Political Ideology and Personality as Predictors for COVID-19 Related Attitudes and Behaviors

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Introduction

The COVID-19 outbreak began in December of 2019 when the first case was reported in Wuhan, Hubei Province, China (WHO, 2020). By March 2020, the virus was spreading rapidly across the United States. Hospitals in many states quickly became overrun with patients suffering from severe COVID-19 symptoms. The Center for Disease Control (CDC) and government officials encouraged people throughout the pandemic to adhere to certain COVID-19 preventative behaviors such as social distancing and wearing a mask to prevent the spread of the virus. These public health measures have been shown to be effective at limiting the spread of COVID-19 (Jarvis et al., 2020; Kinda et al., 2020). Vaccines, like Pfizer's and Moderna's have been shown to provide strong protection against most variants of the COVID-19 virus many people are hesitant to adhere to some of these measures and take a vaccine. (John Hopkins Medicine, 2021; Oliver et al., 2021; Polack et al., 2020).

While adhering to these measures and getting vaccinated have been shown to help prevent the spread of COVID-19, many people are hesitant to adhere to some of these measures and take a vaccine. The COVID-19 pandemic constitutes a social dilemma—or a situation that can create a conflict between individuals' interests and the best interests of the collective (APA Dictionary). Thus, it is important to understand why certain individuals may be less likely to think and act in ways that benefit the greater good. Specifically, this study examines the role that political ideology and personality play in people's willingness to engage in preventative behaviors, their desire to be vaccinated and their belief that they can in fact behave in ways that protect themselves and others.

Past research has shown differences in the way both liberals and conservatives act during social dilemmas (Dunlap, 2011). Conservatives have been shown to be less likely to support action to benefit the collective good when a trade-off must be made during moral dilemmas: situations where an individual is faced with numerous courses of action, each of which may involve compromising an important moral (Luke & Gawrownski, 2020). Furthermore, conservatives have been shown to be more uncomfortable with deviating from the status-quo (Dunlap, 2011). Thus, in past social dilemmas (i.e climate change) their discomfort with deviating from the status quo provides potential rationale for their resistance to thinking and acting in ways the benefit the collective good.

Previous literature also suggests that there may be differences in the thought and behavior processes among individuals holding the Big 5 personality traits during a social dilemma. The Big 5 Personality dimensions include openness, extraversion, neuroticism, conscientiousness and agreeableness. Past research on other social dilemmas such as climate change has found that those who were highly open and agreeable were most likely to support efforts being made for climate change, thus supporting the greater good (Hirsch & Dolderman, 2007). A very recent study also found that openness, agreeableness and conscientiousness were all positively associated with intention to become vaccinated for COVID-19 and likeliness to engage in preventative behaviors (Bogg & Milad (2020).

Hypotheses

I had 2 focal hypotheses for the study.

1) Adhering to a more liberal political ideology would be significantly positively associated with a willingness to adhere to COVID-19 preventative behaviors, preferring to be vaccinated and a higher perceived sense of behavioral control over the pandemic .

2) In terms of personality dimensions, I anticipated that agreeableness, open-mindedness and conscientiousness would be significantly positively related to a desire to comply with COVID-19 preventative behaviors, a willingness to be vaccinated and a higher perceived behavioral control over the pandemic, even when controlling for political ideology.

Participants and Procedure

My online survey was created via the survey program Alchemer. First, participants provided their consent to participate in my study. Next, they completed demographic questions. Participants then completed measures assessing their thoughts and behaviors related to the pandemic. Once the survey was over participants were debriefed.

The sample consisted of 598 participants from the U.S. The mean age of the participants was 39.95 years old. 55% of participants identified male, 45% identified as female, <1% identified as genderqueer and <1% identified as other. 28% of participants had completed high school or obtained a GED, 61% of participants had an associate's or bachelor's degree and 11% had a master's degree or PhD (or some form of graduate degree).

Measures

Demographic Variables. Participants indicated their age, gender, level of education and whether they had received a flu vaccination in the past year.

Political Ideology. Political ideology was measured with a single item: "Please indicate how politically liberal or conservative you consider yourself to be overall." Participants responded on a scale ranging from 1 (very liberal) to 7 (very conservative) (Feinberg & Wheling, 2016).

Personality. Personality was measured using the Big 5 Personality Traits: agreeableness, conscientiousness, extraversion, neuroticism and openness (McRae & Costa, 2008). Participants were presented with 44 personal statements, each measuring one of the five facets of personality. The measure began with the phrase "I see myself as someone who is…" and was followed by the 44 statements assessing each of the 5 personality traits (e.g., extraversion: "Is talkative", agreeableness: "Is helpful and unselfish with others", conscientiousness: "Does a thorough job", neuroticism: "Can be tense", openness: "Is original, comes up with new ideas"). For each statement, participants rated the degree to which they agreed with the given statement on a scale from 1 (disagree strongly) to 7 (agree strongly). This 44-item version of the Big 5 Personality Scale was taken from Goldberg (1993).

Perceived Behavioral Control. Perceived behavioral control was measured by combining two questions (r = .60) (Fasse & Newby, 2020). The questions were "How much do you think you could personally do to protect yourself from catching the virus?" and "How much do you think you could personally do to protect others from catching the virus?". Scaling for the two questions ranged from 1 (couldn't do a lot) to 10 (could do a lot). Scores for the questions were averaged to create the measure of perceived control.

Preventative Behaviors. Participants were presented with 7 COVID-19 preventative behaviors and asked how often they engaged in those behaviors during the past month. These behaviors included "Wear a face mask even if I am not sick", "Wash hands regularly for 20 seconds, with soap and water or alcohol-based hand rub", "Cover nose and mouth with a disposable tissue or flexed elbow when cough or sneeze", "Keep safe social distance with others", "Stay home", "Avoid using public transportation", and "Clean and disinfect frequently touched surfaces such as doorknobs, phones, and keyboards daily" (α = .83). The scales ranged from 1 (never) to 5 (always). This measure was taken from Cavojova et al. (2020).

Attitude toward vaccination for COVID-19. Participants were asked "How likely would you be to get a vaccine that would prevent you from getting COVID-19?" and responded on a 4-point scale (1= not likely-4= very likely) (Fasse & Newby, 2020).

Results

Table 3.
Hierarchical Regressions of Demographic Covariates, Political Ideology and Personality Predicting COVID-19 Preventative Behaviors, Vaccination Attitudes and Perceived Behavioral Control

	Perceived Behavioral Control			Preventative Behaviors			Vaccination Attitude		
Variables	Block 1	Block 2	Block 3	Block 1	Block 2	Block 3	Block 1	Block 2	Block 3
Gender	.12**	0.1*	.08	.19**	.17**	.13**	-.08*	-.11**	-.12**
Age	-.03	.01	-.04	-.01*	-.02	-.07	-.02	.07	.06
Education Level	.02	.00	.01	.01	-.02	-.01	.11**	.08*	.09*
Flu Vaccination	-.20**	-.20**	-.15**	-.21**	-.20**	-.16**	-.36**	-.35**	-.34**
Political Ideology	-	.19**	.18**	-	.30**	.30**	-	.34**	.32**
Extraversion	-	-	.04	-	-	.03	-	-	.03
Agreeableness	-	-	.17**	-	-	.16**	-	-	.11*
Conscientiousness	-	-	.10*	-	-	.17**	-	-	-.10*
Neuroticism	-	-	.05	-	-	.07	-	-	.03
Openness	-	-	.11**	-	-	.02	-	-	.05

Note: ** p < .01, * p < .05

1) For the hierarchical regression with perceived behavioral control as the outcome, political ideology accounted for a significant increase in variance, R^2 change = .09, p <.001. The personality dimensions accounted for a significant increase in variance when they were entered in the third block, R^2 = .16, p < .001. Agreeableness significantly predicted perceived behavioral control (β = .17 p < .001 as did conscientiousness β =.10, p =.05 and openness to experience β = .11, p = .01. Being vaccinated for the flu (β = -.15, p < .001) and political ideology (β = .18, p < .001) remained significant predictors of perceived behavioral control after personality dimensions were entered in the third block in the analysis.

2) For the hierarchical regression evaluating adherence to COVID-19 preventative behaviors as the outcome, political ideology accounted for a significant increase in the variance, R^2 change = .17, p <.001. When dimensions of personality were added to the analysis in the third block they also accounted for a significant increase in the variance, R^2 change = .23, p < .001. Agreeableness β = .16, p <.001 and conscientiousness β = .17, p < .001 both significantly predicted engagement in preventative behaviors. Additionally, after the third step of this analysis, being male (β = .13, p = .001) being vaccinated for the flu (β = -.16, p < .001) and political ideology (β = .30 , p < .001) were still significant predictors.

3) For the hierarchical regression with willingness to get the COVID-19 vaccine as the outcome, political ideology accounted for a significant increase in the variance, R^2 change = .28, p < .001. When the personality dimensions were added to the analysis, they accounted for a significant increase in the variance, R^2 change = .29, p = .03. Both agreeableness β = .11, p = .01 and conscientiousness β = -.10, p = .03 significantly predicted support for the vaccine. Being male (β = -.12, p = .002), education (β = .09, p = .02), being vaccinated for the flu (β = -.34, p < .001) and political ideology (β = .32, p < .001) were also all significant predictors of willingness to be vaccinated after the personality dimensions were entered in the third block.

4) While openness was only significant in the third block of the hierarchical regression for perceived behavioral control, in the intercorrelations analysis openness proved to be positively significant with all 3 outcomes; perceived behavioral control (r = .18, p < .05), engagement in COVID-19 preventative behavior (r = .10, p < .01) and willingness to become vaccinated (r = .10, p < .01).

Conclusions

As anticipated, those who were more liberal, conscientious, open and agreeable were more likely to think and act in ways that benefitted the collective good during the COVID-19 pandemic. Specifically, they held a greater belief in their ability to prevent the transmission of the virus to those around them, were more likely to adhere to preventative behaviors and more willing to receive the COVID-19 vaccine.

My findings contribute valuable information to the growing area of psychological research around the COVID-19 pandemic, as well as other forms of social dilemmas. Consistent with past findings, political ideology and personality were significant predictors for differences in the way individuals thought and acted during the social dilemma that the COVID-19 pandemic proved to be. Literature supporting differences in cognition between those on each end of the political spectrum, as well as those holding each of the Big 5 personality traits, can account for the differences in the way certain individuals' thoughts and behaviors were shaped during the pandemic.

References

COVID-19 Vaccine: What You Need to Know. Johns Hopkins Medicine. (2021, March 8). https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus/covid-19-vaccine-what-you-need-to-know.

Jarvis, C. I., Van Zandvoort, K., Gimma, A., Prem, K., CMMID COVID-19 working group, Klepac, P., Rubin, G. J., & Edmunds, W. J. (2020). Quantifying the impact of physical distance measures on the transmission of COVID-19 in the UK. *BMC medicine*, *18*(1), 124. https://doi.org/10.1186/s12916-020-01597-8

Maragakis, L. (2020, November 17). *Coronavirus Second Wave? Why Cases Increase*. Johns Hopkins Medicine. https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus/first-and-second-waves-of-coronavirus.

Oliver, S. E., Gargano, J. W., Marin, M., Wallace, M., Curran, K. G., Chamberland, M., . . . Dooling, K. (2021, January 1). *The Advisory Committee on Immunization Practices' Interim Recommendation for Use of Moderna COVID-19 Vaccine — United States, December 2020.* https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm695152e1-H.pdf.

Pew Research Center. (2017). *Partisan divides over political values widen*. Pew Research Center - U.S. Politics & Policy. https://www.pewresearch.org/politics/2017/10/05/1-partisan-divides-over-political-values-widen/.

Polack, F. P., Thomas, S. J., Kitchin, N., Absalon, J., Gurtman, A., Lockhart, S., . . . Gruber, W. C. (2020, December 31). *Safety and efficacy of the BNT162b2 Mrna Covid-19 Vaccine: NEJM*. https://www.nejm.org/doi/full/10.1056/NEJMoa2034577.

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