



## Full Length Article

## Moral grandstanding, narcissism, and self-reported responses to the COVID-19 crisis

Joshua B. Grubbs<sup>a,\*</sup>, A. Shanti James<sup>a</sup>, Brandon Warmke<sup>b</sup>, Justin Tosi<sup>c</sup><sup>a</sup> Department of Psychology, Bowling Green State University, Bowling Green, OH, USA<sup>b</sup> Department of Philosophy, Bowling Green State University, Bowling Green, OH, USA<sup>c</sup> Department of Philosophy, Texas Tech University, Lubbock, TX, USA

## ARTICLE INFO

## Keywords:

Status seeking  
Virtue signaling  
Entitlement  
Antisocial behavior

## ABSTRACT

The present study aimed to understand how status-oriented individual differences such as narcissistic antagonism, narcissistic extraversion, and moral grandstanding motivations may have longitudinally predicted both behavioral and social media responses during the early stages of the COVID-19 pandemic. Via YouGov, a nationally representative sample of U.S. adults was recruited in August of 2019 ( $N = 2,519$ ;  $M_{age} = 47.5$ ,  $SD = 17.8$ ; 51.4% women) and resampled in May of 2020, ( $N = 1,533$ ). Results indicated that baseline levels of narcissistic antagonism were associated with lower levels of social distancing and lower compliance with public health recommended behaviors. Similarly, dominance oriented moral grandstanding motivations predicted greater conflict with others over COVID-19, greater engagement in status-oriented social media behaviors about COVID-19, and lower levels of social distancing.

### 1. Moral Grandstanding, Narcissism, and Self-Reported responses to the COVID-19 crisis

Over the course of 2020, daily routines, social relationships, and public behavior all shifted in the wake of the novel Coronavirus pandemic and ensuing COVID-19 crisis (hereafter: COVID-19). As various scientific communities worked to develop effective strategies to address the pandemic, there was a noted academic interest in what factors might predict greater compliance with public health recommendations such as hand-washing, mask-wearing, and social distancing (Bavel et al., 2020). There was also interest in the polarization of public opinions about COVID-19 (Pennycook, McPhetres, Bago, et al., 2020; Shao & Hao, 2020), the spread of misinformation and disinformation (Pennycook, McPhetres, Zhang, et al., 2020), and the tendencies of some individuals to engage in aggressive or conflict-laden behaviors around COVID-19 (Perry et al., 2020). Although many factors (e.g., social norms, political polarization, scientific literacy) likely contributed to responses to the pandemic, individual differences may have influenced how people reacted as well.

Among the plethora of individual differences that might predict pandemic-related behaviors, the present work seeks to examine how status-oriented individual differences—narcissism and moral

grandstanding motivations, specifically—predicted both the nature of public discourse around the COVID-19 pandemic (evidenced by how people report *talking about* the pandemic) and compliance with health recommendations for the COVID-19 pandemic (evidenced by how people report *behaving in response to* the pandemic). To test these ideas, we made use of a 9-month longitudinal study design based on a baseline, nationally representative sample of U.S. citizens from August of 2019 and a follow-up in May of 2020.

#### 1.1. Status seeking and associated traits

Though individual status is often contextually defined and variable across groups, status seeking is a ubiquitous human drive centered on the desire to receive respect and admiration from others (Anderson et al., 2015; Neel et al., 2015). Furthermore, there seem to be universal norms by which individuals seek status, either via prestige (i.e., seeking the admiration and respect of others) or dominance (i.e., seeking to overpower others; Cheng et al., 2013). Additionally, burgeoning evidence suggests that status oriented motivations are often powerfully predictive of social behaviors across a range of settings (Anderson et al., 2015; Bor & Petersen, 2019; Grubbs, Warmke, et al., 2019). As such, in the pantheon of individual differences affecting COVID-19 responses, it

\* Corresponding author.

E-mail address: [GrubbsJ@BGSU.edu](mailto:GrubbsJ@BGSU.edu) (J.B. Grubbs).

is likely that status-seeking drives were also influential.

In the context of individual differences, status-seeking motives are closely related to specific personality traits. For example, extraversion is consistently and robustly linked to status-seeking, with more extraverted people reporting greater status-seeking motives (Neel et al., 2015). Similarly, there is a robust body of work demonstrating that narcissistic traits such as grandiosity and entitlement are particularly associated with the desire to seek status in various ways (Lange et al., 2019; Zeigler-Hill et al., 2019). Recent evidence suggests that status-seeking is also related to moral grandstanding motivations (Grubbs et al., 2019). Below, we define and review both narcissism and moral grandstanding, describe how they relate to status-seeking, and describe their relevance to the current project.

**Narcissism.** Among personality traits known to drive status-seeking impulses, narcissism is likely the most salient (Zeigler-Hill et al., 2018). Though narcissism and narcissistic traits have been the subject of intense debate for several decades in personality research (Ackerman et al., 2016; Grubbs & Riley, 2018; Miller et al., 2017; Rogoza & Ciecuch, 2020), there is a general understanding that the pursuit of social status is a key aspect of narcissism and is arguably a defining feature of the highly narcissistic person's approach to life (Zeigler-Hill et al., 2019). For example, recent work strongly suggests that narcissistic entitlement—a key aspect of most conceptualizations of narcissism (Grubbs & Exline, 2016; Krizan, 2018; Krizan & Herlache, 2018)—is fundamentally driven by a desire for more status and its associated benefits (Lange et al., 2019). Similarly, narcissistic admiration and rivalry are both linked to the pursuit of status, though each differentially predicts the methods of such pursuits (Zeigler-Hill et al., 2019).

Although there are many accounts of narcissism (e.g., narcissistic admiration vs. rivalry, Grove et al., 2019; the Narcissism Spectrum Model, Krizan & Herlache, 2018; dynamic self-regulatory model, Morf & Rhodewalt, 2001), for the present work, we used the trifurcated or three-factor model of narcissism (Crowe et al., 2019; Miller, Few, et al., 2013; Miller et al., 2021; Rogoza, 2020; Weiss et al., 2019). The trifurcated model of narcissism, as assessed by the Five Factor Narcissism Inventory (FFNI), is based on an empirically driven understanding of narcissism that assesses narcissistic traits in 15 sub-dimensions that are derived from the more general five-factor model of personality (Miller et al., 2016). These 15 sub-dimensions correspond broadly to three dimensions of narcissism: agentic extraversion, antagonism, and neuroticism. Narcissistic extraversion generally refers to the grandiose, gregarious, and interpersonally oriented aspects of narcissism. Narcissistic neuroticism generally refers to those aspects of narcissism that are characterized by shame, vulnerability, emotional investment, and a need for affirmation and praise from others. Narcissistic antagonism refers to the antisocial, entitled, and exploitative aspects of narcissism. Although all three of the above dimensions are key to accurately understanding the full spectrum of narcissism, for the present work, we were primarily interested in the degree to which narcissistic extraversion and narcissistic antagonism were related to responses to the pandemic. This focus was due to links between narcissistic antagonism and extraversion and status seeking (Grubbs, Warmke, et al., 2019; Grubbs et al., 2020). Additionally, we note the similarities of narcissistic antagonism and extraversion to conceptions of narcissistic rivalry and admiration respectively, which are also robustly linked to status-seeking drives (Zeigler-Hill et al., 2019). In sum, narcissistic extraversion and antagonism seem most salient to understanding the narcissistic pursuit of status.

**Moral Grandstanding.** The second status-oriented individual difference variable of interest in the present work was moral grandstanding motivation. Originally defined and expounded upon in philosophy, moral grandstanding refers to the act of using moral talk to advance one's status or social standing (Tosi & Warmke, 2016, 2020). There are a multitude of motivations that might lead one to participate in public discourse about morality or politics. For example, some motivations are altruistic: these include desires to promote moral understanding

between oneself and others, or more generally help others in various ways. Other motivations are dutiful: these include desires to do one's moral duty, stand up for what is right, defend those being treated wrongly, or persuade others to be more attentive to evidence. And still other motivations to engage in public discourse are egoistic: these include desires to impress other people with one's moral qualities, or to embarrass and shame others to look morally superior. Moral grandstanding is defined by egoistic motivations for engaging in public discourse. The paradigmatic case is one in which one contributes to public discourse largely because of a desire to appear to be a moral exemplar.

Within psychological research, moral grandstanding is studied as an individual difference or motivation that underlies public discourse behaviors (Grubbs, Warmke, et al., 2019). Moral grandstanding motivations reflect a desire to seek status via publicly sharing one's beliefs or values. Such motivation can be countenanced in two ways consistent with status-seeking more broadly: as involving a desire for prestige or for dominance. Prestige-oriented moral grandstanding motivations are concerned with a desire for one to be seen as inspiring by way of moral beliefs. Alternatively, dominance-oriented moral grandstanding motivations reflect a desire to be seen as overpowering ideological rivals and those who do not share one's beliefs.

Importantly, prior research has shown that moral grandstanding motivations are very closely related to general status-seeking motives and narcissism. Nationally representative samples in the U.S. (Grubbs, Warmke, et al., 2019; Grubbs et al., 2020) have found substantial links (i.e.,  $r > .6$ ) between narcissistic antagonism and dominance-oriented moral grandstanding motivations, as well as smaller, but still contextually robust (see Funder & Ozer, 2019 regarding effects in individual difference research) associations between narcissistic extraversion and prestige-oriented moral grandstanding motivations (i.e.,  $r > 0.3$ ). Collectively, such findings support the general conclusion that moral grandstanding motivations are a domain specific manifestation of status-seeking individual differences and suggest a need to account for narcissistic antagonism and extraversion when examining how moral grandstanding might predict outcomes of interest. Finally, moral grandstanding motivations have clear implications for behavior, as we explore below.

## 1.2. Status-Seeking and behavior

Although, we are now temporally removed from the initial phases of the pandemic, the heterogeneity of both individual and collective responses to the pandemic suggest that a range of factors might have been associated with behavior in the wake of the pandemic. As noted above, there is compelling evidence that status-seeking traits predict social behaviors in a variety of situations. For example, narcissistic entitlement predicts a range of antisocial and belligerent behaviors (Grubbs & Exline, 2016), narcissistic antagonism is broadly predictive of a wide range of aggressive behaviors (Vize et al., 2021), and moral grandstanding motivations generally predict greater conflict with others about political and moral topics (Grubbs, Warmke, et al., 2019). Given the broad range of behaviors predicted by status seeking, it is reasonable to assume that status seeking traits may also have influenced initial responses to the COVID-19 pandemic.

For the present work, we were particularly interested in how status-seeking traits might predict how people *communicated about* and *behaved in response to* the pandemic. Although a wide variety of behaviors are likely relevant to understanding pandemic responses, public discourse about the pandemic and health behaviors (i.e., social distancing, mask-wearing) have been repeated foci of social science research, and both have proven to have broad implications for public health (Hornik et al., 2021). Polarization, conflict, and misinformation communicated about the pandemic have all shown clear associations with public health outcomes (Allington et al., 2021; Basch et al., 2021; Bonnevie et al., 2021; Wheaton et al., 2021), indicating that how people talk about the

pandemic is an important consideration when evaluating responses to the pandemic. Moving further, compliance with public health recommendations has proven to be a robust predictor of both individual risk and communal spread of the SARS-COV-2 virus (Brooks & Butler, 2021; McGrail et al., 2020). Accordingly, there is value in understanding factors that might predict these responses, which implies a need to understand how individual differences predict these domains. Below, we consider how status-seeking traits influence public discourse behaviors and health behaviors and elaborate upon our theoretical rationale for exploring these relationships.

**Status-Seeking and Public Discourse Behavior.** The theoretical rationale for why status seeking traits such as moral grandstanding and narcissism might predict public discourse behavior is relatively straightforward: status seeking traits often predict conflict and discord in public discourse (Petersen et al., 2021). Narcissistic entitlement is associated with a desire for both prestige and dominance, but with the attainment of dominance only (Lange et al., 2019). That is, individuals who demonstrate more antagonistic narcissistic traits often do attain some measure of status but do so via dominance, which is inherently aggressive and at least somewhat antisocial (Cheng et al., 2010, 2013). Similarly, narcissistic antagonism and its component traits are broadly associated with verbal aggression and incivility, as well as with more conflict with others (Grubbs, Warmke, et al., 2019; Vize et al., 2020, 2021). Accordingly, we should expect to find that status seeking traits—particularly narcissistic antagonism—would be related to a wide variety of aggressive, uncivil, or conflict-laden public discourse behaviors, and that this link would also likely persist in the context of the COVID-19 pandemic as well.

Status seeking is also robustly linked to more political conflict with others (Bor & Petersen, 2019). Both cross-sectionally and over time, moral grandstanding motivations consistently predict greater self-reported experiences of conflict with others over political and moral issues (Grubbs, Warmke, et al., 2019). Additionally, both prestige-oriented and dominance-oriented moral grandstanding motivations predict greater self-reported engagement in status-oriented social media behaviors (e.g., sharing material to mock or deride it; posting things simply to enhance one's public image). Collectively, these findings paint a picture of status-oriented traits as being associated with greater conflict over sensitive political or moral issues. Given the clear politicization of the COVID-19 pandemic, particularly in the U.S., it stands to reason then that moral grandstanding motivations would similarly predict caustic public discourse behaviors in the context of the pandemic. Additionally, given that status seeking traits generally predict using social media for status-oriented reasons, it is also reasonable to assume that such patterns would persist in the specific context of COVID-19.

**Status Seeking and Health Behavior.** Whereas links between status-seeking traits and public discourse behaviors are relatively straightforward, links between status seeking and health related behaviors are less clear. Status seeking, as a fundamental social motive, consistently demonstrates a weak, positive association with a desire or motivation to avoid disease (e.g., Neel et al., 2015; Zeigler-Hill, 2019). At first blush, this would suggest that status might translate to greater compliance with COVID-19 health recommendations. However, there is also evidence that general antagonism and social dominance orientation, both closely related to narcissistic antagonism, are negatively associated with disease avoidance (Zeigler-Hill, 2019; Zeigler-Hill & Hobbs, 2017). For example, in the context of HIV prevention, narcissistic traits predict greater willingness to engage in unsafe sexual practice and greater perceptions of invulnerability to both HIV and AIDS (for a review, see: Konrath & Bonadonna, 2014). Additionally, narcissism more generally seems unrelated to disease avoidance (Jonason & Zeigler-Hill, 2018; Zeigler-Hill et al., 2019).

In contrast to the above findings, in at least one study, a unitary construction of narcissism (broadly measured, without any distinction between its various facets) has demonstrated positive associations with proactive health behaviors (i.e. seatbelt wearing, using sunscreen) and

negative associations with cigarette and alcohol use (Malesza & Kaczmarek, 2019). At the same time, a number of other studies have found overall narcissism to be associated with greater risk-taking behaviors, including use of illicit substances, alcohol, and cigarettes (Hill, 2016) and engagement in risky sexual behaviors (Coleman et al., 2020). However, given the demonstrated trifurcated structure of narcissism discussed previously, the unitary conceptualization of narcissism in these prior studies should give pause when attempting to interpret these discrepant results. Narcissistic antagonism implies component traits that are associated with impulsivity, greater risk-taking, and general unwillingness to comply with rules and regulations. Accordingly, we should generally expect to find that narcissistic antagonism predicts less compliance with public health recommendations and less aversion to risk.

Despite mixed findings on health behaviors, the present work is not the first to suggest that narcissistic traits may be relevant in predicting responses to the COVID-19 pandemic (Coleman, 2020). Past work has posited that narcissistic traits, especially those that are more antagonistic, are likely predict less compliance with COVID-19-related health recommendations (Coleman, 2020). Moreover, the above speculations find some empirical support with Polish studies finding that general measures of “Dark Triad” traits (i.e., narcissism, psychopathy, and Machiavellianism) are associated with less willingness to comply with public health recommendations for COVID (Zajenkowski et al., 2020), less willingness to engage in preventative measures such as social distancing (Nowak et al., 2020), and greater willingness to engage in antisocial pandemic responses, such as hoarding behaviors (Nowak et al., 2020). Similarly, in three cross-sectional samples of adults in the U.S. taken from Amazon's Mechanical Turk, psychological entitlement—a key aspect of narcissistic antagonism—was associated with non-compliance with COVID-19 related guidelines and recommendations (Zitek & Schlund, 2020). Such findings suggest that well-validated measures of the facets of narcissistic antagonism (i.e., psychological entitlement) are indeed salient in predicting health behaviors in the wake of COVID-19. These findings have also been demonstrated in Chinese samples (Li, 2021). However, in both cases, such associations remained cross-sectional and taken from non-representative samples. As such, the present work sought to assess the links between narcissism, moral grandstanding, and COVID responses over time and in a representative sample.

## 2. The present study

Building on the above findings, we note that status-oriented traits such as moral grandstanding motivations and narcissism are likely of some importance in understanding certain responses to the COVID-19 pandemic. This is not to say that individual differences were the primary driving factor in all responses to the pandemic, nor is it to exaggerate the importance of status-seeking traits in predicting health behaviors. However, given preliminary links in prior literature between narcissistic traits and various behaviors, there is reason to suspect that status-oriented traits were important in predicting individual responses to the pandemic, particularly during the early stages of the pandemic, when social norms around COVID-19 were still being formed. Accordingly, the primary purpose of the present work was to examine whether moral grandstanding motivations and narcissistic traits were predictive, over time, of responses to the COVID-19 pandemic. We were specifically interested in assessing two broad domains via self-report: public discourse activities around the pandemic (e.g., status-oriented social media behaviors and reported conflict with others) and actual health-related behaviors in the wake of the pandemic (e.g., social distancing compliance and personal health behaviors).

Generally, we expected to find that greater moral grandstanding motivations would be associated with greater self-reported public discourse activity about the COVID-19 pandemic, but that such motivations would be largely unrelated to actual health-related behaviors.

Specifically, we expected to find evidence that individuals with greater baseline moral grandstanding tendencies would report greater status-oriented social media engagement regarding the pandemic and greater levels of conflict with others in discussions about the pandemic, but that such reports would be largely unrelated to compliance with public health recommendations. On the other hand, we expected narcissistic antagonism to be associated with greater disregard of health recommendations during the pandemic, particularly social distancing recommendations. Importantly, we sought to test the above speculations while controlling for political ideology, as there is compelling evidence that political ideology is related to COVID-19 behaviors (Perry, Whitehead, & Grubbs, 2020; Shao & Hao, 2020).

Finally, we note that the present work did not make use of a pre-registered design or a-priori specified hypotheses. As such, our results should be interpreted as representing theoretically driven explorations of our data, rather than confirmation of a pre-specified hypothesis. Full details about the present study design, including open access to materials and data for the present study can be found on the Open Science Framework at <https://osf.io/m8956/>.

### 3. Method

#### 3.1. Participants and procedure

In August of 2019, we recruited a baseline panel of participants in the U.S. that were matched to U.S. nationally representative norms as of the 2016 American Community Survey. As indicated above, the original sample was not recruited with the specific intention of examining responses to COVID-19, but as part of a larger project on personality and public discourse (Grubbs, Tosi, et al., 2019). Full information about this larger project is available via the OSF at: <https://osf.io/zbg3d/>. For the original sample and study, target sample size (target = 2,500) was based on budgetary constraints. Participants were recruited via YouGov (N = 2,519;  $M_{age} = 47.5$ ,  $SD = 17.8$ ; 51.4% women), matched to U.S. norms for age, gender, race, education, and U.S. Census Region. Race was reported as follows: 64.1% White, 12.0% Black, 15.7% Hispanic, 3.3% Asian, 0.9% Native American, 2.5% Mixed, 1.5% other, 0.2% Middle Eastern. Participants identified primarily as 38.7% Democrat, 27.2% Republican, 25.4% Independent, 3.6% other, and 5.1% not sure. Baseline responses were weighted using YouGov's proprietary weighting formulae (Rivers, 2016). Analyses of baseline results from this dataset have been published elsewhere (Grubbs et al., 2020; Grubbs, Warmke, et al., 2019).

During the height of many states' first COVID-19 lockdowns in early May 2020, a follow-up sample was recruited with a goal of obtaining at least 1,500 valid responses, again based on budgetary constraints (N = 1,533;  $M_{age\ at\ baseline} = 53.61$ ,  $SD = 16.31$ ; 55.2% women; 70.2% White; 10.6% Black; 11.4% Hispanic; 2.7% Asian, 0.7% Native American, 2.9% Mixed, 1.4% other, 0.3% Middle Eastern).

#### 3.2. Measures

Unless otherwise indicated, scale scores were obtained by averaging across items.

##### 3.2.1. Moral grandstanding

Moral grandstanding motivations were assessed via the Moral Grandstanding Motivations Scale. This 10-item scale requires participants to rate their agreement (1-*strongly disagree* to 7-*strongly agree*) with items related to their motives for sharing beliefs, opinions, or ideas. Responses are scored across two subscales: Dominance Strivings (MGM: Dominance Strivings; 4 items; example: "I share my beliefs to make people who disagree with me feel bad") and Prestige Strivings (MGM: Prestige Strivings; 6 items; example: "My beliefs should be inspiring to others").

##### 3.2.2. Narcissism

We assessed narcissistic tendencies via the short form of the Five Factor Narcissism Inventory (FFNI-SF; Sherman et al., 2015). Derived from the original, 120-item FFNI (Glover et al., 2012; Miller, Gentile, et al., 2013), the FFNI-SF is a 60-item measure that assesses various facets of narcissism such as entitlement, need for admiration, and arrogance. These facets are aggregated into larger indices representing narcissistic antagonism, narcissistic extraversion, and narcissistic neuroticism. For the present work, as we described in our introduction, we focused on narcissistic antagonism (FFNI-Antagonism; comprised of Manipulativeness, Exploitativeness, Entitlement, Lack of Empathy, Arrogance, Distrust, Thrill-Seeking, and Reactive Anger) and narcissistic extraversion (FFNI-extraversion; comprised of acclaim-seeking, authoritative, grandiose fantasies, and exhibitionism).

##### 3.2.3. Political/Moral conflict with others

At baseline, we measured Political/Moral Conflict using the same scale and items as prior works on this topic (Grubbs, Warmke, et al., 2019). Participants noted how often they had experienced various types of conflicts over political and moral issues over the 12 months prior to the initial survey. Specifically, participants recorded the frequency of their experiences of conflict with others over political and moral beliefs (e.g., "lost friends because of my political/moral beliefs," "grown distant from a friend because of my political/moral beliefs," "experienced conflict in my home because of moral/political issues"). Responses were recorded on a scale of 1 (*never/not at all*) to 4 (*several times*). Responses were averaged.

In May of 2020, we assessed conflict with others over COVID-19 within the past month using a modified version of the above scale wherein the items were changed to focus specifically on "the Coronavirus/COVID-19 crisis" rather than general "political or moral" issues (for example, "lost friends because of my beliefs about the Coronavirus/COVID-19 crisis").

##### 3.2.4. Status-Oriented social media behaviors

At baseline, we included an 8-item measure of status-oriented social-media behaviors that has been used in prior works (Grubbs, Warmke, et al., 2019). This measure required participants to answer the prompt "When was the last time that you..." by rating the recency with which they had engaged in certain behaviors (items: "Posted on social media about a moral or political issue," "Got into an argument on social media about a political or moral issue," "Reposted on social media (retweeted/shared) something you disagreed with to make a point," "Reposted (retweeted/shared) something you disagreed with to make fun of it," "Reposted (retweeted/shared) something you agreed with, so that others would know you agreed with it," "Reposted (retweeted/shared) something you agreed with to make yourself look good," "Praised someone for sharing something on social media," "Called someone out on social media?"). Participants responded on a scale of 1 (*never*) to 6 (*within the past 24 h*).

In May of 2020, we asked the same 8 items with the added phrase "about the Coronavirus/COVID-19 crisis" inserted into each item (e.g., "Reposted (retweeted/shared) something you disagreed with about the Coronavirus/COVID-19 crisis to make fun of it," "Called someone out on social media for something they said or did about the Coronavirus/COVID-19 crisis"). Participants were asked to rate how often they had engaged in such behaviors over the prior month, with responses recorded on a scale of 1 (*never*) to 5 (*more than once per day*).

##### 3.2.5. Social distancing

We measured social distancing and health behaviors using a modified form of poll questions asked by Altarum polling (COVID-19 Survey Results | Altarum, 2020). Specifically, we averaged across responses to a subset of items representing non-essential social engagements in the two weeks prior to the survey (i.e., "Ate inside a restaurant," "Attended a gathering of 10 + people," "Visited family or friends in person," "Went

shopping for non-essential items,” “Went to a place of worship”).<sup>1</sup> Participants responded to the prompt “within the past two weeks I have...” by rating the frequency of engaging in the above listed behaviors on a scale of 1 (*never*) to 5 (*daily*). We then reverse scored these items so that higher scores were indicative of greater social distancing.

### 3.2.6. Personal health behaviors

We measured personal health behaviors by taking the mean of four items (i.e., “Washed my hands more often than typical,” “Avoided touching my face,” “Used hand sanitizer more than usual,” and “Worn a mask in public”). Responses were keyed on the same scale mentioned above in response to the same prompt (items were presented in the same matrix), with higher scores indicating more frequent personal health behaviors.

### 3.3. Analytic plan

Prior to key analyses, we computed descriptive statistics, measures of internal consistency, and Pearson correlations with Holm-adjusted test-statistics between all key measures. Consistent with current recommendations for establishing internal consistency/reliability of our measures, we computed Cronbach’s alpha and Omega total for all measures (Revelle & Condon, 2019; Zinbarg et al., 2005).

Multivariate analysis of variance of key variables based on whether or not participants completed our follow-up wave revealed significant differences between those who completed both waves and those who only completed our baseline measures (Wilk’s Lambda = 0.948,  $F(6, 2509) = 22.805, < 0.001$ ). Subsequent independent samples t-tests revealed that those who completed both waves had significantly lower baseline scores for FFNI Antagonism, MGM: Dominance Strivings, Political and Moral Conflict, and Social Media Behavior. Additionally, comparisons showed those who completed both waves tended to be more liberal and more interested in the news than those who only completed baseline measures. In short, our follow-up sample was more prosocial and liberal than our baseline sample. Given the above factors, all baseline statistics make use of the whole sample ( $N = 2,519$ ), whereas all statistics using follow-up variables make use of listwise deletion and only represent analysis of those who completed both waves ( $n = 1,533$ ).<sup>2</sup>

Subsequent to initial analyses, we performed a structural equation model using the *lavaan* and *umx* packages for R. General models (using the *lavaan* package) and profile-likelihood analyses (using the *umx* package) both used diagonally weighted least squares estimation.

## 4. Results

Pearson correlations revealed positive associations between baseline values for both dimensions of MG and all other baseline variables, except

<sup>1</sup> Three items related to social engagements were asked but not included in analyses, as all three represented social behaviors that could be considered either essential or outside the participant’s control (i.e., “went to a medical appointment,” “went to work outside my home,” and “went to the grocery or drug store”).

<sup>2</sup> We did additionally compute key analyses using Full Information Maximum Likelihood imputation of missing data despite data not being MCAR. These results are available via the OSF at <https://osf.io/m8956/>. Importantly, results were highly similar with regards to general model fit and size/significance/direction of findings. We also conducted alternative analyses in which missing data were handled with Multiple Imputation using the *Amelia* (Honaker et al., 2011), *miTools* (Lumley, 2019), and *semTools* (Jorgensen et al., 2020) packages for R statistical software. Again, analyses of pooled results across 24 imputed datasets using Rubin’s (1987) rules for pooling point and SE estimates revealed highly similar results to what we obtained using listwise deletion as reported in text, again underscoring the robustness of our findings. These results are also available via the OSF at the above link.

for left/right political affiliation. Baseline levels of MGM: Prestige Strivings and MGM: Dominance Strivings demonstrated positive correlations with follow-up levels of Political/Moral conflict and Social Media Behavior, with all such associations in the medium-to-large range ( $r = 0.20-0.30$ ; Funder & Ozer, 2019). MGM: Dominance Strivings demonstrated a medium ( $r > 0.20$ ), negative relationship with social distancing at follow-up, but no such relationship with personal health behaviors. Narcissistic antagonism demonstrated medium-to-large positive correlations with status-oriented social media behaviors and political/moral conflict at both time points and a large negative association with social distancing at follow-up. Narcissistic extraversion demonstrated medium positive associations with status oriented social media behaviors at baseline and political/moral conflict at baseline, but only small associations with these variables at follow-up. Similarly, narcissistic extraversion demonstrated a small positive association with personal health behaviors at follow-up and a small negative association with social distancing at follow-up. These results are summarized in Table 1.

To test relationships over time, we specified a structural equation model using the software noted above. Within this model, the latent variables *Moral Grandstanding Motivations: Prestige Strivings* and *Moral Grandstanding Motivations: Dominance Strivings* were defined by the items of the subscales of the Moral Grandstanding Motivation Scale subscales they represent. Both latent variables were regressed on the observed variables FFNI Antagonism, FFNI Extraversion, News Interest, and Left-Right Political affiliation. In turn, the observed variables Political/Moral Conflict Baseline and Status-Oriented Social Media Behavior Baseline were regressed on all aforementioned variables. Finally, the observed variables from our follow-up data collection (i.e., Political/Moral Conflict Over COVID-19, Social Distancing, Personal Health Behaviors, and Status-Oriented Social Media Behavior Over COVID-19) were regressed on all previously mentioned variables.

All pathways that were insignificant (at  $\alpha = 0.05$ ) and for whom profile likelihood confidence intervals were in the near-null region (i.e., profile likelihood confidence interval containing 0) were fixed to zero to increase degrees of freedom in the model. Comparison of constrained and unconstrained models revealed that fixing insignificant paths to zero did not decrement fit ( $\Delta\chi^2 = 38.748, \Delta DF = 29, p = .107$ ). Accordingly, present results reflect the model with insignificant paths fixed to 0. This final model is summarized in Fig. 1.

Results revealed good fit for the above-described model ( $\chi^2(145) = 612.306, p < .001$ ; Robust Comparative Fit Index = 0.974, Robust Tucker-Lewis Index = 0.967, Robust Root Mean Square Error of Approximation = 0.046; Standardized Root Mean Square Residual = 0.035). We observed a positive relationship between *Moral Grandstanding Motivations: Prestige Strivings* and baseline levels of status-oriented social media behaviors and political/moral conflict. Thus, greater prestige-motivated grandstanding was associated with greater levels of potentially status-oriented social media behaviors and conflict with others. *Moral Grandstanding Motivations: Dominance Strivings* were positively associated with baseline status-oriented social media behaviors and political/moral conflict, as well as their respective follow-up measures. *Moral Grandstanding Motivations: Dominance Strivings* was negatively associated with self-reported social distancing at follow-up, indicating that those with higher levels of dominance-motivated grandstanding were less likely to endorse social distancing.

Narcissistic antagonism was associated with *Moral Grandstanding Motivations: Dominance Strivings*, status-oriented social media behaviors, and political/moral conflict at baseline. The positive relationship between narcissistic antagonism and political/moral conflict persisted in our COVID-19 follow-up. Finally, narcissistic antagonism was negatively associated with levels of social distancing and personal health behaviors at follow-up. These results are available in Fig. 1 and Table 2.

In our SEM, we noted a clear lack of association (i.e., null or near null associations and profile likelihood confidence intervals containing zero) between social media behavior around the pandemic and both social distancing and personal health behaviors. Whether someone reported

**Table 1**  
Means, Standard Deviations, Internal Consistency, and Pearson Correlations (with 95% confidence intervals) for all Included Variables.

	Mean (SD)	Internal Consistency	1	2	3	4	5	6	7	8	9	10	11
1. MGM: Dominance Strivings	2.27 (1.41)	$\omega_t = 0.91$ $\alpha = 0.91$											
2. MGM: Prestige Strivings	4.85 (0.97)	$\omega_t = 0.77$ $\alpha = 0.81$	0.18 (0.15, 0.22)										
3. FFNI: Antagonism	2.20 (0.68)	$\omega_t = 0.93$ $\alpha = 0.88$	0.66 (0.64, 0.68)	0.18 (0.14, 0.22)									
4. FFNI: Extraversion	2.88 (0.73)	$\omega_t = 0.82$ $\alpha = 0.74$	0.31 (0.27, 0.34)	0.4 (0.37, 0.43)	0.57 (0.54, 0.59)								
5. Left-Right Political Affiliation*	11.44 (66.20)	–	0.02 (-0.02, 0.06)	-0.02 (-0.06, 0.02)	0.09 (0.05, 0.12)	0.02 (-0.02, 0.06)							
6. News Interest	3.23 (0.98)	–	-0.11 (-0.15, -0.07)	0.15 (0.11, 0.19)	-0.21 (-0.24, -0.17)	0 (-0.04, 0.00)	-0.04 (-0.08, 0.00)						
7. Status-Oriented Social Media Behavior at Baseline	2.32 (1.32)	$\omega_t = 0.94$ $\alpha = 0.91$	0.28 (0.24, 0.32)	0.26 (0.22, 0.29)	0.29 (0.25, 0.32)	0.23 (0.19, 0.27)	-0.02 (-0.06, 0.02)	0.23 (0.19, 0.27)					
8. Political/Moral Conflict at Baseline	1.69 (0.70)	$\omega_t = 0.92$ $\alpha = 0.89$	0.39 (0.36, 0.43)	0.22 (0.18, 0.26)	0.37 (0.34, 0.40)	0.25 (0.21, 0.28)	-0.06 (-0.10, -0.02)	0.21 (0.17, 0.24)	0.66 (0.64, 0.68)				
9. FU: Status-Oriented Social Media Behavior over COVID-19	1.60 (0.72)	$\omega_t = 0.92$ $\alpha = 0.92$	0.28 (0.24, 0.33)	0.22 (0.17, 0.26)	0.20 (0.15, 0.25)	0.16 (0.11, 0.2)	-0.02 (-0.07, 0.03)	0.13 (0.09, 0.18)	0.66 (0.63, 0.69)	0.49 (0.45, 0.53)			
10. FU: Personal Health Behaviors	3.59 (1.12)	$\omega_t = 0.74$ $\alpha = 0.70$	0.01 (-0.04, 0.06)	0.07 (0.02, 0.12)	-0.03 (-0.08, 0.02)	0.12 (0.07, 0.17)	-0.17 (-0.22, -0.12)	0.05 (0.00, 0.10)	-0.03 (-0.08, 0.02)	-0.01 (-0.06, 0.04)	0.01 (-0.04, 0.06)		
11. FU: Social-Distancing	4.46 (0.48)	$\omega_t = 0.71$ $\alpha = 0.69$	-0.26 (-0.31, -0.21)	-0.06 (-0.11, -0.01)	-0.29 (-0.34, -0.24)	-0.15 (-0.20, -0.10)	-0.20 (-0.25, -0.15)	0.08 (0.03, 0.13)	-0.12 (-0.17, -0.07)	-0.16 (-0.21, -0.11)	-0.16 (-0.21, -0.11)	0.05 (0.00, 0.10)	
12. FU: Political/Moral Conflict over COVID-19	1.33 (0.48)	$\omega_t = 0.89$ $\alpha = 0.88$	0.35 (0.30, 0.39)	0.21 (0.16, 0.26)	0.31 (0.27, 0.36)	0.19 (0.14, 0.24)	-0.09 (-0.14, -0.04)	0.06 (0.01, 0.11)	0.47 (0.43, 0.50)	0.56 (0.52, 0.59)	0.58 (0.55, 0.61)	0.00 (-0.05, 0.05)	-0.23 (-0.28, -0.18)

\*left–right political affiliation was scored from –100 (left/liberal) to +100 (right/conservative)  $\omega_t$  = Omega total,  $\alpha$  = Cronbach’s Alpha; MGM = Moral Grandstanding Motivation; FFNI = Five Factor Narcissism Inventory; FU = Follow-Up; All correlations with absolute value > 0.07 ( $r > |0.07|$ ) significant at the 0.01 level with Holm-adjusted test statistics

posting frequently online about the pandemic was largely orthogonal to whether they engaged in behavioral changes for the pandemic.<sup>3</sup> Overall, our model accounted for substantial variance in status-oriented social

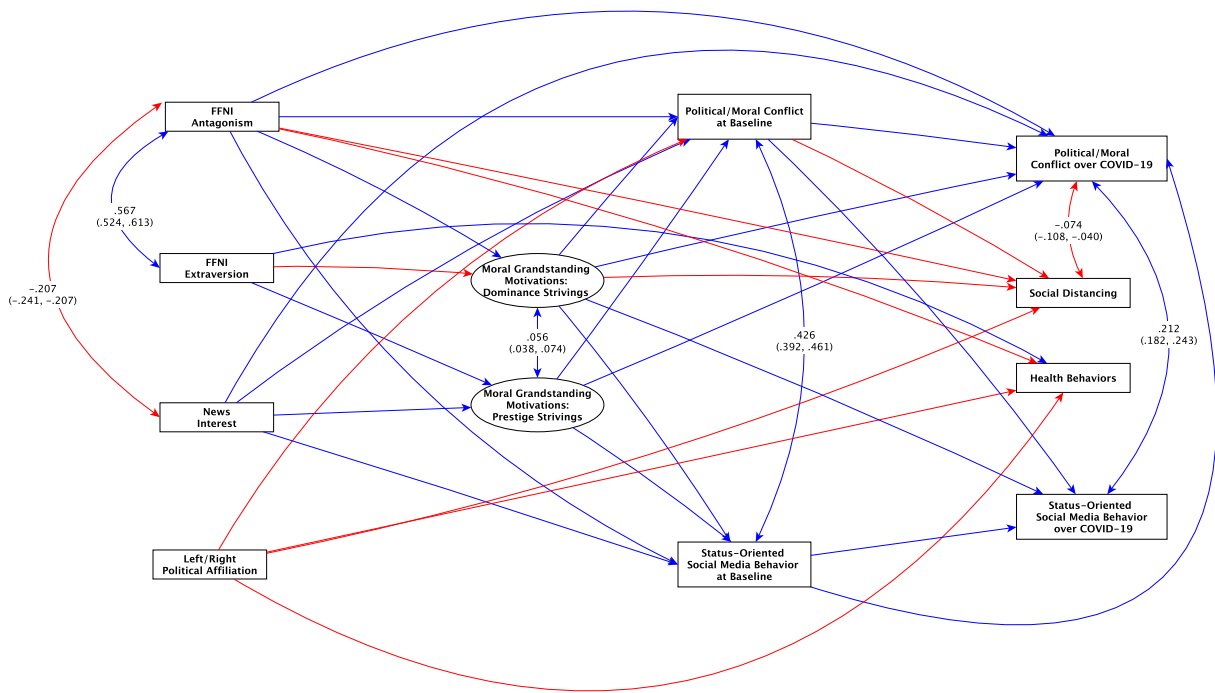
<sup>3</sup> We considered the possibility that there might be an interaction between political affiliation and social media behaviors in predicting actual compliance with health recommendations. Given that we had no prior hypotheses regarding such interactions, we conducted this analysis on a purely exploratory basis and have elected not to present them as a central finding in the present work. Given concerns about moderation analyses that are post-hoc (Simmons et al., 2011), we do not believe these results should be presented as definitive. Regardless, these results are available via the OSF. Specifically, using the Shiny web application InterActive (McCabe et al., 2018) for R Statistical Software, we tested a simple moderation model where political ideology (as measured by the left–right spectrum variable mentioned above) might moderate the link between status-oriented social media behaviors and compliance with social distancing recommendations. Results indicated a significant interaction, where individuals with “left” political ideology (e.g., people < –1 SD from center) demonstrated no significant relationship between social media behavior and actual social distancing compliance and individuals with more right political ideology (people > +1 SD from center) demonstrated a negative relationship between social media behavior and social distancing compliance. That is, for individuals with more conservative or right-wing political views, more social media activity about COVID-19 was associated with less social distancing. These results are available via the OSF as supplemental materials at <https://osf.io/m8956/>.

media behaviors ( $R^2 = 0.506$ ) and political moral conflict ( $R^2 = 0.381$ ) at follow-up, likely due to the baseline measurement of these variables. Our models still accounted for meaningful amounts of variance in social distancing ( $R^2 = 0.162$ ) and personal health behaviors ( $R^2 = 0.051$ ), though these effects were substantially smaller than the effects on status-oriented social media behavior and political/moral conflict.

### 5. Discussion

At the outset of this work, we sought to examine how status-oriented individual differences such as moral grandstanding and narcissism measured prior to the COVID-19 crisis predicted self-reported responses to the COVID-19 crisis during its earliest stages. We specifically examined self-reports of both health-related behaviors (e.g., personal health behaviors; social distancing) and interpersonal interactions (e.g., political/moral conflict; status-oriented social media behaviors) during the early stages of the pandemic, with a goal of understanding what baseline traits might predict how people communicated and behaved in response to the pandemic. We chose these broad domains of response (public discourse and behavioral compliance), as both have demonstrated clear links to public health and have proven to be robust predictors of both individual and communal outcomes associated with COVID-19. Below, we summarize these findings and discuss their implications.

Across analytic techniques, we found no evidence (i.e., insignificant paths in SEMs with profile-likelihood confidence intervals in the near



**Fig. 1.** Final path diagram and unstandardized covariances (with profile likelihood 95% CIs) for longitudinal structural equation model. Path estimates available in Table 2. Blue paths indicate positive relationships. Red paths indicate negative relationships. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

**Table 2**  
Unstandardized path estimates and 95% Profile Likelihood Confidence Intervals for longitudinal structural equation models predicting responses to COVID-19.

	Baseline Variables				Follow-Up Variables			
	Prestige	Dominance	Status-Oriented Social Media Behavior Baseline	Political/Moral Conflict at Baseline	Status-Oriented Social Media Behavior over COVID-19	Political/Moral Conflict over COVID-19	Self-Reported Social Distancing at Follow-Up	Self-Reported Personal Health Behaviors at Follow-Up
Prestige	–	–	0.258 (0.193, 0.324)	0.145 (0.083, 0.207)	–	0.066 (-0.006, 0.137)	–	–
Dominance	–	–	0.173 (0.11, 0.237)	0.319 (0.259, 0.381)	0.194 (0.137, 0.25)	0.183 (0.108, 0.258)	-0.214 (-0.304, -0.124)	–
FFNI Antagonism	–	0.637 (0.602, 0.671)	0.204 (0.153, 0.256)	0.224 (0.175, 0.274)	–	0.11 (0.052, 0.169)	-0.194 (-0.266, -0.122)	-0.124 (-0.192, -0.057)
FFNI Extraversion	0.301 (0.272, 0.330)	-0.089 (-0.12, -0.058)	–	–	–	–	–	0.177 (0.118, 0.236)
Political Affiliation	–	–	–	-0.058 (-0.086, -0.031)	0.047 (0.013, 0.08)	–	-0.208 (-0.254, -0.163)	-0.156 (-0.204, -0.109)
News Interest	0.097 (0.071, 0.124)	–	0.266 (0.229, 0.302)	0.269 (0.234, 0.304)	–	–	–	–
Status-Oriented Social Media Behaviors at Baseline	–	–	–	–	0.604 (0.555, 0.653)	0.604 (0.555, 0.653)	–	–
Political/Moral Conflict at Baseline	–	–	–	–	0.085 (0.032, 0.137)	0.399 (0.342, 0.456)	-0.096 (-0.149, -0.043)	–
R <sup>2</sup>	0.209	0.314	0.168	0.219	0.506	0.381	0.162	0.051

Robust  $\chi^2(145) = 612.306, p < .001$ ; Comparative Fit Index = 0.974, Tucker-Lewis Index = 0.967, Root Mean Square Error of Approximation = 0.046; Standardized Root Mean Square Residual = 0.035; Diagonally Weighted Least Squares estimation.  
Insignificant paths (i.e., paths with profile likelihood CIs containing 0) constrained to be equal to zero to increase degrees of freedom in the model. Covariances in final model available in Fig. 1.

null region) that either prestige-motivated grandstanding or dominance-motivated grandstanding were meaningfully related to personal health behaviors such as hand washing and mask wearing during the early stages of the COVID-19 crisis. Dominance-motivated grandstanding at baseline was negatively related to social distancing nine months later,

even when baseline levels of antagonism, political affiliation, and other salient variables were included in the model. In contrast, prestige-motivated grandstanding demonstrated no relationship with social distancing in either direction, with near null effects observed and profile likelihood confidence intervals fully falling within the near-null region.

The lack of connection between moral grandstanding motivations and behaviors around COVID-19 contrasts the consistent relationship of moral grandstanding motivations, especially dominance, to status-oriented social media behaviors and conflict in response to the crisis. Specifically, we found robust links between dominance-motivated grandstanding and greater self-reported political/moral conflict about the pandemic and engagement in status-oriented social media postings about COVID-19. In short, greater levels of dominance-oriented moral grandstanding motivations predicted greater social media activity with regards to COVID-19 and less social distancing, above and beyond the influence of narcissistic traits themselves.

Narcissistic traits were associated with self-reported health behaviors. Greater levels of narcissistic antagonism were longitudinally associated with lower levels of social distancing and personal health behaviors, while narcissistic extraversion was positively associated with personal health behaviors. Consistent with numerous polls and recent studies, political affiliation was a consistent predictor of actual health behaviors related to COVID-19. Specifically, participants who rated themselves as more left-leaning at baseline were more likely to report greater social distancing and greater personal health behaviors at follow-up.

### 5.1. Implications

These results paint a nuanced picture of how status-oriented traits related to early responses to the COVID-19 crisis. People who were motivated seek status via moral talk (i.e., those who engage in grandstanding), especially via shaming or attacking others, seemed prone to report status-oriented posting on social media and engaging in conflict with others about the COVID-19 crisis. This group also tended to report less compliance with social distancing recommendations. Additionally, greater narcissistic antagonism predicted lower levels of reported behavioral change in response to COVID-19 and greater reported levels of conflict with others over the pandemic. In short, more antagonistic status-oriented traits (i.e., narcissistic antagonism and dominance motivated moral grandstanding) predicted greater engagement in caustic public discourse about COVID-19, but lower levels of pro-social behavioral changes due to the pandemic.

Findings regarding narcissism and COVID-19 behaviors are consistent with the greater body of literature about the structure of narcissism itself and the behaviors that these traits predict. Specifically, a voluminous body of research shows that narcissistic antagonism and its component traits are associated with more antisocial behaviors (Grubbs & Exline, 2016; Lambé et al., 2018). Recent work suggests that narcissism itself, especially antagonistic aspects of narcissism, are subsumed by psychopathy more generally (Weiss et al., 2021), suggesting that antisocial behavior is to be expected among those who demonstrate particularly high levels of this trait. The present study shows that such traits emerged as consistent and reliable predictors of lower levels of social distancing and personal health behaviors in the wake of COVID-19. In short, antagonistic traits clearly predicted lower compliance with COVID-19 recommendations.

Findings regarding narcissistic antagonism and behavior change may be a result of public framing. Although both social distancing and personal health behaviors confer personal benefit (e.g., lowering risk of contracting the coronavirus or developing COVID-19), the primary rationale for engaging in such behaviors in the public sphere has been the protection of others (Brooks et al., 2020). Public health messages around mask-wearing and social distancing have consistently focused on preventing viral spread to others (van der Linden & Savoie, 2020). In this way, it is likely that many people view social distancing and mask wearing as altruistic behaviors rather than self-protective ones. Thus, consistent with existing bodies of research about narcissistic antagonism, it may follow for narcissistic antagonism to predict less engagement in pro-social COVID-19 behaviors. In short, antagonistic individuals are simply less inclined to behave pro-socially across a

variety of situations.

Another possible implication of the present work concerns how popular dialogues about COVID-19 might be corrupted by potentially hypocritical actors. Consistent with research on moral outrage on social media (Brady et al., 2019), the loudest voices about COVID-19 might not be motivated by accurate appraisals of the pandemic or altruistic goals for discourse. Rather, these individuals' social media discussions about the pandemic may be driven by pursuit of status. People who report arguing with others and posting frequently about the pandemic do not appear to be more likely to comply with current best recommendations for healthy behavior. These individuals may be endorsing positive ideals (e.g., compliance with recommendations) without actually acting on them, which is particularly concerning given available evidence that such hypocrisy degrades public discourse (Jordan et al., 2017) and is linked to reduced trust (Greenbaum et al., 2012). It seems that public discourse can occur independently of regard for best practices in the circumstances to which the discourse refers. If true, this suggests that status-seeking drives like moral grandstanding are polluting important public conversations about critical events.

### 5.2. Limitations

The limitations of the present work are largely self-evident. The findings of the present work should not be extended beyond the U.S. cultural context without careful acknowledgement of how the U.S. response to the pandemic has been quite different from the rest of the world. This work represents an analysis of pandemic responses that is may not be generalizable to non-WEIRD contexts. This is especially true for the COVID-19 pandemic given the variety of responses demonstrated in other countries and the unique politicization of the pandemic in the U.S. (Jiang et al., 2020). Even so, links between status-oriented traits and antisocial responses to the COVID-19 pandemic have been replicated in a number of countries (Li, 2021; Nowak et al., 2020; Zitek & Schlund, 2020), and although the U.S. response to COVID-19 may not be universal, links between status-oriented traits—particularly antagonistic ones—and antisocial behavior may generalize across a number of cultural contexts.

We also note that the present work made use of an existing data set and was not pre-registered. These results should not be seen as explicitly confirmatory or a strong test of theory. Rather, they suggest that theoretically expected associations (e.g., that status-oriented aspects of personality, particularly antagonistic traits, predict antisocial behavior) are indeed consistent with data collected on pandemic responses. Finally, a two time-point analysis, though arguably more informative than the plethora of existing cross-sectional studies on COVID-19, precludes modeling of trajectories over time and does not provide adequate evidence for causal inference.

## 6. Conclusion

The COVID-19 crisis disrupted life on a global scale and raised concerns about compliance with public health messaging across various settings. In the U.S., compliance with public health recommendations such as social distancing and mask wearing has been mixed. The present study examined how status seeking traits, particularly those adjacent to antagonism, were associated with reduced compliance with public health recommendations over time. Narcissistic antagonism specifically predicted lower levels of social distancing and personal health behaviors, as well as higher levels of conflict with others about COVID-19 issues nine months later. Additionally, dominance-motivated moral grandstanding predicted higher levels of status-oriented online posting and conflict with others about COVID-19 topics, but lower compliance with social distancing. Collectively, these findings suggest that status-oriented individual differences may play some role in predicting how people in the U.S. talked about and behaved in response to the COVID-19 pandemic, especially in its early stages.



## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Acknowledgements

We gratefully acknowledging the support of the Charles Koch Foundation, the National Institute for Civil Discourse, and Bowling Green State University in funding data collection efforts central to this manuscript.

## Author Contribution Statement

JBG was responsible for study conceptualization, study design, data collection, data analysis, writing, editing and revising of this manuscript. BW, JT, and ASJ were responsible for study conceptualization, writing, editing, and revising of this manuscript.

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