

Systematic Review Analysis on Health Services During the COVID-19 Pandemic in a Political Perspective

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ABSTRACT

The Systematic Review in this research aims to analyze the health service model during the COVID-19 pandemic. Health services are an important part of handling the COVID-19 pandemic. This research is important for examining the formulation of health service policies during the COVID-19 pandemic by identifying themes related to research variables related to health service policies. The benefits of this research can be used as reference material in formulating optimal health service policies during the COVID-19 pandemic. This research uses a literature study of 362 Scopus Indexed International Journals, analyzed using Vosviewer and Nvivo 12 plus software. The results of this research show; 1) Studies related to health services on the number of COVID-19 cases experienced a significant increase during the 2020-2021 period, this shows the ability of the health service system to develop; 2) Health services in each region and country vary depending on the situation and capabilities of each region; 3) the results of the network analysis visualization analysis formulate an effective health service model.

Keywords: Health Service; Policy; COVID-19 Pandemic

INTRODUCTION

The importance of health care during the COVID-19 pandemic cannot be overstated. Controlling COVID-19 is now being led by the health sector (Xiao & Torok, 2020). China's Hubei Province initially detected the COVID-19 virus in December of this year (Lian et al., 2020). As a result of COVID-19's rapid spread throughout proclaimed a global pandemic (Sarbadhikari et al., 2020). Because it targets the human respiratory system, the COVID-19 pandemic is highly contagious.

Various human activities have made it impossible to control the spread

of the COVID-19 pandemic, which has restricted human movement. Human mobility has been restricted to limit the spread of the pandemic sickness COVID-19. The government must implement a strategy to limit human mobility to minimize the effects of the COVID-19 pandemic, which has a cascading effect throughout all aspects of society. There are delays in public service activities, one of which is public health services, because of constraints on human mobility (D. V. Gunasekeran, Tseng, et al., 2021a).

Individuals must remain at home during the COVID-19 pandemic since the services supplied by integrating information and communication technologies via remote methods must be used. The use of technology in the health sector is also an important aspect of protecting public health during the COVID-19 pandemic (Tilahun et al., 2021).

The COVID-19 pandemic, which targets the human respiratory system, has grown extremely deadly due to the enormous number of people who have become infected with it (Prawoto et al., 2020). Health care in combating COVID-19, the government should focus most of its emphasis there. Public health services during the COVID-19 pandemic face several challenges, including (Fadhlorrohman et al., 2020): 1) the availability of suitable public health infrastructure; 2) the accessibility of health services; and 3) the application of technology and strategic strategies in the mechanism of health services.

Health systems across the country were able to keep up with the demand for routine services in the face of a small number of COVID-19 cases early in the outbreak. Strategic adaptation strategies are needed to ensure that resources owned by the public and private sectors are utilized to their full potential as demand for services increases and health workers are affected by COVID-19 infection and its indirect repercussions (Öncü et al., 2021). In the interest of the neighborhood During the COVID-19 pandemic, hospital health services are exclusively available to COVID-19 patients and those who require acute care (Majeed et al., 2020). In-person exams are not suggested for

outpatients who do not have an immediate need for examination services.

As a result of the massive number of uncontrolled COVID-19 pandemic infections, hospitals are overflowing with patients who have the virus (Kennelly B et al., 2020). This research is necessary to assess and design policies and health service mechanisms implemented during the COVID-19 pandemic. One way to address issues in public health services is through the integration of technology (D. V. Gunasekeran, Tseng, et al., 2021a). Health care services must make use of advancements in technology, information, and communication that have been brought about by the digitization of the globe (Tilahun et al., 2021). The digitalization era is defined by the existence of the smart city idea in solving urban issues (Petracca et al., 2020).

In addition, the COVID-19 pandemic makes it challenging to enhance health care systems. During the COVID-19 pandemic, altering the health care system was difficult due to public fear, stigma, misunderstandings, lies, and limits on human mobility, all of which hampered access to health care for all kinds of illnesses (Mbunge et al., 2021). There is a wide range of applications for digitalization technology, from the financial, government, social, and health sectors to information and communication technology (D. V. Gunasekeran, Tseng, et al., 2021a).

To provide high-quality services, technology must be seamlessly linked with other aspects of the business. Industry to build optimal and equitable health services that can serve the entire community (Petracca et al., 2020). The healthcare industry to boost the efficiency with which patients receive care.

In the event of an emergency, a well-organized and well-prepared health care system will retain equal access to vital health services while also reducing the number of people who die directly and indirectly (Witt et al., 2020). Long-term provision of health services to the public is accomplished by using health services (Majeed et al., 2020). A health service endeavors to enhance public health, whether done by an individual or a group.

Promoting health and health development is a primary function of

health care (Xiang et al., 2020). An overworked and understaffed health care system will lead to an increase in pandemic deaths and the indirect death toll from curable and preventable diseases. To ensure correct health-seeking behavior and public health recommendations are adhered to, the public must have trust in the ability healthcare facilities.

The public becomes an actor in the healthcare system, particularly in the event of a pandemic; hence, the public is involved in this research. Political analysis relies heavily on public participation in health-related decision-making, since a less comprehensive understanding may result from a lack of public involvement. As a result, the study considers public involvement and integrates their opinions and experiences into a methodical analysis. Furthermore, the research endeavors to consider the disparities in health policies and tactics implemented by different countries throughout the pandemic. The availability, accessibility, and quality of healthcare can vary significantly among nations or areas due to differing political ideologies.

Rapid policy shifts, changing political dynamics, and the role of the media in shaping public perception are factors that require continuous monitoring. This research attempts to respond responsively to ongoing political developments to provide accurate and relevant research results. This research tries to describe the diversity. Although there are various barriers in methodological also appear in the analysis of this systematic review. The selection of inclusion and exclusion criteria, search design, and methods of evaluation of research quality are elements that require mature consideration. This research should be able to provide a holistic and detailed synthesis of pandemic health care, so the choice of methodology becomes crucial. In a political context, the high uncertainty and dynamics during the pandemic add to the complexity of the analysis.

Promoting health and health development are the primary functions of health services. The overworking healthcare system and the shortage of staff will lead to an increase in pandemic deaths and the number of indirect deaths

from curable and preventable diseases. In order to ensure that proper behavior for seeking treatment and public health recommendations are adhered to, the public must have confidence in the capabilities of health facilities. In addition, the study examines health sector strategies during the COVID-19 pandemic and formulates health models based on information obtained from the literature.

Overall, systematics in the time of the COVID-19 pandemic from a political point of view faces a number of problems that need to be tackled carefully. From data sources to research methodologies, and from public involvement to policy responsibility, each aspect of this research uses a rigorous and holistic approach to ensure that the resulting analysis makes meaningful contributions to our understanding of how political factors affect health services in times of crisis. Therefore, this research aims to develop policy recommendations that pandemics can implement not only as useful academic insights but should also contribute to improvements in health policies and practices.

RESEARCH METHOD

This is a qualitative research project that uses a literature review method. This study examines research issues related service model during the COVID-19 pandemic using the literature analysis approach. There were 362 journal articles that Scopus indexed to conduct a literature review using secondary data types. This study relies on the Scopus database, the world's most widely used academic database.

This, data from trustworthy international academic research can be found in the Scopus database. The stages of collecting this research data are through the Scopus database (<https://www.scopus.com/>) with the keywords "Health Service" AND "Technology" AND "COVID-19" on the Scopus database search engine. Furthermore, the data obtained is specified based on the category of publication year, research topic, document type, and name of journal/publication.

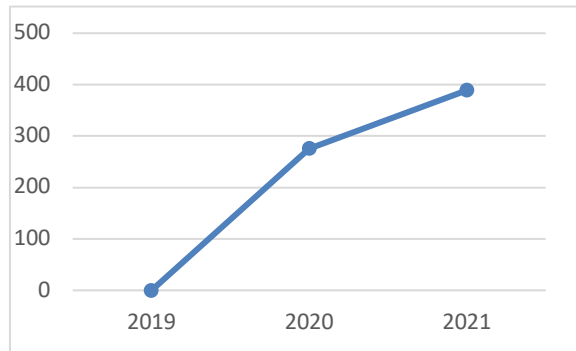
After the data is categorized based on research needs, the next step is to export the data in .csv export file format. In the next stage, the data that has been exported in .csv file format is then analyzed using Vosviewer software to see the results of research visualization based on a bibliometric map of dominant keywords related to the research topic. Data analyzed using Vosviewer will be developed in an analysis using software Nvivo 12 Plus with the help of the Concept Map tool. Concept Map tools to visualize public service models during the COVID-19 pandemic.

RESULT AND DISCUSSION

It has been challenging to balance the requirement to deal with the COVID-19 pandemic with the need to continue delivering other essential health services in countries worldwide (Mosnaim, Stempel, Sickle, et al., 2020). Patients' safety and efficiency must be ensured at all levels of care, including COVID-19 screenings, triage, and targeted referrals (Anthony Jnr, 2021). Many routines and elective health services have been halted to respond to the developing pandemic setting and the changing risk-benefit analysis for each action (D. V. Gunasekeran, Tham, et al., 2021).

It is possible to decrease the risk of system failure by employing appropriate governance and coordination structures and rules for prioritizing and adjusting services. This research examines the health care system's benefits and risks using Scopus-indexed international journal papers to formulate policy recommendations. During the COVID-19 pandemic, this research develops a model for an essential health care policy system. The following table summarizes the findings of a review of 2019-2021 Scopus-indexed international journals

**Figure 1. Publication Trend on Health Service During
The COVID-19 Pandemic**



Source: author's research, 2023

Figure 1 shows the trend of publication of Scopus indexed journals related to health services during the COVID-19 pandemic in 2019-2021. The study of journal literature related to research topics increased significantly in 2020 and 2021. The increase in the number of published journals shows a system's ability to develop a risk-benefit analysis related to the health care policy system model during the COVID-19 pandemic.

Strengthening primary health services in realizing universal health coverage provides an important foundation for adapting to the pandemic context (Caristia et al., 2020; Petracca et al., 2020). A well-organized and prepared health system will maintain equitable access to quality essential health services during an emergency, thereby limiting direct deaths and avoiding indirect deaths (Anthony Jnr, 2021; Lian et al., 2020). Various countries have varying policies regarding the place to control the spread of COVID-19, and their approaches to easing these restrictions also vary (Mbunge et al., 2021; Xiang et al., 2020).

Measures that limit people's movement to control the spread of disease can make it difficult for them to obtain healthcare services and impact the plan to restore services to their previous condition (Monaghesh & Hajizadeh, 2020a). As a result of this pandemic, the public and informal caregivers, such

as family, friends, and neighbors, are placed under an unprecedented level of responsibility to take care of themselves and their loved ones issues (Nicola et al., 2020; Rajkumar, 2020).

Figure 2. Publication Trends on Health Service Based on Country

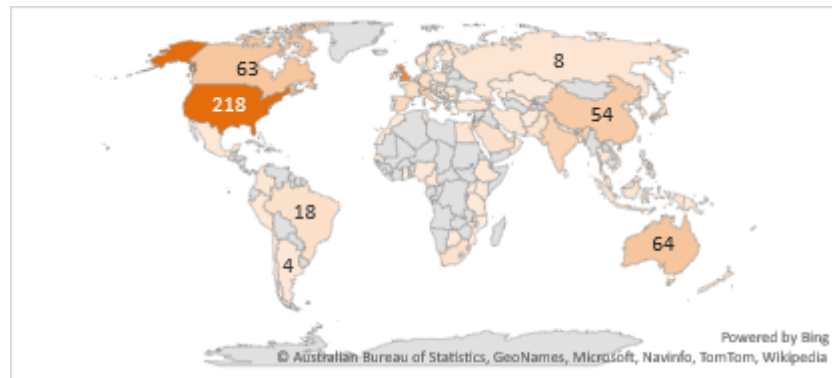


Figure 2 depicts the worldwide trend of journal articles on health services during the COVID-19 pandemic. Compared to China and other countries, the United States has the highest publication trend (Lian et al., 2020; Sust et al., 2020). This demonstrates that the US health care system is more advanced than other countries, such as China. Various regions of the same country may require different ways to assess which health services are necessary and reorient aspects of the health system to preserve these services. Different health services making the right decisions requires balancing the benefits of activities with their potential to transmit the infection (D. V. Gunasekeran, Tham, et al., 2021; Sarbadhikari et al., 2020).

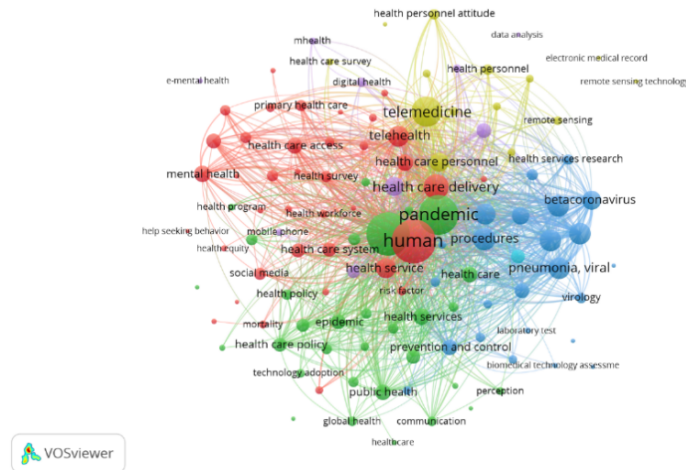
As the pandemic spreads and the illness load increases, so will local capacity to provide basic services and those required as the pandemic worsens (Scott et al., 2020). This will be all factor into any risk-benefit analysis. Public health messages need to be altered to ensure that communities do not postpone seeking medical attention for potentially life-threatening illnesses in areas with high infectious disease burdens (such as malaria, pneumonia, or tuberculosis [TB]) (Gómez-Ochoa et al., 2020; Mbunge et al., 2021). As a result, even short-term shifts in preventative and treatment strategies can quickly

reverse hard-won progress and have long-term effects in places undergoing elimination and eradication efforts. Restrictive public health measures are gradually eased as the outbreak is brought under control (Banakar et al., 2020).

Some changes to service delivery must be returned to their original state. In contrast, others that have been proven to be effective, safe, and beneficial can be implemented into routine post-pandemic practices. The strategy response to this outbreak must be dynamic and calibrated because it is likely to be a tidal wave. Decision-makers must foresee the need to start, stop, and restart adaptation. To ensure that decisions are made in conformity with national and local policies, they must be periodically re-evaluated (Majeed et al., 2020). Public and private sector involvement, special efforts to ensure that disadvantaged social groups may access health services, open and frequent contact with the community, and strong cooperation with community members are all necessary to successfully execute these strategic adjustments.

Ethical considerations such as resource allocation equity, self-belief, a dedication to seeing this project through to its successful conclusion, and a reverence for human dignity and rights must guide all adaptations (Anthony Jnr, 2021; Peek et al., 2020). Vulnerable populations will be in greater danger if they are not adequately protected, which will harm the response to COVID-19 and other public health goals (Mbunge et al., 2021). The most recent guidelines and regulations related to infection prevention and control must be properly followed.

Figure 3. Network Vizualization



Source: author's research, 2023

The author used Vosviewer software to analyze 362 international journal articles indexed by Scopus into a network representation in Figure 3. 362 articles on health services are mapped using vosviewer's text data analysis features. The six (6) clusters of network visualizations based on text data analysis tools were found in the mapping findings. Figure 3 illustrates the differences between each cluster by using various colors. To aid the author in building a health care model, the author can identify and analyze themes connected to health services by mapping this cluster. Table 1 shows the specifics of the cluster in Figure 3's network representation.

Table 1. Cluster of Network Vizualization

Cluster	Jumlah Items	Items
Cluster 1	38 Items	Biomedical technology, clinical article, emergency department, access to healthcare, delivery of healthcare, disparity in healthcare, healthcare facility, healthcare system, disparity in health, equity in health, healthcare service, accessibility of healthcare

		services, survey on health, healthcare systems, healthcare workforce, behaviour of seeking help, hospital emergency department, individual, integrated healthcare system, medical technology, mental illness, mental healthcare, mental healthcare service, mental healthcare services
Cluster 2	31 Items	Artificial intelligence, attitude to health, communication, covid-19, digital technology, pandemic, global health, government, government regulation, medical care, medical care administration, medical care institution, medical care coordination, medical care regulations, medical care standards, medical regulations, medical initiatives, health advocacy, medical services, medical care information technology, internet, medical information, pandemic, perception, public health, public health practice, public health service, robotics, technology adoption, telecommunication
Cluster 3	24 Items	Betacoronavirus, biomedical technology assessment, coronavirus infection, coronavirus infections, emergency health service, health care cost Healthcare needs and demand, healthcare research, hospitalization, infection control, laboratory test, , lockdown, medical education, national health service, organization and management, pneumonia viral, point-of-care testing, prevention and control, procedures, technology assessment, biomedical vaccination, virology, virus pneumonia, virus transmission

Cluster 4	14 Items	Discussion, digital health record, digital medical record, healthcare staff, healthcare questionnaire, healthcare usage, healthcare staff, healthcare staff opinion, medical informatics, remote sensing, remote sensing technology, telemedicine, telemonitoring
Cluster 5	9 items	Data analysis, digital health, e-mental health, epidemiology, mhealth, mobile application, mobile phone, remote consultation, teleconsultation
Cluster 6	1 Items	Delivery of health care

Source: author's research, 2023

A role for technology, information, and communication (ICT) can be inferred from the cluster analysis results. All connected to ICT in the healthcare industry to improve how efficiently patients receive care (Lian et al., 2020). The combination of AI, IoT, and big data has greatly impacted society's need for health services. Big data technology is being used to collect and analyze patient data. A patient's medical records can benefit from big data's application in the health care industry. Big data can also be used to manage medical facilities.

Health care may benefit from IoT's ability to automate processes, track patients' progress in real-time, and make care more readily available(Connor et al., 2020; D. V. Gunasekeran, Tseng, et al., 2021b). It is also utilized in the health sector to diagnose ailments, design health regimens, and tailor therapy based on individual patient needs using Artificial Intelligence (AI)(Bell et al., 2020a; Monaghesh & Hajizadeh, 2020b). AI, IoT, and big data all work together to improve healthcare quality. E-health, telehealth, telemedicine, remote sensing, and other advancements arising from the incorporation health sector will assist in the creation of comprehensive and efficient health care programmes during the COVID-19 pandemic.

This pandemic's requirement for primary health care necessitates

government consideration in developing target policies. Health care has been suspended due to the COVID-19 pandemic's impact on human mobility (Dewi et al., 2020; Prawoto et al., 2020). Many unmet health care demands can accumulate when some health treatments are suspended. Many countries must identify and prioritize their most critical health services to prevent the COVID-19 pandemic from negatively impacting their health care systems. Health services for vulnerable populations, such as newborns and the elderly, are prioritized, as are services for infectious diseases, immunization, and reproductive and mental health (Bell et al., 2020b).

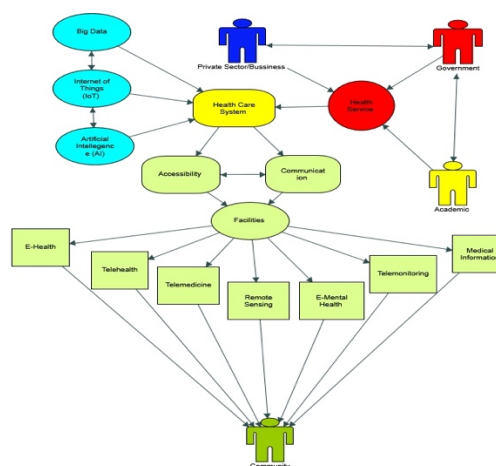
Steady policy changes, shifting political landscapes, and the media's influence on public opinion are all variables that need to be closely watched. In order to produce precise and pertinent research findings, this study makes an effort to react in a timely manner to current political happenings. The goal of this study is to characterize the variety. Though the examination of this systematic review also reveals a number of methodological obstacles. Mature care is needed for the selection of inclusion and exclusion criteria, search design, and techniques for assessing the caliber of research. A comprehensive and in-depth synthesis of pandemic health care should be able to be obtained from this research therefore, the technique selection becomes essential. The high levels of unpredictability and dynamics throughout the epidemic in a political setting increase the complexity of the (Mosnaim, Stempel, Van Sickle, et al., 2020).

To ensure that health services can continue to adapt to changing conditions, it is important to consider more specific examples or case studies. For example, in countries like South Korea and Singapore, governments have successfully implemented effective mass testing and contact tracking systems, which enable them to manage the pandemic better without having to stop essential health services. In addition, in some regions of Africa, mobile health care models have been introduced to reach remote areas, which can be applied as a strategy in the face of pandemics and other emergencies.

The proposed strategy to restart healthcare should be clearly detailed and practical. For example, specific measures such as increased laboratory capacity, provision of adequate self-protection equipment (APD) for healthcare personnel, as well as the implementation of telemedicine technology to reduce physical contact between patients and medical personnel, are some of the strategies that can be implemented practically. Governments and health authorities need to ensure that all these strategies are not only well planned but also supported by adequate resources and adequate training for all parties involved.

Planned activities must be halted or restarted as the pandemic spreads to protect the public. Efficient proactive planning transformation enhance its readiness to handle disruptions, hence reducing the potential risks associated with such disruptions in the future. Improved service resilience and the ability to swiftly expand COVID-19 treatment capacity should focus on adaptation efforts, which should also focus on maintaining safe and reliable access to high-quality critical health services (Nicola et al., 2020). Health service models are developed based on the results of a cluster network analysis, which may be seen in the following figure.

Figure 4. Health Service Model During the COVID-19 pandemic



Source: author's research, 2023

Figure 4. Health Service Model During the COVID-19 pandemic, the vital health services shown in Figure 4 necessitated multiple stakeholder's involvement to maintain high levels of service quality. The government, private sector, academics, and the community are all involved in creating health care services in each country. When it comes to delivering excellent healthcare during the COVID-19 epidemic, every individual involved has an important part to play. The COVID-19 pandemic requires cooperation from the government, commercial sector, academia, and the community to create, administer, and organise necessary health services (Anthony Jnr, 2021; Sust et al., 2020). As a result of this, government policymakers play a significant influence in developing health care programs. In order to offer thorough care, the participation of individuals in the healthcare system is crucial. An integration of ICT, including the system might facilitate the management of a COVID-19 pandemic. The author created a healthcare model for the COVID-19 pandemic as an illustration of the necessary healthcare paradigm.

To plan for the COVID-19 pandemic, several critical procedures need to be taken into consideration, such as (D. V. Gunasekeran, Tseng, et al., 2021a; Kalhori et al., 2021; Sarbadhikari et al., 2020): 1) restricted communication technology infrastructure, internet networks, and various other hurdles that need to be considered; 2) Giving priority to crucial health services and adjusting them to evolving circumstances and requirements are two of the most significant factors to consider. 3) Optimizing the place and platform of service providers. Establishing a safe and effective patient flow in all places; 4) Optimizing the capacity of health services.

Maintaining other considerations; 5) Provide financial support for public health initiatives and remove financial obstacles to care; 6) Communication and monitoring mechanisms for health services should be strengthened; 7) Provide vital health care services via digital channels.

CONCLUSION

The conclusions of this study confirm that the COVID-19 pandemic has tested the resilience of the global healthcare system. The significant increase in healthcare surveys during 2020-2021 reflects the rapid response and adaptation of the health sector to the challenges facing it. The health sector, which is at the forefront of efforts to curb the spread of COVID-19, shows variations in approaches across locations and countries, especially in terms of technology integration. The use of state-of-the-art technology by healthcare providers enables more optimal and equitable services to be achieved, which are accessible to the whole layer of society.

Furthermore, the study emphasizes that the readiness and rapid adaptation of the health system are crucial in ensuring that everyone, regardless of financial capacity, can access the health services they need during a crisis. It shows the need for sustainability in improving healthcare systems, including strengthening technology integration, to face similar challenges in the future. In a political context, the ability to guarantee equal access to health services is a key factor in global health policy, especially in the face of emergencies such as pandemics.

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