Eastern Economic Journal (2023) 49:129–141
https://doi.org/10.1057/s41302-023-00241-6

ORIGINAL ARTICLE

Social Disparities and Social Distancing During the Covid Pandemic

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Published online: 13 March 2023

Abstract

According to Putnam (2000) and Bourdieu (1986), social disparities may result in the formation of narrow social bonds that exacerbate existing social cleavages and impede collective action. Motivated by this insight, we examine the relationship between social disparities and social distancing during the pre-vaccine Covid pandemic in the US. Using a panel of weekly, county-level observations, we find that income, educational and racial disparities are associated with a statistically significant decrease in the social distancing. This result is robust to controls for a wide variety of socioeconomic variables, the Covid infection rate, and a measure of social capital.

Keywords Covid · Social distancing · Social capital · Inequality · Social disparities

Introduction

In the first year of the novel coronavirus pandemic, prior to the development and distribution of effective vaccines, many countries relied extensively on non-medical interventions to slow the spread of Covid. Social distancing played a central role in the recommendations of public health authorities on addressing the pandemic, and evidence has since emerged that social distancing was, as expected, an effective way to "flatten the curve," leading to fewer Covid cases, hospitalizations, and deaths (Matrajt and Leung 2020).

Despite widespread support for social distancing within the medical community, formal policies designed to encourage social distancing proved to be highly contentious and were, indeed, even subject to legal challenge. For example, the Wisconsin Supreme Court ruled a state stay-at-home order to be both unlawful and unenforceable, overturning the stay-at-home order in May 2020 (Jimenez and LeBlanc 2020). The Wisconsin court case cites two of the major difficulties surrounding social

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distancing protocols, those being personal values and beliefs for or against social distancing, and the difficulty of enforcement. In addition, as Malone and Bourassa (2020) have shown, social distancing predated stay-at-home orders in nearly every state, indicating that, to a significant degree, social distancing was independent of laws and policies designed to support it. Both the challenges of enforcing policies designed to support social distancing and evidence that social distancing occurred in the absence of these laws makes it important to understand the factors that contributed to voluntary social distancing.

An important line of this research examines the role of social capital in supporting social distancing. Social capital can be defined as collective values, norms, bonds, and trust within a group of individuals that support communication and collective action (Bourdieu 1986; Coleman 1988; Putnam 1994). In keeping with this understanding of the functional role of social capital, emerging research finds that social capital supported social distancing during the current pandemic, for example, Bartscher et al. (2020), Durante et al. (2020), and Wu (2020).[1] These results echo similar findings regarding the role of social cohesion in responding to health emergencies involving Ebola (Blair et al. 2017; Vinck et al. 2019; Carrion Martin et al. 2016; Fallah et al. 2016) and influenza (Chuang et al. 2015; Rönnerstrand 2014).

Social capital in any community is closely related to underlying measures of social heterogeneity. Alesina and Ferrara (2000) develop a formal model of group formation in heterogeneous societies, which predicts greater participation in associational group activities in communities with more homogeneous populations. While they pay explicit attention to income, race and ethnicity, they note (p. 850) that their theory assumes that "individuals prefer to join groups composed of individuals with preferences similar to their own." As such, their model's prediction applies to any characteristic that is predictive of individual preferences, including age, gender, religion, racial or ethnic identity, income, and educational attainment.

Looking beyond associational groups, however, the role of social disparities in social capital formation is hard to quantify. According to both Putnam (2000) and Bourdieu (1986), social disparities tend to correlate with forms of social capital that may serve to undermine social cohesion and the shared understandings and values that are the basis for broad-based collective action. In Putnam's (2000) theory, social disparities may favor the formation of bonding, which reinforces social distinctions, rather than bridging social capital. Similarly, according to Bourdieu (1986), the individual dispositions that underly social capital are created and replicated among those with similar social backgrounds, and as a result, the bonds of social capital tend to reproduce and reinforce existing class structures. Moreover, existing social capital measures, such those developed by Putnam (1993), Guiso et al. (2004), and Rupasingha et al. (2006), do not directly address the role of social disparities and, thus, may not adequately capture the distinction between bridging and bonding social capital.

[1] Contrary to most of this literature, Ding et al. (2020) find that one dimension of social capital, associativeness, is negatively associated with social distancing.

Given the difficulty in fully accounting for the role of social disparities in certain dimensions of social capital, including the degree to which social groups bridge important social cleavages, we focus instead on the role of social disparities in social distancing. In doing so, we add to a large and diverse literature that finds that socioeconomic inequalities and racial diversity have important consequences for social cohesion (Rothstein and Uslaner 2005; Khambule and Siswana 2017; Taylor 1998), trust (Rothstein and Uslaner 2005; Alesina and Ferrara 2000; Costa and Kahn 2003), and the provision of public goods (La Porta et al. 2007). In particular, social disparities may be understood as undermining social cohesion and the voluntary provision of public goods. Applying this insight to social distancing under Covid, we expect regions characterize by greater social disparities to social distance less.

We test this theory using a weekly panel of US county-level data. Social distancing is measured using cellphone mobility data, as in Ding et al. (2020). We consider three measures of social disparity, reflecting underlying differences in income, educational attainment, and racial identity and constructed from data in the 2019 American Community Survey. All specifications include a broad array of social, demographic and economic controls, and our key findings are robust to the inclusion of the county-level contemporaneous Covid infection rate and a commonly used measure of social capital.

Our key finding is that all three measures of social disparity are significantly and negatively related to social distancing. This result is robust to the inclusion of a wide variety of economic, social and demographic and political controls, as well as to controls for other common measures of social capital. These variables are also economically significant. One-standard deviation increases in income, educational and racial disparities are associated with decreases in social distancing of 2.9%, 5.0% and 12.4% of a standard deviation, respectively. By comparison, a one-standard deviation increase in average income is associated with a 10.0% decrease in social distancing. The importance of social disparities is robust to the inclusion of a prominent measure of social capital. This suggests that social capital measures may not fully reflect the impact of social disparities on social cohesion.

Our research contributes to existing research on social distancing in two distinct ways. First, we directly examine the relationship between social disparities and social distancing. In doing so, our work complements and extends existing work on the determinants of social distancing during the Covid pandemic and highlights the role of important dimensions of social structure that have not been previously addressed. To date, Egorov et al. (2021) is the only paper to address the role of social disparities on social distancing, and they focus exclusively on the role of racial diversity. Second, given the substantial difficulties in enforcing stay-at-home orders and related policies, our findings may also inform work on the efficacy of formal institutions designed to induce social distancing, such as Murray (2021).

Second, our findings suggest the limits of existing approaches to measuring social capital (Putnam 1993; Guiso et al. 2004; Rupasingha et al. 2006), which are based primarily on prosocial behavior, such as voting, newspaper circulation, and blood donation, and the number of collective associations. In particular, these measures do not properly account for the role of social disparities in social capital formation and, thus, fail to adequately capture the distinction between bonding and bridging social

capital. A measure that more fully reflected this distinction might better account for a community's ability to respond collectively to a crisis.

Data

Data on social distancing come from the Google COVID Community Mobility Reports, which was also used by Ding et al. (2020). The mobility reports use cell phone mobility data to generate county-level measures of the percentage change in time spent in various locations relative to a baseline from January 3 to February 6, 2020, which is prior to the onset of the pandemic in the United States. This paper will focus on the residential category, which measures the percentage change in time spent at the primary residence. We view this variable as the closest proxy for compliance with stay-at-home and shelter-in-place orders and interpret an increase in time spent at home as an increase in social distancing.

We collect weekly social distancing data over a thirty-five-week period from June 6, 2020, through January 30, 2021, a period of time that begins after nearly every county had at least one recorded case of Covid and extends through the peak of the third wave and the beginning of US vaccine distribution efforts.[2] This time-period includes the so-called second and third waves of the pandemic in the US. In order to reduce the role of differential access to remote employment in mobility decisions, we measure social distancing on Saturdays. The result is an unbalanced panel of 35,383 social distancing observations, with at least one social distancing observation for 1206 counties, or just over 39% of US counties, and an average of 29.34 observations per county for counties with at least one observation.

We construct county-level measures of social disparity along three dimensions, income, education and race, using data from the 2019 *American Community Survey 5 Year Demographic and Housing Estimates* (ACS). We measure income disparities using $gini_c$, the Gini coefficient for county c. To measure of educational disparity, we compute the probability that two randomly selected adults over the age of 25 in a given county belong to different ACS educational groups: $educdiv_c = 1 - \sum_i S_{\text{ic}}^2$, where S_{ic} equals the share of the population of county c that belongs to educational group i.[3] Finally, we measure racial diversity in a similar way: $racediv_c = 1 - \sum_i S_{\text{rc}}^2$, where S_{rc} equals the share of the population of county c with ACS racial identity r.[4] This variable equals the probability that two individuals in county c have the same ACS racial identity.

To more fully isolate the effects of social disparity on social distancing, we employ a wide set of county-level socioeconomic and demographic controls from

[2] Nichols et al. (2020) report that by May 15, 2020, only 231 of 3,143 counties had no reported cases.

[3] The ACS uses six categories of educational attainment: less than 9th grade, 9th-12th grade with no diploma, high school/diploma equivalent, some college, an associate degree, and a bachelor's degree or higher.

[4] The ACS uses six categories of racial identity: White, Black, Asian, Latino, Native American, and Other.

Table 1 Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Social_dist	35,383	3.585818	3.262311	− 46	21
Gini	35,383	0.4490868	0.0312058	0.3425	0.5956
Educdiv	35,383	0.7503748	0.0362643	0.418016	0.816731
Racediv	35,383	0.3851074	0.1713027	0.015886	0.763654
Loginc	35,383	10.79043	0.2369462	10.21885	12.19525
College	35,383	28.14584	10.5402	8.3	75.3
White	35,383	71.89146	18.86832	0.7	97.2
Male	35,383	49.38009	1.255918	45.6	60.9
Over65	35,383	16.59766	4.180834	6.6	56.7
Inpop	35,383	11.92567	0.9837972	10.10488	16.12622
Popden	35,383	274.0437	1197.918	0.9280979	27819.8
Republican	35,383	55.13007	15.43086	4.122067	89.85188
Infect_rate	35,208	3.175616	2.745767	0.0125172	16.70422
Soc_cap	35,383	− 0.4675048	0.65264	− 2.952219	3.338029

the ACS. These include *loginc*, *college*, *white*, *male* and *over65*, which, respectively, refer to the natural log of per capita income and the percentages of the county population that has a college degree, identifies as white, is male and is over 65 years of age. In addition, we control for *lnpop,* the natural log of country population, *popden*, population density defined as thousands of residents per square kilometer, and *republican*, which is defined as the Republican percentage of a county's presidential vote in 2016 (McGovern, 2020).

We employ two additional variables in robustness tests. The first, *infect_rate*, is the contemporary county-level Covid infection rate measured as infections per hundreds of individuals and reported by The New York Times Coronavirus Case database. The current infection rate may affect social distancing behavior through its impact on the risk of infection.

The second variable robustness test is a county-level measure of social capital in 2014 described by Rupasingha et al. (2006) and updated in 2014. The variable *soc_cap* is the first principal component of four county-level variables, measuring voter turnout during the 2012 presidential election, 2010 US Census response rate on the county-level, the number of non-international non-profit organizations divided by population per 10,000, and the number of social organizations divided by population per 1000.[5] The higher the index value, the higher the presence of social capital in

[5] As Rupasingha et al. (2006) note, there is no consensus measure of social capital identified in the literature, and indeed they argue that it is unlikely that any single measure can fully capture a multi-dimensional nature of social capital. Their choice of variables to include is motivated by Putnam (1993), who stressed the role of associational organizations in building trust and civic mindedness, Alesina and La Ferrara (2000) and Knack (2002), who argued participation elections and the national Census are examples of civic engagement and voluntary contributions to the production of public goods, and Fukuyama (1995), who argued that social capital is exemplified by social values related to compassion and altruism.

Table 2 Correlation matrix, selected variables

	gini	educdiv	racediv	loginc	college	white
Gini	1					
Educdiv	0.0463	1				
Racediv	0.3028	0.1804	1			
Loginc	− 0.1162	− 0.2981	0.0331	1		
College	0.034	− 0.4387	0.139	0.6986	1	
White	− 0.3575	− 0.2468	− 0.8251	0.0869	0.0125	1
Soc_cap	− 0.1258	− 0.0927	− 0.2293	0.3452	0.1516	0.2869

the county. Ding et al. (2020) found the Penn State Social Capital variable to have a negative impact on social distancing.

Summary statistics for these variables are shown in Table 1. Table 2 shows the correlation matrix for selected variables. As seen, all three social disparity variables are positively correlated, though none of these correlations is greater than 0.3 and the correlation between income inequality and educational disparity is particularly low. The immediate impression, then, is that these three variables may reflect somewhat independent dimensions of social disparity. In addition, each of our disparity measures is negatively correlated with the associated level variables, *loginc*, *college* and *white*. Finally, all three disparity variables are negatively correlated with the social capital index, consistent with expectations, but these correlations are relatively low, which is in line with our claim that social disparities may pick up dimensions of social cohesion missed by the index.

Empirical Strategy

We investigate the relationship between social disparities and social distancing by estimating a series of random effects models. We use a random effects model because it allows us to account for some aspects of the panel structure of the data, most notably the ability to capture the influence of county-level heterogeneity in social distancing in the county-specific component of the error term. A random effects estimator is appropriate provided county-level heterogeneity is uncorrelated with the independent variables. If the county-level heterogeneity is correlated with the independent variables, a fixed effects estimator is preferred, however, this is not an option as our measures of social disparities are time-invariant and would be absorbed into county fixed effects.

The models take the following form:

$$\text{Home}X_{\text{ct}} = \beta\text{Disparity}_c + \gamma X_c + \delta_s + \delta_t + u_c + \varepsilon_{\text{ct}} \quad (1)$$

In equation (1), $\text{Home}X_{\text{ct}}$ is social distancing in county c and week t, Disparity_c is a vector of one or more of the social disparity measures, X_c is a vector of time-invariant, county-level socioeconomic, demographic and political controls described above, and δ_s is a vector of state and period fixed effects, which is included to control

for the influence of state-level omitted variables, and δ_t is a vector of period fixed effects, which are included to control for global, time-varying factors, such as the national infection rate and national level policy, that might influence social distancing, and u_c and ε_{ct} are the time-invariant and time-varying components of the error term.

As noted in the data section, the vector of county-level controls includes the natural log of per capita income, the percentages of county residents that are white, college educated, male, and over 65 years of age, the log of population size, population density, and the share of county votes cast for the Republican presidential candidate in 2016. Given our research question, the most important of these controls is the natural log of per capita income, the percentage of county residents with a college degree, and the percentage of residents that identifies as white. These variables are plausibly linked to a variety of factors that may influence social distancing, including trust in science, medical professionals, and government institutions and access to remote employment opportunities (Achterberg et al. 2017; Devine et al. 2021; Kelly, 2021).

In addition, each of these variables provides a measure of the level of one of the social characteristics—income, education, and racial and ethnic identity—for which we measure social disparity. As shown in Table 2, these variables are negatively correlated with our measures of social disparities. Thus, on average, richer counties tend to have lower income inequality, whiter counties have lower racial diversity, and more educated counties have less educational inequality. Including proxies for the mean levels of income, education and racial identity avoids an important potential source of omitted variable bias and, thus, allows us to identify the impact of disparities in these dimensions of social structure more convincingly. The inclusion of the 2016 Republican vote share is important for a similar reason. Social diversity is correlated with the partisan political identity of county residents, with more Republican counties characterized by lower levels of income inequality and racial diversity. As such, failure to include this control would open our empirical strategy to legitimate concerns regarding omitted variable bias.

Results

Table 3 presents our results. In the first three specifications, we consider each of the three social disparity variables individually. Each social distancing variable is negative and significant at the one percent level, providing initial evidence that social disparities reduce social distancing. In column 4, we enter all three social distancing variables simultaneously. The coefficient on each variable is negative and significant at the one percent level. These results are consistent with our primary hypothesis, which holds that social disparities are expected to reduce social distancing. Note also that the estimated magnitudes of these coefficients are only modestly less than those reported in the first three columns. This suggests that the three dimensions of social disparity that we consider have largely independent, rather than overlapping, effects on social distancing.

Table 3 Social distancing regressions

	− 1	− 2	− 3	− 4	− 5	− 6	− 7
Variables	All social_dist	All social_dist	All social_dist	All social_dist	> 10 obs. social_dist	All social_dist	All social_dist
Gini	− 4.370***			− 3.783***	− 3.994***	− 4.714***	− 2.812***
	(− 3.989)			(− 3.506)	(− 3.614)	(− 4.346)	(− 2.579)
Educdiv		− 3.823***		− 3.222**	− 3.473***	− 3.279***	− 3.521***
		(− 2.980)		(− 2.565)	(− 2.699)	(− 2.596)	(− 2.823)
Racediv			− 2.234***	− 2.144***	− 2.066***	− 1.994***	− 1.865***
			(− 6.996)	(− 6.757)	(− 6.383)	(− 6.260)	(− 5.824)
Infect_rate						0.126***	
						− 13.67	
Soc_cap							− 0.292***
							(− 4.690)
Ioginc	1.174***	1.150***	1.290***	1.222***	1.216***	1.231***	1.421***
	− 5.458	− 5.306	− 6.057	− 5.764	− 5.62	− 5.741	− 6.626
College	0.0432***	0.0318***	0.0458***	0.0396***	0.0390***	0.0396***	0.0388***
	− 7.407	− 4.82	− 7.919	− 6.069	− 5.828	− 6.038	− 5.983
White	− 0.00351	− 0.00379	− 0.0174***	− 0.0193***	− 0.0198***	− 0.0109**	− 0.0156***
	(− 0.958)	(− 1.020)	(− 4.120)	(− 4.590)	(− 4.616)	(− 2.571)	(− 3.664)
Male	0.0501**	0.0470*	0.0686***	0.0525**	0.0485*	0.0437*	0.0377
	− 2.032	− 1.885	− 2.818	− 2.144	− 1.92	− 1.788	− 1.542
Over65	0.005	− 0.00484	− 0.00826	0.000235	0.00142	0.0057	0.00938
	− 0.514	(− 0.512)	(− 0.887)	− 0.0246	− 0.146	− 0.596	− 0.969
Inpop	0.172***	0.209***	0.232***	0.255***	0.233***	0.244***	0.195***
	− 4.223	− 4.936	− 5.665	− 6.049	− 5.414	− 5.714	− 4.478
Popden	2.66E− 06	− 2.67E− 05	− 5.00E− 06	− 2.98E− 06	− 1.92E− 06	4.85E− 05	− 1.32E− 05

Table 3 (continued)

	− 1	− 2	− 3	− 4	− 5	− 6	− 7
	− 0.0999	(− 0.995)	(− 0.192)	(− 0.112)	(− 0.0710)	− 0.677	(− 0.500)
Republican	− 0.0420***	− 0.0376***	− 0.0345***	− 0.0364***	− 0.0363***	− 0.0420***	− 0.0390***
	(− 10.08)	(− 9.105)	(− 8.432)	(− 8.745)	(− 8.530)	(− 9.975)	(− 9.362)
Constant	− 10.30***	− 9.269***	− 13.63***	− 7.921***	− 7.107**	− 7.575***	− 9.378***
	(− 3.959)	(− 3.277)	(− 5.501)	(− 2.798)	(− 2.457)	(− 2.664)	(− 3.320)
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Period Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	35,383	35,383	35,383	35,383	35,169	35,208	35,383
Number of counties	1206	1206	1206	1206	1167	1201	1206

Z statistics in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Results for the control variables are relatively consistent across specifications and mostly fit with expectations. In particular, our results indicate that social distancing is greater in counties in which the population is richer, more educated, less white, larger, more male, and less Republican. Perhaps the only surprising result here regards the impact of the white population share, since minorities generally have a greater risk of serious illness from Covid (Van Beusekom, 2021). It is possible that this outcome reflects racial differences in opportunities for remote employment that are not fully accounted for by income and education.

In column 5, we exclude counties with fewer than ten observations from the data set. Our results are largely unchanged.

The social distancing variables are also economically significant. Based on the point estimates from column 4, a one-standard deviation increase in either income inequality or educational disparity is associated with decrease in social distancing of 3.6% of standard deviation. A one-standard deviation increase in racial diversity has a much larger impact on social distancing, decreasing it by 11.3% of a standard deviation. By comparison, one-standard deviation increases in *loginc, college,* and *white* are associated changes in social distancing equal to 8.9%, 12.8% and − 11.0% of a standard deviation, respectively.

Robustness Tests

Given the literature on social capital, the most natural interpretation of our results is that social disparities undermine the formation of social capital and the resulting capacity for collective action, thereby reducing social distancing. However, it is also possible that the negative relationship between social disparities and social distancing reflects a different mechanism that has nothing to do with social capital or collective action. In particular, social disparities may reduce sociability, which has a direct negative effect on the level of Covid infections. If this is the case, then the negative coefficient on our measures of social disparities may, in part, reflect a rational response to the lower risk of Covid transmissions in less socially cohesive counties.

To see if this is the case, we augment the baseline model above to include a measure of the current Covid infection rate. Because the Covid infection rate is arguably endogenous to social capital, the coefficients in this model cannot be interpreted as causal effects. However, the inclusion of this variable serves to further identify the channel through which social disparities affect social distancing. Our results are shown in column 6. The coefficient on the Covid infection rate is both highly significant and positive, as expected. The estimated effect is also large. A one-standard deviation increase in the infection rate is associated with an increase in social distancing of 10.6%, which is roughly on par with the impact of racial diversity. Note also that all three social disparity variables are significant and negative in this specification, and indeed, the estimated coefficients are quite similar, and on average even a bit larger, than those reported in column 4. These results are consistent with argument that social disparities affect social distancing through their impact on collective action, and not primarily through their impact on Covid infection rates.

Part of the argument for examining social disparities is that they are easier to measure than social capital and may, as a result, capture variations in social capital not reflected in more common measures of social capital such as the Penn State social capital index. To see whether this is the case, we consider a set of regressions in which we include the Penn State social capital index, *soc_cap*, as a regressor. Our results are shown in column 7. Note first that the social capital index is itself negatively related to social distancing. This finding echoes the result in Ding et al. (2020) that social capital in part proxies for sociability, which inhibits social distancing. However, in comparing these results it is worth noting that we control for several variables, including average income and the share of the population with a college degree, that Ding et al. (2020) do not include and are arguably related to both social distancing and social capital formation.

Second, note that the negative and significant relationships between the social disparity variables and social distancing are robust to the inclusion of the social capital index. Indeed, the inclusion of the social capital measure has at most a modest impact on the magnitude of the coefficients on the social disparity variables, which decrease by 13% on average. This suggests that the social disparity variables are picking significant elements of social capital that are not captured by the social capital index. It is also possible that social disparity affects social distancing though some other, entirely different mechanism.

Conclusions

This paper forwards the hypothesis and provides empirical support for proposition that social disparities decreased social distancing during the first year of the Covid pandemic. We test this proposition using an unbalanced panel of US county-level cellphone mobility data and measures of income, educational and racial disparity. Our findings provide strong support for our hypothesis. All three social disparity variables are significantly and negatively related to social distancing. Among the dimensions of social disparity that we consider, our estimates indicate that racial disparities have the greatest impact on social distancing. These results are found in the presence of a broad set of socioeconomic, political and demographic controls, including the log of per capita income, the share of a county's population with a college degree, that is white, that is over 65 years of age, and that voted republican in the 2016 election. They are also robust to controlling for a common measure of social capital and the contemporary infection rate.

Our results are broadly consistent with Bourdieu (1986) and Putnam's (2000) theories of social capital, which hold that social disparities affect the nature of social capital formation in a way that limits the role of social ties in supporting collective action, including social distancing behavior during the Covid pandemic. As such, they suggest gains to additional research on the relationships between social disparities, social capital formation, and collective action.

References

Achterberg, Peter, Willem de Koster, and Jeroen van der Waal. 2017. A science confidence gap: Education, trust in scientific methods, and trust in scientific institutions in the United States, 2014. *Public Understanding of Science* 26(6): 704–720.

Alesina, Alberto, and Eliana Ferrara. 2000. Participation in heterogeneous communities. *Quarterly Journal of Economics* 115: 847–890.

Bartscher, AK, Sebatian S, Michaela Slotwinski, Sebastian Siegloch, and Nils Wehrhöfer. 2020a. Social capital and the spread of COVID: Insights from European countries. *IZA Institute of Labor Economics*.

Blair, Robert A., Benjamin S. Morse, and Lily L. Tsai. 2017a. Public health and public trust: Survey evidence from the Ebola virus disease epidemic in Liberia. *Social Science and Medicine* 172: 89–97.

Bourdieu, Pierre. 1986. The forms of capital. *J. Richardson handbook of theory and research for the sociology of education*, 241–258.

Carrion Martin, A.I., P. Tarik Derrough, N. Honomou, B. Kolie, M. Diallo, G. Kone, et al. 2016. Social and cultural factors behind community resistance during an Ebola outbreak in a village of the Guinean forest region, February 2015: A field experience. *International Health* 8(3): 227–229.

Chuang, Ying-Chih., Ya.-Li. Huang, Kuo-Chien. Tseng, Chia-Hsin. Yen, and Lin-hui Yang. 2015. Social capital and health-protective behavior intentions in an influenza pandemic. *PLoS ONE* 10(4): e0122970.

Coleman, James S. 1988. Social capital in the creation of human capital. *American Journal of Sociology* 94: S95–S120.

Costa, Dora, and Matthew Kahn. 2003. Civic engagement and community heterogeneity: An economist's perspective. *Perspectives on Politics* 1(1): 103–111.

Devine, Daniel, Jennifer Gaskell, Will Jennings, and Gerry Stoker. 2021. Trust and the coronavirus pandemic: What are the consequences of and for trust? An early review of the literature. *Political Studies Review* 19(2): 274–285.

Ding, Wenzhi, Ross Levine, Chen Lin, and Wensi Xie. 2020b. Social distancing and social capital: Why U.S. counties respond differently to COVID. *NBER Working paper*, no. w27393.

Durante, Ruben, Luigi Guiso, and Giorgio Gulino. 2020. Civic capital and social distancing: Evidence from Italians' response to COVID. *VoxEU*.

Fallah, Mosoka P., Bernice Dahn, Tolbert G. Nyenswah, M. Massaquoi, Laura Skrip, Dan Yamin, et al. 2016. Interrupting Ebola transmission in Liberia through community-based initiatives. *Annals of Internal Medicine* 164(5): 367–369.

Fukuyama, F. 1995. *Trust: The social virtues and the creation of prosperity*. New York: The Free Press.

Guiso, Luigi, Paola Sapienza, and Luigi Zingales. 2004. The role of social capital in financial development. *American Economic Review* 94(3): 526–556.

Jimenez, Omar and Paul LeBlanc. 2020c. Wisconsin Supreme Court strikes down state's stay-at-home order. *CNN*.

Kelly, Jack. 2021. Remote job listings have 'doubled' during the pandemic, but are not nearly enough to meet the demand for job seekers who want to work from home. *Forbes*.

Khambule, Isaac and Babalwa Siswana. 2017b. How inequalities undermine social cohesion: A case study of south africa. *G20 Insights*.

Knack, Stephen. 2002. Social capital and the quality of government: Evidence from the states. *American Journal of Political Science* 46: 772–785.

Malone, Claire, and Kyle Bourassa. 2020d. Americans didn't wait for their governors to tell them to stay home because of COVID. May 8, fivethirtyeight-dot-com. Available at: https://fivethirtyeight.com/features/americans-didnt-wait-for-their-governors-to-tell-them-to-stay-home-because-of-Covid/.

Matrajt, Laura, and Tiffany Leung. 2020. Evaluating the effectiveness of social distancing interventions to delay or flatten the epidemic curve of coronavirus disease. *Emerging Infectious Diseases* 26: 1740–1748.

McGovern, Tony. 2020e. US county-level presidential election results. *Emdata*.

Murray, Tim. 2021. Stay-at-home orders, mobility patterns, and spread of COVID. *American Journal of Public Health* 1(6): 1149–1156.

Nichols, Mark, Natalie Allison, Amanda King, and Brianne Pfannenstiel. 2020f. Where coronavirus isn't: What's kept cases officially at zero in these 200 counties? USA Today Network.

Putnam, Robert D. 1993. *Making democracy work: Civic traditions in modern Italy*. Princeton, New Jersey, USA: Princeton University Press.
Putnam, Robert D. 1994. Social capital and public affairs. *Bulletin of the American Academy of Arts and Sciences* 47(8): 5–19.
Putnam, Robert Dm. 1995. Bowling alone: America's declining social capital. *Journal of Democracy* 6(1): 65–78.
Putnam, Robert D. 2000. *Bowling alone: The collapse and revival of American community*. New York: Simon and Schuster.
Rothstein, Bo., and Eric M. Uslaner. 2005. All for all: equality, corruption, and social trust. *World Politics* 58(1): 41–72.
Rupasingha, Anil, Stephan J. Goetz, and David Freshwater. 2006. The production of social capital in US counties. *The Journal of Socio-Economics* 35: 83–101.
Rönnerstrand, Björn. 2014. Social capital and immunization against the 2009 A(H1N1) pandemic in the American states. *Public Health* 128(8): 709–715.
Taylor, M.C. 1998. How white attitudes vary with the racial composition of local populations: Numbers count. *American Sociological Review* 63: 512–535.
Van Beusekom, Mary. 2021. Racial minorities at higher risk for COVID hospitalization, ICU care. *Center for infectious disease research and policy*.
Vinck, Patrick, Phuong N. Pham, Kenedy K. Bindu, Juliet Bedford, and Eric J. Nilles. 2019. Institutional trust and misinformation in the response to the 2018–19 Ebola outbreak in North Kivu, DR Congo: A population-based survey. *The Lancet Infectious Diseases* 19(5): 529–536.
Wu, Cary. 2020. Social capital and COVID: A multidimensional and multilevel approach. *Chinese Sociological Review*. https://doi.org/10.1080/21620555.2020.1814139.