



'You can't be careful enough': Measuring interpersonal trust during a pandemic

Dag Wollebæk, Audun Fladmoe & Kari Steen-Johnsen

To cite this article: Dag Wollebæk, Audun Fladmoe & Kari Steen-Johnsen (2021) 'You can't be careful enough': Measuring interpersonal trust during a pandemic, Journal of Trust Research, 11:2, 75-93, DOI: [10.1080/21515581.2022.2066539](https://doi.org/10.1080/21515581.2022.2066539)

To link to this article: <https://doi.org/10.1080/21515581.2022.2066539>



© 2022 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 27 May 2022.



Submit your article to this journal [↗](#)



Article views: 914



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 1 View citing articles [↗](#)

'You can't be careful enough': Measuring interpersonal trust during a pandemic

Dag Wollebæk, Audun Fladmoe and Kari Steen-Johnsen

Institute for Social Research Oslo, Norway

ABSTRACT

Empirical results regarding the role of interpersonal trust in the pandemic setting have been inconsistent. We argue that one explanation may be an inherent weakness in the standard measure of generalised trust, requesting respondents to choose between the options 'most people can be trusted' and 'you can't be careful enough in dealing with people'. The item measures two inter-related yet separate dimensions - trust and caution. A sense of caution is likely to be activated within the pandemic; some respondents may interpret 'being careful' as avoiding infection or spreading the virus. This may lead to 1) exaggerated negative trends in trust after the pandemic outbreak and 2) misrepresentation of the relationship between trust and compliance with guidelines. This is more likely to occur if respondents are primed to think about the pandemic. Analyses of several survey data sets from Norway confirmed that the standard question showed a decline in trust levels after the pandemic outbreak and a weakly negative correlation with social distancing. Alternative operationalisations without reference to caution suggested a small increase in trust and neutral or a weakly positive correlation with social distancing. Our results imply that the standard question should be used with caution in pandemic research.

ARTICLE HISTORY

Received 14 August 2021
Accepted 30 March 2022

ACTION EDITOR



Joseph Hamm

KEYWORDS

Interpersonal trust; caution;
covid-19; measurement;
social distancing

Introduction

Trust has become a salient topic following the outbreak of the Covid-19 pandemic. On one hand, scholars are investigating how different forms of trust are affecting public response to mitigation policies. On the other, they are debating how lockdowns, elevated fear and social distancing will affect levels of trust. The bulk of studies on the role of trust during the pandemic has so far dealt with the role played by trust in institutions in following government guidelines and thereby reducing face-to-face social interaction, mobility and mortality. Most studies have reported positive correlations (e.g. Bargain & Aminjonov, 2020; Dohle et al., 2020; Elgar et al., 2020; Han et al., 2020; Oksanen et al., 2020; Wong & Jensen, 2020).

CONTACT Dag Wollebæk  dag.wollebak@samfunnsforskning.no  Institute for Social Research, Postboks 3233
Elisenberg, 0208 Oslo, Norway

© 2022 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

A smaller number of studies have addressed interpersonal trust, focusing on two main questions: How does the pandemic affect trust between people, and to what extent is such trust an asset (or liability) within the pandemic? In contrast to the uniform findings with regard to trust in institutions, the results are mixed, with studies showing both negative (Iacono et al., 2021) and positive (Esaïsson et al., 2020; Kye & Hwang, 2020) short-term effects of the pandemic on interpersonal trust. The verdict is also unclear about the association between interpersonal trust and social distancing. Some studies show a negative correlation (Jørgensen et al., 2020; Olsen & Hjorth, 2020; Woelfert & Kunst, 2020), while others report positive associations (Oosterhoff & Palmer, 2020; Pagliaro et al., 2021).

The standard generalised trust question used in the European Social Survey (ESS), the World Values Study (WVS), the General Social Survey (GSS) and innumerable other surveys is formulated as follows: 'Generally speaking, would you say that most people can be trusted, or that you [ESS/GSS: can't be too careful/WVS: need to be very careful] in dealing with people?' The ESS uses a 0–10 point scale, while the WVS and GSS force a choice between dichotomous options ('Most people can be trusted' vs 'Can't be careful enough'). In line with other scholars, we contend that this question conflates the two dimensions of trust and caution (Miller & Mitamura, 2003; Yamagishi & Yamagishi, 1994). This issue is far from trivial as much research on trust relies on this single item. The problem becomes particularly salient during high-risk settings in which caution is both prudent and encouraged.

In this article, we argue that during a pandemic, both the measured levels and correlates of interpersonal trust are strongly dependent on 1) how trust is measured and 2) the framing of the survey. At the core of this argument lies the hypothesis that the standard formulation of the generalised social trust question may be read differently in contexts in which prudence is encouraged and seems sensible (e.g. a pandemic, an ongoing terrorist threat or a killer on the loose in a neighbourhood) than under less extraordinary circumstances. Relying exclusively on this question as a measure of trust may, therefore, lead to erroneous interpretations of the level of social trust. If these assumptions hold true within the context of the Covid-19 pandemic, it will be an indication that some cautiousness is warranted in the use of the generalised trust question in other situations that require caution from citizens. We examine these propositions by reviewing existing research using different measurements of interpersonal trust during the Covid-19 pandemic and analysing survey data from Norway.

The problem with the generalised trust question (especially) during a pandemic

Given the widespread use of the generalised trust question since the 1950s, it should come as no surprise that it has been subject to controversy (see Uslaner, 2015, for an in-depth discussion of its strengths and weaknesses). In line with other scholars, we contend that the standard question conflates the dimensions of trust and caution (Miller & Mitamura, 2003; Yamagishi & Yamagishi, 1994). Miller and Mitamura (2003) argue that it is quite possible for an individual to think that most people are trustworthy and also believe that it is sensible to exercise caution, for example, by locking their doors even though they do not think that most people will burglarise their house. Furthermore, while the portion of the question asking whether 'most people can be trusted' refers to an

assessment of the intentions of others, the statement 'can't be careful enough' invokes respondents' own behavioural preferences and willingness to be vulnerable. According to these authors, this should be seen as an assessment of whether the respondent is willing to take risks more than an indicator of trust: '[o]bviously it is possible for a risk-averse person to feel that people in general are trustworthy, but still to be inclined to be careful in dealing with others' (pp. 63-64).

As Yamagishi and Yamagishi argue (1994), general trust and caution are interrelated as trust is a cognitive bias in the assessment of risk, which in turn impacts the extent to which caution is exercised. They empirically show that those with low generalised trust are most often cautious, whereas some of those with high generalised trust are generally cautious, while others are not.

Thus, the generalised trust question is fraught with conceptual shortcomings. The problem with the question is far from trivial as much research on trust relies on this single item. However, it becomes particularly salient during high-risk settings in which caution is both prudent and encouraged. Thus, while this critique raises vexing questions for researchers who rely on the generalised trust question in general, it does so even more in the context of a pandemic. Perhaps now, more than ever, it might be possible to agree with both statements.

It is likely that a pandemic heightens people's sense of caution, including those high in trust. In fact, it is quite possible that both caution and generalised trust, defined as the 'default expectation of other people's goodwill' (Miller & Mitamura, 2003, p. 62), increase in tandem, as people exercise great caution to avoid spreading the virus, while a sense of shared fate and social solidarity and the experience of collective efficacy are also bolstered. The complexity of the issue is underlined by the possibility that cautious behaviour in some cases may be a real reflection of distrust in the compliance of others, and in other cases an act of acquiescence. Thus, cautious behaviour and a heightened sense of risk may drive down trust over time, or carry over to caution in other areas of social interaction.

Unfortunately, these pertinent questions of both theoretical and empirical interest cannot be answered using the standard question. As caution and trust are measured simultaneously, there is no way of knowing whether a decline in the proportion of respondents agreeing that most people can be trusted reflects a real decrease in trust, an increase in caution or even a substantial increase in caution and a simultaneous increase in trust of a lesser magnitude. Furthermore, in a high-risk situation, such as a pandemic, respondents may attribute different meanings to 'being careful' in dealing with people. Some will consider experiences of being cheated or treated unfairly when dealing with unknown others, while others will likely interpret the statement as a reference to being careful in terms of avoiding infection or spreading the virus.

We further hypothesise that respondents will be more likely to veer towards the cautious option if primed to think about the pandemic. If primed with pandemic concerns, it is likely that a stronger sense of caution will be activated among many respondents with high general trust. This is not because they are afraid that they will be cheated or mistreated but because the authorities, science and society, whom they tend to trust (Rothstein & Stolle, 2008), have told them that being careful is pertinent to prevention in terms of contracting or spreading the disease. Priming with pandemic worries (such as framing a survey with a Covid-19 theme) is likely to shift the balance further in the direction of

caution. In the absence of such priming, a respondent's caution will be less strongly activated and they will less likely think about the specific subject of infection prevention when answering a question about caution in dealing with others. The effect may still be present, as the pandemic is on many people's minds much of the time, though probably of a lesser magnitude.

This may also have consequences for how we interpret the relationship between interpersonal trust and protective behaviour, such as social distancing. As mentioned earlier, the relationship between generalised trust and compliance with recommendations is not as straightforward as in the case of trust in institutions. On the positive side, generalised trust is associated with a willingness to cooperate in collective action in large groups based on the expectation that others will do likewise (Sønderskov, 2009). On the negative side, generalised trust may also have paradoxical relationships with compliance since trusting people tend to be more optimistic, sociable and extroverted, susceptible to misinformation and complacent if they believe that most others are doing the job for them (Elgar et al., 2020). If the former aspect of the relationship were dominant, the correlations between generalised trust and compliance would be positive; if the latter were dominant, these correlations would be negative.

However, measuring trust and caution simultaneously and subsequently interpreting the variable as representing trust is likely to misrepresent real-world effects by exaggerating negative correlations. First, respondents who are otherwise trusting may link their social distancing behaviour to being careful in dealing with others and, therefore, express stronger agreement with this statement. In such cases, negative correlations become inflated.

Second, relationships to other important correlates of social distancing may also be misrepresented. The key variables identified as influencing compliance with social distancing guidelines are pandemic-related worry and trust in government institutions (Bargain & Aminjonov, 2020; Dryhurst et al., 2020). Past research on the Covid-19 pandemic has found that those who express high levels of worry tend to be less trusting of groups (Brück et al., 2020; Jørgensen et al., 2020) and adhere more to social distancing guidelines (e.g. Oosterhoff & Palmer, 2020). This suggests a negative relationship between social trust and compliance since those high in generalised trust tend to be less worried than other citizens. However, pre-pandemic research shows a close correlation between interpersonal and institutional trust (Rothstein & Stolle, 2008), which is more or less universally found to be positively correlated with following government guidelines (e.g. Han et al., 2020) and statistics on mobility and mortality (e.g. Elgar et al., 2020; Oksanen et al., 2020). This suggests a positive relationship between interpersonal trust and compliance, mainly among those who also express high levels of institutional trust.

Respondents who would normally express trust, but who choose the 'careful' option within the context of the pandemic, are likely to be the most worried among trusters in a situation characterised by less imminent risk. Thus, the inclusion of caution in a measure of trust may also inflate the negative correlation between trust and worry about the virus, which is in turn a close correlate of social distancing. Conversely, if the pandemic activates caution among respondents with high generalised trust, the correlation with trust in institutions may be deflated.

These problems should not be present for trust items that do not simultaneously measure caution. Thus, based on the above discussion, we expect the standard

generalised trust question to produce different results from alternative operationalisations in the pandemic setting:

- 1) The effect of the pandemic outbreak on trust will appear more negative for the standard question than alternative measures of trust, especially if the study is framed as a Covid-19 survey.
- 2) The correlations between social trust and social distancing will be more negative when the standard question is used compared to alternative measurements of trust.
- 3) The relationship between trust and worry will be more negative, and the relationship between interpersonal and institutional trust less positive, when the standard question is used compared to alternative measurements.

Studies on interpersonal trust during the covid-19 pandemic

Before moving on to the empirical analysis, we shall provide a brief overview of past studies examining either changes in levels of interpersonal trust or correlations with social distancing. Eighteen studies addressing one of these research questions were identified, some of which used the wording of the standard generalised trust question, while others used alternative operationalisations. Information about the studies is summarised in [Table 1](#).

Changes in levels of social trust during the pandemic

Three studies using the standard question reported negative effects of the pandemic on trust. [Iacono et al. \(2021\)](#) used a Covid-19-framed survey and showed that levels of generalised trust in the Netherlands dropped from a historically stable level to one of its lowest points on record after the lockdown was enforced. [Daniele et al. \(2020\)](#) carried out an experiment in which respondents were primed with information about the Covid-19 pandemic. The authors observed a severe reduction in trust on the standard measure in the treatment groups. [Zangger \(2021\)](#) also found a considerable decrease in generalised trust in Switzerland after the pandemic outbreak.

By contrast, three studies using alternative measures of interpersonal trust have shown positive effects. Both [Esaïasson et al. \(2020\)](#) and [Kye and Hwang \(2020\)](#) found significant increases in trust levels in Sweden and South Korea, respectively, in the immediate aftermath of the pandemic outbreak. [Gambetta and Morisi \(2020\)](#) reported that exposure to Covid-19 (either personal or by living in an area strongly affected by the pandemic) had a positive correlation with the estimated probability of believing that strangers would return a wallet found in the local environment. However, two studies which used UK data and used alternative measures of trust – trust in neighbours ([Borkowska & Laurence, 2021](#)) and trust in ‘people you meet for the first time’ ([Delhey et al., 2021](#)) – showed a decline. No such difference was apparent in Germany ([Delhey et al., 2021](#)).

One Norwegian study based on a web survey from May 2020 is of particular relevance as it used three indicators from the ESS in the same context as ours ([Thoresen et al., 2021](#)). That survey was not framed as a Covid-19 study but as a survey on well-being. The authors reported no significant changes on any of the indicators analysed separately compared to

Table 1 . Overview of past studies of interpersonal trust during the Covid-19 pandemic

	Measure of trust	Study object and description	Framed as Covid-19 survey	Result
<i>Effect of pandemic on trust</i>				
Iacono et al. (2021)	Standard question	Dutch population survey, Spring 2020	Yes	Significant decrease in trust
Daniele et al. (2020)	Standard question	Survey experiments in Italy, Germany, and the Netherlands	Not stated	Treatment with information about economic threat and health concerns had a negative effect on trust
Zangger (2021)	Standard question	Swiss population survey, Spring 2020	Yes	Significant decrease in trust
Gambetta and Morisi (2020)	Probability of return of lost wallet	Survey experiments in Italy	Not stated	Various forms of exposure to pandemic had a positive effect on trust
Esaiasson et al. (2020)	'In your opinion, to what extent is it generally possible to trust people?'	Swedish population survey, Spring 2020	Not stated	Small but significant increase in trust
Kye and Hwang (2020)	Trust in South Korean people	South Korean population survey, including panel data with pre-pandemic responses, Spring 2020	Not stated	Increase in trust both on average in population and among individuals.
Borkowska and Laurence (2021)	'People in this neighbourhood can be trusted'	UK population survey, June 2020	Yes	Decrease in trust
Delhey et al. (2021)	Trust in people you meet for the first time	Population surveys in the UK and Germany (2020–2021) compared to EVS 2017	Yes	Decrease in trust 2017–2020 in the UK, not Germany, no change in 2020–2021
Thoresen et al. (2021)	Standard question + 'fairness' and 'helpful' -items from ESS	Norwegian population survey, Spring 2020, compared to ESS 2018	No	No significant change in trust levels but increased difference between items
<i>Correlation with social distancing</i>				
Olsen and Hjorth (2020)	Standard question	Danish population survey, March 2020	Not stated	Negative partial correlation with willingness to socially distance
Jørgensen et al. (2020)	Standard question	Population survey in eight countries, Spring 2020	Not stated	Negative partial correlation with social distancing behaviour in 7/8 countries
Woelfert and Kunst (2020)	Index of standard question, 'fairness' and 'helpful' items (ESS)	UK population survey, Spring 2020	Not stated	Weak negative correlation with social distancing
Oosterhoff and Palmer (2020)	Index of Likert scales measuring (1) generalized trust, (2) most people fair and (3) most people helpful	Survey of US adolescents (13–18), March 2020	Not stated	Zero correlation with social distancing
Gratz et al. (2021)	Nine-item index of dispositional trust	US population survey, March–April 2020	Yes	Zero correlation with social distancing
Pagliaro et al. (2021)	Trust in the compliance of others to social distancing guidelines	Population surveys in 23 countries (convenience sample), Spring 2020	Not stated	Positive correlation with intentions to comply with prescribed behaviours
Hao and Shao (2021)	Five-point scale of generalized trust	US population survey, August–September 2020	Not stated	Positive correlation with behavioural adjustments during pandemic
Wei and Lee (2021)	Five-item index of interpersonal trust	Chinese population survey, January–February 2020	Not stated	Positive correlation with willingness to abstain from social contact
Alessandri et al. (2020)	Index of trust in known others and unknown others	Italian population survey, Spring 2020	Yes	Positive partial correlation between trust in known others and zero correlation with trust in unknown others with social distancing

the ESS of 2018. However, there seemed to be a slight tendency towards the three indicators being variously affected. The mean for the generalised trust question (0–10) was 0.1 higher than for the item ‘would you say that most of the time people try to be helpful or that they are mostly looking out for themselves’ compared to 0.52 in the ESS. Similarly, in their study, the mean for the generalised trust item was 0.7 lower than for the item ‘most people try to take advantage of you, or try to be fair’ compared to 0.29 in the ESS.¹

Correlations with social distancing

Three studies using the standard question reported negative correlations with social distancing behaviour: a study from Denmark (Olsen & Hjorth, 2020), a cross-national survey in eight countries (Jørgensen et al., 2020) and one from the UK (Woelfert & Kunst, 2020), which also included two other items in the index. By contrast, studies utilising alternative measures of social trust report positive or weak relationships. Two reported zero correlations (Gratz et al., 2021; Oosterhoff & Palmer, 2020), while four reported positive correlations, including a cross-national survey from 23 countries (Pagliaro et al., 2021) and surveys from the United States (Gratz et al., 2021), China (Wei & Lee, 2021) and Italy (Alessandri et al., 2020). In the latter study, trust in known others positively predicted social distancing, whereas no correlation was found with trust in unknown others. Overall, the studies that utilise alternative measures do not indicate a robust positive relationship between interpersonal trust and social distancing, but none of them has so far suggested a negative relationship.

In summary, although the conclusion was based on few studies and was, therefore, preliminary, there seemed to be a pattern in the expected direction: Those relying on the standard generalised trust question tended to report negative effects of the pandemic on interpersonal trust, especially when framed as Covid-19 surveys. The verdict from studies using alternative measures was more mixed. The studies examining correlations with social distancing and the standard measures found negative correlations, whereas those using different operationalisations showed zero correlations or positive relationships between trust and social distancing.

Data and methods

We investigated the propositions outlined above using four population-based surveys from Norway, a country characterised by high levels of interpersonal trust (Andersen & Dinesen, 2017). By December 2021, it had been comparatively mildly hit by the Covid-19 pandemic, with 200 deaths per one million residents (compared to 2,400 deaths per 1 million in the US) (www.worldometers.info). The authorities have strongly emphasised the importance of social distancing and hygienic measures.

The first survey (carried out as part of the research project *Pandemic Rhetoric, Trust and Social Media (PAR-TS)*) was a Covid-19-themed survey carried out in three waves (March/April 2020, October/November 2020 and May 2021), while the second was a general panel survey (the Norwegian Citizen Panel (NCP)) in which one wave was explicitly Covid-19-themed (March 2020), while the others were not (January 2020 and three waves from June 2020 to February 2021). The third survey was a longitudinal panel survey on media use, trust and civic participation that has been fielded six times between 2011

and 2020 (Social Media in the Public Sphere (SMIPS)). In this article, we analyse data from the two most recent waves, carried out before (2018) and after the outbreak of the pandemic (May/June 2020). As a fourth source, we also compared responses to two different measurements of interpersonal trust with responses to the last published wave of the European Social Survey (ESS) (2018). By including the SMIPS (Institute for Social Research 2018, 2020) and ESS (2018) surveys, we enabled a comparison of the levels of interpersonal trust before and during the pandemic.

All surveys (except the ESS, which used CAPI) were web-based. PAR-TS was a four-wave panel survey on citizens' trust in and reactions to public policies during the Covid-19 pandemic in Norway, carried out by the Institute for Social Research (ISF), Oslo, Norway. Here, we use data from the second, third and fourth waves, which included the relevant items. The survey was administered by Kantar Norway, and the sample was drawn from Kantar's access panel, which is probability-based and consists of approximately 50,000 Internet users. People under 30 without higher education and those of immigrant descent were somewhat underrepresented in the sample. To reduce these biases, descriptive analyses were weighted according to official statistics on age, gender and education.

The SMIPS surveys were also carried out by ISF and administered by Kantar Norway and relied on the same sample source as the PAR-TS survey. However, the 2020 SMIPS survey was not framed as relating to Covid-19. Due to panel attrition, especially among young adults, the SMIPS samples have a larger age bias than those of the PAR-TS survey. As such, descriptive analyses are weighted accordingly.

The NCP is a general social survey focusing on a range of topics and has been carried out by the University of Bergen and Norwegian Research Centre (NORCE) since 2013. The participants represent a cross-section of the Norwegian population and are invited a few times a year to respond to social surveys. The sample suffers similar biases as the Kantar samples; therefore, descriptive analyses are weighted accordingly. In March 2020, the survey was explicitly Covid-19-themed, though not in later rounds. We report descriptive data from five rounds of the survey, which were carried out before and after the outbreak in 2020 and 2021.

We used three measures of interpersonal trust: 1) the standard generalised trust question ('generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?' on an 11-point scale). The item was included in the ESS, PAR-TS and NCP; 2) trust in three groups (people living in your area, people living in Norway and people of a different nationality on a four-point Likert scale with the options 'do not trust at all', 'trust only to some extent', 'trust quite a lot', and 'trust completely'). The items were included in the SMIPS and PAR-TS surveys; 3) belief in the fairness of others, an item often used to construct indices of generalised trust ('Would you say that most people try to take advantage of you, or try to be fair' on an 11-point scale). This question was included in the ESS and PAR-TS surveys (waves 3 and 4). [Table 2](#) in the next section provides an overview of the different trust items and descriptive statistics.

We also included indices of Covid-19-related worry and fear and trust in health authorities and social distancing (the PAR-TS survey only). The worry index (Cronbach's $\alpha = .83$) was based on the following items: feelings of anxiety when thinking about the virus, worry that many elderly and sick people will die, worry that the respondent or a loved person would die (0–10) and agreement with the statement 'I am worried about the

consequences the coronavirus will have for me and my family’ (four-point Likert scale ranging from completely disagree to completely agree). Trust in health authorities (Cronbach’s $\alpha = .86$) included the items trust in the competency of the Ministry of Health, the National Institute of Public Health and the Health Directorate; trust in the health authorities and trust that the public health authorities give a correct impression of the coronavirus situation. The responses were given on four-point Likert scales (ranging from very little to very high trust). Additive indices for worry and trust in health authorities were constructed after recoding all the measures ranging from 0–1, i.e. the four points on the Likert

Table 2 . Interpersonal trust before and during the pandemic: Various measurements of interpersonal trust in Covid-19 and non-Covid-19 framing. Means and 95% confidence intervals.

	Method	Survey	Mean	95% confidence interval		N
				Lower	Upper	
Non-Covid-19-themed surveys						
Generalised trust (0–10)						
ESS 2018	CAPI	ESS	6.59	6.49	6.70	1,397
Jan 2020	Web	NCP	6.75	6.71	6.78	11,360
Jun 2020	Web	NCP	6.65	6.56	6.74	2,035
Nov 2020	Web	NCP	6.77	6.64	6.89	868
Feb 2021	Web	NCP	6.92	6.88	6.96	10,324
Generalised trust (1–10)						
Oct/Nov 2018	Web	SMIPS	6.36	6.29	6.43	3,779
May/Jun 2020	Web	SMIPS	5.91	5.84	5.99	3,970
Most people try to take advantage of you or try to be fair (0–10)						
2018	CAPI	ESS	6.94	6.84	7.03	1,397
Trust in groups (1–4)						
<i>People living in your area</i>						
Oct/Nov 2018	Web	SMIPS	2.42	2.40	2.44	3,527
May/Jun 2020	Web	SMIPS	2.48	2.46	2.51	3,675
<i>People living in Norway</i>						
Oct/Nov 2018	Web	SMIPS	2.34	2.31	2.36	3,482
May/Jun 2020	Web	SMIPS	2.41	2.39	2.43	3,675
<i>People with a different nationality</i>						
Oct/Nov 2018	Web	SMIPS	2.36	2.34	2.39	3,436
May/Jun 2020	Web	SMIPS	2.37	2.35	2.40	3,514
Covid-19-themed surveys						
Generalised trust (0–10)						
Mar 2020	Web	NCP	6.34	6.29	6.38	12,038
Mar/Apr 2020	Web	PAR-TS	5.80	5.66	5.94	1,420
Oct/Nov 2020	Web	PAR-TS	5.48	5.38	5.59	2,049
May 2021	Web	PAR-TS	5.84	5.72	5.95	1,728
Generalised trust (1–10)						
Most people try to take advantage of you or try to be fair (0–10)						
Oct/Nov 2020	Web	PAR-TS	6.61	6.52	6.70	2,053
May 2021	Web	PAR-TS	6.93	6.85	7.02	2,307
Trust in groups (1–4)						
<i>People living in your area</i>						
Mar/Apr 2020	Web	PAR-TS	2.63	2.59	2.66	1,356
Oct/Nov 2020	Web	PAR-TS	2.71	2.68	2.73	1,994
May 2021	Web	PAR-TS	2.83	2.80	2.85	2,231
<i>People living in Norway</i>						
Mar/Apr 2020	Web	PAR-TS	2.48	2.44	2.51	1,385
Oct/Nov 2020	Web	PAR-TS	2.57	2.54	2.60	2,003
May 2021	Web	PAR-TS	2.70	2.68	2.72	2,241
<i>People with a different nationality</i>						
Mar/Apr 2020	Web	PAR-TS	2.43	2.39	2.47	1,279
Oct/Nov 2020	Web	PAR-TS	2.52	2.49	2.55	1,952
May 2021	Web	PAR-TS	2.59	2.57	2.62	2,184

Abbreviations: NCP – Norwegian Citizen Panel; ESS – European Social Survey; SMIPS – Social Media in the Public Sphere.

scales given the values 0, 0.33, 0.67 and 1 while eleven-point scales were recoded to 0, 0.1, 0.2 and so forth, thus attributing equal weight to each item. All items loaded on one dimension in separate exploratory factor analyses conducted for each dimension.

Social distancing was measured by whether the respondents had changed their behaviour in four areas compared to the pre-Covid-19 landscape (additive index 0–4): participate less in social activities outside the home, avoid public spaces where many people are gathered, invite people over less frequently and avoid kissing or hugging people other than close relations.

Results and discussion

The analysis of the Norwegian data on interpersonal trust shall proceed in two steps: First, we will examine the extent to which trust levels have changed after the outbreak of the pandemic and gauge variations in the results depending on whether the generalised trust question or other formulations were used. We will also compare surveys that were explicitly framed as Covid-19 surveys and those that were not. Second, we will investigate the relationships between different measures of interpersonal trust, worries about the pandemic, institutional trust and social distancing behaviour.

Changes in trust levels

Table 2 shows variations (averages and confidence intervals) of different measurements of trust in Norway before and during the pandemic as well as information about the data collection method and whether the survey was framed as a Covid-19 study. Changes are considered significant ($p < 0.05$) when confidence intervals do not overlap. Select indicators are presented graphically in Figure 1.

In examining changes in generalised trust using the standard question, we observed that compared to the pre-pandemic wave of the NCP (January 2020), there was a significant decline in the March wave both in terms of the NCP, $M = 6.75$, 95% CI [6.71, 6.78] (January) and $M = 6.34$, 95% CI [6.29, 6.38] (March), and PAR-TS, $M = 5.80$, 95% CI [5.66, 5.94] (March). The ESS figure from 2018 ($M = 6.59$, 95% CI [6.49, 6.70]) was slightly lower than that reported in the NCP in January 2020, though still significantly higher than the March 2020 levels.

Both surveys in March (NCP and PAR-TS) were presented to respondents as dedicated to the topic of the pandemic. Later rounds of the NCP covered a wide range of themes, and the respondents were not primed to think about the coronavirus. Interestingly, after March, the trends of the NCP and PAR-TS surveys diverged: The mean returned to the pre-pandemic level in the former, while it fell further in the latter in the October/November wave, $M = 5.48$, 95% CI [5.38, 5.59]. If we are correct that the respondents were thinking about being careful so as to avoid the virus when they chose the 'distrusting' statement in the March surveys, the drop from March to October in the PAR-TS survey could be explained by social distancing practices becoming routine and more deeply engrained in the population several months into the pandemic than during its early days. It is reasonable to expect the routinisation of social distancing and the establishment of such behaviour as a firm norm in magnifying the priming inherent in receiving a survey with an explicit Covid-19 theme. The fall 2020 survey was carried out in the context of the

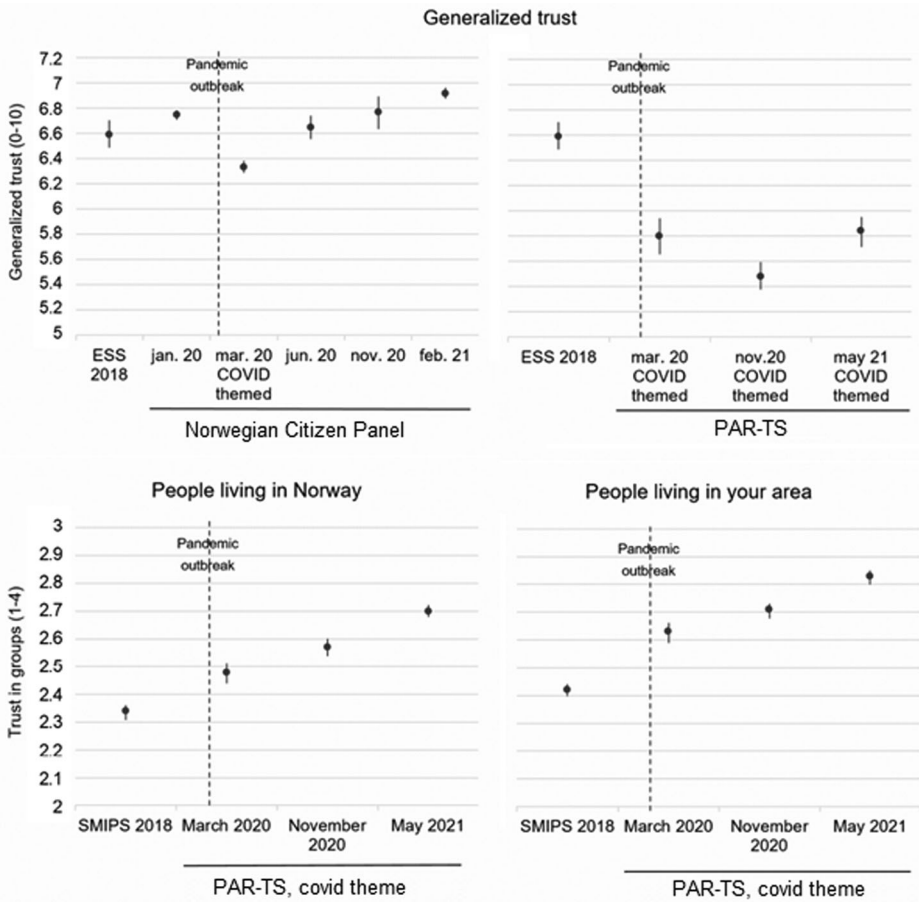


Figure 1. Interpersonal trust in the ESS, NCP, SMIPS and PAR-TS (selected indicators): Means and 95% confidence intervals. NOTE: Y-axes have been truncated.

emergence of the second wave of infections in Norway, at a time when caution about spreading the infection was strongly underscored by the authorities. In line with fewer cases of severe disease and somewhat relaxed social distancing guidelines as the third wave of infections was ebbing in May 2021, generalised trust reverted to the levels found in March 2020.

The SMIPS survey also included the generalised trust question, although with a scale ranging from 1–10 instead of 0–10. Thus, the mean value was not comparable with the other surveys included in the table. However, it was possible to compare the mean after the outbreak of the pandemic with that from the pre-pandemic (2018) survey. The item shows a significant drop (from $M=6.36$, 95% CI [6.29, 6.43] to $M=5.91$, 95% CI [5.84, 5.99]), even without priming (while trust in groups increased, see below). The change was of a lesser magnitude than in the PAR-TS survey, but it was comparable to that found in the NCP. This raises the question of whether caution was activated in the absence of explicitly priming the respondents to think about the pandemic.

A second measure from the ESS survey frequently used to construct indices of generalised trust – whether people try to take advantage of you or try to be fair – seemed to be less affected by the pandemic. This item was included in the third wave of the PAR-TS survey (fall 2020). While the difference between the ESS of 2018 and the PAR-TS survey (wave 3) on the item ‘most people can be trusted/can’t be careful enough’ was more than one scale point (-1.11), the difference on the item ‘try to be fair’ was only 0.33 , M (ESS) = 6.94 , 95% CI [6.94 , 7.03], M (PAR-TS w3) = 6.61 , 95% CI [6.52 , 6.70]. It should be noted that the comparison between the ESS and PAR-TS was not entirely straightforward: The ESS was carried out using CAPI and a live interviewer, while the PAR-TS survey was web-based. This could manifest in interviewer effects and higher values on both indicators in the ESS, meaning that the drop was less severe with regard to the generalised trust question and possibly absent on the fairness question.

Questions about trust in groups (people living in your area, other Norwegians and people of a different nationality) followed a different trajectory altogether. The levels measured in the PAR-TS survey immediately following the March lockdown were slightly but significantly higher than in the comparable SMIPS survey from 2018. This was the case for all three items. The non-Covid-framed SMIPS survey from May 2020 also showed a small but significant increase in trust in neighbours and compatriots. Trust levels continued to rise somewhat from March until October/November 2020 and even more from November 2020 to May 2021. This suggests that the pandemic may have created a sense that society had weathered the storm, resulting in an increase in interpersonal trust, at least in the short term.

Finally, the argument was further strengthened by comparing correlations between trust in groups and generalised trust. In the 2018 SMIPS survey, generalised trust, measured on a 10-point scale, was quite strongly correlated with trust in people living in your area (.46), people living in Norway (.56) and people of a different nationality (.48). In the fall 2020 wave of the PAR-TS survey, in which the drop in generalised trust was most pronounced, these correlations were .43, .37 and .31, respectively. This indicates that otherwise high-trusting respondents moved towards the cautious end of the generalised trust scale during the pandemic, consistent with our hypothesis of a different interpretation of ‘being careful’ during the pandemic; however, when caution was absent from the question wording, they did not. While there was not much change in the correlation with people living in the area, there was a weaker association with generalised trust with regard to the outer reaches of the ‘radius of trust’, namely fellow compatriots and people of a different nationality, arguably conceptually closer to the idea of trust in strangers.

Thus, when measured with the ‘can’t be careful enough’ variant of the generalised trust question in the context of a survey dedicated to the pandemic, trust appeared to decrease in line with our expectations. However, when the respondents were not primed with the Covid-19 theme, they seemed to interpret being careful in a more regular light (e.g. being cheated or mistreated), with the responses being more similar to those in the pre-pandemic period. There was also a decrease in the mean when asked about the fairness of others, although of a much smaller magnitude. When trust was measured with items representing groups (neighbours, Norwegians and people of another nationality) without any mention of ‘being careful’, the trend appeared to be slightly positive. As the pandemic was starting to ebb, vaccination

was underway and social distancing somewhat relaxed in May 2021, trust increased significantly on all measures used.

Correlations with pandemic worry, trust in institutions and social distancing

As discussed above, the measure used for trust may also affect conclusions regarding the association between trust and social distancing behaviour. We hypothesised that the generalised trust question would show correlations with social distancing that were more negative than those of alternative measurements of trust. We further hypothesised that correlations with pandemic-related worry and institutional trust would be more negative and less positive respectively, which could indicate a more negative relationship with social distancing than other measures. In order to gauge relationships at a time when social distancing was both established as a general norm in the population and highly pertinent, we used data from the third wave (Oct/Nov 2020) of the PAR-TS survey. In the absence of temporal ordering of the data, we made no causal claims. Our prime interest was how different operationalisations of trust interrelated with worry, trust in authorities and social distancing behaviour.

Figure 2 shows the correlations between the variables of interest (see methods section for index construction), using three indicators. In order to isolate the direct relationship between interpersonal trust and social distancing, the horizontal arrow in the figure shows partial correlations, controlling for trust in health authorities and worry/fear.

The relationship between trust and the other three variables varied on the basis of how it was measured. The standard generalised trust question was directly and negatively related to social distancing (partial correlation $-.09, p < .001$). There was also a negative relationship with pandemic worries: Those placing themselves closer to 'can't be careful' were more worried ($-.14, p < .001$), and those who were worried adhered more to social distancing ($.21, p < .001$). There was a positive relationship between generalised trust and trust in health authorities ($.25, p < .001$). In sum, the relationships suggest a weakly negative association between trust, measured by the standard question, and social distancing.

By contrast, an index of trust in the three aforementioned groups (Cronbach's $\alpha = .78$), showed a weaker correlation with worry and fear ($-.04, p = .048$) and a stronger correlation with trust in health authorities ($.34, p < .001$). The partial correlation between trust and social distancing, controlling for trust in authorities and worry/fear, was insignificant. The correlations suggest a neutral or weakly positive relationship between interpersonal trust and social distancing.

Finally, believing that people are mostly fair was uncorrelated with worry about and fear of the virus, but strongly positively correlated with trust in health authorities ($.40, p < .001$). The correlation between this belief and adherence to social distancing was weakly positive but insignificant ($.033, p = .127$). Thus, using this measure, interpersonal trust appeared to be positively related to social distancing behaviour, as it is strongly correlated with trust in health authorities, which in turn correlates with social distancing.

Thus, when the generalised trust question was used (including the wording 'can't be careful enough'), the relationship between trust and adherence to social distancing was weakly negative. It was negatively associated with worry (because those thinking they should be careful were more worried), less strongly related to trust in health

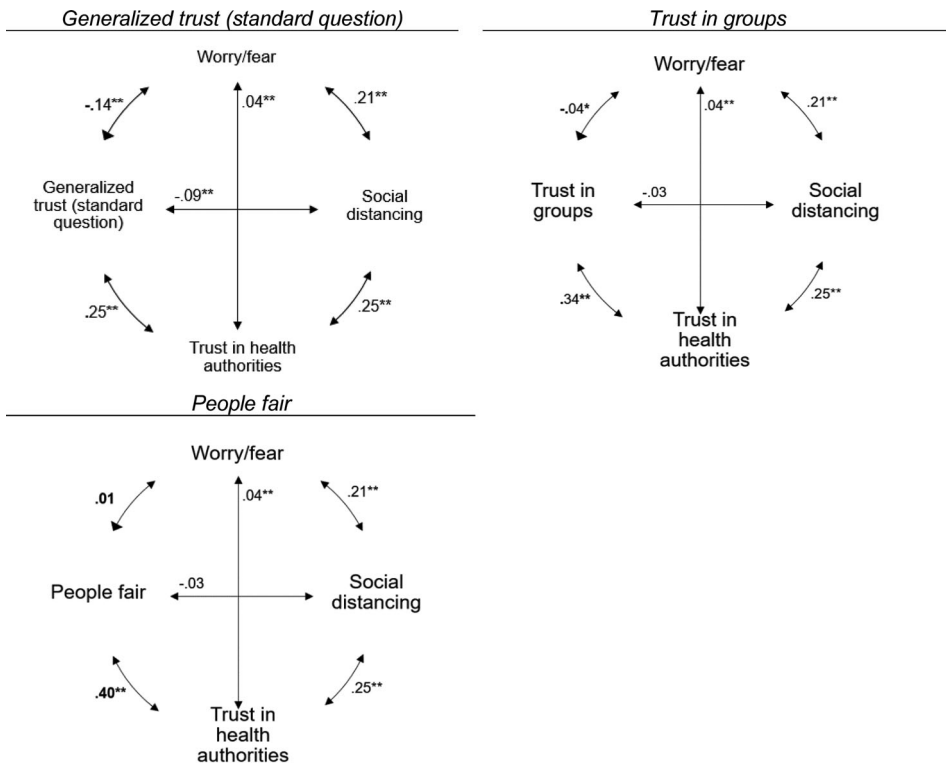


Figure 2. Relationship between three measures of interpersonal trust, worry/fear, trust in health authorities and social distancing behaviour. Pairwise correlations (partial correlations between trust and social distancing). PAR-TS October/November 2020.

authorities than the other measurements and directly negatively linked to social distancing behaviour. By contrast, when trust in groups or the statement about whether other people are mostly fair was used, the relationship appears weakly positive. Trust in health authorities was stronger, and the negative indirect relationship via worry and fear was weak or absent altogether.

Conclusion

The analyses herein confirmed an inherent weakness in the standard generalised trust question, namely that it conflates two separate dimensions (trust in others and cautious behavioural preferences/acceptance of risk) (Miller & Mitamura, 2003). The conceptual problem associated with conflating trust and caution arguably applies to all trust research. However, it appears especially salient in situations in which cautious behaviour is widespread and encouraged, such as during a pandemic, and especially when respondents are primed to think about current circumstances.

We identified two potential pitfalls for pandemic research utilising the item. First, it could exaggerate or even create an artificial drop in trust when the more accurate explanation is elevated caution. Second, it could misrepresent the relationship with social distancing and, thereby, the role played by interpersonal trust during a pandemic (possibly

including other situations of high risk, e.g. an ongoing terrorist threat). In a worst-case scenario, this could lead to misguided policy recommendations that encourage distrust in order to maintain compliance with guidelines.

Indeed, the analyses based on the generalised trust question suggested a decline in trust levels in Norway and a weak negative correlation with social distancing, while alternative operationalisations showed a small increase in trust and a weak positive correlation with adhering to government guidelines. The generalised trust question also exaggerated the negative correlation with worry and fear and showed a weaker correlation with trust in authorities, both close correlates of adhering to social distancing guidelines.

The differences between Covid-19-framed surveys and those without such framing suggest that the phrase 'can't be careful enough' was perceived differently if the respondent was primed to think about the pandemic. In such situations, the respondents tended to veer toward the 'careful' alternative as caution was both prudent and encouraged by authorities and science. Furthermore, it is likely that some respondents were thinking about the precautions they were taking to avoid exposure to or spreading the virus when asked about whether they should be careful in dealing with others.

The findings fall into a pattern observed in extant pandemic research. Although based on few studies, there seems to be a tendency towards a more negative verdict regarding the role of interpersonal trust in studies using the standard trust/caution item compared to those measuring trust in other ways. In a situation characterised by high imminent risk, such as a pandemic, a sense of caution is instilled in the population, and cautious behaviour in some areas of social interaction becomes widespread. This is arguably reflected in the responses to the standard question in Covid-19-themed surveys, but the jury is still out on the question of whether the pandemic has caused trust to decline in the longer term. The caution exercised could be motivated, in part, by distrust in the willingness of others to cooperate, and we cannot rule out that prolonged practices of cautious behaviour could damage interpersonal trust in the longer term.

However, two of our alternative measurements (trust in neighbours and fellow Norwegians) suggest that this has not happened thus far. While we did see a small decline in the belief in the fairness of others, there seemed to be a continual increase throughout the course of the pandemic in the two aforementioned measures of trust. This apparent increase in interpersonal trust could be interpreted in several ways: as an expression of a strengthened sense of shared fate and social cohesion (Rothstein & Uslaner, 2005) and as heightened perceived collective efficacy (Bandura, 2000) based on the observation that others are indeed cooperating and that society is weathering the storm. In the third wave of the PAR-TS survey (Oct/Nov 2020), 74 per cent agreed with the statement that 'most people do what they can to limit the spread of infection'. An alternative or complementary mechanism may be the emancipatory theory of trust developed in the context of natural disasters, which posits that people become more dependent on the support of others in times of catastrophe (Gambetta & Morisi, 2020). The present analyses did not allow us to identify the exact mechanisms, which could vary according to how hard hit the society under study has been by the pandemic and the nature of the response of the public and government. This opens up a natural avenue for further research.

Thus, at least some aspects of caution (manifested in changes in the generalised trust/caution question when primed with the pandemic) and trust (in neighbours and

Norwegians) may have *both* increased during the period under study. This underlines the importance of a multidimensional approach to trust research. Although the two concepts are interrelated, trust and caution should be treated as theoretically and analytically separate constructs, and empirical investigations should be conducted accordingly. Further research should address whether situation-specific practices of caution, such as social distancing during a pandemic, carry over into cautious attitudes and behaviours in other domains of interaction and whether this, in turn, affects different aspects of trust. The generalised trust question is too blunt a tool to disentangle such effects; different types of caution and trust should be measured and analysed separately.

The problem may be most severe in surveys framed with a Covid-19 theme, in which the respondent is primed to think about the virus. In NCP surveys with a general topic, even after the pandemic outbreak, responses to the generalised trust question were at pre-pandemic levels. More research is needed to establish whether this finding, and the other issues with the generalised trust question identified herein, apply to countries with lower initial levels of trust or those that have been harder hit by the pandemic. While some of the studies referenced above indicated similar patterns to ours, it is a limitation of our study that we only explored the problem in a single context with very high outset levels of trust.

While the amalgamation of trust and caution in a single item is conceptually problematic, a somewhat positive takeaway from this finding is that the use of the standard question in, for example, future rounds of the ESS or the WVS will be plagued by less severe problems compared to surveys explicitly addressing attitudes and behaviour relating to the pandemic or other situations where citizens are urged to exercise caution in aspects of their social interactions. In the context of Covid-19 research, however, the recommendation emanating from our findings is clear: When it comes to using the generalised trust question, you really cannot be careful enough.

Note

1. In the ESS of 2018, the mean scores for the three items were as follows: fairness 6.94 ($SD = 1.85$, $n = 1398$), helpful 6.13 ($SD = 1.96$, $n = 1405$) and generalised trust 6.59 ($SD = 2.00$, $n = 1398$). Thoresen et al. (2021, p. 5) reported the following means: fairness 7.1 ($SD = 2.2$), helpful 6.3 ($SD = 2.3$) and generalised trust 6.4 ($SD = 2.4$). The n of their survey was 1040. We thank the authors for their assistance in interpreting the results.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by Norges Forskningsråd: [Grant Number 312731].

Notes on contributors

Dag Wollebæk is Research Professor at the Institute for Social Research in Oslo, Norway. He has published extensively on trust in relation to a number of phenomena, such as the Covid-19 pandemic, participation in voluntary associations, terrorism, and ethnic diversity, in journals such as *Scandinavian Political Studies*, *Political Science & Politics* and *Journal of Elections, Public Opinion and Parties*.

Audun Fladmoe is Senior Research Fellow at the Institute for Social Research in Oslo, Norway. His research interests include topics related to public opinion, civic participation, trust and freedom of speech, and he has recently been studying conditions for, and effects of trust in relation to the Covid-19 pandemic. Fladmoe has published in journals such as *Social science computer review*, *Social Policy & Administration* and *Journal of European Social Policy*.

Kari Steen-Johnsen is Research Professor at the Institute for Social Research in Oslo, Norway. Conditions for, and effects of trust in the aftermath of terrorism and during the pandemic has been the focus of several of her previous and current projects. Steen-Johnsen's work is published in journals such as *New Media & Society*, *Political Science & Politics*, *European Journal of Communication* and *Political Psychology*.

References

- Alessandri, G., Filosa, L., Tisak, M. S., Crocetti, E., Crea, G., & Avanzi, L. (2020). Moral disengagement and generalized social trust as mediators and moderators of rule-respecting behaviors during the COVID-19 outbreak. *Frontiers in Psychology*, *11*, 2102. <https://doi.org/10.3389/fpsyg.2020.02102>
- Andersen, R. F., & Dinesen, P. T. (2017). Social capital in the Scandinavian countries. In P. Nedergaard, & A. Wivel (Eds.), *The Routledge handbook of Scandinavian politics* (pp. 161–173). Routledge.
- Bandura, A. (2000). Exercise of human agency through collective efficacy. *Current Directions in Psychological Science*, *9*(3), 75–78. <https://doi.org/10.1111/1467-8721.00064>
- Bargain, O., & Aminjonov, U. (2020). Trust and compliance to public health policies in times of COVID-19. *Journal of Public Economics*, *192*, 104316. <https://doi.org/10.1016/j.jpubeco.2020.104316>
- Borkowska, M., & Laurence, J. (2021). Coming together or coming apart? Changes in social cohesion during the COVID-19 pandemic in England. *European Societies*, *23*(sup1), S618–S636. <https://doi.org/10.1080/14616696.2020.1833067>
- Brück, T., Ferguson, N., Justino, P., & Stojetz, W. (2020). *Trust in the time of corona* (WIDER Working Paper, No. 2020/82). The United Nations University World Institute for Development Economics Research (UNU-WIDER), Helsinki.
- Daniele, G., Martinangeli, A. F., Passarelli, F., Sas, W., & Windsteiger, L. (2020). *Wind of change? Experimental survey evidence on the Covid-19 shock and socio-political attitudes in Europe* (CESifo Working Paper, No. 8517). Center for Economic Studies and Ifo Institute (CESifo), Munich.
- Delhey, J., Steckermeier, L. C., Boehnke, K., Deutsch, F., Eichhorn, J., Kühnen, U., & Welzel, C. (2021). *A virus of distrust? Existential insecurity and trust during the corona-virus pandemic*. (No. 80). DSS Working Paper.
- Dohle, S., Wingen, T., & Schreiber, M. (2020). Acceptance and adoption of protective measures during the COVID-19 pandemic: The role of trust in politics and trust in science. *Social Psychological Bulletin*, *15*(4), 1–23. <https://doi.org/10.32872/spb.4315>
- Dryhurst, S., Schneider, C. R., Kerr, J., Freeman, A. L., Recchia, G., Van Der Bles, A. M., Spiegelhalter, D., & Van Der Linden, S. (2020). Risk perceptions of COVID-19 around the world. *Journal of Risk Research*, *23*(7-8), 994–1006. <https://doi.org/10.1080/13669877.2020.1758193>
- Elgar, F. J., Stefaniak, A., & Wohl, M. J. (2020). The trouble with trust: Time-series analysis of social capital, income inequality, and COVID-19 deaths in 84 countries. *Social Science & Medicine*, *263*, 113365. <https://doi.org/10.1016/j.socscimed.2020.113365>
- Esaiasson, P., Sohlberg, J., Gherstet, M., & Johansson, B. (2020). How the coronavirus crisis affects citizen trust in institutions and in unknown others: Evidence from 'the Swedish experiment'. *European Journal of Political Research*, *60*(2), 748–760. <https://doi.org/10.1111/1475-6765.12419>
- European Social Survey. (2018). European Social Survey Round 9 Data (2018). NSD - Norwegian Centre for Research Data, Norway. doi:10.21338/NSD-ESS9-2018.
- Gambetta, D., & Morisi, D. (2020). L'enfer c'est les autres? The effects of Covid-19 virus on interpersonal trust. <https://files.osf.io/v1/resources/rm4ck/providers/osfstorage/5f8f09e68fc43a00bc8dbf62?action=download&direct&version=1>

- Gratz, K. L., Richmond, J. R., Woods, S. E., Dixon-Gordon, K. L., Scamaldo, K. M., Rose, J. P., & Tull, M. T. (2021). Adherence to social distancing guidelines throughout the COVID-19 pandemic: The roles of pseudoscientific beliefs, trust, political party affiliation, and risk perceptions. *Annals of Behavioral Medicine*, 55(5), 399–412. <https://doi.org/10.1093/abm/kaab024>
- Han, Q., Zheng, B., Cristea, M., Agostini, M., Belanger, J., Gutzkow, B., Kreienkamp, J., Reitsema, A. M., van Breen, J. A., Abakoumkin, G., Khaiyom, J. H. A., Ahmedi, V., Akkas, H., Almenara, C. A., Kurapov, A., Atta, M., Bagci, S. C., Basel, S., Kida, E. D., ... Leander, P. (2020). Trust in government and its associations with health behaviour and prosocial behaviour during the COVID-19 pandemic. *PsyArXiv*, 1–11. <https://doi.org/10.31234/osf.io/p5gns>
- Hao, F., & Shao, W. (2021). Understanding the effects of individual and state-level factors on American public response to COVID-19. *American Journal of Health Promotion*, 1078–1083. <https://doi.org/10.1177/08901171211017286>
- Iacono, S. L., Przepiorka, W., Buskens, V., Corten, R., & van de Rijdt, A. (2021). COVID-19 vulnerability and perceived norm violations predict loss of social trust: A pre-post study. *Social Science & Medicine*, 291, 114513. <https://doi.org/10.1016/j.socscimed.2021.114513>
- Institute for Social Research. (2018). Social Media in the Public Sphere (SMIPS) 2018 survey. Institute for Social Research.
- Institute for Social Research. (2020). Social Media in the Public Sphere (SMIPS) 2020 survey. Institute for Social Research.
- Jørgensen, F. J., Bor, A., & Petersen, M. B. (2020). Compliance without fear: Predictors of protective behavior during the first wave of the Covid-19 pandemic. *PsyArXiv*. May, 19.
- Kye, B., & Hwang, S.-J. (2020). Social trust in the midst of pandemic crisis: Implications from COVID-19 of South Korea. *Research in Social Stratification and Mobility*, 68, 100523. <https://doi.org/10.1016/j.rssm.2020.100523>
- Miller, A. S., & Mitamura, T. (2003). Are surveys on trust trustworthy? *Social Psychology Quarterly*, 66(1), 62–70. <https://doi.org/10.2307/3090141>
- Oksanen, A., Kaakinen, M., Latikka, R., Savolainen, I., Savela, N., & Koivula, A. (2020). Regulation and trust: 3-month follow-up study on COVID-19 mortality in 25 European countries. *JMIR Public Health and Surveillance*, 6(2), e19218. <https://doi.org/10.2196/19218>
- Olsen, A. L., & Hjorth, F. (2020). Willingness to distance in the COVID-19 pandemic. *OSF*, 633. <https://osf.io/xpwg2/>
- Oosterhoff, B., & Palmer, C. A. (2020). Attitudes and psychological factors associated with news monitoring, social distancing, disinfecting, and hoarding behaviors among US adolescents during the coronavirus disease 2019 pandemic. *JAMA Pediatrics*, 174(12), 1184–1190. <https://doi.org/10.1001/jamapediatrics.2020.1876>
- Pagliaro, S., Sacchi, S., Pacilli, M. G., Brambilla, M., Lionetti, F., Bettache, K., Bianchi, M., Biella, M., Bonnot, V., & Boza, M. (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>
- Rothstein, B., & Stolle, D. (2008). The state and social capital: An institutional theory of generalized trust. *Comparative Politics*, 40(4), 441–459. <https://doi.org/10.5129/001041508X12911362383354>
- Rothstein, B., & Uslaner, E. M. (2005). All for all: Equality, corruption, and social trust. *World Politics*, 58(1), 41–72. <https://doi.org/10.1353/wp.2006.0022>
- Sønderskov, K. M. (2009). Different goods, different effects: Exploring the effects of generalized social trust in large-N collective action. *Public Choice*, 140(1-2), 145–160. <https://doi.org/10.1007/s11127-009-9416-0>
- Thoresen, S., Blix, I., Wentzel-Larsen, T., & Birkeland, M. S. (2021). Trusting others during a pandemic: Investigating potential changes in generalized trust and its relationship with pandemic-related experiences and worry. *Frontiers in Psychology*, 12(3560).
- Uslaner, E. M. (2015). Measuring generalized trust: In defense of the 'standard' question. In F. Lyon, G. Möllering, & M. N. K. Saunders (Eds.), *Handbook of research methods on trust* (pp. 97–106). Edward Elgar Publishing.
- Wei, L., & Lee, T.-T. (2021). Who can I trust in a scary world? An examination of the objects of trust, information sources and social distancing intention amid COVID-19. *International Journal of Environmental Research and Public Health*, 18(10), 5321. <https://doi.org/10.3390/ijerph18105321>

- Woelfert, F. S., & Kunst, J. R. (2020). How political and social trust can impact social distancing practices during COVID-19 in unexpected ways. *Frontiers in Psychology, 11*(3552), 1–16. <https://doi.org/10.3389/fpsyg.2020.572966>
- Wong, C. M. L., & Jensen, O. (2020). The paradox of trust: Perceived risk and public compliance during the COVID-19 pandemic in Singapore. *Journal of Risk Research, 23*(7-8), 1021–1030. <https://doi.org/10.1080/13669877.2020.1756386>
- Yamagishi, T., & Yamagishi, M. (1994). Trust and commitment in the United States and Japan. *Motivation and Emotion, 18*(2), 129–166. <https://doi.org/10.1007/BF02249397>
- Zangger, C. (2021). Help thy neighbor: Neighborhood relations, subjective well-being, and trust during the COVID-19 pandemic.