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# Covid-19 conspiracy beliefs and containment-related behaviour: The role of political trust



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#### ABSTRACT

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The roles of conspiracy beliefs and political trust for public health behaviour have seldomly been studied prior to the COVID-19 pandemic. In this study, we tested whether conspiracy beliefs affect containment-related behaviour in relation to the COVID-19 pandemic and whether this relationship is mediated by political trust, preference for saving the economy or for saving lives. The data were collected at two time points, at the beginning of the epidemic and after the state of emergency was introduced. The sample consisted of 790 adults from Serbia (349 at time 1 and 441 at time 2), of which around 60% were female, with a mean age of around 33. The results indicate that holding more conspiracy beliefs is related to less adherence to containment-related behaviour, both directly and indirectly, via decreased political trust. Preference for saving lives has a direct effect on containment-related behaviour, while preference for saving economy plays no important role in this relationship, although it has a negative zero-order association with containment-related behaviour. The findings are interpreted in light of the importance of governmental pandemic management for containing, i.e. preventing the spread of infectious diseases.

## 1. Introduction

The pandemic of COVID-19 was officially declared on 11th March 2020. Until now, there have been more than 86,195,000 cases and more than 1,860,000 deaths worldwide.<sup>1</sup> Many conspiracy theories (CTs) unfolded and quickly spread after the virus emerged. Conspiracy beliefs (CBs) are defined as assumptions that a group of agents meets secretly to pursue goals that are perceived as malevolent (Zonis & Joseph, 1994). Van Prooijen (2018) suggested five conditions that qualify a belief as a CB: non-random patterns, intentional agency, coalitions or groups of (non)human actors, hostility in pursuing evil goals and continued secrecy. Holding CBs is characterized by contradiction: the same people believe different CTs (van Prooijen & Acker, 2015), including conceptually unrelated or clearly contradicting theories (e.g. believing that MI6 was responsible for the death of Princess Diana and that HIV was created in a laboratory, or the belief that Princess Diana is both still alive and dead; Wood et al., 2012). This contradiction has led researchers to believe that there is a disposition, a single factor that comprehends inclination to CBs, "conspiracist ideation" (e.g. Swami et al., 2011). Wood et al. (2012) argue that the correlation of every single CT with a

higher-order belief supports this thesis. This assumption was supported by Bruder et al. (2013), who found firm support for a one-dimensional conspiracy mentality construct across cultures.

Previous studies have demonstrated that people are more prone to holding CBs in times of societal crisis, defined as "impactful and rapid social change that calls existing power structures, norms of conduct, or even the existence of specific people or groups into question" (Van Prooijen & Douglas, 2017, p. 324). In crises, CBs can help people tame the chaos by making sense of ambiguity (Wood, 2018) and getting the illusion of control (Imhoff & Lamberty, 2020). Also, the "major eventmajor cause" bias present in CBs indicates that people need to explain large events with large causes (Van Prooijen & van Dijk, 2014). CBs also help people answer the questions of why something happened, who should be blamed, and who benefits from it and how (Wood, 2018). A pandemic fulfils the conditions of the context in which CBs arise.

CBs may be important in the context of a pandemic due to their influence on public health behaviour. There have been few studies that explored the effect of CBs on HIV. For example, Ford et al. (2013) found that those who held CBs tended to engage in more HIV preventive behaviours. However, mistrust in the government decreased the odds of

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<sup>1</sup> https://www.worldometers.info/coronavirus/.

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testing and early detection. The belief that HIV was man-made for the purpose of committing genocide affected patients' will to adhere to testing and treatment (Kalichman, 2009). Studies on CBs regarding the Zika virus also emphasized that CBs may reduce the likelihood of vaccination (Dredze et al., 2016). Anti-vaccine CBs have a significant direct effect on reduced vaccination intentions, but this relationship is mediated by feelings of powerlessness and disillusionment, and decreased trust in authorities (Jolley & Douglas, 2014). During a pandemic, public panic and increased death toll can be severe consequences of CBs (Nerlich & Koteyko, 2012). CBs could harm the adherence to official recommendations, or people could even intentionally involve in risky behaviour (Pennycook et al., 2020). Imhoff and Lamberty (2020) revealed that there are differences in how different CBs influence containment-related behaviours (CRB), such as that those who believe that the risk of COVID-19 is much lower than officially reported tend not to follow the official recommendations, while those believing that the virus is man-made tend to prepare themselves better to avoid getting infected. Government behaviour and political trust might be crucial. Health officials and leaders need to persuade the public and contribute to adherence to containment measures (Van Bavel et al., 2020; Vinck et al., 2019).

Political trust can be defined as judgment of the citizens that the system and its representatives are responsive (Miller & Listhaug, 1990) and reliable (Blind, 2007). Political trust is not limited only to politicians, but also to (dis)trust in democratic institutions and procedures (e. g. Stolle & Hooghe, 2005). Furthermore, distrust in one institution is related to distrust in other institutions, indicating it is a one-dimensional phenomenon (Marien, 2011). The consequences of political (mis)trust continue to be understudied (Van der Meer, 2017). Research has shown that the citizens are more likely to adhere to government decisions if they perceive the system to be legitimate (Tyler & Huo, 2002), trustworthy (Rudolph & Evans, 2005), or acting for the common good (Dalton, 2004).

In most countries, the measures for fighting the epidemic have led to increased unemployment rates and decreased gross domestic product (GDP). Countries were faced with the question of finding a trade-off between GDP declines and deaths caused by the pandemic (Hall et al., 2020). Some experts argue that flattening the epidemic curve sharply steepens the recession curve (Gourinchas, 2020).

The first case of COVID-19 in Serbia was officially registered on 6th March 2020. On 15th March, a state of emergency was introduced. Two days later, a curfew was introduced, as well as additional restriction measures. The rules of effective crisis communication by the officials were violated, leading to citizens not taking the danger of the virus seriously and not adhering to preventive behaviours, and to damaged trust in key institutions and individuals (Kešetović, 2020). The state of emergency was revoked on 6th May, with the official total number of 9791 registered cases, with 203 deaths.<sup>2</sup>

In the present study, we aimed to explore whether there is an effect of CBs on CRB. We also tested whether political trust and preferences for saving lives and saving the economy mediate this relationship. We hypothesized the following:

**H1.** Higher conspiracy beliefs are related to lower adherence to containment-related behaviour.

**H2.** Individuals will be more prone to conspiracy beliefs during the state of emergency. We expect that the intensified crisis will contribute to stronger CBs, in accordance with previous research (Van Prooijen & Douglas, 2017).

**H3.** The correlations between conspiracy beliefs and containmentrelated behaviour will rise at the second time point. Declaring a state of emergency is a strong indicator of a crisis, and given that CBs increase in crisis contexts, we expect that people will be more prone to these beliefs, and in accordance with the first hypothesis, that CRB will decrease.

**H4.** The relationship between conspiracy beliefs and containmentrelated behaviour is mediated by political trust, preference for saving the economy and preference for saving lives, i.e. those who hold fewer CBs tend to adhere to more CRB due to higher political trust and preference for saving lives.

## 2. Method

## 2.1. Participants

The sample consisted of 349 adults from Serbia at the first time point (age M = 33.4, SD = 9.9, 66.5% female) and 441 participants at the second time point (age M = 33.5, SD = 10.7, 59% female). The sociodemographic structure of the samples is presented in Table 1.

## 2.2. Measures

## 2.2.1. COVID-19 conspiracy beliefs scale

The scale was created based on the most present CBs in social media at the time of creation (beginning of March, after the first case was registered). It included nine CBs (see Supplementary materials) with a 5level Likert scale (*completely disagree* to *completely agree*). The questionnaire items were constructed by analysing the comments of laypersons about coronavirus, mostly on social networks and internet news portals. Factor analysis was conducted on the sample as a whole (including both time points) and factor scores were used in further analyses. Two subscales were extracted. The *Harmless Virus* includes items whose content mostly refers to beliefs that coronavirus is harmless or even does not exist and that the hoax is used by certain agents who benefit from it (Cronbach's  $\alpha = 0.831$ ). *Hiding Information* includes items that do not deny the existence of the virus, but emphasize that the real information about it is hidden or intentionally distorted (Cronbach's  $\alpha$ = 0.859).

## 2.2.2. Containment-related behaviour

This scale consisted of seven behaviours that were recommended by the WHO and the authorities for preventing COVID-19 (see Supplementary materials). The answers were provided on a dichotomous yes/ no scale and the total count of positive answers was taken as a measure of adherence to containment-related behaviour (Cronbach's  $\alpha = 0.777$ ).

## Table 1

#### Socio-demographic structure of the sample (percentages).

Variable	Beginning of the	State of
	pandemic	emergency
Education		
High school	18.3	25.2
Undergraduate studies	32.1	36.7
Master's degree or higher	49.6	37.2
Residence		
Urban (>100,000 habitants)	74.2	71.2
Town (10,000–100,000 habitants)	18.6	18.8
Rural (<10,000 habitants)	7.1	10
Employment status		
Unemployed	9.5	10.7
Employed	69.3	59.4
Students	19.5	27.7
Retired	1.7	2.3

There is no significant difference between the two sub-samples in terms of age (t (783) = -0.120, p = .905). However, the samples differ in regard to education ( $\chi^2$  (2) = 12.289, p = .002) and gender ( $\chi^2$  (1) = 4.688, p = .032).

 $<sup>^2\,</sup>$  www.covid19.rs, the official government web page for providing COVID-19 related information.

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## 2.2.3. Political trust

*Political trust* was tested with six items, with a 5-point Likert scale (*not at all* to *completely*): How much trust do you have in: the Government, health system, the President, the Prime Minister, epidemiology experts, Ministry of Health (Cronbach's  $\alpha = 0.899$ ).

#### 2.2.4. Conspiracy mentality questionnaire (CMQ; Bruder et al., 2013)

We included this measure to validate our newly created conspiracy theories scale. The CMQ consists of five items, such as *I think that government agencies closely monitor all citizens* (Cronbach's  $\alpha = 0.796$ ).

## 2.2.5. Preference for saving the economy and for saving lives

Preference for saving the economy and for saving lives were measured with one item each (completely disagree to completely agree): The Serbian economy needs to be sustained even if it poses a health threat to people who have to go to work. and It is important to preserve people's health, even if it means that some workplaces must be closed.

## 2.3. Procedure

The first online questionnaire was launched on March 10 using the Google Forms platform. Data collection was open until March 13. One month after the first data portion was collected, we launched a second, independent, survey that included additional variables. The survey was launched online via Google Forms on 17th April and the last entry we included was on 5th May, a day before the state of emergency was revoked. The data was collected anonymously by a snowball method, and participants were to provide informed consent to take part in the study.

#### 2.4. Data analysis

The scales were normalized before entering into analyses and multivariate outliers were calculated by Mahalanobis distance and excluded. For testing differences between the two time points, analysis of covariance was performed to control for gender and education, since the samples differed significantly on these variables. Hierarchical regression analysis was conducted to predict CRB by CBs, political trust, and preference for lives and economy, with gender, age, and education as control variables. The software used was IMB SPSS 23.0. Finally, a path analysis was conducted using AMOS to check for mediating effects of political trust and preference for lives and economy on the relationship between CBs and CRB.

## 3. Results

Descriptives for all variables are provided in the Supplementary materials. Correlations of conspiracy mentality and CB scales designed for this study are high and significant: r(440) = 0.481, p < .001 for Harmless Virus, r(440) = 0.663, p < .001 for Hiding Information. Positive correlations suggest that CBs about coronavirus are indeed related to the wider narrative of conspiracy theories.

## 3.1. Differences between the two time points

Two ANCOVA tests were applied to test for differences in levels of CBs and CRB at T1 and T2, with gender and education as covariates. There is a significant difference in the level of CRB (F(1, 774) = 393.07, p < .001,  $\eta^2 = 0.373$ ; Fig. 1) when controlled for gender (F(1, 774) = 8.31, p = .004) and education (F(1, 774) = 2.87, p = .057). Beliefs that true information about coronavirus is being hidden also differ significantly between the two time points (F(1, 774) = 5.12, p = .024,  $\eta^2 = 0.006$ ); the main effect of gender is not significant (F(1, 774) = 1.66, p = .198), while the effect of education is (F(1, 774) = 4.21, p = .015). The difference is not significant when it comes to believing that coronavirus is harmless (F(1, 774) = 0.147, p = .702,  $\eta^2 = 0.001$ ). There is only the

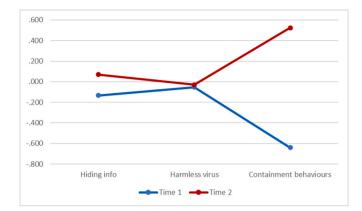


Fig. 1. Differences in conspiracy beliefs and containment-related behaviour at two time points.

main effect of education (F(1, 774) = 7.24, p = .001), and not that of gender (F(1, 774) = 0.496, p = .481). At both time points, those with a Master's degree or higher held less CBs than those with lower education levels.

#### 3.2. Relationship between CBs and CRB

CRB correlates negatively with both types of CBs at both time points (Table 2). The difference between coefficients at T1 and T2 is significant for CRB and Hiding Information (Z = 2.04, p = .041), but not for CRB and Harmless Virus (Z = 1.35, p = .176). Those who have more trust in institutions tend to adhere more to these behaviours, as well as those who prefer saving lives. On the other hand, those preferring saving the economy are less inclined to decreasing the risk of spreading the disease. Those holding more CBs also tend to prefer saving the economy.

Two regression analyses were conducted to test the model for predicting CRB at two time points (Table 3). At T1, the only significant predictor is the belief that the virus is harmless: those holding this CB tended to adhere less to CRB. This predictor remained significant after a state of emergency was introduced, with another important predictor emerging—political trust: those trusting more in the system adopted more CRB.

## 3.3. Mediation analysis

The fourth hypothesis assumed that political trust, beliefs about the economy and public health may be the mediators in the link between CBs and CRB. To test this, we conducted structural equation modelling analysis in AMOS. We set CBs as exogenous variables; political trust, beliefs about economy and public health were modelled as mediators, and CRB as the endogenous variable. We tried to fit a structural model where all these measures were modelled as latent variables. However, this model was unidentified, even when several additional parameters were modelled as fixed. Consequently, we modelled all variables as observed ones, i.e. we conducted a path analysis. We started with the full model described previously and removed the variables with insignificant pathways to the endogenous measure or the endogenous variables which showed no relation to the mediators. This resulted in the model presented in Fig. 2. The fit indices of the model are excellent ( $\chi^2(1) =$ 0.212, p = .645; NFI = 0.998; CFI = 1; RMSEA = 0.000), which wasexpected since all the modelled variables are observable ones and the non-significant pathways were removed from the model. The CB which involves hiding information on coronavirus and belief in the importance of the economy were removed from the model. Prioritizing public health in the time of the pandemic was an independent predictor of CRB with a positive coefficient ( $\beta = 0.12$ , p = .08). The belief that coronavirus is harmless had both a positive direct link to the CRB ( $\beta = -0.30, p < .001$ )

#### Table 2

Correlation coefficients between variables at the first and second measurement time points.

	1	2	3	4	5	6	7	8
1. Containment-related behaviour	_	0.066	0.108*	0.114*	-0.187**	-0.341**		
2. Gender	0.167**	-	-0.053	0.052	0.067	0.055		
3. Age	0.085	0.119*	-	0.204**	-0.042	-0.083		
4. Education	0.051	0.093	0.234**	-	$-0.137^{*}$	-0.192**		
5. Hiding information	-0.324**	-0.011	-0.054	-0.075	-	0.590**		
6. Harmless virus	-0.424**	-0.032	-0.002	-0.097*	0.660**	-		
7. Political trust	0.187**	0.040	-0.075	-0.055	-0.123**	-0.130**	-	
8. Preference for saving economy	$-0.142^{**}$	-0.201**	-0.042	0.072	0.215**	0.235**	-0.020	-
9. Preference for saving lives	0.114*	0.083	-0.080	-0.115*	-0.030	-0.033	0.181**	-0.269**

Note: Correlations at T1 are above the diagonal, at T2 below the diagonal.

\_\_\_\_\_*p* < .05.

p < .01.

## Table 3

Regression analysis results for predicting containment-related behaviour.

Predictor	Containment-related behaviour					
	Beginning pandemic	,	State of e	State of emergency		
	β	Sig.	β	Sig.		
Gender	0.086	0.089	0.148	0.001		
Age	0.079	0.128	0.062	0.166		
Education	0.030	0.569	-0.029	0.524		
Hiding information	0.018	0.777	-0.066	0.254		
Harmless virus	-0.344	< 0.001	-0.371	< 0.001		
F	10.417, p	10.417, <i>p</i> < .001		< .001		
R <sup>2</sup>	0.132 Step 2		0.193			
Gender			0.138	0.002		
Age			0.074	0.099		
Education			-0.015	0.739		
Hiding information			-0.056	0.333		
Harmless virus			-0.361	0.000		
Political trust			0.115	0.010		
Preference for saving economy			-0.001	0.978		
Preference for saving lives			0.061	0.180		
$\Delta F$			-6.632, p	-6.632, <i>p</i> < .001		
$\Delta R^2$			0.013			

and an indirect link via political trust: this CB was negatively related to political trust ( $\beta = -0.12$ , p = .07), while the latter measure was positively associated with CRB ( $\beta = 0.17$ , p < .001). Furthermore, the indirect effect of the belief that coronavirus is harmless on CRB was statistically significant as well:  $\beta = -0.02$ , p = .038. Hence, political trust partially mediated the link between the belief that coronavirus is

harmless and CRB – individuals who believe that the virus is not dangerous have lower levels of trust in the system in general, and consequently express protective behaviour to a lower extent. These three measures explained 15% of the CRB in total.

#### 4. Discussion

In this study, we tested several hypotheses about the relationship between conspiracy beliefs and behaviour related to public health: higher CBs are related to lower adherence to CRB; individuals are more prone to CBs during the state of emergency; the correlations between CBs and CRB will rise at the second time point; and the relationship between CBs and CRB is mediated by political trust, preference for saving the economy and preference for saving lives. The first and third hypotheses are confirmed, the second and fourth partially.

The results show that holding both beliefs that coronavirus is harmless and that the authorities are hiding information about it is related to less adherence to CRB. These findings are in accordance with the study by Imhoff and Lamberty (2020), but also with the general tendency proven before regarding infectious diseases (Ford et al., 2013; Vinck et al., 2019).

Introducing the state of emergency qualifies as a strong stressor, which was followed by introducing measures that extremely differ from ordinary daily experiences. One way of dealing with confusion and ambiguity was the proliferation of CBs, a process that is common in societal crisis contexts (Van Prooijen & Douglas, 2017). The level of adherence to CRB increased with the state of emergency: besides being obliged to adhere to measures, this increase may be due to the proportion of women in the sample, which is also indicated by regression analysis. It has been demonstrated that women tend to adhere more to

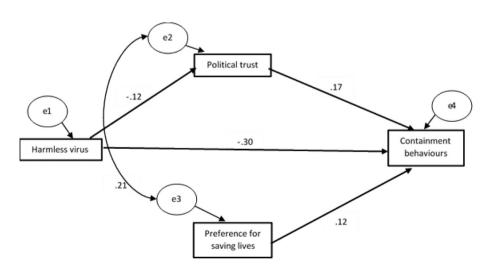


Fig. 2. Path analysis of the relations between conspiracy beliefs, political trust, preference for saving lives and containment-related behaviour.

preventive behaviours (Abdelrahman, 2020; Qian & Yahara, 2020). Those who believed that coronavirus is harmless continued believing so even after the state of emergency was introduced. Also, the belief that the government is hiding or distorting true information even increased during the emergency period.

Predicting CRB revealed interesting results. Shortly after the first cases of COVID-19 emerged in Serbia, beliefs that the virus is harmless predicted lower adherence to protective behaviours. During the state of emergency, these CBs remained the most significant predictor, followed by political trust - higher trust in the system predicted more adherence to CRB. In the study by Imhoff and Lamberty (2020), believing that coronavirus is a hoax had an effect on protective behaviours, comparable to our finding that believing that the virus is harmless reduces adherence to these behaviours. The correlations between CRB and CB rose at T2, although the change is not significant for Harmless Virus and CRB relationship. This could be due to a couple of reasons. First, since adherence to CRB rose markedly at T2, it is possible that we did not catch the change in correlation because of the sample size. Second, a state of emergency is a strong environmental stimulus, and when environmental stimuli are powerful, the role of individual differences decreases.

Mistrust in the government has been linked to health-related behaviours before (Han et al., 2020; Jolley & Douglas, 2014). Given that people are more prone to abide by laws and procedures of the government when they trust them (Marien, 2011; Tyler & Huo, 2002), it seems clear why our participants tended to behave less responsibly if they believed in the system less. Specifically, as indicated by path analysis, believing that the virus is harmless predicted lower adherence to CRB both directly and indirectly, via decreased political trust. In the UK, it was found that trusting the government to be able to effectively control the pandemic is related to following the government's regulations during the lockdown (Moxham-Hall & Strang, 2020). In a cross-country study during the current pandemic, it was found that the qualities of a trustworthy government are good organization in response to COVID-19, clear messages, competency, and perceived fairness (Han et al., 2020). The credibility and reliability of information about epidemics progressively decreased in Serbian citizens throughout the pandemic's course (Damnjanović et al., 2020). The citizens trusted least in politicians and traditional media sources. Furthermore, the lack of trust was related to specific events where the discrepancy between pandemicrelated events and the government's response was detected.

When it comes to preference for the economy or human lives, the former negatively correlates with CRB and positively with both sets of CBs, while the latter correlates positively only with the CRB. However, neither of these variables is a significant predictor of CRB. Certainly, one of the reasons for this outcome is the fact that these attitudes were measured by single items in our study, which reduced the reliability of the measures. Secondly, these specific attitudes can be expressions of broader ideological attitudes, i.e. the conservatism-liberalism dimension. It is plausible to expect that care for public health is more prominent in liberals, while the focus on preserving economy may be more expressed in conservatives. Since this is a novel topic, there are no data which explicitly test this assumption, but some existing findings are indeed in line with it (Kushner Gadarian et al., 2020). Furthermore, conservatives are less inclined to social distancing in the context of the pandemic and this effect can mostly be attributed to a lower perception of health risks and diminished trust in media reports (Rothgerber et al., 2020). Hence, broader ideological attitudes may be important in explaining CRB and its links to beliefs about the economy and public health in the context of epidemics - this may be a fruitful course of investigation in future studies.

Our findings speak in favour of the significance of detecting and battling CBs about a phenomenon such as a virus whose spreading led to a pandemic. Avoiding protective behaviours can have serious consequences. Studying CBs is of great importance because of their immense power (Smallman, 2018, pp. 8). Few studies before the outbreak of the

COVID-19 pandemic explored relationships between CBs and behaviours that help decrease the spreading of the virus. The increasing number of studies will help scientists and governments understand and thus be more prepared for future (unforeseen) events such as this one.

The study has several limitations. First, the cross-sectional design makes it difficult to infer any causality which may aid the explanation of the relationship between CBs and CRB. Second, the samples were convenient, i.e. the population that has no access or does not use social networks was not included. Inclusion of a wider sample was not possible due to the pandemic restrictions, therefore, any generalization is limited. Future studies should try and operationalize political trust in a different way so that it is clear what qualities the governing bodies should possess to be considered trustworthy. Also, the role of attitudes that indicate a preference for saving lives and saving the economy should be further explored, since it was demonstrated in our study that at least one of them has a significant effect on CRB. The lack of significance, in this case, could be due to their operationalization.

In conclusion, the study confirms how important political trust is for CRB and adherence to government measures in general. It also reveals that CBs affect the prevention of infectious diseases and that they should be especially tackled. The government and its bodies play an important role in the relationship between CBs and CRB, and there may lie one of the most important mechanisms for fighting the pandemic. We recommend that the governments consider regaining trust as one of the priorities in fighting the pandemic, alongside battling misinformation that feeds conspiracy beliefs. Joint actions by the media and the authorities could be helpful in achieving these aims, as well as providing more space for scientific and relevant statistical information.

## CRediT authorship contribution statement

**Tijana Karić:** Conceptualization, Formal analysis, Methodology, Writing – original draft. **Janko Međedović:** Conceptualization, Formal analysis, Methodology, Validation, Writing – review & editing.

## Declaration of competing interest

#### None.

The data used in this study is available at https://osf.io/5csj2/.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.paid.2021.110697.

#### References

- Abdelrahman, M. (2020). Personality traits, risk perception, and protective behaviors of Arab residents of Qatar during the COVID-19 pandemic. *International Journal of Mental Health and Addiction*, 1–12. https://doi.org/10.1007/s11469-020-00352-7.
- Blind, P. K. (2007, June). Building trust in government in the twenty-first century: Review of literature and emerging issues. In 7th Global Forum on Reinventing Government Building Trust in Government (pp. 26–29). UNDESA Vienna.
- Bruder, M., Haffke, P., Neave, N., Nouripanah, N., & Imhoff, R. (2013). Measuring individual differences in generic beliefs in conspiracy theories across cultures: Conspiracy Mentality Questionnaire. *Frontiers in Psychology*, 4, 225. https://doi.org/ 10.3389/fpsyg.2013.00225.
- Dalton, R. J. (2004). Democratic challenges, democratic choices: The erosion of political support in advanced industrial democracies. Oxford University Press.
- Damnjanović, K., Ilić, S., Lep, Ž., Manojlović, M., & Teovanović, P. (2020). Psihološki profil pandemije u Srbiji [Psychological profile of the pandemic in Serbia]. Psychosocial Innovation Network. https://doi.org/10.13140/RG.2.2.23937.28002.
- Dredze, M., Broniatowski, D. A., & Hilyard, K. M. (2016). Zika vaccine misconceptions: a social media analysis. Vaccine, 34(30), 3441–3442 (doi:10.1016%2Fj. vaccine.2016.05.008).
- Ford, C. L., Wallace, S. P., Newman, P. A., Lee, S. J., & Cunningham, W. E. (2013). Belief in AIDS-related conspiracy theories and mistrust in the government: Relationship with HIV testing among at-risk older adults. *The Gerontologist*, 53(6), 973–984. https://doi.org/10.1093/geront/gns192.
- Gourinchas, P. O. (2020). Flattening the pandemic and recession curves. In R. Baldwin, & B. Weder di Mauro (Eds.), *Mitigating the COVID economic crisis: Act fast and do whatever* (pp. 31–40). CEPR Press.

- Hall, R. E., Jones, C. I., & Klenow, P. J. (2020). Trading off consumption and covid-19 deaths (no. w27340). Federal Reserve Bank of Minneapolis Quarterly Review, 42(1). https://doi.org/10.21034/qr.4211.
- Han, Q., Zheng, B., Cristea, M., Agostini, M., Belanger, J., Gutzkow, B., ... Leander, P. (2020). Trust in government and its associations with health behaviour and prosocial behaviour during the COVID-19 pandemic. PsyArXiv https://psyarxiv.com/p5gns/.
- Imhoff, R., & Lamberty, P. (2020). A bioweapon or a hoax? The link between distinct conspiracy beliefs about the coronavirus disease (COVID-19) outbreak and pandemic behaviour. *Social Psychological and Personality Science*, 11(8), 1110–1118. https:// doi.org/10.1177%2F1948550620934692.
- Jolley, D., & Douglas, K. M. (2014). The effects of anti-vaccine conspiracy theories on vaccination intentions. *PLoS One*, 9(2), Article e89177. https://doi.org/10.1371/ journal.pone.0089177.
- Kalichman, S. C. (2009). Denying AIDS: Conspiracy theories, pseudoscience and human tragedy. Copernicus Books, Springer Science and Business Media.
- Kešetović, Ž. (2020). Crisis communication in the COVID-19 pandemic in the Republic of Serbia – Between Hippocrates and Machiaveli. *The Culture of Polis, 27*, 151–165. Retrieved from https://kpolisa.com/KPP2020\_2/EN/11.KesetovicEN.pdf.
- Kushner Gadarian, S., Goodman, S. W., & Pepinsky, T. B. (2020). Partisanship, health behaviour, and policy attitudes in the early stages of the COVID-19 pandemic. *Social Science Research Network*. https://doi.org/10.2139/ssrn.3562796 (advance online publication).
- Marien, S. (2011). Measuring political trust across time and space. In S. Zmerli, & M. Hooghe (Eds.), *Political trust. Why context matters* (pp. 13–37). ECPR Press.
- Miller, A. H., & Listhaug, O. (1990). Political parties and confidence in government: A comparison of Norway, Sweden and the United States. *British Journal of Political Science*, 357–386. https://doi.org/10.1017/s0007123400005883.
- Moxham-Hall, V., & Strang, L. (2020). Public opinion and trust in government during a public health crisis. https://www.kcl.ac.uk/news/public-opinion-and-trust-in-g overnment-during-a-public-health-crisis.
- Nerlich, B., & Koteyko, N. (2012). Crying wolf? Biosecurity and metacommunication in the context of the 2009 swine flu pandemic. *Health & Place*, 18(4), 710–717. https:// doi.org/10.1016/j.healthplace.2011.02.008.
- Pennycook, G., McPhetres, J., Zhang, Y., & Rand, D. (2020). Fighting COVID-19 misinformation on social media: Experimental evidence for a scalable accuracy nudge intervention. PsyArXiv. https://doi.org/10.31234/osf.io/uhbk9.
- van Prooijen, J. W., & Acker, M. (2015). The influence of control on belief in conspiracy theories: Conceptual and applied extensions. *Applied Cognitive Psychology*, 29(5), 753–761. https://doi.org/10.1002/acp.3161.
- Qian, K., & Yahara, T. (2020). Mentality and behavior in COVID-19 emergency status in Japan: Influence of personality, morality and ideology. *PLoS One*, 15(7), Article e0235883.
- Rothgerber, H., Wilson, T., Whaley, D., Rosenfeld, D. L., Humphrey, M., Moore, A. L., & Bihl, A. (2020). Politicizing the COVID-19 pandemic: Ideological differences in adherence to social distancing. PsyArXiv. https://doi.org/10.31234/osf.io/k23cv.

- Rudolph, T. J., & Evans, J. (2005). Political trust, ideology, and public support for government spending. American Journal of Political Science, 49(3), 660–671. https:// doi.org/10.1111/j.1540-5907.2005.00148.x.
- Smallman, S. (2018). Whom do you trust? Doubt and conspiracy theories in the 2009 influenza pandemic. *Journal of International & Global Studies*, 6(2), 1–24. https ://www.lindenwood.edu/files/resources/1-24.pdf.
- Stolle, D., & Hooghe, M. (2005). Inaccurate, exceptional, one-sided or irrelevant? The debate about the alleged decline of social capital and civic engagement in Western societies. *British Journal of Political Science*, 35(1), 149–167. https://doi.org/ 10.1017/s0007123405000074.
- Swami, V., Coles, R., Stieger, S., Pietschnig, J., Furnham, A., Rehim, S., & Voracek, M. (2011). Conspiracist ideation in Britain and Austria: Evidence of a monological belief system and associations between individual psychological differences and real-world and fictitious conspiracy theories. *British Journal of Psychology*, 102(3), 443–463. https://doi.org/10.1111/j.2044-8295.2010.02004.x.

Tyler, T., & Huo, Y. J. (2002). Trust in the law. Russell Sage Foundation.

- Van Bavel, J. J., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., ... Drury, J. (2020). Using social and behavioural science to support COVID-19 pandemic response. *Nature Human Behaviour*, 1–12. https://doi.org/10.1038/ s41562-020-0884-z.
- Van der Meer, T. W. (2017). Political trust and the "crisis of democracy". In Oxford research encyclopedia of politics. https://doi.org/10.1093/acrefore/ 9780190228637.013.77.

Van Prooijen, J. (2018). The psychology of conspiracy theories. Routledge.

- Van Prooijen, J. W., & Douglas, K. M. (2017). Conspiracy theories as part of history: The role of societal crisis situations. *Memory Studies*, 10(3), 323–333 (doi:10.1177% 2F1750698017701615).
- Van Prooijen, J. W., & van Dijk, E. (2014). When consequence size predicts belief in conspiracy theories: The moderating role of perspective taking. *Journal of Experimental Social Psychology*, 55, 63–73. https://doi.org/10.1016/j. iesp.2014.06.006.
- Vinck, P., Pham, P. N., Bindu, K. K., Bedford, J., & Nilles, E. J. (2019). Institutional trust and misinformation in the response to the 2018–19 Ebola outbreak in North Kivu, DR Congo: A population-based survey. *The Lancet Infectious Diseases*, 19(5), 529–536. https://doi.org/10.1016/S1473-3099(19)30063-5.
- Wood, M. J. (2018). Propagating and debunking conspiracy theories on Twitter during the 2015–2016 Zika virus outbreak. *Cyberpsychology, Behaviour and Social Networking*, 21(8), 485–490. https://doi.org/10.1089/cyber.2017.0669.
- Wood, M. J., Douglas, K. M., & Sutton, R. M. (2012). Dead and alive: Beliefs in contradictory conspiracy theories. Social Psychological and Personality Science, 3(6), 767–773 (doi:10.1177%2F1948550611434786).
- Zonis, M., & Joseph, C. M. (1994). Conspiracy thinking in the Middle East. Political Psychology, 3, 443–459. https://doi.org/10.2307/379156.