

Review

Multistakeholder Participation in Disaster Management—The Case of the COVID-19 Pandemic

Sigamani Panneer ¹, Komali Kantamaneni ^{2,3,*}, Robert Ramesh Babu Pushparaj ⁴, Sulochana Shekhar ⁵, Lekha Bhat ⁶ and Louis Rice ⁷

- ¹ Department of Social Work, School of Social Sciences and Humanities and Centre for Happiness, Central University of Tamil Nadu, Thiruvavur, Tamilnadu 610005, India; sigamanip@cutn.ac.in
 - ² Faculty of Creative Industries, Architecture and Engineering, Solent University, Southampton SO14 0YN, UK
 - ³ Department of Civil, Environmental & Geomatic Engineering, Chadwick Building, University College London (UCL), Gower St, London WC1E 6BT, UK
 - ⁴ Research Scholar, Department of Social Work, Central University of Tamil Nadu, Thiruvavur, Tamilnadu 610005, India; robertrb19@students.cutn.ac.in
 - ⁵ Department of Geography, School of Earth Sciences, Central University of Tamil Nadu, Thiruvavur, Tamilnadu 610005, India; sulochana@cutn.ac.in
 - ⁶ Department of Epidemiology & Public Health, School of Life Sciences, Central University of Tamil Nadu, Thiruvavur, Tamilnadu 610005, India; lekhabhatd@gmail.com
 - ⁷ Centre for Architecture and Built Environment Research, University of the West of England, Bristol BS16 1QY, UK; Louis.Rice@uwe.ac.uk
- * Correspondence: komali.kantamaneni@solent.ac.uk or k.kantamaneni@ucl.ac.uk



Citation: Panneer, S.; Kantamaneni, K.; Pushparaj, R.R.B.; Shekhar, S.; Bhat, L.; Rice, L. Multistakeholder Participation in Disaster Management—The Case of the COVID-19 Pandemic. *Healthcare* **2021**, *9*, 203. <https://doi.org/10.3390/healthcare9020203>

Academic Editors: Christopher R. Cogle, Amar H. Kelkar and Pedram Sendi
Received: 14 December 2020
Accepted: 8 February 2021
Published: 13 February 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Abstract: The coronavirus disease 2019 (COVID-19) pandemic is affecting society's health, economy, environment and development. COVID-19 has claimed many lives across the globe and severely impacted the livelihood of a considerable section of the world's population. We are still in the process of finding optimal and effective solutions to control the pandemic and minimise its negative impacts. In the process of developing effective strategies to combat COVID-19, different countries have adapted diverse policies, strategies and activities and yet there are no universal or comprehensive solutions to the problem. In this context, this paper brings out a conceptual model of multistakeholder participation governance as an effective model to fight against COVID-19. Accordingly, the current study conducted a scientific review by examining multi-stakeholder disaster response strategies, particularly in relation to COVID-19. The study then presents a conceptual framework for multistakeholder participation governance as one of the effective models to fight against COVID-19. Subsequently, the article offers strategies for rebuilding the economy and healthcare system through multi-stakeholder participation, and gives policy directions/decisions based on evidence to save lives and protect livelihoods. The current study also provides evidence about multidimensional approaches and multi-diplomatic mechanisms during the COVID-19 crisis, in order to examine dimensions of multi-stakeholder participation in disaster management and to document innovative, collaborative strategic directions across the globe. The current research findings highlight the need for global collaboration by working together to put an end to this pandemic situation through the application of a Multi-Stakeholder Spatial Decision Support System (MS-SDSS).

Keywords: COVID-19; multistakeholder participation; networking/collaboration; spatial decision support system; disaster management

1. Introduction

The world is facing the coronavirus disease 2019 (COVID-19) pandemic, which is having an unprecedented effect on people's lives and livelihoods, leading to severe and long-term impacts at individual, community and societal levels. The pandemic crisis involves not only health issues but also economic issues [1]. Pandemics are not new to human society; however, their nature, intensity and the way societies respond change

over time. In history, we have seen the most devastating pandemic, called the “black death”, which shook the world from the years 1347 to 1352 and took the lives of more than 75,000,000 people [2]. In the years 1918 to 1920, there was another pandemic called the “Spanish Flu”, where more than 100,000,000 people died [3]. Pandemics create uncertainty, complexity in understanding and there is need for new knowledge. In order to access new knowledge, it is important that we integrate the best available knowledge and reconcile often conflicting values and viewpoints. There is a need to find solutions to dealing with complicated, wicked problems such as COVID-19 that will involve complex interactions between technological, social, environmental, behavioural, managerial and medical worlds; one such strategy is multi-stakeholder participation [4], and we propose this can be combined with Multi-stakeholder Spatial Decision Support systems (MS-SDSS). The aim is to help the world to be prepared for future problems and challenges that include pandemics [5].

As the impact of the COVID-19 pandemic is multidimensional, affecting all spheres of life and across the global population, no single agency or stakeholder can work alone to control COVID-19 effectively and mitigate its impact. In order to better respond to and manage the COVID-19 situation, we need to deploy appropriate multi-stakeholder management strategies which can improve the effectiveness and efficiency of crisis and humanitarian operations [6]. It is important that competencies are developed at all levels for emergency, crisis prevention and management. COVID-19 is partly a spatial problem, highlighting the importance of quarantine, segregation and isolation in homes, workplaces and cities [7,8]. Controlling and managing these spatial issues requires an integrated, scientific approach that can help in the aggregation of spatial and non-spatial data, quick visualisation of epidemic information, spatial tracking of confirmed cases, estimation of regional transmission, and provide solid spatial information support for decision-making, measures formulation, and effective assessment of COVID-19 prevention and control measures [9,10].

In order to fight against COVID-19, the paper presents a conceptual model for multi-stakeholder governance which includes various stakeholders, their strategies and, in particular, a multi-stakeholder spatial decision support system. At present, there are no bespoke models of multi-stakeholder participation for dealing with COVID-19 that combine the advantages of a multi-stakeholder spatial decision support system. The model is developed based on directly and indirectly relevant research articles on disaster management; this is relevant because COVID-19 is a disaster and requires focused on multi-stakeholder participation. The paper aims to understand the implication of COVID-19 on health and development and specifically explore the most effective role for multi-stakeholder participation, as part of managing the epidemic response. However, it is acknowledged that the research only provides a snap shot of the possibilities and challenges related to multi-stakeholder participation, as the pandemic is still ongoing globally, and various stakeholders are altering, upgrading and/or updating their strategies. The paper presents a conceptual model which would be a great help towards controlling the COVID-19 pandemic and deal with its long-term impacts most effectively, and which contributes both theoretically and managerially to knowledge in this area. This helps agencies, governments and other stakeholders involved in fighting against COVID-19, with an aim to inspire researchers to take up empirical enquiries and policy makers to define policies and strategies to fight the pandemic.

2. Synthesis of Literature Review

2.1. Multi-Stakeholder Participation

The role of multi-stakeholders participation in this context is to work towards policy decision-making and action on global development issues, distribution of commitment and responsibility among themselves, to bring about collective action solutions for public benefit, establishing clear roles and responsibilities, getting involved in proactive prevention activities and working for community governance [11]. One of the operational definitions

of multi-stakeholder participation is that it involves participation among vested-interest groups as a core activity. Multi-stakeholder collaboration may improve service delivery and participation at international, national, local/regional and community levels [12]. However, multi-stakeholder participation in decision analysis tends to become quite complex, and the outcomes can be both positive and negative. To minimise the negative results and maximise the positive outcomes, a systematic, holistic approach is required, where every stakeholder has a role to play and contribute significantly to the decision-making process [13].

2.2. Interlinking of Multi-Stakeholder Spatial Decision Support System (MS-SDSS)

To address COVID-19, it is important to face the challenges from an interdisciplinary approach, with proactive planning, international solidarity and a global perspective [7,14,15]. For Multi-stakeholder participation, an important issue is exploring the possibility of adoption of MS-SDSS to address the challenges caused by the pandemic. The spatial decision support system (SDSS) is a computer-based information system designed to support policymakers and practitioners in decision-making processes [16]. In this context, SDSS offers a platform for the interaction of public health officials, affected actors, and first responders to improve estimations of disease propagation and likelihoods of new outbreaks [7]. Understanding the spatiotemporal dynamics of COVID-19 is essential for its mitigation, as it helps to clarify the extent and impact of the pandemic and can aid decision making, planning and community action. SDSS helps to integrate the science, data and models with decision-making at different levels of operations, policy and governance in a sustainable way over the long term [17]. A multi-stakeholder decision support system, containing data, models, tools, and a design process can assist local authorities in preparing an integrated plan for fighting COVID-19 (Figure 1); in order to facilitate multi-stakeholder planning, a design process (Figure 1) is required [18].

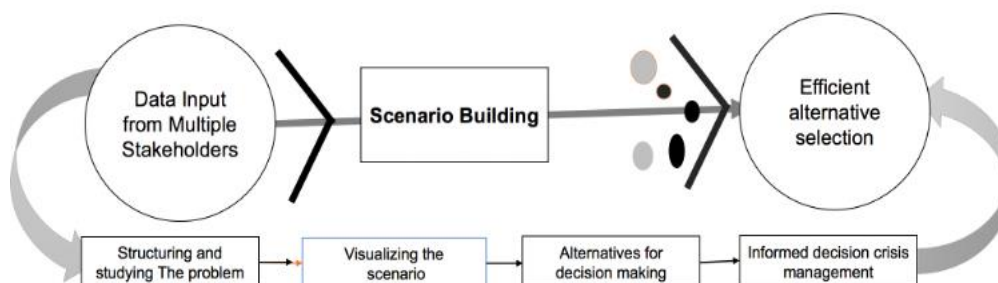


Figure 1. Conceptual design of Multi-Stakeholder Spatial Decision Support System (MS-SDSS).

In this design, the multiple stakeholders are involved in the decision-making process from the problem structuring stage to the scanning of alternatives to identify the efficient one stage, followed by the last stage a set of well-studied and carefully selected efficient alternatives [19].

3. Methodology

Review of Global Methodological Procedures

There are so many methodologies (explained in Sections 1 and 2) to review the literature globally, particularly in the multi-stakeholder participation in disaster management fields. However, we selected the scientific review methodological procedures for the current study. Accordingly, a fundamental concept of methodology has been taken from Kantamaneni [20] and subsequently applied to the current study. The present scientific literature review critically explores multi-stakeholder disaster response strategies more broadly and COVID-19 MS responses more specifically. In order to carry out the scientific literature review, first, a protocol was developed for the inclusion and exclusion crite-

ria, then literature review and meta-analyses were identified and subsequently analysed (Figure 2).

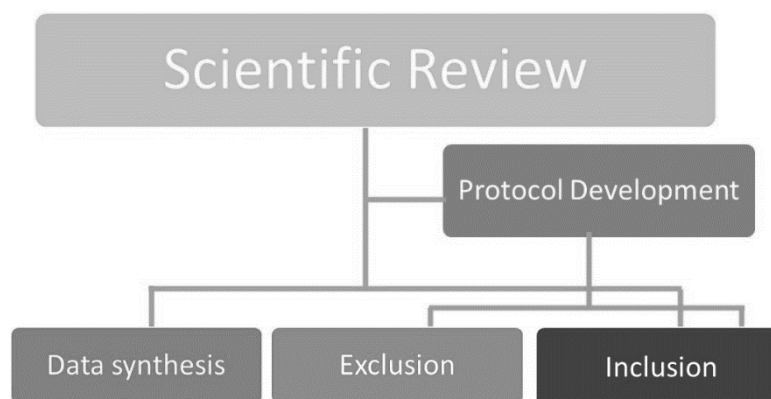


Figure 2. Schematic representation of methodological procedures.

The current study searches the various search engines and data sources: ADB (Asian Development Bank), BioSci (BioScience), BMC (Biomed Central), Elsevier journals, Future, HSB (Harvard School of Business), JAMA (Journal of the American Medical Association), JPHP (Journal of Public Health Policy), Lancet, MDPI (Multidisciplinary Digital Publishing Institute) journals, Nature, NIH (National Institutes of Health) public access, Policy Sc. (Policy Science), PubMed (Public/Publisher MEDLINE) papers, Science Adv (Science Advances), Springer journals, Google scholar, Sustain Sci (Sustainability Science), UNDP (United Nations Development Programme) report, UN (United Nations) reports, WHO (World Health Organization) reports and Wiley publications (open access). The keywords that were used to identify the relevant data/case are: COVID-19, multistakeholder participation, disaster management, crisis management, networking, collaborations, global health, governance, crisis management, multidimensional healthcare, civil society organizations and bilateral and multi-lateral organizations. After the search, 825 various literature sources were identified; however, a review then found that some of those were not relevant to the current study. Accordingly, 432 sources were excluded from the analysis after initial screening. Then, the remaining 403 articles were scrutinised for the second screening. After detailed and careful consideration, 220 more papers were excluded from the analysis. Finally, 183 were considered for full analysis.

The inclusion criteria comprised of selecting, empirically peer-reviewed studies, peer-reviewed reviews and conceptual frameworks which were related to disaster management and COVID-19. The exclusion criteria included non-peer-reviewed papers, studies on multi-stakeholder participation that were not related to disaster management, and COVID-19 studies which were not published in the English language and studies not exactly related to the current study. While analysing the literature, we found that there were a limited number of empirical studies on multi-stakeholder participation in disaster management that involved pandemic crisis and limited availability of data. There is further lack of data as not all countries have data on multi-stakeholder participation and a lack of impact assessment studies on multi-stakeholder participation. The research presents the approaches, methods and strategies followed by different countries as case syntheses in handling COVID-19 based on the available literature at the time of writing this paper. There is a strong possibility that some countries might change their methodology and strategies as the COVID-19 situation is still on-going. Most importantly the research lacks empirical evidence on multi-stakeholder participation during COVID-19.

4. Scientific Review Results

4.1. Taxonomy of COVID-19

The COVID-19 pandemic has spread world-wide very rapidly and aggressively within a very short timeframe. Countries across the globe have adopted various prevention and control measures to minimise negative health impacts [21]. The COVID-19 pandemic and the associated economic and social crisis are posing huge challenges, including, but not limited to, availability of accurate information, free/affordable COVID-19 testing and treatment emerging issues related to jobs and income of millions of people, lack of social safety-net programs, lack of income support schemes, increased burden on women to manage family problems and the plight of migrants and informal sector workers, which are some of the important effects of this pandemic on human lives [22]. Other serious challenges relate to the restriction on economic activities, commercial, services and industrial production, the inability of firms to sell their goods and services, leading to high economic and social costs around the world due to social distancing, lockdown and quarantine [23]. More than 30 million people could fall into poverty in the absence of active policies to protect or substitute income flow to vulnerable populations [24].

The major societal impacts of COVID-19 include health inequality [25,26], social stratification [27], low-income individuals disproportionately affected [28] and lack of access to essential healthcare services [29]. There are gender issues like the dual burden on work, limitations of working from home and an increase in domestic violence and violation of human rights. There are increases in individual isolation, which may result in a reduction of human happiness and mental wellbeing, potentially leading to rises in psychological issues including suicide, grief, survival, and fear [24]. There are major effects on the economy including the informal sector [30], fear of losing one's job [31], pay cuts [23], pending time-bound project completion [32], lack of interpersonal relationships [33] and lack of data/adequate information [34,35]. There are impacts on socio-environmental issues including living conditions and mass gatherings. There are impacts on persons with special needs including elderly issues, absence of social security measures and lack of access to essential services. COVID-19 affects religious practices, particularly from the closure of places of worship and cancellation of religious services [36].

4.2. Emerging Trends in Multi-Stakeholder Participation

The literature review highlights emerging trends in multi-stakeholder participation including global preparedness/contingency planning, the lack of post-crisis reconstruction and recovery, the presence of weak legal and institutional mechanisms, weak infrastructural facilities including communication networks, the lack of systematic and periodic assessment, the lack of accounting of potential losses, and the presence of poorly managed financial, technical and human resources. Other challenges include managing spontaneous behavioural reactions e.g., generalised panic, rumours/conspiracies regarding the spread of COVID-19, exposure to the elements (living conditions) and availability of good food and nutrition to fight against COVID-19. Furthermore, there is a need to work for vaccination, rehabilitation, water supply, food safety, basic sanitation, personal hygiene, research into other zoonotic diseases and investment in research and development [37].

4.3. Enhancing Nationwide Preparedness and Responses

One of the challenges involved in the process of nationwide preparedness to fight against COVID-19 is that it can lead to a national emergency [38]. This calls for dedicated funding for staffing, equipment and resources and resource allocations that are needed to support state, local and other health departments. Strengthening the linkages among all levels of state and non-state actors is very important to ensure multi-stakeholder participation in handling this pandemic (Table 1) [39].

Table 1. Case synthesis of multi-stakeholder activities to control COVID-19.

Country/Territory	Method/Approach	Crisis Management	Partners/Stakeholders	Source
Taiwan	Networking, proactive testing, border control, transparency	Frequent health check-ups, public education, relief to business, use of information technology	Multi-layer governance, private organisations, insurance companies, citizens	[40–44]
South Korea	Timely emergency response, the nationwide framework of networks among stakeholders	Shared interest, priority-based emergency response, rapid response, effective anti-COVID-19 measures, rapid testing, effective isolation strategy, scaling up resources, use of information technology	Govt, community, CSOs (Civil Society Organisation)	[45–50]
China, Singapore	The collaboration of Science including Social Sciences	Large scale coordination, institutional timely response, community resilience, national level response, effective contact tracing	Govt, industry, banks and financial institutions	[51–55]
USA	Networking	Outbreak management, control, ineffective response to the COVID-19	Multi-layer Govts, private, CSOs	[56–59]
Malaysia	Movement control order	Produce PPE (personal, protective equipment), fundraising, collaboration with healthcare service providers, inducting additional Labs, effective testing and contact tracing, effective communication and daily briefings	Govt, CSOs, community	[60–63]
India	Lockdown	Emergency management, interstate transmission control, laboratory network, ineffective practice of physical distancing, closure of educational institutes	Multi-layer Govts, private, CSOs	[56,64–67]
Italy	Pandemic management, lockdown	Institutional arrangements, undermining the virus, triple “Ts” (testing, tracing and treatment)	Govt, CSOs	[68–73]
Turkey	Lockdown, proactive policy style	Rapid and strong response, extensive use of institutional resources, factual information campaigns	Presidential system of government, community, religious authorities	[74–76]
Canada	Social distancing, travel restrictions, integration of social sciences	Well-functioning federalism, long term care, rapid testing and tracing, face mask mandates	Multilayer government	[77–80]
France	Nationwide lockdown	Closure of non-essential public places and services, internal and international travel restrictions, cancellation of public events, all covid-19 system—care categorization and anticipation strategy	Govt, health department	[55,81–84]
Japan	Emergency (sub-national and local)	Effective implementation of self-discipline, avoiding “Three Cs” (closed spaces with insufficient ventilation, crowded conditions with people, and conversations at a short distance), no lockdown, recommendations regarding closure of schools and work places, public information campaigns	Govt, community	[40,55,85–88]

Table 1. Cont.

Country/Territory	Method/Approach	Crisis Management	Partners/Stakeholders	Source
Sweden	Pandemic management—long term plan	Temporary ban on nonessential travel, recommendations on social distancing and working online, voluntary self-protection, non-closure of gyms, schools, restaurants and shops	Govt, voluntary organizations, community	[55,89–93]
Germany	Social lockdown & Economic lockdown	Nation-wide social distancing and contact restrictions, personal care business centres were closed (hair dresses, tattoos, massage centres, etc.), different states followed different styles of lockdown e.g., strict lockdown—stay at home order and/or lenient lockdown—not to leave the house without a reason, closure of churches, recommendation on wearing of face masks, good medical preparedness, developed a reliable testing system, stock of testing kits, early testing and tracing	Govt (National & Federal state), public and private hospitals, medical professionals, virologists, public health experts, laboratories, community, self-discipline, citizens	[94–99]
New Zealand	Lockdown	Lockdown measures, closure of schools, non-essential workplaces, travel restrictions, restrictions on social gathering, social distancing, border control, rapid and science-based risk assessment, rapid testing and contact tracing, community transmission control measures, promotion of hand washing hygiene, medical preparedness, arranged more ICU & ventilator facilities, safeguarding healthcare professionals	Govt, public and private hospitals, medical professionals, virologists, public health experts, laboratories, community, self-discipline, citizens	[100–104]

From the above Table 1, we can understand the approaches, methods and strategies followed by different countries. For example, Taiwan used networking, proactive testing, border control and transparency as a method to handle the situation. They had frequent health check-ups, public education and relief measures to business as strategies to manage the crisis. Using multi-layer governance, they partnered with local government, private organisations, insurance companies and citizens to manage the COVID-19 situation [40–44]. South Korea used timely emergency response and a nationwide framework of networks of stakeholders as a method and, as a strategy, they followed shared interest, priority-based emergency responses and rapid response, partnering with government, community and chief scientific officers [45–50]. China and Singapore used the collaboration of scientists including social sciences as a method. As part of this strategy, they used large-scale coordination as an institutional and timely response and partnered with government, industry, banks and financial institutions and worked for community resilience [51–55].

The USA used networking as a basic method; and outbreak management and infection control as their strategy. They partnered with multi-layer government, private industries and companies and CSOs (Civil Society Organisation) [56–59]. Malaysia used movement control orders as a method and followed these steps with their strategies including producing more PPE (personal, protective and equipment), fundraising, collaboration with healthcare service providers and inducting additional laboratories. They partnered with government, CSOs and the community [60–63]. India used lockdown as a method and used emergency management and interstate transmission control as strategies to manage the situation. They partnered with multi-layer government, private sector organisations

and CSOs [56,64–67]. Italy used pandemic management as a method and institutional arrangements as their strategy. They partnered with government and CSOs [68–73].

Turkey used lockdown and proactive policy for their method. They used rapid and strong response, extensive use of institutional resources and factual information campaigns as their crisis management. They partnered with government, community and the religious leaders [74–76]. Canada used social distancing, travel restrictions, integration of social sciences as their method. They used well-functioning federalism, long term care, rapid testing and tracing, face mask mandates as their crisis management; partnered with multilayer government [77–80].

France used nationwide lockdown as their method, using closure of non-essential public places and services, internal and international travel restrictions, cancellation of public events, care categorization and anticipation strategy as their crisis management, partnered with government and health department [55,81–84].

Japan used emergency (sub-national and local) as their method. They used effective implementation of self-discipline, avoiding “Three Cs” (closed spaces with insufficient ventilation, crowded conditions with people, and conversations at a short distance), no lockdown, recommendations regarding closure of schools and work places and public information campaigns as their crisis management. This was partnered with government and community [40,55,85–88].

Sweden used pandemic management—long term plan as their strategy. They used temporary bans on nonessential travel, recommendations on social distancing, working online, voluntary self-protection, non-closure of gyms, schools, restaurants and shops as their crisis management. This was partnered with government, voluntary organizations, and community [55,89–93].

Germany used social lockdown & economic lockdown as their method. They used national-wide social distancing and contact restrictions, personal care business centres were closed (hair dressers, tattoos, massage centres, etc.), different states followed different styles of lockdown for example strict lockdown—stay at home order and lenient lockdown—not to leave the house without a reason, closure of churches, recommendation on wearing of face masks, good medical preparedness, developed a reliable testing system, stock of testing kits, early testing and tracing as their crisis management. They partnered with government (National & Federal state), public and private hospitals, medical professionals, virologists, public health experts, laboratories, community, self-discipline, and citizens [94–99].

New Zealand used lockdown as their method. They used lockdown measures, closure of schools, non-essential workplaces, travel restrictions, restrictions on social gathering, social distancing, border control, rapid and science-based risk assessment, rapid testing and contact tracing, community transmission control measures, promotion of hand washing hygiene, medical preparedness, arranged more ICU & ventilator facilities and safeguarding healthcare professionals as part of their crisis management. They partnered with government, public and private hospitals, medical professionals, virologists, public health experts, laboratories, community, self-discipline and citizens [100–104].

It is evident that, different countries adopted various strategies to accommodate multi-stakeholder participation to handle the pandemic and its impact on lives. The approach to method and strategies varied upon the number of cases, available resources and the socio-political structure of the country.

5. Policy Announcement from Selected Countries for COVID-19

National Level COVID-19 Public Health responses included international travel restrictions, improving health facilities, setting strict following quarantine rules, guidance and compliance; tracking and testing, building up advisory systems, creating public awareness, controlling non-essential businesses, strengthening government services, restrictions on mass gathering, closure of schools and universities and imposing curfews. Some countries implemented good health data management/epidemiological databases, declared a state

of emergency, imposed internal travel restrictions, implemented lockdown policies and followed decentralised communication as shown in Table 2.

Table 2. Policy announcements for COVID-19.

International travel restrictions [105,106]
Improving health facilities [107]
Strict quarantine measures [108–110]
Tracking and testing [47,108,111–113]
Built new hospitals for the treatment COVID-19 [110]
Building up advisory systems and Creating public awareness [47,114]
Stoppage of Non-essential businesses [108,112]
Strengthening Government services [115,116]
Restriction on mass gathering [108,112,116]
School and university closure [108,109,112,116]
Curfew [109,112,117]
Health data management/ epidemiological data base [47,108,114]
State of emergency [108]
Internal travel restriction [112]
Lockdown policy [111,112,117–119]
Decentralised communication [47]
community to be proactive, sharing of responsibility [120,121]
Stakeholders and clinical manifestation of COVID-19 [45,122]

While others made the community be proactive, coordinated the works with clear role clarity, coordinated different policies, shared responsibilities and implemented effective public health measures. Some connected with their stakeholders by establishing mutual trust and through clinical manifestation to manage COVID-19 [40,45,47,51,56,60,68,105–117,120–132].

Strategies Followed to Combat COVID-19

Various countries followed different strategies like extensive testing, contact tracing, community mobilisation, crisis precautions, cluster containment strategy, public health surveillance, proactive state leadership, proper planning, knowledge of COVID-19, expect the unexpected, creating awareness, service orientation and supply chain information to fight against COVID-19 (Table 3).

Table 3. Case synthesis of lessons learned from the experience of different countries.

Lessons Learned from the Experience of Different Countries
1. Strengthen crisis management and response strategies [133]
2. Recognize your cognitive biases [134]
3. Avoid partial solutions [69]
4. Learning is critical [48]
5. Extensive testing of symptomatic and asymptomatic cases early on [135]

Table 3. Cont.

Lessons Learned from the Experience of Different Countries
6. Proactive tracking of potential positives [136]
7. A strong emphasis on home diagnosis and care [137]
8. Specific efforts to monitor and protect health care and other essential workers [138]
9. Collecting and disseminating data is important [139]
10. The resilience of affected/infected individuals [140]
11. Awareness of the plight of farmers, labours [141]
12. Social protection measures [142]
13. A robust collection of health data, and epidemiological database (for health policies) [143]
14. To ensure public health surveillance [144]
15. Recognition of the role of international non-governmental organisations (INGOs) [145]
16. Timely provision of medical supplies and hygiene kit [146]
17. Provision of social support and care to the appropriate communities and vulnerable populations [147]
18. Coordination of funding activities and volunteers [148]
19. R&D in life-saving medical innovations [149]
20. Test, Test and Test again [150]

Lessons learned from different countries involve the strengthening of crisis management and response strategies, increasing efforts to recognise cognitive bias and avoid partial solutions. Learning is critical and a readiness to accept the limitations is necessary. Understanding that extensive testing of symptomatic and asymptomatic cases early and proactive tracing of potential positives is very important. A strong emphasis on home diagnosis and care, specific efforts to monitor and protect health care and other essential workers, and collecting and disseminating data are important, as well as the resilience of affected/infected individuals [151]. It is important to address the plight of farmers, labourers and workers towards social protection measures. Health departments should concentrate on the robust collection of health data and epidemiological databases (for health policies and to ensure public health surveillance). The government should recognise the role of local international non-governmental organisations (INGOs) to the pandemic response and encourage timely provision of medical supplies and hygiene kit to individuals. The government should focus on the provision of social support and care to appropriate communities and vulnerable populations, co-ordination of funding activities and volunteers, R&D in life-saving medical innovations and to Test, Test and Test again the people in order to bring COVID-19 under control [40,45,48,51,56,60,68,69,123–130,133–151].

6. Discussion

The paper has presented different strategies, policies and methods used by different countries to fight against COVID-19. There is no one solution that can solve COVID-19, but through multi-stakeholder participation it is possible to find the most appropriate strategies to fight against COVID-19. Countries need to identify innovative and culturally acceptable measures to combat this crisis. Efforts should be taken to identify easily available, culturally adaptable local technology that is accessible and affordable to everyone. There is a need to address the immediate and long-term impacts of COVID-19 [152]. In pandemic times, there must be promotion of culturally acceptable strategies for physical distancing coupled with social solidarity [153]. There is a need to advocate for the advancement and strengthening of social welfare services as an essential protection against the pandemic [154]. There is a need to develop capabilities at all levels for emergency and pandemic prevention and management where each stakeholder's strength and skills

are identified, targeted and harmonised within general response and management systems [155].

There is a need to strengthen inter-organisational coordination, participation, accountability and local responsibility with central coordination to handle the pandemic impact effectively [156]. Societies also need significant resources and dedicated funding to deal with emerging and re-emerging infectious diseases focusing on its future recurring possibilities, prevention and management [157]. There should be incentives given to people for early reporting [158] followed by developing strategies to prevent antimicrobial resistance [159,160].

The health impact of recent outbreaks should be properly studied and there is a need to communicate effectively with public health emergency management including hazard and risk assessment, prevention and mitigation, incident management, resource management, communications, operations and training, exercising evaluation, corrective action and quality improvement [161]. Government should focus on the impact of sudden job losses and depletion of income due to COVID-19 and acute hardships for millions of urban and rural households, especially those working in the informal sector with no contracts, including migrants. Governments should find solutions to the complex challenges of health and nutrition, poverty, hunger and acute undernourishment of several million people, rising domestic conflict, violence and depression. Major economic problems like a reversal in capital follow as global risk, oil market deep-diving into negative, economic stagnation and the plight of labour, require further attention. Governments must also address the risk of health inequalities especially in vulnerable groups [162–164].

Importance and Implications of Public Policies

While communicating to people there should be credible communication to the public without politicising the message [165]. Countries should come together, even if digitally/virtually, in order to take bold action since the virus knows no borders [166]. The public sector must lead society with a global approach to mitigate the impact of COVID-19. This involves public health emergency actions, identifying economic impacts, and combating misinformation and disinformation about the disease and its spread (Harvey, M. Whole of Society Approach [167]). Governments should focus on providing authoritative information via multiple sources to ensure accurate data, to slow the spread so that our health systems are not over-stressed (Kayyem, J. Disruption is the Plan [167]). There is a need to encourage increasing transparency, impose control measures and appropriate restrictions, design suitable prioritisation guidelines regarding the allocation of scarce resources and make use of effective technologies (Saghafian, S. Transparency, Control, Prioritization [167]). Countries should strive to recognise the potential for psychological burnout from long hours of work and potential demoralisation from persistent stress (Howitt, A.; Leonard, H. Energetic Mobilization [167]). Governments need to strike a balance between protecting the health of people and respecting human rights (Sikkink, K. Rights and Responsibilities [167]); to invest in vaccine and therapeutics against COVID-19 (Chandra, A. Vaccine Investment [167]); and to identify new priorities and revisit national spending priorities (Bilmes, L.J. How the Public Sector and Civil Society Can Respond to the Coronavirus Pandemic: New Priorities [167]). The government should address the long-standing challenges of health and nutrition of low-income households [168]. Governments must create synergy between partners and encourage collaboration to identify and engage in strong partnerships.

7. Suggestions for Effective Interventions

Despite the breadth of this study, we are not presenting generalised suggestions for the most effective interventions, as there is so much variation across contexts, cultures and climates, and no single approach is most appropriate in all cases. Instead, we present the multi-stakeholder participation model as one of the appropriate models to be implemented in combating COVID-19. We need to create effective mechanisms through which to enable

collaboration between international, national and regional organisations, and we should strive to establish pathways through which multiple actors can work together [169] and create synergy among society, economy and development [170]. An understanding of pandemic risks in all its dimensions, interlinking of disaster management and development planning is required [171]. There is also a need to encourage clinical and community-based research [172] and to strive to enhance healthcare data management for evidence-based research [173,174]. Successful interventions always assess the felt need of the community and then, through active and effective legal enforcement as required, facilitate and enable education to create a context of personal and public accountability and social responsibility. Self-discipline is one of the better interventions through which we can fight against COVID-19 so this can be achieved successfully [40]. The most effective intervention may be a combination of the different suggestions presented according to the needs, wants and situation of each country.

Scope for Future Research

There is a need to better understand the COVID-19 crisis life cycle [175], and more research is required to know the causes and consequences (recovery, mitigation, response and preparation). Further analysis can be done by revisiting datasets, redefining relevant methodologies, facilitating access to online resources and exploring culturally relevant approaches. There is a need to improve access to relevant information sources and compile robust data of active and closed COVID-19 cases and their relatives. We need to evolve a global monitoring framework and find ways to implement the sustainable development goals [176]. Additional work is required to explore COVID-19's impact on social development, human happiness and well-being of professionals, carers, their families and others in the community. Evidence must be synthesised more rapidly and it is needed the provision of large-scale intervention guidelines and longer-term strategies for human happiness, well-being, social and economic recovery. Further work is required to ensure adequate quality of research work and to better communicate the findings with multi-stakeholders, including policy briefs. There is a need to strengthen community-based crisis risk management, replicate best practices and learn from the field of diverse multispectral partnerships [177].

8. Limitations

Although the present study has accomplished some significant and interesting results, there are certain research limitations and challenges that can be improvised for better research in this field. First, due to the lack of available consistent data on global pandemic COVID-19 multi-stakeholder participation in diverse aspects, it took a lot of time to collect and finalise the data sets. Second, significant differences in various technical subjects (e.g., SDSS) led to challenges in identifying the real current situations. Third, due to the lockdown, work restrictions and lack of full physical access to the universities, some library facilities were not available for the data search. This is to be a major limitation and could be better addressed in future research. Finally, during the data collection, some organisations, particularly for government organisations, did not respond within the time frame. However, most of the vital information was obtained during the stipulated data collection period.

9. Conclusions

The current study assessed the global literature regarding COVID-19 and disasters scientifically using Kantamaneni's [20] methodology. Accordingly, the present study critically synthesises the data from diverse countries to effectively understand the strategies and methods used to manage pandemics. Results and discussion identified that multi-stakeholder participation is one of the most effective solutions to combat the COVID-19 pandemic and its impact on livelihood in the current situations. Moreover, results also explored that the amalgamation of Multi-Stakeholder and Spatial Decision Support System (MS-SDSS) has proven to be the most applicable model to identify the potential pan-

demographic sources and to control the spread of it across the world. While transdisciplinary approaches to problem structuring and decision-making to combat COVID-19 seem extremely promising, the conceptual MS-SDSS can bring out a synergic relationship between multi-stakeholders and help inform decision making in crisis management. This paper also promotes the need to strengthen public health surveillance and preparedness for pandemic management, through research, capacity building and action. The review study suggests that governments partner with collaborating institutions and provide support in surveillance, preparedness and capacity building during public health emergencies. The study also encourages an inclusive, innovative community-based approach, (including virtual and home-based care). Cumulatively, the current study results help the researchers, diverse stakeholders, policy and decision-makers to continue further research or work on this topic.

Author Contributions: Conceptualization: S.P., K.K. and S.S. data analysis: S.P., R.R.B.P., L.B. and L.R. methodology: S.P., K.K., S.S. and R.R.B.P. writing—review and editing: S.P., R.R.B.P., L.B. and L.R. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. McKee, M.; Stuckler, D. If the world fails to protect the economy, COVID-19 will damage health not just now but also in the future. *Nat. Med.* **2020**, *26*, 640–642. [[CrossRef](#)] [[PubMed](#)]
2. Anyfantaki, S.; Balfoussia, H.; Dimitropoulou, D.; Gibson, H.; Papageorgiou, D.; Petroulakis, F.; Theofilakou, A.; Vasardani, M. COVID-19 and other pandemics: A literature review for economists. *Econ. Bull.* **2020**, *51*, 1–36.
3. Jordà, Ò.; Singh, S.R.; Taylor, A.M. *Longer-Run Economic Consequences of Pandemics*; National Bureau of Economic Research: Cambridge, MA, USA, 2020. [[CrossRef](#)]
4. Eweje, G.; Sajjad, A.; Nath, S.D.; Kobayashi, K. Multi-stakeholder partnerships: A catalyst to achieve sustainable development goals. *Mark. Intell. Plan.* **2020**. [[CrossRef](#)]
5. Brown, P. *Studying COVID-19 in Light of Critical Approaches to Risk and Uncertainty: Research Pathways, Conceptual Tools, and Some Magic from Mary Douglas*; Taylor & Francis: Abingdon, UK, 2020.
6. Ramkissoon, H. COVID-19 place confinement, pro-social, pro-environmental behaviors, and residents' wellbeing: A new conceptual framework. *Front. Psychol.* **2020**, *11*, 2248. [[CrossRef](#)]
7. Franch-Pardo, I.; Napoletano, B.M.; Rosete-Verges, F.; Billa, L. Spatial analysis and GIS in the study of COVID-19. A review. *Sci. Total Environ.* **2020**, *739*, 140033. [[CrossRef](#)] [[PubMed](#)]
8. Rice, L. After Covid-19: Urban design as spatial medicine. *Urban Des. Int.* **2020**, in press. [[CrossRef](#)]
9. Zhou, C.; Su, F.; Pei, T.; Zhang, A.; Du, Y.; Luo, B.; Cao, Z.; Wang, J.; Yuan, W.; Zhu, Y.; et al. COVID-19: Challenges to GIS with Big Data. *Geogr. Sustain.* **2020**, *1*, 77–87. [[CrossRef](#)]
10. Pourghasemi, H.R.; Pouyan, S.; Heidari, B.; Farajzadeh, Z.; Fallah Shamsi, S.R.; Babaei, S.; Khosravi, R.; Etemadi, M.; Ghanbarian, G.; Farhadi, A.; et al. Spatial modeling, risk mapping, change detection, and outbreak trend analysis of coronavirus (COVID-19) in Iran (days between 19 February and 14 June 2020). *Int. J. Infect. Dis.* **2020**, *98*, 90–108. [[CrossRef](#)] [[PubMed](#)]
11. Biekart, K.; Fowler, A. Ownership dynamics in local multi-stakeholder initiatives. *Third World Q.* **2018**, *39*, 1692–1710. [[CrossRef](#)]
12. Kain, J.-H. Multistakeholder Participation. In *Encyclopedia of Geography*; Warf, B., Ed.; SAGE Publications, Inc.: Thousand Oaks, CA, USA, 2010; pp. 1957–1959.
13. MacDonald, A.; Clarke, A.; Huang, L. Multi-stakeholder partnerships for sustainability: Designing decision-making processes for partnership capacity. *J. Bus. Ethics* **2019**, *160*, 409–426. [[CrossRef](#)]
14. Burkle, F.M.; Bradt, D.A.; Ryan, B.J. Global public health database support to population-based management of pandemics and global public health crises, part I: The concept. *Prehospital Disaster Med.* **2020**, *36*, 1–10. [[CrossRef](#)]
15. Khorram-Manesh, A.; Carlström, E.; Hertelendy, A.J.; Goniewicz, K.; Casady, C.B.; Burkle, F.M. Does the prosperity of a country play a role in COVID-19 outcomes? *Disaster Med. Public Health Prep.* **2020**, 1–10. [[CrossRef](#)] [[PubMed](#)]
16. Rodela, R.; Bregt, A.K.; Ligtenberg, A.; Pérez-Soba, M.; Verweij, P. The social side of spatial decision support systems: Investigating knowledge integration and learning. *Environ. Sci. Policy* **2017**, *76*, 177–184. [[CrossRef](#)]
17. Serrat-Capdevila, A.; Valdes, J.B.; Gupta, H.V. Decision support systems in water resources planning and management: Stakeholder participation and the sustainable path to science-based decision making. *Effic. Decis. Support Syst.-Pract. Chall. Curr. Future* **2011**, *3*, 423–440.
18. Hettinga, S.; Nijkamp, P.; Scholten, H. A multi-stakeholder decision support system for local neighbourhood energy planning. *Energy Policy* **2018**, *116*, 277–288. [[CrossRef](#)]
19. Hämmäläinen, R.; Kettunen, E.; Marttunen, M.; Ehtamo, H. Evaluating a framework for multi-stakeholder decision support in water resources management. *Group Decis. Negot.* **2001**, *10*, 331–353. [[CrossRef](#)]

20. Kantamaneni, K.; Sudha Rani, N.; Rice, L.; Sur, K.; Thayaparan, M.; Kulatunga, U.; Rege, R.; Yenneti, K.; Campos, L.C. A systematic review of coastal vulnerability assessment studies along Andhra Pradesh, India: A critical evaluation of data gathering, risk levels and mitigation strategies. *Water* **2019**, *11*, 393. [CrossRef]
21. Zhao, Z.; Li, X.; Liu, F.; Zhu, G.; Ma, C.; Wang, L. Prediction of the COVID-19 spread in African countries and implications for prevention and controls: A case study in South Africa, Egypt, Algeria, Nigeria, Senegal and Kenya. *Sci. Total Environ.* **2020**, *729*, 138959. [CrossRef] [PubMed]
22. Sayeh, A.; Chami, R. Lifelines in danger. *Financ. Dev.* **2020**, *57*, 16–19.
23. Nicola, M.; Alsafi, Z.; Sohrabi, C.; Kerwan, A.; Al-Jabir, A.; Iosifidis, C.; Agha, M.; Agha, R. The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *Int. J. Surg.* **2020**, *78*, 185–193. [CrossRef]
24. UNDP. *COVID-19 and Human Development: Assessing the Crisis, Envisioning the Recovery*; United Nations: New York, NY, USA, 2020.
25. Abedi, V.; Olulana, O.; Avula, V.; Chaudhary, D.; Khan, A.; Shahjouei, S.; Li, J.; Zand, R. Racial, economic, and health inequality and COVID-19 infection in the United States. *J. Racial Ethn. Health Disparities* **2020**, 1–11. [CrossRef]
26. Williams, D.R.; Cooper, L.A. COVID-19 and health equity—A new kind of “herd immunity”. *JAMA* **2020**, *323*, 2478–2480. [CrossRef]
27. Raghunath, N.; Tan, T. The impact of social stratification on morbidity during the COVID-19 pandemic. *Int. J. Sociol. Soc. Policy* **2020**, *40*, 793–806. [CrossRef]
28. Oldekop, J.A.; Horner, R.; Hulme, D.; Adhikari, R.; Agarwal, B.; Alford, M.; Bakewell, O.; Banks, N.; Barrientos, S.; Bastia, T.; et al. COVID-19 and the case for global development. *World Dev.* **2020**, *134*, 105044. [CrossRef] [PubMed]
29. Søreide, K.; Hallet, J.; Matthews, J.B.; Schnitzbauer, A.A.; Line, P.D.; Lai, P.B.S.; Otero, J.; Callegaro, D.; Warner, S.G.; Baxter, N.N.; et al. Immediate and long-term impact of the COVID-19 pandemic on delivery of surgical services. *Br. J. Surg.* **2020**, *107*, 1250–1261. [CrossRef]
30. Bandyopadhyay, R. Migrant Labour, Informal Economy, and Logistics Sector in a Covid-19 World. In *Borders of An Epidemic COVID-19 and Migrant Workers*; Mahanirban Calcutta Research Group: Kolkata, India, 2020; pp. 31–41. Available online: <https://www.im4change.org/upload/files/Essays%20COVID-19.pdf#page=41> (accessed on 13 February 2020).
31. Coibion, O.; Gorodnichenko, Y.; Weber, M. *Labor Markets during the Covid-19 Crisis: A Preliminary View*; National Bureau of Economic Research: Cambridge, MA, USA, 2020. [CrossRef]
32. Alenezi, T.A.N. Covid-19 Causes of Delays on Construction Projects in Kuwait. *IJERGS* **2020**, *8*, 6–9.
33. Pietromonaco, P.R.; Overall, N.C. Applying relationship science to evaluate how the COVID-19 pandemic may impact couples’ relationships. *Am. Psychol.* **2020**, 1–13. [CrossRef]
34. Le, H.T.; Nguyen, D.N.; Beydoun, A.S.; Le, X.T.T.; Nguyen, T.T.; Pham, Q.T.; Ta, N.T.K.; Nguyen, Q.T.; Nguyen, A.N.; Hoang, M.T. Demand for health information on COVID-19 among Vietnamese. *Int. J. Environ. Res. Public Health* **2020**, *17*, 4377. [CrossRef] [PubMed]
35. Tasnim, S.; Hossain, M.M.; Mazumder, H. Impact of rumors and misinformation on COVID-19 in social media. *J. Prev. Med. Public Health* **2020**, *53*, 171–174. [CrossRef]
36. WEF. Challenges and Opportunities in the Post-COVID-19 world. World Economic Forum. May 2020, p. 54. Available online: http://www3.weforum.org/docs/WEF_Challenges_and_Opportunities_Post_COVID_19.pdf (accessed on 26 August 2020).
37. Timmis, K.; Brüßow, H. The COVID-19 pandemic: Some lessons learned about crisis preparedness and management, and the need for international benchmarking to reduce deficits. *Environ. Microbiol.* **2020**. [CrossRef] [PubMed]
38. Mahmood, S.; Hasan, K.; Carras, M.C.; Labrique, A. Global Preparedness Against COVID-19: We Must Leverage the Power of Digital Health. *JMIR Public Health Surveill.* **2020**, *6*, e18980. [CrossRef]
39. National Academies of Sciences, Engineering, and Medicine. *Global Health Risk Framework: Resilient and Sustainable Health Systems to Respond to Global Infectious Disease Outbreaks*; National Academies Press: Washington, DC, USA, 2016.
40. Wang, C.; Ng, C.; Brook, R. Response to COVID-19 in Taiwan: Big data analytics, new technology, and proactive testing. *JAMA* **2020**, *323*, 1341–1342. [CrossRef]
41. Cheng, H.-Y.; Li, S.-Y.; Yang, C.-H. Initial rapid and proactive response for the COVID-19 outbreak—Taiwan’s experience. *J. Formos. Med. Assoc.* **2020**, *119*, 771. [CrossRef]
42. Huang, I.Y.F. Fighting COVID-19 through government initiatives and collaborative governance: The Taiwan experience. *Public Adm. Rev.* **2020**, *80*, 665–670. [CrossRef] [PubMed]
43. Lin, C.; Braund, W.E.; Auerbach, J.; Chou, J.-H.; Teng, J.-H.; Tu, P.; Mullen, J. Policy decisions and use of information technology to fight coronavirus disease, Taiwan. *Emerging Infect. Dis.* **2020**, *26*, 1506. [CrossRef] [PubMed]
44. Summers, J.; Cheng, H.-Y.; Lin, H.-H.; Barnard, L.T.; Kvalsvig, A.; Wilson, N.; Baker, M.G. Potential lessons from the Taiwan and New Zealand health responses to the COVID-19 pandemic. *Lancet Reg. Health Western Pac.* **2020**, *4*, 100044. [CrossRef]
45. Ha, K. A Lesson Learned from the Outbreak of COVID-19 in Korea. *Indian J. Microbiol.* **2020**, *60*, 396–397. [CrossRef] [PubMed]
46. Lee, D.; Heo, K.; Seo, Y. COVID-19 in South Korea: Lessons for developing countries. *World Dev.* **2020**, *135*, 105057. [CrossRef]
47. You, J. Lessons from South Korea’s Covid-19 policy response. *Am. Rev. Public Adm.* **2020**, *50*, 801–808. [CrossRef]
48. Lee, S.; Hwang, C.; Moon, M.J. Policy learning and crisis policy-making: Quadruple-loop learning and COVID-19 responses in South Korea. *Policy Soc.* **2020**, *39*, 363–381. [CrossRef]

49. Kim, J.-H.; An, J.A.-R.; Min, P.-k.; Bitton, A.; Gawande, A.A. How South Korea responded to the COVID-19 outbreak in Daegu. *N. Engl. J. Med.* **2020**, *1*. [[CrossRef](#)]
50. Park, S.; Choi, G.J.; Ko, H. Information technology-based tracing strategy in response to COVID-19 in South Korea—privacy controversies. *JAMA* **2020**, *323*, 2129–2130. [[CrossRef](#)]
51. Liu, Y.; Lee, J.M.; Lee, C. The challenges and opportunities of a global health crisis: The management and business implications of COVID-19 from an Asian perspective. *Asian Bus. Manag.* **2020**, *19*, 277–297. [[CrossRef](#)]
52. Pan, S.L.; Cui, M.; Qian, J. Information resource orchestration during the COVID-19 pandemic: A study of community lockdowns in China. *Int. J. Inf. Manag.* **2020**, *54*, 102143. [[CrossRef](#)]
53. Kuguyo, O.; Kengne, A.P.; Dandara, C. Singapore COVID-19 pandemic response as a successful model framework for low-resource health care settings in Africa? *Omicron A J. Integr. Biol.* **2020**, *24*, 470–478. [[CrossRef](#)]
54. Woo, J. Policy capacity and Singapore's response to the COVID-19 pandemic. *Policy Soc.* **2020**, *39*, 345–362. [[CrossRef](#)]
55. Yan, B.; Zhang, X.; Wu, L.; Zhu, H.; Chen, B. Why do countries respond differently to COVID-19? A comparative study of Sweden, China, France, and Japan. *Am. Rev. Public Adm.* **2020**, *50*, 762–769. [[CrossRef](#)]
56. Zodpey, S.; Negandhi, H.; Dua, A.; Vasudevan, A.; Raja, M. Our fight against the rapidly evolving COVID-19 pandemic: A review of India's actions and proposed way forward. *Indian J. Community Med.* **2020**, *45*, 117. [[PubMed](#)]
57. Balogun, J.A. Lessons from the USA Delayed Response to the COVID-19 Pandemic: Commentary. *Afr. J. Reprod. Health* **2020**, *24*, 14–21. [[PubMed](#)]
58. Carter, D.P.; May, P.J. Making sense of the US COVID-19 pandemic response: A policy regime perspective. *Adm. Theory Prax.* **2020**, *42*, 265–277.
59. Haffajee, R.L.; Mello, M.M. Thinking globally, acting locally—The US response to COVID-19. *N. Engl. J. Med.* **2020**, *382*, e75. [[CrossRef](#)]
60. Shah, A.U.M.; Safri, S.N.A.; Thevadas, R.; Noordin, N.K.; Abd Rahman, A.; Sekawi, Z.; Ideris, A.; Sultan, M.T.H. COVID-19 Outbreak in Malaysia: Actions Taken by the Malaysian Government. *Int. J. Infect. Dis.* **2020**, *97*, 108–116. [[CrossRef](#)] [[PubMed](#)]
61. Abdullah, J.M.; Ismail, W.F.N.m.W.; Mohamad, I.; Ab Razak, A.; Harun, A.; Musa, K.I.; Lee, Y.Y. A critical appraisal of COVID-19 in Malaysia and beyond. *Malays. J. Med. Sci.* **2020**, *27*, 1. [[CrossRef](#)]
62. Elengoe, A. COVID-19 outbreak in Malaysia. *Osong Public Health Res. Perspect.* **2020**, *11*, 93. [[CrossRef](#)] [[PubMed](#)]
63. Rahman, F. The Malaysian Response to COVID-19: Building Preparedness for 'Surge Capacity', Testing Efficiency and Containment. 2020. Available online: <https://www.europeanpharmaceuticalreview.com/article/125084/the-malaysian-response-to-covid-19-building-preparedness-for-surge-capacity-testing-efficiency-and-containment/> (accessed on 24 January 2021).
64. Changotra, R.; Rajput, H.; Rajput, P.; Gautam, S.; Arora, A.S. Largest democracy in the world crippled by COVID-19: Current perspective and experience from India. *Environ. Dev. Sustain.* **2020**, 1–19. [[CrossRef](#)] [[PubMed](#)]
65. Chetterje, P. Gaps in India's preparedness for COVID-19 control. *Lancet Infect. Dis.* **2020**, *20*, 544. [[CrossRef](#)]
66. Ghosh, J. A critique of the Indian government's response to the COVID-19 pandemic. *J. Ind. Bus. Econ.* **2020**, *47*, 519–530. [[CrossRef](#)]
67. Pulla, P. Covid-19: India imposes lockdown for 21 days and cases rise. *BMJ* **2020**. [[CrossRef](#)]
68. Capano, G.; Howlett, M.; Jarvis, D.S.; Ramesh, M.; Goyal, N. Mobilizing policy (in) capacity to fight COVID-19: Understanding variations in state responses. *Policy Soc.* **2020**, *39*, 285–308. [[CrossRef](#)]
69. Pisano, G.P.; Sadun, R.; Zanini, M. Lessons from Italy's Response to Coronavirus. Available online: <https://www.hbs.edu/faculty/Pages/item.aspx?num=57971> (accessed on 15 August 2020).
70. Ruiu, M.L. Mismanagement of Covid-19: Lessons learned from Italy. *J. Risk Res.* **2020**, *23*, 1007–1020. [[CrossRef](#)]
71. Armocida, B.; Formenti, B.; Ussai, S.; Palestra, F.; Missoni, E. The Italian health system and the COVID-19 challenge. *Lancet Glob. Health* **2020**, *5*, e253. [[CrossRef](#)]
72. Berardi, C.; Antonini, M.; Genie, M.G.; Cotugno, G.; Lanteri, A.; Melia, A.; Paolucci, F. The COVID-19 pandemic in Italy: Policy and technology impact on health and non-health outcomes. *Health Policy Technol.* **2020**, *9*, 454–487. [[CrossRef](#)]
73. Paterlini, M. On the front lines of coronavirus: The Italian response to covid-19. *BMJ* **2020**, 368. [[CrossRef](#)]
74. Bakir, C. The Turkish state's responses to existential COVID-19 crisis. *Policy Soc.* **2020**, *39*, 424–441. [[CrossRef](#)]
75. Alyanak, O. Faith, politics and the COVID-19 pandemic: The Turkish Response. *Med. Anthropol.* **2020**, 1745482. [[CrossRef](#)]
76. Zahariadis, N.; Petridou, E.; Oztig, L.I. Claiming credit and avoiding blame: Political accountability in Greek and Turkish responses to the COVID-19 crisis. *Eur. Econ. Rev.* **2020**, *6*, 159–169.
77. Desson, Z.; Weller, E.; McMeekin, P.; Ammi, M. An analysis of the policy responses to the COVID-19 pandemic in France, Belgium, and Canada. *Health Policy Technol.* **2020**, *9*, 430–446. [[CrossRef](#)] [[PubMed](#)]
78. Detsky, A.S.; Bogoch, I.I. COVID-19 in Canada: Experience and response. *JAMA* **2020**, *324*, 743–744. [[CrossRef](#)]
79. Karaivanov, A.; Lu, S.E.; Shigeoka, H.; Chen, C.; Pamplona, S. Face Masks, Public Policies and Slowing the Spread of COVID-19: Evidence from Canada. *MedRxiv* **2020**. [[CrossRef](#)]
80. Leslie, M.; Fadaak, R.; Davies, J.; Blaak, J.; Forest, P.; Green, L.; Conly, J. Integrating the social sciences into the COVID-19 response in Alberta, Canada. *BMJ Glob. Health* **2020**, *5*, e002672. [[CrossRef](#)]
81. Bounie, D.; Camara, Y.; Galbraith, J.W. Consumers' Mobility, Expenditure and Online-Offline Substitution Response to COVID-19: Evidence from French Transaction Data. Available online: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3588373 (accessed on 15 August 2020).

82. Barro, K.; Malone, A.; Mokede, A.; Chevance, C. Management of the COVID-19 epidemic by public health establishments—Analysis by the Fédération Hospitalière de France. *J. Visc. Surg.* **2020**, *157*, S19–S23. [[CrossRef](#)]
83. Di Domenico, L.; Pullano, G.; Sabbatini, C.E.; Boëlle, P.-Y.; Colizza, V. Impact of lockdown on COVID-19 epidemic in Île-de-France and possible exit strategies. *BMC Med.* **2020**, *18*, 1–13. [[CrossRef](#)]
84. Pullano, G.; Valdano, E.; Scarpa, N.; Rubrichi, S.; Colizza, V. Population mobility reductions during COVID-19 epidemic in France under lockdown. *MedRxiv* **2020**. [[CrossRef](#)]
85. DeWit, A.; Shaw, R.; Djalante, R. An integrated approach to sustainable development, National Resilience, and COVID-19 responses: The case of Japan. *Int. J. Disaster Risk Reduct.* **2020**, *51*, 101808. [[CrossRef](#)] [[PubMed](#)]
86. Iwasaki, A.; Grubaugh, N.D. Why does Japan have so few cases of COVID-19? *EMBO Mol. Med.* **2020**, *12*, e12481. [[CrossRef](#)] [[PubMed](#)]
87. Tashiro, A.; Shaw, R. COVID-19 pandemic response in Japan: What is behind the initial flattening of the curve? *Sustainability* **2020**, *12*, 5250. [[CrossRef](#)]
88. Yabe, T.; Tsubouchi, K.; Fujiwara, N.; Wada, T.; Sekimoto, Y.; Ukkusuri, S.V. Non-compulsory measures sufficiently reduced human mobility in Japan during the COVID-19 epidemic. *arXiv* **2020**, arXiv:2005.09423.
89. Paccas, A.M.; Weimer, M. From Diversity to Coordination: A European Approach to COVID-19. *Eur. J. Risk Regul.* **2020**, *11*, 283–296. [[CrossRef](#)]
90. Dahlberg, M.; Edin, P.-A.; Grönqvist, E.; Lyhagen, J.; Östh, J.; Siretskiy, A.; Toger, M. Effects of the COVID-19 pandemic on population mobility under mild policies: Causal evidence from Sweden. *arXiv* **2020**, arXiv:2004.09087.
91. Kavaliunas, A.; Ocaya, P.; Mumper, J.; Lindfeldt, I.; Kyhlstedt, M. Swedish policy analysis for Covid-19. *Health Policy Tech.* **2020**, *9*, 598–612. [[CrossRef](#)] [[PubMed](#)]
92. Petridou, E. Politics and administration in times of crisis: Explaining the Swedish response to the COVID-19 crisis. *Eur. Policy Anal.* **2020**. [[CrossRef](#)]
93. Valeriani, G.; Sarajlic Vukovic, I.; Lindegaard, T.; Felizia, R.; Mollica, R.; Andersson, G. Addressing Healthcare Gaps in Sweden during the COVID-19 Outbreak: On Community Outreach and Empowering Ethnic Minority Groups in a Digitalized Context. *Healthcare* **2020**, *8*, 445. [[CrossRef](#)]
94. Stafford, N. Covid-19: Why Germany's case fatality rate seems so low. *BMJ* **2020**, *369*, m1395. [[CrossRef](#)] [[PubMed](#)]
95. Armbruster, S.; Klotzbü, V. *Lost in Lockdown? Covid-19, Social Distancing, and Mental Health in Germany*; Discussion Series No. 2020-04; Albert Ludwig University of Freiburg: Freiburg i. Br, Germany, 2020; Available online: <https://www.econstor.eu/handle/10419/218885> (accessed on 13 February 2021).
96. Buthe, T.; Messerschmidt, L.; Cheng, C. Policy responses to the coronavirus in Germany. In *The World Before and After COVID-19: Intellectual Reflections on Politics, Diplomacy and International Relations*; Gardini, G.L., Ed.; European Institute of International Relations: Bruxelles, Belgium, 2020.
97. Desson, Z.; Lambert, L.; Peters, J.W.; Falkenbach, M.; Kauer, L. Europe's Covid-19 outliers: German, Austrian and Swiss policy responses during the early stages of the 2020 pandemic. *Health Policy Tech.* **2020**, *9*, 405–418. [[CrossRef](#)] [[PubMed](#)]
98. Narlikar, A. The Good, the Bad, and the Ugly: Germany's response to the COVID-19 Pandemic. *Daring*. Available online: <https://www.orfonline.org/research/the-good-the-bad-and-the-ugly-germanys-response-to-the-covid-19-pandemic-66487> (accessed on 30 March 2020).
99. Naumann, E.; Möhring, K.; Reifenscheid, M.; Wenz, A.; Rettig, T.; Lehrer, R.; Krieger, U.; Juhl, S.; Friedel, S.; Fikel, M. COVID-19 policies in Germany and their social, political, and psychological consequences. *Eur. Policy Anal.* **2020**, *6*, 191–202. [[CrossRef](#)]
100. Baker, M.G.; Kvalsvig, A.; Verrall, A.J.; Wellington, N. New Zealand's COVID-19 elimination strategy. *Med. J. Aust.* **2020**, *1*. [[CrossRef](#)]
101. Baker, M.G.; Kvalsvig, A.; Verrall, A.J.; Telfar-Barnard, L.; Wilson, N. New Zealand's elimination strategy for the COVID-19 pandemic and what is required to make it work. *N. Z. Med. J.* **2020**, *133*, 10–14.
102. Baker, M.G.; Wilson, N.; Anglemeyer, A. Successful elimination of Covid-19 transmission in New Zealand. *N. Engl. J. Med.* **2020**, *383*, e56. [[CrossRef](#)]
103. Cousins, S. New zealand eliminates covid-19. *Lancet* **2020**, *395*, 1474. [[CrossRef](#)]
104. Jefferies, S.; French, N.; Gilkison, C.; Graham, G.; Hope, V.; Marshall, J.; McElnay, C.; McNeill, A.; Muellner, P.; Paine, S. COVID-19 in New Zealand and the impact of the national response: A descriptive epidemiological study. *Lancet Public Health* **2020**, *5*, e612–e623. [[CrossRef](#)]
105. Wells, C.R.; Sah, P.; Moghadas, S.M.; Pandey, A.; Shoukat, A.; Wang, Y.; Wang, Z.; Meyers, L.A.; Singer, B.H.; Galvani, A.P. Impact of international travel and border control measures on the global spread of the novel 2019 coronavirus outbreak. *Proc. Natl. Acad. Sci. USA* **2020**, *117*, 7504–7509. [[CrossRef](#)] [[PubMed](#)]
106. Now, India bans entry of Indians from EU, Turkey and UK. *The Economic Times*. 18 March 2020. Available online: <https://economictimes.indiatimes.com/news/politics-and-nation/government-prohibits-entry-of-passengers-from-eu-turkey-uk-from-march-18/articleshow/74657194.cms?from=mdr> (accessed on 22 January 2021).
107. Zangrillo, A.; Beretta, L.; Silvani, P.; Colombo, S.; Scandroglio, A.M.; Dell'Acqua, A.; Fominskiy, E.; Landoni, G.; Monti, G.; Azzolini, M.L. Fast reshaping of intensive care unit facilities in a large metropolitan hospital in Milan, Italy: Facing the COVID-19 pandemic emergency. *Crit. Care Resusc.* **2020**, *22*, 91.

108. Lu, N.; Cheng, K.-W.; Qamar, N.; Huang, K.-C.; Johnson, J.A. Weathering COVID-19 storm: Successful control measures of five Asian countries. *Am. J. Infect. Control* **2020**, *48*, 851–852. [CrossRef]
109. Åslund, A. Responses to the COVID-19 crisis in Russia, Ukraine, and Belarus. *Eurasian Geogr. Econ.* **2020**, *61*, 532–545. [CrossRef]
110. Hopman, J.; Allegranzi, B.; Mehtar, S. Managing COVID-19 in Low- and Middle-Income Countries. *JAMA* **2020**, *323*, 1549–1550. [CrossRef] [PubMed]
111. Peto, J.; Alwan, N.A.; Godfrey, K.M.; Burgess, R.A.; Hunter, D.J.; Riboli, E.; Romer, P.; Buchan, I.; Colbourn, T.; Costelloe, C. Universal weekly testing as the UK COVID-19 lockdown exit strategy. *Lancet* **2020**, *395*, 1420–1421. [CrossRef]
112. Kwok, K.O.; Lai, F.; Wei, V.W.I.; Tsoi, M.T.F.; Wong, S.Y.S.; Tang, J. Comparing the impact of various interventions to control the spread of COVID-19 in twelve countries. *J. Hosp. Infect.* **2020**, *106*, 214–216. [CrossRef] [PubMed]
113. Djalante, R.; Lassa, J.; Setiamarga, D.; Mahfud, C.; Sudjatma, A.; Indrawan, M.; Haryanto, B.; Sinapoy, M.S.; Rafliana, I.; Djalante, S. Review and analysis of current responses to COVID-19 in Indonesia: Period of January to March 2020. *Prog. Disaster Sci.* **2020**, *100091*. [CrossRef]
114. Alanezi, F.; Aljahdali, A.; Alyousef, S.; Alrashed, H.; Alshaikh, W.; Mushcab, H.; Alanzi, T. Implications of Public Understanding of COVID-19 in Saudi Arabia for Fostering Effective Communication Through Awareness Framework. *Front. Public Health* **2020**, *8*. [CrossRef]
115. Dzigbede, K.; Gehl, S.B.; Willoughby, K. Disaster resiliency of US local governments: Insights to strengthen local response and recovery from the COVID-19 pandemic. *Am. Rev. Public Adm.* **2020**. [CrossRef]
116. Almutairi, A.F.; BaniMustafa, A.A.; Alessa, Y.M.; Almutairi, S.B.; Almaleh, Y. Public trust and compliance with the precautionary measures against COVID-19 employed by authorities in Saudi Arabia. *Risk Manag. Healthc. Policy* **2020**, *13*, 753. [CrossRef] [PubMed]
117. Sarkar, K.; Khajanchi, S.; Nieto, J.J. Modeling and forecasting the COVID-19 pandemic in India. *Chaos Solitons Fractals* **2020**, *139*, 110049. [CrossRef] [PubMed]
118. Chiu, N.-C.; Chi, H.; Tai, Y.-L.; Peng, C.-C.; Tseng, C.-Y.; Chen, C.-C.; Tan, B.F.; Lin, C.-Y. Impact of Wearing Masks, Hand Hygiene, and Social Distancing on Influenza, Enterovirus, and All-Cause Pneumonia During the Coronavirus Pandemic: Retrospective National Epidemiological Surveillance Study. *J. Med. Internet. Res.* **2020**, *22*, e21257. [CrossRef]
119. Lancet, T. India under COVID-19 lockdown. *Lancet* **2020**, *395*, 1315. [CrossRef]
120. Wan, K.-M.; Ho, L.K.-K.; Wong, N.W.; Chiu, A. Fighting COVID-19 in Hong Kong: The effects of community and social mobilization. *World Dev.* **2020**, *134*, 105055. [CrossRef] [PubMed]
121. Hartley, K.; Jarvis, D.S. Policymaking in a low-trust state: Legitimacy, state capacity, and responses to COVID-19 in Hong Kong. *Policy Soc.* **2020**, *39*, 403–423. [CrossRef]
122. Levy, D.L. COVID-19 and Global Governance. *J. Manag. Stud.* **2020**. [CrossRef]
123. Baxter, D.; Casady, C.B. A Coronavirus (COVID-19) Triage Framework for (Sub) national Public-Private Partnership (PPP) Programs. *Sustainability* **2020**, *12*, 1–6.
124. Policy Responses to COVID19. Available online: <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19> (accessed on 29 July 2020).
125. Katz, J.; Lu, D.; Sanger-Katz, M. USA: Excess death data compared to confirmed COVID-19 fatalities. *The New York Times*. Available online: <https://www.nytimes.com/interactive/2021/01/14/us/covid-19-death-toll.html> (accessed on 22 January 2020).
126. Leonardo, L.; Xavier, R. The End of Social Confinement and COVID-19 Re-Emergence Risk. *Nat. Hum. Behav.* **2020**, *4*, 746–755.
127. Tackling Coronavirus (COVID 19) Contributing to a Global Effort. Available online: <https://www.oecd.org/coronavirus/en/> (accessed on 16 July 2020).
128. Tabish, S. COVID-19 Pandemic: The crisis and the longer-term perspectives. *J. Cardiol. Curr. Res.* **2020**, *13*, 41–44.
129. Sustainable Development Outlook 2020: Achieving SDGs in the Wake of COVID-19: Scenarios for Policymakers. Available online: <https://www.un.org/development/desa/dpad/publication/sustainable-development-outlook-2020-achieving-sdgs-in-the-wake-of-covid-19-scenarios-for-policymakers/> (accessed on 27 July 2020).
130. World Bank Group Launches First Operations for COVID-19 (Coronavirus) Emergency Health Support, Strengthening Developing Country Responses. Available online: <https://www.worldbank.org/en/news/press-release/2020/04/02/world-bank-group-launches-first-operations-for-covid-19-coronavirus-emergency-health-support-strengthening-developing-country-responses> (accessed on 29 July 2020).
131. Haghani, M.; Bliemer, M.C.; Goerlandt, F.; Li, J. The scientific literature on Coronaviruses, COVID-19 and its associated safety-related research dimensions: A scientometric analysis and scoping review. *Saf. Sci.* **2020**, *129*, 104806. [CrossRef]
132. Maor, M. The political calculus of bad governance: Governance choices in response to the first wave of COVID-19 in Israel. In Proceedings of the ECPR General Conference Online, Colchester, UK, 24–28 August 2020; pp. 24–28.
133. Bouey, J. Strengthening China’s Public Health Response System: From SARS to COVID-19. *Am. J. Public Health* **2020**, *110*, 939–940. [CrossRef]
134. Timmermann, C. Epistemic ignorance, poverty and the COVID-19 pandemic. *Asian Bioeth. Rev.* **2020**, *12*, 519–527. [CrossRef]
135. Onder, G.; Rezza, G.; Brusaferro, S. Case-Fatality Rate and Characteristics of Patients Dying in Relation to COVID-19 in Italy. *JAMA* **2020**, *323*, 1775–1776. [CrossRef] [PubMed]

136. Marahatta, S.B.; Paudel, S.; Aryal, N. COVID-19 Pandemic: What can Nepal do to Curb the Potential Public Health Disaster? *J. Karnali Acad. Health Sci.* **2020**, *3*. [[CrossRef](#)]
137. Sood, A.; Walker, J. The Promise and Challenge of Home Health Services During the COVID-19 Pandemic. *Am. Fam. Physician* **2020**, *102*, 8–9. [[PubMed](#)]
138. Bielicki, J.A.; Duval, X.; Gobat, N.; Goossens, H.; Koopmans, M.; Tacconelli, E.; van der Werf, S. Monitoring approaches for health-care workers during the COVID-19 pandemic. *Lancet Infect. Dis.* **2020**, *20*, e261–e267. [[CrossRef](#)]
139. Moorthy, V.; Restrepo, A.M.H.; Preziosi, M.-P.; Swaminathan, S. Data sharing for novel coronavirus (COVID-19). *Bull. World Health Organ.* **2020**, *98*, 150. [[CrossRef](#)]
140. Hynes, W.; Trump, B.; Love, P.; Linkov, I. Bouncing forward: A resilience approach to dealing with COVID-19 and future systemic shocks. *Environ. Syst. Decis.* **2020**, *40*, 174–184. [[CrossRef](#)] [[PubMed](#)]
141. Paganini, N.A.K.; Buthelezi, N.; Harris, D.; Lemke, S.; Luis, A.; Koppelin, J.; Karriem, A.; Ncube, F.; Nervi Aguirre, E.; Ramba, T.; et al. Growing and Eating Food during the COVID-19 Pandemic: Farmers’ Perspectives on Local Food System Resilience to Shocks in Southern Africa and Indonesia. *Sustainability* **2020**, *12*, 8556. [[CrossRef](#)]
142. Gentilini, U.; Almenfi, M.; Orton, I.; Dale, P. Social Protection and Jobs Responses to COVID-19. 2020. Available online: <https://openknowledge.worldbank.org/handle/10986/33635> (accessed on 15 August 2020).
143. Xu, B.; Gutierrez, B.; Mekaru, S.; Sewalk, K.; Goodwin, L.; Loskill, A.; Cohn, E.L.; Hswen, Y.; Hill, S.C.; Cobo, M.M. Epidemiological data from the COVID-19 outbreak, real-time case information. *Sci. Data* **2020**, *7*, 1–6. [[CrossRef](#)]
144. Hussein, M.R.; Apu, E.H.; Shahabuddin, S.; Shams, A.B.; Kabir, R. Overview of digital health surveillance system during COVID-19 pandemic: Public health issues and misapprehensions. *arXiv* **2020**, arXiv:2007.13633.
145. Davies, S.E.; Wenham, C. Why the COVID-19 response needs International Relations. *Int. Aff.* **2020**, *96*, 1227–1251. [[CrossRef](#)]
146. Zheng, S.-Q.; Yang, L.; Zhou, P.-X.; Li, H.-B.; Liu, F.; Zhao, R.-S. Recommendations and guidance for providing pharmaceutical care services during COVID-19 pandemic: A China perspective. *Res. Soc. Adm. Pharm.* **2020**, *17*, 1819–1824. [[CrossRef](#)] [[PubMed](#)]
147. Castelyn, C.D.V.; Viljoen, I.M.; Dhali, A.; PEPPER, M.; Naidu, C. Resource allocation during COVID-19: A focus on vulnerable populations. *S. Afr. J. Bioeth. Law* **2020**, *13*, 83.
148. Miao, Q.; Schwarz, S.; Schwarz, G. Responding to COVID-19: Community volunteerism and coproduction in China. *World Dev.* **2020**, *137*, 105128. [[CrossRef](#)]
149. Palanica, A.; Fossat, Y. COVID-19 has inspired global healthcare innovation. *Can. J. Public Health* **2020**, *111*, 645–648. [[CrossRef](#)]
150. Cohen, J.; Kupferschmidt, K. *Countries Test Tactics in ‘War’ against COVID-19*; American Association for the Advancement of Science: Washington, DC, USA, 2020.
151. Khan, S.; Siddique, R.; Ali, A.; Xue, M.; Nabi, G. Novel coronavirus, poor quarantine, and the risk of pandemic. *J. Hosp. Infect.* **2020**, *104*, 449–450. [[CrossRef](#)] [[PubMed](#)]
152. Baxter, D.; Casady, C.B. *Encouraging and Procuring Healthcare Public-Private Partnerships (PPPs) Through Unsolicited Proposals during the Coronavirus (COVID-19) Pandemic*; ResearchGate: Berlin, Germany, 2020.
153. Meinzen-Dick, R. Collective action and “social distancing” in COVID-19 responses. *Agric. Hum. Values* **2020**, *37*, 649–650. [[CrossRef](#)]
154. Hermanto, D.; Akrim, A. Covid-19 Pandemic: A Social Welfare Perspective. *Soc. Sci. Humanit. J.* **2020**, *4*, 1915–1924.
155. Megahed, N.A.; Ghoneim, E.M. Antivirus-built environment: Lessons learned from Covid-19 pandemic. *Sustain. Cities Soc.* **2020**, *61*, 102350. [[CrossRef](#)]
156. Fontanarosa, P.B.; Bauchner, H. COVID-19—looking beyond tomorrow for health care and society. *JAMA* **2020**, *323*, 1907–1908. [[CrossRef](#)] [[PubMed](#)]
157. Steinwehr, U. Facing COVID-19, World Health Organization in crisis mode. *DW News*, 18 May 2020.
158. Laxminarayan, R.; Reif, J.; Malani, A. Incentives for reporting disease outbreaks. *PLoS ONE* **2014**, *9*, e90290. [[CrossRef](#)] [[PubMed](#)]
159. Huttner, B.; Catho, G.; Pano-Pardo, J.R.; Pulcini, C.; Schouten, J. COVID-19: Don’t neglect antimicrobial stewardship principles! *Clin. Microbiol. Infect.* **2020**, *26*, 808–810. [[CrossRef](#)]
160. Kost, G.J. Geospatial spread of antimicrobial resistance, bacterial and fungal threats to COVID-19 survival, and point-of-care solutions. *Arch. Pathol. Lab. Med.* **2020**. [[CrossRef](#)]
161. Matthiessen, L.; Colli, W.; Delfraissy, J.-F.; Hwang, E.-S.; Mphahlele, J.; Ouellette, M. Coordinating funding in public health emergencies. *Lancet* **2016**, *387*, 2197–2198. [[CrossRef](#)]
162. Nygren-Krug, H. The Right(s) Road to Universal Health Coverage. *Health Hum Rights* **2019**, *21*, 215–228.
163. World Health Organization; OECD; International Bank for Reconstruction and Development. *Delivering Quality Health Services: A Global Imperative for Universal Health Coverage*; World Health Organization: Geneva, Switzerland, 2018.
164. UN. Universal Health Coverage: Moving Together to Build a Healthier World. Available online: <https://www.un.org/pga/73/event/universal-health-coverage/> (accessed on 18 August 2020).
165. Baum, M.; Ognyanova, K.; Lazer, D.; Della Volpe, J.; Perlis, R.H.; Druckman, J.; Santillana, M. The state of the nation: A 50-state covid-19 survey report# 3 vote by mail. *OSFPREPRINTS* **2020**. [[CrossRef](#)]
166. Sherman, W. We Can’t Let Coronavirus Tear Us Apart. Available online: <https://www.hollandsentinel.com/opinion/20200313/wendy-sherman-we-cant-let-coronavirus-tear-us-apart> (accessed on 15 August 2020).

167. How the Public Sector and Civil Society Can Respond to the Coronavirus Pandemic. Available online: <https://www.hks.harvard.edu/faculty-research/policy-topics/health/how-public-sector-and-civil-society-can-respond-coronavirus> (accessed on 13 August 2020).
168. Lele, U.; Bansal, S.; Meenakshi, J. Health and Nutrition of India's Labour Force and COVID-19 Challenges. *Econ. Political Weekly* **2020**, *55*, 13.
169. Irwin, R.; Smith, R. Rituals of global health: Negotiating the world health assembly. *Glob. Public Health* **2019**, *14*, 161–174. [[CrossRef](#)] [[PubMed](#)]
170. Wahid, M.A.K.; Nurhaeni, I.D.A.; Suharto, D.G. *The Synergy among Stakeholders in Management of Village-Owned Enterprises (BUM Desa)*; 1st Borobudur International Symposium on Humanities, Economics and Social Sciences (BIS-HESS 2019); Atlantis Press: Amsterdam, The Netherlands, 2020; pp. 317–320. [[CrossRef](#)]
171. Uusikylä, P.; Tommila, P.; Uusikylä, I. Disaster Management as a Complex System: Building Resilience with New Systemic Tools of Analysis. In *Society as an Interaction Space*; Springer: Singapore, 2020; pp. 161–190.
172. Kwan, K.M.W.; Shi, S.Y.; Nabbijohn, A.N.; MacMullin, L.N.; VanderLaan, D.P.; Wong, W.I. Children's appraisals of gender nonconformity: Developmental pattern and intervention. *Child Dev.* **2020**, *91*, e780–e798. [[CrossRef](#)]
173. Pandi-Perumal, S.R.; Akhter, S.; Zizi, F.; Jean-Louis, G.; Ramasubramanian, C.; Edward Freeman, R.; Narasimhan, M. Project Stakeholder Management in the Clinical Research Environment: How to Do it Right. *Front. Psychiatry* **2015**, *6*, 71. [[CrossRef](#)]
174. Rice, L.; Sara, R. Updating the determinants of health model in the Information Age. *Health Promot. Int.* **2018**, *34*, 1241–1249. [[CrossRef](#)] [[PubMed](#)]
175. Oliver, N.; Lepri, B.; Sterly, H.; Lambiotte, R.; Deletaille, S.; De Nadai, M.; Letouzé, E.; Salah, A.A.; Benjamins, R.; Cattuto, C.; et al. Mobile phone data for informing public health actions across the COVID-19 pandemic life cycle. *Sci. Adv.* **2020**, *6*, eabc0764. [[CrossRef](#)] [[PubMed](#)]
176. Paul, C.; Pearlman, C.V.; Tulika Singh, L.M.; Stevens, B.K. Multi-stakeholder partnerships: Breaking down barriers to effective cancer-control planning and implementation in low-and middle-income countries. *Sci. Dipl.* **2016**, *5*, 1–15.
177. Fernandez, A.A.; Shaw, G.P. Academic Leadership in a Time of Crisis: The Coronavirus and COVID-19. *J. Leadersh. Stud.* **2020**, *14*, 39–45. [[CrossRef](#)]