

Impacts of COVID-19 on Life in Different Countries: A Systematic Review

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ABSTRACT

Background: Currently, the challenge for WHO and many countries are finding effective drugs to defeat the virus or vaccines that can be used in healthy individuals to prevent them from becoming infected. As there is no effective drug or vaccine, the best procedures currently are control of the source of infection, early diagnosis, isolation, and supportive care. For individuals, good personal hygiene and avoiding crowded places will help to prevent Coronavirus infection.

Aim: The main purpose of conducting this study is to provide information, descriptions, ideas/ideas about the impact of COVID-19 on people's lives in various countries based on reference sources, both international journals, novels, textbooks, and reports.

Method: The writing of this Systematic Review uses the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses) method which is carried out systematically by following the stages or procedures of the Systematic Review.

Findings: The impact of the pandemic in Asia is more sensitive than in countries in the Australia/Oceania region or the European region. Middle-income and low-income countries need to be more prudent in managing the COVID-19 pandemic to have better or equal effectiveness with developed or high-income countries.

COVID-19, vaccine, systematic review

KEYWORDS

INTRODUCTION

Coronavirus (COVID-19) is a large family of viruses that cause respiratory tract infections, ranging from the common cold to serious illnesses such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). This virus is transmitted through physical contact, sharing goods with patients who are positive for Covid-19, not wearing a mask when talking to people with COVID-19, and so on. This virus is an unpredictable disease. Signs and symptoms of COVID-19 which are classified as severe, acute respiratory syndrome causes pneumonia, kidney failure, and the most fatal results in death, while the mild symptoms are fever, sneezing, sore throat, and so on.

Clinical manifestations usually appear or are felt after 5-6 days, or no later than 14 days, since exposure to the virus. Some symptoms appear after 2 days of infection. However, some patients do not experience any symptoms when infected even though the test results show positive results. Early detection of this virus is very important to relieve the symptoms that appear. In addition, it is also important to prevent a more massive transmission (Lauer et al., 2020). Therefore, it is necessary to know the symptoms that indicate a viral infection.

This disease was first discovered in December 2019 in Wuhan, the capital of China's Hubei Province, and has since spread globally around the world (GÜNER et al., 2020). The world was shocked by the outbreak of new pneumonia that started in Wuhan, Hubei Province, which then spread rapidly to more than 190 countries and territories. Since the first case in Wuhan, there has been an increase in COVID-19 cases in China reporting to WHO that every day there is an increase in cases between late January to early February 2020. Initially, most of the reports came from Hubei and neighboring provinces then increased to other provinces and throughout China (Böhm et al., 2021). As of January 30, 2020, there have been 7,736 confirmed cases of COVID-19 in China, and 86 other cases were reported from various countries such as Taiwan, Thailand, Vietnam, Malaysia, Nepal, Sri Lanka, Cambodia, Japan, Singapore, Arab Saudi, South Korea, Philippines, India, Australia, Canada, Finland, France, and Germany (Kandel et al., 2020).

This disease outbreak has shaken the world community so badly, nearly 200 countries in the world were affected by this virus including Timor-Leste which destroyed people's lives both economically and socially, the World Health Organization (WHO) declared the 2019-2020 coronavirus outbreak an International Public Health Emergency (PHEIC) on 30 January 2020, and the pandemic on March 11, 2020 (Cucinotta & Vanelli, 2020). Various efforts to prevent the spread of the Covid-19 virus were also carried out by governments in countries around the world to break the chain of the spread of the Covid-19 virus, which is referred to as lockdown and social distancing. current policy on quarantine periods of 14 days for closure of confirmed case contacts and 28 days for monitoring infections in known cohorts (Tan et al., 2020).

On December 22, 2020, WHO (World Health Organization) reported that global data contained 75,129,306 confirmed cases of Covid-19 and 561,617 deaths (Böhm et al., 2021). The number of new cases globally over the past week (June 21-27 2021) was more than 2.6 million, the same number compared to the previous week. The weekly death toll continued to decline, with more than 57,000 deaths reported in the past week, a 10% decrease compared to the previous week. This is the lowest weekly death toll since recorded in early November 2020. Globally, the incidence of COVID-19 remains very high with an average of more than 370,000 cases reported daily over the past week. the cumulative number of cases reported globally now exceeds 180 million and the death toll is nearly 4 million (WHO, 2020). Furthermore, on 24 September 2021 WHO reported globally, there were 230,418,451 confirmed cases of COVID-19, including 4,724,876 deaths. At the European region/region level, there were 69,097,144 confirmed cases, Asia 42,746,778 confirmed cases, Eastern Mediterranean 15,585,152 confirmed cases, Western Pacific 8,162,376 confirmed cases, Africa 5,984,952 confirmed cases.

The current situation in Southeast Asia (South East Asia) according to data from the Institute for Health Metrics and Evaluation on 16 June 2021, shows that the current condition of daily cases reported in the past week (until 13 June) fell to 104,100 per day on average compared to 141,100 the previous week. The daily mortality rate in the past week on average fell to 6,700 per day compared to 9,800 the previous week. The estimated daily total COVID-19 deaths are 3 times greater than the number of reported deaths. The Institute for Health Metrics and Evaluation projects a cumulative 1,753,000 deaths as of October 1. This represents an additional 381,000 deaths from June 14 to October 2021. The daily death toll is expected to

decline throughout the summer, but spikes in Indonesia and Myanmar will flatten the regional downward trend into early fall (Institute for Health Metrics and Evaluation, 2021).

Timor-Leste is one of the countries in Southeast Asia where the Corona Virus has been detected. On January 6, 2021, the Ministry of Health (Ministério da Saúde) reported that the total number of people who took the Covid-19 test was 17,102 people, confirmed cases 49 people, recovered (37: Confirmed, 4: Probable), waiting for test results 512 people, negative 16564 Person, Deceased 0 (WHO, 2020). On 25 June 2021, the WHO Regional Office for Southeast Asia reported that Timor-Leste continued to report a decline in new cases and between weeks 23 and 24 there had been a 22.6% decline (n=422). TPR (The test positivity rate) decreased from 9.7% in week 23 to 2.9% in week 24 (WHO, 2020). On 28 September 2021 the Ministry of Health of Timor-Leste reported that a total of 19445 confirmed cases, 47 new confirmations, a cumulative total of participated in the test 205400 people, waiting for result 0, 128 people just recovered, currently treating 838 people, those who have recovered (confirmation 18493+probable 4=18497), died 114.

The above data shows that SARS-CoV-2 has spread rapidly in many countries, causing severe disease and sustained human-to-human transmission, making it a concern and serious public health threat. Considering the global threat to health caused by SARS-CoV-2, effective prevention, and treatment of COVID-19 are urgently needed (Li et al., 2020). However, the development of drugs for the SARS-CoV-2 pathogen is still a major problem for humans, and there are currently no officially approved drugs to treat COVID-19.

Currently, there is no specific drug available for the treatment of SARS-CoV-2 infection and supportive measures remain the mainstay of Covid-19 treatment. Thus, the immune function of the patient (society) is a major determinant of disease severity, and populations with immune function, such as the elderly, are more susceptible and have a high mortality rate after COVID-19 infection compared to children with strong immunity (Lei et al., 2020).

Over time All viruses – including SARS-CoV-2, the virus that causes COVID-19 – evolve. When a virus replicates or makes copies of itself, it sometimes changes slightly, which is normal for viruses. These changes are called "mutations". A virus with one or more new mutations is referred to as a "variant" of the original virus. On 25 February 2021, WHO released a document outlining the working definitions of VOC (Variant of Concern) and VOI (a variant of interest), including recommended actions for member states if a VOI or VOC is identified (Huamán Saavedra, 2021).

With the development of Covid-19 with the rapid increase in the rate of transmission, the speed of Covid-19 to carry out mutations is even faster. As a result, until now many variants of this virus have developed in various countries and this Covid-19 variant is more difficult to detect, treat or prevent with a vaccine, so scientists are currently studying and tracking its development (United Kingdom & South Africa, 2021).

The naming of the Covid-19 variant was carried out by a WHO expert group consisting of several scientific researchers at the WHO Virus Evolution Working Group, the WHO COVID-19 reference laboratory network, GISAID, Nextstrain, Pango, and several experts from several countries. The naming was agreed to use letters from the Greek alphabet to make it easier for a wider audience to understand. with the term Variants of Concern (VOC) such as Alpha (B.1.1.7, Q.1-Q.8), Beta (B.1.351, B.1.351.2, B.1.351.3), Gamma (P.1, P.1.1, P.1.2), Epsilon

(B.1.427 and B.1.429), Eta (B.1.525), Iota (B.1.526), Kappa (B.1.617.1) N/A (B.1.617 .3), Mu (B.1.621, B.1.621.1), Zeta (P.2) (Centers for Disease Control and Prevention, 2021).

The presence of Covid-19 with its new variant poses a big challenge to development aspirations. This is a sharp reminder of shared vulnerabilities and shows the need for real change. However, it can also be a starting point to change direction and build a more resilient new normal. Much will depend on the policies taken and the ability to coordinate, both at the international and national levels to build a more inclusive, resilient, and sustainable future (UNCTAD, 2020).

Current developments, especially developing countries such as Timor-Leste in dealing with Covid-19, need international support, both financially and materially. In the absence of international support, developing countries must find innovative policy mechanisms to achieve sustainability and development goals cost-effectively. This requires identifying affordable policies that can result in immediate progress towards common SDG goals, rather than sacrificing some goals to achieve others and aligning economic incentives for long-term sustainable development (Barbier & Burgess, 2020).

Globalization, urbanization, and environmental change, infectious disease outbreaks, and epidemics have become global threats that require a collective response. Although the majority of developed countries, especially Europe and North America, have strong real-time surveillance and health systems to manage the spread of infectious diseases, improvements in public health capacity in low-income and high-risk countries, including human and animal surveillance, workforce preparedness, and strengthening laboratory resources needs to be supported by using national resources complemented by international donor funds (Pak et al., 2020).

Currently, the challenge for WHO and many countries are finding effective drugs to defeat the virus or vaccines that can be used in healthy individuals to prevent them from becoming infected. As there is no effective drug or vaccine, the best procedures currently are control of the source of infection, early diagnosis, isolation, and supportive care (Abd El-Aziz & Stockand, 2020). For individuals, good personal hygiene and avoiding crowded places will help to prevent Coronavirus infection. The main purpose of conducting this study is to provide information, descriptions, ideas/ideas about the impact of COVID-19 on people's lives in various countries based on reference sources, both international journals, novels, textbooks, and reports.

METHOD

Literature Review search strategy

The writing of this Systematic Review uses the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses) method which is carried out systematically by following the stages or procedures of the Systematic Review. Article search using the keywords Impact of COVID-19, people's lives in various countries which are accessed online from websites and visits to related university or research institute pages through Google Scholar, Pubmed, Emerald Insight, and DOAJ. Article search is limited to articles in English and international publications. The total number of articles obtained is 72 and out of these 72 articles, a selection process was carried out to meet the inclusion and exclusion criteria.

Inclusion and exclusion criteria

Based on the systematic review procedure, the reviewed articles must meet the inclusion criteria as follows:

- a) Inclusion Criteria: International journal dealing with the impact of hazardous and toxic waste management, research articles published in a span of 5 years (2017-2021), research or review articles, and fully accessible research articles
- b) Exclusion Criteria: International articles irrelevant to strategies for developing medical waste management interventions, research articles published more than 5 years back, and so on (Not part of the inclusion criteria)

Selection Process

The selection process or article collection is carried out in stages, namely: 1) Relevant Article Search; 2) Article submission from 2017-2021; 3) Screening according to the Inclusion and Exclusion criteria; 4) Combining review results; and 5) Determining the results, findings from the grouping that have been carried out need to be discussed to conclude the context or results of the review

Article Evaluation

Evaluation of this article to evaluate the quality and new findings of a scientific article with an international category that is included in the Systematic Review. These criteria can be used to select articles that will not be used. The assessment was carried out in journals related to the topic of strategies for developing medical waste management interventions. It should be understood that the so-called scientific literature can be in the form of papers from scientific journals, papers from a conference (Proceedings), report from a trusted organization, and textbooks.

Data Extraction

In this Systematic Review, data extraction is carried out by looking at the entire published journal within the appropriate 10-year period, then writing down the important findings from the article and proceeding to the next stage, namely data synthesis. The process of journal tracing activities is carried out as shown in the following chart.

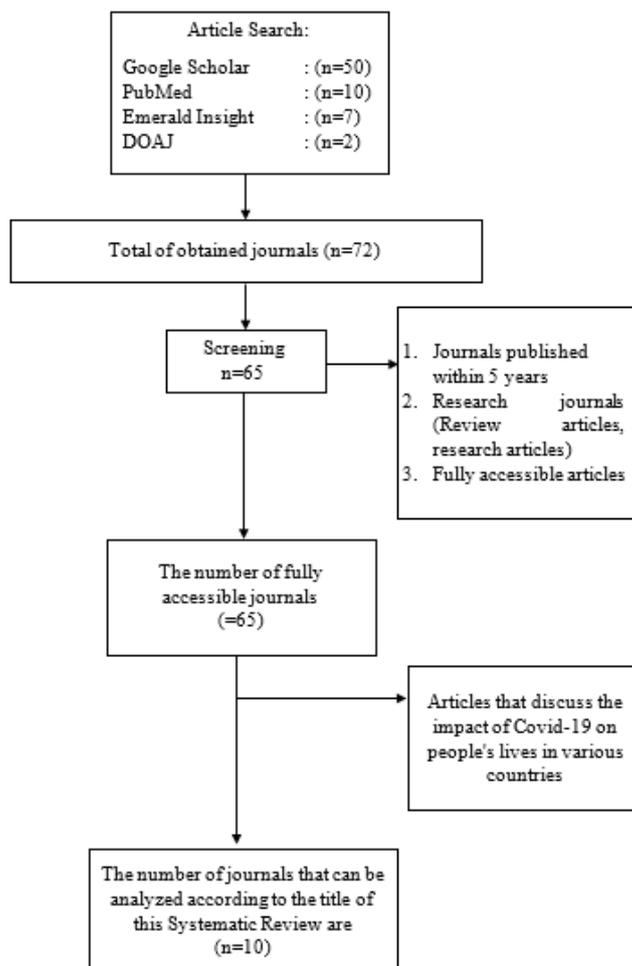


Figure 1. PRISMA Diagram: Stages of Systematic Review

Of all the articles extracted, they were taken from several sources, namely Google Scholar, PubMed, Emerald Insight, DOAJ with the types of journals published such as ELSEVIER, IJS, PROCEEDINGS, NATURERESEARCH, ORESTA, NOVEL CORONA VIRUS, GPH, BTAD, BJS, TUBITAK, CDD, JMINR, IEEE, EHP, FPH, UNTCAD, MDPI, JPP, JMII, AIM, NEJMC, OPHRP, Health Services research and six reports from WHO (World Health Organization). Furthermore, screening of titles, abstracts, and the content selection or content according to inclusion and exclusion was carried out, which obtained 10 articles that were further analyzed. This data extraction is very important in helping and tracing articles that can be analyzed and developed in the future.

Data Synthesis

Research journals that match the inclusion criteria are then collected and a journal summary is made including the name of the researcher, year of publication of the journal, country of research, research title, method, and summary of results or findings. The summary of the research journals is entered into a table sorted alphabetically and the year the journal was published and following the existing format.

RESULTS AND DISCUSSION

Based on the search results, 65 articles were found that were considered suitable for the purpose and then combined and then screened whether the titles in the articles were the same or not. After screening, it was found that there were 10 articles with the same title, from 65 journals, then they were screened based on eligibility according to the inclusion and exclusion criteria, 10 articles were obtained for further review. The literature search strategy can be seen in Table 2 as follows:

Table 1. Literature Search Strategy

No.	Search Engine	Google Scholar	PubMed	Emerald Insight	DOAJ
1.	Search results	60	6	4	2
2.	Fulltext, pdf, 2010-2020	55	4	2	2
3.	Suitable titles	40	2	2	1
4.	Eligible according to inclusion and exclusion	5	2	2	1
	Result	10			

The source of this systematic review is taken from studies conducted in various countries. Systematic Review is one of the methods used for assessment, examination, structured evaluation, classification, and categorization of previously produced evidence-based (Taylor et al., 2014). In writing this Systematic Review, 10 articles were analyzed, consisting of 2 research journals and 8 review articles. A list of 10 articles to be extracted can be seen in the following table:

Table 3. Reviewed Articles

No.	Country	Number of Articles	First Author	Publication Year
1.	America	1	Stephen A. Lauer	2020
2.	China	1	Sasmita Poudel Adhikari	2020
3.	Finland	1	Atte Oksanen	2020
4.	England	1	X. Cai	2020
5.	Iran	1	Morteza Abdullatif Khafaie	2021
6.	Germany	1	S. Böhm	2021
7.	Poland	1	Piotr Staszkiwicz	2020
8.	Singapore	1	Tan Tock Seng Hospital	2020
9.	Sweden	1	Olga Golubeva	2021
10.	Turkey	1	Sema Kayapinar Kaya	2020

After assessing the quality of the study from 10 articles can be categorized as good (High), then data extraction is carried out. This data extraction was carried out by analyzing the data

based on the author's name, title, purpose, research method, and results, namely the grouping of important data in the article. The results of data extraction can be seen in the following table:

Table 4. List of Articles' Components

No	Author and Year	Title	Journal	Method	Result
1.	Morteza Abdullatif Khafaie, Fakher Rahim b. (2021)	Cross-Country Comparison of Case Fatality Rates of COVID-19/SARS-COV-2	Osong Public Health Res Perspect	Data were retrieved from accurate databases according to the user's guide of data sources for patient registries, CFR and recovery rates were calculated for each country	Italy's CFR was the highest of all countries studied for both time points (12th March, 6.22% versus 23rd March, 9.26%). The data showed that even though Italy was the only European country reported on 12th March, Spain and France had the highest CFR of 6.16 and 4.21%, respectively, on 23rd March, which was strikingly higher than the overall CFR of 3.61%.
2.	Sasmita Poudel Adhikari, Sha Meng, Yu-Ju Wu, Yu-Ping Mao, Rui-Xue Ye, Qing-Zhi Wang, Chang Sun, Sean Sylvia, Scott Rozelle, Hein Raat, and Huan Zhou. (2020)	Epidemiology, causes, clinical manifestation and diagnosis, prevention and control of coronavirus disease (COVID-19) during the early outbreak period: a scoping review	BMC Journal	A scoping review was conducted following the methodological framework suggested by Arksey and O'Malley	Research articles initially focused on causes, but over time there was an increase of the articles related to prevention and control. Studies thus far have shown that the virus' origination is in connection to a seafood market in Wuhan, but specific animal associations have not been confirmed. Reported symptoms include fever, cough, fatigue, pneumonia, headache, diarrhea,

				<p>hemoptysis, and dyspnea. Preventive measures such as masks, hand hygiene practices, avoidance of public contact, case detection, contact tracing, and quarantines have been discussed as ways to reduce transmission. To date, no specific antiviral treatment has proven effective; hence, infected people primarily rely on symptomatic treatment and supportive care.</p>	
3.	<p>S. Böhm, T. Woudenberg D. Chen⁴, D. V. Marosevic¹, M. M. Böhmer, L. Hansen J. Wallinga, A. Sing and K. Katz. (2021)</p>	<p>Epidemiology and transmission characteristics of early COVID-19 cases, 20 January–19 March 2020, in Bavaria, Germany</p>	<p>Epidemiology and Infection Journal</p>	<p>Describe the epidemiology and transmission characteristics of early coronavirus disease 2019 (covid-19) cases in Bavaria, Germany</p>	<p>By 19 March, 3546 cases were reported. A large proportion was exposed abroad (38%), causing further local transmission. The median incubation period of 256 cases with exposure abroad was 3.8 days (95%CI: 3.5–4.2). For 95% of infected individuals, symptom onset occurred within 10.3 days (95%CI: 9.1–11.8) after exposure. The median serial interval, using 53 pairs, was 3.5 days (95%CI: 3.0–4.2; mean: 3.9, S.D.: 2.2). Travelers returning to</p>

				Germany had an important influence on the spread of SARS-CoV-2 infections in Bavaria in early 2020.	
4.	Sema Kayapinar Kaya. (2020)	Evaluation of the effect of Covid-19 on countries' sustainable development level: a comparative MCDM framework.	ORESTA Journal	MultiAttributive Ideal-Real Comparative Analysis (MAIRCA) method	The results obtained from these methods were tested with Spearman's correlation coefficient. Finally, to examine the effect of COVID-19 on the indicators of sustainable development, a non-parametric Wilcoxon signed-rank test was applied. As a result, it was concluded that COVID-19 negatively affected the sustainable development of countries. However, sustainable development performances of developed countries have been observed to be better than developing countries
5.	X. Cai, C. V. Fry, C. S. Wagner. (2020)	International collaboration during the COVID-19 crisis: autumn 2020 developments	Scientometrics Journal	Data were collected for multiple periods, enabling us to analyze research publications during COVID-19 by period.	COVID-19 research teams and international collaboration show a quixotic pattern of rapid change in reaction to the pandemic. In the first months of the COVID-19 pandemic, the

				majority of articles and international collaboration was limited to the largest, most affected nations (China and the USA) and those with strong research capacity (the UK). As the pandemic has dragged on around the world throughout 2020, we see the numbers of articles rise but more slowly than in the earliest months. That said, over time the research system recovers from the initial shock and many more nations begin to collaborate and publish results.	
6.	Piotr staszkiewicz, Iwona chomiak-orsa, and Igor staszkiewicz. (2020).	Dynamics of the COVID-19 Contagion and Mortality: Country Factors, Social Media, and Market Response Evidence From a Global Panel Analysis.	IEEE Access	cross-sectional regression models	<ol style="list-style-type: none"> 1. The speed of severity and contagion is different between themselves and across continents. 2. Financial markets and social media respond differently to factors affecting contagion and severity, and 3. The period between the first contagion in the economy and the first death case cannot be plausibly

				explained with time-invariant variables. This research supports the policymakers with robust data for the informative allocation of scarce resources.	
7.	Olga Golubeva. (2021)	Firms' performance during the COVID-19 outbreak: international evidence from 13 countries	Emerald Publishing Limited	The study uses a regression performance model for enterprises during the COVID-19 crisis.	This study confirms the significance of multiple factors for company performance: sector, size, participation in exports, and market demand for firms' products. Robust financing solutions during the coronavirus pandemic period include equity contributions, followed by firms' cash balances and debt. Support by a government, however, has not yet been confirmed as a significant source of finance.
8.	Stephen A. Lauer, MS, Ph.D., Kyra H. Grantz, BA, Qifang Bi, MHS; Forrest K. Jones, MPH; Qulu Zheng,	The Incubation Period of Coronavirus Disease 2019 (COVID-19) From Publicly Reported Confirmed Cases: Estimation and	OIM Journal	Pooled analysis of confirmed COVID-19 cases reported between 4 January 2020 and 24 February 2020.	There were 181 confirmed cases with identifiable exposure and symptom onset windows to estimate the incubation period of COVID-19. The median incubation period was estimated to be 5.1 days (95% CI, 4.5 to 5.8 days), and

	MHS; Hannah R. Meredith, Ph.D.; Andrew S. Azman, Ph.D.; Nicholas G. Reich, Ph.D.; and Justin Lessler, Ph.D. (2020)	Application			97.5% of those who develop symptoms will do so within 11.5 days (CI, 8.2 to 15.6 days) of infection. These estimates imply that, under conservative assumptions, 101 out of every 10 000 cases (99th percentile, 482) will develop symptoms after 14 days of active monitoring or quarantine.
9.	Joel Hellewell, Sam Abbott, Amy Gimma, Nikos I Bosse, Christopher I Jarvis, Timothy W Russell, James D Munday, Adam J Kucharski, W John Edmunds, Centre for the Mathematical Modelling of Infectious Diseases COVID-19 Working Group, Sebastian Funk†,	Feasibility of controlling COVID-19 outbreaks by isolation of cases and contacts	ELSEVIER	Developed a stochastic transmission model, parameterized to the COVID-19 outbreak	Simulated outbreaks starting with five initial cases, an R0 of 1.5, and 0% transmission before symptom onset could be controlled even with low contact tracing probability; however, the probability of controlling an outbreak decreased with the number of initial cases, when R0 was 2.5 or 3.5 and with more transmission before symptom onset. Across different initial numbers of cases, the majority of scenarios with an R0 of 1.5 were controllable with less than 50% of contacts successfully traced. To control the majority of

	Rosalind M Eggo. (2020)			outbreaks, for R0 of 2.5 more than 70% of contacts had to be traced, and for an R0 of 3.5 more than 90% of contacts had to be traced. The delay between symptom onset and isolation had the largest role in determining whether an outbreak was controllable when R0 was 1.5. For R0 values of 2.5 or 3.5, if there were 40 initial cases, contact tracing and isolation were only potentially feasible when less than 1% of transmission occurred before symptom onset	
10.	Atte Oksanen, DrSocSci; Markus Kaakinen, DrSocSci; Rita Latikka, MSocSci; Iina Savolainen, MSci; Nina Savela, MSocSci; Aki Koivula, DrSocSci. (2020)	Regulation and Trust: 3-Month Follow-up Study on COVID-19 Mortality in 25 European Countries	JMIR Public Health and Surveillance	The present study was based on a background analysis of European Social Survey data on 25 European countries (N=47,802)	The spread of the COVID-19 epidemic has been fast everywhere, but the findings revealed significant differences between countries in COVID-19 mortality. Perceived sociability predicted higher COVID-19 mortality. Major differences between the 25 countries were found in reaction times to the crisis. Late reaction to the crisis predicted later mortality figures.

				Institutional trust was associated with lower COVID-19 mortality.
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Socio-economic Impact

The COVID-19 pandemic has brought up new challenges for nation-states to overcome. In particular, it is about how countries respond and work to prevent and stop the virus from spreading more widely. The emergence of the current global pandemic, Covid-19, has so far been a threat or impact on various sectors of people's lives, including the social and economic sectors.

Summer et al (2020) explained that in a United Nation study that global poverty could increase for the first time since 1990. This means that COVID is a real threat to Sustainable Development (SDGs) to end poverty by 2030 (Buheji et al., 2020). According to a report from the World Bank (2020), estimates that 11 million people could fall into poverty in East Asia and the Pacific. Analyzes the impact of the pandemic on poor communities on four Continents and estimates that 49 million people will be pushed into extreme poverty by 2020 (living on less than \$1.90 per day) (Martin et al., 2020).

During this time of the COVID-19 pandemic, socioeconomic issues have greatly affected people from lower economic strata (Nicola et al., 2020). According to a report from the Asia Development Bank (ADB) the economic impact of COVID-19 will be around 5.8 to 8.8 trillion USD\$ (6.4–9.7% of global GDP), excluding the impact of policy measures. ADB estimates that there will be a decline in employment in Asia from 109 million-167 million jobs. This has a detrimental impact on vulnerable groups of people. According to the World Bank, “The COVID-19 recession has seen the fastest and sharpest downgrade in projected consensus growth among all global recessions since 1990 (Suthar et al., 2021).

Economic conditions around the world are also in a state of poverty. Global production has suffered, along with various service industries especially including tourism and aviation, due to strict lockdown measures. Since the future is uncertain, investment rates will remain low. The social and humanitarian aspects of the pandemic have also created stress and anxiety in society. Women, children, and the elderly are particularly exposed to the virus, as they are among the weaker and thus more vulnerable sections of society. The lockdown has also jeopardized the safety of women, and an increase in cases of domestic violence (Wei et al., 2021).

The World Economic Forum in 2020 report states that in addition to economic problems, many countries will face many multidimensional problems in tourism, housing markets, commercial demand for products, transportation, unemployment, education, energy consumption, and impacts on social life. In addition, tourism transportation, and services are among the sectors hardest hit by COVID-19. Transportation and transportation activities almost stopped during the quarantine process (Kaya, 2020).

At the regional level, Asia is one of the regions experiencing the socio-economic impact due to the COVID-19 pandemic. Rasul (2021) explains that this part of South Asia is one of the poorest regions in the world: about a third of the world's poor live in this region with about 70 percent living in rural areas and mainly depending on agriculture. Before the COVID-19

Pandemic, 649 million people in South Asia were moderate or severe food insecurity and 271 million of them were very food insecure. Similarly, 36 percent of children are stunted and 16 percent are acutely malnourished. The situation is likely to worsen further due to the effects of COVID-19 (Rasul et al., 2021).

Interventions carried out by governments in various countries to overcome this socio-economic impact are to provide financial assistance and food and clothing for small children. In addition, support for industry and the service sector is also very important in maintaining the stability of the economy. Moral assistance to individuals and society is also needed for proper time management and financial planning in the face of this Pandemic (Ceylan et al., 2020).

Public Health Impact

COVID-19 is a dangerous virus and is very dangerous for people's lives in general. The current public health situation forces us to reflect on how humanity is navigating the uncharted waters of the coronavirus disease (COVID-19) pandemic (del Castillo, 2021). On the other hand, amid the COVID-19 pandemic, some unexpected positive results have emerged, such as:

- a. **Positive Changes in People's Behavior and Lifestyle:** The COVID-19 pandemic is one of the largest global health crises in human history. Many people's lifestyles are fundamentally changing — from wearing face masks to maintaining physical distance and practicing handwashing in public.
- b. **Hospital Admissions Reduced:** Public health efforts have succeeded in reducing the transmission of coronavirus in certain countries where strict standard operating procedures are implemented. This approach, which is advantageous in the prevention and control of COVID-19, also has a positive impact on other diseases. The number of hospital admissions for community-related infectious diseases was drastically reduced after public health measures against COVID-19 were introduced.
- c. **Tobacco Smoking Reduction and Cessation:** The continued popularity of tobacco smoking has been one of the major public health concerns since the pre-pandemic era. This pandemic has the potential to impact several individual psychosocial factors that are highly relevant to tobacco use, including daily behavior patterns, lifestyle context, social context, mental health, and perceived health risks. This is an opportunity for smokers to reflect on smoking and for public health regulators to revise tobacco control policies and smoking cessation services.
- d. **Mental relations and sexual health:** The relationship between mental health and sexual health, which is still taboo in most societies, has also received public attention during the pandemic. Some reductions in the incidence of sexually transmitted diseases (STDs) and diagnoses of the human immunodeficiency virus (HIV) were reported after travel restrictions were imposed worldwide.
- e. **Health care innovation and technology development:** Health services currently need to adapt to the Covid-19 pandemic situation in order to prevent transmission of the corona virus in health care facilities. The development of advanced technology has to do with the delivery of health services but also in our daily lives. Applying new innovations to healthcare in general can provide many clinical benefits beyond simply reducing the risk of infection with COVID-19 (Hoo et al., 2021).

The COVID-19 pandemic has significantly stressed public health systems around the world and exposed gaps in health care for underserved and vulnerable populations. Anticipating the spread and increase in the number of sufferers, the implementation of health protocols needs to be carried out by the community (Benjamin, 2020).

Prevention of the spread of COVID-19

Coronavirus Disease has caused many deaths for sufferers but no anti-virus has been found. Therefore, prevention efforts are one of the interventions to break the chain of transmission of the Corona Virus (Samudrala et al., 2020). At this time the prevention and control of Coronavirus infection in all countries is based on WHO guidelines, namely:

- a. **Wearing a Mask: Face Protective Masks** Face masks are a form of self-protection during the Coronavirus pandemic. This statement has also been strengthened by the World Health Organization (WHO) through interim guidelines announced on April 6, 2020, regarding recommendations regarding masks.
- b. **Social distancing:** Social distancing is designed to reduce interactions between people in the wider community, where individuals may be infectious but have not been identified and thus have not been isolated. Social distancing activities such as working and studying at home, staying at home, prohibiting activities in crowds, and limiting operating hours in public places (Yanti et al., 2020)
- c. **Washing Hands:** Hand hygiene is one of the most effective measures to prevent the spread of COVID-19 and other pathogens. Maintaining personal hygiene during the Coronavirus pandemic such as washing hands is one of the steps that the community needs to take. The World Health Organization (WHO) has also explained that maintaining hand hygiene has been able to save human lives from Coronavirus infection.
- d. **Applying Hand Sanitizer:** Using hand sanitizer is another way to keep hands clean besides washing hands with soap and running water. This is because hand sanitizers can prevent microbial infections in humans (Dewi et al., 2016). Hand sanitizers or antiseptics containing as much as 62%-95% alcohol can denature microbial proteins and can inactivate viruses (Lee et al., 2020). Seeing this, the spread and infection of the Coronavirus in the community can certainly be minimized.
- e. **Cover your mouth when sneezing and coughing:** The spread of the Coronavirus in the world has taken place rapidly with millions of patients being infected. One of the spread processes can be through direct contact with infected patient droplets (Singhal, 2020). The problem that now arises is that there are infected patients who do not show symptoms so that the process of spreading the Coronavirus is difficult to identify (Nishiura et al., 2020). Following up on this, the World Health Organization (WHO) applies to cough and sneezing etiquette, namely covering the nose and mouth, immediately throwing away tissues that have been used to cover the mouth when coughing or sneezing, and cleaning hands.

Today, everyone needs to understand how, when, and where infected people transmit the virus, it is important to develop and implement control measures to break the chain of

transmission. Prevention of transmission is best achieved by identifying suspected cases as quickly as possible, testing, and isolating cases of infection. In addition, it is very important to identify all close contacts of infected people so that they can be quarantined to limit the spread and break the chain of transmission.

Quarantine measures (Close contact), potential secondary cases will already be separated from others before they develop symptoms or they start shedding the virus if they become infected, thus presenting opportunities for further spread. The incubation period for COVID-19, which is the time between exposure to the virus and the onset of symptoms, averages 5-6 days but can be as long as 14 days. Thus, quarantine must be carried out for 14 days from the last exposure to a confirmed case. If it is not possible to contact to quarantine in a separate place of residence, 14 days of self-quarantine at home is required; those in self-quarantine may need support during the use of physical distancing measures to prevent the spread of the virus (WHO, 2020).

WHO emphasizes that in efforts to prevent and overcome the Covid-19 pandemic, it is necessary to coordinate systems and services to provide long-term care, such as coordination between relevant authorities (e.g Ministry of Health, Ministry of Social Welfare, Ministry of Social Justice, etc.) must exist to provide continuous care in LTCFs (Long-term care facilities), activate local health and social care networks to facilitate ongoing care (clinics, acute care hospitals, daycare centers, volunteer groups, etc.), and facilitate additional support if any parent in LTCF is confirmed with COVID19 (WHO, 2020).

COVID-19 Vaccine

The history of vaccination begins with vaccines based on live microbes that have been attenuated so that they cannot cause disease. Vaccines are highly effective in stimulating the immune system and induce a strong and persistent immune memory which is efficacious in preventing infection. Hundreds of millions of people have been protected from deadly and deadly diseases by using attenuated vaccines (Forni & Mantovani, 2021). Seeing the faster spread of the coronavirus, the medical world is trying to do various kinds of research to find the type of vaccine that can break the chain of transmission of Corona Virus, such as AstraZeneca, Sinovac, Moderna, and Pfizer. Those who receive the Covid-19 vaccine must continue to anticipate because of several forms of post-vaccination follow-up events that may be experienced, both in adolescents and the elderly, such as aches around the injection site, mild fever, fatigue, headaches, muscle aches or pains. joints, chills, and diarrhea.

High vaccination coverage globally may be needed to halt the COVID-19 pandemic. However, vaccine demand in low- and middle-income countries is less well studied and there may be different considerations of the population compared to high-income countries. Low- and middle-income countries may have less capacity to introduce new vaccines and may need to deal with communities that do not believe in the benefits of a COVID-19 vaccine (Harapan et al., 2020).

Based on a report from WHO that to date 169 countries have reported vaccination. As of April 7, 2021, there have been 710 million doses administered globally. But five percent (5%) of the world's population has received at least one dose of the approved vaccine. This highlights important inequalities in global vaccine access. (Fig.1) shows the number of doses of COVID-19 vaccine administered determined by country. However, it does highlight countries that have

not yet started vaccination. At the time of up-to-date vaccination data, the highest were middle-income countries and had started rolling out vaccinations, but many low-income countries had not (Fig.2) (Mathieu et al., 2021).

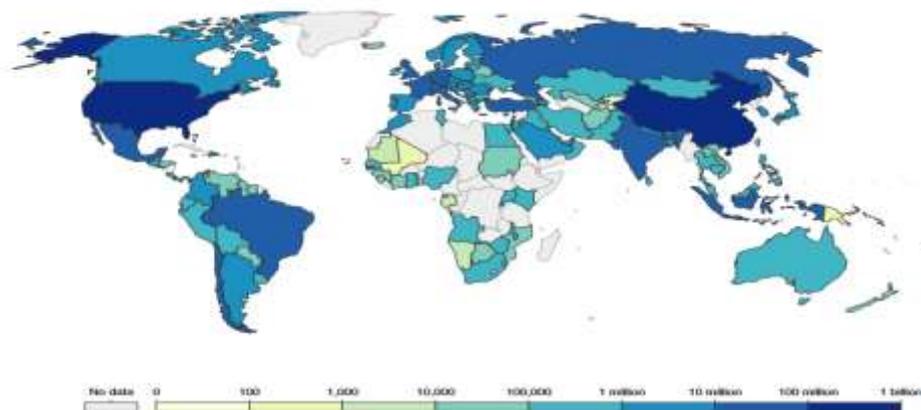


Fig 1. Cumulative number of COVID-19 doses administered by the country

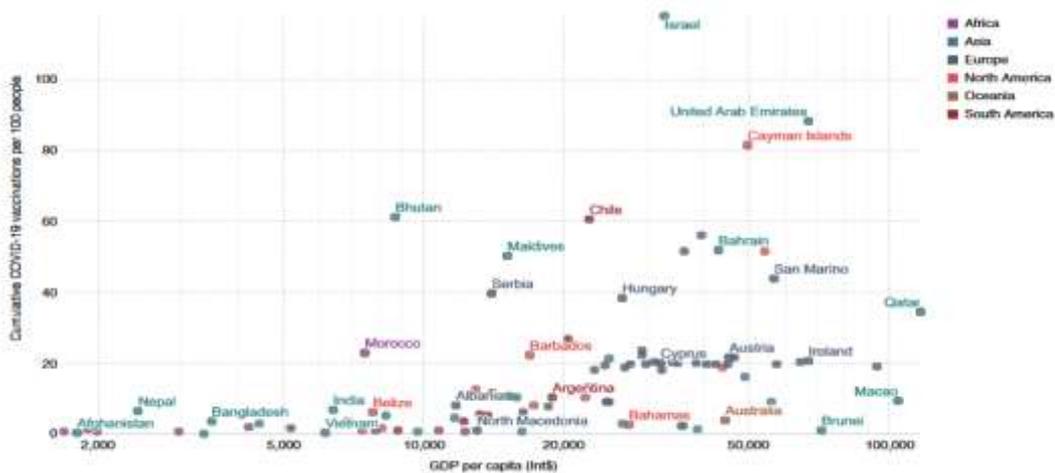


Fig 2. COVID-19 vaccine doses administered per 100 people versus gross domestic product per capita

To convince the general public in both developed and developing countries to receive the COVID-19 vaccination, the government and the Ministry of Health need to understand the most effective approach to roll out mass vaccination and prioritize administration in a way that minimizes morbidity and mortality from The COVID-19 pandemic. If vaccination coverage is high and evenly distributed, herd immunity will be formed. In addition, the Covid-19 vaccination can also maintain productivity and reduce social and economic impacts. The Covid-19 vaccination is carried out after there is certainty about its safety and efficacy. Vaccines can provide higher antibodies and protect against the COVID-19 virus.

CONCLUSION

The challenge for the world today is that no drug can kill or break the chain of transmission of the Coronavirus. Thus, it needs vigilance for countries in the Americas, Africa, and Asia.

The impact of the pandemic in this region is more sensitive than in countries in the Australia/Oceania region or the European region. Middle-income and low-income countries need to be more prudent in managing the COVID-19 pandemic to have better or equal effectiveness with developed or high-income countries.

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