Received: 24 February 2023 | Revised: 10 May 2023 | Accepted: 12 May 2023

DOI: 10.1111/spc3.12792

EMPIRICAL ARTICLE

WILEY

Who do we trust? Differences in types of trust and beliefs in conspiracy theories between vaccinated and unvaccinated Europeans across 17 European countries

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Abstract

A plethora of research has highlighted that trust in science, political trust, and conspiracy theories are all important contributors to vaccine uptake behavior. In the current investigation, relying on data from 17 countries (N = 30,096) from the European Social Survey we examined how those who received (and wanted to receive the COVID-19 vaccine) compared to those who did not differ in their trust in: science, politicians and political parties, international organizations and towards people in general. We also examined whether they differed in how much they believed in conspiracy theories. Those who received (or wanted to receive) the COVID vaccine scored significantly higher in all forms of trust, and lower in conspiracy theory beliefs. A logistic regression suggested that trust in science, politicians, international organizations, as well as belief in conspiracy theories were significant predictors, even after accounting for key demographic characteristics.

KEYWORDS
conspiracy theories, European social survey, multilevel modelling, political ideology, political trust, trust in science, vaccination behavior

1 | INTRODUCTION

The outburst of COVID-19 challenged people, governments and institutions. The pace of vaccination was a key factor in curtailing its spread worldwide. In the context of vaccination uptake, trust is a key predictor of vaccine hesitancy (MacDonald, 2015). At the same time, conspiracy theories have been circulated regarding the vaccine and the hidden role of politicians and scientists in getting people vaccinated (Pertwee et al., 2022). Such theories led to low support of public health policies and behaviors (Gkinopoulos et al., 2022). Because such conspiracies constitute key predictors of distrust towards science and politics deteriorating social relations (Van Prooijen et al., 2022), there is an urgent need to link trust with vaccine uptake (Amo-Adjei et al., 2022).

Successful vaccination rates and heavily depend on the attitudes that people already hold about the vaccine (Paterson et al., 2016; Shiloh et al., 2022). Furthermore, decision-making regarding vaccine uptake is affected by a costs-benefits analysis of the vaccine which, in turn, determines people's trust towards vaccine-relevant information (Cummings, 2014). Further reviews about vaccine decision-making (Larson et al., 2013, 2018) identify different levers of trust towards: the provider, the policy-maker, the fellow citizens in a community. Trust in people around and in politicians and government increases vaccination uptakes (Thornton, 2022) and decreases vaccine hesitancy (Lalot et al., 2022). Although in the case of close others, people sometimes may feel more comfortable not to fully adhere to health containment behaviors, because they trust their own family members (Stefaniak et al., 2022), more generally interpersonal trust towards people as members of a community and towards politicians that govern the communities as an essential part of democratic governance increases vaccine uptakes (Bollyky et al., 2023; Devine et al., 2023; Tagat & Kapoor, 2023). Beyond trust towards other people and politicians/government, vaccine uptakes were also positively predicted by trust towards institutions and organizations, such as the World Health Organization, worldwide (Chen et al., 2022; De Freitas et al., 2021), as well as trust towards health professionals (Hara et al., 2021), scientists and the health system generally (Bajos et al., 2022). While the aforementioned types of trust positively predict vaccine uptakes, conspiracy beliefs about COVID-19 and vaccines negatively predicted vaccine behavior and uptakes (Enea et al., 2022; Eshel et al., 2022; Han et al., 2022). Additionally, Enea et al. (2022) also showed that both generic and COVID-19 vaccine-related conspiracy beliefs negatively predicted vaccine uptakes. COVID-19 and vaccine conspiracy beliefs was found to remain a robust predictor when accounting also for demographics, such as religiosity or political ideology (Han et al., 2022; Jennings et al., 2021).

1.1 | The current study: Rationale and hypotheses

We sought to build on and expand the existing work on the links between trust and conspiracy beliefs with vaccine uptakes by utilizing large, nationally-representative, cross-national dataset, which included measures on different types of trust, belief in conspiracy theories, and self-reports of actual vaccination uptake, rather than vaccination intentions. In doing so, we directly compare vaccinated to unvaccinated individuals regarding their trust and conspiracy beliefs. We will also infer which predictor emerges as a robust antecedent of vaccination uptake after all the different types of trust, beliefs in conspiracy theories, and participants' own demographic characteristics were accounted for. Thus our work complements recent cross-national investigations of the antecedents of vaccination (e.g. Lazarus et al., 2023; Leonhardt & Pezzuti, 2022; Pagliaro et al., 2021).

To this end, we conducted a secondary analysis of cross-national data involving different levers of trust, as well as beliefs in conspiracy theories, in line with conceptualizations of trust similar to the one proposed by Larson et al. (2018) and the interplay of these levers and of beliefs in conspiracy theories with self-reports of vaccine uptake as an outcome. Following from the literature that was previously reviewed, we hypothesized that those who were vaccinated (or aspired to get vaccinated) will score higher on all of the trust measures but lower in beliefs in conspiracy theories. Additional to this key hypothesis, we aimed to test which of these measures would be the most robust predictor of vaccination behavior.

2 | METHODS

2.1 | Participants

Data were obtained from the 10th round of the European Social Survey (ESS, 2020) conducted between 09/17/2020 and 05/24/2022. Data for the ESS are usually obtained via an hour-long face-to-face interview, however due to the impact of COVID-19, in some countries this method was switched to a self-completion (web and paper) approach in 9 countries. In this dataset, a measure of receiving the coronavirus vaccine was shown in 15 European countries: Bulgaria, Switzerland, Czechia, Estonia, Finland, Greece, Croatia, Hungary, Iceland, Italy, Lithuania, North Macedonia, Netherlands, Norway, Portugal, Slovenia, and Slovakia. In this sample (N = 30,096), 16,273 participants were female, and 13,823 were male. In total, 5663 did not receive the vaccine (20%) and 22,698 received the vaccine (80%).[1] Average age was 51 years (SD = 18.34). See Table S2 in the Supplementary Materials (SM) for demographic information for each country.

2.2 | Measures

Tables S3 and S4 in the SM provide reliability estimates and descriptive statistics for each country. Overall, these measured displayed good reliability (*a*s collapsed across countries ranged from 0.81 to 0.92).

2.2.1 | Trust

Measures of trust towards people (3 items, e.g., "most people can be trusted"), politicians (3 items; trust for politicians, the parliament, and political parties), international organizations (2 items; European parliament, United Nations), and science (1 item; scientists) were included. These were all captured on Likert scale ranging from 0 (no trust at all)—10 (complete trust). Interestingly, across all countries, trust in science appeared to be highest and trust in politicians the lowest (see Figure 1).

2.2.2 | Conspiracy theories

Three items captured belief in conspiracy theories, on a 1 (strongly disagree)—5 (strongly agree) Likert scale: "a small secret group of people is responsible for making all major decisions in world politics", "groups of scientists

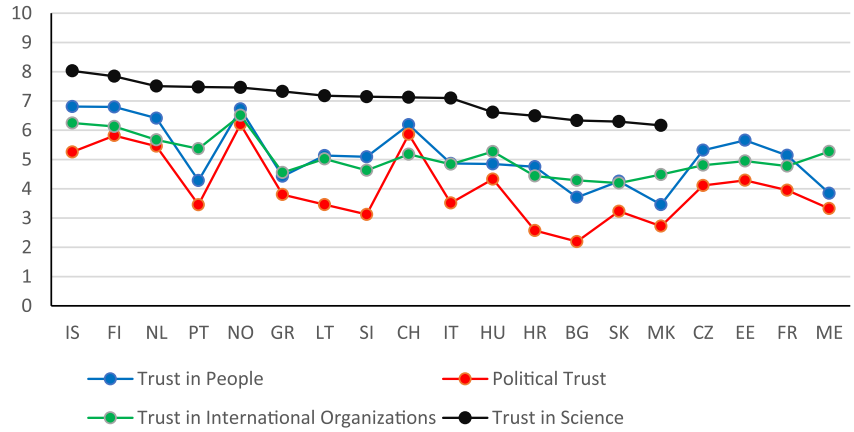

FIGURE 1 Average Scores for Each type of Trust in Each Country. Lines connecting the scores are included for ease of interpretability.

manipulate, fabricate, or suppress evidence in order to deceive the public", and "COVID-19 is the result of deliberate and concealed efforts of some government or organization".[2]

2.3 | Demographic covariates

The following measures were also included the survey, each captured with a single item: political ideology, religiosity, family income, years in education, age, and having contracted COVID in the past. Measurement information for these measures can be found in Table S1 in the SM.

3 | RESULTS

3.1 | Analysis plan

All data, and syntax is available on OSF (https://osf.io/mz2dt/?view_only=3e42066c92644078a7c5c696217ea91d) and on the ESS website (https://www.europeansocialsurvey.org/). Analyses were conducted in SAS and Mplus8. First we estimated multilevel regressions (to account for country-level influences on each outcome) comparing those who received (and those who wanted to receive the vaccine) to those who did not on all types of trust and beliefs in conspiracy theories. We then estimated a logistic regression to examine how all the aforementioned variables predict getting the vaccine simultaneously.[3] All analyses were weighted using the *anweight* variable as recommended by the ESS team. Importantly, we chose to collapse those who already had received the vaccine and those who indicated they would get the vaccine into one group, as analyses were highly consistent when only including vaccinated individuals and this would allow us to have a larger sample (see Tables S8-S9).

3.2 | Differences in trust and beliefs in conspiracy theories

Five multilevel regression models were estimated. In these models, the random of the dummy-coded variable indicating vaccination (vs. not) predicted each of the five outcomes. Means and standard deviations for each outcome in each country are presented in Table S5 (for vaccinated individuals) and Table S6 (for unvaccinated individuals) in the SM.

As shown in Table 1, those who were vaccinated or wanted to receive the vaccine reported significantly higher levels of political trust, trust in science, trust in people, trust in international organizations, and significantly lower levels of belief in conspiracy theories. Figures 2 and 3 provide a visual representation of these results. For a depiction of differences for each individual country see Figures S1–S5 in the supplementary materials.

TABLE 1 Multilevel regression models for all outcomes of interest.

Outcome	Random intercept Estimate (SE)	Random slope for vaccinated Estimate (SE)	Error variance Estimate (SE)	Intercept variance Estimate (SE)	Slope variance Estimate (SE)
Trust in science	6.13*** (0.03)	1.19*** (0.09)	0.10* (0.04)	0.09* (0.03)	4.45*** (0.42)
Trust in people	4.86*** (0.18)	0.44*** (0.08)	3.50*** (0.26)	0.58*** (0.14)	0.08** (0.03)
Political trust	3.35*** (0.22)	0.88*** (0.08)	4.32**** (0.20)	0.84*** (0.21)	0.07 (0.05)
Trust in international organizations	4.20*** (0.11)	1.17*** (0.12)	5.60*** (0.39)	0.18** (0.06)	0.19*** (0.05)
Belief in conspiracy theories	3.30*** (0.05)	−0.64*** (0.05)	0.83*** (0.04)	0.04** (0.01)	0.04** (0.01)

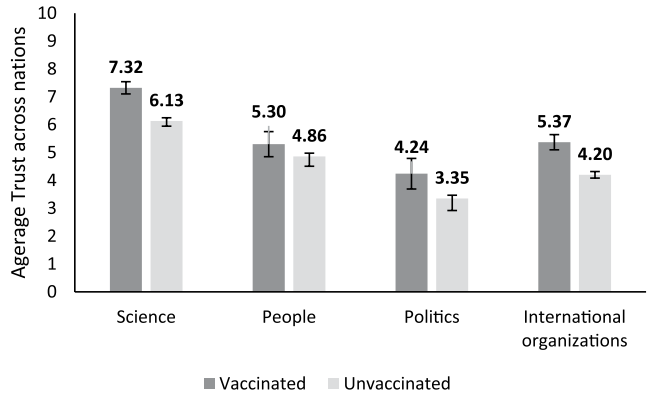

FIGURE 2 Bar graphs depicting the average levels of trust for those who received or wanted to receive the vaccine, and those who did not across all nations in the sample. Error bars depict 95% C.I.

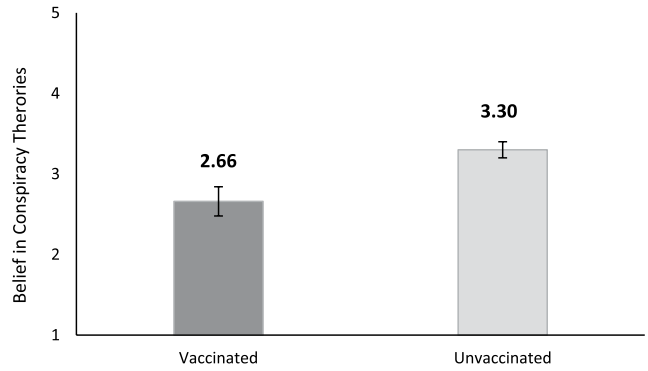

FIGURE 3 Bar graph depicting the average levels of belief in conspiracy theories for those who received or wanted to receive the vaccine, and those who did not across all nations in the sample. Error bars depict 95% C.I.

3.3 | Predictors of getting vaccinated

All types of trust, belief in conspiracy theories, and the different demographic covariates were tested as simultaneous predictors in a logistic regression model. Political trust, trust in science, trust in international organizations, being male, educated and older were all significant positive predictors of getting vaccinated. Belief in conspiracy theories and having contracted COVID in the past were significant negative predictors. Trust in people, political ideology, religiosity and income level did not significantly predict getting vaccinated (see Table 2).[4]

4 | DISCUSSION

This research investigated how getting or not getting the COVID-19 vaccine is predicted by levers of trust (science, people, politicians, international organizations) and beliefs in conspiracy theories. In doing so, this investigation adds to the existing literature on the psychological drivers of vaccination. Our hypothesis was confirmed, as our findings showed that those who did not get the vaccine demonstrated lower trust towards people, science, politicians and international organizations, compared to those who got the vaccine. Furthermore, those who did not get the vaccine were more likely to believe in broader and relevant conspiracy theories. Lastly, in line with the aforementioned research (see Introduction), conspiracy beliefs about COVID-19 and vaccines was the most robust predictor of vaccine uptake. Thus, at a first level, it seems that a general sense of distrust, and general conspiratorial thinking

TABLE 2 Logistic regression model predicting receiving or wanting to receive the COVID-19 vaccine.

Predictor	*b*	SE	Wald χ^2	*β*	Odds ratio
Trust in people	−0.03	0.02	2.31	−0.02	0.97
Trust in politics	**0.06****	**0.02**	**6.94**	**0.05**	**1.07**
Trust in international organizations	**0.07****	**0.02**	**8.20**	**0.06**	**1.07**
Trust in science	**0.14*****	**0.02**	**49.32**	**0.11**	**1.15**
Belief in conspiracy theories	**−0.76*****	**0.04**	**288.11**	**−0.28**	**0.47**
Right-wing political ideology	−0.01	0.02	0.77	−0.01	0.99
Religiosity	−0.03	0.01	3.37	−0.03	0.98
Gender (male = 1)	**0.19***	**0.08**	**5.85**	**0.04**	**1.21**
Years of education	**0.03***	**0.01**	**6.45**	**0.04**	**1.03**
Income	0.00	0.02	0.00	0.00	1.00
Age	**0.02*****	**0.00**	**105.03**	**0.16**	**1.02**
Covid history (had = 1)	**−0.21***	**0.09**	**5.16**	**−0.03**	**0.81**

Note: Bold values signifiy statistically significant results.

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

underlies vaccine behavior. Our findings from cross-country comparisons echo and, at the same time, increase generalizability of existing findings on mainly trust as key predictor of actual vaccine uptake (Lastrucci et al., 2022; Yan et al., 2022). Importantly, they add to existing research which finds a link between beliefs in conspiracy theories and vaccine intentions (e.g. Ghaddar et al., 2022), by replicating this link with self-reports of COVID-19 vaccination behavior.

Our study was not without limitations. Although the ESS allows us to test our hypotheses across many European countries, in data that is large, highly-powered and nationally representative, we could not include data from countries outside of Europe, which limits the generalizability of our results. Another limitation is the inability to include or consider covariates or predictors that were not included in the ESS, particularly at the country level, as any such test would have been relatively underpowered due to the small number of countries (n = 15). Future research could consider how the cultural orientation of a nation (e.g., individualism-collectivism; Triandris et al., 1988; or tightness-looseness;, Gelfand et al., 2006) potentially impacts different types of trust, beliefs in conspiracy theories or vaccination behavior directly, or moderates the association between trust in different actors and institutions and vaccination behaviors, as some evidence (at the national level) suggests it does (Gelfand et al., 2021).

When examining all these types of trust, belief in conspiracy theories, as well as common demographic covariates as simultaneous predictors for receiving the vaccine, our findings mirror claims which posit that dissemination of rational and factual information, rather than rumors, misinformation and conspiracy theories, as key factors for trust establishment (Zhou et al., 2019). Therefore, our results can be informative in the direction of helping policy-makers provide factual medical information to people, ensuring their positive social response in contexts of uncertainty, where trust in institutions, as well as in fellow citizens is of utmost importance (Gvozden et al., 2021).

Furthermore, our results bring the social divide that followed the spread of the virus to the foreground by comparing vaccinated and unvaccinated people. By taking this social divide into account, our findings respond to the call of recent research (e.g. Albrecht, 2022) for the need to empirically investigate trust in scientists, health professionals and policy-makers as a vital step to tackle major societal challenges such as spread of conspiracies and social divides. tolerance and respect" (p. 1). Our results also highlight that potentially, politicians and international organizations can influence people's tendency to get vaccinated, as trust towards these agents remained a significant predictor even after accounting for demographic characteristics, trust in science and belief in conspiracy theories. Interestingly, religiosity and political ideology did not significantly relate to receiving the vaccine, which could highlight that these variables would be more influential in more polarized settings (e.g., the U.S.). Finally, educated and older people were

more likely to receive the vaccine, while female respondents and those who had already contracted COVID were less likely to do so. Ultimately, these results provide us with insights regarding the motivations behind an important public safety behavior, and serve as a reminder that certain demographic characteristics, the spread of misinformation, and how trustworthy key agents are can all potentially shape vaccination behavior.

ACKNOWLEDGEMENTS

There are no acknowledgements to be made.

CONFLICT OF INTEREST STATEMENT

There are no conflicts of interest.

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ENDNOTES

[1] From this number, 20,024 indicated that they had already received the vaccine, while 2674 stated they plan to receive the vaccine. Importantly, at the time of the study, the only country for which the COVID-19 vaccine was not approved by a national regulatory authority and/or was available to the public was Slovenia.

[2] Bivariate correlations between all outcomes highlighted that all types of trust and belief in conspiracy theories were all moderately to strongly correlated (see Table S7 in the SM).

[3] We estimated a logistic regression model and not a multilevel logistic regression as we would have to estimate 12 random slopes (one for each predictor). Our model only had 15 s level clusters (countries) which would make such a model too complicated for the type of data at hand.

[4] Importantly, for the Czech Republic and Estonian samples, the measure of trust in science was not displayed, and thus participants from this country were removed from this analysis.

REFERENCES

Albrecht, D. (2022). Vaccination, politics and COVID-19 impacts. *BMC Public Health*, *22*(1), 96. https://doi.org/10.1186/s12889-021-12432-x

Amo-Adjei, J., Nurzhynska, A., Essuman, R., & Lohiniva, A. L. (2022). Trust and willingness towards COVID-19 vaccine uptake: A mixed-method study in Ghana, 2021. *Archives of Public Health*, *80*(1), 64. https://doi.org/10.1186/s13690-022-00827-0

Bajos, N., Spire, A., Silberzan, L., Sireyjol, A., Jusot, F., Meyer, L., Franck, J. E., & Warszawski, J., & EpiCov study group. (2022). When lack of trust in the government and in scientists reinforces social inequalities in vaccination against COVID-19. *Frontiers in Public Health*, *10*, 908152. https://doi.org/10.3389/fpubh.2022.908152

Bollyky, T. J., Castro, E., Aravkin, A. Y., Bhangdia, K., Dalos, J., Hulland, E. N., Kiernan, S., Lastuka, A., McHugh, T. A., Ostroff, S. M., Zheng, P., Chaudhry, H. T., Ruggiero, E., Turilli, I., Adolph, C., Amlag, J. O., Bang-Jensen, B., Barber, R. M., Carter, A., … Dieleman, J. L. (2023). Assessing COVID-19 pandemic policies and behaviours and their economic and educational trade-offs across US states from Jan 1, 2020, to July 31, 2022: An observational analysis. *The Lancet*, *401*(10385), 1341–1360. https://doi.org/10.1016/S0140-6736(23)00461-0

Chen, X., Lee, W., & Lin, F. (2022). Infodemic, institutional trust, and COVID-19 vaccine hesitancy: A cross-national survey. *International Journal of Environmental Research and Public Health*, *19*(13), 8033. https://doi.org/10.3390/ijerph19138033

Cummings, L. (2014). The "trust" heuristic: Arguments from authority in public health. *Health Communication*, *29*(10), 1043–1056. https://doi.org/10.1080/10410236.2013.831685

De Freitas, L., Basdeo, D., & Wang, H. (2021). Public trust, information sources and vaccine willingness related to the COVID-19 pandemic in Trinidad and Tobago: An online cross-sectional survey. *Lancet Reg. Health Am.*, *3*, 100051. https://doi.org/10.1016/j.lana.2021.100051

Devine, D., Valgarðsson, V., Smith, J., Jennings, W., Scotto di Vettimo, M., Bunting, H., & McKay, L. (2023). Political trust in the first year of the COVID-19 pandemic: A meta-analysis of 67 studies. *Journal of European Public Policy*, 1–23. https://doi.org/10.1080/13501763.2023.2169741

Enea, V., Eisenbeck, N., Carreno, D. F., Douglas, K. M., Sutton, R. M., Agostini, M., Bélanger, J. J., Gützkow, B., Kreienkamp, J., Abakoumkin, G., Abdul Khaiyom, J. H., Ahmedi, V., Akkas, H., Almenara, C. A., Atta, M., Bagci, S. C., Basel, S., Berisha Kida, E., Bernardo, A. B. I., Buttrick, N. R., … Leander, N. P. (2022). Intentions to be vaccinated against COVID-19: The role

of prosociality and conspiracy beliefs across 20 Countries. *Health Communication*, 1–10. Advance online publication. https://doi.org/10.1080/10410236.2021.2018179

Eshel, Y., Kimhi, S., Marciano, H., & Adini, B. (2022). Conspiracy claims and secret intentions as predictors of psychological coping and vaccine uptake during the COVID-19 pandemic. *Journal of Psychiatric Research*, *151*, 311–318. https://doi.org/10.1016/j.jpsychires.2022.04.042

ESS Round 10: European Social Survey Round 10 Data. (2020). Data file edition 1.2. Sikt - Norwegian agency for shared services in education and research, Norway – data archive and distributor of ESS data for ESS ERIC. https://doi.org/10.21338/NSD-ESS10-2020

Gelfand, M. J., Jackson, J. C., Pan, X., Nau, D., PieperDenison, E., Dagher, M., Van Lange, P. A. M., Chiu, C. Y., & Wang, M. (2021). The relationship between cultural tightness–looseness and COVID-19 cases and deaths: A global analysis. *The Lancet Planetary Health*, *5*(3), E135–E144. https://doi.org/10.1016/S2542-5196(20)30301-6

Gelfand, M. J., Nishii, L. H., & Raver, J. L. (2006). On the nature and importance of cultural tightness-looseness. *Journal of Applied Psychology*, *91*(6), 1225–1244. https://doi.org/10.1037/0021-9010.91.6.1225

Ghaddar, A., Khandaqji, S., Awad, Z., & Kansoun, R. (2022). Conspiracy beliefs and vaccination intent for COVID-19 in an infodemic. *PLoS One*, *17*(1), e0261559. https://doi.org/10.1371/journal.pone.0261559

Gkinopoulos, T., Truelsen Elbæk, C., & Mitkidis, P. (2022). Morality in the echo chamber: The relationship between belief in COVID-19 conspiracy theories and public health support and the mediating role of moral identity and morality-as-cooperation across 67 countries. *PLoS One*, *17*(9), e0273172. https://doi.org/10.1371/journal.pone.0273172

Gvozden, T. V., Baucal, A., Krstic, K., & Filipović, S. (2021). Intolerance of uncertainty and tendency to worry as mediators between trust in institutions and social support and fear of coronavirus and consequences of the pandemic. *Frontiers in Psychology*, *12*, 737188. https://doi.org/10.3389/fpsyg.2021.737188

Han, Q., Zheng, B., Abakoumkin, G., Leander, N. P., & Stroebe, W. (2022). Why some people do not get vaccinated against COVID-19: Social-cognitive determinants of vaccination behavior. *Applied psychology. Health and well-being*. Advance online publication. https://doi.org/10.1111/aphw.12411

Hara, M., Ishibashi, M., Nakane, A., Nakano, T., & Hirota, Y. (2021). Differences in COVID-19 vaccine acceptance, hesitancy, and confidence between healthcare workers and the general population in Japan. *Vaccines*, *9*(12), 1389. https://doi.org/10.3390/vaccines9121389

Jennings, W., Stoker, G., Bunting, H., Valgarðsson, V. O., Gaskell, J., Devine, D., McKay, L., & Mills, M. C. (2021). Lack of trust, conspiracy beliefs, and social media use predict COVID-19 vaccine hesitancy. *Vaccines*, *9*(6), 593. https://doi.org/10.3390/vaccines9060593

Lalot, F., Abrams, D., Heering, M. S., Babaian, J., Ozkececi, H., Peitz, L., Davies Hayon, K., & Broadwood, J. (2022). Distrustful complacency and the COVID-19 vaccine: How concern and political trust interact to affect vaccine hesitancy. *Political Psychology*. https://doi.org/10.1111/pops.12871

Larson, H., Clarke, R. M., Jarrett, C., Eckersberger, E., Levine, Z., Schulz, W. S., & Paterson, P. (2018). Measuring trust in vaccination: A systematic review. *Human Vaccines & Immunotherapeutics*, *14*(7), 1599–1609. https://doi.org/10.1080/21645515.2018.1459252

Larson, H. J., Leask, J., Aggett, S., Sevdalis, N., & Thomson, A. (2013). A multidisciplinary research agenda for understanding vaccine-related decisions. *Vaccines*, *1*(3), 293–304.

Lastrucci, V., Lorini, C., Stacchini, L., Stancanelli, E., Guida, A., Radi, A., Morittu, C., Zimmitti, S., Alderotti, G., Del Riccio, M., Bechini, A., Boccalini, S., Bonaccorsi, G., & Bonaccorsi, G. (2022). Determinants of actual COVID-19 vaccine uptake in a cohort of essential workers: An area-based longitudinal study in the province of prato, Italy. *International Journal of Environmental Research and Public Health*, *19*(20), 13216. https://doi.org/10.3390/ijerph192013216

Lazarus, J. V., Wyka, K., White, T. M., Picchio, C. A., Gostin, L. O., Larson, H. J., Rabin, K., Ratzan, S. C., Kamarulzaman, A., & El-Mohandes, A. (2023). A survey of COVID-19 vaccine acceptance across 23 countries in 2022. *Nature Medicine*, *29*(2), 366–375. https://doi.org/10.1038/s41591-022-02185-4

Leonhardt, J. M., & Pezzuti, T. (2022). Vaccination acceptance across cultures: The roles of collectivism, empathy, and homophily. *Journal of International Marketing*, *30*(2), 13–27. https://doi.org/10.1177/1069031X211073179

MacDonald, N. E. (2015). Vaccine hesitancy: Definition, scope and determinants. *Vaccines*, *33*(34), 4161–4164. https://doi.org/10.1016/j.vaccine.2015.04.036

Pagliaro, S., Sacchi, S., Pacilli, M. G., Brambilla, M., Lionetti, F., Bettache, K., Bianchi, M., Biella, M., Bonnot, V., Boza, M., Butera, F., Ceylan-Batur, S., Chong, K., Chopova, T., Crimston, C. R., Álvarez, B., Cuadrado, I., Ellemers, N., Formanowicz, M., … Zubieta, E. (2021). Trust predicts COVID-19 prescribed and discretionary behavioral intentions in 23 countries. *PLoS One*, *16*(3), e0248334. https://doi.org/10.1371/journal.pone.0248334

Paterson, P., Meurice, F., Stanberry, L. R., Glismann, S., Rosenthal, S. L., & Larson, H. J. (2016). Vaccine hesitancy and healthcare providers. *Vaccines*, *34*(52), 6700–6706. https://doi.org/10.1016/j.vaccine.2016.10.042

Pertwee, E., Simas, C., & Larson, H. J. (2022). An epidemic of uncertainty: Rumors, conspiracy theories and vaccine hesitancy. *Nature Medicine*, *28*(3), 456–459. https://doi.org/10.1038/s41591-022-01728-z

Shiloh, S., Peleg, S., & Nudelman, G. (2022). Investigation of the correspondence principle with regard to specific and general COVID-19 behaviors. *Social and Personality Psychology Compass*, *16*(12), e12700. https://doi.org/10.1111/spc3.12700

Stefaniak, A., Wohl, M. J. A., & Elgar, F. J. (2022). Commentary on "Different roles of interpersonal trust and institutional trust in COVID-19 pandemic control". *Social Science Medicine*, *299*, 114765. https://doi.org/10.1016/j.socscimed.2022.114765

Tagat, A., & Kapoor, H. (2023). We're very grateful: Moral emotions, role models, and trust predict vaccine uptake intent in India. *Behavioural Public Policy*, 1–22. https://doi.org/10.1017/bpp.2023.12

Thornton, J. (2022). COVID-19: Trust in government and other people linked with lower infection rate and higher vaccination uptake. *BMJ*, *376*, o292. https://doi.org/10.1136/bmj.o292

Triandis, H. C., Bontempo, R., Villareal, M. J., Asai, M., & Lucca, N. (1988). Individualism and collectivism: Cross-cultural perspectives on self-ingroup relationships. *Journal of Personality and Social Psychology*, *54*(2), 323–338. https://doi.org/10.1037/0022-3514.54.2.323

van Prooijen, J. W., Spadaro, G., & Wang, H. (2022). Suspicion of institutions: How distrust and conspiracy theories deteriorate social relationships. *Current opinion in psychology*, *43*, 65–69. https://doi.org/10.1016/j.copsyc.2021.06.013

Yan, E., Lai, D. W. L., Ng, H. K. L., & Lee, V. W. P. (2022). Predictors of COVID-19 actual vaccine uptake in Hong Kong: A longitudinal population-based survey. *SSM - Population Health*, *18*, 101130. https://doi.org/10.1016/j.ssmph.2022.101130

Zhou, X., Zafarani, R., Shu, K., & Liu, H. (2019). Fake News: Fundamental theories, detection strategies and challenges. In *WSDM 2019—proceedings of the 12th ACM international conference on web search and data mining* (pp. 836–837). https://doi.org/10.1145/3289600.3291382

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Syropoulos, S., & Gkinopoulos, T. (2023). Who do we trust? Differences in types of trust and beliefs in conspiracy theories between vaccinated and unvaccinated Europeans across 17 European countries. *Social and Personality Psychology Compass*, *17*(9), e12792. https://doi.org/10.1111/spc3.12792