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> Arathy Puthillam Nikita Mehta Sarah Rezaei Arunima Ticku Hansika Kapoor

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DUTIFUL CITIZENS: PREDICTORS OF COVID-19 POLICY COMPLIANT BEHAVIOR IN INDIA



DEPARTMENT OF PSYCHOLOGY

Dutiful Citizens: Predictors of COVID-19 Policy Compliant

Behavior in India

Arathy Puthillam

Department of Psychology, Monk Prayogshala, Mumbai, India

Nikita Mehta

Department of Psychology, Monk Prayogshala, Mumbai, India

Sarah Rezaei

Department of Psychology, Monk Prayogshala, Mumbai, India

Arunima Ticku

Department of Psychology, Monk Prayogshala, Mumbai, India

Hansika Kapoor

Department of Psychology, Monk Prayogshala, Mumbai, India Neag School of Education, University of Connecticut, Storrs, USA

Address correspondence to Nikita Mehta at <u>nm@monkprayogshala.in</u>

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Dutiful Citizens: Predictors of COVID-19 Policy Compliant Behavior in India

Abstract

With the aggravation of COVID-19 pandemic, there is increasing reliance on mitigation strategies such as compliance of COVID-19 behaviors (masking, social distancing, sanitizing, and so on). Political ideology reflects the way people conduct themselves in the social world, affecting their decisions and actions, including those pertaining to health care. Thus, maximizing COVID compliant behaviors mandates an understanding of its sociopolitical context. Study 1 aims to investigate the role of political ideology and collective narcissism in predicting COVID-19 policy support, physical hygiene, and social distancing in India. While political ideology was not associated with COVID-19 compliant behaviors, collective narcissism was found to significantly predict policy support and physical hygiene. However, considering the multi-party system in India, most people (apart from political elites) are not politically sophisticated enough to self-locate on an ideology scale. Thus, study 2 aimed to understand whether district-level partisanship affects mobility during COVID-19 in India. Results indicate that during the first wave of COVID-19 (May-October, 2020), there was a greater change in the amount of time spent at the places of residence in districts based on the partisanship. Further, during the second wave (April-June, 2021), partisanship predicted a higher change in mobility to groceries and pharmacies. Keywords. collective narcissism, political ideology, COVID-19, preventative health behaviors, mobility

Dutiful Citizens: Predictors of COVID-19 Policy Compliant Behavior in India

In response to the various COVID-19 pandemic waves, governments across the world undertook measures like national lockdowns, mobility restrictions, and social distancing to reduce the spread of the virus. As context determines abidance to preventative health behaviors (van Bavel et al., 2020), this manuscript aims to understand whether political ideology and partisanship affect individuals COVID-19 compliant behaviors in India.

In the early days of the spread of the coronavirus, there were widespread beliefs about Indians' superior immunity against the virus. Some claimed that "Indians do not need to worry about the spread of COVID-19 in India as (Indian) bodies have one of the toughest immune systems in the world" (Deb, 2020). Many of these beliefs were even propagated by political elites in unofficial capacities. These claims have now been discredited (Alt News, 2020) but likely influenced people's early behavior towards COVID-19 in India.

Political ideology

Differences in political ideology, representing competing philosophies, elicit different social, cognitive, and motivational tendencies depending on which side of the political spectrum one lies (Jost et al., 2009). The predictive role of partisan ideological commitment on policy support is widely observed and accepted (Hartley et al., 2018; Pliskin et al., 2014). Using an agentbased model, individuals' learning of risks and coping behaviors in groups with majority votes were outperformed by leader-based groups, and those deciding alone (Abdulkareem et al., 2020). Since national political ideology directly impacts mitigation strategies, it is essential that one is exposed to effective leadership when learning about risks.

Past research has associated left political ideological commitment with attitudes of change and equality and right political ideological commitment with attitudes of stability and inequality

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(Jost et al., 2009). Recent research observed that acceptance of policies was stronger when affiliated with perceptions of fairness as opposed to consequences for personal freedom, for people from both sides of the spectrum (Jagers et al., 2017). This is further contextualized by the finding that US conservatives view social inequalities, and liberals view economic equalities as zero-sum (Davidai & Ongis, 2019). This indicates that people from both the sides of the political ideological spectrum have different other-focused motivations, as opposed to consequences of personal freedom.

Collective narcissism

Political ideology can be linked with collective narcissism, i.e., the belief in ingroup superiority that is not recognized by others. Collective narcissism differs from nationalism owing to the inclusion of the belief in the uniqueness of the ingroup and the subsequent entitlement to privileged treatment. Such attitudes have often been targeted by political candidates (Golec de Zavala et al., 2019, 2017). Counterintuitively, collective narcissism undermines social cohesion both within and between groups. Therefore, personal motivations are identified as supreme even amongst those who believe their country, as a whole, deserved better treatment (Cichocka & Cislak, 2020).

Evidence has pointed to a link between national narcissism and partisan orientation, oftentimes extending to policy support (Marchlewska et al., 2017; Golec de Zavala et al., 2017). The aspects of convenience versus inconvenience, and self-versus other-protection have been highlighted in imparting support to health policies. Handwashing was heightened as it is a selfbeneficial, convenient task and social distancing was lowered as it is an other-beneficial, inconvenient task (Sternisko et al., 2020). Furthermore, conservative-orientation and right-wing authoritarianism was highly associated with perception of personal danger as riskier whereas,

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liberal-orientation was highly associated with greater risk perception of shared hazards (Choma et al., 2013).

Collective narcissism was related to lower solidarity with those affected by COVID-19 (Federico et al., 2020). It was also related to hoarding of goods and in non-engagement with prevention behaviors. Collective narcissists perceived greater barriers to COVID-19 related prevention guidelines and greater benefits to not engaging in prevention behavior, higher selfefficacy, and higher perceived severity and susceptibility to COVID-19 (Nowak et al., 2020). Additionally, US liberals were more likely to think that COVID-19 policies are appropriate, regardless of how concerned they are for the economy or public health. Liberals, as opposed to conservatives, displayed greater belief in the appropriateness of government response (van Holm et al., 2020).

Risk perception

Wise et al. (2020) found that, irrespective of political ideologies, the perceived risk of contracting COVID-19 was found to be higher for others as opposed to self. This risk was seen to be temporally affected with risk perception for self and was seen to increase over time. More importantly, the behaviors of washing hands and maintaining social distance were seen to be highly impacted by one's risk perception. Herein, the risk to oneself contracting the virus and the global impact of the same were found to predict prevention behaviors (Wise et al., 2020). Therefore, risk perception is seen to be pivotal in one's response to risks that affect oneself and the people around.

Each persons' unique life experiences have shown to affect their risk perception. Women and non-whites perceived greater risks than men and whites regarding individual health and food; this also extends to behavioral intentions (Finucane et al., 2000). Thus, risk perception is seen to vary in terms of one's social group. Partisan ideological commitment is the basis of one such grouping wherein risk perception varies. Conservatives are largely thought to have a lower risk perception threshold (they have been found to read more threat in facial expressions as opposed to liberals; Vigil, 2010) and are more sensitive to negative affect (Choma et al., 2009). Research indicates that political ideology contributes differently to different kinds of risks. Liberals perceive the dangers of global warming as immediate and grave (Shao et al., 2014), and are more affected by risks that pose greater social impact (Choma et al., 2013), whereas conservatives are more risktaking in matters of finance (Choma et al., 2014).

It is imperative to understand the role political ideology plays in perceiving risks, especially when people often adjust the personal levels of their risk perception to be congruent with the risk perception displayed by their prefered political party (Linde, 2020). Confidence in the political leaders' handling of the virus has also been implicated in lower risk perception (Shao & Hao, 2020). This is of great significance in the context of COVID-19 wherein one's risk perception also has an impact on the people around them. Risk perception has also shown to directly impact health behaviors (Ferrer & Klein, 2015). A recent study found that lower risk perception inspired lesser COVID-19 related preventive behaviors (Niepel et al., 2020). Thus, in two studies, we assess the relationships between political ideology, collective (national) narcissism, risk perception regarding COVID-19, and its impact on policy support and compliance.

Study 1

We hypothesized (see Appendix for more details):

H1: Political ideology and collective narcissism will predict COVID-19 policy endorsement and the relationship will be moderated by risk perception of and exposure to COVID-19. H2: Political ideology and collective narcissism will predict COVID-19 physical hygiene and the relationship will be moderated by risk perception of and exposure to COVID-19. H3: Political ideology and collective narcissism will predict COVID-19 physical contact and the relationship will be moderated by risk perception of and exposure to COVID-19.

2. Methods

Participants and procedure

This study is part of a larger, global study (van Bavel et al., 2022). It was conducted in April and May 2020. The data of 883 Indians from the aforementioned study were used. After deleting data based on non-fulfilment of criteria on consent, spam, bot, and attention (6 and above on a scale from 1 to 10), 818 participants' data were included in the study. However, owing to missing data, the sample differed across various sections of the questionnaire.

After consenting to participate, participants reported their perceived risk of contracting COVID-19, political ideology, collective narcissism, and preventative health behaviors, among other variables (see van Bavel et al, 2022).

Measures

Risk perception (General). Participants were asked about the perceived risk of COVID-19 contraction for themselves and an average person in India on a linear scale (1: *impossible* to 100: *certain*; α = .69; *M* = 89.05, *SD* = 43.09).

Political ideology. Participants were asked to rate their political leaning from 0 (*very left leaning*) to 10 (*very right leaning*; M = 4.69, SD = 2.63).

Collective narcissism. The 3-item scale asked participants whether they think their nation deserves special treatment (Golec de Zavala et al., 2009) on an 11-point Likert scale ranging from 0 (strongly disagree) to 10 (strongly agree; α = .8; *M* = 19.54, *SD* = 6.7).

Preventative Health Behaviors. Participants were asked to rate five questions each (0: *strongly disagree* to 100: *strongly agree*), on policy support (α = 0.82; M = 46.91, SD = 5.66),

physical hygiene (α = 0.77; M = 41.41, SD = 8.14), and social distancing (α = 0.65; M = 39.89, SD = 8.35).

3. Results

Analysis was computed using RStudio software version 1.4.1717 (RStudio team, 2021). Only 15 participants had themselves been diagnosed with COVID-19, and 63 knew an acquaintance diagnosed with it; thus, separate analysis between these groups was not computed. Descriptive statistics and zero-order correlations are reported in Table 1. Refer to supplementary materials for detailed results.

Political orientation

Political orientation did not predict policy support (H1; b = -.14, SE = .16, $R^2 = -.01$, p = .36; Figure 1), physical hygiene (H2; b = .14, SE = .22, $R^2 = .00$, p = .51; Figure 2), or social distancing (H3; b = -.24, SE = .20, $R^2 = .02$, p = .224; Figure 3). Additionally, risk perception and exposure to COVID-19 were not predictive of policy support, physical hygiene, or social distancing. Thus, its moderating role in the relationship between political orientation and policy support, physical hygiene, and social distancing was not assessed.

Collective Narcissism

Collective narcissism predicted policy support (H1; b = .12, SE = .05, R^2 = .09, p = .016; Figure 4) and physical hygiene (H2; b = .14, SE = .07, R^2 = .02, p = .044; Figure 5), but did not predict social distancing (H3; b = -.03, SE = .06, R^2 = .01, p = .661; Figure 6).

Collective narcissism did not predict risk perception and exposure to COVID-19. Further, exposure and risk perception did not moderate the relationships between collective narcissism and policy support (b = .00, SE = .00, $R^2 = .02$, p = .32) or physical hygiene (b = .04, SE = .01, $R^2 = .05$, p = .50). Risk perception (b = .03, SE = .03, $R^2 = 0.01$, p = .24) and exposure to COVID-19 (b = -4.38, SE = 5.02, R^2 = .00, p = .38) were not predictive with social distancing thus, their moderating role in the relationship between collective narcissism and social distancing was not examined. **Discussion**

Impact of political ideology on COVID-19 behaviors in India

Political ideology exercises significant control on policy support and may play an even more important role than beliefs about specific policies (Collins et al., 2021). For example, in the context of COVID-19 in the USA, liberals have been found to show greater concern for COVID-19 regulations but also, a lower decrease in outings as opposed to conservatives (van Holm et al., 2020). Conservative states show delayed implementation of staying indoors and an actual rise in infected cases (Rosenfeld, 2020).

In the present research, political ideology did not predict COVID-19 compliant behaviors in India. This is a surprising result given the general entrenchment of political ideology in the sense of self (McCormick, 1979). This could be supported by recent research indicating that people from both sides of the political spectrum have different other-motivations as aforementioned (Davidai & Ongis, 2019). Additionally, this would mean that both sides are united in stopping the spread of the COVID-19 virus, with different reasons to do so.

Impact of collective narcissism on COVID-19 behaviors in India

Endorsers of collective narcissism, in their hypervigilance to a sense of threat to one's group from other groups, may overlook real threat. On the other hand, nationalism is linked with intergroup identification, and has been used to increase policy cooperation, such as tax compliance policies (Gangl et al., 2016). Preliminary evidence suggests that national narcissism is associated with differing degrees of specific COVID-19-related health behaviors of handwashing, social distancing, and policy support (Sternisko et al., 2020). In the Indian context, the present study finds that higher national/collective narcissism is linked with supporting COVID-19 policies

and maintaining physical hygiene, but not maintaining distance with others. Thus, even within the context of misinformation about one's heightened immunity, Indians were likely to abide by government-led initiatives instead of flouting them. This is contrasted by findings in different countries, which linked collective narcissism with decreased compliance to COVID-19 behaviors (Federico et al., 2020), or supporting 'dark' acts such as under-reporting of cases and releasing untested vaccines (Gronfeldt et al., 2021). Instead, among Indians, collective narcissism is also corroborated with adhering to expert-recommended COVID-19 behaviors.

Further, collective narcissism benefits oneself more than other ingroup members (Cai & Gries, 2013; Cichocka & Cislak, 2020). Specifically, self-centric behaviors such as policy support and maintaining physical hygiene were reported to be higher among individuals. Although policy support and physical hygiene were predicted by collective narcissism, maintaining physical distance was not. Sternisko et al. (2020) also observed that during COVID-19, autonomy concerns are highlighted, wherein people engaging in hand-washing were likely to do so out of convenience and self-protection. On the other hand, social distancing and public policy support were likely to be flouted due to inconvenience and the central nature of community protection.

Though the present study is based in an understudied context and sheds light on important catalysts of COVID-19 compliant behaviors, it has certain limitations. First, the generalizability of the findings is hampered owing to it being conducted online. However, given that the pandemic was in its full force at the time of data collection, this was a necessary step. Second, political ideology is assessed using one self-report item. This may have led to misreporting of one's political ideology.

Study 2

4. Introduction

Study 1 found that though political ideology was not associated with COVID-19 compliant behaviors, collective narcissism significantly predicted policy support and physical hygiene. However, considering the multi-party system in India, most people (apart from political elites) are not politically sophisticated enough to self-locate on an ideology scale. Thus, using secondary data Study 2 aimed to partially conceptually replicate Study 1 by examining whether partisanship affects mobility during COVID-19 in India using partisanship and mobility at the constituency level.

Partisanship and compliance during COVID-19

Partisan affiliation is a reflection of an individual's deeply held values and social groupings (Mason & Wronski, 2018). People's decisions and actions (Margolis & Sances, 2017), even those pertaining to health care (Baum, 2011; Sances & Clinton, 2021) are all influenced by their political standing.

Partisan differences in response to stay-at-home orders given at the state level during COVID-19 have been observed (Cornelson & Miloucheva, 2020; Grossman et al., 2020; Painter & Qiu, 2020) in risk perception and social distancing behaviors across political parties (Fan et al., 2020). Republican and Democratic areas differed in how frequently they googled COVID-19 related queries and their mobility patterns (Barrios & Hochberg, 2020). Republicans were 27.8% more likely to be socially mobile (Painter & Qiu, 2021) and less likely to adhere to nonpharmaceutical interventions and perceive the pandemic as a risk (Hsiechen et al., 2020).

Partisanship was seen as an important factor in explaining mobility than actual local incidences of COVID-19 (Clinton et al., 2021). It was demonstrated that counties that supported Donald Trump (Republican candidate) in the 2016 US Presidential elections practiced less social

distance compared to those who supported Hillary Clinton (Democratic candidate; Allcott et al., 2020).

The effect of social categorization (Turner, 1975) might be one of the reasons why partisans prefer their own party members over others. Furthermore, online media creates an echo chamber for people to share their opinions and information that conforms to the group they belong to and also reinforces their held beliefs (Jamieson & Capella, 2008), potentially contributing to exacerbating political polarization (Prior, 2013; Guess et al., 2021). Hence, social categorization and media exposure lend themselves as a cornerstone to understanding partisan preferences and the likelihood of people showing support for their party members and policies.

Gender and perceptions about candidate's competence

For decades, men have predominantly assumed leadership roles in different areas of society. Although women are slowly gaining access to elite positions, holding top positions for them is still rare. Sapiro (1981) found that female candidates are considered competent in handling issues related to education and health, and those related to nurturance and compassion (like, help for the poor and the aged), whereas male candidates are considered competent in areas of farming, military, finance, international affairs, crime, and national security (Huddy & Terkildsen, 1993; Sanbonmatsu, 2002; Dolan, 2014; Holman et al., 2016).

Bias against women might play a role in why women candidates are perceived negatively, especially in higher positions. Women are seen to possess less agency and for a woman to be a leader is inconsistent with many people's beliefs about what is considered as "desirable" behavior (Eagly & Karau, 2002). Voters are more likely to become conservative in times of perceived threat that can potentially lead to doubts about women's competence in "nontraditional roles" such as, a leader (Bonanno, 2006). With respect to somewhat personally invasive recommendations (e.g., contact tracing) compliance only slightly increased when the recommendations were made by an in-partisan female leader but, there was a greater willingness if made by an in-partisan male leader (Bauer et al., 2020). Evidence also shows that voters exhibit gender-motivated biases toward female leaders when they belong to an opposing party (Bauer, 2017; Ditonto, 2017; Krupnikov and Bauer, 2014). Indian political scenario and COVID-19

Indian politics is largely dominated by a person's religious affiliation, which is becoming central to one's social identity (Brass, 2005). Religious beliefs are often instrumentalized by political parties that advocate for the cause of a particular religious group and prioritize their interests (Chatterji et al., 2019). Hence, it is likely that partisanship and one's religious identity influence each other (Heath et al., 2015; Chhibber & Verma, 2019). Moreover, religious-nationalist partisanship correlated significantly with the likelihood of believing COVID-19 misinformation in India. Additionally, partisans who were strong supporters of the BJP (Bharatiya Janata Party) were able to identify fewer stories highlighting misinformation about the pandemic (Bardianathan & Chauchard, 2021).

Research showed a considerable decrease in mobility following India's national lockdown; however, this was not uniform across states (Kumar et al., 2020). Before the nationwide lockdown imposed by the Central government, state-level policies on citizens' mobility were in place, albeit, heterogeneous with several states failing to reduce mobility. It was seen that states showing higher compliance with social distancing policies before the national lockdown did better during the same (Kumar et al., 2020). This study points to the fact that although centralized policies in unprecedented times are necessary, the effectiveness of those policies largely depends on the individual capacity of the states. Given the magnitude of influence that partisanship and gender stereotypes exercise on the perceptions and decisions of the people, it is imperative to investigate just how it plays a role in compliance with preventive health measures to minimize risks, especially in a pluralistic and multiparty society like India.

This study poses the following research questions:

RQ1: Does district-level partisanship in India affect mobility during COVID-19? RQ2: Does the gender of the district-level representative play a role in the relationship between district-level partisanship and mobility during COVID-19?

5. Methods

Variables and Data Sources

Publicly available secondary data sets were used in the current study.

Partisanship. Partisanship was measured in terms of the partisanship of the Lok Sabha member for a given constituency in India. Specifically, members of the Lok Sabha (the "lower" house of India's bicameral parliament) are elected directly. We utilized the dataset representing the 17th General Assembly Elections (2019) from the Lok Dhaba repository (Agrawal et al., 2021). For the current study, party affiliation was re-coded into 'BJP' (a right-wing party in India) and other parties as 'non-BJP.'

Mobility. The study uses the COVID-19 Community Mobility Reports (CMR; 2020 & 2021; Google, 2020) for all regions in India. This publicly available dataset indicates the movement trends by region across different categories of places like grocery and pharmacy (essential), retail and recreation, parks, transit stations, workplace (non-essential), and residential. The residential category was measured as the change in duration (hours) spent in places of residence and the other categories were measured as a change in the total number of visitors.

The data from mobility reports shows the changes in visits and length of stay at different places compared to a baseline calculated between 3rd January to 6th February, 2020 (prior to the national lockdown announced in India on 25th March 2020). The data for mobility reports was created using aggregated, anonymized sets of data from users who had turned on their location history setting.

Data Cleaning

The elections data were filtered for including only the candidates that won the general election in 2019 in each constituency. The CMR included daily movement trends that were averaged into monthly mobility trends for each sub-region/district. After merging only the overlapping regions between the two data files, the final dataset included a total of 3553 data points for the year 2020 (February-December) and 2584 data points for the year 2021 (January-August).

6. Results

Analysis was conducted using RStudio software version 1.4.1717 (RStudio team, 2021). Considering the vast amounts of data, the monthly data from CMR were filtered into 3-month intervals for each district. Categorical variables were dummy coded for the analysis: political party (BJP = 0, non-BJP = 1), incumbency (True = 1, False = 0), and reported gender (Male = 1, Female = 0) and caste (General = 1, Scheduled = 0) of the candidate. Descriptive statistics along with zeroorder correlations are reported in Table 2 and Table 3 (for disaggregated results refer to supplementary materials).

Partisanship and mobility

Table 4 presents findings of the impact of partisanship on mobility (RQ1). There was a lesser percentage change in mobility to retail and recreation activities as well as parks during May to October, 2020 in districts having a non-BJP representative. During that time a higher

percentage change in the amount of time spent at the places of residence in districts with a non-BJP representative was observed. Additionally, during November and December (2020), there was a lower percentage change in mobility to retail and recreation, and a higher percentage change in mobility to workplaces in non-BJP represented districts.

The beginning of 2021 showed a greater percentage change in mobility to retail and recreational centers, along with grocery and pharmacies in non-BJP districts. Furthermore, there was a lower percentage change in the time spent in residential areas. During the peak of the second wave (April-June, 2021), there was a greater percentage change in terms of mobility in districts with a non-BJP representative to groceries and pharmacies, and workplaces. Following that, in July and August (2021) as well, there was a higher percentage change in mobility to grocery and pharmacy stores in non-BJP as compared to BJP districts.

Gender of the candidate and mobility

Furthermore, gender of the political representative in districts played a role in mobility to essential and non-essential places (refer to Supplementary material). A significant percentage change in mobility to retail and recreation activities (August-December, 2020), grocery and pharmacy stores (November, 2020- March 2021; July and August 2021), parks (August-October, 2020; April-August, 2021), and workplaces (July and August 2021) was observed when the district representative was male as compared to female. Amount of time spent in residential areas during May-October, 2020 and April-August, 2021 also differed based on the gender of the representative.

Partisanship, gender of the representative, and mobility

Table 5 presents findings of the impact of partisanship along with gender of the representative on mobility in a district (RQ2). From May to July (2020), there was a lesser percentage change in mobility to parks among BJP (M = -34.85) partisans when the representative

was a female (b = 17.58, t = 2.12, p = 0.03). Furthermore, there was a lesser percentage change in mobility to parks during August-October, 2020 for a male (M = -37.02) candidate when they belonged to BJP (b = -7.78, t = -2.01, p = 0.04).

A difference in mobility at transit stations was observed between BJP and non-BJP partisans when the representative was female (August-October, 2020: b = -7.21, t = -2.19, p = 0.03; November-December, 2020: b = -8.90, t = -2.04, p = 0.04) and between male and female candidates when the representative belonged to BJP (May-July, 2020: b = -5,11, t = -2.39, p = 0.02; August-October, 2020: b = -5.55, t = -2.65, p = 0.008; November-December, 2020: b = -5.87, t = -2.12, p = 0.03). From May to October 2020 and January-March, 2021, mobility to transit stations saw a greater percentage change in the number of visitors with an additional difference between BJP and non-BJP when the representative was male.

Mobility to groceries and pharmacies saw an additional difference between BJP vs non-BJP governed districts during April-August, 2021 when the candidate was male. Finally, mobility to workplaces (b = -3.01, t = -2.07, p = 0.04) and number of hours spent in one's residence (b = 1.46, t= -2.51, p = 0.01) were significantly different between male and female candidates belonging to BJP districts during July and August, 2021.

Exploratory analysis was conducted to understand whether partisanship, gender, incumbency, caste, and vote share predicted mobility. Additionally, we explored whether districtwise aggregated number of confirmed COVID-19 cases (using COVID19-India API data, 2020) and partisanship predicted mobility in India. (See supplementary materials). **Discussion**

Impact of district-level partisanship on mobility

A clear political divide to the COVID-19 pandemic was seen in a US study where Republicans were less likely to respond and comply with CDC-recommended behaviors than Democrats early on (Gadarian et al., 2021). Our results present a similar picture showing that in 2020, mobility to essential and nonessential places were influenced by the party representation in the district. In 2020, compared to BJP governed districts, non-BJP governed districts showed lower change in non-essential mobility towards areas of retail and recreation and a greater change in time spent at place of residence. However, neither BJP nor non-BJP districts witnessed a significant change in essential mobility, especially during the first wave. The uncertainty during the first year of the pandemic had the public scrambling and stocking up on supplies ("Indians scramble for supplies," 2020), which could have led them to visit grocery shops and pharmacies more.

The COVID-19 trajectory in India witnessed a drastic change starting from mid-June 2020, where mobility restrictions were eased and shopping centers, places of worship, hotels, and restaurants reopened. This resulted in an alarming increase in infections in various states (Choutagunta et al., 2021). Non-BJP governed districts saw a lesser change in non-essential mobility for the purpose of retail and recreation during those months which could have contributed to the rising number of cases.

Mobility to groceries and pharmacies saw a greater change in non-BJP governed states in 2021 especially, when caseloads in the country were the highest. During the second wave, the states of Maharashtra, Kerala, Karnataka, Andhra Pradesh, Tamil Nadu, Delhi, Uttar Pradesh, and West Bengal had the highest caseloads (Kar et al., 2021). Of these, six are governed by non-BJP parties. The increasing rate of infections in these states would have contributed to the increase in mobility to essential areas like the pharmacies and groceries, possibly to stock on supplies in the prospect that a nationwide lockdown is imposed. Less change in mobility to transit stations was seen in non-BJP governed states during July and August 2021. This might be because of the ease in the restrictions imposed by the government after the second wave.

Impact of gender of the candidate and partisanship on mobility

The results also demonstrate how the candidate's gender impacts mobility in the district. Districts where a male representative was present, non-essential mobility to areas of retail and recreation, and parks saw a lesser change between the months of August and December 2020, which is when the first wave peaked and had started to decline in the country. The decline in caseloads allowed for the easing of restrictions and the reopening of stores, recreational areas, and transit stations. It is possible that citizens have gender-motivated biases when it comes to compliance with policies.

Prior research has shown how people generally prefer strong and aggressive leaders in times of crisis (Gadarian, 2010). The competence of women leaders is often doubted because for a woman to hold a position of a leader is "non-traditional" (Bonanno, 2006), which often leads to people perceiving the competence of women representatives negatively because women are not "typically" associated with leadership roles (Eagly & Karau, 2002).

The findings also show significant interactions between partisanship and the gender of the political leader in a district in terms of mobility to parks (May-October, 2020), transit stations (May, 2020- March 2021), groceries and pharmacies (April-August, 2021), workplaces (July and August 2021). There is a possibility that either gender or partisanship had a greater influence on the public's mobility. Studies show that partisans actively dislike other party's members (Webster & Abramowitz, 2017) and we see this dislike being present even more so if the other party member is female (Bauer, 2017; Ditonto, 2017; Krupnikov & Bauer, 2014), which could contribute to the resistance in complying with policies recommended by them.

Furthermore, it was noted that during the first (March-June) and the second wave (April-June), there were no significant differences in mobility (both essential and non-essential) depending on whether the political representative of a district was a man or a woman. Another study suggested that individuals demonstrated a similar extent in policy compliance when the recommendations were made by a female or a male governor during the pandemic (Bauer et al., 2020).

Because mobility was assessed using Google CMR, which only reflects the movement of users who possess GPS-enabled smartphones, a complete estimate of the public's mobility in the country was not possible. For instance, mobility for rural areas where not many use mobile phones or people within urban areas who do not own these smartphones could not be gauged.

7. General discussion

The first study highlights various connections to COVID-19 compliant behaviors that were unexpected. For instance, in India, policies or communication catering to COVID-19 compliant behaviors can leverage collective narcissism. This would mean focusing on the moral underpinnings of public health behaviors, pointing out national interest in adhering to such behaviors, and promoting social belongingness without physically meeting others. Study 2 on the other hand, points to the possible link between partisanship and mobility in compliance with socialdistancing restrictions. It also provides insights on how gender of the district representative might influence responses by the public but, not in all cases.

The timing of Study 1 (April and May, 2020) might be one of the reasons for differences in findings between the two studies. The nation-wide lockdown with stringent guidelines and apprehensions about the virus during the first wave may have affected people's compliance, irrespective of their political ideology.

The two studies highlight individuals' behavior with respect to policy compliance during national emergencies. Further investigations could build on and confirm these findings to formulate newer policies to mitigate against the effects of future catastrophes.

Data Accessibility Statement

Data, analytic methods, and study materials for both the studies will be made available at the OSF repository. [Study 1: https://osf.io/mj7ce/?view_only=eaa31fdfa7cd4deab6c3e80f96b0ddf8 and https://static-content.springer.com/esm/art%3A10.1038%2Fs41467-021-27668-9/MediaObjects/41467_2021_27668_MOESM1_ESM.pdf, Study 2: https://osf.io/snaud/?view_only=11f8ac592274485aa8e71e662a44ea6a] Study 1 was pre-registered at the OSF registry. [https://osf.io/wyc6t/?view_only=3078bb40fde640c6bccea86afd764408] Study 2 was registered along with the analysis plan prior to conducting the data analysis at the

OSF registry. [https://osf.io/b4jn2/?view_only=6d4079ac15ab4b4db5a20e41706647d2]

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PREDICTORS OF COVID-19 COMPLIANT BEHAVIOR

Table 1

Sample descriptives and Zero-order correlations

Variables	n	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Age	607	33.28	11.81										
2. Sex	610	0.43	0.51	-0.07									
3. Number of children	514	0.68	0.84	0.74***	-0.05								
4. Ladder	600	5.22	2.02	0.01	0.09*	-0.10*							
5. Income	212	5.89	1.72	0.16*	0.03	0.06	0.04						
6. Social distancing	684	41.27	8.59	0.00	0.15***	-0.19***	0.33***	0.20***					
7. Physical hygiene	677	41.41	8.14	0.11**	-0.02	0.10*	0.28***	-0.05	0.28***				
8. Policy support	677	49.61	5.66	0.03	-0.05	0.04	0.00	0.01	0.17***	0.30***			
9. Political ideology	644	4.69	2.63	0.04	-0.06	0.06	0.15***	-0.13	0.10*	0.16***	-0.01		
10. Collective narcissism	663	19.54	6.7	0.11**	-0.06	0.10*	0.04	-0.23***	0.17***	0.22***	0.19***	0.27***	
11. Risk perception (of wearing a mask)	653	89.05	43.09	0.05	0.02	0.10*	0.03	0.06	-0.15***	0.21***	0.07	0.02	-0.12***
12. Urban	606	1.22	0.43										

PREDICTORS OF COVID-19 COMPLIANT BEHAVIOR

Note. * p < .05, ** p < .01, *** p < .001

Table 2

Descriptive statistics and correlation matrix for 2020

Variable	М	SD	1	2	3	4	5	6	7	8	9
1. Party	0.37	0.48									
2. Incumbency	0.42	0.49	21**								
3. Sex	0.88	0.33	0.02	-0.01							
4. Vote share	53.12	7.89	40**	.17**	05**						
5. Retail & recreation	-35.37	24.62	04**	0	-0.03	0.01					
6. Grocery & pharmacy	7.68	30.2	-0.01	-0.02	0.03	0	.40**				
7. Parks	-24.8	35.83	.11**	13**	06**	17**	.40**	.20**			
8. Transit stations	-26.08	23.6	0	04*	-0.03	.04*	.80**	.47**	.41**		
9. Workplace	-15.92	15.61	0.02	05**	-0.02	08**	.72**	.59**	.45**	.73**	
10. Residential	12.14	7.5	.09**	0	.06**	0.01	80**	44**	39**	70**	78**

Note. * p < .05. ** p < .01.

Table 3

Descriptive statistics and correlation matrix for 2021

Variable	М	SD	1	2	3	4	5	6	7	8	9
1. Party	0.37	0.48									
2. Incumbency	0.42	0.49	21**								
3. Sex	0.88	0.33	0.02	-0.01							
4. Vote share	53.12	7.89	40**	.17**	05*						
5. Retail & recreation	-21.23	18.54	0.02	-0.01	-0.02	-0.04					
6. Grocery & pharmacy	24.72	31.52	.09**	05*	.07**	04*	.65**				
7. Parks	-5.45	29.25	0.02	11**	07**	14**	.53**	.45**			
8. Transit stations	-13.23	22.15	-0.02	-0.04	-0.02	.07**	.73**	.55**	.40**		
9. Workplace	-16.45	14.53	.04*	-0.03	-0.02	-0.02	.84**	.57**	.47**	.71**	
10. Residential	13.98	6.73	0	0.01	.04*	0	71**	44**	25**	61**	71**

Note. * p < .05. ** p < .01.

Table 4

Simple regression analysis for the impact of partisanship on mobility

		202	0		2021					
Place	Month (in numbers)	b- NonBJP	t	R ²	Month (in numbers)	b- NonBJP	t	R ²		
Retail and recreation	2, 3, 4	-1.03	-0.49	0.0002	1, 2, 3	2.28	3.74*	0.0143		
	5, 6, 7	-2.29	-2.76*	0.0078	4, 5, 6	0.63	0.47	0.0002		
	8, 9, 10	-3.75	-3.86*	0.015	7, 8	-0.71	-0.67	0.0007		
	11, 12	-1.99	-2.01*	0.006						
Grocery and	2, 3, 4	0.89	0.68	0.0005	1, 2, 3	4.38	2.79*	0.0081		
pharmacy	5, 6, 7	-1.65	-0.74	0.0005	4, 5, 6	6.47	2.95*	0.0089		
	8, 9, 10	-1.22	-0.77	0.0006	7, 8	7.83	3.14*	0.0154		
	11, 12	-0.69	-0.36	0.0002						
Parks	2, 3, 4	3.68	1.99	0.0041	1, 2, 3	1.24	0.76	0.0006		
	5, 6, 7	16.33	5.69*	0.0326	4, 5, 6	1.89	0.93	0.00089		

	8, 9, 10	8.43	4.03*	0.0165	7, 8	0.32	0.13	2.76E-05
	11, 12	3.54	1.39	0.0029				
Transit	2, 3, 4	0.38	0.20	4.01E-05	1, 2, 3	0.64	0.61	0.00038
stations	5, 6, 7	0.89	0.76	0.0006	4, 5, 6	-1.02	-0.71	0.00052
	8, 9, 10	-0.96	-0.84	0.0007	7, 8	-3.72	-2.41*	0.00896
	11, 12	-1.62	-1.06	0.0018				
Workplace	2, 3, 4	0.95	0.66	0.0005	1, 2, 3	0.83	1.76	0.0032
	5, 6, 7	0.45	0.50	0.0003	4, 5, 6	2.24	2.49*	0.00636
	8, 9, 10	0.13	0.17	2.86E-05	7, 8	0.45	0.56	0.00048
	11, 12	1.67	2.41*	0.0090				
Residential	2, 3, 4	1.00	1.34	0.0019	1, 2, 3	-0.44	-2.01*	0.00416
	5, 6, 7	2.01	4.84*	2.37E-02	4, 5, 6	0.17	0.35	0.00012
	8, 9, 10	1.62	5.32*	0.0285	7, 8	0.58	1.81	0.005
	11, 12	0.42	1.61	0.004				

37

Table 5

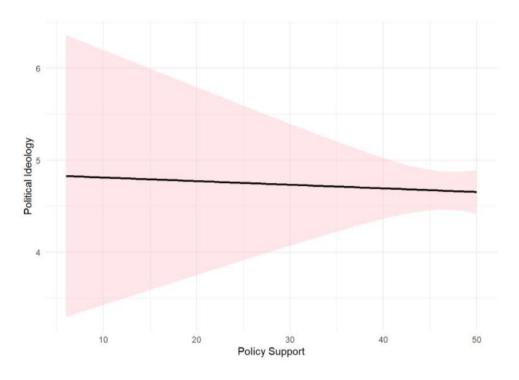
Contrast regression analysis

		2020				2021		
Place	Month (in numbers)	b- Non-BJP: Male	t	R ²	Month (in numbers)	b- Non-BJP: Male	t	R ²
Retail and	2, 3, 4	-0.07	-0.01	0.0007	1, 2, 3	1.44	0.77	0.016
recreation	5, 6, 7	0.20	0.08	0.008	4, 5, 6	0.26	0.06	0.001
	8, 9, 10	-1.63	-0.55	0.0195	7, 8	1.53	0.47	0.003
	11, 12	-2.79	-0.93	0.0156				
Grocery and	2, 3, 4	0.14	0.03	0.0006	1, 2, 3	9.54	1.96	0.0258
pharmacy	5, 6, 7	8.34	1.21	0.003	4, 5, 6	13.50	1.99*	0.014
	8, 9, 10	6.30	1.28	0.003	7, 8	19.36	2.51*	0.036
	11, 12	5.61	0.93	0.008				
Parks	2, 3, 4	-1.69	-0.30	0.006	1, 2, 3	-1.45	-0.29	0.004

	5, 6, 7	-1.36	-0.15	0.0358	4, 5, 6	-10.77	-1.71	0.009
	8, 9, 10	-1.13	-0.18	0.0237	7, 8	-4.36	-0.60	1.00E-02
	11, 12	-6.94	-0.88	0.009				
Transit	2, 3, 4	1.02	0.17	0.0002	1, 2, 3	7.36	2.28*	6.00E-03
stations	5, 6, 7	8.07	2.24*	0.0076	4, 5, 6	4.04	0.92	0.003
	8, 9, 10	7.15	2.03*	0.008	7, 8	4.31	0.91	0.012
	11, 12	8.33	1.79	0.009				
Workplace	2, 3, 4	-1.93	0.44	0.0006	1, 2, 3	0.22	0.15	3.00E-03
	5, 6, 7	-1.00	-0.36	0.001	4, 5, 6	0.04	0.02	0.007
	8, 9, 10	-1.44	-0.60	0.003	7, 8	1.50	0.61	0.008
	11, 12	-1.65	-0.78	0.0099				
Residential	2, 3, 4	0.92	0.40	0.003	1, 2, 3	-0.94	-1.42	6.00E-03
	5, 6, 7	1.96	1.55	0.036	4, 5, 6	-0.77	-0.53	0.005
	8, 9, 10	1.09	1.17	0.24	7, 8	-0.85	-0.87	0.0157
	11, 12	0.01	0.02	0.0095				

Note. * p < .05.

Figure 1



Regression plot between political ideology and policy support

Figure 2

Regression plot between political ideology and physical hygiene

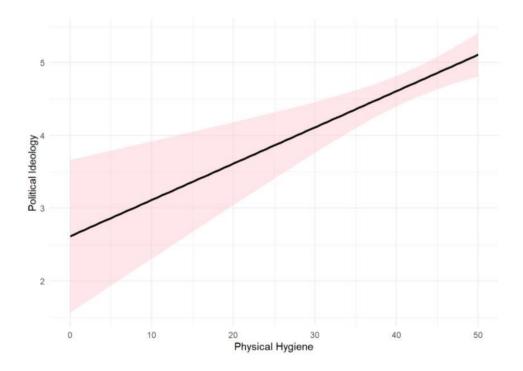
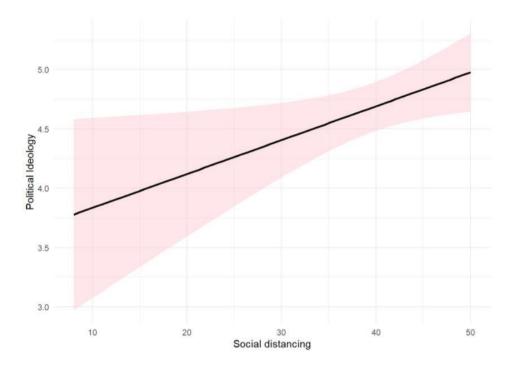


Figure 3



Regression plot between political ideology and social distancing

Figure 4

Regression plot between collective narcissism and policy support

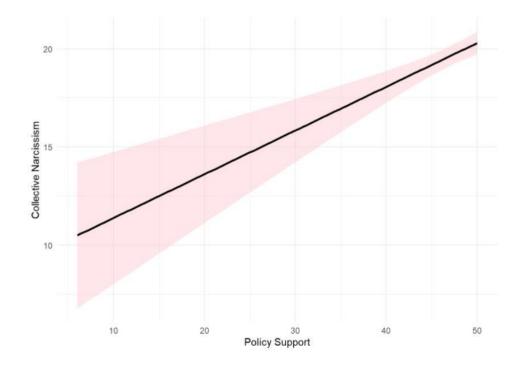
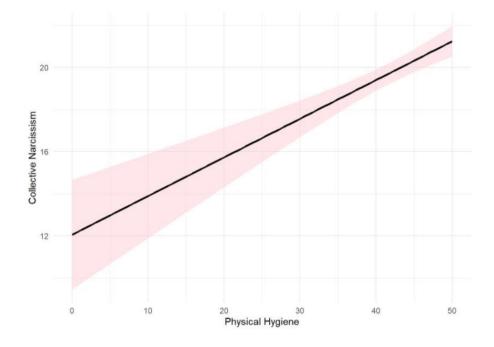


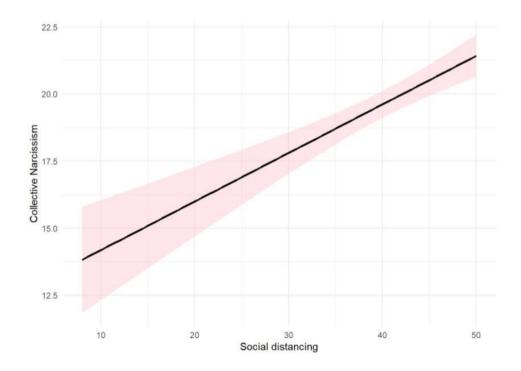
Figure 5



Regression plot between collective narcissism and physical hygiene

Figure 6

Regression plot between collective narcissism and social distancing



Monthly mean percentage change in mobility to retail and recreation activities based on partisanship

in 2020

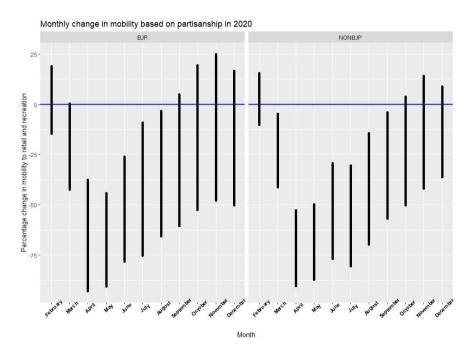
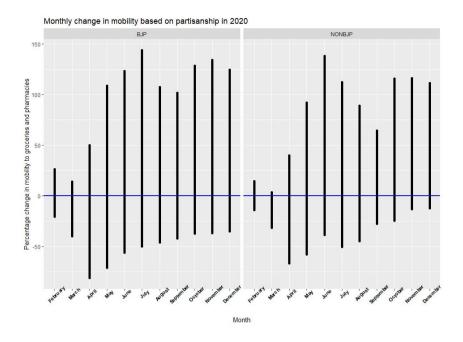


Figure S2

Monthly mean percentage change in mobility to groceries and pharmacies based on partisanship in

2020



Monthly mean percentage change in mobility to parks based on partisanship in 2020

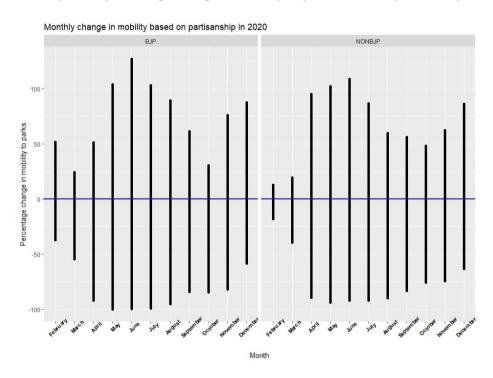
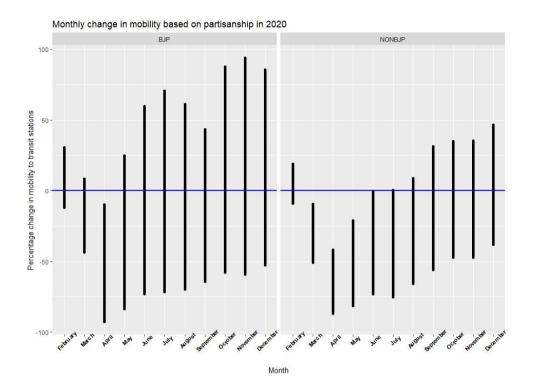
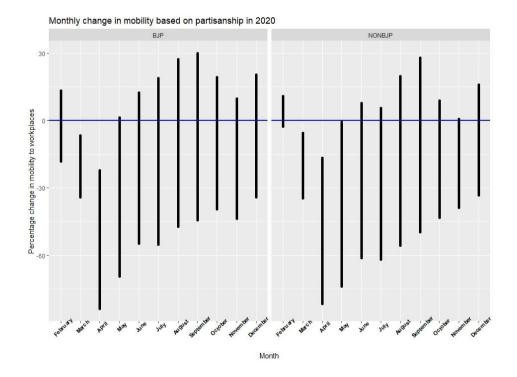


Figure S4

Monthly mean percentage change in mobility to transit stations based on partisanship in 2020

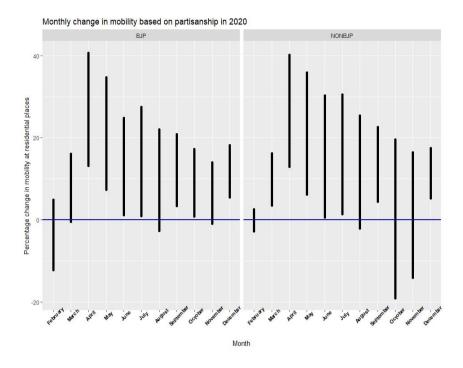


Monthly mean percentage change in mobility to workplaces based on partisanship in 2020





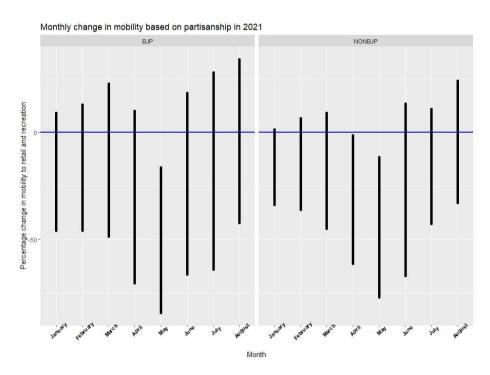
Monthly mean percentage change in mobility at residential areas based on partisanship in 2020





Monthly mean percentage change in mobility to retail and recreation activities based on partisanship







Monthly mean percentage change in mobility to groceries and pharmacies based on partisanship in



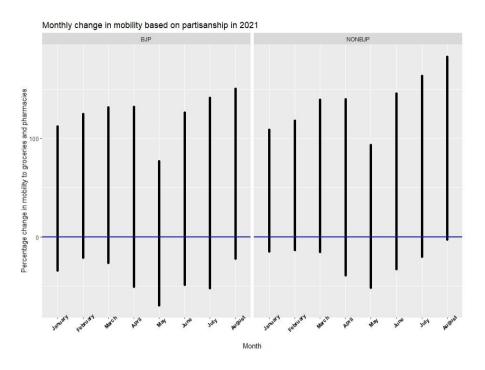
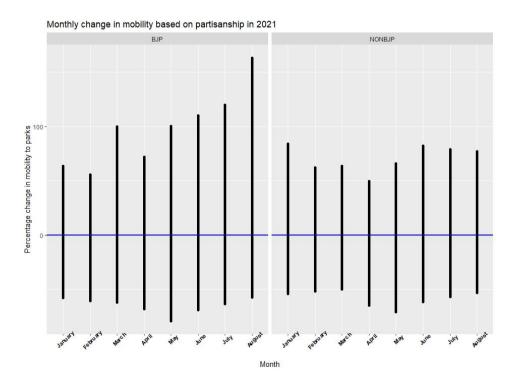


Figure S9

Monthly mean percentage change in mobility to parks based on partisanship in 2021



Monthly mean percentage change in mobility to transit stations based on partisanship in 2021

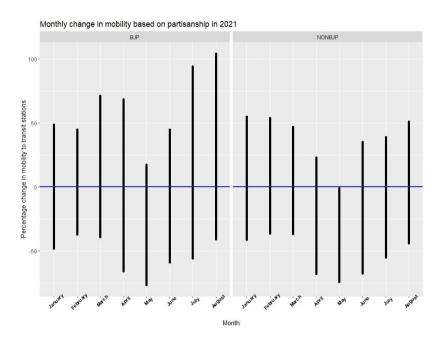
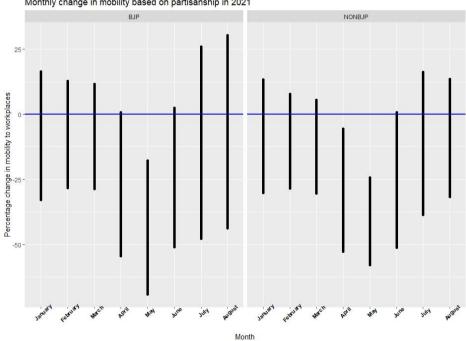


Figure S11

Monthly mean percentage change in mobility to workplaces based on partisanship in 2021



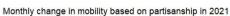
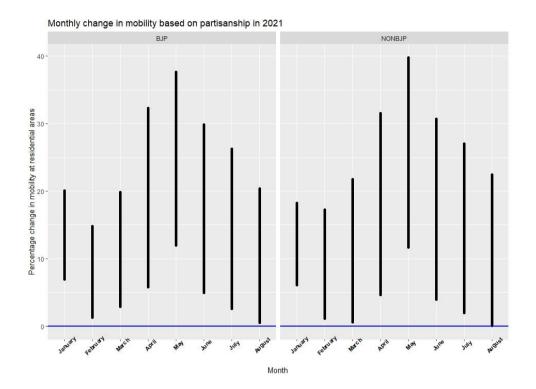


Figure S12

Monthly mean percentage change in mobility at residential areas based on partisanship in 2021



Supplementary material: Study 1

1

Table S1

Hierarchical testing the impact of Political Ideology and Collective Narcissism on COVID-19 compliant behaviors

	COVID-19 policy support		Physical I	nygiene	Social distancing		
	Ь	SE	Ь	SE	Ь	SE	
1. Intercept	47.98***	2.01	37.69***	2.82	40.36***	2.57	
2. Age	-0.00	0.07	0.00	0.10	0.13	0.09	
3. Sex	-0.17	0.72	0.92	1.02	1.53	0.93	
4. Ladder	-0.28	0.19	0.18	0.27	-0.10	0.25	
5. Qualification	0.60	0.64	1.07	0.90	0.36	0.82	
6. Relationship status	0.87	0.68	-1.46	0.95	0.64	0.86	
7. Number of children	-1.30	.10	2.29	1.40	-0.79	1.27	
Model 1 ΔR^2	-0.0	-0.005		03	0.013		

Political Ideology

-0.14	0.16	0.14	0.22	-0.24	0.20
-0.006		0.000		0.016	
0.849		1		1.498	
0.12*	0.05	0.14*	0.07	-0.03	0.06
0.018		0.018		0.010	
0.146		1.540		1.304	
	-0.0 0.8 0.12* 0.0	-0.006 0.849 0.12* 0.05 0.018	-0.006 0.0 0.849 1 0.12* 0.05 0.14* 0.018 0.0	-0.006 0.000 0.849 1 0.12* 0.05 0.14* 0.07 0.018 0.018	-0.006 0.000 0.0 0.849 1 1.4 0.12* 0.05 0.14* 0.07 -0.03 0.018 0.018 0.0

Note: b = standardized coefficient; ΔR^2 = Change in R^2 * p \leq .05, ** p \leq .01, *** p \leq .001

2

Table S2Hierarchical testing the impact of Collective Narcissism on COVID-19 compliant behaviors

	COVID-1 supp		Physical I	nygiene	Social distancing		
	b	SE	b	SE	b	SE	
1. Intercept	47.98***	2.01	37.69***	2.82	40.36***	2.57	
2. Age	-0.00	0.07	0.00	0.10	0.13	0.09	
3. Sex	-0.17	0.72	0.92	1.02	1.53	0.93	
4. Ladder	-0.28	0.19	0.18	0.27	-0.10	0.25	
5. Qualification	0.60	0.64	1.07	0.90	0.36	0.82	
6. Relationship status	0.87	0.68	-1.46	0.95	0.64	0.86	
7. Number of children	-1.30	0.10	2.29	1.40	-0.79	1.27	
Model 1 ΔR^2	-0.005		0.00	0.002		0.014	
8. Collective narcissism	0.12*	0.05	0.14*	0.07	-0.03	0.06	

Model 2 ΔR^2	0.018	0.018	0.010
F	0.146	1.540	1.304

Note: b = standardized coefficient; ΔR^2 = Change in R^2 * p \leq .05, ** p \leq .01, *** p \leq .001

Table S3

Risk perception (of wearing a mask) and Exposure to COVID-19 as moderators in the association between Collective Narcissism and Policy support and Physical Hygiene

4

	COVID-1 supp	. ,	Physical I	nygiene
	b	SE	b	SE
1. Intercept	51.15***	8.30	41.87***	11.76
2. Age	-0.00	0.07	0.01	0.10
3. Sex	-0.04	0.72	1.15	1.02
4. Ladder	-0.30	0.19	0.17	0.27

5. Qualification	-0.07	0.64	0.94	0.90
6. Relationship status	0.96	0.67	-1.36	0.95
7. Number of children	-1.49	0.10	2.10	1.41
8. Exposure to COVID-19	-2.47	3.85	-3.25	5.46
9. Collective narcissism	0.03	0.42	-0.18	0.60
Path A (Collective narcissism * Exposure to COVID-19)	0.04	0.20	0.16	0.30
$Path A \Delta R^2$	0	.22	0.	010
10. Risk perception (of contracting COVID- 19)	-0.01	0.20	0.01	0.03
Path B (Collective narcissism * Risk perception)	0.00	0.00	-0.00	0.00
Path B ΔR^2	0	.01	0	.01

Path C (Collective narcissism * Exposure * Risk perception)	0.00 0.00	0.00 0.01
Path C ΔR^2	0.02	-0.00
F	1.284	0.926

Note: b = standardized coefficient; ΔR^2 = Change in R^2 * p \leq .05, ** p \leq .01, *** p \leq .001

Supplementary material: Study 2

Table S4 Descriptive statistics and correlation matrix for February, March, and April, 2020

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. Party	0.37	0.48									
2. Incumbency	0.42	0.49	21**								
3. Sex	0.88	0.33	0.02	-0.01							
4. Vote share	53.12	7.9	40**	.17**	-0.05						
5. Retail & recreation	-31.31	31.75	-0.02	0	-0.02	-0.01					
6. Grocery & pharmacy	-17.17	19.67	0.02	-0.01	0.01	-0.03	.84**				
7. Parks	-15.16	27.8	.06*	10**	-0.04	09**	.69**	.67**			
8. Transit stations	-27.32	28.74	0.01	-0.02	-0.01	-0.01	.97**	.82**	.69**		
9. Workplace	-19.99	21.68	0.02	-0.04	0	08*	.96**	.86**	.72**	.94**	

10. Residential 11.32 11.27 0.04 0.01 0.03 0.02 -.97** -.84** -.69** -.94** -.96**

Table S5

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. Party	0.37	0.48									
2. Incumbency	0.42	0.49	21**								
3. Sex	0.88	0.33	0.02	-0.01							
4. Vote share	53.12	7.9	40**	.17**	-0.05						
5. Retail & recreation	-56.64	12.49	09**	0	0.01	.06*					
6. Grocery & pharmacy	15.39	33.16	-0.02	-0.03	0.02	-0.01	.66**				
7. Parks	-34.88	43.73	.18**	18**	-0.05	21**	.19**	.26**			
8. Transit stations	-38.04	17.66	0.02	06*	-0.04	0.03	.59**	.55**	.27**		
9. Workplace	-18.52	13.62	0.02	09**	-0.03	12**	.72**	.72**	.40**	.68**	
10. Residential	14.93	6.32	.15**	0.02	.10**	0.03	71**	64**	29**	52**	75**

Table S6

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. Party	0.37	0.48									
2. Incumbency	0.42	0.49	21**								
3. Sex	0.88	0.33	0.02	-0.01							
4. Vote share	53.12	7.9	40**	.17**	-0.05						
5. Retail & recreation	-31.38	14.68	12**	0.01	06*	0.05					
6. Grocery & pharmacy	12.3	23.5	-0.03	-0.02	0.03	0.04	.59**				
7. Parks	-32.91	31.7	.13**	16**	08**	20**	.26**	.21**			
8. Transit stations	-25.16	17.29	-0.03	07*	-0.06	.10**	.54**	.45**	.24**		
9. Workplace	-11.56	11.83	0.01	-0.05	-0.05	-0.05	.55**	.47**	.47**	.51**	
10. Residential	11.45	4.64	.17**	0	.11**	06*	58**	46**	28**	39**	50**

Table S7

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. Party	0.37	0.48									
2. Incumbency	0.42	0.49	21**								
3. Sex	0.88	0.33	0.02	-0.01							
4. Vote share	53.12	7.9	40**	.17**	-0.05						
5. Retail & recreation	-15.55	12.11	08*	0.04	09*	-0.03					
6. Grocery & pharmacy	26.74	23.45	-0.01	-0.01	.08*	0	.49**				
7. Parks	-12.01	31.3	0.05	-0.07	-0.07	20**	.29**	.20**			
8. Transit stations	-7.56	18.67	-0.04	-0.05	-0.05	.08*	.41**	.30**	.29**		
9. Workplace	-12.42	8.52	.09*	-0.07	0	11**	.54**	.37**	.54**	.52**	
10. Residential	10.24	3.19	0.06	-0.02	0.08	.09*	37**	22**	0.06	09*	.11**

Table S8

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. Party	0.37	0.48									
2. Incumbency	0.42	0.49	21**								
3. Sex	0.88	0.33	0.02	-0.01							
4. Vote share	53.12	7.9	40**	.17**	-0.05						
5. Retail & recreation	-16.09	9.21	.12**	-0.06	0.03	08*					
6. Grocery & pharmacy	26.57	23.48	.09**	-0.06	.12**	-0.04	.33**				
7. Parks	-3.96	24.4	0.02	10**	-0.06	16**	.29**	.24**			
8. Transit stations	-5.61	15.85	0.02	11**	0	0.06	.31**	.29**	.13**		
9. Workplace	-8.89	7.04	0.06	-0.03	0.01	-0.02	.56**	.32**	.36**	.32**	
10. Residential	9.72	3.27	06*	0.05	0	0.05	12**	09**	.13**	11**	.20**

Table S9

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. Party	0.37	0.48									
2. Incumbency	0.42	0.49	21**								
3. Sex	0.88	0.33	0.02	-0.01							
4. Vote share	53.12	7.9	40**	.17**	-0.05						
5. Retail & recreation	-34.75	20.15	0.01	0.02	-0.03	06*					
6. Grocery & pharmacy	11.23	32.96	.09**	-0.02	0.04	07*	.74**				
7. Parks	-14.72	30.69	0.03	11**	07*	15**	.59**	.51**			
8. Transit stations	-27.94	21.59	-0.02	0	-0.04	0.04	.80**	.64**	.48**		
9. Workplace	-29.32	13.59	.08*	-0.03	-0.02	-0.06	.84**	.65**	.48**	.72**	
10. Residential	19.46	7.02	0.01	-0.03	.07*	0.02	78**	57**	35**	66**	75**

Table S10

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. Party	0.37	0.48									
2. Incumbency	0.42	0.49	21**								
3. Sex	0.88	0.33	0.02	-0.01							
4. Vote share	53.12	7.9	40**	.17**	-0.05						
5. Retail & recreation	-8.66	12.93	-0.03	-0.06	-0.04	0.03					
6. Grocery & pharmacy	42.4	30.47	.12**	08*	.10*	-0.01	.41**				
7. Parks	6.24	29.15	0.01	13**	10*	12**	.39**	.32**			
8. Transit stations	-2.54	18.99	09*	-0.03	-0.04	.16**	.45**	.32**	.24**		
9. Workplace	-8.49	9.82	0.02	09*	08*	0.05	.69**	.38**	.42**	.44**	
10. Residential	12.12	3.94	0.07	0.05	.10*	08*	34**	09*	0.07	20**	20**

Table S11

Place	Month	b- Male	t	р	R ²
Retail and recreation	February, March, April	-2.14	-0.69	0.49	0.0005
recreation	May, June, July	0.37	0.30	0.76	9.57E-05
	August, September, October	-2.88	-2.02	0.04*	0.004
	November, December	-3.33	-2.31	0.02*	0.008
Grocery and	February, March, April	0.80	0.41	0.68	0.0002
pharmacy	May, June, July	2.29	0.68	0.50	0.0005
	August, September, October	2.09	0.88	0.38	0.0008
	November, December	5.77	1.97	0.049*	0.006
Parks	February, March, April	-3.73	-1.36	0.17	0.002
	May, June, July	-7.22	-1.68	0.09	0.003
	August, September, October	-8.05	-2.58	0.01*	0.007

	November, December	-6.80	-1.80	0.07	0.005
Transit stations	February, March, April	-0.99	-0.36	0.72	0.0001
	May, June, July	-2.23	-1.30	0.20	0.002
	August, September, October	-3.05	-1.81	0.07	0.003
	November, December	-2.97	-1.33	0.18	0.003
Workplace	February, March, April	-0.08	-0.04	0.97	1.57E-06
	May, June, July	-1.17	-0.88	0.38	0.0008
	August, September, October	-1.93	-1.67	0.10	0.003
	November, December	-0.00	-0.00	1.00	1.42E-08
Residential	February, March, April	0.92	0.83	0.41	0.0007
	May, June, July	1.93	3.15	0.00*	0.01
	August, September, October	1.62	3.60	0.00*	0.013

November, December 0.	73 1.91	0.06	0.006
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Note. * p < .05.

Table S12

Place	Month	b- Male	t	Р	R ²
Retail and recreation	January, February, March	0.76	0.85	0.40	0.0007
	April, May, June	-2.03	-1.02	0.31	0.001
	July, August	-1.52	-0.97	0.33	0.001
Grocery and bharmacy	January, February, March	8.59	3.60	0.00*	0.013
	April, May, June	3.57	1.08	0.28	0.001
	July, August	9.80	2.58	0.01*	0.01
Parks	January, February, March	-4.17	-1.74	0.08	0.003
	April, May, June	-6.64	-2.20	0.03*	0.005

	July, August	-8.80	-2.51	0.01*	9.70E-03
Transit stations	January, February, March	0.21	0.13	0.89	1.87E-05
	April, May, June	-2.67	-1.27	0.21	0.002
	July, August	-2.56	-1.13	0.26	0.002
Workplace	January, February, March	0.18	0.26	0.79	7.02E-05
	April, May, June	-0.89	-0.67	0.50	0.0005
	July, August	-2.47	-2.11	0.04*	0.007
Residential	January, February, March	-0.01	-0.02	0.98	4.67E-07
	April, May, June	1.39	2.03	0.04*	0.004
	July, August	1.17	2.50	0.01*	0.0096

Note. * p < .05.

Table S13

Place	Month	b		SE		F	R2
		Partisanship: Non BJP	Confirmed cases	Partisanship: Non BJP	Confirmed cases	_	
Retail and recreation	February, March, April	-1.139	-0.021*	1.012	0.003	22.71*	0.164
	May, June, July	-2.469*	-4.246e-04*	0.869	1.34E-04	9.529*	0.021
	August, September, October	-3.609*	-1.323e-04*	1.006	2.50E-05	22.67*	0.049
	November, December	-1.435	-1.551e-04*	9.45E-01	1.55E-05	54.37*	0.158
Grocery and	February, March, April	3.532	-0.046*	2.227	-6.409	22.29*	0.162
pharmacy	May, June, July	-2.117	-0.001*	2.294	0.0003	14.72*	0.033
	August, September, October	-1.007	-1.831e-04*	1.641	4.07E-05	10.72*	0.024
	November, December	0.367	-1.768e-04*	1.963	3.22E-05	15.3*	0.05

-0.057*

4.257

0.013

17.24*

0.129

Parks

February, March, April

16.86*

	May, June, July	17.93*	-1.468e-03*	2.977	4.56E-04	22.46*	0.049
	August, September, October	9.950*	-2.355e-04*	2.131	5.29E-05	18.85*	0.041
	November, December	5.074	-1.660e-04*	2.636	4.32E-05	8.341*	0.028
Transit stations	February, March, April	5.167*	-0.018*	1.269	0.004	19.09*	0.141
	May, June, July	0.913	-7.481e-04*	1.218	1.88E-04	8.121*	0.018
	August, September, October	-0.526	-9.197e-05*	1.209	3.01E-05	4.973*	0.011
	November, December	-0.834	-1.097e-04*	1.579	2.59E-05	9.6*	0.032
Workplace	February, March, April	1.038	-0.037*	1.397	0.004	35.97*	0.237
	May, June, July	0.115	-1.101e-03*	0.871	1.34E-04	33.74*	0.072
	August, September, October	0.588	-2.219e-04*	0.739	1.84E-05	73 *	0.143
	November, December	2.175*	-1.013e-04*	0.643	1.06E-05	48.08 *	0.142

Residential	February, March, April	1.651*	0.014*	0.735	0.002	21.03 *	0.154
	May, June, July	2.128*	4.012e-04*	0.433	6.67E-05	31.62*	0.068
	August, September, October	1.520*	6.832e-05*	0.304	7.55E-06	58.82*	0.119
	November, December	0.222	2.673e-05*	0.258	4.24E-06	21.42 *	0.068

Note. * p < .05.

Table S14

Regression analysis between partisanship, confirmed cases, and mobility in 2021

Place	Month	b SE		SE		F	R2
		Partisanship: Non BJP	Confirmed cases	Partisanship: Non BJP	Confirmed cases	_	
Retail and recreation	January, February, March	2.902*	-7.948e-05*	0.601	8.12E-06	53.48*	0.109
	April, May, June	1.44	-7.830e-05*	1.355	8.29E-06	44.61*	0.093
	July, August	0.658	-5.619e-05*	0.947	4.57E-06	76.92*	0.21
Grocery and	January, February, March	5.287*	-8.926e-05*	1.646	2.21E-05	11.58*	0.026

pharmacy	April, May, June	7.583*	-8.912e-05*	2.275	1.39E-05	23.81*	0.052
	July, August	9.542*	-5.028e-05*	2.552	1.22E-05	13 *	0.043
Parks	January, February, March	2.662	-1.002e-04*	1.689	2.28E-05	10.06*	0.022
	April, May, June	4.048	-8.928e-05*	2.091	1.28E-05	24.84*	0.054
	July, August	2.3	-6.224e-05*	2.433	1.18E-05	14.01*	0.046
Transit stations	January, February, March	1.352	-5.431e-05*	1.122	1.51E-05	6.649*	0.015
	April, May, June	-0.410	-5.785e-05*	1.478	9.07E-06	20.96*	0.045
	July, August	-2.485	-3.677e-05*	1.576	7.61E-06	14.9*	0.048
Workplace	January, February, March	1.033*	-5.619e-05*	0.446	6.05E-06	43.6*	0.09
	April, May, June	2.161*	-3.629e-05*	0.913	5.61E-06	22.17*	0.048
	July, August	0.847	-3.382e-05*	0.731	3.54E-06	45.87*	0.136
Residential	January, February, March	-0.723*	9.349e-06*	0.232	3.13E-06	8.06*	0.018

April, May, June	-0.230	1.919e-05*	0.492	3.01E-06	20.34*	0.044
July, August	0.156	1.064e-05*	0.319	1.54E-06	25.41 *	0.08

Note. * p < .05.

Table S15

Multiple regression analysis 2020

Place	Month			F	R2			
		Partisans hip: NonBJP	Gender: Male	Caste: General	Incumbent: True	Vote share percent		
Retail and recreation	February, March, April	-2.05	-2.09	0.57	-0.67	-0.12	0.25	0.0015
	May, June, July	-2.17*	0.93	0.03	-1.11	0.05	1.67	0.0099
	August, September, October	-4.49***	-2.37	1.55	-1.66	-0.06	3.49**	0.0205
	November, December	-3.01*	-3.17*	2.08	-0.28	-0.20**	2.79*	0.0246
Grocery and pharmacy	February, March, April	-0.34	0.80	1.18	-0.58	-0.12	0.42	0.0025
	May, June, July	-5.29	2.85	5.58	-5.57*	-0.15	1.77	0.0106

	August, September, October	-2.54	2.65	4.05	-3.56*	0.05	1.8	0.0108
	November, December	-1.92	6.23*	3.30	-2.04	-0.08	1.3	0.0118
Parks	February, March, April	-0.08	-4.48	1.09	-4.71*	-0.28*	2.83*	0.0167
	May, June, July	3.00	-10.78*	7.02	-12.85***	-1.01***	12.65***	0.0711
	August, September, October	0.18	-10.21**	2.89	-8.55***	-0.75***	11.94***	0.0671
	November, December	-3.21	-8.38*	2.46	-3.45	-0.88***	5.73***	0.0494
Transit stations	February, March, April	-0.20	-0.93	-0.02	-1.35	-0.06	0.17	0.0010
	May, June, July	0.73	-1.94	-0.29	-2.76*	0.10	1.50	0.0089
	August, September, October	-0.64	-2.60	0.99	-3.64**	0.17*	3.10 **	0.0184
	November, December	-1.87	-2.53	1.95	-3.68*	0.09	1.50	0.0134
Workplace	February, March, April	-0.40	-0.31	-1.16	-0.97	-0.21	1.33	0.0079
	May, June, July	-1.27	-1.21	-1.50	-2.12*	-0.22**	4.93***	0.0287

	August, September, October	-1.30	-1.97	1.04	-1.68	-0.12*	2.04	0.012
	November, December	0.78	-0.18	1.03	-1.18	-0.11*	2.50*	0.022
Residential	February, March, April	1.62	0.93	-0.27	0.42	0.08	0.90	0.0054
	May, June, July	3.08***	1.88**	-0.66	0.95*	0.11***	9.51***	0.0541
	August, September, October	2.13***	1.53***	-0.67	0.68*	0.03	9.21***	0.0524
	November, December	0.92**	0.80*	0.08	-0.09	0.07***	4.74***	0.0411

Note. * $p \le .05$, ** $p \le .01$, *** $p \le .001$

Table S16

Multiple regression analysis 2021

Place	Month		F	R2				
		Partisanshi p: NonBJP	Gender: Male	Caste: General	Vote share percent	Incumbent: True		
Retail and recreation	January, February, March	1.80*	0.90	0.27	-0.07	-1.16	4.19***	0.0245

	April, May, June	-1.25	-2.43	3.37	-0.30**	0.29	2.38*	0.0142
	July, August	-1.12	-0.76	1.01	-0.01	-2.93*	1.39	0.0125
Grocery and pharmacy	January, February, March	3.34	9.12***	2.69	0.02	-3.63*	4.80***	0.0285
	April, May, June	2.99	3.13	9.58***	-0.32	-1.94	4.07**	0.024
	July, August	6.87*	11.17**	4.94	0.17	-6.49*	4.66***	0.0412
Parks	January, February, March	-2.92	-4.30	0.91	-0.51***	-5.72**	6.95***	0.0401
	April, May, June	-5.24*	-7.47*	5.80*	-0.74***	-7.73***	8.12***	0.0467
	July, August	-6.29*	-8.90*	3.18	-0.58**	-9.65***	6.20***	0.0533
Transit stations	January, February, March	0.16	0.60	2.24	0.08	-4.91***	3.95**	0.0232
	April, May, June	-1.01	-2.68	4.20*	-0.001	-1.19	1.36	0.0081
	July, August	-2.13	-1.28	2.66	0.26*	-4.15*	3.13**	0.0275
Workplace	January, February, March	0.50	0.15	1.44*	-0.01	-0.80	1.98	0.0117

	April, May, June	2.22*	-1.28	0.96	-0.08	-0.02	2.18	0.0128
	July, August	0.23	-2.19	1.95	0.05	-2.62**	3.17**	0.0278
Residential	January, February, March	-0.18	-0.002	-0.05	0.02	0.37	1.52	0.009
	April, May, June	0.37	1.51*	-0.94	0.06	-0.35	1.85	0.0110
	July, August	0.57	1.03*	-0.72	-0.01	0.79*	2.68*	0.0236

Note. * $p \le .05$, ** $p \le .01$, *** $p \le .001$