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Follow or not follow?: The relationship between psychological entitlement and compliance with preventive measures to the COVID-19

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ABSTRACT

Some recent evidence has shown that individuals with a higher sense of psychological entitlement were more likely to ignore instructions than individuals with a lower sense of psychological entitlement. Building on these findings, the current research investigated the relationship between psychological entitlement and breaching coronavirus restrictions during the COVID-19 pandemic. Using self-reported adherence to various infection prevention measures, Study 1 revealed that psychological entitlement positively predicted a lower likelihood of complying with distancing instructions in Chinese university students. Study 2 fully replicated these findings in a new sample of Chinese working adults. Moving beyond self-assessment of public health-compliance behaviors, Study 3 further assessed the relationship behaviorally and recapitulated the reported effects. Consistently, Studies 1 through 3 provided supporting evidence that fairness perceptions mediate the negative link between psychological entitlement and observance of preventive measures. Overall, our findings suggest that individual differences in psychological entitlement are associated with people’s virus-mitigating behaviors in the fight against COVID-19.

1. Introduction

The COVID-19 pandemic poses one of the biggest threats to global health. Current research suggests that the basic reproductive rate, or R value, for Covid-19, is now located in the range [1.0011–2.7936] for the different location countries (Al-Raeei, 2020), which is higher than what is observed for seasonal influenza ($R_0 = 1.2$) in most cases (Biggerstaff et al., 2014). It means that the number of secondary infections generated from one infected individual can be about 2.7 for coronavirus, while the number is approximately 1 for flu virus. Additionally, the incubation period of COVID-19, which refers to the time between exposure to onset of infectiousness and apparent symptom and signs, is longer than many other contagious diseases (Lauer et al., 2020; Li et al., 2020). For instance, the incubation period for most strains of the influenza is typically around 2 days, whereas the COVID-19 may take 4–12 days to have symptoms (Petersen et al., 2020).

Unlike many other infectious diseases, there are currently no vaccines available for preventing coronavirus infections. The extant medical evidence has shown that avoiding close contact with other individuals (social distancing) has been the most effective way to reduce the spread of COVID-19 (Anderson et al., 2020; Lewnard & Lo, 2020). For instance, Remuzzi and Remuzzi (2020) noted that the European countries should implement strong regulations such as avoiding close face-to-face contact with others and in-person meeting to enhance a delay in the transmission of the virus. Based on the simulation models of COVID-19’s spread, Greenstone and Nigam (2020) estimated that 1.7 million lives would be saved if moderate distancing, such as frequent hand-washing, cancelling mass gatherings, and keeping a safe space from others, was practiced at the early stage of pandemic in the United States. Therefore, both national governments and individual citizens can take containment measures and implement cumulative interventions to attenuate the impact of the COVID-19 pandemic.

Despite these preventive actions aiming at flattening the infected curve, adherence to measures such as quarantine, isolation, and hygiene appears to vary greatly across cultures, contexts, and individuals (Caria et al., 2020; Wong & Alias, 2020). For instance, a rapidly growing body of research has investigated how contextual cues or subtle nudges can increase a propensity to engage in social distancing across different cultural groups. For instance, using a sample of 500 Irish participants, Lunn et al. (2020) found that activating the thinking of the high risk of transmission can significantly promote adherence to social distancing measures. In a similar vein, Pfattheicher et al. (2020) found that inducing empathy for vulnerable populations has a positive effect on the motivation to comply with social distancing measures in German
participants. These findings suggest that psychologically-informed communication strategies may influence people’s risk perception of COVID-19 and promote their willingness to follow preventive measures during the pandemic.

Concomitantly, personality and individual differences have been studied regarding their potential effect on practicing the social distancing. Researchers have identified a number of social and personality factors related to these preventive behaviors. For instance, much research has shown that individuals, who exhibited a stronger sense of conscientiousness and belonging, were more likely to perform the social distancing as the forced legitimization (Aschwan et al., 2020; Oosterhoff et al., 2020). For instance, in a very recent study conducted by Sheetal et al. (2020), they found that participants, who read a hypothetical scenario conveying optimism regarding the COVID-19 (e.g., the decreased rate of new infections), were less willing to breach coronavirus restrictions than participants in the pessimism condition (e.g., an effective vaccine still not available). This pattern of results suggests that dispositional optimism reduces unethically related to the pandemic. Meanwhile, numerous studies have also suggested that individuals with higher levels of the Dark Triad, extraversion, callousness, deceitfulness, and risk-taking were more prone to violating social-distancing guidelines even with increasing numbers of cases and deaths (Carvalho et al., 2020; Miguel et al., 2021; Nowak et al., 2020; O’Connell et al., 2020; Zajenkowski et al., 2020; Zettler et al., 2020). Taken together, these findings highlight the importance of personality in public-health research.

In the current inquiry, we propose that an underexplored personality trait – psychological entitlement – is a critical predictor of whether a person will comply with safety-promoting measures surrounding the COVID-19 pandemic. Psychological entitlement refers to a general belief that individuals tend to take more credit and to see themselves as more deserving of positive outcomes than other people (Campbell et al., 2004; Fisk & Neville, 2011). Individuals showing higher entitlement are more likely to think that they deserve valuable resources, preferential rewards, and privileged treatment, often with little consideration of their actual performance compared to others (Grubbs & Exline, 2016; Harvey & Martinko, 2009). Multiple studies in the literature have shown that entitled people show little concern for socially acceptable behavior or the feelings of others (Priesemuth & Taylor, 2016). For example, individuals with a higher sense of entitlement are more likely to engage in unethical work behaviors (Naseer et al., 2020), to display higher dishonest intentions (Poon et al., 2013), and to rationalize decisions involving moral issues (Lee et al., 2019).

There is also evidence that psychological entitlement is positively associated with failure to follow instructions. In a series of studies, Zitek and Jordan (2019) provided an instruction set and asked participants to follow it in a lab-based task. Their results consistently showed that individuals, who displayed a higher level of entitlement traits, demonstrated a lower likelihood of following instructions about how to format their responses. The relationship between psychological entitlement and ignoring instructions was still robust even when following instructions did not bring inconvenience for the participants, when instructions were framed as optional, or when the chance of punishment was high. Zitek and Jordan (2019: Study 6) additionally tested fairness perception as an underlying factor in explaining the relationship between entitlement and violation of instructions. These findings suggest that entitled individuals ignored instructions at least partly because they tended to believe that the instructions were unfair.

Despite prior findings, there has convincingly demonstrated the robust relationship between psychological entitlement and following instructions in laboratory quasi-experiments (e.g., word search task), it is still unclear whether psychological entitlement can predict adherence to containment measures to the COVID-19 pandemic which is immediately relevant to health needs. In addition, previous research was mainly conducted with American participants and may be valid only for this society; thus, the generalizability of the research findings across different cultural groups is unclear. To address these lacunas, the present research investigated whether entitlement is also a strong predictor of breaching coronavirus restrictions in Chinese populations. This thesis stems from the findings that trait entitlement can exert negative influences on several aspects of the self such as fostering undeservingness, specialness, and exaggerated expectations (Harvey & Martinko, 2009; Zitek & Jordan, 2021). Given the findings that entitled individuals care little about what are socially acceptable behavioral patterns, we argue that the level of psychological entitlement should be negatively related to people’s willingness to engage in strict social distancing to fight the COVID-19 pandemic. Guided by the findings described above, we also explored fairness perceptions as an underlying mechanism for the relationship between entitlement and breaching coronavirus restrictions.

Our research is different from prior work in at least three important ways. First, despite Zitek and Jordan (2019) showing that psychological entitlement is negatively related to compliance with behavioral instructions, we are not aware of studies that investigated this relationship in the context of the COVID-19 pandemic. Observance with preventive restrictions to the coronavirus disease is qualitatively different from following specific instructions associated with the word search task in Zitek and Jordan (2019). This is because breaching coronavirus restrictions may have profound and negative consequences on mental and physical health.

Second, Zitek and Jordan (2019) only tested the relationship between psychological entitlement and following instruction in Amazon Mechanical Turk (MTurk) samples (presumably most of them were western participants). Recent evidence suggests that there might be significant cultural differences in narcissism (Jonason et al., 2020). Since psychological entitlement is an essential component of narcissism, it might also be sensitive to country-level effect. Thus, it would be valuable to investigate the relationship between psychological entitlement and compliance with behavioral instructions in different contexts (e.g., the COVID-19 pandemic) and in under-studied cultural systems (e.g., China).

Third, previous research on the role of psychological entitlement in following instructions was conducted within well-controlled experimental settings, and it is unclear whether these results can be translated effectively into real-world settings. In addition, previous work has virtually always investigated the relationship between personality traits and behaviors related to the COVID-19 pandemic through self-report (e.g., Nowak et al., 2020). To address these issues, our Study 3 added a behavior outcome measure and assessed such a relationship behaviorally, in keeping with Baumeister et al.’s (2007) call for more direct observation of behavior in social psychological and personality research.

We tested our hypotheses across three studies. Study 1 involved a survey investigating whether university students, who displayed a higher level of entitlement traits, would be less likely to comply with containment measures to COVID-19 than students with a lower level of entitlement traits. To gain a better understanding of this phenomenon in different settings, Study 2 explored whether entitlement exhibited the same negative correlation with adherence to containment measures in a new sample of Chinese working adults. It should be noted, however, that Study 2 was conducted earlier (April 2020) than Study 1 (September 2020). We did not follow the chronological order because of the availability of participants. University students constitute the most convenient sample, but they cannot represent the general population of interest (Hanel & Vigne, 2016). In China, university students were not allowed to return to campus until September due to the virus situations, while company employees returned to the workplace much earlier. Following conventions in psychological research, we used the student sample as the starting point of our research and then generalized our findings in a non-student sample. Finally, moving beyond participants’ self-reports regarding social distancing rules, Study 3 examined the link between psychological entitlement and preventive behaviors using more objectively observable measures in a more representative sample. All studies investigated whether perception of fairness plays a mediating role.
role in the relationship between psychological entitlement and ignoring quarantine advice during the pandemic. Since deviations from the sanitary regime were not punished (e.g., a monetary fine) in places where our experiments took place and thus respondents should not be reluctant to admit deviating from it.

2. Study 1

2.1. Method

2.1.1. Participants

The study took place in early September 2020. There were no confirmed cases in this area or no new confirmed cases for 14 consecutive days during the experimental session. There had been 570 confirmed cases of COVID-19, including 6 deaths. Participants were undergraduate and graduate students at a university in southwest China. A total of 155 participants (age: M = 22.1 years, SD = 3.6 years; 83 females, 72 males) completed the survey voluntarily and anonymously in exchange for a monetary reward (10 Chinese Yuan).

2.1.2. Materials and procedure

After providing their informed consents, subjects completed a set of questionnaires. We first measured participants’ psychological entitlement using the nine-item scale developed by Campbell et al. (2004). Participants were instructed to respond to sample items such as “I feel entitled to more of everything” and “I deserve more things in my life” on a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree (α = 0.91). This measure was shown to have good reliability and validity in published research which examined Chinese samples (Bai et al., 2019). Higher scores were interpreted as corresponding with a stronger sense of psychological entitlement. Subsequently, we asked participants to complete a time management survey which is unrelated to the main hypothesis of the study.

Next, participants were asked to complete a questionnaire about engagement behaviors to COVID-19 containment measures. The six precaution measures (wearing masks in classes, avoiding crowded places and gatherings, seeking medical advice with the onset of symptoms, keeping a safe distance from other people, washing hands regularly, and not leaving campus unless it is essential) were listed in the notifications for the new semester and were repeatedly emphasized by the university. Students were asked to rigorously follow the social distancing advice when they returned to campus. Participants were asked to rate their adherence to these prevention instructions on a 5-point Likert scale ranging from 1 = not at all to 5 = always (α = 0.78). Finally, participants rated how fair it is that they were asked to follow the six instructions on a 7-point Likert scale ranging from 1 = very unfair to 7 = very fair (α = 0.87). We computed the mean response of adherence to and the mean fairness rating of these preventive measures.

2.2. Results and discussion

Debriefing responses indicated that no participants issue any suspicions about the true purpose of the study. Mean scores, standard deviations, and correlations between the measures in this study are reported in Table 1. As predicted, psychological entitlement (M = 3.23, SD = 0.84) was negatively correlated with adherence to prevention instructions (M = 3.75, SD = 0.73), r = -0.425, 95% CI [-0.546, -0.288], p < .001. This pattern of results suggests that individuals scored higher on psychological entitlement were more likely to breach coronavirus restrictions. Further analysis showed that there was also a negative relationship between entitlement and fairness perceptions (M = 4.93, SD = 1.13), r = -0.489, 95% CI [-0.6, -0.36], p < .001. A bootstrapping analysis with 5000 iterations provided support for the mediating role of fairness perceptions in the link between entitlement and compliance with containment measures, as the 95% bias-corrected confidence interval for the indirect effect did not include zero [-0.3093, -0.0793] (Preacher & Hayes, 2008).

These findings are an initial demonstration of the relationship between psychological entitlement and behaving social distance. In line with our predictions, highly entitled individuals indeed were less likely to comply with containment measure to COVID-19. To further substantiate these findings and to show that they are generalizable to other organizational contexts and populations, we conducted a second study using a sample of working adults.

3. Study 2

3.1. Method

3.1.1. Participants

We collected data from a large agroindustrial company with a revenue of more than 100 million RMB that is located in Southwest China. Questionnaires were distributed to employees in early April 2020. There were 561 confirmed cases of COVID-19, including 3 deaths when the survey took place. A total of 167 working adults (age: M = 34.7 years, SD = 5.5 years; 80 females, 87 males) completed the survey voluntarily and anonymously in exchange for a monetary reward (15 Chinese Yuan). The work council of the company issued the permit to perform the study for the purpose of research and improving the company’s workplace environment. After providing their informed consents, participants were told that no names or identity numbers were recorded to keep their responses confidential.

3.1.2. Materials and procedure

Although the coronavirus outbreak was under control during the study session, the company outlined and issued its guidance to help make work and workplace COVID-secure. Six preventive measures in work place (wearing a mask, establish flexible worksites and work hours, keeping social distance in shared space, washing hands often, covering coughs and sneeze, and avoiding sharing objects and equipment) were listed in the guidance. As in Study 1, participants first responded to the psychological entitlement scale (α = 0.89). Subsequently, they completed a time management survey which is unrelated to the main hypothesis of the study. Next, they were asked to rate their adherence to the six prevention instructions on a 5-point Likert scale ranging from 1 = “not at all” to 7 = “always” (α = 0.79). Finally, participants rated how fair it is that they were asked to follow these instructions on a 7-point Likert scale ranging from 1 = “very unfair” to 7 = “very fair” (α = 0.82). We calculated the mean response of adherence to and the mean fairness rating of these preventive measures.

3.2. Results and discussion

Debriefing responses indicated that no participants issue any suspicions about the true purpose of the study. Mean scores, standard deviations, and correlations between the measures in this study are reported in Table 2. In line with our predictions, psychological entitlement (M = 3.13, SD = 0.96) was negatively correlated with adherence to prevention instructions (M = 3.88, SD = 0.62), r = -0.399, 95% CI [-0.519, -0.264], p < .001. This pattern of results suggests that
individuals scored higher on psychological entitlement were more likely to breach coronavirus restrictions. Further analysis showed that there was also a negative relationship between psychological entitlement and fairness perceptions ($M = 5.04, SD = 0.98$, $r = 0.509, 95\% CI [0.388, 0.613], p < .001). A bootstrapping analysis with 5000 iterations provided support for the mediating role of fairness perceptions in the link between entitlement and compliance with containment measures, as the 95% bias-corrected confidence interval for the indirect effect did not include zero ($[-0.1378, -0.0287]$ (Preacher & Hayes, 2008)).

Study 2 fully replicated the findings of Study 1: psychological entitlement positively predicted a lower likelihood of complying with containment measures to COVID-19 in a sample of Chinese working adults. In addition, this study, in line with our reasoning, established the mediating effect of fairness perceptions in explaining the negative relationship between entitlement and practicing social distancing. Thus, this pattern of results offered further support for the robustness of previous findings and showed that they can generalize to other populations and organizational contexts.

Although our first two studies offered converging evidence that individual differences in psychological entitlement were associated with individuals’ tendency to follow preventive measures, both studies have assessed the relationship through self-report in relatively homogeneous groups. By adding a behavioral outcome measure, Study 3 used a more diverse sample and investigated whether individuals following a laboratory hygiene rule—washing their hands before entering the laboratory—would show different levels of psychological entitlement from individuals failing to follow instructions.

4. Study 3

4.1. Method

4.1.1. Participants

A total of 203 participants (age: $M = 35.9$ years, $SD = 10.6$ years; 102 females, 101 males) completed the survey voluntarily in exchange for a gift voucher (30 Chinese Yuan).

4.1.2. Material and procedure

The study took place in the middle of May 2020. There were 564 confirmed cases of COVID-19, including 3 deaths when the experiment took place. Participants were recruited through flyers that were distributed in local communities and social media (e.g., Wechat) for half a month. A confederate who was naive to the study’s hypotheses met participants at the lobby of an office building. The confederate welcomed the participants and introduced them the procedure of the survey. Moreover, the confederate informed participants that the laboratory room was located at the fifth floor. A hand sanitizer dispenser was available approximately 15 ft to the left or right of the door (fully counterbalanced across subjects). Participants were requested to follow the hygiene rule and to use the dispenser to decrease infectious agents on the hands due to the impact of COVID-19 before entering the room. Another research assistant at the reception desk recorded whether the participants washed their hands or not without getting their attention.

Upon arrival at the laboratory room, participants were instructed to complete the psychological entitlement scale (α = 0.89) and time management survey as in Studies 1 and 2. Next, they were asked to recall the hygiene rule that had been informed by the confederate and to rate how fair it is. After completing the survey, participants were debriefed by providing their responses to the question “What is the true purpose of the study?”.

4.2. Results and discussion

All participants correctly recalled the hygiene rule regarding cleaning hands with hand sanitizer before entering the laboratory room. Debriefing responses indicated that no participants showed any awareness or suspicion regarding the real purpose of the study. We found that a majority of participants (72.0%) washing their hands using the dispenser at a rate that differed reliably from 50% ($\chi^2 (1, N = 203) = 34.59, p < .001$, Cramer’s $\phi = 0.41, 95\% CI = [0.2839, 0.5253]$. Critically, participants choosing to follow the hygiene rule displayed an essentially lower significance of entitlement ($M = 3.05, SD = 0.73$) than participants failed to follow the instructions ($M = 3.38, SD = 0.79$, $t (201) = -2.81, p = .006, d = 0.40, 95\% CI = [0.0549, 0.0972]$, which is consistent with our predictions. Moreover, the mean ratings of fairness in participants washing their hand ($M = 5.71, SD = 0.99$) were higher than participants who failed to do so ($M = 4.97, SD = 1.14$, $t (201) = 4.61, p = .0001, d = 0.65, 95\% CI = [0.4250, 1.0594]$. A bootstrapping analysis with 5000 iterations provided supports for the mediating role of fairness perceptions in the link between psychological entitlement and compliance with containment measures, as the 95% bias-corrected confidence interval for the indirect effect did not include zero ($[-0.3655, -0.0386]$ (Preacher & Hayes, 2008)).

5. General discussion

Given the crucial role of social distancing in hindering an accelerating growth in infections, there is a great deal of academic interest in understanding the psychological motivation behind these behaviors. To date, psychologists have identified a range of personality and social factors related to containment measures to COVID-19 (Aschwanden et al., 2020; Eaton & Kalichman, 2020; Pfattheicher et al., 2020). However, the relationship between psychological entitlement and breaching coronavirus restrictions has received sparse attention, especially entitlement that robustly predicts failure to follow instructions (Zitek & Jordan, 2019). In the current research, we build upon and extend prior work to assess how the sense of entitlement is correlated to a lack of engagement with health-promoting behaviors.

Across three studies involving 529 participants, we offered converging evidence that psychological entitlement is a strong predictor of breaches of COVID-19 rules in both self-report and true behavior measures. In Study 1, college student participants who displayed higher levels of entitlement were less likely to practice social distancing than participants who displayed lower levels of entitlement. Study 2 replicated this finding by using a sample of Chinese working adults, which attenuated common method biases produced by sample characteristics. Some critics may argue that Studies 1 and 2 are burdened with all problems posed by self-report studies conducted on relatively homogeneous groups. By adding a behavioral outcome measure and employing a larger, more diverse sample, Study 3 provided evidence that highly entitled individuals were less likely to follow hygiene practices than individuals with low entitlement levels. Moreover, we uncovered that fairness perceptions emerged as a mediator in explaining the link between psychological entitlement and adherence to coronavirus restrictions across three studies.

Several theoretical and practical contributions arise from the current research. First, the present contributions enrich an emerging body of recent research on the relationship between personality traits and compliance with COVID-19 containment measures. The current research represents the first attempt, to the best of our knowledge, to demonstrate
that individual differences in psychological entitlement are associated with the willingness to engage in preventive behaviors during the COVID-19 pandemic. The current study replicated and extended previous findings that individuals with a greater sense of entitlement are less willing to do something that is “unfair” in their opinions (Zitek & Jordan, 2019), this time within the context of COVID-19. For instance, although wearing face masks help other individuals from virus infection, personal costs are also present since they cause harm to skin and difficulty in breathing (Matusiak et al., 2020). In line with these observations, we found that individuals higher in psychological entitlement are less likely to sacrifice their personal interests to protect public health in compliance with quarantine measures than individuals lower in psychological entitlement.

Second, the current research adds to our knowledge that fairness perceptions mediate the relationship between entitlement and ignoring instructions. Zitek and Jordan (2019) found that entitled people tend to view the instructions as an unfair imposition on them, which can cause them to be less mindful of rules that they need to comply with, thus leading to failure to follow instructions in word search tasks. Our studies extended Zitek and Jordan’s (2019) work empirically. On the one hand, we chose to do this research with Chinese participants because this provided an opportunity to examine the mediating effect of fairness perceptions on the link between psychological entitlement and ignoring instructions in non-WEIRD (Western, educated, industrialized, rich and democratic) populations (Henrich et al., 2010). Our positive results offered further supporting evidence for the observed relationship and its underlying mediating mechanism, which increase the generalizability of previous findings. On the other hand, we extended the findings of Zitek and Jordan (2019) in a new context, namely, adherence to containment measures in combating pandemics. Our results provided converging evidence for a relationship between self-reported and natural occurring social distancing behaviors and psychological entitlement, thus taking the findings beyond the context of ignoring instruction in word search tasks, which strengthen researchers’ confidence in the relationships uncovered.

Importantly, we recognize that fairness perceptions may not be the sole mechanism linking psychological entitlement to compliance with social distancing measures to the COVID-19 pandemic. For instance, Zitek and Jordan (2019) explored the various theoretically driven mechanisms that could explain the relationship between entitlement and follow instructions. In addition to fairness perceptions, they also found that individuals higher in psychological entitlement were more likely to feel happy when they got away with breaking rules than individuals lower in psychological entitlement. Bootstrapping analyses further revealed that happiness level mediates the relationship between entitlement and ignoring instructions. Indeed, in subsequent open-ended interviews, Zitek and Jordan (2019) found that high-entitlement individuals who failed to obey rules, communicated more anger at rules which may harm their interests. Thus, such alternative mechanisms warrant future research. If happiness is an underlying mechanism for the link between entitlement and breaches of coronavirus restrictions, this would raise the questions regarding which of these mediators has a stronger effect.

Finally, the results of our research have clear and important policy implications. Although we observed the already high motivation to follow social distancing rules in different group of participants (university students: $M = 3.75, SD = 0.73$; working adults: $M = 3.87, SD = 0.62$), our findings suggest that individuals higher in psychological entitlement showed less adherence to crucial measures to fight the COVID-19 pandemic in Chinese participants. Thus, organizations such as universities and companies must ensure that they put in place mechanisms to monitor personality change in organizational behavior since breaching coronavirus lockdown rules may detrimentally influence community safety. For instance, when appraising performance during the pandemic, managers may seek to gauge their employees’ inflated sense of psychological entitlement and pay special attention to high-entitlement individuals. Some evidence has shown that asking participants to think about benefits of regarding others as equals (egalitarian values) can significantly decreased entitlement (Piff, 2014). Based on these findings, making social distancing measures seem fairer might be an efficient strategy to encourage entitled individuals to comply with them.

However, we identified several limitations of the current research and point to future directions. First, though sample populations in our studies were economically, linguistically, and culturally diverse in comparison to most studies relied primarily if not exclusively on WEIRD populations, caution should be taken in generalizing these findings outside of China due to various factors such as cultural differences in psychological entitlement, different virus situations, government guidance, or social perception pertaining to the pandemic throughout the world. Second, Studies 1 and 2 reported in the current research is limited by the use of self-report data about psychological entitlement and can be affected by self-representations bias such as holding a positive self-image in the mind. Finally, some research has shown that psychological entitlement is a multidimensional construct. Future research should investigate how different facets of entitlement are related to breaching coronavirus restrictions.

**CRediT authorship contribution statement**

**Heng Li** Conceptionalization, Data curation, Validation, Methodology, Writing – original draft, Writing – review & editing.

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