

**ORIGINAL ARTICLE**

# The burden of being certain: National identity certainty predicts support for COVID-Related restrictive measures and outgroup conspiracy beliefs

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**Abstract**

In dealing with the COVID-19 pandemic, government officials often encounter two concurrent concerns: they have to enforce necessary public health and safety measures to manage COVID-19. Meanwhile, they also have to mitigate conspiracy beliefs about COVID-19. To shed light on these issues, we conducted two studies to investigate national identity certainty (i.e., the extent to which people are certain about their national identity) as a predictor of (a) support for restrictive measures to curtail COVID-19 and (b) conspiracy beliefs about an outgroup as the culprit of COVID-19. Study 1 was a three-week longitudinal study ( $N = 301$ ) where we investigated the relationships both on a between-person level (differences between individuals) and on a within-person level (week-by-week fluctuations of the same individual). We found that individual differences in national identity certainty predicted increased support for restrictive measures and increased outgroup conspiracy beliefs. These relationships emerged, even when we controlled for national identity positivity, that is, the extent to which people see their national identity in positive light. In Study 2 ( $N = 316$ ), we used a cross-sectional correlational design and replicated the findings of Study 1. Moreover, we found that the relationships were explained by distinct threat perceptions: realistic threat explained the increased support for restrictive measures, whereas symbolic threat explained the increased outgroup conspiracy beliefs. Overall, our findings suggest that support for restrictive measures and outgroup conspiracy beliefs can be seen as attempts of people high in national identity certainty to address the distinct threats of COVID-19.

## 1 | INTRODUCTION

Governments across the world have to respond to many issues caused by the coronavirus disease 2019 (COVID-19). Relevant to social psychology, governments have to respond to two concurrent concerns that could threaten the health and safety of its citizens.

First, public health and safety measures such as social distancing, mask wearing, travel restrictions, and shutdown of nonessential businesses were implemented to reduce the spread of COVID-19 (see Ren, 2020). We refer to these measures as *restrictive measures* throughout this paper. Despite restrictive measures' utility in COVID-19 management (Arshed et al., 2020; Breitenbach

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et al., 2020), peoples' adherence to these measures varies considerably (Allcott et al., 2020; Graham et al., 2020). Moreover, some people want more restrictive measures than what were enacted in their communities, such as stringent isolation protocols for anyone infected with COVID-19 or travel ban at the borders, while others want less. For instance, in a recent survey by Devlin et al. (2021) for the Pew Research Center, 56% of U.S. adults thought there should have been more restrictions on public activity whereas 26% thought there should have been fewer restrictions. The researchers reported similar splits in public opinions in other advanced economies (e.g., France, 40% vs 24%).

Meanwhile, many people believe in conspiracy theories about COVID-19 (Douglas, 2021; Enders et al., 2020; Romer & Jamieson, 2020; Sternisko et al., 2021; Uscinski et al., 2020). Examples of these beliefs include the idea that COVID-19 is humanmade or that the pandemic is less serious than its portrayal by public health and government officials. Conspiracy beliefs may negatively affect people by leading them to defy public health and safety measures such as social distancing (Biddlestone et al., 2020; Bierwaczzonek et al., 2020; Freeman et al., 2022; Romer & Jamieson, 2020).

Successful management of COVID-19 could thus involve rallying people around restrictive measures (when there is a need) while mitigating conspiracy beliefs about COVID-19. To address these concerns, it is essential to understand why people may support restrictive measures and COVID-related conspiracy theories. To date, relevant research has been emerging. For example, research has attributed the support for restrictive measures to perceptions of COVID-19 as a realistic threat (Kachanoff et al., 2020). COVID-related conspiracy theories have, on the other hand, been attributed to dispositions and ideological motivations (Uscinski et al., 2020) or beliefs about a nation's greatness (Sternisko et al., 2021). The current research adjoins prior research by identifying a factor that could contribute to these issues but has received relatively less attention: individual difference in national identity certainty. Integrating previous research (e.g., Chen et al., 2004; DeMarree et al., 2007; Godinic et al., 2020; Jaspal & Nerlich, 2020; Kachanoff et al., 2020), we contend that people high in national identity certainty should be more likely to support restrictive measures and believe in conspiracy theories that blame COVID-19 on an outgroup.

## 1.1 | National identity certainty and the threat of COVID-19

People struggle to feel certain about the world (Festinger, 1954). Feelings of uncertainty, particularly those about themselves, can be unsettling (Jonas et al., 2014). One thing people strive to be somewhat certain about is their social identity. According to social identity theory (Abrams & Hogg, 2010; Tajfel & Turner, 1979) and its recent development, uncertainty-identity theory (Hogg, 2007), people categorize each other in group terms (e.g., "us" vs. "them"), forming social identities at various levels (gender identity, national identity etc.). Social identities prescribe people's behaviors and are said to

be a viable source of certainty. Indeed, research suggests that when people feel uncertain about themselves, they tend to strengthen the bond with their social identities (Grieve & Hogg, 1999; Hogg & Mahajan, 2018). The implication is that most people have a need to reduce feelings of uncertainty, which can be fulfilled by social identities.

The majority of work on uncertainty-identity theory focuses on *feelings* of uncertainty, a situationally induced, unsettling state (Choi & Hogg, 2020). We, on the other hand, focused on individual differences in social identity certainty—and more specifically national identity certainty—as a relatively stable disposition or trait that varies between individuals. That is, individuals differ in the clarity and correctness in their metacognitive assessment of self-concepts (Baumgardner, 1990; Chen et al., 2004; DeMarree et al., 2007; Pelham, 1991). For example, when asked about what it means by being an "American", some Americans may give answers with great confidence, whereas others may hold some reservations—they may consider to be "American" is to "support diversity", but they may admit they are unsure they are correct. Individual differences as such could stem from the fact that some people are dispositionally more tolerant of uncertainty (Hillen et al., 2017) or are less in need of certainty (Webster & Kruglanski, 1998). Still, people, regardless of being high or low in national identity certainty, could experience *feelings* of uncertainty that fluctuate across different situations and engage in correspondent uncertainty-reduction. In this sense, our work operates on a different level of analysis (i.e., trait vs. state) than traditional uncertainty-identity theory research.

Research has suggested people high in identity certainty should in general invest more epistemically into that identity (Chen et al., 2004; DeMarree et al., 2007; Pelham, 1991); their views about the identity should be stable and resistant to change. Given their investment, people high in identity certainty should also be more motivated to sustain the self-views against threats that may result in self-view inconsistencies (Festinger, 1957; Swann & Read, 1981). For instance, Chen et al. (2004) demonstrated that people who are highly certain about their group attributes prefer to interact with an ingroup partner who confirms (vs. disconfirms) these attributes—even when these attributes are negative. In contrast, those who are less certain about group attributes do not selectively attend to ingroup partners in a similar manner. Built on prior research, we propose that under the ongoing pandemic, people high in national identity certainty should experience more acute threat from COVID-19. This threat could take the specific form of threat to the health or mortality of group members (including the individual), identity-related norms, or economic opportunities.

To elaborate, people may perceive COVID-19 as an identity threat (Godinic et al., 2020; Jaspal & Nerlich, 2020; Kachanoff et al., 2020). The virus prompts measures of social distancing that change people's daily routines and disrupt their sense of self (Jaspal & Nerlich, 2020) or their nation's norms (e.g., individualism and anti-statism, Bazzi et al., 2020). In addition, COVID-19 has delivered a heavy blow on regional and global economies (Bartik et al., 2020; Carlsson-Szlezak et al., 2020) and consequently

rendered the economic prospect of a nation uncertain (Godinic et al., 2020). Any of these threats can prompt people to question the certainty of their national identity, rendering the latter in the brim of collapse.

Because people high in national identity certainty epistemically have more at stake, they should be more threatened by COVID-19. Those high in national identity certainty should be more motivated to take actions to resolve that threat. One action they could take is to support restrictive measures. Even if restrictive measures can be costly to social and personal life, they are powerful tools that could quell the immediate threat of the pandemic (e.g., by stopping the spread, Arshed et al., 2020; Breitenbach et al., 2020). We thus predict:

Those high (vs. low) national identity certainty should be more inclined to support restrictive measures to manage COVID-19 (H1).

Meanwhile, an alternative for people high in national identity certainty is to believe in conspiracy theories, particularly those that depict an opposing outgroup as the culprit of the pandemic. Outgroup conspiracy beliefs cater to epistemic needs (Marchlewska, et al., 2018; Van Prooijen & Douglas, 2017). That is, conspiracy theories provide a narrative of how and why major threatening events, such as the pandemic, happen (as secretly plotted by malevolent entities). In salient intergroup conflicts, appeal to an opposing outgroup can be particularly conducive to this epistemic process, because the outgroup is a ready target to blame (Van Prooijen, 2020; Van Prooijen & Song, 2021). For our investigations, we note outgroup conspiracy beliefs could explain away some of the threats that COVID-19 may pose and thereby alleviate or even forestall the collapse of a national identity. For example, the pandemic may introduce behavioral and social changes in conflict with national norms. By ascribing to conspiracy beliefs, people (particularly those high in national identity certainty) may be able to see such changes as a necessary move against a hostile outgroup (as opposed to a threat to their national identity). We thus predict:

Those high (vs. low) national identity certainty should be more inclined to hold outgroup conspiracy beliefs (H2).

It is crucial to clarify, however, that we are not contending that people high in national identity certainty necessarily possess a general disposition toward conspiracy thinking (i.e., a tendency to believe in any conspiracy theories regardless of what the conspiracy theories are about). Not all conspiracy beliefs could serve the purpose of alleviating the identity threats—at least to an equal degree. For example, conspiracy beliefs about an ingroup as the culprit may not be as effective. Such beliefs may even backfire because they entail strong associations between one's ingroup identity (national identity) and COVID-19 (threat). Accordingly, our prediction is that people high in national identity certainty should turn *specifically* to outgroup conspiracy beliefs because doing so directly addresses the identity threat of COVID-19.

One other line of research suggests that outgroup conspiracy beliefs help safeguard social (national) identity positivity, that is, a positive social (national) identity that people generally cherish (Douglas et al., 2017; Van Prooijen, 2020; Van Prooijen & Song, 2021; Van Prooijen & Van Vugt, 2018). A robust finding across studies is that collective narcissism (i.e., unrealistic, exaggerated beliefs about ingroup positivity) predict increased conspiracy beliefs (e.g., Cichocka et al., 2016; De Zavala & Cichocka, 2012; Golec de Zavala & Federico, 2018), including those about the COVID-19 (Hughes & Machan, 2021; Sternisko et al., 2021). While research on conspiracy beliefs and national identity positivity is relevant to our investigation, our research diverges from this line of work. Based on the perspective of attitude and attitude certainty (e.g., Tormala & Rucker, 2018), we draw a difference between national identity certainty and national identity positivity (see DeMarree et al., 2007 for a parallel between self-concepts and attitudes), with our focus on the former: conceptually, national identity certainty hinges on a sense of clarity (as opposed to the positive valence) of one's national identity. It differs from how positive people view their national identity in that people can deem their national identity rather positively with some degree of uncertainty. People can also deem their national identity negatively with full degree of certainty. Admittedly, it is possible that national identity positivity somewhat contributes to our predicted relationships involving national identity certainty. Still, we suspect that national identity certainty could predict restrictive measures or outgroup conspiracy beliefs over and above national identity positivity. This is because not every threat posed by COVID-19 involves the positivity of a nation. For instance, the virus could make the future of a nation uncertain, regardless of whether the image of that nation is considered as positive or negative. Our hypothesized effect of national identity certainty could therefore be irreducible to the effect of national identity positivity.

To summarize, we see both support for restrictive measures and outgroup conspiracy beliefs as ways that people—particularly those high in national identity certainty—use to cope with the identity threats posed by the COVID-19 Pandemic. Importantly, we do not think that to cope with the threat of COVID-19, people can *only* turn to restrictive measures or conspiracy theories. Nor do we consider restrictive measures and conspiracy beliefs as fully interchangeable for that purpose—they address different aspects of threats that COVID-19 may pose.

## 1.2 | COVID-19 as a realistic and symbolic threat

Drawing from Integrated Threat Theory (Stephan & Stephan, 2000), recent research examined how peoples' actions and beliefs differed based on whether they saw COVID-19 as a *realistic* threat or a *symbolic* threat (Kachanoff et al., 2020). Realistic threat refers to a concrete assault on physical or material well-being of individuals and their ingroups (Esses et al., 1998). Symbolic threat refers to an assault on the norms and values of the group. Perceived realistic and symbolic threat (of COVID-19) can have distinct implications

on individuals' behaviors and attitudes. Whereas perceived realistic threat predicted individuals' increased adherence to social distancing, perceived symbolic threat predicted decreased adherence (Kachanoff et al., 2020). Kachanoff and colleagues attributed these patterns to social distancing simultaneously mitigating realistic threat (e.g., preventing sickness or mortality from COVID-19) and inflating symbolic threat (e.g., by weakening a sense of national identity).

Drawing from Kachanoff and colleagues' work, we argue that the relationship between national identity certainty and support for restrictive measures should be explained by perceived realistic (but not symbolic) threat. Restrictive measures aim to reduce the spread of the virus and should thus cater to realistic threat only. Such measures hardly resolve symbolic threat. If anything, in nations with individualistic cultural orientation such as the United States, restrictive measures could by itself become a symbolic threat to be resolved. On the other hand, we expect the relationship between national identity certainty and outgroup conspiracy beliefs be explained by perceived symbolic threat but not realistic threat. Conspiracy beliefs hardly address the actual threat of the pandemic (e.g., the spread of COVID-19 and the declining economy). However, they do allow people to rationalize and explain away some of the threats COVID-19 may pose (on group norm etc.) by appealing to a hostile outgroup. We thus advance two additional hypotheses on the role of threat perception in people high in national identity certainty's support for restrictive measure and outgroup conspiracy beliefs:

Perceived realistic (but not symbolic) threat should explain the relationship between national identity certainty and support for restrictive measures (H3).

Perceived symbolic (but not realistic) threat should explain the relationship between national identity certainty and outgroup conspiracy beliefs (H4).

### 1.3 | The current research

In sum, we predict that people high in national identity certainty should be more motivated to support restrictive measures against COVID-19 (H1) and believe in conspiracy theories that blame COVID-19 on an outgroup (H2). The increase in support for restrictive measures should be explained by perceived realistic (but not symbolic) threat (H3); the increase in outgroup conspiracy beliefs should be explained by perceived symbolic (but not realistic) threat (H4). To test these ideas, we conducted two studies. Both studies were set in the context of the United States, where China was often portrayed as the outgroup antagonist in COVID-related conspiracy theories.

Study 1 was a three-week longitudinal study around a projected peak of COVID-19 cases. We explored the co-variation between national identity certainty and support for restrictive measures

or outgroup conspiracy beliefs, both between-person and within-person. Our framework (H1 and H2) would be supported by significant between-person relationships. Namely, people high (vs. low) in national identity certainty should be more likely to support restrictive measures and/or believe in outgroup conspiracy theories across the three weeks. Meanwhile, uncertainty-identity theory could predict significant within-person relationships such that people should support restrictive measures and believe in outgroup conspiracy theories during weeks they report being *less* certain about national identity certainty. Presumably, for the same person, week-by-week fluctuations in national identity certainty reflect how much uncertainty the person *feels* at any particular week. On weeks people feel uncertain, they could be inclined to support restrictive measures and/or believe in outgroup conspiracy theories to mitigate such feelings. In addition, we also explored if any of the relationships would emerge when national identity positivity was controlled for. This allowed us to tease apart the potential effect of national identity certainty from that of national identity positivity.

Built on the findings of Study 1, Study 2 examined perceived realistic/symbolic threat as mediators of hypothesized relationships (H3 and H4). We also attempted to manipulate national identity certainty. We expected people high in national identity certainty to feel threatened both realistically and symbolically by COVID-19, which differentially explained their support for restrictive measures and outgroup conspiracy beliefs. We did not have predictions over whether and how certain aspect of threat (realistic or symbolic) was more dominant among people high in national identity certainty. The study materials and data sets are available at: [https://osf.io/2ja6g/?view\\_only=6453f46fcac44dfa84fa470409b4267c](https://osf.io/2ja6g/?view_only=6453f46fcac44dfa84fa470409b4267c)

## 2 | STUDY 1

### 2.1 | Method

#### 2.1.1 | Participants

Data of Study 1 were collected from April 18, 2020 to May 6, 2020 when COVID-19 was estimated to reach its first peak in most regions of the United States (Murray, 2020). We recruited 301 U.S. participants (172 males, 126 females, 3 preferred to self-describe or did not disclose;  $M_{\text{age}} = 40.05$  years,  $SD = 13.38$ ; 71.1% White) from Amazon Mechanical Turk (MTurk). Each wave of survey took about 5 minutes. Participants were paid \$0.50 per wave of survey completion and an additional bonus \$0.50 if they completed all three waves.

The sample size of Study 1 was determined a priori. A power analysis via the software Optimal Design (Raudenbush, Spybrook, et al., 2011) revealed that a minimum of 200 participants would be needed to detect a small-to-medium effect size of  $\delta = 0.25$  (roughly equivalent to an  $r$  of .12) at  $p = .05$  (two-tailed) with a power of .80 within individuals (assuming effect size variability  $\sigma_{\delta}^2 = 0.05$ ) or between individuals (assuming intra-class correlation  $\rho = .05$ ).

## 2.1.2 | Procedures and materials

The study consisted of three consecutive waves of weekly surveys. Each wave was delivered online via Qualtrics software during the weekend. We matched data points by anonymous IDs generated by MTurk. Overall, the survey response rate was satisfactory with 89% of the participants completing at least two waves of surveys and 71.4% of the participants completing all three waves. Regardless of how many waves of surveys were ultimately completed, participants were included in subsequent data analyses. Missing data were listwise deleted.

Each wave of survey took identical format and measures except that the demographics questions were only included at the end of the first-wave survey. Participants completed a number of questionnaires. They first completed the measure of national identity certainty, followed by the measure of national identity positivity. Finally, participants completed measures of support for restrictive measures and outgroup conspiracy beliefs. The order of the two outcome variable measures was counterbalanced. Our goal was to ensure: within the same survey wave, participants' ratings of national identity certainty and positivity were not affected by their ratings of support for restrictive measures and outgroup conspiracy beliefs. Similarly, we aimed to ensure that participants' ratings of support for restrictive measures were not affected by their ratings of outgroup conspiracy beliefs (or vice versa).

### National identity certainty

Based on Wagoner and colleagues' work (2017) and past research that measured attitude certainty (see Tormala & Petty, 2002), we developed two items to measure national identity certainty ("I am certain about what 'Americans' are supposed to be" and "I am certain about what it means by being an 'American'"). Participants were informed that the items concern their beliefs about Americans (inhabitants of the United States) and rated their agreement with the items on 9-point Likert scales (1 = *Strongly disagree*, 5 = *Neither agree nor disagree*, 9 = *Strongly agree*). Responses on the two items were highly correlated across waves of measurement and were collapsed into one composite ( $M = 6.49$ ,  $SD = 1.88$ ,  $r_{\text{spearman}} = .81$ ).

### National Identity Positivity

We measured national identity positivity with a 9-point semantic differential scale (Snider & Osgood, 1969). Participants were asked to rate "Americans" as a whole on a total of six word pairs: *uncaring-caring*, *inefficient-efficient*, *unintelligent-intelligent*, *incompetent-competent*, *insincere-sincere*, and *untrustworthy-trustworthy* ( $\alpha = .96$  across waves of measurement). We collapsed the scores into one composite ( $M = 6.38$ ,  $SD = 1.69$ ). Higher scores reflect more positive national identity.

### Support for restrictive measures

We developed four items to measure support for restrictive measures. The items covered examples of potential public health policies that were commonly referred to by media and scholars as

"draconian", "drastic" or "strict" (see Conway et al., 2020; Parmet & Sinha, 2020; Ren, 2020, for examples)—some of these policies had already been to some degree implemented by the U.S. government when the study was launched. The four items were "Close the border and let no one in," "Enact Martial Law nationwide," "Lockdown major cities and restrict transportation to those areas," and "Make it mandatory that anyone exposed to COVID-19 cases be taken into special quarantine facilities." Participants rated to what extent they agree with the United States should enact these items/policies on 9-point Likert scales (1 = *Strongly disagree*, 9 = *Strongly agree*). Responses on the four items were internally consistent ( $\alpha = .75$ , across survey waves) and were collapsed into one composite ( $M = 5.22$ ,  $SD = 2.03$ ).

### Outgroup conspiracy beliefs

To test the idea that people high in national identity certainty turn *specifically* to outgroup conspiracy beliefs (relative to ingroup conspiracy beliefs), we measured both conspiracy beliefs that blame Chinese government (outgroup) for COVID-19 and conspiracy beliefs that blame U.S. government (ingroup) for COVID-19 and then computed a difference score.<sup>1</sup> Following examples of existing research (e.g., Goertzel, 1994; Romer & Jamieson, 2020), we developed four items about COVID-related conspiracy theories. Each conspiracy belief was measured with two items (i.e., "The COVID-19 virus is deliberately engineered in a Chinese/U.S. government laboratory" and "The Chinese/U.S. government has tried to withhold key information about COVID-19 treatment from the rest of the world"). Participants rated to what extent they believed the items were true on 9-point Likert scales (1 = *Definitely not true*, 5 = *Cannot decide*, 9 = *Definitely true*).

Responses on the items were moderately correlated across waves of surveys ( $r_{\text{spearman}} = .40$  for conspiracy beliefs about Chinese government as the culprit;  $r_{\text{spearman}} = .46$  for conspiracy beliefs about U.S. government as the culprit) and were collapsed accordingly. A difference score was then calculated by subtracting scores of U.S.-government conspiracy beliefs from scores of Chinese-government conspiracy beliefs. Higher score reflected more conspiracy beliefs about Chinese-over-U.S. (i.e., outgroup over ingroup) government as the culprit of COVID-19. Overall, participants were only slightly more oriented to believe Chinese (over U.S.) government as the culprit of COVID-19 ( $M = 1.80$ ,  $SD = 2.40$ ).

## 2.2 | Results

Table 1 presented the average within-person correlations among measured variables, calculated based on the instructions of Snijders and Bosker (1999). *Within* each person, national identity certainty was positively correlated with national identity positivity. National identity positivity seemed to be negatively correlated with support for restrictive measures. Still, these within-person relationships were rather weak. Table 2 presented the correlation coefficients among the person averages of measured variables (i.e., between-person correlations). On a between-person level, national identity

certainty was positively correlated with national identity positivity, and more importantly, with support for restrictive measures and outgroup conspiracy beliefs. National identity positivity was also positively correlated with the two outcome variables. Support for restrictive measures, meanwhile, was negatively correlated with outgroup conspiracy beliefs.

### 2.2.1 | Support for restrictive measures

To accommodate for the multilevel structure in our data (i.e., waves nested within individuals), we conducted multilevel analyses based on restricted maximum likelihood methods. We used the software Hierarchical Linear Modeling (HLM, version 7.03; Raudenbush, Bryk, et al., 2011). Each estimated model included two levels. Level 1 represented the survey waves nested within individuals, and Level 2 represented mean differences between individuals. We used the obtained  $t$  and  $df$  to calculate the effect size  $r$  (Equation 2.3, Rosenthal et al., 2000). Below, we focused on fixed effect estimates. More details of data analyses (e.g., covariance structure) can be found on OSF.

For the relationship between national identity certainty and support for restrictive measures, we first estimated an unconditional model (i.e., a random intercept model) to calculate the intraclass correlation coefficient (Snijders & Bosker, 1999). The analysis revealed that most of the variance in support for restrictive measures (80.1%) was at Level 2 (between individuals), while there was a small amount of variance (19.9%) at Level 1 (within individuals across waves). We proceeded by including the person-mean centered national identity certainty at Level 1 to capture purely within-person relationships (Bryk & Raudenbush, 1992); at Level 2, we adjusted the intercept with the person mean of national identity certainty (grand-mean centered) to capture the relationship on a between-person level. The results are presented in Table 3 (Model 1). National identity certainty

significantly predicted increased support for restrictive measures on a between-person level, but not on a within-person level.

Next, we controlled for national identity positivity. We person-mean centered both national identity positivity and national identity certainty, and included both variables at Level 1 of the model. At Level 2, we adjusted the intercept with the person means of both national identity positivity and national identity certainty (grand-mean centered). As presented in Table 3 (Model 2), national identity positivity significantly predicted decreased support for restrictive measures on a within-person level. The relationship between national identity positivity and support for restrictive measures was, however, not significant on a between-person level. With national identity positivity controlled (on both within-person level and between-person level), the relationship between national identity certainty and support for restrictive measures remained mostly unchanged. If anything, the relationship on a within-person level became closer to significance,  $p = .053$ .

### 2.2.2 | Outgroup conspiracy beliefs

We applied the same analytic strategy for outgroup conspiracy beliefs. Estimation of the unconditional model revealed that majority of the variance in outgroup conspiracy beliefs (79.2%) was at Level 2, with a small amount of variance (20.8%) at Level 1. Including national identity certainty into the model (Table 4, Model 1), the analysis revealed that national identity certainty significantly predicted increased outgroup conspiracy beliefs on a between-person level, but not on a within-person level. Finally, we controlled for national identity positivity on both within-person and between-person levels (Table 4, Model 2). National identity positivity significantly predicted increased conspiracy beliefs on a between-person level but not on a within-person level. With national identity positivity controlled, national identity certainty still significantly predicted increased outgroup conspiracy beliefs on a between-person level—only the relationship got slightly weaker.

TABLE 1 Average Within-Person Correlations between Major Variables (Study 1)

Variables	1	2	3	4
1. National identity certainty	–			
2. National identity positivity	.16	–		
3. Support for restrictive measures	.04	–.12	–	
4. Outgroup conspiracy beliefs	.03	–.01	.02	–

## 2.3 | Discussion

Study 1 provided initial evidence for our hypotheses H1 and H2. National identity certainty predicted increased support for restrictive measures and outgroup conspiracy beliefs on a between-person level, but not on a within-person level. Stated differently,

Variables	1	2	3	4
1. National identity certainty	–			
2. National identity positivity	.58**	–		
3. Support for restrictive measures	.19**	.11**	–	
4. Outgroup conspiracy beliefs	.33**	.34**	–.12**	–

TABLE 2 Correlation coefficients of between-person correlations (Study 1)

\* $p < .05$ ; \*\* $p < .01$ .

TABLE 3 Support for restrictive measures as predicted by measured variables on between-person and within-person levels (Study 1)

	Model 1					Model 2				
	B (SE)	t	r	p	95% CI	B (SE)	t	r	p	95% CI
Intercept	5.29 (0.11)	48.56	.94	<.001	[5.07, 5.51]	5.29 (0.11)	48.48	.94	<.001	[5.07, 5.51]
Level 1 (within-person) predictor										
National Identity Certainty	0.06 (0.04)	1.34	.06	.18	[-0.02, 0.14]	0.08 (0.04)	1.94	.09	.053	[0.002, 0.16]
National Identity Positivity						-0.18 (0.06)	-2.85	.13	.005	[-0.30, -0.06]
Level 2 (between-person) predictor										
National Identity Certainty	0.21 (0.06)	3.32	.19	.001	[0.09, 0.33]	0.22 (0.08)	2.91	.17	.004	[0.06, 0.38]
National Identity Positivity						-0.02 (0.08)	-0.28	.02	.78	[-0.18, 0.14]

people who were more certain about national identity, tended to support restrictive measures and believe in outgroup conspiracy theories. But on a week-by-week base, fluctuations in national identity certainty of the same person predicted neither of the outcome variables. The lack of significant relationships on a within-person level might be because the variance of support for restrictive measures/outgroup conspiracy theories lied mostly on a between-person level. In any case, our findings suggested the observed link between national identity certainty and support for restrictive measures /outgroup conspiracy theories can be understood as relatively stable individual differences. Finally, our findings remained mostly unchanged when national identity positivity was statistically controlled for. This suggested that the effect of national identity certainty on support for restrictive measures or outgroup conspiracy beliefs was unique, not reducible to the effect of national identity positivity.

Although we found some supporting evidence for our H1 and H2 in Study 1, a major limitation of the study was that we failed to fully test out our rationales. We reasoned that people high in national identity certainty was drawn to restrictive measures or outgroup conspiracy beliefs to essentially cope with distinct aspects of threats of COVID-19. Elevated realistic (but not symbolic) threat should account for the relationship between national identity certainty and support for restrictive measures (H3); elevated symbolic (but not realistic) threat should account for the relationship between national identity certainty and outgroup conspiracy beliefs (H4). In Study 2, we directly measured the realistic/symbolic threat of COVID-19 and tested these rationales out. We also included a manipulation of national identity certainty to explore potential causal relationships.

### 3 | STUDY 2

#### 3.1 | Method

##### 3.1.1 | Participants

Data of Study 2 were collected around November 21, 2020, a period of time when new cases of COVID-19 were again on the rise across the United States. We recruited 324 U.S. adults from MTurk participated in the study in exchange for \$1. Following the recommendation of Aust et al. (2013), we had participants report whether or not they had taken the study seriously at the end of the survey to ensure data quality. One participant indicated not taking the study seriously and was removed from subsequent data analyses. An additional seven participants were removed for failure to seriously follow the instruction (e.g., merely input "good" when instructed to recall a personal experience he/she felt certain). This resulted in a final sample of  $N = 316$  (155 male, 161 female;  $M_{\text{age}} = 43.46$  years,  $SD = 13.55$ ; 80.1% White).

The sample size of Study 2 was determined by a power analysis via G\*Power v3.1 (Erdfelder et al., 1996). The analysis revealed that to detect a small-to-medium effect size of  $d = 0.35$  (equivalent to

TABLE 4 Outgroup conspiracy belief as predicted by measured variables on between-person and within-person levels (Study 1)

	Model 1					Model 2				
	B (SE)	t	r	p	95% CI	B (SE)	t	r	p	95% CI
Intercept	1.7(0.12)	14.34	.64	<.001	[1.54, 2.02]	1.7(0.12)	14.65	.65	<.001	[1.54, 2.02]
Level 1 (within-person) predictor										
National Identity Certainty	0.01 (0.05)	0.25	.01	.80	[-0.09, 0.11]	0.03 (0.05)	0.62	.03	.54	[-0.07, 0.13]
National Identity Positivity						-0.13 (0.08)	-1.72	.08	.09	[-0.29, 0.03]
Level 2 (between-person) predictor										
National Identity Certainty	0.39 (0.07)	5.45	.30	<.001	[0.25, 0.53]	0.21 (0.08)	2.47	.14	.01	[0.05, 0.37]
National Identity Positivity						0.35 (0.09)	3.85	.22	<.001	[0.17, 0.53]

TABLE 5 Descriptive statistics and correlations for measured variables in Study 2

Variable	M (SD)	1	2	3	4	5
1. Self-report national identity certainty	7.10 (1.92)	-				
2. Realistic threat	6.91 (1.60)	.11	-			
3. Symbolic threat	5.06 (2.35)	.20**	.31**	-		
4. Support for restrictive measures	4.19 (2.26)	.14*	.32**	.19**	-	
5. Outgroup conspiracy beliefs	1.66 (2.44)	.20**	-.01	.25**	-.01	-

\* $p < .05$ ; \*\* $p < .01$ .

TABLE 6 The effects of national identity certainty manipulation in Study 2

Variable	High Certainty	Low Certainty	t	p	d	95% CI
	M (SD)	M (SD)				
Self-report national identity certainty	7.06 (1.84)	7.14 (1.99)	-0.38	.71	0.04	[-0.51, 0.34]
Support for restrictive measures	4.20 (2.30)	4.18 (2.23)	0.08	.94	0.01	[-0.48, 0.52]
Outgroup conspiracy beliefs	1.67 (2.33)	1.65 (2.55)	0.07	.95	0.01	[-0.52, 0.56]

$r = .17$ ) at  $p = .025$  (assuming a power of .80), we need to recruit at least 314 participants (157 participants per condition). We ended up collecting slightly more than the analysis had suggested.

### 3.1.2 | Procedures and materials

As in Study 1, the whole procedure was delivered online via Qualtrics. Participants first received national identity certainty manipulation adapted from existing research (Bhattacharjee et al., 2014; Gao et al., 2009). Specifically, they were randomly assigned into one of the two conditions: In low certainty condition, participants were asked to recall and write about two events they felt a great deal of doubt or uncertainty. In high certainty condition, participants recalled and wrote about two events they felt a

great deal of confidence and certainty. Participants of both conditions were subsequently asked to think about what it meant to be an “American” and type down their thoughts. According to previous research (Bhattacharjee et al., 2014; Gao et al., 2009), participants should attribute the high/low certainty they experienced in the initial recall task to the aspect of identity (in this case, national identity) activated by the second task. All participants then completed the same measure of national identity certainty ( $r_{\text{spearman}} = .82$ ) as used in Study 1. This measure served as the manipulation check.

After national identity certainty manipulation, they completed the COVID-19 Threat Scale (Kachanoff et al., 2020) that assesses COVID-19 as realistic threat ( $\alpha = .79$ ) and symbolic threat ( $\alpha = .91$ ). The scale presented participants ten aspects of their life that might be threatened by COVID-19 (e.g., “Your personal health” for realistic threat and “American values and traditions” for symbolic threat).



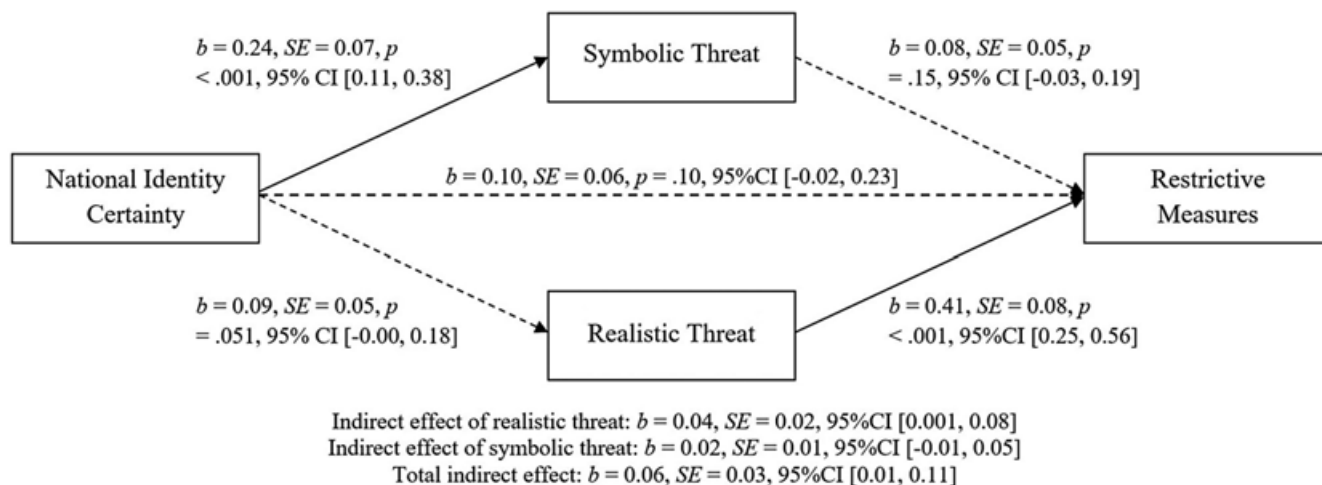


FIGURE 1 A simple mediation analysis: the indirect effects of national identity certainty on support for restrictive measures through realistic and symbolic threat in Study 2. Dotted paths represent paths that fail to reach conventional level of significance,  $p > .05$

Participants rated how much of a threat the coronavirus outbreak was for each aspect on a 9-point Likert scale (1 = *Not a threat*, 5 = *Cannot decide*, 9 = *Major threat*). Following this measure, participants completed the same measures of support for restrictive measures ( $\alpha = .81$ ) and outgroup conspiracy beliefs ( $r_{\text{spearman}} = .59$  for Chinese-government conspiracy beliefs;  $r_{\text{spearman}} = .42$  for US-government conspiracy beliefs). As in Study 1, the order of the two measures was counterbalanced. We again computed a difference score to reflect participants' beliefs about an outgroup (vs. ingroup) government as responsible for COVID-19.

### 3.2 | Results and discussion

Descriptive statistics and correlation coefficients are presented in Table 5. We first conducted independent sample t-tests to examine the effects of national identity certainty manipulation on self-report national identity certainty (i.e., manipulation check), support for restrictive measures and outgroup conspiracy beliefs. The results are presented in Table 6. Surprisingly, people in high and low certainty condition did not differ in self-report national identity certainty. This suggested that our manipulation of national identity certainty was not successful.

Given our manipulation was not successful, we examined instead, the correlations between self-report national identity certainty and other key variables. As seen in Table 5, there were small yet positive correlations between national identity certainty and outcome variables (support for restrictive measures and outgroup conspiracy beliefs). National identity certainty was also positively correlated with COVID-19 as symbolic threat, and to a lesser extent, COVID-19 as realistic threat,  $p = .051$ . Moreover, symbolic threat was positively correlated with outgroup conspiracy beliefs whereas realistic threat was positively correlated with support for restrictive measures.

We proceeded by examining whether realistic and symbolic threat mediated the relationship between self-report national identity certainty and outcome variables. We used the PROCESS macro for SPSS v 3.4 (Hayes, 2017, Model 4, with 10,000 bootstrap samples) to estimate the indirect effects. Both realistic threat and symbolic threat were entered into the models as mediators so that the indirect effects could be teased apart from one another. As presented in Figure 1, the analyses revealed a significant indirect effect of national identity certainty on support for restrictive measures via realistic (but not symbolic) threat. This suggested that people high in national identity certainty experienced more acute realistic threat of COVID-19, which explained their increased likelihood in supporting restrictive measures. The analyses also revealed (see Figure 2) a significant indirect effect of national identity certainty on outgroup conspiracy beliefs via symbolic (but not realistic) threat. This suggested that people high in national identity certainty experienced more acute symbolic threat of COVID-19, which explained their increased outgroup conspiracy beliefs. These patterns were consistent with H3 and H4.

## 4 | GENERAL DISCUSSION

Across two studies, we found evidence that individual difference in national identity certainty predicted both increased support for restrictive measures to curtail COVID-19 (H1) and increased conspiracy beliefs about an outgroup (vs. ingroup) being the culprit of the pandemic (H2). These relationships held true on a between-person level across three weeks around a projected peak of COVID-19 cases (Study 1) and were replicated months later in a subsequent cross-sectional study (Study 2). Moreover, these relationships emerged even when national identity positivity was statistically controlled for (Study 1). We also found that the relationships between national identity certainty and support

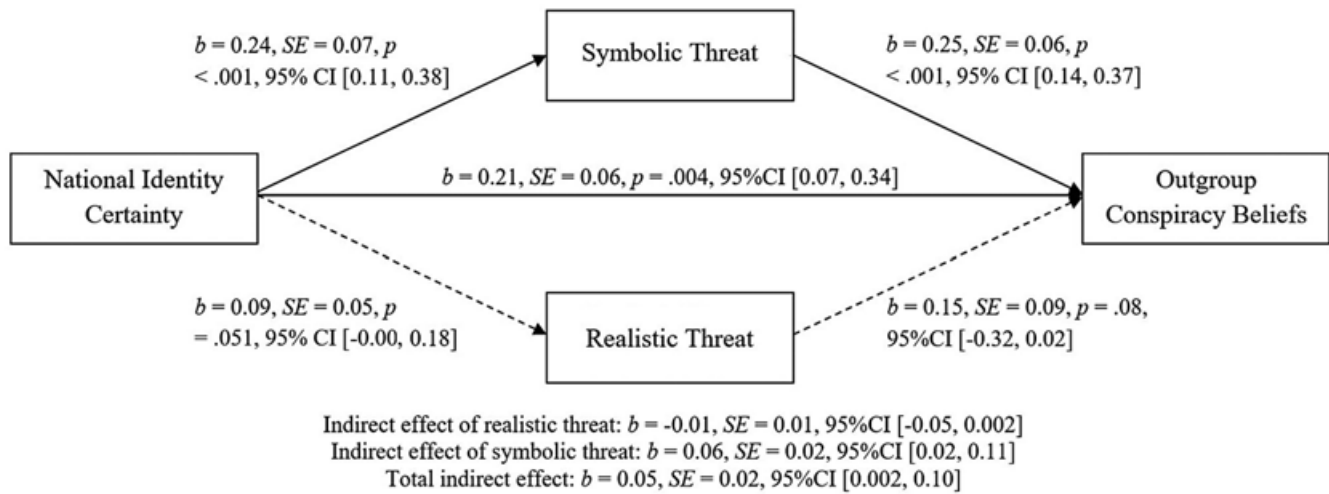


FIGURE 2 A simple mediation analysis: the indirect effects of national identity certainty on outgroup conspiracy beliefs through realistic and symbolic threat in Study 2. Dotted paths represent paths that fail to reach conventional level of significance,  $p > .05$

for restrictive measures or outgroup conspiracy beliefs were explained by different underlying threat perceptions (Study 2): Consistent with H3, realistic but not symbolic threat explained the relationship between national identity certainty and support for restrictive measures. Consistent with H4, symbolic but not realistic threat explained the relationship between national identity certainty and outgroup conspiracy beliefs.

It is worth noting that the link between national identity certainty and restrictive measures or outgroup conspiracy theories did not manifest in week-by-week fluctuations within the same individual (Study 1). This might have something to do with support for restrictive measures or outgroup conspiracy beliefs being stable. Given that we also failed to experimentally manipulate national identity certainty (Study 2), our findings should not be interpreted in causal terms (i.e., feeling certain about national identity prompts people into supporting restrictive measures /outgroup conspiracy beliefs). The emerged links should rather be seen as evidence for stable individual differences: people who are more certain about national identity are more likely to support restrictive measures or to hold outgroup conspiracy beliefs (depending on whether they perceive COVID-19 as a realistic or a symbolic threat).

#### 4.1 | Implications

Taken together, our work joined emerging research (e.g., Kachanoff et al., 2020; Sternisko et al., 2021; Uscinski et al., 2020) to unfold the psychology behind people's beliefs and attitudes toward COVID-19 and related policies. The findings highlighted the role of national identity certainty in these issues. Whereas some research suggested that social (national) identity could help reinstate certainty and reduce feelings of uncertainty (Hogg, 2007), our work suggests if someone is too certain about a social (national) identity, the person could be vulnerable to the identity threats of COVID-19 and are more motivated to resolve such threats.

Growing research suggests that peoples' feelings toward a shared identity play a key role in collective action during or following a natural disaster (Drury, 2018; Van Bavel et al., 2022; Vezzali et al., 2015). In the context of COVID-19, a strong sense of shared national identity is proposed to promote solidarity and is found predictive of support for public health policies (Van Bavel et al., 2022). The current research, on the other hand, provided a more complex portrait of national identity in a pandemic. Our work suggested the same identity-related variable (i.e., national identity certainty) is actually related to a broader variety of attitudes and beliefs, including measures that are somewhat controversial and costly (i.e., restrictive policies such as lockdown) and conspiracy beliefs that blame an outgroup. Moreover, past research suggested that conspiracy beliefs could undermine efforts of social distancing (Biddlestone et al., 2020; Bierwiazzonek et al., 2020; Freeman et al., 2022; Romer & Jamieson, 2020; also see Imhoff & Lamberty, 2020 for a more nuanced view). Under this lens, it could be unintuitive or even surprising that we found individual difference in national identity certainty positively related to both support for restrictive measures and outgroup conspiracy beliefs. In other words, the same group of people seemed to possess beliefs and attitudes of conflicting implications.

While our findings may strike as unintuitive, we argue that they can be understood by seeing both support for restrictive measures and outgroup conspiracy beliefs (at least partially) as attempts to cope with the threat of COVID-19. From this standpoint, believing in conspiracy theories could take away some of the need to resort to restrictive measures (and vice versa). People high in national identity certainty, meanwhile, have a greater need to resolve identity threat in general (resulting in a positive relationship between national identity certainty and support for restrictive measures/outgroup conspiracy beliefs). We would also note that we do not consider restrictive measures and outgroup conspiracy beliefs as serving exactly the same purpose. In Study 2, we found realistic threat explained support for restrictive measures and symbolic threat explained outgroup conspiracy beliefs about COVID-19. The correlation between

symbolic and realistic threat was only moderate,  $r = .31$ , suggesting that the two aspects of threats are related, but to some degree distinct. Overall, our work suggests that restrictive measures and outgroup conspiracy beliefs could address the threat of COVID-19, but in a way that focuses on different aspects (symbolic vs. realistic). This supported early research that symbolic and realistic threats can have divergent implications (Kachanoff et al., 2020).

One theoretical implication of our research is that national identity could be a source of division. Within the same group (i.e., those high in national identity certainty), COVID-19 could pose more of a symbolic threat to some but more of a realistic threat to others, leaving people to respond differently (i.e., support restrictive measures or believe in conspiracy theories). Nevertheless, in Study 2, we observed that national identity certainty was more strongly related to symbolic (vs. realistic) threat.<sup>2</sup> This finding should be interpreted with caution, given we did not have a priori hypotheses on the matter. It may, for example, reflect our measurement of national identity certainty (i.e., having people report their certainty about “what it means to be American”) tapped more into values, the main subject of symbolic threat. Or it could be the divisive political climate at the time when Study 2 was launched (i.e., shortly after 2020 U.S. presidential election) exaggerated the symbolic threat of COVID-19. A more intriguing possibility is that people high in national identity certainty are more sensitive to symbolic threat *in general*. Research on social identity theory (Abrams & Hogg, 2010; Hogg, 2007) suggests that norms and values capture what defines a group and what differentiates one group from another. An assault on these issues (i.e., a symbolic threat) could entail the annihilation of a group category and hence draw more attention.<sup>3</sup> If this is the case, one would expect the more certain people are regarding their national identity, the more likely they see a threat in symbolic terms with their “default” response being outgroup conspiracy beliefs. This possibility warrants more investigation.

Theoretically, our findings also contribute to a line of research showing that the metacognitive certainty about cognitions (the self, judgment, attitude, etc.) could sway related behaviors and decision-making (e.g., Chen et al., 2004; DeMarree et al., 2007; Tormala & Rucker, 2018). Under this lens, self-certainty reflects peoples' epistemic investment into particular or global self-concepts—something people seek to sustain and defend in the face of threat or inconsistencies (Festinger, 1954; Swann & Read, 1981). Our work suggests that peoples' struggle to maintain a highly certain self-view may put them in a position where an identity threat seem more threatening so that they would need to support restrictive measures or believe in outgroup conspiracy theories (as a way to resolve the threat).

Furthermore, the findings remained robust when national identity positivity was controlled for. This suggests national identity certainty and positivity are not merely conceptually distinct, but distinguishable in empirical settings. Our work thereby diverges from past research showing a link between national identity positivity (in particular, collective narcissism) and conspiracy beliefs (e.g., Cichocka et al., 2016; De Zavala & Cichocka, 2012; Golec de Zavala & Federico, 2018; Hughes & Machan, 2021; Sternisko et al., 2021).

Our findings suggest that people do not just turn to conspiracy beliefs to safeguard a positive image of national identity; they may also believe in conspiracy theories to safeguard the *certainty* of that image. Interestingly, a similar divergence between certainty and valence (i.e., positivity) has been documented in the study of attitudes (see Tormala & Rucker, 2018 for a discussion). It is likely that the divergence between certainty and positivity is a more general phenomenon, not restricted in peoples' attitudes or beliefs about identity. Future research should look into this possibility.

More broadly, our work has implications beyond the context of COVID-19. The ongoing pandemic is not the only thing that can threaten ones' invested social (national) identity. Diverse lines of research suggest that natural disasters in general (even an imagined tornado, see Wohl et al., 2010), the incoming immigrants in a host nation (Stephan et al., 2005) and/or an outgroup member getting elected as the national leader (Wagoner & Barreto, 2019) can all pose threats to an ingroup identity. In these scenarios, we expect that people high in ingroup identity certainty should see a similar appeal of measures that are somewhat costly but of utility (e.g., devise a compromise with the outgroup leader) and of conspiracy beliefs that blame an outgroup for the threats (e.g., claims that an election was “stolen” by the outgroup). To the extent such measures and beliefs address realistic and symbolic threat respectively, people high in ingroup identity certainty should be more motivated to support the measures and believe in conspiracies. More research should check these possibilities.

Finally, our work can help inform policies and interventions designed to foster the management of COVID-19. Restrictive measures are of utility to slow the spread of COVID-19 (Arshed et al., 2020; Breitenbach et al., 2020) and could be in dire need when medical resources are strained. In contrast, conspiracy beliefs about the virus's origin could hinder nations' efforts to curtail the pandemic (Biddlestone et al., 2020; Bierwiazzonek et al., 2020; Freeman et al., 2022; Romer & Jamieson, 2020). Effective management of COVID-19 could therefore involve encouraging people to support restrictive measures (when in need) and simultaneously discouraging them from conspiracy beliefs. We recommend policy-makers to target people high in national identity certainty and pay attention to the type of threat (realistic vs. symbolic) in messaging. For instance, messaging that emphasizes the realistic threat of COVID-19 should be most productive in promoting support for restrictive measures among those high in national identity certainty. However, messaging could be counterproductive to the management of the pandemic when it somehow makes the symbolic threat of COVID-19 salient. Under such condition, people high in national identity certainty should be more likely to believe in conspiracy theories, instead.

## 4.2 | Limitations and future directions

The current research has several limitations to be addressed. First, our entire findings were built upon a two-item scale of national identity certainty. Scales with more items are of more measurement

reliability and validity (Emons et al., 2007). Moreover, the operationalization left us difficult to tease national identity certainty apart from the related construct of national identification, because we did not measure key aspects of national identification (e.g., the positive feelings associated with group membership, Cameron, 2004) in the studies.<sup>4</sup> Intuitively, people high in national identity certainty should identify with their nation more strongly. Our rationale (of COVID-19 as identity threat) could apply to national identification—the latter could in fact be more fundamental than national identity certainty. It is also possible that national identity certainty is unique and more fundamental. Teasing apart these possibilities would require research on the relationship between national identity certainty and national identification (e.g., whether they reflect the same underlying psychological processes or latent structure)—research to the best our knowledge is lacking at the moment.

Second, we operationalized outgroup conspiracy beliefs as a difference score between conspiracy beliefs that blame COVID-19 on an outgroup and conspiracy beliefs that blame COVID-19 on an ingroup. We sought to capture the idea that not all conspiracy beliefs serve the purpose of resolving identity threat to an equal extent—outgroup conspiracy beliefs should be particularly appealing for this purpose (relative to ingroup conspiracy beliefs). The tradeoff of our approach is that it left aside individual differences in conspiracy thinking (i.e., someone who scored high on both ingroup and outgroup conspiracy beliefs was practically indistinguishable from someone who scored low on both conspiracy beliefs). To examine the relationship between individual differences in conspiracy thinking and national identity certainty, future research could look into a broader variety of conspiracy beliefs (e.g., conspiracy beliefs that consider COVID-19 as a “hoax”, Imhoff & Lambert, 2020) and compute a composite (as opposed to a difference score) out of participants' ratings.

Third, we note a disconnect between our measure of national identity positivity and standard measures of collective narcissism. We had participants rate their national identity (i.e., “American”) on word-pairs of opposing valence (desirable vs. undesirable), an approach consistent with how attitudes are typically measured (see, for example, Tormala & Petty, 2002). In contrast, collective narcissism is traditionally measured by having participants rate how much they agree with statements such as “*I will never be satisfied until the United States gets the recognition it deserves*” (see, for example, Golec de Zavala & Federico, 2018). It would be ideal for follow-up research to use standard measures of collective narcissism. Still, given an exceedingly positive national identity theoretically lies at the heart of collective narcissism, we expect our findings to be replicable when standard measures of collective narcissism are used.

In addition to measurement issues, our work also left some intriguing future directions. For instance, our work used exclusively samples from the United States. Given COVID-19 is a global public health crisis, future research could test the generalizability of our findings in other nations or groups. Relatedly, future research could explore other approaches of coping with COVID-19 as an identity threat (e.g., getting vaccinated). Future research can also advance our understanding by validating the relationship between national identity certainty and

symbolic (vs. realistic) threat and exploring potential moderators. For example, among conservatives (vs. liberal) in United States, the threat of COVID-19 to national identity could be predominantly symbolic (vs. realistic). Alternatively, some people may construe an identity threat in more abstract, non-pragmatic terms (Trope et al., 2007). Their national identity certainty may well be related to symbolic threat.

Last, we recommend future research to examine whether our findings hold true on a more situational, state level. Will momentary increase in outgroup conspiracy beliefs actually *makes* people feel more certain about their national identity? To test this possibility, follow-up studies may have to capture meaningful within-person changes in support for restrictive measures or outgroup conspiracy theories. Given support for restrictive measures and outgroup conspiracy theories appears rather stable in our research, we recommend future research to conduct longitudinal studies over a longer time span or use stronger experimental manipulations.

## 5 | CONCLUSION

The COVID-19 pandemic has prompted controversies regarding the usage of restrictive measures and the conspiracy theories about the virus's origin. Understanding why people may support or endorse these issues is vital to the management of COVID-19. Our research suggests that it is people who are more certain about national identity that are more likely to support restrictive measures—in an attempt to curtail the realistic threat of COVID-19. These people also tend to believe in conspiracy theories that blame COVID-19 on an outgroup, for a related but different purpose: to cope with symbolic threat. To effectively manage the ongoing pandemic, we recommend policymakers to pay attention to people high in national identity certainty and the type of threat involved in messaging.

## ACKNOWLEDGEMENTS

All authors contributed to the study conception and design. The first author performed most of the material preparation, data collection and analysis. We would like to thank anonymous reviewers for their suggestions on how to improve the fluency of our hypotheses and broaden the implication of our work.

## CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available in The Open Science Framework at [https://osf.io/2ja6g/?view\\_only=6453f46fcac44dfa84fa470409b4267c](https://osf.io/2ja6g/?view_only=6453f46fcac44dfa84fa470409b4267c)

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## ENDNOTES

- <sup>1</sup> We conducted the same analysis to examine the relationship between national identity certainty and Chinese-government conspiracy belief only, with or without US-government conspiracy beliefs controlled as a covariate. The results of the two studies remained mostly unchanged. Details can be found in Supporting Information.
- <sup>2</sup> For exploratory purposes, we computed a difference score between realistic and symbolic threat and examined its correlation with national identity certainty. The analysis did reveal a significant negative correlation,  $r = -.12$ ,  $p = .03$ , suggesting those high in national identity certainty could experience more symbolic (over realistic) threat of COVID-19.
- <sup>3</sup> Still, some realistic threats may warrant similar attention (e.g., threats of physical extinction, Wohl et al., 2010).
- <sup>4</sup> We did include a measure of national identity centrality in both studies (i.e., the extent to which people consider being an "American" is important to them). Identity centrality is commonly regarded as one component of group identification (Cameron, 2004). The relationship between national identity certainty and support for restrictive measures/outgroup conspiracy beliefs remained mostly unchanged (except for outgroup conspiracy beliefs in Study 2) when identity centrality was controlled for. This suggests that while identity centrality is occasionally more fundamental to outgroup conspiracy beliefs than national identity certainty, the bulk of our findings is not reducible to the effect of identity centrality. Details can be found in OSF.

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**How to cite this article:** Chen, K., Zhang, J., Ao, X. & Ramdass, J. (2022). The burden of being certain: National identity certainty predicts support for COVID-Related restrictive measures and outgroup conspiracy beliefs. *Journal of Applied Social Psychology, 52*, 414–428. <https://doi.org/10.1111/jasp.12868>