

Breaking Quarantine During the COVID-19 Pandemic:
Correlations Between Gen Zers' Political Beliefs, News Source, Extraversion, and Attitudes
Toward Social Distancing Behaviors

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The current paper chronicles our investigation into the personality and demographic variables associated with compliance with social distancing practices designed to stem the spread of COVID-19. Similar to the widely varying United States citizen response to the COVID-19 pandemic, in the early 2000s contradictory information about SARS from public health officials led citizens to question the credibility of public health messages (Cava, Fay, Beanlands, McCay, & Wignall, 2005). Specifically, Cava et al. found compliance with public guidelines (such as wearing a mask to stop the spread of SARS) was followed more closely if the message was centered on ethical grounds (i.e., “*I complied to be a good citizen*”).

In addition to the SARS research which found that certain messages are more persuasive, it seems that some personality traits correlate with compliance with public health guidelines. In the current COVID-19 pandemic, Bartels (2020) found antagonistic personality traits are associated with non-compliance with preventative measures like mask-wearing. Specifically, narcissism and psychopathy have been linked with disregarding health guidelines. In an online survey, participants were asked about their compliance with preventing the spread of the virus. People higher on psychopathic subtraits, specifically for meanness and disinhibition, tended to show less interest in social distancing and hygiene. During the course of the pandemic, several reports of people purposefully coughing and spitting in public were witnessed and psychopathy-related traits allude to an explanation for this behavior (Theisen, 2020).

The above-mentioned studies, as well as our observations of different messages by political leaders in the U.S. led us to wonder if political ideology might also be a mitigating factor, along with personality traits. Pertaining to political ideology and how it influences the way people think, Wouter-Botzen, Michel-Kerjan, Kunreuther, de Moel, and Aerts (2016) administered a study observing people with different political ideologies and their attitudes toward environmental issues, a topic that also has an impact on public health and safety. While 71% of Democrats agreed that excess flooding was caused by human influence, only 47% of Republicans held the same belief. Applied to the COVID-19 pandemic, Wouter-Botzen et al.’s study suggests that partisan differences are associated with distrust of scientific findings. Such skepticism which might be an obstacle to efficacious public messaging around health and safety measures.

Relatedly, Sommers (2011) examined the relationship between political ideology on inclination to believe “conspiracy theories” and how partisanship appears to fuel skepticism; Sommers examined the posts of the Facebook group *We Are Change* (WAC), dedicated to promoting conspiracies such as those pertaining to 9/11 and the U.S. government, and found that the majority of participants were right-wing and male, suggesting the increased likelihood of dispositional skepticism among certain subgroups of Republicans.

Given these intriguing studies, we set out to survey young American adults (age 18-27) about their social distancing behavior and beliefs during May, 2020. Participants answered

questions about their beliefs about the COVID-19 pandemic, practices of socializing with others outside of their household, their news sources, extraversion, support for President Trump, substance use, and beliefs about personal susceptibility to COVID-19. We hypothesized that social distancing discipline (following medically-advised distance and mask recommendations), as well as judgements (pro or con) of others who fail to follow social distancing advisories, would vary as a function of respondents' news sources and political ideology. We also investigated participants' substance use (nicotine, alcohol and marijuana), since others have found that substance use has increased during the pandemic (Clay & Parker, 2020).

Method

Participants

Participants were recruited through Amazon's Mechanical Turk (mTurk) surveying system. mTurk allows surveyors, called requesters, to upload their surveys with an incentive of a predetermined payment if completed. Qualifications can be placed on the survey to focus on collecting data from certain populations; our study placed a qualification of residency in the United States. Participants, called workers, are awarded a specified amount of payment automatically by Amazon (within three days) after completing the survey. Our study was incentivized with a \$0.25 payment. IP addresses were reviewed to remove responses from duplicate IP addresses. In addition, data was omitted from participants who reported being older than 27 years old, bringing the total to 484 participants. There were 241 (49.6%) participants who identified as female, 236 (48.6%) who identified as male, 4 (0.8%) who identified as non-binary, and 3 (0.06%) who did not identify their gender. Participants ranged in age from 18 to 27 years old with a mean age of 23.7 years ($SD=2.49$).

Design and Materials

Variables included geographic location, where the participants got their news (news source), how they have personally been affected by the COVID-19 pandemic, and degree of support for President Trump. In addition, participants completed Likert-style responses of: perceptions of severity of the spread of the virus, news coverage of the virus (overblown or under-reported) and how well they believed President Trump was handling the pandemic.

The 41-question survey also included items such as: how important "flattening the curve" of the COVID-19 infection rate is; how worried they were about the spread of COVID-19; and where they lived in the United States. The survey was uploaded on SurveyMonkey and administered through mTurk for subject recruitment. After data collection was complete, the data was transferred to SPSS for analysis.

COVID-19 positivity rate by location. We utilized Johns Hopkins University's COVID-19 national tracking website to assign each participant a score reflecting the positivity rate in their zip code. Zip codes reported by participants were compared with Johns Hopkins University's report, and the Per Hundred statistic for the zip code area was assigned.

Situational acceptability. Included in the 41-question survey were 4 fictional scenarios representing people breaking stay-at-home orders and social distancing practices during the

COVID-19 pandemic. After reading each scenario, participants were asked to rate how acceptable behavior was. Scores from the four scenarios were summed for a composite score that reflected overall acceptability of breaking COVID-19 preventative orders and practices. Higher scores in situational acceptability meant greater acceptance of breaking quarantine.

Substance use. Three questions assessed the participants' substance use and any changes since the start of the pandemic. Alcohol, tobacco, and marijuana were assessed on a scale measuring greater, lesser, or identical usage since the start of the pandemic.

Demographics. Each participant was asked to provide their zip code of residency, state of residency, age, gender, and identified political affiliation.

*Readers who would like a full copy of the 41-question survey may contact the first author.

Procedure

The study was reviewed and approved by our university's Institutional Review Board. The initial goal was to collect 500 participants. The study was initially posted on May 13, and the 500-participant goal was exceeded to 515 as the limit was reached on mTurk. We decided to upload the survey again in a second recruitment wave at a different time of day to account for time differences throughout the United States, which allowed us to 1) expand respondents' geographic diversity and 2) account for the inability to add age qualifications to the study due to lack of funding. (mTurk charges increase with each qualifying variable, such as age. By recruiting any American respondent, regardless of age, we were able to fund a larger sample and omit those outside of our target age after data collection.) We anticipated that we would receive a large number of participants outside of our Gen Z (18-27) age target who would have to be omitted post-data-collection. The second batch was uploaded on May 15, where we collected data from 297 additional participants. Data from these two batches was transferred to SPSS, where the initial 812 participants were culled to 484 who met the age criteria and had verified, distinct IP addresses. Each of the resulting 484 participants' zip codes were then utilized to determine the value of cases per 100k in each county reported using John Hopkins University's COVID-19 national tracking website.

Results

As hypothesized, participants' support for President Trump was negatively correlated with 1) compliance with social-distance practices and 2) anxiety about the coronavirus, and positively correlated with endorsement of others breaking quarantine. In addition, news source (namely Fox News Channel (FNC) viewers) significantly differed from other news consumers in terms of how worried they were about COVID-19 and how often they socialized face-to-face with those outside their household.

Support for President Trump

Pearson correlations were executed for participants' support for President Trump and we discovered significant correlations between that variable and the following variables: 1) that President Trump has managed the COVID-19 pandemic well $r(475) = .826, p = .001$; 2) support for the April 18th Michigan and Minnesota protests to lift stay-at-home orders $r(475) = .549, p = .001$;

3) that “the world would be better off letting COVID-19 run its natural course without social distancing”: $r(473)=.506$, $p=.001$; 4) “the government stay-at-home orders to COVID-19 were an overreaction” $r(475)=.437$, $p=.001$; 5) “the media has overly-dramatized the gravity of the COVID-19 pandemic” $r(475)=.367$, $p=.001$; 6) how often they socialized with others face-to-face within 6 feet (as opposed to the social distancing measures of at least 6 feet) $r(475)=.295$, $p=.001$; 7) extraversion $r(473)=.289$, $p=.001$; 8) that the government has provided themselves with adequate financial assistance during the COVID-19 pandemic $r(475)=.286$, $p=.001$; and 9) belief that immunity is higher for younger people than older people $r(478)=.254$, $p=.001$.

There were also negative significant correlations found between support for President Trump and the following: 1) importance of “flattening the curve” of the COVID-19 spread is $r(475)=-.283$, $p=.001$; 2) the likelihood of another outbreak of, or similar to, COVID-19 happening again in the foreseeable future $r(478)=-.262$, $p=.001$; 3) worry about the death toll as a result of opening the United States economy $r(477)=-.242$, $p=.001$; 4) how cautiously they have been practicing social distancing measures $r(477)=-.230$, $p=.001$; 5) the perceived importance to wear a mask in public places (e.g., grocery stores) $r(477)=-.179$, $p=.001$; and 6) confidence that they would personally recover from COVID-19 if they became infected $r(476)=-.146$, $p=.001$.

Fox News Channel (FNC) viewers

To evaluate the impact of Fox News viewership, t-tests were conducted and found significant relationships for the following: 1) FNC viewers ($M=4.28$, $SD=2.06$) had significantly greater support for President Trump than non-FNC viewers ($M=2.69$, $SD=2.07$) $t(477)=8.06$, $p=.001$; 2) FNC viewers ($M=4.09$, $SD=1.95$) reported President Trump managed the COVID-19 pandemic significantly better than non-FNC viewers ($M=2.76$, $SD=2.05$) $t(478)=6.94$, $p=.001$; 3) FNC viewers ($M=3.28$, $SD=2.23$) reported significantly greater support for April 18th protests against stay-at-home orders in Michigan and Minnesota than non-FNC viewers ($M=2.43$, $SD=2.01$) $t(478)=4.27$, $p=.001$; 4) FNC viewers ($M=3.40$, $SD=1.95$) reported significantly greater beliefs that the media has overly-dramatized the gravity of the COVID-19 pandemic than non-FNC viewers ($M=2.76$, $SD=1.92$) $t(478)=3.51$, $p=.001$; 5) FNC viewers ($M=3.18$, $SD=2.24$) reported greater frequency of unprotected face-to-face socializing during the pandemic than non-FNC viewers ($M=2.51$, $SD=1.89$) $t(478)=3.47$, $p=.001$; 6) FNC viewers ($M=4.51$, $SD=1.77$) were found to be significantly more extraverted than non-FNC viewers ($M=3.89$, $SD=1.96$) $t(476)=3.42$, $p=.001$; 7) FNC viewers ($M=2.52$, $SD=1.69$) reported there to be a greater overreaction to COVID-19 than non-FNC viewers ($M=2.04$, $SD=1.68$) $t(478)=3.03$, $p=.003$; 8) FNC viewers ($M=3.29$, $SD=2.18$) reported significantly higher agreeableness that the world would be better off by letting COVID-19 run its course naturally without social distancing than non-FNC viewers ($M=2.73$, $SD=2.00$) $t(476)=2.85$, $p=.005$; 9) FNC viewers ($M=3.30$, $SD=1.95$) reported significantly greater approval of government financial aid during the COVID-19 pandemic than non-FNC viewers ($M=2.87$, $SD=1.97$) $t(478)=2.35$, $p=.019$; 10) FNC viewers ($M=2.12$, $SD=1.72$) had a significantly higher use of nicotine since the start of the

COVID-19 pandemic than non-FNC viewers ($M=1.75$, $SD=1.56$) $t(480)=2.35$, $p=.019$; and 11) FNC viewers ($M=4.67$, $SD=1.85$) reported significantly higher agreeableness that young people are more immune to COVID-19 than older people compared to non-FNC viewers ($M=4.29$, $SD=1.85$) $t(480)=2.14$, $p=.033$.

FNC viewership t-tests also revealed negative significant relationships for the following: 1) FNC viewers ($M=5.01$, $SD=1.96$) reported significantly less import to “flattening the curve” of the COVID-19 spread than non-FNC viewers ($M=5.64$, $SD=1.80$) $t(478)=-3.56$, $p=.001$; 2) FNC viewers ($M=4.09$, $SD=1.97$) reported being significantly less worried about the death toll if the United States reopened the economy than non-FNC-viewers ($M=4.60$, $SD=1.87$) $t(480)=-2.82$, $p=.005$; 3) FNC viewers ($M=4.27$, $SD=1.72$) reported significantly less likelihood of another outbreak of, or similar to, COVID-19 happening again in the foreseeable future than non-FNC viewers ($M=4.64$, $SD=1.78$) $t(481)=-2.23$, $p=.026$; and 4) FNC viewers ($M=1.61$, $SD=0.49$) were significantly less likely to personally know someone who had contracted COVID-19 than non-FNC viewers ($M=1.71$, $SD=0.45$) $t(480)=-2.17$, $p=.030$.

Situational acceptability

Pearson correlations were also calculated to evaluate support of President Trump and the four scenarios displayed in the survey. There were statistically significant correlations found between support for President Trump and all four scenarios: Situation 1 (Party), a 21 year old who attends a small party with close friends $r(477)=.245$, $p=.001$; Situation 2 (Travel), a young man who decides to take a vacation during the pandemic in order to take advantage of cheap plane tickets $r(476)=.416$, $p=.001$; Situation 3 (Love), traveling across state lines to mend a romantic relationship $r(476)=.315$, $p=.001$; and Situation 4 (Park), a group of 20 people playing a game in a park during stay-at-home orders $r(475)=.323$, $p=.001$ (see Table 1).

Table 1

Correlations Between Support for President Trump and Endorsement of Situations 1-4

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Support for President Trump	480	3.26	2.20	--				
2. Party situation	479	2.77	1.80	.245**	--			
3. Travel situation	478	2.19	1.65	.416**	.460**	--		
4. Love situation	478	2.75	1.76	.315**	.467**	.507**	--	
5. Park situation	477	2.31	1.75	.323**	.441**	.633**	.483**	--

* $p < .05$, ** $p < .01$

Pearson correlations were also conducted for the situational acceptability composite score in order to measure overall perceived acceptance of actions described and questioned in Situations 1 through 4 ($M=9.74$, $SD=5.29$). For the dependent variable of “acceptability”, a Cronbach’s Alpha score was calculated across all situations with a resulting score of $\alpha=.79$, suggesting a high degree of consistency between responses to the 4 situations. Situational acceptability was found to have statistically significant correlations with the following variables: 1) whether the government stay-at-home orders to COVID-19 were an overreaction $r(292)=.652$, $p=.001$; 2) belief that the media has over-dramatized the impact of the COVID-19 pandemic $r(292)=.526$, $p=.001$; 3) support for the April 18th Michigan and Minnesota protests to lift stay-at-home orders $r(292)=.534$, $p=.001$; 4) belief that President Trump has managed the COVID-19 pandemic well $r(291)=.379$, $p=.001$; 5) support for President Trump $r(290)=.381$, $p=.001$; 6) how often they went outside in the month of April $r(293)=.277$, $p=.001$; 7) immunity being higher for younger people $r(292)=.236$, $p=.001$; 8) confidence that they would personally recover from COVID-19 if they became infected $r(292)=.244$, $p=.001$; and 9) extraversion $r(291)=.144$, $p=.013$.

Negative correlations were found between situational acceptability and the following variables: 1) the perceived importance to wear a mask in public places (e.g., grocery stores) $r(293)= -.436$, $p=.001$; 2) how cautiously they have been practicing social distancing measures $r(293)= -.379$, $p=.001$; 3) how worried they were about the death toll with the reopening of the U.S. economy $r(293)= -.354$, $p=.001$; and 4) how important flattening the curve of the virus spreading is $r(293)= -.356$, $p=.001$. A t-test also found that situational acceptability was higher for those who reported not knowing someone who had contracted COVID-19 ($M=10.16$, $SD=5.73$) compared to those who reported knowing someone who had contracted the virus ($M=8.83$, $SD=4.14$) $t(292)=-2.03$, $p=.044$.

Substance use

Pearson correlations were conducted to evaluate potential change in substance use behavior after the onset of the COVID-19 pandemic. The substances in question were alcohol, nicotine, and tobacco. For nicotine ($M=1.88$, $SD=1.63$), statistically significant correlations were found for the following variables: 1) belief that society would be better if the world let COVID-19 run its natural course without social distancing $r(476)=.270$, $p=.001$; 2) support for the April 18th Michigan and Minnesota protests to lift stay-at-home orders $r(478)=.267$, $p=.001$; 3) support for President Trump $r(477)=.263$, $p=.001$; 4) greater situational acceptability $r(293)=.258$, $p=.001$; 5) how well President Trump has managed the COVID-19 pandemic $r(478)=.255$, $p=.001$; 6) how often they socialized with others face-to-face within 6 feet (as opposed to the social distancing measures of at least 6 feet) $r(478)=.243$, $p=.001$; 7) whether the government stay-at-home orders to COVID-19 were an overreaction $r(478)=.224$, $p=.001$; 8) belief that the media has over-dramatized the impact of the COVID-19 pandemic $r(478)=.197$, $p=.001$; and 9) that the government has provided themselves with adequate financial assistance during the COVID-19 pandemic $r(478)=.100$, $p=.029$.

Negative correlations were also found for nicotine and the following variables: 1) how important flattening the curve of the virus spreading is $r(478)=-.218$, $p=.001$; 2) how cautious they were practicing social distancing $r(480)=-.121$, $p=.008$; and 3) how worried they were about the death toll with the reopening of the U.S. economy $r(480)=-.093$, $p=.041$. A t-test was also evaluated and found that those who reported contracting COVID-19 personally ($M=3.59$, $SD=2.02$) had significantly higher nicotine use than those who had not contracted COVID-19 ($M=1.74$, $SD=1.51$) $t(444)=6.05$, $p=.001$.

For marijuana ($M=2.31$, $SD=2.00$), there were statistically significant correlations between two variables: 1) belief that society would be better if the world let COVID-19 run its natural course without social distancing $r(476)=.199$, $p=.001$; and 2) support for the April 18th Michigan and Minnesota protests to lift stay-at-home orders $r(478)=.129$, $p=.005$. There were also negative statistically significant correlations found for the following variables: 1) if they had personally contracted COVID-19 $r(476)=-.137$, $p=.003$; and 2) how important flattening the curve of the virus spreading is $r(478)=-.122$, $p=.007$. A t-test was also conducted for marijuana and if they personally knew someone who had contracted COVID-19, which found that marijuana use was higher if they personally knew someone ($M=2.65$, $SD=2.13$) as opposed to if they did not know someone ($M=2.14$, $SD=1.91$) $t(480)=2.67$, $p=.008$.

For alcohol ($M=3.07$, $SD=2.00$), there were statistically significant correlation between two variables: 1) belief that society would be better if the world let COVID-19 run its natural course without social distancing $r(476)=.155$, $p=.001$; and 2) the belief that the media has over-dramatized the impact of the COVID-19 pandemic $r(478)=.139$, $p=.002$.

T-tests were conducted on gender and substance use and found that males ($M=2.17$, $SD=1.82$) reported greater increase in nicotine use since the onset of the COVID-19 pandemic than females ($M=1.62$, $SD=1.39$), $t(474)=3.73$, $p=.001$.

COVID-19 positivity rate by location.

To evaluate for the severity of COVID-19 in approximate locations of the participants, data from John Hopkins University on the county of the zip code was available in a per 100k reading. We were able to obtain the zip codes of 368 participants, and per 100k statistics ranged from 20.50 to 4120.69 ($M=684.70$, $SD=758.92$). A t-test was conducted for per 100k and if they personally knew someone who contracted COVID-19, and found, understandably, that those who did know someone ($M=793.67$, $SD=829.03$) were located in significantly higher per 100k areas than those who did not know someone ($M=627.05$, $SD=716.73$) $t(365)=2.00$, $p=.047$.

Pearson correlations were executed per *100k infection rate* and found no significant correlations. Notable non significant correlations included: support of President Trump $r(364)=-.087$, n.s., President Trump has managed the COVID-19 pandemic well $r(364)=-.086$, n.s., and belief in the importance of wearing a mask in public places $r(366)=.085$, n.s.

Discussion

The present study suggests that participants' news preferences, along with their support for President Donald Trump, are negatively correlated with social distancing compliance and

anxiety about the novel coronavirus. Participants' news preferences and support for President Trump were positively correlated with participants' endorsement of scenarios of others "breaking quarantine". Previous research has found data which highlighted similar results; including Ash, Galletta, Hangartner, Margalit, and Pinna (2020), who found that Fox News viewership had a negative effect on subjects' views towards social distancing and mask wearing. Ash et al. speculates that being exposed to programming which downplays the dangers of COVID-19, while highlighting skepticism towards the medical professionals, is the reasoning behind their results. The present study supports Ash et al.'s findings, and the speculations which began in that study could be reasonably applied to the present study as well.

Bursztyn, Rao, Roth, and Yanagizawa-Drott (2020) looked more precisely at Fox News programming and found that viewers of FNC commentator Tucker Carlson, who spoke on his program weeks earlier about the COVID-19 threat, in comparison to Sean Hannity, were more likely to practice social distancing and less likely to contract the virus than viewers of Sean Hannity who expressed greater skepticism, for a longer duration, than Carlson. While the present study did not measure differences in news consumption on a commentator-to-commentator level, our data does suggest that viewership of right-leaning, conservative news media outlet Fox News did affect subjects' views on the dangers of COVID-19 (higher frequency of maskless face-to-face interactions, for example). Further research regarding the differences of the individual programs, their placement on the political spectrum, and viewers' COVID-19 consideration is required before further exploring the relationship between news commentators and the beliefs of their viewers.

It is a very real possibility that the United States has had high rates of the COVID-19 cases and deaths (McNeil, 2020) in part due to a large portion of the American population's viewership of a popular news / entertainment source which has consistently understated the magnitude of the virus. Additionally, our data suggests that some Americans' allegiance to President Trump, who has minimized the extent of the virus on several occasions, may also have a part to play in the vast amount of COVID-19 cases and deaths in America. Another possible reason for America's number of cases is the country's lack of a consistent federal plan or message during the initial outbreak. As states were given the power to enact different social-distancing standards, many discrepancies were created across the nation- possibly leading to more skepticism and less compliance to government guidelines.

Past research looking at attitudes towards environmental issues (Wouter Bozen et al., 2016), and opinions towards the believability of "conspiracy theories" (Summers, 2006), and how they pertain to certain political ideologies, has also suggested a strong partisan divide exists between Americans. The present study's findings also point towards the health risks of this divide, and should serve as another example of how unwavering partisanship can negatively affect the day to day lives of Americans.

One of the biggest limitations that this study faced was the time in which it was collected. We collected our data in mid-May of 2020, and now in December 2020 our data seems like

elementary steps in evaluating the impact of this virus. COVID-19 spreads more and more each day, and has now evolved into something far greater than it was at the time this data was collected seven months ago. Administering the same survey now might reflect a change in responses, or a consistency.

It is our hope that these findings help future health and government entities dealing with pandemic communication strategies. Understanding idiosyncratic differences between Americans (inclination to be influenced by medical expertise, distrust of scientific reports, and faith in news commentators over other sources) may be a key avenue for future efforts to control pandemic threats.

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