



Identification of Vaccination Experience and Understanding of Indonesian Society: Public Health Literacy Study



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Abstract

This paper aims to identify the community's experience and understanding of the COVID-19 vaccination. The author believes that the success of the vaccination program, especially in cases of COVID-19, is closely related to understanding and experience. Therefore, search the data as scientific evidence in many publications. To obtain evidence that becomes the answer to the question of this study, examine it with a phenomenological approach, an attempt to dig up the broadest possible data to understand the problem of this research. This study fully uses secondary descriptive qualitative research data obtained through a database of electronic health journals assisted by a keyword search system. Our data review process involves a system review characterized by coding, data analysis, interpretation, and drawing conclusions based on data validation and reliability principles. Based on the evidence and discussion, can conclude that residents' experience in the COVID-19 vaccination program does not fully understand the Coronavirus. Vaccine candidates do not get help understanding vaccination from suitable sources. The daily rumors about COVID-19 have triggered a lack of public response in responding to all issues related to the pandemic. It is hoped that these findings can be used as review material for similar studies in the future.

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1 Introduction

After the World Health Organization declared Corona Virus Disease an international concern in early 2020 with many cases reported globally, mainly from China, followed by its neighbors Hong Kong and Taiwan, the status of COVID-19 as a threatening safety issue has since been open to all attention of many c of many countries (Alah et al., 2020). Since then, cases that started from China to other countries, including Indonesia, have continued to increase (Tariku, 2020). If so, the public health communication strategy continues to be an issue that automatically raises awareness of the world's citizens about the dangers of the Coronavirus and the international community. It takes the initiative to deal with the impact and find solutions to overcome it through handling both economically, socially, and healthily, including government policies to conduct mass vaccination throughout Indonesia (Naryono & Sukabumi, 2020; Parmin et al., 2020).

In this case, through the Ministry of Health, the Indonesian government continues the development of issues both from China as the origin of the virus and from various state sources, especially the UN world agency. Indonesia has all possibilities to keep abreast of various news updates so that the government can use all the information related to developmental and countermeasures issues, including preparing a national vaccine program (Lin et al., 2021). Dissemination of information is accompanied by prevention strategies utilizing vaccination, but the messages sent by the public from the government to the community have not fully received a positive response (Sharma, 2021). It should be noted that the threat of being exposed to this virus is not only for health workers, but the threat of this virus is also attacking all levels of society, both in cities and in rural areas. This shows that the experience and understanding of the community about health problems can be said to be still low so that it requires support in the form of understanding health workers to inform the dangers of COVID-19 infection (Ningsih et al., 2021). With the emergence of these hidden cases and accompanied by various distributions of information from the government, especially health services provided by other state institutions, so that correct information about the dangers of COVID-19 and its prevention is carried out in various ways, both from government media, mass media and social media (Aminullah & Erman, 2021; Mahardika et al., 2021).

It is acknowledged that the Indonesian people, in general, have not received the correct understanding of how comfortable and safe they are after being vaccinated, considering that there is quite a lot of unofficial news about COVID-19 as this issue is a new disease (Djalante et al., 2020). Finally, the government obliges all components of citizens, especially those of productive age, such as medical workers, considering that our nature can naturally be exposed to deadly viruses anytime and anywhere (Al-Qerem & Jarab, 2021). The survey shows that from a series of government programs that carry out campaign actions, very few people are willing to come to receive vaccines like those brought by the government; this shows that there is still little information related to vaccinations that people get following what was conveyed by the government through health workers and the media of government (Chew et al., 2021). This makes the message of control of exposure to transmission programs something that requires new ways to be more concerned and aware of the importance of vaccination (Hussin et al., 2021). From some surveys conducted on the understanding and experience of the community both nationally and internationally, it appears that it is shallow compared to what happened in the handling of Ebola cases in Nigeria with management strategies that include prevention of migration, vaccination, and drug administration so that it does not get worse (MacPherson, 2020). The government has issued many cases with various policies, including continuing to wear masks, socialize, and stop and limit people's movements during the pandemic response period in Indonesia (Glover et al., 2020).

Based on the evidence and actual conditions of the Indonesian people regarding their understanding and experience in terms of government policy efforts to prevent and stop the spread of this corona outbreak, the government has determined to succeed the national vaccine program, which is named the Coronavirus vaccination program (Mahendradhata et al., 2021). Seeing that the enthusiasm and desire of the community to receive vaccines seems to be decreasing, researchers with good intentions to gain an understanding of how the experience and knowledge of the people in both cities and villages regarding their desire to be vaccinated will review and examine various data sources, both mass scientific journals media and also others, so that we will get a more detailed understanding of issues related to public understanding and experience in responding to government policies to include vaccines for the entire community to avoid the spread of the Coronavirus (Toharudin et al., 2021; Widana et al., 2021).

2 Materials and Methods

In this section, we describe the steps of this research we did from beginning to end. First, we try to understand the topic of this study and try to select and support data that follows the theme of understanding and the problems faced by the community in implementing the mandatory COVID-19 vaccine (Chenail et al., 2010). Next, we conducted a literature search from various published articles between 2010 and 2020 by focusing on the discussion area, namely developing issues regarding the problems experienced by the community when they wanted to implement vaccines (Hanna & Gough, 2015). Next, we evaluate all the data obtained, assuming that these findings are the most recent and relevant to the current study. We run so that there is no contradiction between the theory of results and the methodology of this study (Gentles et al., 2015). Then after examining the data more accurately and then we try to coordinate this paper by developing the topic that we have chosen with the consideration of a friend that is significantly related to the question and is a significant trend that answers the problem and the theories that support influence each other.

Furthermore, in developing the purpose of this study, we did some research, such as involving coding theory, data evaluation, and concluding, the point of which is to answer questions systematically. Moreover, finally, we try to write all the findings according to the topics we raise by following the pattern of writing review articles (Radanliev et al., 2020). We make this study in the form of descriptive qualitative data based on the writing that has been done so far. We did all the data and processes electronically and got some applications that could help the first writer because English is a foreign language, so we did not encounter many obstacles with the help of various applications that we found online (Aw et al., 2021).

3 Results and Discussions

3.1 Spreading COVID-19 and vaccine issue

In this section, we describe the study findings from various data sources that emerged essentially to answer the question of this study, which aims to gain understanding and experience from citizens regarding national vaccination activities to prevent the spread of the Coronavirus during a pandemic in Indonesia (Pitaloka et al., 2020). A comprehensive understanding of the pandemic and COVID-19 requires a refresher on why national vaccination is needed. Later, this understanding will become a new solution or knowledge for the success of the national vaccination program in the next government. This capability aligns with the government's expectations when the community understands a problem, especially the issues and challenges faced by the community (Jatmika et al., 2021).

According to the parties' acknowledgment, especially by the Health Service, the biggest obstacle to overcoming the pandemic problem is the flood of information from various sources about COVID-19, increasing from mid-2020 to mid-2021 is hoax news (Dhama et al., 2021). This is indeed circulating on various social media platforms and by word of mouth of the public (Manullang, 2021). Indeed, the spread of hoax issues about COVID-19 from various social media platforms, another obstacle is the lack of knowledge and public awareness of the risk of spreading the Coronavirus, which is increasingly being neglected (Fisk et

al., 2021). Through this awareness, the community will get a self-analysis in dealing with the possibility of being exposed to COVID-19 among their people (Eshun-Wilson et al., 2021).

This is closely related to the lack of knowledge about conflict because this pandemic is a new pandemic regarding the origin of the disease and how the virus can spread to other people. Plus, leadership from the government and awareness from the citizens themselves to stop the spread of the virus. In addition to prevention efforts through the national vaccination program, the government must first resolve the issue of campaigns and education to overcome the risk of spreading Covid to the community because this hoax issue is detrimental to the community and at the same time stops it. Government programs in implementing the national vaccination program (Simon et al., 2021).

The community must be proactive in finding the correct information, and the community must have a culture of reading and understanding correctly. It needs to be improved so that people are not easily deceived; for example, it is easy to trust news sources that are not necessarily accurate (Urinov et al., 2021). Regarding covid information from which number they get news and information related to vaccines, this is a joint task of the government, especially the Health Office, in collaboration with the Information and Communications Office (Sarnoto & Hayatina, 2021). For the vaccination program to be successful, government activities can provide awareness to citizens so that they get helpful information about COVID-19 in a balanced way and people want to seek rights amid the spread of information about the inventor, but this is not possible because people have different levels of understanding (Sarasty et al., 2020). It must be acknowledged that increasing hidden risk communication from the government to the public is essential so that the public has the knowledge and capacity to deal with issues related to the content of issues regarding the pandemic (Kaup et al., 2020).

3.2 Reluctance to receive the COVID-19 vaccine

Regarding the public understanding of the protection and prevention of a type of vaccine that has recently been reported in various media, the origin of vaccines in text messages and modern media in mass immunization programs (Wang et al., 2020). However, the general public certainly does not know how the results of phase 1 clinical trials from the use of some brands and models of vaccines and vaccines that have been circulating in developed countries where the public, in general, have not received the understanding provided by the government (Gee et al., 2021). So that this factor is also one of the causes of failure and the level of acceptance of vaccines in Indonesia, what people get is confusion about understanding and how vaccines work as antibodies that can be used. Until now, the general public has not received an adequate understanding of which vaccines are safe and effective vaccine brands provided by the government. This is a challenge for the government to provide understanding so that the public will not be more hesitant (Harrison et al., 2021).

It must be admitted that doubts about this vaccine have become more apparent after the various ways the government has taken to invite the public to follow this vaccine are essential (Asmanet al., 2021). However, the reluctance and refusal to vaccinate continues to emerge in the community, so that the government, in this case, the Health Service, must cooperate with getting support from elements other state administrators (Yang, 2020). So that people are encouraged to implement the vaccine program. The reluctance of the public to implement the Nadine covid vaccine is also influenced by the fact that in the field, there are still many cases of an increase in the number of sufferers of COVID-19 attacks, even those who have just carried out the first and second vaccines (Huang, 2010). The second point is one of the reasons and indicators that show dramatically low public participation and willingness to receive vaccines during the pandemic adds to doubt and uncertainty (Marcec et al., 2021). This is coupled with the growing issue that this vaccination is a program rather than the international community in conducting trade wars, and the vaccination business is a variety of information and thoughts that are received by the community through various groups such as social media and word of mouth (Forni & Mantovani, 2021).

What the public gets is preliminary information that is not based on scientific vaccines that had circulated since getting it on various social media and friends even before the government released news about the complete vaccine and how to use it (Mahendradhata et al., 2021). Materials used as vaccine drugs in Indonesia) several vaccine brands have raised public doubts, especially with claims that vaccines can alter human DNA, which makes people doubt the government's proposal for a vaccine (Kim et al., 2021). Furthermore, the rapid development of the number of people exposed to COVID-19 is reported to cause

concern about the safety and long-term effectiveness after receiving vaccine treatment, although it was found to be found (Harapan et al., 2020). The authors' observation that the Indonesian government has indeed carried out several brands of vaccine procurement to increase it through the government's understanding with drug centers from abroad through direct purchases with, However, with this regulation, it is hoped that the government can receive vaccines that are more reliable for the community. However, due to the low acceptance and low public perception of the COVID-19 issue, various problems arise that make the government have to look for various ways and strategies so that the government can convince and provide understanding to the broader community and so that they are willing to volunteer to become recipients of the COVID-19 vaccine (Ifdil et al., 2020).

3.3 Understanding people's doubts

Various studies have revealed doubts about potential recipients of the covid vaccine in several developing countries, including Indonesia (Forni & Mantovani, 2021). Precisely around the middle of 2021, when several international reports stated that more than 180 million people had been infected and nearly 4 million people died, the data released by this world health agency is an acknowledgment that the role of the COVID-19 immunization program is indeed very intensive, which aims to create a healthy world community through preventing and stopping the transmission of the Coronavirus (Mellet & Pepper, 2021). However, globally, it is now confirmed that out of 125 vaccine recipients, 365 have been tested in the process with 18 different vaccine brands and at least most high-income countries have no concerns about the safety of COVID-19 vaccines due to the spread and provision of information. So that people do not hesitate when receiving vaccines (Wouters et al., 2021).

Citing the natural medicine health journal presents data showing a gap in vaccination acceptance between developed and developing countries. Many developing countries do not want to receive vaccines for safety reasons. So, it has made it difficult for many of these countries to implement with hesitation that this vaccine is a growing problem (Dror et al., 2020). Even before, the government framework in developing attention to invite people to become vaccine recipients was constrained when they first had to understand each first (Coustasse et al., 2021). The community, especially the lower middle class, is more effective than giving vaccines from the government, including public trust and satisfaction, comfort, and fear of obstacles, then considering the risks and weaknesses of using vaccines and prevention efforts. Combating this virus requires a deep understanding so that the public wants to be vaccinated with the reason of wanting or not he must gain understanding by providing the most reliable source of information in this way people's questions about the items contained in this vaccine become very important the basics of governance in the country (Calina et al., 2020).

Various analyses have been carried out in low-income countries, including Indonesia, where these countries compare their acceptance rates; it is evident that low-income countries find many obstacles in accepting the vaccine efforts provided by the government (Wang et al., 2020). It should be noted that the government's intention to vaccinate is constrained by readiness and concerns about side effects, which are the main reasons people are hesitant about vaccine drugs and also to officers who guide people who are sometimes unable to give vaccines. Correct understanding of the effectiveness of vaccines against Vietnam, a common enemy that must be fought, was essential (Wouters et al., 2021).

If it looks at studies conducted by centers of disease control and prevention in many countries, there are several countries from low-income areas, and it was found that the majority of people in Africa, Asia, and the Pacific, for example, about 70% will be challenging to vaccinate (Brüssow, 2020). They consider the vaccine unsafe and effective against the Coronavirus. With the experience and information circulating about the infectious diseases that it can prevent, this will happen in the face of death when they fail to be vaccinated for vaccination-related problems.

On the other hand, the above did not happen in several developed countries regarding the rejection of the COVID-19 vaccination (Forni & Mantovani, 2021). In reality, there are not many bad problems that occur, especially in infectious diseases, so that compliance and the level of community satisfaction with the government's Wah services are not too much of an obstacle because the average community has seen the effectiveness of every problem handling in their environment (Lucero-Prisno III et al., 2021). This is an indicator of citizen satisfaction and shared social responsibility and in making decisions to participate in

vaccines. This has become several obstacles and problems in low-income countries, including Indonesia, facing chaotic national vaccination governance, which should have entered the third stage (Harapan et al., 2020).

In terms of disseminating information, logically, many citizens get comprehensive information services with the circulation of smartphones. Even though this has become a very effective means of educating citizens, which is the main thing in every step or decision on the vaccination program initiated by the government, this should be a positive thing, but on the contrary, what happens is a challenge where wrong information comes in (Fuady et al., 2021). So people are more likely to believe in messages that come from various sources of information, which may not necessarily be true. The content and information are very complex and challenging to understand. These basics are why vaccines are increasingly difficult for the government to successfully invite people to participate in the COVID-19 vaccine (Wibawa, 2021).

It must be admitted that various obstacles in receiving the COVID-19 vaccine, including doubts about the halalness and the risk of side effects of the COVID vaccine experienced by the community, make the government's work very complex to continue the vaccination program (Wong et al., 2020). Along with the news circulating when new variants of the Coronavirus emerged, this added to the problems and complexity that continued so that the initially implemented vaccine would be hampered (Lin et al., 2021). Due to the imbalance between the speed with which citizens receive information from various sources and communication from the government, sometimes the government is slow in conveying news and information so that public doubts are high. Likewise, the public's understanding of the various information generated from this research, the pharmaceutical companies that produce the various vaccine brands, sometimes the public does not find openness with the existing data, such as international medical journals that cannot understand users, namely, to determine the content of vaccines that are not dangerous and do not pose a significant danger to vaccine recipients to make the government more transparent in handling vaccines, including the availability of vaccine brand models that have been circulated internationally (Romer & Jamieson, 2020).

Likewise, public understanding of the side effects that people receive after receiving the vaccination is also a critical component that must be communicated to the community. The government must know-how and solutions when side effects occur in terms of when side effects occur where people find side effects that are spread through social media, which makes people who have not done the vaccine will increase doubts and the rate of rejection and acceptance of vaccines (Nuzhath et al., 2020). Therefore, the government must provide more responsible information disclosure and provide information services that are firm and impartial both to the government that provides drugs and the community, making people think Kinan will receive the vaccine (Purike & Baiti, 2021). So it can be concluded that people who use various information services on the internet and social media, including scientists and medical professionals, must act responsibly to avoid addressing information leakage and as far as possible correcting miscommunication that has the potential to increase public doubts about vaccination (Perveen et al., 2021).

These problem models are used by certain parties to spread false and responsible news so that it becomes a more significant challenge for the government to intervene as much as possible so that delays in information from the government are used as information reform so that the government can be responsive in implementing the program. vaccination in Indonesia (Kim et al., 2020). Each region by presenting much information that helps overcome the problem of doubt so that various scientific findings do show that the government, in many ways, is not able to maintain the correct way of providing information to patients to the community (Sallam, 2021), so that the community will have a level of satisfaction and willingness to accept vaccination is not a spirit of receiving vaccines such as coercion because indeed the consequences of state arbitration such as the need for various administrative matters are the reasons they have to vaccinate (Rahiem, 2020). So this is a form of public doubt that is increasing when the government is not able to maintain the importance of vaccinating by releasing reliable information logically and comprehensively, and quickly through campaigns so that sharing information about the accuracy and truth of vaccines can be conveyed out by increasing the trust and application of vaccination, not instead do more community (Mannan & Farhana, 2020).

4 Conclusion

In this final section, we will report the essential components that we have described in the findings section, where this study aims to discuss the experience and knowledge of vaccines by the people in Indonesia. We believe that the series of data findings that we present are supported by appropriate data sources; these findings have answered the core problem of this study. We realize that in addition to its advantages, it also has limitations both ecologically and in the data and reports that we have compiled. For that, we want this data to be input and material for constructive criticism so that future studies will be even better. The findings of these points are where we improve to be the first is how the spread of cognitive and the government's task is to respond to it by implementing a national vaccination program.

The next friend is that we can briefly explain the reluctance of the community to receive vaccines which makes the government highly opposed to carrying out this task because the public is limited in understanding some of the critical points that the government wants to convey and also the limitations of the community to be able to understand the functions and principles of how vaccines are helpful or work in the human body. Next is understanding why many people are hesitant to join the vaccine program, which the government has spent several funds on to deal with and at the same time combat the spread of covid in Indonesia. The public's doubts are pretty reasonable due to the various confusing news that they get through various social media platforms and word of mouth, defeating the government's ability to guard, protect, and revive the community. With the series of explanations above, we have understood that the public's reluctance and doubts to get vaccine services are not far from how people have received various news and news that have no clarity of truth and benefit the community.

This study hopes that this finding can be used as input for policymaking where the government should give confidence to the public so that the dignity of those who carry out vaccines are truly informed so that it becomes a shared understanding and ultimately becomes an awareness called upon to exercise their right as citizens to receive health benefits, protection and health insurance from the state. Hopefully, this finding will be the material for the following study.

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References

- Alah, M. A., Abdeen, S., & Kehyayan, V. (2020). The first few cases and fatalities of Corona Virus Disease 2019 (COVID-19) in the Eastern Mediterranean Region of the World Health Organization: A rapid review. *Journal of Infection and Public Health*, 13(10), 1367-1372. <https://doi.org/10.1016/j.jiph.2020.06.009>
- Al-Qerem, W. A., & Jarab, A. S. (2021). COVID-19 vaccination acceptance and its associated factors among a Middle Eastern population. *Frontiers in Public Health*, 9, 34.
- Aminullah, E., & Erman, E. (2021). Policy innovation and emergence of innovative health technology: The system dynamics modelling of early COVID-19 handling in Indonesia. *Technology in Society*, 66, 101682. <https://doi.org/10.1016/j.techsoc.2021.101682>
- Asman, A., Asman, A., & Dewi, A. K. (2021). Community nursing strategies for tourism health families during COVID-19 pandemic. *International Journal of Health Sciences*, 5(3), 224-231. <https://doi.org/10.53730/ijhs.v5n3.1449>
- Aw, J., Seng, J. J. B., Seah, S. S. Y., & Low, L. L. (2021). COVID-19 vaccine hesitancy—A scoping review of literature in high-income countries. *Vaccines*, 9(8), 900.
- Brüssow, H. (2020). The novel coronavirus—a snapshot of current knowledge. *Microbial Biotechnology*, 13(3), 607-612.
- Calina, D., Docea, A. O., Petrakis, D., Egorov, A. M., Ishmukhametov, A. A., Gabibov, A. G., ... & Tsatsakis, A. (2020). Towards effective COVID-19 vaccines: Updates, perspectives and challenges. *International journal of molecular medicine*, 46(1), 3-16.
- Chenail, R. J., Cooper, R., & Desir, C. (2010). Strategically Reviewing the Research Literature in Qualitative Research. *Journal of Ethnographic & Qualitative Research*, 4(2).
- Chew, N. W., Cheong, C., Kong, G., Phua, K., Ngiam, J. N., Tan, B. Y., ... & Sharma, V. K. (2021). An Asia-Pacific study on healthcare workers' perceptions of, and willingness to receive, the COVID-19 vaccination. *International Journal of Infectious Diseases*, 106, 52-60. <https://doi.org/10.1016/j.ijid.2021.03.069>
- Coustasse, A., Kimble, C., & Maxik, K. (2021). COVID-19 and vaccine hesitancy: a challenge the United States must overcome. *The Journal of Ambulatory Care Management*, 44(1), 71-75.
- Dhama, K., Sharun, K., Tiwari, R., Dhawan, M., Emran, T. B., Rabaan, A. A., & Alhumaid, S. (2021). COVID-19 vaccine hesitancy—reasons and solutions to achieve a successful global vaccination campaign to tackle the ongoing pandemic. *Human Vaccines & Immunotherapeutics*, 17(10), 3495-3499.
- Djalante, R., Lassa, J., Setiamarga, D., Sudjatma, A., Indrawan, M., Haryanto, B., ... & Warsilah, H. (2020). Review and analysis of current responses to COVID-19 in Indonesia: Period of January to March 2020. *Progress in Disaster Science*, 6, 100091. <https://doi.org/10.1016/j.pdisas.2020.100091>
- Dror, A. A., Eisenbach, N., Taiber, S., Morozov, N. G., Mizrahi, M., Zigran, A., ... & Sela, E. (2020). Vaccine hesitancy: the next challenge in the fight against COVID-19. *European journal of epidemiology*, 35(8), 775-779.
- Eshun-Wilson, I., Mody, A., Tram, K. H., Bradley, C., Sheve, A., Fox, B., ... & Geng, E. H. (2021). Preferences for COVID-19 vaccine distribution strategies in the US: A discrete choice survey. *PloS one*, 16(8), e0256394.
- Fisk, H. L., Childs, C. E., Miles, E. A., Ayres, R., Noakes, P. S., Paras-Chavez, C., ... & Calder, P. C. (2021). Dysregulation of endocannabinoid concentrations in human subcutaneous adipose tissue in obesity and modulation by omega-3 polyunsaturated fatty acids. *Clinical Science*, 135(1), 185-200.
- Forni, G., & Mantovani, A. (2021). COVID-19 vaccines: where we stand and challenges ahead. *Cell Death & Differentiation*, 28(2), 626-639.
- Fuady, A., Nuraini, N., Sukandar, K. K., & Lestari, B. W. (2021). Targeted vaccine allocation could increase the covid-19 vaccine benefits amidst its lack of availability: A mathematical modeling study in indonesia. *Vaccines*, 9(5), 462.
- Gee, J., Marquez, P., Su, J., Calvert, G. M., Liu, R., Myers, T., ... & Shimabukuro, T. (2021). First month of COVID-19 vaccine safety monitoring—United States, December 14, 2020–January 13, 2021. *Morbidity and Mortality Weekly Report*, 70(8), 283.
- Gentles, S. J., Charles, C., Ploeg, J., & McKibbin, K. A. (2015). Sampling in qualitative research: Insights from an overview of the methods literature. *The qualitative report*, 20(11), 1772-1789.

- Glover, R. E., van Schalkwyk, M. C., Akl, E. A., Kristjansson, E., Lotfi, T., Petkovic, J., ... & Welch, V. (2020). A framework for identifying and mitigating the equity harms of COVID-19 policy interventions. *Journal of clinical epidemiology*, 128, 35-48. <https://doi.org/10.1016/j.jclinepi.2020.06.004>
- Hanna, E., & Gough, B. (2015). Experiencing male infertility: A review of the qualitative research literature. *Sage Open*, 5(4), 2158244015610319.
- Harapan, H., Wagner, A. L., Yufika, A., Winardi, W., Anwar, S., Gan, A. K., ... & Mudatsir, M. (2020). Willingness-to-pay for a COVID-19 vaccine and its associated determinants in Indonesia. *Human vaccines & immunotherapeutics*, 16(12), 3074-3080.
- Harrison, J., Berry, S., Mor, V., & Gifford, D. (2021). "Somebody Like Me": Understanding COVID-19 Vaccine Hesitancy Among Staff in Skilled Nursing Facilities. *Journal of the American Medical Directors Association*. <https://doi.org/10.1016/j.jamda.2021.03.012>
- Huang, C. J. (2010). Corporate governance, corporate social responsibility and corporate performance. *Journal of management & organization*, 16(5), 641-655.
- Hussin, D. A., Samah, M. A. A., Suhaimi, A. A., & Kamarudin, M. K. A. (2021). A study on knowledge, attitude and practice of COVID-19 pandemic among the residents. *International Journal of Health Sciences*, 5(2), 177-188. <https://doi.org/10.29332/ijhs.v5n2.1378>
- Ifdil, I., Fadli, R. P., Suranata, K., Zola, N., & Ardi, Z. (2020). Online mental health services in Indonesia during the COVID-19 outbreak. *Asian journal of psychiatry*, 51, 102153.
- Jatmika, S., Permana, I., Koko, O. R., & Salsabila, A. A. (2021). Good governance of health diplomacy: a new agenda of politics studies in Indonesia post COVID-19. *Sociology and Technoscience*, 11(2), 215-242.
- Kaup, S., Jain, R., Shivalli, S., Pandey, S., & Kaup, S. (2020). Sustaining academics during COVID-19 pandemic: the role of online teaching-learning. *Indian Journal of Ophthalmology*, 68(6), 1220.
- Kim, J. H., Marks, F., & Clemens, J. D. (2021). Looking beyond COVID-19 vaccine phase 3 trials. *Nature medicine*, 27(2), 205-211.
- Kim, L., Leary, R., & Asbury, K. (2020). 'We need clear directions, if we're going to move forward. It's as simple as that': Teachers' narratives during partial school reopenings in the COVID-19 pandemic.
- Lin, C., Tu, P., & Beitsch, L. M. (2021). Confidence and receptivity for COVID-19 vaccines: a rapid systematic review. *Vaccines*, 9(1), 16.
- Lucero-Prisno III, D. E., Ogunkola, I. O., Imo, U. F., & Adebisi, Y. A. (2021). Who will pay for the COVID-19 vaccines for Africa?. *The American Journal of Tropical Medicine and Hygiene*, 104(3), 794.
- MacPherson, Y. (2020). What is the world doing about COVID-19 vaccine acceptance?. *Journal of Health Communication*, 25(10), 757-760.
- Mahardika, I. M. R., Suyasa, I. G. P. D., Kamaryati, N. P., & Wulandari, S. K. (2021). Health literacy is strongest determinant on self-monitoring blood glucose (SMBG) type 2 DM patients during COVID-19 pandemic at public health centre in Tabanan Regency. *International Journal of Health & Medical Sciences*, 4(3), 288-297.
- Mahendradhata, Y., Andayani, N. L. P. E., Hasri, E. T., Arifi, M. D., Siahaan, R. G. M., Solikha, D. A., & Ali, P. B. (2021). The capacity of the Indonesian healthcare system to respond to COVID-19. *Frontiers in public health*, 9, 887.
- Mannan, D. K. A., & Farhana, K. M. (2020). Knowledge, attitude and acceptance of a COVID-19 vaccine: A global cross-sectional study. *International Research Journal of Business and Social Science*, 6(4).
- Manullang, S. O. (2021). Giving COVID-19 vaccines to citizens: Understanding legal basis. *International Journal of Health Sciences*, 5(3), 364-372. <https://doi.org/10.53730/ijhs.v5n3.1598>
- Marcec, R., Majta, M., & Likic, R. (2021). Will vaccination refusal prolong the war on SARS-CoV-2?. *Postgraduate medical journal*, 97(1145), 143-149.
- Mellet, J., & Pepper, M. S. (2021). A COVID-19 vaccine: big strides come with big challenges. *Vaccines*, 9(1), 39.
- Naryono, E., & Sukabumi, S. (2020). Impact of National Disaster Covid-19, Indonesia Towards Economic Recession. *OSF Preprints*.
- Ningsih, S., Ismail, D., & Indriani, I. (2021). Study protocol: relationship between parenting patterns and diet with nutritional status of toddlers during COVID-19 pandemic. *International Journal of Health Sciences*, 5(2), 128-134. <https://doi.org/10.29332/ijhs.v5n2.1336>
- Nuzhath, T., Tasnim, S., Sanjwal, R. K., Trisha, N. F., Rahman, M., Mahmud, S. F., ... & Hossain, M. M. (2020). COVID-19 vaccination hesitancy, misinformation and conspiracy theories on social media: A content analysis of Twitter data.

- Parmin, P., Suarayasa, K., & Wandira, B. A. (2020). Relationship between quality of service with patient loyalty at general polyclinic of kamonji public health center. *International Journal of Health & Medical Sciences*, 3(1), 86-91.
- Perveen, S., Akram, M., Nasar, A., Arshad-Ayaz, A., & Naseem, A. (2021). Vaccination-hesitancy and vaccination-inequality as challenges in Pakistan's COVID-19 response. *Journal of community psychology*.
- Pitaloka, H., Al Umar, A. U. A., Hartati, E. R., & Fitria, D. (2020). The economic impact of the COVID-19 outbreak: Evidence from Indonesia. *Jurnal Inovasi Ekonomi*, 5(02).
- Purike, E., & Baiti, A. (2021). Informasi Vaksin Di Media Sosial Dan Program Vaksin Covid-19: Langkah Apa Yang Dapat Dilakukan Oleh Pemerintah Republik Indonesia?. *Cross-border*, 4(2), 58-69.
- Radanliev, P., De Roure, D., & Walton, R. (2020). Data mining and analysis of scientific research data records on Covid-19 mortality, immunity, and vaccine development-In the first wave of the Covid-19 pandemic. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 14(5), 1121-1132. <https://doi.org/10.1016/j.dsx.2020.06.063>
- Rahiem, M. D. (2020). The emergency remote learning experience of university students in Indonesia amidst the COVID-19 crisis. *International Journal of Learning, Teaching and Educational Research*, 19(6), 1-26.
- Romer, D., & Jamieson, K. H. (2020). Conspiracy theories as barriers to controlling the spread of COVID-19 in the US. *Social science & medicine*, 263, 113356. <https://doi.org/10.1016/j.socscimed.2020.113356>
- Sallam, M. (2021). COVID-19 vaccine hesitancy worldwide: a concise systematic review of vaccine acceptance rates. *Vaccines*, 9(2), 160.
- Sarasty, O., Carpio, C. E., Hudson, D., Guerrero-Ochoa, P. A., & Borja, I. (2020). The demand for a COVID-19 vaccine in Ecuador. *Vaccine*, 38(51), 8090-8098. <https://doi.org/10.1016/j.vaccine.2020.11.013>
- Sarnoto, A. Z., & Hayatina, L. (2021). Polarization of the Muslim community towards government policies in overcoming the COVID-19 pandemic in Indonesia. *Linguistics and Culture Review*, 5(S1), 642-652.
- Sharma, M. G. (2021). Supply chain, geographical indicator and blockchain: provenance model for commodity. *International Journal of Productivity and Performance Management*.
- Simon, S., Tampenawas, A. R., Santoso, J., Nainupu, A. M. Y., Angkouw, S. R., & Poluan, A. (2021). Participation of Religious Leaders in Helping the Success of the Government's COVID-19 Vaccination Program. *Evangelikal: Jurnal Teologi Injili dan Pembinaan Warga Jemaat*, 5(2), 234-245.
- Tariku, M. (2020). Corona virus disease (COVID-19) and Mental Health in the Community. *East African Journal of Health and Biomedical Sciences*, 4(2), 1-4.
- Toharudin, T., Pontoh, R. S., Caraka, R. E., Zahroh, S., Kendogo, P., Sijabat, N., ... & Pardamean, B. (2021). National vaccination and local intervention impacts on covid-19 cases. *Sustainability*, 13(15), 8282.
- Urinov, M., Alikulova, N., Zukhritdinova, D., Usmonov, M., & Urinov, R. (2021). Clinical, laboratory and instrumental indicators in patients who have undergone COVID-19. *International Journal of Health Sciences*, 5(3), 403-415. <https://doi.org/10.53730/ijhs.v5n3.1719>
- Wang, C. J., Ng, C. Y., & Brook, R. H. (2020). Response to COVID-19 in Taiwan: big data analytics, new technology, and proactive testing. *Jama*, 323(14), 1341-1342.
- Wibawa, T. (2021). COVID-19 vaccine research and development: ethical issues. *Tropical Medicine & International Health*, 26(1), 14-19.
- Widana, I.K., Sumetri, N.W., Sutapa, I.K., Suryasa, W. (2021). Anthropometric measures for better cardiovascular and musculoskeletal health. *Computer Applications in Engineering Education*, 29(3), 550-561. <https://doi.org/10.1002/cae.22202>
- Wong, L. P., Alias, H., Wong, P. F., Lee, H. Y., & AbuBakar, S. (2020). The use of the health belief model to assess predictors of intent to receive the COVID-19 vaccine and willingness to pay. *Human vaccines & immunotherapeutics*, 16(9), 2204-2214.
- Wouters, O. J., Shadlen, K. C., Salcher-Konrad, M., Pollard, A. J., Larson, H. J., Teerawattananon, Y., & Jit, M. (2021). Challenges in ensuring global access to COVID-19 vaccines: production, affordability, allocation, and deployment. *The Lancet*. [https://doi.org/10.1016/S0140-6736\(21\)00306-8](https://doi.org/10.1016/S0140-6736(21)00306-8)
- Yang, K. (2020). Unprecedented challenges, familiar paradoxes: COVID-19 and governance in a new normal state of risks. *Public Administration Review*, 80(4), 657-664.

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