

Unvaccinated and left out: The mismatch of vaccine supply and demand during COVID-19 as a source of interpersonal and societal exclusion

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Abstract

At the beginning of the COVID-19 vaccination campaign, many countries faced a mismatch between the demand and supply of vaccines. Particularly in countries where different rights were granted to vaccinated and unvaccinated individuals, this situation may have fostered what we here refer to as *policy-induced feelings of social exclusion*. Using data from Germany in spring 2021, we investigate how individuals' vaccination status related to feelings of (1) being excluded by others (interpersonal level) and (2) being excluded by the government (societal level) at a time when vaccinated and unvaccinated individuals had different rights. We find that being unvaccinated is associated with feeling excluded by others and by the government and that individuals generally report higher levels of exclusion by the government than by other people. These findings have important implications for policymakers not only in times of a pandemic but in light of major crises more generally.

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INTRODUCTION

In times of crisis, governments often face difficult decisions that have the potential to create strong societal tension. Often, these decisions need to carefully balance conflicting interests. As an ongoing example, decisions regarding the climate crisis sometimes need to balance what is environmentally reasonable against the question of what is societally fair. As a result of this balancing, political decisions hold the potential to cause people to feel left out. An extensive body of research suggests that such feelings of social exclusion may have severe negative consequences (Riva et al., 2017; Rudert et al., 2021). Most of this research focused on feelings of exclusion that originate from *other people's* excluding behavior. In contrast, little is known about what we here refer to as *policy-induced feelings of exclusion*, which originate from policy decisions. We here argue and show that policy decisions have the potential to cause feelings of exclusion, which may manifest themselves on the interpersonal level (e.g., people feel excluded or ignored by others because a policy sets them apart) and the societal level (e.g., people feel excluded or ignored by their government). Theories and research in social exclusion may well benefit from accounting for policy-induced feelings of being ignored or left out.

A specific period in spring 2021 in Germany provides the unique opportunity to examine these policy-induced feelings of exclusion more closely. Specifically, in May 2021, the German government loosened COVID-19 restrictions for those fully vaccinated (i.e., two weeks after having received the second vaccine shot) or recovered from COVID-19. Those who were not fully vaccinated or recovered, however, needed to further adhere to the restrictions, involving night-time curfews, contact restrictions, and quarantine after traveling. Importantly, regulations were selectively loosened at an early stage of the vaccination campaign, thus at a time when most people in Germany had not yet had the chance to get fully vaccinated (i.e., only ~14% were fully vaccinated; Statista, 2022). Unlike in later stages of the pandemic when all people in Germany had the *possibility* to get vaccinated—even though some *decided* not to—this particular phase in May 2021 was characterized by a mismatch between demand and supply of vaccines. As a result, individuals who could not get vaccinated may have felt left out, by others who were not affected by restrictions, and by the government, which was responsible for this policy decision.

We argue that such policy-induced feelings of social exclusion generally have the potential to create personal distress and societal tension, and that unique societal circumstances such as in spring 2021 in Germany may provide a lesson to learn for future crises. Combined with the rich body of fundamental research on social exclusion experiences, such insights are important for designing crisis management plans, and more generally for dealing with situations in which individuals feel disadvantaged and deprived of their basic rights as a result of governmental actions.

COVID-19 policies as a source of social isolation and exclusion

The COVID-19 pandemic and the associated measures to prevent the disease's spread represent an extraordinary source of social isolation. During the pandemic, in many countries, contact restrictions allowed individuals to meet only a specific number of people at a time. In the most severe phases of the pandemic, many countries instructed their citizens to adhere to strict physical distancing rules and sometimes even limited their physical contact to people living within the same household (Cheng et al., 2020; Hale et al., 2021). As humans are inherently social beings, who

strive for belonging and connectedness, such forced social isolation can pose a threat to their fundamental need to belong and threaten their well-being (Baumeister & Leary, 1995). In line with this idea, research conducted during a strict COVID-19 lockdown in Italy shows that a longer duration of social isolation, measured by the days the lockdown had been in place, is associated with impaired mental health (Pancani et al., 2021). Moreover, men who lived alone and were thus particularly isolated during COVID-19 lockdowns experienced less well-being compared to those living with others (Jauch et al., 2023).

Interestingly, Hales et al. (2021) argue that physical distancing measures and the according social isolation and lack of social contacts may have similar effects as social exclusion. Even though the lack of social contacts is caused by the external circumstances shaped by the pandemic, people may still feel the pain of being socially excluded because physical distancing threatens the fundamental human needs for control, belonging, meaningful existence, and self-esteem. In support of this reasoning, a study by Graupmann and Pfundmair (2022) conducted in the USA and Germany at the beginning of the COVID-19 pandemic suggests that social distancing in the work context was associated with less basic need fulfillment.

Above and beyond physical distancing rules, the COVID-19 pandemic was associated with other measures that may have caused individuals to feel left out. For instance, the transition to distance education and e-learning posed a disadvantage to students with disabilities (e.g., deaf students, see Madhesh, 2021) or students from low socio-economic backgrounds (Alsoud & Harasis, 2021). In a similar vein, mainly relying on digital communication instead of having face-to-face interactions may have caused elderly people without access to or knowledge of technology to feel left out and overlooked (Seifert, 2020; Seifert et al., 2021). Switching to digital communication may also have created higher risks of feeling excluded and ignored online (i.e., cyber ostracism), with negative consequences for students and employees who were forced to study and work online (Sarfraz et al., 2023; Yang et al., 2022). Moreover, in the context of discussions of the pandemic's origin, individuals of Asian descent faced racist discrimination, stigmatization, and social exclusion across the world (He et al., 2020).

Vaccination-specific feelings of social exclusion

With the discovery of COVID-19 vaccines and the start of vaccination campaigns in many countries at the beginning of 2021 (European Centre for Disease Prevention and Control, 2021), a new source of potential feelings of social exclusion emerged. At the start of the COVID-19 vaccination campaign, many countries faced a mismatch between the vaccine's demand and supply and had to carefully weigh various decision parameters. In line with the guidelines by the World Health Organization (2020), many countries prioritized the most vulnerable groups, (e.g., elderly people, healthcare workers). While this strategy has been vastly in line with citizens' self-reported preferences and perceptions of fairness (Duch et al., 2021; Luyten et al., 2022), it may have nurtured vaccination-specific feelings of social exclusion that arose from loosening COVID-19 restrictions for those fully vaccinated, as was the case in May 2021 in Germany. In particular, with the loosened restrictions, contact restrictions did not apply to unvaccinated versus vaccinated individuals to the same extent. Thus, at a time when many people suffered from a lack of close social contacts (Pancani et al., 2021), the burden was eased for some and aggravated for other individuals. Specifically, we here argue that non-vaccinated individuals may have experienced two different kinds of vaccination-specific feelings, as further detailed next.

Exclusion on the interpersonal level

As a result of the loosened COVID-19 restrictions for vaccinated people, some individuals may have experienced social exclusion on an interpersonal level, for instance by friends or family members who did not include them in social activities. We here refer to this experience as *policy-induced feelings of interpersonal exclusion*. Research on interpersonal social exclusion has established a plethora of negative consequences that result from being ignored or left out by other people. For instance, in the short term, social exclusion poses a threat to individuals' fundamental psychological needs, such as belongingness, self-esteem, control, and meaningful existence (Williams, 2009). Further, social exclusion has been shown to increase aggressive behavior (Ren et al., 2018), reduce pro-social behavior (Twenge et al., 2007), and foster suicidal ideation (Chen et al., 2020). Moreover, if feelings of social exclusion by others persist, they can result in alienation, depression, and hopelessness (Riva et al., 2017; Rudert et al., 2021).

Importantly, based on other research suggesting that physical distance measures *in general* can result in feelings of exclusion and impaired mental well-being (Graupmann & Pfundmair, 2022; Hales et al., 2021; Pancani et al., 2021), there is a strong basis to assume that physical distance measures that apply *specifically* to non-vaccinated individuals may have similar or even stronger effects. In fact, unlike rules that apply to everybody, physical distance measures tied to one's vaccination status may increase perceptions of unfairness and may thus even aggravate feelings of social exclusion. This is in line with previous research, showing that reactions to social exclusion depend on its perceived (un)fairness (Tuscherer et al., 2016).

Exclusion on the societal level

In addition to interpersonal exclusion, individuals may have also experienced *policy-induced feelings of societal exclusion*. Specifically, in the present context, when the restrictions were loosened for vaccinated and recently recovered individuals, unvaccinated people may have felt that their needs were ignored by the government.

Understanding societal exclusion is of high relevance because, in the long run, these feelings may foster a sense of powerlessness and insignificance, which can lead to political alienation or anomia. Both political alienation and anomia describe psychological states that involve feelings of detachment from society and its norms and are important factors in understanding delinquent behaviors (Smith & Bohm, 2008). So far, the issue of societal exclusion in terms of not feeling considered by the government, politics in general, or society at large is rarely investigated, but its effects are likely to be similarly painful to those of interpersonal exclusion.

Of relevance in this context is research on social invisibility (for an overview, see Wesselmann et al., 2023). This form of social exclusion describes the neglect or ignorance of an individual or of some of their personal attributes and can occur on the societal or political level. For instance, women can feel socially invisible when language is exclusively focused on men (Stout & Dasgupta, 2011) or when they feel objectified and thus reduced to their physical appearance (Dvir et al., 2021). Social invisibility can also manifest in perceived interchangeability of members of certain groups.

Another source of social exclusion tied to societal variables is individuals' social and economic status. For instance, research suggests that particularly younger, unemployed individuals are at higher risk to feel socially excluded (Albath et al., 2023) and that homeless individuals feel socially excluded as a result of perceived economic inequality (Marinucci et al., 2022).

Finally, research on political events suggests that elections have the power to elicit feelings of exclusion. For instance, research by Young et al. (2009) has shown that voters who strongly identified with the losing (i.e., McCain) compared to the winning (i.e., Obama) political candidate in the 2008 US presidential election report less fulfillment of fundamental psychological needs. Replicating this pattern for the opposing political party, Claypool et al. (2020) showed that after Trump had won the presidential election in 2016, Clinton compared to Trump supporters reported stronger feelings of rejection and less fulfillment of fundamental psychological needs.

Interestingly, while there is an extensive body of research on political trust, astonishingly little research has examined how feelings of (not) being considered by the government evolve (Flavin, 2013) and to what extent they correspond to experiences of social exclusion.

The present research

In sum, some research suggests that structural and political factors may cause feelings of being overlooked or excluded, thus providing evidence for exclusion on the societal level. Moreover, the negative effects of interpersonal exclusion, that is, social exclusion that results from (the lack of) interactions with other people, are well documented (Williams & Nida, 2022). None of these prior contributions, however, has looked at specific policy decisions and their impact on feeling excluded, most likely because it is notoriously difficult to isolate such impact. The present work provides first evidence mending this gap by investigating *policy-induced feelings of societal exclusion* tied to one specific decision with strong societal implications: The German government's decision to loosen COVID-19 restrictions for vaccinated compared to unvaccinated individuals, at a time when many people wanted to be vaccinated but could not because of a supply shortage.

METHODS

This work is part of a more comprehensive project on the psychological impact of COVID-19 regulations consisting of three timepoints of measurement. We here focus on data from Timepoint 1 and only report the variables used for the analyses of the present work.¹

Given the novelty of the research question as well as time and resource constraints, sample size determination was based on available resources. These considerations resulted in a pre-registered sample size of 300 participants at Timepoint 1. On May 21–22, 2021 (loosened restrictions had been in place for two weeks), 281 German residents accessed the study via Prolific Academic. After applying pre-registered exclusion criteria, 274 participants were retained ($M_{\text{age}} = 29.69$, $SD = 9.00$, 121 female, three diverse, one undisclosed).

We assessed participants' *objective* vaccination status with seven categories (see Table 1). In addition to this self-reported objective vaccination status, individuals were probed for their subjective vaccination status by asking about the perceived psychological distance to being fully vaccinated. To that purpose, we adapted Aron et al.'s (1992) Inclusion of Other in the Self (IOS) scale, which originally has been developed as a measure of relational closeness. In the scale's

¹ Please note that the data, analysis code, and all study materials including the measures that are not reported in the present manuscript are openly available on the OSF: <https://osf.io/pr8vn/>. The project has been pre-registered in two different pre-registrations, see https://aspredicted.org/blind.php?x=PJ5_WR5 and https://aspredicted.org/blind.php?x=GV6_9TD. While the hypotheses tested in the current work were pre-registered, the exact analysis approach was not.

TABLE 1 Variable properties, descriptive statistics, and bivariate correlations.

Variable	Item	Scale	M (SD)	(1)	(2)	(3)	(4)
(1) Objective vaccination status	Please indicate your current vaccination status	1 = fully vaccinated to 7 = not yet vaccinated and no appointment for vaccination	5.68 (1.95)	–			
(2) Subjective vaccination status	Please choose the image that best describes your perceived distance to the status “fully vaccinated”	See Figure 1	2.56 (1.73)	–.80***	–		
(3) Feelings of interpersonal exclusion	I have felt excluded by others because of my vaccination status.	1 = does not apply at all to 7 = completely applies	1.92 (1.57)	.21***	–.24***	–	
(4) Feelings of societal exclusion	I feel that the government adequately considers my personal interests and needs (reverse-coded)	1 = does not apply at all to 7 = completely applies	3.34 (1.44)	.14*	–.19**	.08	–
(5) Political trust ($\alpha = .88$)	To what extent do you trust the following institutions: The parliament The judicial system The police Politicians The parties	1 = do not trust at all to 7 = completely trust	3.86 (1.24)	< .01	.08	–.04	–.55***

Note: * $p < .05$. ** $p < .01$. *** $p < .001$. For all correlation analyses including feelings of societal exclusion, the original scale was reverse coded (i.e., higher values indicate stronger feelings of societal exclusion).

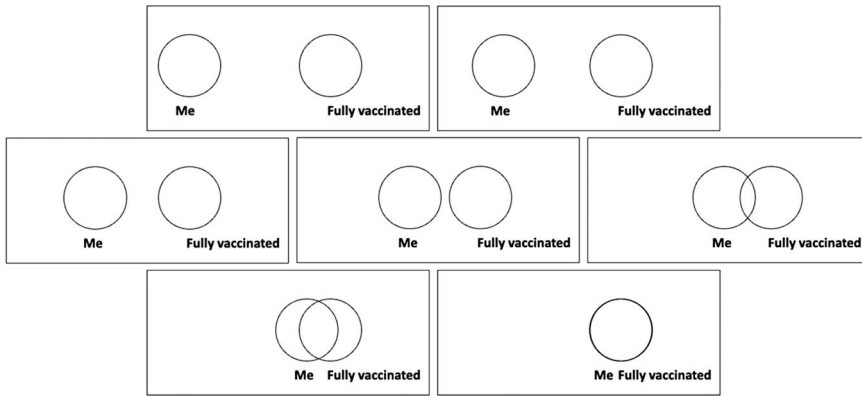


FIGURE 1 Measure of participants' subjective vaccination status. A larger distance between the two circles indicates a larger perceived distance to the status "fully vaccinated".

original version, participants are presented with seven pairs of overlapping circles arranged in increasing overlap with each other and are asked to indicate which pair best reflects their relationship with a given other person (from 1 = *far apart* to 7 = *completely overlapping*). While the IOS scale was originally designed to assess self-reported closeness to one's partner (Aron et al., 1992), later research has adapted the scale to assess *psychological distance* (see Trope & Liberman, 2010) to a person, a construct, or an object more generally. For instance, Choi and Winterich (2013) used an adapted version of the IOS scale to assess individuals' perceived closeness to a brand in the context of consumer research. We developed this conceptual path further and reasoned that the spatial distance between pairs of circles can be used to graphically represent psychological distance to being *fully vaccinated*. To this end, we presented participants with the seven pairs of circles in decreasing distance (see Figure 1) and asked them to indicate which pair best describes their perceived distance to the status fully vaccinated ($M = 2.56$, $SD = 1.73$).

Notably, individuals with the same objective vaccination status may feel differently about how far they are away from being fully vaccinated, and participants' subjective vaccination status provides a useful measure to capture such important psychological factors. In addition to providing a useful measure of psychologically impactful subjective differences, the continuous subjective measure provides a statistical advantage to the categorical objective measure. This is because at a time in history when the distribution on the objective measure was highly skewed (i.e., very few vaccinated individuals), the continuous subjective measure allows for running analyses that would not be possible with the categorical objective measure.

Further variables that were assessed and considered for analysis in the present work are interpersonal exclusion, societal exclusion, and political trust (see Table 1).

RESULTS

Participants' objective and subjective vaccination status are strongly correlated (Spearman's rho), suggesting that they measure a similar construct. Consequently, and because only subjective vaccination status is an interval-scaled variable fulfilling the requirement for parametric testing, in the following we focus on subjective vaccination status. The bivariate correlations between all variables are depicted in Table 1. Note that for all analyses including feelings of societal

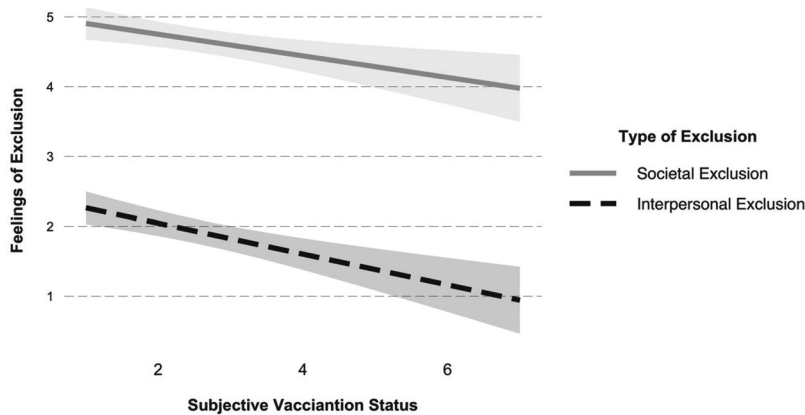


FIGURE 2 Feelings of exclusion predicted by type of exclusion and subjective vaccination status. Note: Grey areas indicate 95% Confidence Intervals. Higher numbers correspond to a smaller perceived distance to the status “fully vaccinated” and to stronger feelings of exclusion. Both feelings of exclusion and subjective vaccination status were measured on a scale from 1 to 7.

exclusion, the original scale was reverse coded (i.e., higher values indicate stronger feelings of societal exclusion).

To investigate whether the situation in spring 2021 in Germany did result in *policy-induced feelings of (a) interpersonal and (b) societal exclusion*, we calculated a mixed model using the *R* package *lme4* (Bates et al., 2015), controlling for participants’ age and gender (fixed effects). Because type of exclusion is nested within participants, a mixed model analysis with a random intercept for participants was chosen. The type of exclusion (interpersonal versus societal) was entered as an effect coded (0.5; −0.5) within-subjects fixed effect, subjective vaccination status (*z*-standardized) as a continuous fixed effect, and feelings of exclusion as the outcome variable. Due to the *z*-standardization of subjective vaccination status, the reported *bs* indicate standardized coefficients. In addition, we report the squared semi-partial correlation coefficients (sr^2) for each predictor using the *R* package *partR2* (Stoffel et al., 2021). Upon inspection of the assumptions of least square method including normality, linearity, and independence of residuals, no violations were observed. Of note, as a general advantage of the use of mixed model analysis, mixed models have been shown to yield robust model estimates in spite of violations of assumptions (Schielzeth et al., 2020).

The interaction between type of exclusion and subjective vaccination status was not significant, $b = .06$, $p = .361$, and did not improve the model fit, $X^2(1, N = 274) = 0.84$, $p = .36$, which is why we dropped the interaction term from the model. The analysis showed that a higher subjective distance to being vaccinated is associated with stronger feelings of exclusion, $b = -.16$, $sr^2 = .02$, $p < .001$. Moreover, individuals further reported significantly stronger feelings of societal exclusion ($M = 4.66$, $SD = 1.44$) than personal exclusion ($M = 1.92$, $SD = 1.56$), $b = 1.35$, $sr^2 = .45$, $p < .001$. Neither age, $b < .01$, $sr^2 < .01$, $p = .927$, nor gender, $b = .03$, $sr^2 < .01$, $p = .432$, had a significant effect on feelings of exclusion. In sum, subjective vaccination status has a significant, small effect on both interpersonal and societal feelings of exclusion. The pattern of effects is visualized in Figure 2.

We further calculated bivariate correlations between subjective vaccination status, feelings of exclusion (interpersonal and societal), and political trust (see Table 1). While there was no

significant association between subjective vaccination status and trust or feelings of interpersonal exclusion and trust, there was a significant association between feelings of societal exclusion and political trust.

DISCUSSION

During a time when the demand and supply of vaccines were in mismatch, and vaccination status determined personal social distancing restrictions, a larger subjective distance to the status “fully vaccinated” was associated with stronger feelings of both personal and societal exclusion. This finding may have important implications for crisis management in general, as both types of exclusion likely cause various negative consequences.

First, being left out by others (interpersonal exclusion) has been shown to result in adverse psychological consequences that manifest in affective, cognitive, and behavioral reactions (Williams & Nida, 2022). If experiences of social exclusion persist, they pose a serious risk to individuals’ mental health (Riva et al., 2017; Rudert et al., 2021). In times of COVID-19 lockdowns, many individuals faced the burden of social isolation and loneliness which negatively affected their mental health (Pancani et al., 2021). Feelings of interpersonal exclusion may aggravate this situation further by threatening important psychological needs, thereby constituting additional psychological burdens (Williams, 2009).

Second, the present findings suggest that individuals’ subjective vaccination status (i.e., how close individuals perceive themselves to acquiring the status “fully vaccinated”) influenced feelings of being excluded by the government, which, in the long run, may have negative societal consequences. Even though research on this matter is scarce, some evidence suggests that individuals report more confidence in governments whose decisions are in line with their own ideological values (Flavin, 2013). These findings afford the speculation that feelings of being excluded by the government may reduce trust in political institutions, which is an important driver of law compliance, political engagement, and support of democracy in general (Catterberg & Moreno, 2006; Marien & Hooghe, 2011). We hasten to add that while we did observe a negative bivariate correlation between political trust and feelings of exclusion by the government, the cross-sectional design does not allow for causal inferences. We thus limit this discussion to the speculation that feelings of being excluded by the government may, in the long term, influence political trust.

Such negative societal effects may have severe consequences. For instance, a study by Pfundmair and Mahr (2022) observed that amongst individuals who opposed the present COVID-19 measures (e.g., proof of vaccination), feeling socially excluded by these measures was associated with a higher willingness to take illegal and violent actions to fight COVID restrictions. This suggests that policy-induced feelings of social exclusion hold the potential to foster radicalization.

Having the choice versus the opportunity to get vaccinated

As a general caveat to our findings, the present study did not assess participants’ willingness to get vaccinated and thus, no inferences about the subgroup of individuals not willing to be vaccinated can be drawn. However, while many studies investigated vaccination willingness/hesitancy (e.g., Gerretsen et al., 2021; Murphy et al., 2021; Troiano & Nardi, 2021), to our knowledge, no study to date examined the psychological consequences of the mismatch in vaccine supply and demand at the beginning of the COVID-19 vaccination campaign, as we did in the present study. At this

particular point in time in spring 2021, whether or not participants *wanted* to be vaccinated likely was usurped by whether or not participants *could* get vaccinated and the consequences associated with being vaccinated.

Yet, it is an intriguing question how individuals who actively chose not to get vaccinated, despite having the opportunity to do so, experienced and coped with the restrictions during COVID-19. Possibly, feeling excluded due to one's vaccination status may have more severe or long-lasting consequences for individuals who intentionally chose not to be vaccinated compared to individuals who could not be vaccinated due to a supply shortage. This is because individuals may recover more quickly when they can attribute the reason for their exclusion experience to external reasons beyond their control rather than to internal reasons that depend on their own decisions (Williams, 2009). Moreover, as Wirth and Williams (2009) show, variables that define permanent group membership (e.g., gender) compared to temporary group membership (e.g., the color of one's shirt) lower the speed of recovery from exclusion by an outgroup member. It is thus conceivable that unvaccinated individuals who perceived their vaccination status as part of their identity recover more slowly from exclusion compared to unvaccinated individuals who intend to get vaccinated as soon as they get the opportunity.

While the lack of control of people who wanted to, but could not yet get vaccinated, may have facilitated external attributions and thus recovery from feelings of exclusion, it may also have had negative effects. In particular, research suggests that a threat to individuals' feelings of control can aggravate negative reactions in excluded individuals. For instance, while reactions of excluded individuals who have the possibility to restore their feelings of control have been shown to be similar to those of included individuals, individuals who are excluded and additionally deprived of control behave substantially more aggressively (Warburton et al., 2006). In another line of research, individuals who were excluded contrary to their expectations and thus experienced a threat to their predictive control behaved more aggressively compared to those who expected to be excluded (Wesselmann et al., 2010). The lack of control associated with wanting vaccination but not receiving it may thus have changed social behavior.

Importantly, research suggests that the lack of control associated with social exclusion can be compensated for by situational factors. As an example, individuals in a position of high compared to low power (operationalized by spatial position) experienced more control and behaved less aggressively following exclusion (Schoel et al., 2014). The fact that threats to control may have severe consequences but can be influenced by the social circumstances is of interest to those who develop pandemic management plans.

Implications

The findings presented here focus on a very specific, unique situation in spring 2021 in Germany. However, from a more general perspective, they indicate that policy decisions may result in feelings of interpersonal and societal exclusion. While some previous contributions have investigated societal variables that may cause feelings of being overlooked or excluded (see Wesselmann et al., 2023), the present study is the first to put the spotlight on policy implications and thus conceptually extends the social exclusion literature. In this line of research, we measured societal exclusion in terms of how strongly participants feel that the government considers their personal interests and needs. From our perspective, this is a useful approach that other research may fruitfully build on when exploring feelings of societal exclusion that go back to structural and political reasons.

Insights into societal exclusion may be particularly relevant in times of crisis when people and societies are under stress, and when trust in political institutions is arguably needed the most. The present findings allow for the conclusion that crisis management plans should be amended with insights about the severe consequences that may result from social exclusion, as well as ways how to avoid such feelings ex-ante when designing policies. The energy and food crisis, triggered by the outbreak of the war in Ukraine in 2022, and felt around the globe, could be one example in which such knowledge is needed. This is because the energy and food crisis also represent severe burdens to many households, which may heighten the risk that individuals feel both excluded on a personal and a societal level. For instance, some individuals may not be able to afford certain social activities and thus feel left out by others, and they may feel excluded by the government because they feel that politicians take too little action to financially relieve certain groups.

Our findings have important implications for feelings of societal exclusion that may be independent of major crises like the COVID-19 pandemic, too. For instance, our research may inform future investigations into feeling excluded by society based on, for instance, one's ethnicity, race, political orientation, gender, or sexual orientation. Notably, feelings of social exclusion may have harmful (inter-)personal and societal consequences, irrespective of whether these experiences are based on factual or perceived discrimination in society. Moreover, even though we found no interaction effect between societal and interpersonal exclusion in the present study, it is possible that different exclusion experiences add up and reinforce their negative effects. This may be a particularly important aspect in understanding exclusion experiences of members of stigmatized groups or individuals affected by intersectional discrimination (Lieberman et al., 2023; Purdie-Vaughns & Eibach, 2008).

CONCLUSION

In sum, the present findings suggest that governmental decisions can result in *policy-induced feelings of social exclusion* on an interpersonal and societal level, which may have critical downstream consequences. For the sake of social peace and preventing social divide, it is crucial for policymakers to consider the impact decisions may have on perceived social exclusion.

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CONFLICT OF INTEREST STATEMENT

We have no conflicts of interest to declare.

DATA AVAILABILITY STATEMENT

Open Code, Open Data, and Open Materials for the study in this manuscript are accessible here: <https://osf.io/pr8vn/>

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