
Figure 1. Politics linked to preferences for COVID-19 self-testing (over testing in clinical settings).

Notes: Preference for at-home self-testing over clinical-setting testing is expressed in terms of odds ratio using “Strong Left” as the reference group, after adjusting for age, ethnicity, and gender. The points represent the OR and the bars represent the 95% CIs. The x axis of this figure is an aggregate measure created by summing the 3 highly correlated political items. For this aggregate measure, the scaled opinions of President Biden were reverse coded.