Does Partisanship Influence General Self-Rated Health in the Post-COVID Era?

Submitted to TESS Short Studies Program

Background

Medical and social science researchers often use a single measure to assess individuals' health in surveys—general self-rated health (GSRH). The most common GSRH measure asks respondents to rate their general health as "excellent, good, fair, or poor." This measure is short, widely-applicable, and predictive of key health outcomes including all-cause mortality (DeSalvo et al. 2006; Jylhä 2009; Schnittker and Bacak 2014). Past work finds GSRH reliably proxies respondents' objective health, particularly their physical functioning (Mavaddat et al. 2011; Wu et al. 2013), but also respondents' health *perceptions*. Indeed, the primary advantage of GSRH is that it predicts health outcomes with one brief item as well as, and often better than, long survey questionnaires including many "objective" metrics of health (Idler and Benyamini 1997). Given these qualities, it is unsurprising that GSRH measures have found widespread use in applications ranging from everyday clinical intakes to the OECD cross-national health surveys (Jylhä 2009).

Researchers studying the nexus of health and politics have also begun utilizing GSRH; recent studies find poorer self-rated health is associated with affective polarization (Fraser et al. 2022; Nayak et al. 2021; Nelson 2022), reduced turnout (Blakely et al. 2001; Mattila et al. 2013), right-wing populism in Europe (Kavanagh et al. 2021), and Democratic partisanship in the U.S. (Pacheco and Fletcher 2015). Other work finds attention to politics around elections is associated with poorer GSRH (Panagopoulos and Weinschenk 2022; Smith 2022; Smith et al. 2019). Of course, the COVID-19 pandemic has also been a wellspring for inquiries into health-politics link (e.g., Baccini et al. 2021; Gadarian et al. 2022; Panagopoulos and Weinschenk 2022). And the recent inclusion of GSRH on the American National Election Study (ANES) Time Series will likely further increase the production of research linking health and politics in coming years.

Although there has been significant attention to the measurement properties of GSRH for health research, little work has assessed its fitness for political inquiry. Considering the growing literature on the health-politics link reliant on GSRH, it is increasingly important to understand whether there are *political* determinants of GSRH—in other words, whether political attitudes, identities, and behaviors themselves shape individuals' views of their own health. Specifically, in this project, I propose that in the aftermath of the polarized partisan response to the COVID-19 pandemic, GSRH may have become *endogenous to politics* because Democrats have generally viewed the health risks of COVID-19 and Long COVID as far more severe than Republicans.

Observational Analyses

To assess whether GSRH has become endogenous to partisanship amidst the COVID-19 pandemic, I first looked at panel surveys. In Appendix 2, I offer the standardized associations of lagged partisanship on GSRH in three General Social Survey (GSS) panels fielded from 2006 to 2014. Pooling across the pre-COVID panels, the average association between lagged Republican partisanship and GSRH is just -0.006 ($p=0.785$, $n=1,717$). Before the onset of COVID-19, there is no evidence that lagged partisanship affects GSRH. However, examining the 2016-2020 GSS and ANES panels which usefully straddle the onset of COVID-19, a different picture emerges. Lagged Republican partisanship is associated with a 0.048 standard deviation increase in self-rated health from 2016 and 2020 ($p<0.001$, $n=3,870$). And while not a huge effect, partisanship's effects are on par with other variables generally thought to be important determinants of general health like age ($\beta=-0.054$) and education ($\beta=0.056$). These panel studies suggest that during the

COVID-19 pandemic, Democrats began to report relatively worse health than Republicans—a phenomenon not observed in panel studies just a decade prior.

While informative of Granger causal associations (i.e., that a temporally prior variable is predictive of another variable's future values), longitudinal analyses of these sort still suffer from most weaknesses of observational studies for causal inference. A foremost issue is that I cannot show the effects of partisanship on GSRH are mediated through partisans' differential responses to COVID-19.[1] Towards demonstrating the mechanism, I propose pairing the panel analyses with an experiment fielded through the TESS Short Studies program testing whether priming COVID polarizes health ratings such that Democrats report relatively worse health than Republicans.[2]

TESS Short Study – Proposed Experimental Design

I propose fielding a four-unit experiment via the TESS Short Studies program (n=1,600).[3] The treatment group will be asked to answer three survey questions pertaining to COVID-19: the number of times they suspect they have had COVID-19, their level of concern about COVID-19, and their level of concern about Long COVID (with a short vignette explaining Long COVID).[4] Then, respondents will be asked to rate their general health. The control group will not see any of the COVID questions and will simply be asked to rate their health. My hypothesis is that COVID primes will polarize partisans' GSRH such that Democrats report worse health than Republicans in treatment relative to the control (to account for any baseline partisan health rating differences).

I will use a pre-post, between-groups design to test this hypothesis. AmeriSpeak's health profile includes a GSRH variable ("In general, how would you rate your overall health?"). I can use this variable as a pre-treatment covariate to increase precision when estimating the treatment effects (Clifford et al. 2021). I will model post-treatment GSRH as a function of continuous 7-pt partisanship (an AmeriSpeak profile variable) interacted with respondent treatment status (and their constitutive terms), controlling for pre-treatment GSRH. Support for my hypothesis would be indicated by an interaction such that Democratic relative to Republican partisanship predicts worse GSRH in treatment than control. Supplementary analyses will test if the treatment effects are concentrated among one partisan group (e.g., "are Democrats rating their health as worse in the treatment condition while Republicans rate their health similarly across conditions?").

Given the widespread usage of GSRH, it is crucial to understand what exactly informs Americans' health ratings. If the results of this experiment are in line with my hypothesis, I will have demonstrated that health ratings are influenced by partisanship in the aftermath of COVID-19. These findings would, in turn, inform and complicate inquiries into the health-politics link. Further, such findings would have significant implications for research in other fields which have not considered the political influences on Americans' health ratings. Considering the potential for this project to have significant impacts on burgeoning health and social scientific literatures reliant on GSRH, I am requesting that TESS field this experiment via its Short Studies Program.

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[1] In a separate experiment I recently fielded, I find GSRH does not appear affected by outright partisan cheerleading; thus, to the extent that COVID polarized Americans' perceptions of their health, I believe it has done so due to real perceptions of having had worse (better) health among Democrats (Republicans) since the pandemic's onset.

[2] One possible critique of this proposed study is its timing since the peak of the COVID-19 pandemic has "passed." However, in Appendix 3, I examine recent public opinion surveys to show that many Americans are still concerned about COVID-19, and that partisan differences are pronounced due to the low COVID concern among Republicans.

[3] The exact question wordings and response sets are detailed in Appendix 1.

[4] An advantage of this bundled COVID treatment is that the treatment effects should be larger; the downside is that I will not be able to decompose the treatment effects of each question. I opt for the bundled treatment since I am more interested in identifying a general effect of COVID primes than distinguishing the effects of specific COVID primes.

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Appendix 1—Experimental Design, Question Wordings, and Response Sets

The two AmeriSpeak profile variables this study will use are the "Party Identification (7 level)" standard demographic variable and Q1 of the Health Profile variables: "In general, how would you rate your overall health?" [Excellent, very good, good, fair, poor].

Ideally, the experiment would be blocked by partisanship. Respondents randomized into the treatment group will answer three questions regarding COVID-19. The other half of respondents randomized into the control group will not answer these three questions. All respondents will answer the exact same GSRH question from the AmeriSpeak profile post-treatment/control, i.e., a pre-post, between-groups experimental design.

COVID-19 Treatments

1. Thinking back over the last two years, how many times, if any, have you been sick with COVID-19, the coronavirus? Please include both times you have tested positive for COVID-19 and times you suspect you were sick with COVID-19, even if you did not get tested. [0, 1, 2, 3, 4+]
2. For many Americans, COVID-19 infections can cause serious illness. How concerned are you about getting seriously ill if you were to be infected with COVID-19? [Extremely concerned, very concerned, somewhat concerned, a little concerned, not at all concerned]
3. For some Americans, COVID-19 infections have long-lasting effects, often referred to as "Long COVID." These lingering effects can include chronic fatigue, trouble focusing (or "brain fog"), and damage to vital organs like the lungs, heart, and liver. How concerned are you about the possibility of having long-term side effects from COVID-19 infections? [Extremely concerned, very concerned, somewhat concerned, a little concerned, not at all concerned]

GSRH Dependent Variable

1. (Copied from AmeriSpeak profile for purpose of pre-post design): In general, how would you rate your overall health? [Excellent, very good, good, fair, poor]

Appendix 2—Panel Analyses of Partisan Influences on General Self-Rated Health

In the proposal, I reference panel analyses where I estimate the effect of lagged partisan identity on GSRH to show that partisanship was associated with changes in health ratings post-COVID, but that partisanship was unassociated with changes in health ratings pre-COVID. Table 2A below offers these results for the pooled pre-COVID and post-COVID studies, as well as the individual pre-COVID and post-COVID studies. The models use identical controls for age, race, gender, education, income, employment status, marital status, parental status, and sample fixed effects for pooled estimates. While not an exhaustive set of potential confounds, I opted to limit the number of controls in the model to variables that were found on every single panel study so that I could make apples-to-apples comparisons across panels. Notably, as shown in the lower half of the table, the results are near-identical dropping all controls. And adding a larger set of controls in the 2016-2020 GSS and ANES panels (which have more variables that strike me as potential confounds than the older GSS panels) does not attenuate the effects of lagged partisan identity on GSRH. I am thus confident that the association of lagged partisanship with GSRH between 2016 and 2020 is robust.

Effects of Lagged Partisanship on Health Ratings (Controls)					
Sample	**GSS 06-10**	**GSS 08-12**	**GSS 10-14**	**GSS 16/18-20**	**ANES 16-20**
Lagged PID	-0.018 (0.035) p=0.604	-0.004 (0.036) p=0.904	0.003 (0.035) p=0.942	0.038 (0.020) p=0.054	0.050 (0.012) p<0.001
Observations	576	570	571	1,128	2,742
Pooled Sample Lagged PID	-0.006 (0.020) p=0.785			0.048 (0.010) p<0.001	
Observations	1,717			3,870	
Effects of Lagged Partisanship on Health Ratings (No Controls)					
	GSS 06-10	**GSS 08-12**	**GSS 10-14**	**GSS 16/18-20**	**ANES 16-20**
Lagged PID	-0.013 (0.032) p=0.678	-0.002 (0.033) p=0.948	0.031 (0.031) p=0.315	0.051 (0.019) p=0.007	0.077 (0.016) p<0.001
N	665	638	637	1,189	2,799
Lagged PID	0.005 (0.019) p=0.797			0.053 (0.010) p<0.001	
N	1,940			3,988	

Table 2A—Effects of Lagged Partisanship on General Self-Rated Health. Table entries are standardized cross-lagged panel model coefficients for the effects of lagged partisan identity on general self-rated health (GSRH). Standard errors in parentheses. Positive coefficients indicate associations between Republican partisanship and better self-rated health. Two-tailed tests. Note that the 2016/2018-2020 is a two-wave panel with some respondents taking the first wave in 2016 and others in 2018, which are pooled as a wave one sample. Sources: General Social Survey 2006-2010 Panel, General Social Survey 2008-2012 Panel, General Social Survey 2010-2014 Panel, General Social Survey 2016/2018-2020 Panel, American National Election Study 2016-2020 Panel.

Appendix 3—Survey Evidence of Partisan Differences in COVID Concern in 2023

Potentially, one objection to this experiment is that it would be fielded too late to capture partisan differences in responses to COVID primes. However, recent polling finds that (1) many Americans are still very concerned by COVID-19 and (2) concern is more pronounced among Democrats than Republicans (with independents falling in between these groups). For example:

- A Monmouth poll in early January 2023 found 50% of Americans were concerned about COVID causing a serious illness to themselves or someone in their family.
- A Gallup poll from October 2022 found that less than half of Americans (46%) say their health is completely back to normal since the onset of the COVID-19 pandemic (https://news.gallup.com/opinion/gallup/308126/roundup-gallup-covid-coverage.aspx).
- A Quinnipiac poll in late January 2023 found 56% of Democrats, 30% of independents, and 17% of Republicans reported concern about a possible surge in COVID-19 cases.
- A Kaiser Family Foundation (KFF) poll in late January 2023 found 42% of Democrats were worried they would get "seriously sick" from COVID-19 compared to 30% of independents and 20% of Republicans.