Research Report

Trust in Governmental Health Communication on Covid-19
Does Vulnerability Moderate the Effect of Partisanship?

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Abstract
Trust in governmental communication is critical to the successful containment of public health crises. However, in highly politicised crises, trust varies as a function of partisanship. In this research report, we examine the relationship between political preferences and trust in governmental health communication during the Covid-19 pandemic in Germany. We pay particular attention to the interaction between (a) different dimensions of vulnerability to the virus and (b) distrust rooted in partisan preferences. Using original data from a representative, four-wave online survey conducted in Germany in 2020 and 2021, we found moderate to low levels of trust in information from the government. Whereas belonging to a vulnerable age group (65+) and fear of infection were significantly associated with trust, identification as a member of a risk group was not. Voters of the right-wing populist AfD were less likely to trust government information. Finally, the association between fear of infection and trust was stronger among AfD voters than among voters of established parties. We conclude that public health campaigns should account for the fact that politicised individuals may not trust communicators in prolonged crises. Messages targeting members of risk groups and partisans of populist parties should make health risks relatable to them as individuals.

Keywords
Trust, risk perception, public health campaigns, survey data, Covid-19.
Health communication research has long established that trust in communicators is one of the most important conditions for effective campaigning (e.g., Brown et al., 2010; Habersaat et al., 2020; Mesch & Schwirian, 2015). Particularly in times of public health crisis, it is crucial that citizens trust governmental communication as it can help them cope with sudden increases in uncertainty and threat (Finset et al., 2020). At the same time, governments need citizens to comply with mitigation policies (e.g., Blair et al., 2017). In this research report, we examine the evolution of trust in government communication over time during the Covid-19 in Germany, paying particular attention to its relationship with partisanship and individual vulnerability.

When the SARS-CoV-2 virus emerged in early 2020, citizens in many democracies showed high levels of trust in their government and supported wide-reaching containment measures (e.g., Esaiasson et al., 2021; Kritzinger et al., 2021). Citizens who trusted public health authorities as a source of information were more likely to engage in preventive behaviour (Bollyky et al., 2022; Oksanen et al., 2020; Schieferdecker et al., 2022). Thus, effective risk communication played a key role in containing the pandemic (Heydari et al., 2021; Hyland-Wood et al., 2021), especially in the face of information overload and misinformation (Jolley et al., 2022; Ratzan et al., 2020; Warren & Lofstedt, 2022).

However, while citizens had “rallied ‘round the flag” at the onset of the pandemic, their levels of trust and support subsequently faded (e.g., Johansson et al., 2021; Wasserman & Madrid-Morales, 2022). Whereas most studies focused on general trust in the government, some research also suggested that trust in governmental communication declined in the first months of the pandemic (Latkin et al., 2020). This is not too surprising, as governments operated in an unpredictable environment with rapidly changing scientific evidence. Governments made mistakes, communicated incorrect or inconsistent information and updated policies frequently (Hyland-Wood et al., 2021; see also Lee, 2009). As the crisis dragged on, the political debate surrounding it intensified. In this context, ineffective government communication, low trust and political opposition went hand in hand with lower intentions to engage in preventive behaviour (e.g., Bajos et al., 2022; Han et al., 2023; Shank & Menebo, 2022), which may have prolonged the crisis (Kim & Kreps, 2020). Based on the existing research, we formulated the following hypothesis:

**H1:** The longer the pandemic lasted, the lower were the levels of trust in governmental information on Covid-19.

In most democracies, certain parties downplayed the dangers of Covid-19 and opposed far-reaching containment measures (for the US, see Allcott et al., 2020; Gollwitzer et al., 2020; Pennycook et al., 2022). In European countries, mostly (though not exclusively) populist right-wing parties positioned themselves as opponents of Covid-19 containment measures (e.g., Wang et al., 2021). This is not too surprising, since right-wing populist parties tend to rally around themes consistent with the belief system of opponents of containment measures: anti-elitist narratives of an intrusive government, a general scepticism towards state interventions in the economy and a mistrust of political institutions (Faas et al., 2022; Jørgensen et al., 2021; Schieferdecker, 2021). The literature on the effects of politicisation on trust in government communication is scarce, but we expected a similar pattern for trust in governmental communication, as detailed in the following hypothesis:

**H2:** Individuals who intended to vote for the right-wing populist party had lower levels of trust in governmental communication on Covid-19.
It is important to note that not all supporters of right-wing populist parties, in Germany and abroad, opposed containment measures and mistrusted government health communication on the matter – and neither were all opponents of containment measures voters of the AfD (see Schieferdecker et al., 2024; Steiner, 2024). This raised the question of whether this heterogeneity may be a function of the individuals’ vulnerability to the virus. Among supporters of right-wing populist parties, were those at risk of developing more severe symptoms less likely to support their party's critical stance and to discredit governmental information? Such an interaction would have crucial consequences: Partisans, who are unlikely to trust government health messages in general, could be targeted as members of vulnerable groups.

Despite the fact that vulnerable groups were the focus of public health communication during the pandemic (Warren & Lofstedt, 2022), there is little to no empirical evidence on the relationship between vulnerability, partisanship and trust in public communication. On the one hand, vulnerable individuals may be more inclined to trust governmental health information because rejecting information on prevention may incur higher costs for themselves (Vaughan & Tinker, 2009). On the other hand, vulnerable individuals may be more critical of policy failures and miscommunication and may have lower levels of trust due to negative experiences with the health care system in the past (Clark-Ginsberg & Petrun Sayers, 2020). The limited evidence on risk perceptions of vulnerable groups during the pandemic is mixed: Research found that vulnerable age groups had higher levels of trust in public institutions in Italy (Falcone et al., 2020), but also more negative perceptions of government responses in other countries (Lazarus et al., 2021; see also Kalocsányiová et al., 2023). This led us to ask the following questions:

**RQ1:** How was vulnerability to Covid-19 related to trust in government health communication?

**RQ2:** Was the association between preference for a right-wing populist party and trust in government health communication moderated by individual vulnerability?

Vulnerability to a health threat can be conceptualised in different ways. Individuals with certain characteristics may be at objectively higher risk of developing severe symptoms or life-threatening conditions after contracting a disease. During the Covid-19 pandemic, this was true for older adults and individuals with pre-existing health conditions (see Farshbafinadi et al., 2021; Goyal et al., 2020). However, the fact that people belong to a vulnerable subpopulation does not mean that they accept that they are at higher risk of developing severe symptoms after a SARS-CoV2 infection. Even if they identify as members of a risk group, they may still see themselves as exceptions to the rule or disagree that membership is actually associated with a higher risk (for examples beyond the pandemic, see Abrahamson et al., 2009; Berger et al., 2023). Finally, individuals may subjectively perceive themselves as more or less vulnerable and at risk of developing severe symptoms, i.e., they may differ in how much they fear an infection with SARS-CoV-2. Given the lack of literature on the influence of vulnerability on trust in governmental information in a politicised health crisis, we asked the following question:

**RQ3:** Did the moderation effect between vulnerability and political preferences differ for different dimensions of vulnerability?
To test our hypotheses and answer our research questions, we studied public opinion in Germany between December 2020 and September 2021. Germany has a multi-party system characterised by organised pluralism and a strong political centre (Hallin & Mancini, 2004; Humprecht et al., 2022; Munzert & Bauer, 2013). While the majority of citizens supported containment measures (Betsch et al., 2020), a heterogeneous opposition became visible during the pandemic. Freedom restrictions and vaccination were highly contested issues in 2020 and 2021 (Frei et al., 2021). Trust in the government, science and journalism emerged as critical factors in people’s experience of the pandemic. The public had mixed attitudes towards the publicly available information (Faas et al., 2022; Schieferdecker, 2021; Wolling et al., 2020). The study period coincided with the second large wave of infection and the launch of the vaccination campaign.

Materials and Method

We draw on original data from the RAPID-COVID online panel study. Respondents were invited via YouGov’s online access panel. The YouGov panel is certified according to ESOMAR 28 and ISO/IEC 27001 (YouGov, 2024), has been widely used in public opinion research and has been shown to be of high quality for this type of research (Ansolabehere & Schaffner, 2014). Data and the code to replicate all analyses are available at https://doi.org/10.17605/OSF.IO/6T2YS.

We conducted four waves in December 2020, March 2021, May 2021 and September 2021 (see the online supplementary material, Section A, for an overview). In the initial wave, we applied quotas for age, gender, education and region to obtain a sample that was broadly representative of the population eligible to vote in Germany. Panel attrition was relatively low (from Wave 1 to Wave 4: 31%) and two quota-sampled control cross-sections, conducted in parallel with Wave 2 and Wave 4, revealed no systematic attrition bias. The sample consists of 10,965 observations from 3,207 participants. To improve the comparability of our models, we retained observations without missing values for all measures ($N = 8,088$ observations from 2,522 participants). We systematically compared the distributions of the raw and analysis samples for all variables across all waves (see OSM-B). We found statistically significant differences in terms of gender (Wave 1), age groups (in Waves 1 to 4) and vote choice (Wave 1). However, these differences are small in magnitude and these variables are all included as controls in the models. We also ran benchmarks to evaluate the distribution of our vote choice variable and concluded that it provided a good representation of the political landscape in Germany (see OSM-F).

Our outcome variable is trust in governmental information. We asked respondents to state their level of agreement with the statement “I fully trust the information provided by the federal government on Covid-19”. Answer options ranged on a 5-point Likert-type scale from 1 (strongly disagree) to 5 (strongly agree).

We measured party preference by asking respondents which party they would vote for if a federal election were held next Sunday. Answer options included all parties in the national parliament, as well as other, I don’t know and I wouldn’t vote. Following the theoretical discussion above, we recoded this variable into three categories: (1) voters of established parties represented in the Bundestag, (2) voters of the right-wing populist AfD and (3) others (comprising non-voters and voters of niche parties).
We operationalized three dimensions of vulnerability in the following ways. We measured objective vulnerability by asking respondents about their age in years and grouping the responses into three categories: 18-34, 35-64 and 65 and older to account for potential non-linear associations. We considered the last age group to be objectively vulnerable. To measure an individual’s identification as a member of a risk group, we provided respondents with a short introductory text that informed them about the characteristics that made people particularly vulnerable to Covid-19. Respondents were expected to be familiar with this definition, as it was an integral part of the public discourse around Covid-19 in Germany. We then asked respondents whether they belonged to (at least) one of these risk groups (yes = 1, no = 0). We also measured fear of infection by asking respondents how afraid they were to get infected with the coronavirus using a 4-point scale ranging from 1 (not afraid at all) to 4 (very afraid).

We included the following control variables: Gender distinguished (1) female from (0) male, education indicated (1) eligibility to study at a university or college compared to (0) a lower educational level, and monthly household income was measured by offering categories ranging from (1) under EUR 500 to (12) EUR 10,000 or more.

Trust, fear of infection, vote choice and age group were measured in all four waves. Gender, education, monthly household income and self-reported membership of a risk group are treated as time-invariant variables. To examine the levels and determinants of trust in governmental information over the period of our study, we estimated longitudinal multilevel models in which measurement occasions were nested within participants (Hox et al., 2018). Our base model predicts trust over time as a function of the predictors above, an index of our waves (from 1 to 4), the square of this index (to account for non-linear trends) and random intercepts for participants (see OSM-C for the formal specification). We also estimated three separate moderation models in which we included an interaction between vote choice and an indicator of vulnerability (i.e., age, identification as a risk group member and fear of infection).

![Figure 1](image-url)

**Figure 1.** Average Levels of Trust in Covid-19-Related Information by the Federal Government in Germany, December 2020 to September 2021

Note. The figure shows the mean level of trust by wave with 95% confidence intervals in brackets. For full distributions by wave, see OSM-B.
Results

Figure 1 shows the levels of trust in Covid-19-related governmental information in Germany over time. Respondents in our representative sample were, on average, undecided about whether to trust public health information (mean across all waves = 3.1). The percentage of respondents who trusted information from the government (i.e., agreed or strongly agreed with our statement) varied considerably over time: from 51% in December 2020 down to 36% in May 2021 and again up to 41% in September 2021 (for full distributions, see OSM-B). Our results show that the negative trend in trust expected in H1 was reversed by the end of our study period. However, despite this modest recovery, trust remained significantly lower than in December 2020.

Figure 2 shows the results of our multilevel models (for detailed regression tables, see OSM-D). Our multivariate analysis confirms the results above. Looking at our base model, trust followed a curvilinear time trend: We found a negative linear time effect ($b = -0.70, p < 0.01$) and a positive quadratic time effect ($b = 0.13, p < .01$). In line with H2, we found that a preference for the right-wing populist AfD was associated with significantly lower levels of trust in communication by the government compared to a preference for established parties ($b = -0.87, p < .01$). Regarding RQ1, we found that significantly higher levels of trust were associated with a higher fear of infection ($b = 0.19, p < .01$) and with being in the older age group that was more vulnerable to Covid-19 ($b = 0.11, p = .03$). Identification as a member of a risk group had no significant effect.

![Figure 2](image.png)

Figure 2. Models of Trust in Covid-19-Related Information by the Government

*Note.* The figure shows coefficient estimates with 95% confidence intervals for two multilevel linear models with random intercepts for participants. The moderation model includes an interaction term between vote choice and fear of infection. Reference categories: Gender = Male, Age = 35-64 years, Education = Low (below pre-university education), Risk group member = No, Vote choice = Established parties. Wave is coded from (1) December 2020 to (4) September 2021; household income is coded from (1) under EUR 500 to (12) EUR 10,000 or more; fear of infection is coded from (1) not afraid at all to (4) very afraid.
Regarding RQ2 and RQ3, we found that only the interaction between fear of infection and vote choice was significant at $p < .05$ and significantly improved model fit compared to the base model (see likelihood ratio tests in the OSM-E). In other words, the association between a preference for the right-wing populist AfD and trust did not significantly depend on age and identification as a member of a risk group. Figure 3 shows the predicted values. In the moderation model, we found that among those who intended to vote for the right-wing AfD, fear of infection was more strongly associated with trust levels than among voters of established parties ($b = 0.11, p = .01$). In other words, an increase in fear among AfD voters was related to a stronger increase in trust in government communication than among other partisan groups.

**Discussion**

Using representative survey data from Germany, we found that, on average, citizens were undecided about whether to trust Covid-19-related information from the government. Trust declined rapidly after the first wave of our panel and, although it increased at the end of our study period, it never returned to its initial level (see also Betsch et al., 2020; Wolling et al., 2020). How to make sense of this decline? Since we started collecting data nine months into the pandemic, we may have observed the long tail of a “rally around the flag” effect. In times of acute crisis, people may have been inclined to trust that the government was taking the necessary steps to deal with uncertainty and threat – an effect that may have faded as people got used to the virus. As the pandemic dragged on, it is plausible that the German population experienced a form of “psychic numbing” and lost the urgency to engage seriously with public health information (Slovic, 2020; see also Schraff, 2021). Alternatively, policy changes may have contributed to the decline in trust. The first survey waves were conducted after the second
lockdown and the start of the vaccination campaign. These months were characterised by the gradual and hotly debated reintroduction of freedom restrictions (which varied from state to state) and the slow roll-out of the vaccination campaign (see also Sweden, Johansson et al., 2021).

We find it alarming that in the second year of the pandemic, less than 50% of our respondents indicated that they trusted governmental health information related to Covid-19. To be effective, public health campaigns should provide information that is deemed credible and trustworthy by citizens. However, if a large portion of the public discredits the government as a communicator of reliable public health information and, in response, shows low levels of problem awareness and preventive behaviour, it will become more difficult to contain health crises in the future (Bajos et al., 2022; Han et al., 2023; Seale et al., 2020; Shanka & Menebo, 2022).

We found that political ideology had a large impact on trust in governmental information. Voters of the right-wing populist AfD showed significantly lower levels of trust. Our results reflect a broader trend in established democracies: Anti-elitism is a key feature of populism and sympathizers of right-wing populist parties seem to have lost trust in institutions (Hooghe & Marks, 2018). Lack of trust in government and political elites may then spill over into distrust of governmental health information.

In this politicised context, the relationship between vulnerability and trust in governmental information was complex. Respondents who were objectively more vulnerable to Covid-19 because of their older age showed higher levels of trust than middle-aged people. Higher fear of an infection was also associated with more trust in governmental communication. However, self-identification as a member of a risk group was not significantly associated with trust in governmental communication. These findings are consistent with research showing that risk group status may be independent of an individual’s risk perception (Abrahamson et al., 2009; Berger et al., 2023).

Finally, the relationship between fear of infection and trust in governmental communication was stronger among AfD voters than among voters of established parties in parliament. Supporters of established parties, regardless of their perceived vulnerability, were generally more convinced of the importance of government action during the pandemic. Consequently, their level of trust may have been less influenced by personal fears of contracting the virus. On the other hand, for AfD supporters, who were typically more sceptical of public health measures, fear of infection may have been particularly important in tempering their criticism. In addition, AfD supporters who were more afraid of the virus may have been more inclined to rely on governmental information, as their usual media sources may not have provided sufficient guidance on how to mitigate risks.

It is important to discuss the limitations of this study. Our measures have high face validity, but future research should rely on multi-item measures to increase reliability. Second, future work should continue to investigate the causal mechanisms linking risk perception and trust in governmental communication (Castelfranchi & Falcone, 2010; Rožukalne et al., 2022; Schraff, 2021). While vulnerability associated with age is not caused by partisanship, identification as a member of a risk group and fear of infection are likely to influence and be influenced by political preferences. Furthermore, the relationship between trust in governmental health communication and broader social trust, trust in government and trust in other sources of public information deserves more attention (Buturoiu et al., 2022; Han et al., 2023).
Implications

This research note has three important implications for communicators of public health information. First, public health authorities should be aware that a significant proportion of the population – including vulnerable groups – is likely to react with distrust to information provided by the government. Thus, health communication scholars and practitioners should recognise that low levels of trust are a significant barrier to reaching vulnerable groups, in addition to other hurdles such as language barriers, low health literacy or lack of access to communication technologies (see Clark-Ginsberg & Petrun Sayers, 2020; Vaughan & Tinker, 2009; Wieland et al., 2021).

Second, lower levels of trust in an ongoing crisis are likely to be associated with political predispositions. The systematically lower levels of trust among supporters of populist parties could create a vicious circle: Distrust could make public health campaigns less effective, which, in turn, could foster even more distrust and provide a fertile ground for anti-establishment parties. To maintain trust in times of crisis, governments should continue to build institutional trust in times of relative stability by tirelessly explaining democratic processes, by publicly deliberating and by thoroughly justifying their policies.

Third, whereas fear of infection emerged as a key predictor of trust, campaigners should not assume that vulnerable populations will readily accept the implications of their risk group status. Belonging to a risk group may not in itself lead to higher perceptions of risk and thus, public health messages should make risks relatable to individuals, before singling out specific groups. Communicating the risks associated with public health crises may be particularly important to counter the influence of right-wing populist parties on public health information.

Notes

1. This means that every row in our dataset is complete, but the number of rows per participant may vary. In our analysis sample, respondents participated in an average of 3.2 waves.
2. Age groups were calculated based on the year and month of birth of the respondents measured in the first wave; the measure was adjusted for all subsequent waves. Gender, education and self-reported risk group membership were measured in the first wave. Monthly household income was measured in the first and in the last waves; we kept the last available value and applied it to all waves.

Online Supplementary Material

The online supplementary material is available at https://doi.org/10.17605/OSF.IO/6T2YS.

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Conflict of Interest

The authors do not report any conflict of interest.

Ethical Approval

As is common in many communication and political science departments in Germany, the ethical evaluation of the study was conducted within the departments of the first two authors. Since no concerns were expressed, an external ethical review was waived. The study was conducted in full accordance with the Declaration of Helsinki. All participants were informed about their rights and the content of the study. They gave written informed consent. The panel provider YouGov adheres to the ESOMAR code. All information acquired was anonymous.

References


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