

CHAPTER 15

THE GLOBAL CONSEQUENCES OF “KNOWING”: INFORMATION DISSEMINATION AND DISPARITY IN THE COVID-19 PANDEMIC

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ABSTRACT

COVID-19 gripped the world with its sudden onset and its devastating impacts. The world was caught seemingly unaware, and even in nations with advanced information and dissemination pathways, the emergence was so fast as to neutralize any advantage a presumed level of development contributed. Much more important has been the effective use of information in the response to the onset of the virus. This chapter examines the differences between regions and nations in terms of the rate of vaccination; rates of confirmed cases in those nations; death rates; and development criteria and explores what we might expect in the future as far as the progress of the virus and our attempts to contain it. Finally, these conclusions are drawn together to explore just how damaging COVID has been to our decision-making and governance infrastructures. Whatever may occur, the only hope for the nations of the world will be to create and implement policy that works, decision-making that is transparent in its creation and execution, and accessible information that flows freely to all citizens of all nations. These goals or something very close to them will be required for the world and its citizens to have a future within the current paradigm. COVID-19 may well be just the beginning. Many more potentially greater challenges are ahead of us. One area of hope may rest on what we are learning about combatting the global pandemic. Those lessons can be very useful in dealing with the challenges ahead.

Keywords: Rate of vaccination, Decision-making, Governance infrastructures

1. Introduction

The early months of 2020 shook the very foundations of the world in ways that no one, neither governments nor medical experts, and certainly not citizens, had predicted. While there had been a general expectation by some in the expert community that a global pandemic was possible (see Recchia, 2021; Osterholm, 2007; Webster and Govorkova, 2006), virtually no one saw this specific COVID-19 virus nor the speed of its spread coming. Only epidemiologists could envision the level of infection and death that was to come, which, by October, 2021, approximately 22 months after its initial identification, had created nearly 245,000,000 confirmed cases and nearly 5.0 million deaths worldwide (WHO, 2021). While still short of the 50 million 1918-9 Spanish flu deaths (CDC, 2021), COVID-19 still ranks as the deadliest pandemic of the 21st Century, second only to HIV/AIDS (30 million) in the past 100 years (LePan, 2020).

While the scale of COVID-19 infection and death is considerable, so are the attention and resources the world community has committed to dealing with it. Powerful vaccines have been developed and nearly 7 billion doses have been administered to approximately 3.8 billion people (Oxford, 2021) in at least 196 nations, the vast majority of which have been administered just in the past year (Reuters, 2021). Recently, the World Bank announced an unprecedented program involving the Bank with the International Monetary Fund (IMF), World Health Organization (WHO), and the World Trade Organization (WTO) to accelerate access to COVID-19 vaccines, therapeutics, and diagnostics, targeting low- and middle-income countries. Their goal is to vaccinate 40% of the world’s people by the end of 2021 and at least 60% by mid-2022 (World Bank, 2021). It is no exaggeration to say that no previous pandemic has warranted a global medical and scientific intervention of the scale we have seen in the attempt to combat COVID. Indeed, no global crisis has ever seen such unity and speed of action by governments and international organizations as has been the case since the pandemic began in Wuhan, China in December 2019.

Epidemiological and medical expertise have not been the only resources brought to bear on this worldwide pandemic. Information, massive amounts of data, instructions, warnings and widely diverging perspectives have been widely disseminated, not just in medical journals and the academic literature, but also in popular media. Countless stories, broadcasts, social media posts, recent books and other sources have focused attention to the pandemic and guidance as to how to deal with it, both in terms of individual actions as well as national and global policy approaches. Moreover, the speed of that communication, a hallmark of 21st

Century life, is unprecedented. With so much attention to COVID-19 and the speed with which vaccinations have become available across the globe, one might be optimistic about our predictions about COVID's demise. Indeed, one could conclude that the speed and general unity in dealing with the pandemic might cause some to be optimistic about our ability to face other global challenges, such as the serious climate change discussions that took place at COP 26 in Glasgow in November 2021. Can we now say that we may finally be able to resolve age-old tribalism and sectarianism to counter common threats to our planet? Are we on the precipice of a new day of peace, harmony, equality, and justice, as is envisioned by the United Nations Sustainability Goals (SDGs)?

Unfortunately, almost no one but the most optimistic believes this to be true. Indeed, there are more who regard the COVID pandemic as the harbinger of greater failure at the global level than see it as the rise of some new golden age. How can this be? Further, the discussion of even the "successful" responses to COVID gives rise to a series of difficult questions. First, why are we not doing better to stem the continuous rise in cases and the numbers of deaths? Moreover, what can we conclude about the ability (or lack of ability) of governments and international organizations to address the current and future outbreaks of the virus? Is there some pattern that might differentiate those relatively successful from those less so? It is known that only 3% of those in the poorest countries have received even one vaccine dose (Oxford, 2021). Does the pattern of COVID infections follow along the lines of who has or who does not have access to the COVID vaccine? And what of the so-called "Information Revolution"? Are we seeing reductions in infection and death in only those countries with the most access to expert information and data?

Part of the answer to these questions is complicated due to the nature of the virus itself. It spreads rapidly and part of that spread creates opportunities for local variants to emerge quickly. The Delta variant is much more infectious than other forms of the COVID virus (Yale, 2021). In 2022, the Mu strain in the Western Europe and the US has been officially recognized by the WHO and a reported R.1 strain is reported to be breaking out in the American West (Barrett, 2021; Suliman, 2021; Cavanaugh, et al, 2021). One can guess that new variants are emerging even as we consider these questions. Indeed, when this chapter in the present book was conceived, its premise was that it was to be something of a post-mortem by the author, akin to an investigator reporting on a crime scene. COVID allows us no such latitude, however. We must report as the case unfolds. We do not have the luxury of considering it after the fact. This is part of the challenge of these questions. Moreover, there is resistance in many nations within certain parts of the population to accept the vaccine, even

when it is freely available, seemingly without respect to the obvious and very well reported health risks among the unvaccinated (see Edwards, Biddle, Gray, & Solis, 2021). Clearly, COVID is a continuing story and our apparent collective failure to contain it is a major part of our challenge, both in this paper and in life itself.

What is really at the heart of this discussion, however, speaks to the consequences of the global COVID pandemic and, in many ways, how we recover from the “recovery”. While some nations are doing better than others in combatting the virus, we are failing as a world. While the medical situation is part of the reason for our failure, it is not all of it, nor does it do much to guide us. We have to look at social, political, and economic factors that may show us the pattern of relative “success” or “failure”. Identifying those possible patterns and examining their various consequences are the focus of the discussion here. Is there a clear relationship between the level of national development and COVID, suggesting that the degree of an advanced sociopolitical/information/communication/medical/technical infrastructure improves COVID outcomes? Is the level of resistance to vaccination at the same level in all places, or do we see variability across nations, and what effects is that variability having? This chapter examines the differences between regions and nations in terms of rate of vaccination; rates of confirmed cases in those nations; death rates; and development criteria and explores what we might expect in the future as far as the progress of the virus and our attempts to contain it. Finally, these conclusions are drawn together to explore just how damaging COVID has been to our decision-making and governance infrastructures.

2. Analytic Approach

Unfortunately, it is not possible to explore the process involved in taking the COVID-19 vaccine for nine billion people across the globe and following them to see what their outcomes would be. Even if we could construct a survey to do so for every person in the world, some distortion would inevitably occur, not just on terms of sampling issues, but also measurement limitations and communications disparities across the globe. Indeed, it is exactly those disparities that are central to our purposes. Accordingly, we must look at structural factors, incorporating data from the national, regional, and global levels, as available and appropriate to the task.

2.1. Structural Factors and Their Measures

The first and most obvious factors to be examined are rates of confirmed cases, death rates, and vaccination rates across the world. These data will be taken from internationally-recognized official government and non-governmental organizations charged with collecting

data and responding in policy arenas. Moreover, each level of data will be taken from a common source to give the best possible chance of comparing nations and regions in terms of standardized methods of data collection and reporting. Indeed, all data used in this analysis come from respected international sources in publicly available formats, nearly entirely in the form it is provided.

The second level of analysis to compare twelve nations selected by the WHO for deeper analysis, which will form the base of the study. We will examine socio-economic differences, most particularly measures of development, especially featuring the Human Development Index (HDI), “a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and having a decent standard of living. The HDI is the geometric mean of normalized indices for each of ... three dimensions” employed by the United Nations Development Programme. These dimensions are: Prospects for a Long and Healthy Life, as measured by life expectancy at birth; Education, as measured by expected years of schooling; and A Decent Standard of Living, as measured by per capita Gross National Income (GNI) (UNDP, 2021), as well as an exploration of socio-political criteria, including the Human Freedom Index (HFI) produced by a consortium of organizations, including the Cato Institute of the United States; the Fraser Institute of Canada; and the Liberales Institute at the Friedrich Naumann Foundation for Freedom of Germany. The HFI presents the state of human freedom of 162 countries around the world based on a broad measure that encompasses economic, civil, and personal freedom (World Population Review, 2022).

A third level of data will involve communications capacity of nations as measured by the Information and Communication (ICI) Development Index (IDI) prepared by the Information Telecommunications Union (ITU) of the United Nations. The IDI measures the level and evolution over time of ICT developments in both developed and developing countries; the digital divide, i.e. differences between countries in terms of their ICT status; and the potential for future ICTs as well as the extent to which countries can make use of them to enhance growth and development in the context of available capabilities and skills. (ITU, 2021).

Fourth, the “Human Freedom Index” (HFI), a broad measure of personal, civic, and economic freedom will be considered (Vasquez and McMahon, 2021) and finally, press freedom will be measured by the World Press Freedom Index (WPF) of Reporters Without Borders (RSF). WPF measures the degree of freedom available to journalists in 180 countries as determined by pooling the responses of experts to a questionnaire devised by RSF (RSF, 2021).

Essentially, there are two major hypotheses that have emerged both from the literature and the previous discussion that bear examination. First, that regional differences will determine the impact of COVID, both in terms of cases and deaths, suggesting that as COVID is spread by humans and will tend to be high or low based on the extent of human interactions in those regions. Secondly, that idiosyncratic features within those nations cause some nation to be high or low, due to policy differences with regard to such things as vaccination as well as socio-economic, political, and communications factors in the 12 nations under deeper examination. Each of these hypotheses will be examined in this analysis.

2.2. Methodological Considerations

The data considered are all from reputable sources in responsible organizations throughout the world. Moreover, each factor is measured individually from each of those sources. This provides assurances that data from the same database of the same organization can be considered comparable to others. Still, these measures cannot be assumed to be perfect. Indeed, those data are only as reliable as the source from which they come, whether they are national departments and ministries or survey studies of “experts”. This means that the quality of the data from those sources may vary in terms of the ability of those government and organizational sources to report them reliably. However, unless one argues that the data from a particular region of the world are systematically suspect, as compared to others, or biased along the lines of “developed” nations being more reliable than “developing” nations, we know this is not true. Most certainly, “scandals” have been reported in various places around the world concerning COVID-19 data, but these have come from “developed” nations, including the UK and the US (SciDevNet, 2021; BBC, 2021; ProPublica, 2021). As such, we can reasonably assume that such discrepancies are not systematic and that any differences between reported and actual case data can be considered random factors. As well, these data are presumably useful enough to make national and global policy and are the “official” version of events. As such, they can be considered suitable for this study.

Upon a review of the first level of examination, a subset of nations will be selected that are representative of classes of nations identified by WHO with respect to the effects of COVID-19. Twelve nations were selected by WHO to be broadly representative of their regions and, based on their COVID numbers, likely due to both their relatively high numbers and the likely reliability of their data. Data from levels 2-4 of this study will be presented and evaluated in the context of the hypotheses developed. Further, any anomalies emerging from the analysis will be reviewed for deeper examination.

3. COVID-19 Case Data by Region

The data for COVID-19 confirmed cases and deaths, by World Health Organization region as of 22 October 2021, are shown in Table 1.

Overwhelmingly, the data show the greatest impact of COVID-19 cases as being in the Americas and Europe, while the death rates do not vary dramatically (<.5% in most cases) from region to region, from the overall mean (1.8%). A superficial interpretation might be that COVID is primarily a “western” phenomenon, as both raw numbers of cases of and deaths from COVID go down as one moves eastward from Europe. While there is something to this notion, this may suggest that the spread of the virus will tend to locate in certain areas more than others through person-to-person infection, at least initially. However, to the extent that it suggests issues such as lifestyle, levels of development, economic systems, or information disparities, this position obscures more than it illuminates. The regions themselves have considerable diversity in these respects and, except as broad attempts to comprehend the impact of the pandemic, they fail to contribute much to the discussion. In each region, the diversity is most striking. For example, in the Americas, unsurprisingly, the United States leads the region in number of cases in the WHO data (44.9 million, nearly half the regional total) as well as deaths (726,846). This, however, is less than 1/3 of the regional total. The US also has a death rate (1.6%) that is below the global mean of 1.8% as well and substantially below the regional figure mean of 2.6%. Other countries in the region vary significantly as well. Brazil, Argentina, Columbia, Peru, Chile, and Canada all have in excess of 1.0 million cases (21.6m; 5.3 m; 5.0 m; 2.2 m, 2.1 m; 1.7 m; 1.7 m, respectively), with death rates of 2.8%; 2.2%; 2.5%; 9.1%; 2.2%; and 1.7%). Clearly, there is great variability within the Americas, the US and Canada being below the global death rate of 1.8%, Mexico and Peru being substantially above it. (WHO, 2021). This pattern obtains throughout each region, one country with dramatic looking numbers that, when parsed, look better than a neighboring country with lower overall numbers, but a much worse situation when these data are analyzed. Given the totality of these data, it can be fairly stated that regional differences do not provide much in the way of meaningful conclusions about COVID or the effectiveness of actions being taken to combat it. We also know that socio-economic and political factors tend not to necessarily cross-national borders, obviating the notion of regions as being meaningful in this study. Accordingly, it is necessary to take a deeper look at the countries within regions to explore the matters under consideration.

Table 1: COVID-19 Cases and Deaths by Region (WHO, 2021)

	Cases	Deaths	Pct (row)	Case Pct. (col)	Death Pct. (col)
The Americas	92.6 m	2.4 m	2.6%	38.2%	43.6%
Europe	74.5 m	1.9 m	2.0%	30.8%	34.5%
South-east Asia	43.7 m	0.7 m	1.4%	18.0%	12.7%
Eastern Mediterranean	16.2 m	0.3 m	1.8%	6.7%	5.4%
Western Pacific	9.1 m	0.1 m	1.1%	3.8%	1.8%
Africa	6.1 m	0.1 m	1.6%	2.5%	1.8%
TOTALS	242.2 m	5.5 m	(1.8%)	100.0%*	100.0%*

*Rounded value

3.1. COVID-19 Data by Nation

The World Health Organization identified twelve nations for in-depth examination: United States, Brazil, Colombia, and Argentina from the Americas; France, Spain, Italy, the United Kingdom, and the Russian Federation from Europe; Turkey and Iran from the Eastern Mediterranean; and India from the South-east Asia Region. No nations were selected from Africa or the Western Pacific. No reasons were provided for the selection in the WHO documentation. Table 2 presents the data by country, including the percentage of the citizens of the nation who have been fully vaccinated for the COVID virus.

Table 2: COVID-19 Cases and Deaths by Nation (WHO, 2021)

		Cases	Deaths from COVID-19	Death Pct. (col.)	Pct. Vaccinated
The Americas					
	USA	44.9 m	.72 m	1.6%	56.6%
	Brazil	21.7 m	.60 m	2.8%	53.6%
	Colombia	5.0 m	.13 m	2.6%	38.6%
	Argentina	5.3 m	.12 m	2.5%	55.3%
Europe					
	France	6.9 m	.12 m	1.7%	67.5%
	Spain	5.0 m	.08 m	1.6%	79.6%
	Italy	4.7 m	.13 m	2.8%	70.8%
	UK	8.6 m	.14 m	1.6%	66.7%
	Russia	8.1 m	.23 m	2.8%	32.8%
South-east Asia					
	India	34.1 m	.45 m	1.3%	21.5%
Eastern Mediterranean					
	Turkey	7.8 m	.07 m	0.8%	56.5%
	Iran	5.8 m	.12 m	2.1%	34.0%

The national data contain some surprises. While the proposition that “developed” western nations trend generally better than nations identified in the Global South tends to hold, this is not true in absolute terms. European Union-member Italy, with COVID cases lower than its neighbors and having a relatively high rate of vaccinations scores as high with regard to COVID death as do Brazil and Russia, and even worse than Colombia, all of which have relatively low rates of vaccination. However, the biggest surprise may be India, with one of the lower death rates in Table 2 and, at the same time, having the lowest vaccination rate. Likewise, Turkey shows the lowest rate of death with a vaccination rate about the average of the nations listed. Based on the factors above, there seems to be no single overall trend that would explain all of these discrepancies. Much as we might prefer a simple connection between COVID vaccinations as a preventative to death, these data do not provide such comfort.

3.2. Socio-Economic, Political, and Communications Factors

Based on the indicators mentioned, Socio-economic, Political, and Communications data are compared with Death and Vaccination frequencies in Table 3.

		Death %	Vac. %	HDI (2019)	HFI (2021)	IDI (2017)	WPI
The Americas							
	USA	1.6%	56.6%	0.92	8.46	8.18	23.93
	Brazil	2.8%	53.3%	0.76	6.48	6.12	36.25
	Colombia	2.6%	38.6%	0.76	6.93	5.36	43.74
	Argentina	2.5%	55.3%	0.83	6.86	6.79	28.99
Europe							
	France	1.7%	67.5%	0.89	8.02	8.24	22.60
	Spain	1.6%	79.6%	0.89	8.12	7.79	20.44
	Italy	2.8%	70.8%	0.88	8.04	7.04	23.39
	UK	1.6%	66.7%	0.92	8.47	8.65	21.59
	Russia	2.8%	32.8%	0.82	6.38	7.07	48.71
South-east Asia							
	India	1.3%	21.5%	0.65	6.64	3.03	46.56
Eastern Mediterranean							
	Turkey	0.8%	56.5%	0.81	6.21	6.08	49.79
	Iran	2.1%	34.0%	0.80	5.10	5.58	72.70

The absence of easy answers and clear trends noted in Table 2 becomes even more complex in Table 3. Indeed, this becomes the crux of the issue as to whether the extent to

which socio-economic conditions, information availability (both through press freedom and technological access) and personal freedom contribute to better outcomes, as measured by higher proportions of a population achieving full vaccination from COVID and, the ultimate indicator, the proportion of a population dying from COVID. Our hypotheses would suggest that the higher the socio-economic status of a nation, the more freely its citizens may access health care. As well, the better and more honestly informed a population is, the better its outcomes relative to COVID should be. By inspection, the UNDP’s HDI shows the United States and the United Kingdom as having the highest levels of “Human Development”; the highest levels of “Human Freedom”; and among the highest levels of “Information and Communications Development” and “Press Freedom” (Note: the WPI indicator measures abuses and barriers to press freedom, thus the lowest scores are indicative of being the best in terms of this factor). However, this does not translate directly into the “best” COVID outcomes. Indeed, Spain and Italy have the highest vaccination rates of the set of nations considered, not the US and UK. As well, the US is just above Turkey and Brazil in terms of vaccination rates. Moreover, Turkey’s rate of death from COVID is half of what the US and UK show and less than one-third of Italy’s death data, the highest among nations listed, despite scoring relatively high levels of socio-economic development, information access, and individual and press “freedom”. By contrast, Turkey, with only a modestly favorable level of vaccination, scores less well than Italy on all of the indicators of well-being and information access, and far less well in “press freedom” second only to Iran in terms of abuses to and barriers to the free-flow of information via the press. India shows a similar pattern as Turkey, but perhaps at an even greater extreme with a very low rate of death and a very low rate of vaccination, but with very low scores on the all of the human well-being and freedom criteria.

How is this possible? If the death rate from COVID is the ultimate measure of a nation successfully defending itself from the pandemic virus, how is it that Turkey and India have done this so effectively, in the absence of many of the factors that are presumed to produce successful outcomes? By contrast, how does Italy do so poorly, when it seemingly has done everything “right”? Indeed, Italy, India, and Turkey are the anomalies in the data. If we remove Italy, Turkey, and India from the analysis, the data do show lower rates of death overall when vaccinations are high, people can afford health care, and they have free access to information about the pandemic, just as our hypotheses suggest they should. Indeed, viewed in this way, the data fall with very few exceptions along the path it was predicted they would, confirming common sense. If people are able to access information and have the means to mediate disease, they will tend to do so and thus, health outcomes are improved. As such,

nations of the world that create policy (and humans who follow the requirements of that policy) will do a better job of mediating the impact of pandemics. Italy, Turkey, and India seem not to follow the pattern.

A full understanding of the impact the COVID pandemic upon the world requires that the anomalies be understood, as well the consistencies. What is it about Italy, Turkey, and India that make them “different” from nations otherwise similar in these critical areas?

3.3. Correlates of COVID Death in Italy, Turkey, and India

Three nations of the twelve considered in depth show anomalies from the expected pattern in COVID deaths. While irregularities in reporting may account for some of these differences, none of the three nations mentioned were cited as being particularly deficient or lacking in this respect, according to several recent studies (The Economist, 2021; Whittaker, et al, 2021), whereas others “more developed” nations most clearly were. As such, our assumptions about the general comparability of the data drawn from common sources can stand. Thus, relatively speaking, Italy has a high rate of COVID death, compared to other nations having similar socio-economic and information resources; India and Turkey have low rates of death, compared to other nations having similar economic and information resources. Obviously, individual factors would pertain, but this variance would be randomized across countries. However, age and gender (AAAS, 2020) and obesity (Mayo Clinic, 2021) have been often cited as systemic risk factors impacting COVID mortality. In general, older, more obese males tended to be at greater risk of death after a COVID infection. Those data are available and are shown as follows:

	Death %	Obese %	65+%	Male %	Male 65+%
Italy	2.8%	19.9%	23.0%	48.6%	21.7%
Turkey	0.8%	32.1%	6.0%	49.1%	5.50%
India	1.3%	3.9%	8.2%	51.8%	2.05%

The data show little obvious connection between obesity and death from COVID-19. Turkey, with the highest rate of obesity, has the lowest rate of COVID death. India, having the lowest rate of obesity, has a very low rate of death. Italy, with a moderate level of obesity, shows a relatively high rate of death. Instead, while Table 4 shows the lack of a direct relationship between obesity and death, except potentially in connection with other variables. By contrast, however, the strong suggestion in the literature that Males 65 and over are most

vulnerable group goes a long way toward explaining the uncommonly low overall death rates in Turkey and India. In fact, the very low percentage of older Males in the national populations of Turkey and India means that each have a relatively smaller percentage of people in the most vulnerable categories. Italy, on the other hand, has a very large percentage of the population that is Male 65 and over, nearly four times that of Turkey and more than ten times more than India. Thus, Italy has a much larger population at greatest risk. A larger rate of death from COVID in Italy is, therefore, quite understandable. Indeed, with an average age in Italy of 44.3 years and a life expectancy of 83.3 years, both figures being very near the top of global data, Italy is a very old population. Turkey (29.4 years/77.7 years) and India (26.4 years/69.7 years) have much younger populations (WorldData.info, 2013). Exactly why Males are more vulnerable to COVID relative to Females is unclear, but this question is beyond the scope of the study. Gender and age are, per the literature, the two biggest risk factors in death by COVID-19. Indeed, perhaps the more interesting question is to speculate how much death Italy has spared itself by having such a robust vaccination program, as well as how many deaths India and Turkey would have had with older Male 65+ cohorts and such modest vaccination programs.

We can see that, upon inspection, the low death rates of Turkey and India are not anomalies at all. It is the lower relative prevalence of two major, if not the most important, risk categories. Indeed, this is a strong explanation for the apparent contradictions we saw in earlier parts of this analysis. Put another way, many more men died in Turkey and India before COVID struck them, compared to the case of Italy. As such, a generally more resilient population in both countries were impacted by COVID, compared to the case of Italy. However, if the assumption that robust approaches to vaccination reduces the overall national risk, we should see evidence of this mitigation of cases emerging over time. The next section explores this question.

3.4. COVID Cases over Time: Italy, Turkey, and India

The distribution of newly confirmed COVID-19 cases discovered since the beginning of the pandemic are as follows in Italy, Turkey, and India, in terms of cases by day per million as first recorded, the COVID peak, and as of 1 November 2021:

	First Recorded	High	1 November 2021
Italy	24/2/20-4.28	16/11/20-580.99	73.51
Turkey	23/3/20-1.12	20/4/21-708.66	331.49
India	30/3/20-0.02	24/11/21-31.71	9.64

The data in Table 5 show a still different picture. Instead of being the “best” at combating COVID due to the low rate of death, Turkey has had the greatest challenges in terms of cases in its population. India, even at its very worst, was the least impacted by COVID of the three nations, much lower than either Italy or Turkey. However, even with a “low” rate of cases per million, the size of India’s population meant that hundreds of thousands of people were infected, and their true peak may be yet to come with such a low vaccination rate. Italy, on the other hand, experiences a peak in late 2020, but aggressive vaccination has brought the new infection rate to be about 1/8th of what it was at its peak.

4. Discussion

Two major hypotheses have been examined in this paper. First, that active and aggressive national vaccination efforts are, in general, effective in combatting the global COVID pandemic. Nations which instituted such vaccination programs and had higher proportions of their populations vaccinated tended to have more success in dealing with the ultimate indicator of successful outcomes, the reduction in the relative numbers of deaths due to COVID. Nations with less effective vaccination outcomes tended to have higher rates of death. Moreover, relatively higher levels of socio-economic well-being and relatively more open societies with active and “free” flows of information, both through the media and through internet-based communications, tended to show higher levels of vaccination, but this does not tell the entire story. The free flow of formal information and social media also activated more organized resistance activity, which had a depressing effect on national vaccination rates.

Beyond resistance to vaccination, the findings vary to some degree from nation to nation. The relationships between vaccination, socio-economic well-being, and access to communication did not have a uniform impact across the globe. Indeed, individual national variations influenced the level of success in combatting COVID-19 in every region. In the particular cases of Italy, Turkey, and India, the variance from the norm was extreme enough to justify a deeper probe into the nature of those differences. Upon further review, it was found that, in the end, the exceptions further demonstrated the overall trends, insofar as those differences concerned risk factors that differentiated COVID-19 outcomes. Indeed, the data are particularly worrisome in Turkey, as the initial “success” of a low rate of COVID death may be undermined by a later surge of cases than other nations experienced. As a consequence, one cannot say with assurance that the trends shown in the case of Turkey, and to a lesser extent, India, will not change for the worse as the pandemic continues. Indeed, one can say that uncertainty is in the nature of the virus itself, as new variants continue to emerge.

5. Conclusions

This study is more than an analysis of the COVID-19 pandemic. At its core is a question as to whether the nation-state, with all of its powers internally, but lacking the ability to externalize that power to a global level is capable of successfully addressing global issues. It is no mere coincidence that the 1918 Spanish Flu epidemic with its world-wide destructive power, emerging as it did toward the conclusion of the First World War, ushered in what was, for most of the world, a new form of governance in the 20th Century. Following these twin catastrophes, the nation-state as a form of human organization dominated the world as empires fell apart and were divided into the nation-states we know today. Presumably, it will take more than one catastrophe to cause a new form of governance to emerge. But, with everything happened more quickly in the 21st Century, it may not take as long for some new set of structures to emerge as it has in the past. Global challenges that continue, such as COVID-19 continuing now, drastic climate change and resource depletion perhaps further down the road, will further challenge the ability of nations to cope with global problems. With whatever may occur, the only hope for the nations of the world will be to create and implement policy that works, decision-making that is transparent in its creation and execution, and accessible information that flows freely to all citizens of all nations. This is more than a simple hope. These goals or something very close to them will be required for the world and its citizens to have a future within the current paradigm. COVID-19 may well be just the beginning. Many more potentially greater challenges are ahead of us. One area of hope may rest on what we are learning about combatting the global pandemic. Those lessons can be very useful in dealing with the challenges ahead.

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