COVID-19 related anxieties do not decrease support for liberal democracy

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Abstract

The COVID-19 pandemic led to widespread fear among the population. Early studies suggested that this resulted in exclusionary attitudes and increased support for discriminatory policy measures. We still lack an understanding of the longer-term, potentially erosive consequences that COVID-19 specific anxieties may carry for citizens' commitment to liberal democratic norms. In this research note, we present evidence from an original experiment in which we manipulate individuals' cognitive accessibility of their fears related to COVID-19. We implemented this experiment in Hungary and Romania – two cases where illiberal attitudes are most likely to amplify under conditions of fear – a year and a half after the outbreak of the pandemic. The results show that our intervention is successful in elevating respondents' levels of worry, anxiety, and fear when thinking about infectious diseases like COVID-19. However, these emotions do not carry secondary effects on individuals' levels of right-wing authoritarianism, nationalism, or outgroup hostility, nor do they affect preferences for specific discriminatory policy measures aimed to fight a potential resurgence of COVID-19. We discuss these findings in light of the literature on the demand-side determinants of democratic backsliding and the consequences of emotions on political behaviour.

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Introduction

When people experience fear, their appraisal tendencies change towards more protective behaviors, and they perceive threats and risk more pessimistically (Lerner & Keltner, 2000; Lerner *et al.*, 2003; Druckman & McDermott, 2008). The number of people rapidly infected with the virus causing COVID-19, and the high death toll that followed increased fear and intensified anxieties among the public (Degerman *et al.*, 2020; Ahorsu *et al.*, 2020). Widespread lack of information, such as the one individuals experienced during the early stages of the pandemic, can trigger a psychological need for certainty, defensive reactions, and a strong desire for security (Lambert *et al.*, 2011; Jonas *et al.*, 2014). Research carried out during the first stage of the pandemic confirms that citizens' approval of extreme policies meant to combat the spread of Sars-CoV-2, but at odds with liberal democratic norms increased (Alsan *et al.*, 2020; Amat *et al.*, 2020; Bol *et al.*, 2021; Barto *et al.*, 2021). We know much less about the effects of the pandemic beyond its peak and the potential negative effects of the fears that individuals experienced in relation to COVID-19.

Considering the existing literature pointing to an erosion of liberal-democratic attitudes during the pandemic, it appears critical to understand how citizens' experience with the crisis affected their support for liberal-democratic norms. If the experience of fear and anxieties related to the pandemic would lastingly impact citizens' support for liberal democracy, we should most likely observe any such effect in the newer member states of the European Union that are most challenged in their democratic consolidation. In regimes experiencing authoritarian innovations, political elites have been more willing to centralize power during the health crisis (Rapeli & Saikkonen, 2020) and opt for measures more restrictive of fundamental rights (Engler *et al.*, 2021). In this context, the attitudes of citizens less committed to democratic norms could support elites' illiberal agendas.
In this research note, we present empirical evidence of an original experiment conducted in two Central Eastern European countries - Romania and Hungary - one and a half years after the onset of the pandemic. Romania and Hungary are representative cases for regimes struggling with democratic consolidation (Ganev, 2013; Enyedi, 2020). The restrictive measures required to deal with the pandemic were coupled with an accumulation of power in the hands of opportunistic incumbents with track records of illiberal agendas. This increased concerns of an erosion of democratic norms and structures (Guasti, 2020). The public in such post-communist settings also has greater tendencies towards right-wing authoritarianism, ethnocentrism and illiberalism compared to the public in the European Union's Western half (Hooghe & Marks, 2018; Anghel, 2020). In the absence of deep-seated liberal-democratic values among citizens, and given the illiberal agenda of governing elites, the effects of the pandemic might be lasting and particularly pronounced. To estimate the potentially erosive consequences of the pandemic on citizens' support for liberal democracy, in our study, we exogenously manipulate individuals' cognitive accessibility of fears related to COVID-19. To do so, we exploit the transient lower salience and presence of COVID-19 during August 2021. At this time, the number of new COVID-19 cases and deaths hit its lowest point since the start of the pandemic (Johns Hopkins University, 2022), while the overall threat of new variants remained real (World Health Organisation, 2021).

Our results show that this experimental manipulation is successful. Respondents in the treatment group experience significantly greater levels of worry, anxiety, and fear when thinking about in-

fectious diseases like COVID-19. The results also demonstrate that these greater anxieties do not carry secondary effects on individuals' broader levels of right-wing authoritarianism, nationalism or their outgroup hostility, nor do they influence individuals' preferences for authoritarian or discriminatory policy measures aimed to fight a potential resurgence of COVID-19. This finding holds across a range of different modeling strategies and is independent of how the various attributes of the different concepts are represented in a low dimensional space.

In drawing attention to the lack of negative consequences of the COVID-19 experience on citizens' attitudes and their liberal-democratic values in situations where we are most likely to encounter such effects, our results suggest that early concerns raised by political scientists were too pessimistic. In fact, citizens' liberal-democratic attitudes may be more resistant to punctuated violations of liberal-democratic norms in the wake of the COVID-19 health crisis than previously assumed. These results contribute to a finetuning of the literature related to the demand-side determinants of democratic backsliding. Finally, the findings of our study show the limited impact of fears perceived during enduring health crises on people's culturally conservative political attitudes.

The article is organized as follows. First, we offer a concise review of the literature on the effects of fears and anxiety on individuals' political attitudes with a particular view to integrate the existing evidence on the related (early) effects of fear of COVID-19. In doing so, we highlight the need to understand the implications of the pandemic for citizens' key liberal-democratic attitudes beyond its initial shock. Second, we introduce our research design, aimed to understand such potentially harmful and lasting political consequences in two countries most likely to be affected due to political elites' propensity to nurture support for anti-liberal agendas, and because of wider spread illiberal attitudes in the population. Third, we present the results of our study. We conclude by discussing the role that a strategic amplification and manipulation of anxieties by political elites may play in nurturing authoritarian attitudes among the public.

COVID-19 and the effects of fear on political attitudes

The literature concerned with understanding the effects of emotions on political behavior agrees that the experience of fear has important consequences on individuals' decision-making and their political attitudes (Brader & Marcus, 2013). Individuals experience fear and anxiety[1] when their emotionality reacts to certain events that are perceived as threatening, dangerous or highly novel in nature. Anxiety dominates over other emotions when individuals deal with an uncontrollable source of threat, or one that cannot be overcome (Lazarus, 1991). Political scientists have studied the implications of such kinds of behavior with respect to individuals' reaction to terrorist attacks (Merolla & Zechmeister, 2009; Albertson & Gadarian, 2015), organized crime (Vilalta, 2016), immigration (Brader *et al.*, 2008), economic downturns (Kopasker *et al.*, 2018), or deadly viral outbreaks (Brader & Marcus, 2013; Clifford & Jerit, 2018).

[1] We follow the tradition in political psychology to use these concepts interchangeably (see Brader & Marcus, 2013; Wagner & Morisi, 2019).

The global COVID-19 pandemic led to widespread fear among the population (Ahorsu *et al.*, 2020), creating what some observers identified as a 'culture of fear' (Gruchoa & Sawek-Czochra, 2021). The initial spread of an indiscriminate virus, coupled with individuals' lack of control over environmental conditions and their personal safety nurtured illiberal attitudes among citizens. Potential bodily contamination triggers disgust in individuals, a powerful driver for social conservatism (Aarøe *et al.*, 2020). Studies concerned with infectious disease salience in a society demonstrate that threats related to pathogen contamination make people less extraverted and more risk-averse (Schaller & Murray, 2008), more xenophobic (Faulkner *et al.*, 2004), and more ethnocentric (Navarrete & Fessler, 2006). The acceptance of ethnic and national diversity, the prioritization of individual rights and freedoms, and the support of limited constitutional government are key liberal attitudes (Norris & Inglehart, 2019). Studies show that the early experience of the pandemic affected these attitudes. Hartman *et al.* (2021) shows that perceptions of threat stemming from the virus causing COVID-19 are strongly associated with nationalism, right-wing authoritarianism, and outgroup derogation in the UK and Ireland (see also Lu *et al.* (2021) for similar results in the context of the US). Filsinger & Freitag (2022) demonstrate that reported levels of fear and worry predict authoritarian attitudes in four Western European countries (Germany, Switzerland, Italy, and the UK) during the second wave of the pandemic (late 2020 to spring 2021). Dipoppa *et al.* (2021) argues that the threat of infection triggered violence against certain minority groups, leading to an increase in hate crimes at the onset of the pandemic in Italy. Barto *et al.* (2021) study citizens' early responses to the pandemic in the Czech Republic, showing that the salience of the COVID-19 crisis increased their hostility against foreigners in a behavioral experiment.

Such findings are in line with research from political psychology, showing that individuals cope with threat by readily modifying their attitudes towards other individuals, in particular towards those who are not part of their social ingroup (Merolla & Zechmeister, 2009). These studies also show that under conditions of a prolonged salience of infectious diseases within a society, such exclusionary norms may become culturally formalized (Karwowski *et al.*, 2020; Bieber, 2022). Thus, it becomes important to investigate what the effects of the pandemic beyond its peak are. In unconsolidated democracies (such as Romania) or hybrid regimes (such as Hungary)–where exclusionary and illiberal tendencies are already widespread among the population–this formalization of exclusionary norms should be particularly likely in response to COVID-19 related anxieties. Following these arguments, we test the following hypotheses:

> **H1**: Individuals who experience fear of COVID-19 display higher levels of **a)** right-wing authoritarianism, **b)** nationalism, and **c)** outgroup-hostility.

Beyond affecting individuals' authoritarian, outgroup hostile, or nationalist attitudes, the experience of fear of COVID-19 might also directly shape citizens' preferences for specific policies designed to fight the spread and the resurgence of COVID-19 through new strains and variants. Scientists agree that there is a high probability to observe pandemics similar to COVID-19 in the coming decades (Marani *et al.*, 2021). To respond to future health crises, governments might choose to implement similar mitigation measures. Policy measures used to combat the spread of COVID-19 included not only the compulsory use of facial masks or public lockdowns and the obligation to quarantine, all of which are established approaches to handling epidemics and pandemics (Hays,

2009). Governments across the world also proposed policies that involve infringements of individual rights (Jørgensen *et al.*, 2021), curtail the balance of powers (Bolleyer & Salát, 2021), and could challenge the fundamentals of democratic rule (Goetz & Martinsen, 2021). Several studies document that citizens' approval of extreme policies meant to combat the spread of the virus, but at odds with liberal democratic norms, increased under the impression of fear and anxiety at the height of the pandemic (Alsan *et al.*, 2020; Amat *et al.*, 2020). Marbach *et al.* (2020) demonstrate that the implementation of such policies lastingly increased authoritarian values in four Western European democracies. While in established democracies liberal democratic norms may have worked to create resistance to these illiberal policy measures to some extent (Arceneaux *et al.*, 2020), the same may not hold true in countries where liberal democratic norms are less entrenched in society. In light of these arguments, we assume that when individuals recall their fears related to the pandemic, they are more likely to support illiberal policy measures aimed at containing the spread of the virus, that include discriminatory practices. The emotional experience of fear related to COVID-19 may directly affect their policy preferences should a similar threat re-emerge. Thus, we test the following hypotheses:

> **H2**: When under conditions of fear of COVID-19, individuals are more likely to approve of **a)** authoritarian, **b)** nationalist, and **c)** outgroup-hostile policies related to COVID-19.

Research design

To test our hypotheses, we draw on an original experimental design that allows us to exogenously manipulate the cognitive accessibility of fear of COVID-19.[2] The timing of the study is critical. The pandemic was central in people's decision-making processes during its onset (Bol *et al.*, 2021). By August 2021, the dominance of health concerns in the minds of most citizens reduced significantly. The number of new COVID-19 cases and deaths hit its lowest point since the start of the pandemic (Johns Hopkins University, 2022), while the more contagious COVID-19 Omicron variant was still to be reported. Across most European countries, including Romania and Hungary, the society and the economy reopened with restrictions partially lifted, and the vaccination campaign was underway. Citizens resumed pre-pandemic practices like holiday traveling or returning to their offices for work.[3] At the same time, scientists urged to maintain efforts to prevent transmission (World Health Organisation, 2021), warning that new waves no less harmful might hit countries during autumn and winter. As governments maintained the state of emergency, further restrictions

[2] Our experiment has received ethical approval and has been pre-registered in a pre-analysis plan available at the Open Science Framework. This plan also includes our survey in English, Romanian and Hungarian. We fielded this experimental study simultaneously in Hungary and Romania in the first two weeks of August 2021 and recruited more than 2800 respondents through an online survey company (1449 Hungarian respondents and 1427 Romanian respondents). The online survey company (TGM Research) provided access to nationally representative samples according to age, gender, and the region inhabited. The survey was carried out in Romanian and Hungarian, respectively. Native-speaking political scientists translated the survey.

[3] According to Eurostat, August 2021 recorded the most promising signs of recovery to pre-COVID figures in terms of the number of nights spent in tourist accommodation establishments in the EU (Eurostat, 2021).By September of 2021 approximately 40% of all global office workers would return to the office (Wakefield, 2021).

of individual rights and elite manipulations of democratic norms and structures continued to be a possibility.

These conditions are favorable to *experimentally* study whether the anxieties that individuals experienced due to the pandemic have downstream consequences for their political attitudes and their authoritarian inclinations. They allow us to manipulate the cognitive accessibility of individuals' fears related to the pandemic in a random subset of the sample. To do so, half of the respondents recall and describe their fears in open-ended questions (i.e., we apply a 'bottom-up' approach to induce fear (Wagner & Morisi, 2019); for similar designs see e.g., Kettle & Salerno (2017); Kugler *et al.* (2012); Lerner & Keltner (2000)). We first ask them to share three things that made them feel afraid during the peak of the COVID-19 pandemic, after which they describe in greater detail one situation during the COVID-19 pandemic that made them feel most afraid.[4]. Respondents are instructed to picture that situation in such a way that it would make other people feel afraid too. We deliberately avoid specifying what we consider the peak of the COVID-19 pandemic to be, and we do not provide any specific examples of situations that could have made people afraid. This strategy aims to accommodate the variety of individual experiences which may have triggered fear and anxiety related to COVID-19.

We field the study in two Central and Eastern European (CEE) countries with low levels of democratic consolidation, Romania and Hungary. These are two most likely cases (Gerring, 2017) to see illiberal attitudes amplify in response to anxieties induced by the pandemic.[5] Hungary was a frontrunner of post-communist transition that did not rise to expectations of rapid democratization and descended into authoritarianism (Magyar & Madlovics, 2020). Since 2014, the vote of a majority of the Hungarian population reconfirmed in office the party of Prime Minister Viktor Orban, Fidesz. Under PM Orban's leadership, Fidesz altered the functioning of democratic institutions as early as 2010, and pushed for an exclusionary heteronormative, white, Christian composition of the Hungarian society. Romania was considered a laggard of the transition–reflected in its late accession to the EU in 2007–and continues to stagnate in its democratic consolidation (European Commission, 2021). Although initial concerns of Romania's descent into authoritarianism following its post-communist transition did not materialize, incumbents frequently challenge judicial independence and self-servingly manipulate democratic institutions (Lacatus & Sedelmeier, 2020). Unlike the case of Hungary, Romania's illiberal elites cannot easily be linked to a single party. . The population protested against obvious instances of corrupt practices, but entrenched clientelism and frequent cabinet changes have ensured the dominance of cross-party illiberal views and practices regardless (Protsyk & Matichescu, 2011; Gherghina & Volintiru, 2017).

The pandemic provided Romanian and Hungarian elites with the opportunity to further pursue such agendas. The policy measures enacted by the Romanian or Hungarian governments included

[4] See Figure S1 in the SI.

[5] Poland and Bulgaria share similar attributes and are two alternative most likely cases to observe an effect of COVID-19 anxieties on citizens' illiberal attitudes. Due to financial constraints and our knowledge of languages spoken in the respective countries, we limit our analysis to Hungary and Romania. Our choice of cases also allows us to hold constant incumbents' responses to the pandemic; unlike other national populists in government, neither the Hungarian nor the Romanian incumbents undermined or downplayed the significance and severity of the COVID-19 pandemic.

actions that minimized the role of courts in balancing discretionary executive actions, put the military in charge of civil objectives such as hospitals, and minimized freedom of speech to limit anti-government dissent. In the case of Romania, it also provided government representatives with the opportunity to intensify a defamatory agenda against the Constitutional Court which ruled against COVID-19 related illegal government policies. These governments also endorsed policies that discriminated against minorities or immigrants. In Romania, the Roma community fell victim to brutal interventions by law enforcement (Amnesty International, 2020). Authorities pursued discriminatory policies to isolate mostly Romani communities from the rest of the population. In Hungary, observers reported hate crimes against the Asian community (Bard & Uszkiewicz, 2020) that were never sanctioned by Hungarian authorities. State representatives also branded foreigners or ethnic minorities as scapegoats for spreading the virus. Hungarian PM Viktor Orban declared that 'primarily foreigners brought in the disease, and that it is spreading among foreigners.' Orban used the virus to advance his long-established anti-immigration policy to abolish asylum rights (Euronews, 2020). Representatives of the Romanian government urged and dissuaded citizens who lived or worked outside the country not to return to Romania (Paun, 2020); those who did return at the start of the pandemic were forced into institutionalised confinement by an executive order soon to be struck down as unconstitutional (Romanian Constitutional Court, 2020). At the same time, mainstream media amplified politicians' racist undertones to show the influx of ethnic Romani returning from Western Europe (Chiruta, 2021). We study two central outcome variables: higher-level authoritarian attitudes and specific preferences for authoritarian COVID-19 policy measures to combat the spread of the virus.[6] To test the first set of hypotheses (H1a-c), we measure respondents' authoritarian attitudes according to the six-item 'Very Short Authoritarianism' (VSA) scale (Bizumic & Duckitt, 2018). To estimate the effects of fear of COVID-19 on nationalist attitudes, we complement this six-item VSA scale with three more questions measuring respondents' nationalist attitudes. These questions ask respondents about their emotional attachment to their country, the importance of the birthplace as a major component of their identity (proxy for nativism), and whether they have a strong national devotion that places their own country above all others. Finally, we measure respondents' outgroup-hostile sentiments by asking them about their approval of a set of statements related to the political rights of the diaspora, immigration by ethnic groups (of the same 'race' and of different 'race'), the impact of immigration on the functioning of the economy, and on the quality of life within their country, more generally. Tables S1 and S2 in the SI show the exact question wording of all items.

To test the second set of hypotheses (H2a-c) and to measure individuals' support for COVID-19 specific policy measures, we ask respondents about their (dis-)approval of a set of specific policies that were discussed in the context of the pandemic. Such policies would go against fundamental principles of liberal democracy that include institutional checks and balances on executive power, respect for the rule of law, human rights such as minority rights, and civil liberties. We broadly group these policies into three categories: authoritarian policy measures that relate to constitutional breaches or the concentration of executive power, nationalist policies that relate to the abso-

[6] Note that in the survey experimental design, we first measure higher-level attitudes and then COVID-19 policy preferences. This is to avoid the subconscious experience of a recall of fear of COVID-19 in the control group when answering questions related to the pandemic before the questions related to higher-level authoritarian, nationalist, and outgroup-hostile attitudes.

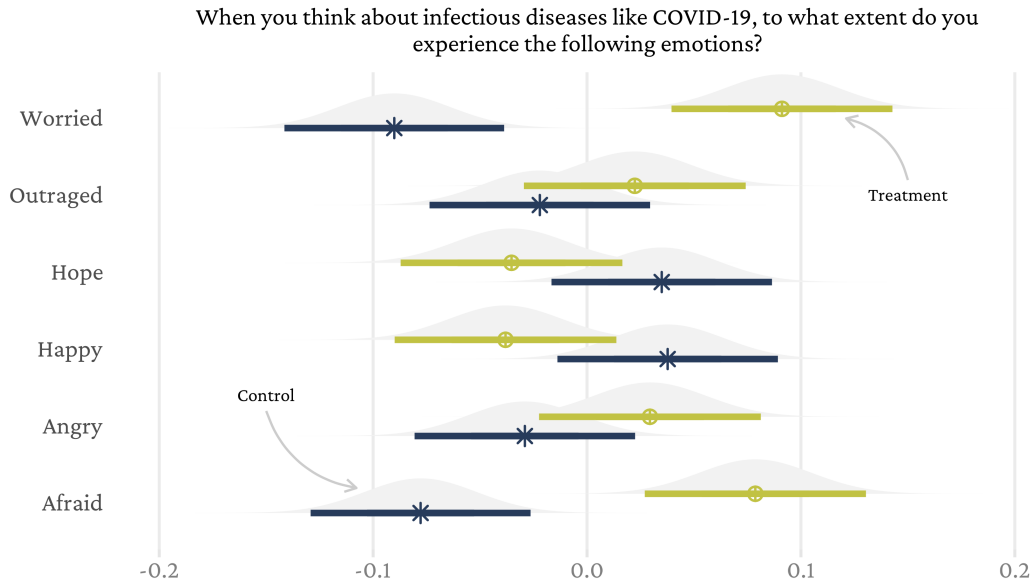

Figure 1: Means of emotional responses among treatment and control group when thinking about infectious diseases like COVID-19.

lute prioritization of the respective country's national interests when faced with the COVID-19 crisis, and outgroup-hostile policies that relate to the enforcement of strict immigration policies and to outgroup-specific limitation of freedom of movement during the pandemic. All these COVID-19 containment policies were discussed by the Romanian or the Hungarian executives.

Results

We begin by discussing the effectiveness of our fear treatment. Our recall questions in the treatment condition were meant to increase individuals' cognitive accessibility of fears and anxieties related to COVID-19. On average, respondents spent 22 seconds answering these questions, recalling what made them feel afraid during the COVID-19 pandemic. If our experimental manipulation was successful, we should observe that individuals in the treatment condition, on average, feel more worried and afraid when thinking about infectious diseases such as COVID-19. To assess whether this is the case, respondents report on the feelings they experience when thinking about infectious diseases like COVID-19. This manipulation check is included *after* respondents answer all the questions related to our outcome variables of interest (Kane & Barabas, 2019). Figure 1 shows the average levels of emotional responses among individuals in the treatment and control groups along with the respective confidence distributions around these sample means. The graph demonstrates that individuals who were assigned to the "fear of COVID-19" condition display significantly higher lev-

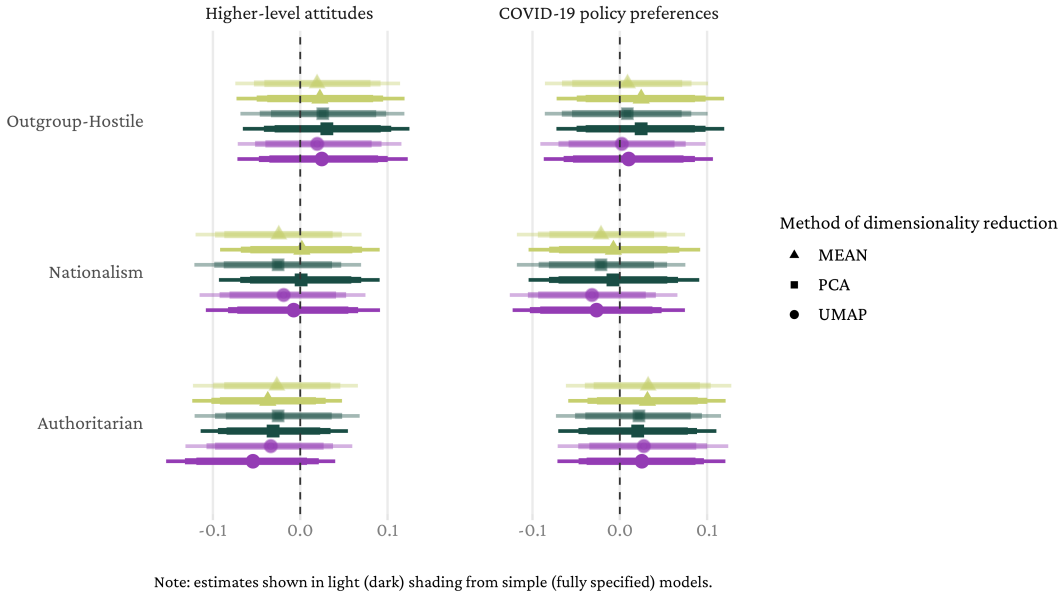

Figure 2: The effect of fear of COVID-19 on authoritarian, nationalist, and outgroup-hostile attitudes (left panel) and related COVID-19 policy measures (right panel). Point estimates along with 90%, 95%, and 99% bootstrapped percentile confidence intervals obtained from 5000 bootstrap resamples.

els of fear and worry.[7] Having recalled their fears experienced during the peak of the COVID-19 pandemic, respondents feel more anxious and concerned when thinking about infectious diseases like COVID-19. While they also report somewhat lower levels of happiness and hopefulness and greater levels of anger and outrage, these differences are not statistically significant.[8] Most importantly for the theoretical pursuit of our study, however, we find that treated respondents do experience significantly higher levels of being afraid and worried in relation to infectious diseases. This proves that our experimental manipulation was successful.[9] This strengthens our confidence in the validity of our design and in the inferences we draw from studying the differences among respondents in the treatment and control groups with respect to their levels of support for illiberal norms and policies.

[7] To ease the visual interpretation of the differences between treatment and control group, all respective variables in Figure 1 have been standardized to zero mean and unit standard deviation. Table S4 in the SI reports the respective mean values, standard deviations, and the difference in means between treatment and control group in the unstandardized data.

[8] Figure S2 in the SI shows there are strong positive correlations between the emotional states of feeling worried and afraid and between feeling angry and outraged (pearson's $r > 0.5$). There is also a modest positive correlation between feeling angry and worried (pearson's $r > 0.3$) and a modest negative correlation between feeling hopeful and afraid (pearson's $r < -0.3$). There are no statistically significant differences in these general patterns among treatment and control group.

[9] In addition to assessing mean levels on the manipulated emotions among treated and control respondents, native speakers checked the overall quality of the replies to the open-ended fear recall questions to gauge whether the increased feelings of fear and anxiety might reflect a genuine recall of individuals' fears during the pandemic.

Can we observe any such effects of fear of COVID-19 one and a half years after the onset of the pandemic? We next look at the variation that fear of COVID-19 explains in the three conceptual dimensions of interest. Figure 2 shows that when under the impression of fear of COVID-19, individuals do not express greater preferences for authoritarian policies during a crisis such as the COVID-19 pandemic (see Table S6 in the SI for full results).[10] We also do not observe any secondary effects on their broader levels of right-wing authoritarianism, outgroup-hostility, or nationalism.[11] All 90%, 95%, and 99% confidence intervals obtained from estimating our model on 5000 bootstrap resamples of the data include zero. We obtain the same results when accounting for any potential variation among treatment and control group that may persist even after randomization (for balance statistics see Table S3 in the SI).[12] We account for variation in respondents' gender, their age, their level of education, the degree of urbanity of their place of residence, self-identification with an ethnic minority group, their level of religiosity, their satisfaction with the work of their respective government, whether they had been infected with the SARS-CoV 2 virus that causes COVID-19, whether they are vaccinated against the disease, and for the current COVID-19 incidence rate in their region at the time of answering the survey.[13] The fully specified models including these covariates are shown in light shading in Figure 2. These results are also independent of the choice of a dimensionality reduction method.[14] We rely on three different such methods: the simple means of all items, their first principals of a principal component analysis (PCA), and their components obtained from a non-linear algorithm that maximally preserves the data's dimensionality relying on stochastic gradient descent (UMAP).[15] Under any of these dimensionality reduction methods, the differences among respondents in the treated and control group are statistically insignificant.[16]

Figure S3 in the SI presents the corresponding results of a total of 72 different regressions fitted separately for each country. Figure S4 in the SI further shows that with respect to the various subitems there are also no statistically significant differences between those respondents who recalled their fears related to the COVID-19 pandemic and those who did not, neither among Hungarian nor Romanian respondents. While this recall task was successful in elevating respondents' fears and anxieties related to infectious diseases like COVID-19, these fears do not entail any downstream effects on individuals' levels of authoritarianism, outgroup hostility, or nationalism. They also do

[10] Respondents in the treatment (control) condition, on average, score 4.67 (4.56) on the averaged scale of preferences for authoritarian COVID-19 policies, 5.32 (5.26) on the averaged scale of outgroup-hostile COVID-19 policies, and 4.26 (4.3) on the averaged scale of nationalist COVID-19 policies.

[11] Respondents in the treatment (control) condition, on average, score 5.7 (5.71) on the averaged scale of right-wing authoritarianism, 5.25 (5.26) on the averaged scale of outgroup-hostility, and 7.03 (7.04) on the averaged scale of nationalism.

[12] The standardized difference between covariate means of treatment and control groups is not statistically significant ($p<0.05$) for any of these variables.

[13] Among these covariates, some are consistent predictors for high levels of authoritarianism: respondents with low levels of education, supportive of the government and those that consider religion to be an important part of their life rank highest in authoritarian attitudes and in preferences for respective policy-measures meant to contain the spread of the virus.

[14] As we use several question items to tap into the different relevant outcome dimensions of interest, we reduce this higher dimensional data (two to six items per dimension, see Tables S1 and S2 in the SI) to a single, lower dimension in an effort to make the results more interpretable and accessible to readers.

[15] For a more detailed discussion of these different techniques that each help to reduce the various question items to a single outcome dimension with a different emphasis on maintaining the information contained in the respective full set of original items, please see the SI.

[16] Tables S6 to S7 in the SI report full results of the respective regression analyses underlying the estimates in Figure 2.

not carry any impact on their preferences for related kinds of policies to fight the spread of the virus.

Conclusion

This study examines whether fears associated with the COVID-19 pandemic amplify illiberal attitudes among citizens. Previous literature suggests that when people experience anxiety, they have a greater tolerance for violations of liberal democratic norms and are more likely to support discriminatory public safety measures. Exploiting the transient lower salience and presence of COVID-19 in August 2021, we experimentally manipulate COVID-19 related anxieties among a random subset of respondents. We study two most likely cases in the European Union to see such attitudes amplify: Romania and Hungary are both countries that are challenged in their democratic consolidation. Our experimental manipulation is successful in increasing individuals' cognitive accessibility of the fears and anxieties they felt during the peak of the COVID-19 pandemic. These anxieties, however, do not result in lower support for fundamental principles of liberal democracy and do not trigger higher levels of authoritarianism, nationalism, and out-group hostility.

In showing that citizens' liberal attitudes are less vulnerable to fears and anxieties than previously assumed, the results of our study appear encouraging for scholars concerned with the demand-side determinants of democratic backsliding across Europe. Our results are also important for policy makers who aim to predict the political effects of imminent future epidemics. Future research should extend these insights to other political contexts that vary in terms of the prevalence of authoritarian inclinations or the extent to which democratic norms are internalized among citizens. While our study deliberately adopts a bottom-up approach to analyze the effects of people's personal fears related to the COVID-19 pandemic on their illiberal attitudes, more research is necessary to understand whether such anxieties could still pose a threat to citizens' support for liberal democracy when strategically engineered by elites (top-down). Finally, the results of our study suggest that anxieties experienced during health crises, unlike anxieties experienced during economic crises or domestic crises resulting from terrorist attacks, are not associated with higher levels of anger – an emotion that is powerfully linked to illiberal attitudes (Wagner, 2014; Vasilopoulou & Wagner, 2017). This finding may be of interest to scholars concerned with understanding the (lack of) transformative impact of crises on the cultural dimension of political conflict across Europe.

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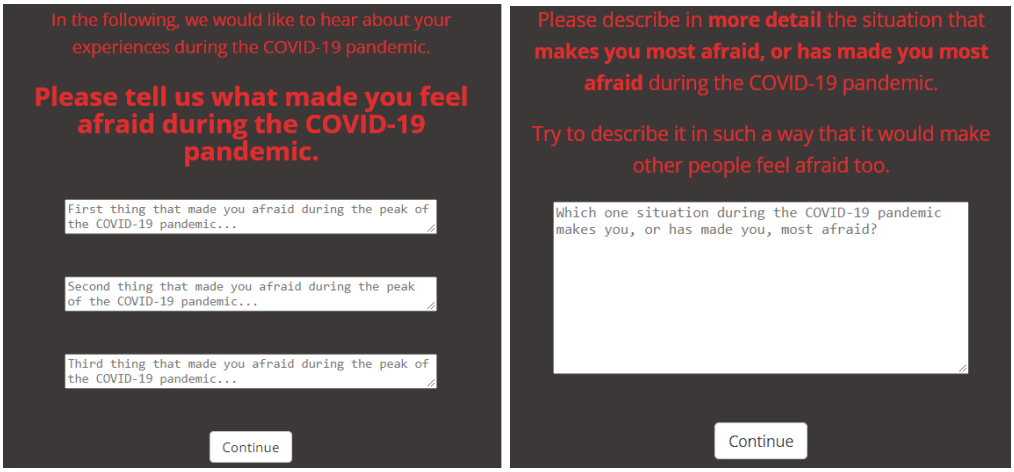


Figure S1: Fear recall questions presented to respondents in the treatment group. Left panel shows first question prompt, right panel shows following question prompt.

Supplementary Information

Experimental stimulus

Figure S1 shows the question prompts presented to individuals in the treatment group. The left panel shows the first question prompt that asked individuals to mention three things that made them feel afraid during the peak of the COVID-19 pandemic. The right panel shows the question prompt that followed and asked individuals to describe in more detail the situation that makes or made them most afraid in such a way that would make other people feel afraid, too. Drawing on research on the subconscious effects that colors have on individuals' emotional reactions, we present the fear recall questions on a black background with red text (Hupka *et al.*, 1997).

Items of outcome dimensions

Tables S1 and S2 show the different items that compose the different outcome dimensions. We introduced the different items measuring respondents' COVID-19 policy preferences with a short pretext ("While the numbers of COVID-19 cases are currently low, [Country] might still need to adopt policy-measures to contain the spread of the virus in the upcoming months. Please tell us how much you could personally approve of the following policies in this situation.").

Descriptive statistics

Table S3 presents descriptive statistics on the mean, standard deviation, minimum and maximum values of relevant covariates among treated and control units in Hungary and Romania. The table also shows how each variable is distributed by presenting inline histograms and boxplots.

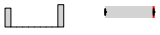
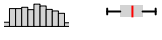
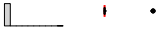
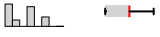
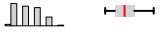
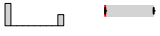
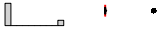
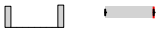
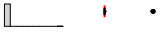
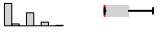
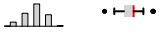
Table S1: Items measuring higher-level attitudes related to right-wing authoritarianism, outgroup-hostility, and nationalism

Authoritarian		
1	R	Its great that many young people today are prepared to defy authority.
2		What our country needs most is discipline, with everyone following our leaders in unity.
3		Gods laws about abortion, pornograpyh, and marriage must be strictly followed before it is too late.
4	R	There is nothing wrong with premarital sexual intercourse.
5	R	Our society does NOT need tougher government and stricter laws.
6		The facts on crime and the recent public disorders show we have to crack down harder on troublemakers if we are going to preserve law and order.
Nationalist		
1		How emotionally attached do you feel to [Country]?
2		The interests of my country come before those of all other nations, including countries that are in desperate need
3		Being born in [Country] and having ancestry here is an important component of having a [Country] identity.
Outgroup-hostile		
1		[Country] citizens who live in [Country] should have a bigger say in how to run the country than those who left [Country]
2		[Country] should allow people of the same race or ethnic group as most [Country citizens] to come and live here
3		[Country] should allow people of a different race or ethnic group as most [Country citizens] to come and live here
4		Is it generally bad or good for [Country]'s economy that people come to live here from other countries?
5		Is [Country] made a worse or a better place to live by people coming to live here from other countries?

Table S2: Items measuring right-wing authoritarian, outgroup-hostile, and nationalist COVID-19 policy preferences

Authoritarian	
1	The Constitutional Court should refrain from intervening to check every executive decision.
2	It is more important for the government to act fast than closely follow legal procedures.
3	The military should be allowed to take over some of the duties of the government.
4	Public safety needs to take precedence over freedom of movement.
5	Public safety needs to take precedence over freedom of expression.
6	Public safety needs to take precedence over minority rights.
Nationalist	
1	[Country] should not consider sharing personal protective equipment (PPE) or vaccines with other nations.
2	The government should make it more difficult for [Country] trained medical personnel to leave the country and work somewhere else.
Outgroup-hostile	
1	[Country] should impose tougher border controls and checks on the returning workforce.
2	[Country] should be ready to impose tough immigration controls to keep those who are not [Country] citizens out.

Table S3: Summary statistics by treatment and control

	Treatment				Control				Diff. adj. means (p-value)
	Mean	SD	[Min, Max]		Mean	SD	[Min, Max]		
Hungary									
Female	0.54	0.50	[0, 1]		0.49	0.50	[0, 1]		0.06
Age	42.11	13.08	[18, 66]		43.42	13.36	[18, 68]		0.07
Diaspora	0.01	0.10	[0, 1]		0.00	0.06	[0, 1]		0.15
Urbanity	2.28	1.15	[1, 5]		2.33	1.16	[1, 5]		0.49
Education	3.18	1.10	[1, 6]		3.13	1.14	[1, 6]		0.44
Minority	0.03	0.18	[0, 1]		0.02	0.15	[0, 1]		0.32
Religion Life	0.33	0.47	[0, 1]		0.33	0.47	[0, 1]		0.98
Religious Service	1.65	0.95	[1, 5]		1.65	0.95	[1, 5]		0.98
Support Government	2.98	3.32	[0, 10]		3.28	3.45	[0, 10]		0.11
Pol. News Consumption	2.86	1.21	[1, 6]		2.86	1.17	[1, 6]		0.96
Covid Infection	0.19	0.39	[0, 1]		0.16	0.37	[0, 1]		0.16
Covid Vaccination	0.65	0.48	[0, 1]		0.67	0.47	[0, 1]		0.64
Incidence (Survey)	8.18	4.48	[2.84, 21.94]		8.66	4.74	[2.84, 21.94]		0.06
Romania									
Female	0.51	0.50	[0, 1]		0.49	0.50	[0, 1]		0.45
Age	41.95	12.50	[18, 66]		42.28	12.81	[18, 66]		0.64
Diaspora	0.01	0.11	[0, 1]		0.00	0.07	[0, 1]		0.12
Urbanity	1.93	1.11	[1, 5]		1.98	1.14	[1, 5]		0.40
Education	3.88	0.90	[1, 6]		3.82	0.92	[1, 6]		0.25
Minority	0.08	0.27	[0, 1]		0.08	0.27	[0, 1]		0.92
Religion Life	0.65	0.48	[0, 1]		0.61	0.49	[0, 1]		0.20
Religious Service	2.26	1.01	[1, 5]		2.20	0.96	[1, 5]		0.23
Support Government	2.87	2.89	[0, 10]		2.72	2.82	[0, 10]		0.35
Pol. News Consumption	3.02	1.34	[1, 6]		3.17	1.38	[1, 6]		0.06
Covid Infection	0.22	0.41	[0, 1]		0.22	0.41	[0, 1]		1.00
Covid Vaccination	0.56	0.50	[0, 1]		0.51	0.50	[0, 1]		0.06
Incidence (Survey)	12.06	8.16	[3.2, 33.98]		12.64	8.85	[3.2, 47.39]		0.22

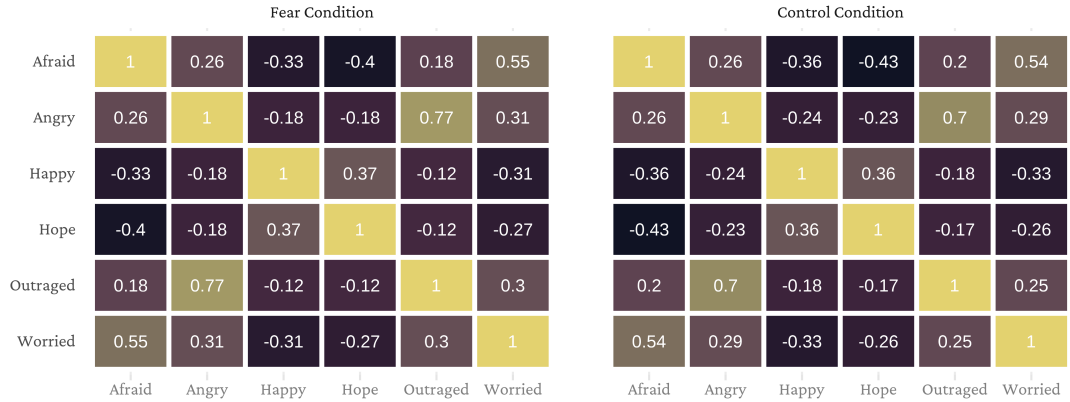


Figure S2: Heat map of correlations between different emotional states among treated and control respondents.

Analyses

Heat Map of Emotion States

Figure S2 shows a heat map of the bivariate correlations between the different emotional states that respondents reported in the treatment and control groups. We find strong positive correlations between the emotional states of feeling worried and afraid and between feeling angry and outraged (pearson's r > 0.5). There is a modest positive correlation between feeling angry and worried (pearson's r > 0.3) and a modest negative correlation between between feeling hopeful and afraid (pearson's r < -0.3). There are no statistically significant differences in these general patterns between treatment and control groups.

Table S4: Means and standard deviations of manipulated emotions among treated and control respondents

	Control (N=1446)		Treatment (N=1430)			
	Mean	Std. Dev.	Mean	Std. Dev.	Diff. in Means	Std. Error
Hope	5.45	3.28	5.22	3.34	-0.23	0.12
Afraid	3.87	2.83	4.32	2.89	0.45	0.11
Outraged	5.41	2.62	5.53	2.66	0.12	0.10
Happy	3.37	2.40	3.19	2.40	-0.18	0.09
Worried	5.82	1.95	6.17	1.94	0.35	0.07
Angry	5.21	2.51	5.36	2.66	0.15	0.10

Group Differences in Emotion States

In addition to the visual presentation of group differences in respondents' (standardized) manipulated emotions presented in Figure 1, Table S4 shows the group means and respective differences in the unstandardized data.

Table S5: First and second principal components of each conceptually relevant dimension and amount of variance explained by each component.

Country	Dimension	Principal Component	N Items	% Variance Explained
COVID-19 Policies				
Hungary	**Authoritarian**	**1**	**6**	**0.52**
Hungary	Authoritarian	2	6	0.16
Romania	**Authoritarian**	**1**	**6**	**0.47**
Romania	Authoritarian	2	6	0.17
Hungary	**Outgroup-Hostile**	**1**	**2**	**0.70**
Hungary	Outgroup-Hostile	2	2	0.30
Romania	**Outgroup-Hostile**	**1**	**2**	**0.80**
Romania	Outgroup-Hostile	2	2	0.20
Hungary	**Nationalist**	**1**	**2**	**0.58**
Hungary	Nationalist	2	2	0.42
Romania	**Nationalist**	**1**	**2**	**0.59**
Romania	Nationalist	2	2	0.41
General Attitudes				
Hungary	**Authoritarian**	**1**	**6**	**0.39**
Hungary	Authoritarian	2	6	0.18
Romania	**Authoritarian**	**1**	**6**	**0.26**
Romania	Authoritarian	2	6	0.22
Hungary	**Outgroup-Hostile**	**1**	**5**	**0.44**
Hungary	Outgroup-Hostile	2	5	0.18
Romania	**Outgroup-Hostile**	**1**	**5**	**0.41**
Romania	Outgroup-Hostile	2	5	0.22
Hungary	**Nationalist**	**1**	**3**	**0.66**
Hungary	Nationalist	2	3	0.21
Romania	**Nationalist**	**1**	**3**	**0.73**
Romania	Nationalist	2	3	0.15

PCA reduced outcome dimensions

Principal Component Analysis (PCA) is an unsupervised, non-parametric statistical technique frequently used for dimensionality reduction. It reduces a larger set of variables into a smaller set, while maintaining most of the information contained in the initial variables. The new variables ('principal components') are constructed as linear combinations of all underlying variables that are uncorrelated with each other. Most of the information contained in the larger set of initial variables is compressed into the first components. PCA, thus, puts maximum possible information of the underlying variables into the first component. This allows us to reduce the dimensionality in our data by focusing on the first component(s) and discarding the remaining components that only add little additional information of lower eigenvalues. Table S5 shows the metrics of the PCA that we conducted to arrive at the conceptually relevant outcome dimensions of interest. We show the first two components and the amounts of variance in the initial set of variables that can be explained by these three components. The percentage of variance explained by each principal component is the eigenvalue of each component divided by the sum of all eigenvalues. As can be seen in Table S5, the first principal of the well-established short right-wing authoritarian scale (Bizumic & Duckitt,

2018) only explains around a third of the variance of the data in both countries. To address this shortcoming, and to assess the robustness of our results with respect to an entirely different way of reducing our data's dimensionality, we also report the results from using the first component of a so-called uniform manifold approximation and projection (UMAP). We discuss this in greater detail below.

Table S6 shows the effect of fear of COVID-19 on authoritarian, outgroup-hostile, and nationalist policy measures in response to the pandemic. The dependent variables are first principal components of the respective dimensions. We report confidence intervals from 5000 bootstrap resamples stratified by countries.

Table S7 shows the effect of fear of COVID-19 on broader levels of authoritarian, outgroup-hostile, and nationalist attitudes that are not specifically related to the pandemic.

Table S6: Preferences for authoritarian, outgroup-hostile, and nationalist COVID-19 measures in response to fear of COVID-19 (outcomes: PCA)

	Authoritarian		Outgroup-Hostile		Nationalist	
	Simple	Full	Simple	Full	Simple	Full
COVID-19 Fear	0.02	0.02	0.01	0.02	-0.02	-0.01
	[-0.05; 0.09]	[-0.05; 0.09]	[-0.07; 0.08]	[-0.05; 0.10]	[-0.09; 0.05]	[-0.08; 0.07]
Female		0.12		0.07		-0.02
		[0.05; 0.19]		[0.00; 0.15]		[-0.10; 0.05]
Age		0.00		0.01		0.00
		[-0.01; -0.00]		[0.00; 0.01]		[-0.00; 0.01]
Urbanity		0.00		-0.01		-0.01
		[-0.04; 0.03]		[-0.05; 0.02]		[-0.04; 0.03]
Education		-0.12		-0.08		-0.06
		[-0.15; -0.08]		[-0.12; -0.05]		[-0.09; -0.02]
Gov. Support		0.11		0.06		0.04
		[0.10; 0.12]		[0.05; 0.08]		[0.02; 0.05]
Pol. News		-0.03		-0.02		-0.06
		[-0.06; 0.00]		[-0.05; 0.02]		[-0.10; -0.03]
Church Attendance		-0.02		0.00		0.01
		[-0.06; 0.03]		[-0.05; 0.04]		[-0.04; 0.06]
Religion Important		0.23		0.21		0.13
		[0.15; 0.32]		[0.12; 0.30]		[0.04; 0.22]
Covid Infection		0.04		-0.01		-0.03
		[-0.04; 0.13]		[-0.11; 0.08]		[-0.12; 0.06]
Covid Incidence Rate		0.00		0.00		-0.01
		[-0.01; 0.00]		[-0.01; 0.00]		[-0.01; -0.00]
Minority		-0.16		-0.15		0.05
		[-0.33; 0.00]		[-0.32; 0.04]		[-0.11; 0.21]
Diaspora		-0.37		-0.60		-0.71
		[-0.74; 0.01]		[-1.01; -0.18]		[-1.11; -0.28]
Intercept	-0.01	-0.03	0.00	-0.17	0.01	0.28
	[-0.07; 0.05]	[-0.25; 0.19]	[-0.07; 0.06]	[-0.41; 0.06]	[-0.05; 0.07]	[0.04; 0.52]
R^2	0	0.176	0	0.072	0	0.039
Num.Obs.	2876	2665	2876	2665	2876	2665

Note: dependent variables are first principal components of the respective dimensions. 95% percentile confidence intervals from 5000 bootstrap resamples stratified by countries.

Table S7: Authoritarian, outgroup-hostile, and nationalist attitudes in response to fear of COVID-19 (outcomes: PCA)

	Authoritarian		Outgroup-Hostile		Nationalist	
	Simple	Full	Simple	Full	Simple	Full
COVID-19 Fear	-0.03	-0.03	0.03	0.03	-0.03	0.00
	[-0.10; 0.05]	[-0.09; 0.03]	[-0.05; 0.10]	[-0.04; 0.10]	[-0.10; 0.05]	[-0.07; 0.07]
Female		-0.04		-0.05		-0.02
		[-0.10; 0.03]		[-0.12; 0.02]		[-0.09; 0.05]
Age		0.00		0.01		0.02
		[0.00; 0.01]		[0.01; 0.01]		[0.02; 0.02]
Urbanity		0.03		0.00		-0.01
		[-0.01; 0.06]		[-0.04; 0.03]		[-0.05; 0.02]
Education		-0.07		-0.12		-0.11
		[-0.10; -0.04]		[-0.16; -0.09]		[-0.15; -0.08]
Gov. Support		0.09		0.02		0.07
		[0.08; 0.10]		[0.01; 0.04]		[0.06; 0.08]
Pol. News		-0.05		-0.07		0.01
		[-0.07; -0.02]		[-0.11; -0.04]		[-0.02; 0.04]
Church Attendance		0.18		0.02		0.04
		[0.13; 0.22]		[-0.03; 0.07]		[-0.01; 0.08]
Religion Important		0.56		0.18		0.33
		[0.48; 0.64]		[0.09; 0.27]		[0.25; 0.41]
Covid Infection		-0.01		0.04		0.01
		[-0.09; 0.07]		[-0.05; 0.13]		[-0.07; 0.10]
Covid Incidence Rate		0.00		0.00		-0.01
		[-0.01; 0.00]		[-0.01; 0.00]		[-0.01; -0.00]
Minority		-0.10		-0.08		-0.51
		[-0.26; 0.06]		[-0.26; 0.10]		[-0.69; -0.34]
Diaspora		0.05		-0.36		0.01
		[-0.40; 0.51]		[-0.91; 0.16]		[-0.38; 0.36]
Intercept	0.01	-0.49	-0.01	0.25	0.01	-0.66
	[-0.05; 0.08]	[-0.69; -0.28]	[-0.08; 0.05]	[0.00; 0.48]	[-0.05; 0.07]	[-0.88; -0.43]
R^2	0	0.265	0	0.075	0	0.182
Num.Obs.	2876	2665	2876	2665	2876	2665

Note: dependent variables are first principal components of the respective dimensions. 95% percentile confidence intervals from 5000 bootstrap resamples stratified by countries.

UMAP reduced outcome dimensions

UMAP is a non-linear dimensionality reduction algorithm first introduced by McInnes *et al.* (2018). It is based on ideas from topological data analysis and is particularly well-suited to balance the emphasis of the local versus the global structure of the data. Relying on the concept of k-nearest neighbor, UMAP tries to optimize the results through stochastic gradient descent. To do so, it first calculates the distance between the different points in high dimensional space, while projecting

them onto the low dimensional space and calculating the distance between the different points in this respective low dimensional space. Using stochastic gradient descent, it then tries to minimize the difference between these distances.

Table S8 shows the effect of fear of COVID-19 on authoritarian, outgroup-hostile, and nationalist policy measures in response to the pandemic. The dependent variables are first UMAP components of the respective dimensions. We report confidence intervals from 5000 bootstrap resamples stratified by countries.

Table S9 shows the effect of fear of COVID-19 on broader levels of authoritarian, outgroup-hostile, and nationalist attitudes that are not specifically related to the pandemic.

Table S8: Preferences for authoritarian, outgroup-hostile, and nationalist COVID-19 measures in response to fear of COVID-19 (outcomes: UMAP)

	Authoritarian		Outgroup-Hostile		Nationalist	
	Simple	Full	Simple	Full	Simple	Full
COVID-19 Fear	0.03	0.03	0.00	0.01	-0.03	-0.03
	[-0.05; 0.10]	[-0.05; 0.10]	[-0.07; 0.08]	[-0.06; 0.09]	[-0.11; 0.04]	[-0.10; 0.05]
Female		0.15		-0.01		-0.01
		[0.07; 0.22]		[-0.08; 0.07]		[-0.08; 0.07]
Age		0.00		0.00		0.00
		[-0.01; -0.00]		[-0.00; 0.01]		[-0.00; 0.00]
Urbanity		-0.01		-0.01		-0.01
		[-0.04; 0.03]		[-0.05; 0.03]		[-0.05; 0.03]
Education		-0.09		-0.05		-0.05
		[-0.13; -0.06]		[-0.09; -0.02]		[-0.09; -0.01]
Gov. Support		0.07		0.04		0.01
		[0.06; 0.08]		[0.03; 0.05]		[-0.00; 0.02]
Pol. News		-0.04		0.00		-0.05
		[-0.08; -0.01]		[-0.03; 0.03]		[-0.08; -0.02]
Church Attendance		-0.04		0.02		0.01
		[-0.09; 0.01]		[-0.03; 0.07]		[-0.03; 0.06]
Religion Important		0.16		0.11		0.05
		[0.07; 0.25]		[0.02; 0.20]		[-0.04; 0.14]
Covid Infection		-0.01		-0.09		-0.04
		[-0.10; 0.08]		[-0.18; 0.01]		[-0.13; 0.06]
Covid Incidence Rate		0.00		0.00		-0.01
		[-0.01; 0.00]		[-0.01; 0.00]		[-0.01; -0.00]
Minority		-0.11		-0.14		-0.01
		[-0.28; 0.07]		[-0.32; 0.03]		[-0.17; 0.15]
Diaspora		-0.21		-0.18		-0.51
		[-0.62; 0.20]		[-0.61; 0.28]		[-0.94; -0.06]
Intercept	-0.01	0.23	0.00	-0.02	0.02	0.35
	[-0.07; 0.05]	[-0.00; 0.46]	[-0.06; 0.06]	[-0.26; 0.23]	[-0.05; 0.08]	[0.11; 0.60]
R^2	0	0.085	0	0.028	0	0.017
Num.Obs.	2876	2665	2876	2665	2876	2665

Note: dependent variables are dimensions obtained by UMAP. 95% percentile confidence intervals from 5000 bootstrap resamples stratified by countries.

Table S9: Authoritarian, outgroup-hostile, and nationalist attitudes in response to fear of COVID-19 (outcomes: UMAP)

	Authoritarian		Outgroup-Hostile		Nationalist	
	Simple	Full	Simple	Full	Simple	Full
COVID-19 Fear	-0.03	-0.05	0.02	0.02	-0.02	-0.01
	[-0.11; 0.04]	[-0.13; 0.02]	[-0.05; 0.09]	[-0.05; 0.10]	[-0.09; 0.05]	[-0.08; 0.07]
Female		0.02		0.02		-0.02
		[-0.06; 0.10]		[-0.06; 0.09]		[-0.09; 0.06]
Age		0.00		0.01		0.01
		[-0.00; 0.00]		[0.00; 0.01]		[0.01; 0.01]
Urbanity		-0.01		0.02		-0.01
		[-0.04; 0.03]		[-0.02; 0.05]		[-0.04; 0.03]
Education		-0.04		-0.04		-0.06
		[-0.08; 0.00]		[-0.08; -0.00]		[-0.10; -0.02]
Gov. Support		0.00		0.00		0.04
		[-0.01; 0.01]		[-0.01; 0.02]		[0.03; 0.05]
Pol. News		-0.03		-0.03		0.02
		[-0.06; 0.01]		[-0.06; 0.00]		[-0.01; 0.05]
Church Attendance		0.01		0.05		-0.01
		[-0.03; 0.05]		[0.00; 0.09]		[-0.05; 0.04]
Religion Important		0.12		0.04		0.30
		[0.04; 0.21]		[-0.06; 0.13]		[0.21; 0.39]
Covid Infection		0.12		-0.05		-0.06
		[0.03; 0.21]		[-0.14; 0.05]		[-0.15; 0.03]
Covid Incidence Rate		0.00		0.00		0.00
		[-0.01; 0.00]		[-0.00; 0.01]		[-0.01; 0.00]
Minority		-0.14		-0.15		-0.25
		[-0.30; 0.02]		[-0.31; 0.01]		[-0.39; -0.12]
Diaspora		-0.01		-0.30		-0.28
		[-0.45; 0.41]		[-0.72; 0.10]		[-0.65; 0.12]
Intercept	0.02	0.13	-0.01	-0.13	0.01	-0.44
	[-0.05; 0.08]	[-0.13; 0.37]	[-0.07; 0.05]	[-0.38; 0.11]	[-0.05; 0.07]	[-0.67; -0.20]
R^2	0	0.01	0	0.025	0	0.075
Num.Obs.	2876	2665	2876	2665	2876	2665

Note: dependent variables are dimensions obtained by UMAP. 95% percentile confidence intervals from 5000 bootstrap resamples stratified by countries.

Simple means reduced outcome dimensions

Table S10 shows the effect of fear of COVID-19 on authoritarian, outgroup-hostile, and nationalist policy measures in response to the pandemic. The dependent variables are simple means of all items belonging to the respective dimensions. We report confidence intervals from 5000 bootstrap resamples stratified by countries.

Table S11 shows the effect of fear of COVID-19 on broader levels of authoritarian, outgroup-hostile, and nationalist attitudes that are not specifically related to the pandemic.

Table S10: Preferences for authoritarian, outgroup-hostile, and nationalist COVID-19 measures in response to fear of COVID-19 (outcomes: mean)

	Authoritarian		Outgroup-Hostile		Nationalist	
	Simple	Full	Simple	Full	Simple	Full
COVID-19 Fear	0.03	0.03	0.01	0.02	-0.02	-0.01
	[-0.04; 0.10]	[-0.04; 0.10]	[-0.07; 0.08]	[-0.05; 0.10]	[-0.09; 0.05]	[-0.08; 0.07]
Female		0.12		0.07		-0.03
		[0.05; 0.19]		[0.00; 0.15]		[-0.10; 0.05]
Age		0.00		0.01		0.00
		[-0.01; -0.00]		[0.00; 0.01]		[-0.00; 0.01]
Urbanity		0.00		-0.01		-0.01
		[-0.03; 0.03]		[-0.05; 0.02]		[-0.04; 0.03]
Education		-0.12		-0.08		-0.05
		[-0.16; -0.08]		[-0.12; -0.05]		[-0.09; -0.02]
Gov. Support		0.11		0.06		0.04
		[0.10; 0.12]		[0.05; 0.08]		[0.02; 0.05]
Pol. News		-0.03		-0.02		-0.06
		[-0.06; 0.00]		[-0.05; 0.02]		[-0.09; -0.03]
Church Attendance		-0.01		0.00		0.01
		[-0.05; 0.03]		[-0.05; 0.04]		[-0.04; 0.06]
Religion Important		0.21		0.21		0.13
		[0.13; 0.30]		[0.12; 0.30]		[0.04; 0.22]
Covid Infection		0.05		-0.01		-0.03
		[-0.04; 0.13]		[-0.11; 0.08]		[-0.12; 0.06]
Covid Incidence Rate		0.00		0.00		-0.01
		[-0.01; 0.00]		[-0.01; 0.00]		[-0.01; -0.00]
Minority		-0.15		-0.15		0.05
		[-0.32; 0.01]		[-0.32; 0.04]		[-0.11; 0.21]
Diaspora		-0.39		-0.60		-0.72
		[-0.75; -0.03]		[-1.02; -0.18]		[-1.12; -0.29]
Intercept	-0.02	0.00	0.00	-0.17	0.01	0.26
	[-0.07; 0.05]	[-0.21; 0.22]	[-0.07; 0.06]	[-0.41; 0.06]	[-0.05; 0.07]	[0.02; 0.50]
R^2	0	0.177	0	0.072	0	0.039
Num.Obs.	2876	2665	2876	2665	2876	2665

Note: dependent variables are dimensions obtained by mean aggregation. 95% percentile confidence intervals from 5000 bootstrap resamples stratified by countries.

Table S11: Authoritarian, outgroup-hostile, and nationalist attitudes in response to fear of COVID-19 (outcomes: mean)

	Authoritarian		Outgroup-Hostile		Nationalist	
	Simple	Full	Simple	Full	Simple	Full
COVID-19 Fear	-0.03	-0.04	0.02	0.02	-0.02	0.00
	[-0.10; 0.05]	[-0.10; 0.03]	[-0.05; 0.09]	[-0.05; 0.09]	[-0.10; 0.05]	[-0.07; 0.07]
Female		-0.03		-0.05		-0.02
		[-0.10; 0.04]		[-0.12; 0.03]		[-0.09; 0.05]
Age		0.00		0.01		0.02
		[0.00; 0.01]		[0.01; 0.01]		[0.02; 0.02]
Urbanity		0.02		-0.01		-0.01
		[-0.01; 0.06]		[-0.04; 0.03]		[-0.05; 0.02]
Education		-0.06		-0.13		-0.11
		[-0.09; -0.03]		[-0.16; -0.09]		[-0.15; -0.08]
Gov. Support		0.09		0.02		0.07
		[0.07; 0.10]		[0.01; 0.04]		[0.06; 0.08]
Pol. News		-0.05		-0.07		0.01
		[-0.08; -0.02]		[-0.10; -0.04]		[-0.02; 0.04]
Church Attendance		0.16		0.03		0.04
		[0.12; 0.21]		[-0.02; 0.07]		[-0.01; 0.08]
Religion Important		0.53		0.18		0.33
		[0.45; 0.61]		[0.10; 0.28]		[0.24; 0.41]
Covid Infection		0.00		0.04		0.01
		[-0.08; 0.09]		[-0.05; 0.13]		[-0.08; 0.10]
Covid Incidence Rate		0.00		0.00		-0.01
		[-0.01; 0.00]		[-0.01; 0.00]		[-0.01; -0.00]
Minority		-0.09		-0.10		-0.51
		[-0.26; 0.07]		[-0.27; 0.07]		[-0.68; -0.34]
Diaspora		0.04		-0.41		0.01
		[-0.43; 0.51]		[-0.98; 0.14]		[-0.38; 0.36]
Intercept	0.01	-0.48	-0.01	0.25	0.01	-0.65
	[-0.05; 0.08]	[-0.68; -0.26]	[-0.07; 0.05]	[0.01; 0.49]	[-0.05; 0.07]	[-0.88; -0.43]
R^2	0	0.235	0	0.074	0	0.181
Num.Obs.	2876	2665	2876	2665	2876	2665

Note: dependent variables are dimensions obtained by mean aggregation. 95% percentile confidence intervals from 5000 bootstrap resamples stratified by countries.

Country-specific results

Figure S3 presents the estimated effects of COVID-19 related anxieties on the different outcome dimensions which have been obtained by fitting a total of 72 country-specific regressions.

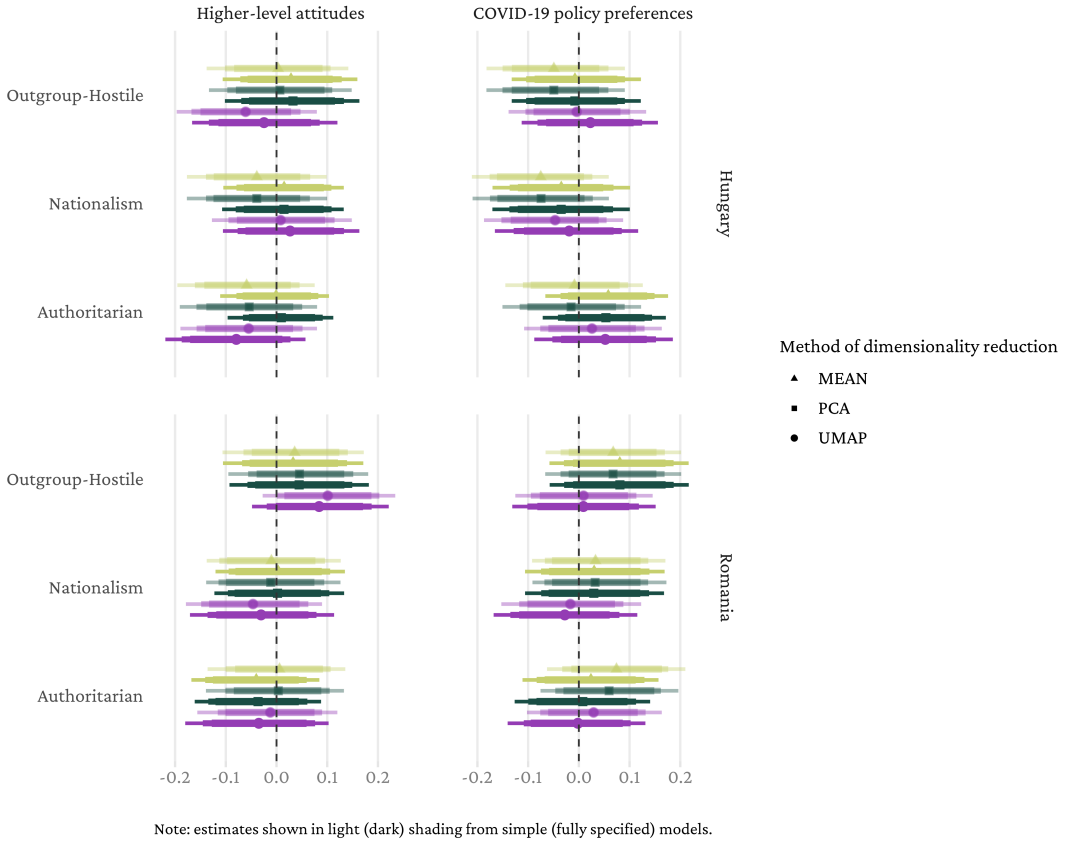


Figure S3: The effect of fear of COVID-19 on authoritarian, nationalist, and outgroup-hostile attitudes (left panel) and related COVID-19 policy measures (right panel). Results obtained by country-specific regressions. Point estimates along with 90%, 95%, and 99% bootstrapped percentile confidence intervals obtained from 5000 bootstrap resamples.

Within-dimensions analyses

In the following, we report the simple differences in means between treatment and control groups across the various items of the different dimensions. Figure S4 shows that there are no statistically significant differences on any of the outcome items (for a detailed description of the items see Tables S1 and S2), neither for the Hungarian respondents, nor for the Romanian respondents. The graph shows that the mean values on the respective outcome variables (standardised to a zero mean and unit standard variation) among those respondents to whom their fears and anxieties during the COVID-19 pandemic were cognitively accessible ("Treatment") are statistically indistinguishable from the mean values among those respondents to whom their fears and anxieties during the COVID-19 pandemic were not cognitively accessible ("Control").

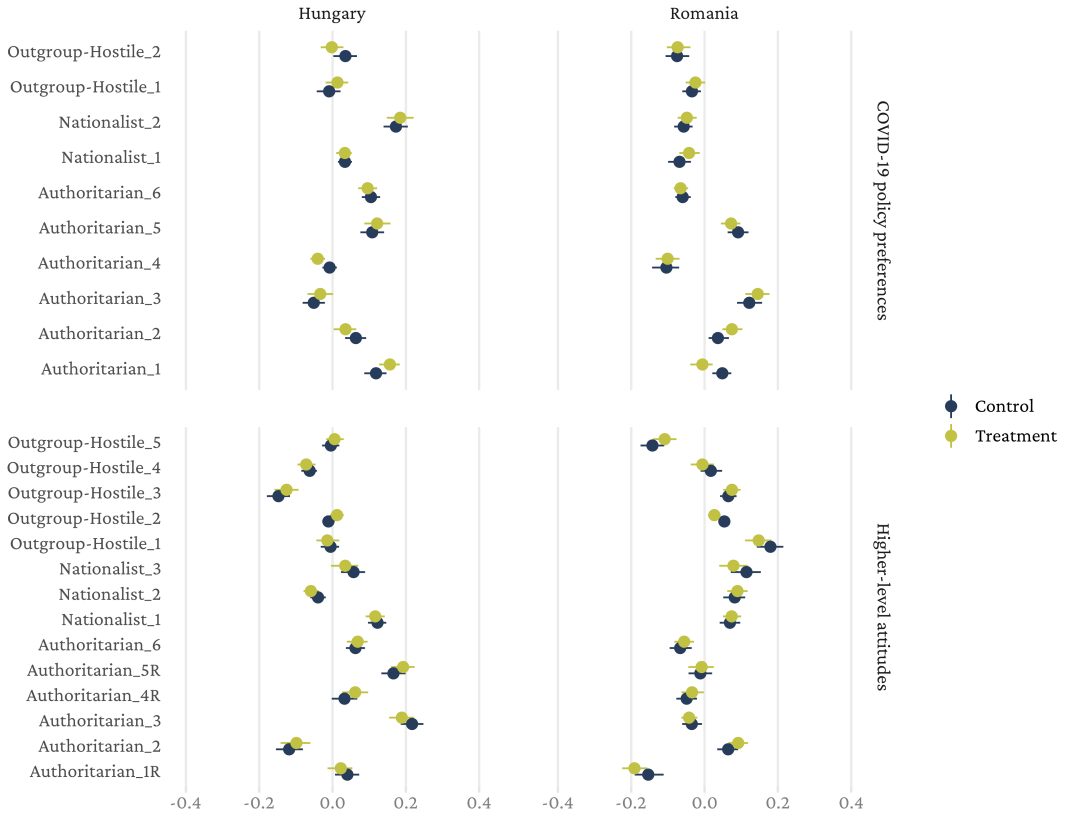


Figure S4: The effect of fear recall on the various outcome items within each dimension.

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