

The Influence of Mass Media Content on the Effectiveness of Covid-19 Vaccination Achievements in East Nusa Tenggara, Indonesia

Mas'amah¹, Apris A. Adu², Felisianus Efrem Jelahun³, Anwar Mallongi⁴

Abstract

The mass media plays a very important role in the success of government programs according to the expected targets, the complete vaccine achievement program according to the targets that have been set at this time is the most important thing. Various efforts have been made to achieve the target of the Covid-19 vaccination program in Indonesia, such as involving all ministries including the TNI and POLRI, but so far they have not reached the target set by the Ministry of Health of the Republic of Indonesia. One effort that enables success in reducing doubts and increasing knowledge from the public is carrying out various promotions through means capable of reaching the vast territory of Indonesia, namely through the mass media. The method used in this research is qualitative. The samples are all electronic and print media, both national and local, in East Nusa Tenggara. The aim is to determine the influence of the national and local mass media on the achievement of complete vaccine coverage in East Nusa Tenggara. The results of the study show that the recommended booster dose injection for the general public can be given at least three months after receiving the 2nd vaccination. The target of this booster vaccine is for people who are at high risk. The procedure for administering, place of implementation, flow of implementation and recording of the COVID-19 vaccination still refers to Circular Letter Number HK.02.02/II/252/2022

Keywords: Covid 19 Pandemic; Covid-19 Vaccination; Booster Vaccine, Mass media, Effectiveness

¹ Department of Communication Science, Nusa Cendana University, Indonesia, mas'amah@staf.undana.ac.id

² Faculty of Public Health, Nusa Cendana University, Indonesia

³ Department of Communication Science, Nusa Cendana University, Indonesia

⁴ Faculty of Public Health, Hasanuddin University, Makassar, Indonesia

INTRODUCTION

Mass media grows and develops rapidly along with the development of science, knowledge, technology and art (Silvia et al. 2021). Advances in communication technology have made it possible for the globalization of information where various media inform events at home and abroad quickly and various kinds of information that are interesting and easy to watch and read for both children, youth and adults, besides The mass media can also influence the behavior of people, both young and old, teenagers and children. According to Cangara in (Ayuni, Cangara, and Arianto 2019) Mass media consists of several forms, namely print media, electronic media and internet media. The mass media has very useful benefits for human life today. There are four benefits of the mass media, including collecting and disseminating information, providing education for the general public, as a medium of entertainment and as a means of social control in the life of society and the state. In the context of the Covid-19 vaccination, the mass media also influences the effectiveness of the spread and the percentage of vaccination achieved.

Vaccination or immunization aims to make a person's immune system able to recognize and quickly fight bacteria or viruses that cause infection (Gurning et al. 2021). The goal to be achieved by administering the COVID-19 vaccine is to reduce the morbidity and mortality rates from this virus. Until now the corona virus has not ended. Based on data from the World Health Organization in 2022 the spread of positive confirmed cases of Covid-19 in the world as of May 23 2022 reached 525,467,084 people, with a death rate of 6,285,171 people. It has been more than two years since the first case was reported in Wuhan, China on December 31 2019. The Covid-19 virus is still a problem in all countries in the world including Indonesia (Ilahi and Mangguang 2022). According to (Nugroho and Hidayat 2021) the incidence of Covid-19 is still fluctuating every day. The Ministry of Health through its online website as of May 29 2022 reported that 6,054,415 people were confirmed positive for Covid-19, with the death rate reaching 156,574 people and 5,894,889 people being declared cured. The government has made many efforts to break the chain of transmission of this virus, one of which is the implementation of the Covid-19 vaccination as outlined in Permenkes Number 10 of 2021 (Ilahi and Mangguang 2022)

Vaccination is a process in the body, where a person becomes immune or protected from a disease so that if one day they are exposed to the disease, they will not get sick or only experience a mild illness. Various COVID-19 vaccines have gone through a long journey to ensure their safety and efficacy through a research process over a certain period of

time. The vaccination program is considered the key to ending the pandemic because it can be used to reduce morbidity and mortality rates and to form group immunity against the COVID-19 virus (Gandryani and Hadi 2021).

The Ministry of Health (Kemenkes) issued a Circular Letter (SE) of the Director General of Disease Prevention and Control Number SR.02.06/II/1180/2022 concerning Adjustments to Implementation of Advanced Dose (Booster) COVID-19 Vaccination for the General Public. This SE was issued as a follow-up to SE Number HK.02.02/II/252/2022 concerning Advanced Doses of COVID-19 Vaccination (Booster) which was issued on January 12, 2022 taking into account the increasing number of COVID-19 cases (Susanna 2020).

In this rule, it is stated that the recommended booster dose injection for the general public can be given at least three months after receiving the 2nd full dose of vaccination. By

Therefore, based on this background, the researcher is interested in conducting a study on "The Influence of Mass Media Content on the Effectiveness of Covid-19 Vaccination Achievements in East Nusa Tenggara". The purpose of this study is to find out the effect of mass media content on the effectiveness of vaccine achievements, before there is a government policy regarding the mandatory complete vaccine in using airplane and sea public transportation on the achievement of the Covid-19 vaccine in East Nusa Tenggara, through information obtained from the media the mass. The position of this research among other studies is that research has reached a wider area and a wider unit of analysis to other mass media such as radio, which has never been studied in research on other vaccines.

MATERIALS AND METHOD

The method used in this research is a qualitative method with a descriptive approach, namely research that describes situations or events or observational research as proposed by Wood in (Hartmann and Wood 1990). Another characteristic of the descriptive method is the emphasis on observation and natural settings (naturalistic settings). This research also does not describe (analytical), but also combines (synthetic) (Iskandar 2022). Not only do the classification, but also the organization. One of the other uses of descriptive research is that it is very useful in producing or creating tentative theories. Perhaps this is where the fundamental difference lies in the qualitative descriptive method compared to other methods. The descriptive method does not test theory, but seeks theory. Often descriptive research arises because of an event that attracts the attention of researchers, but there is no theoretical framework that can explain it.

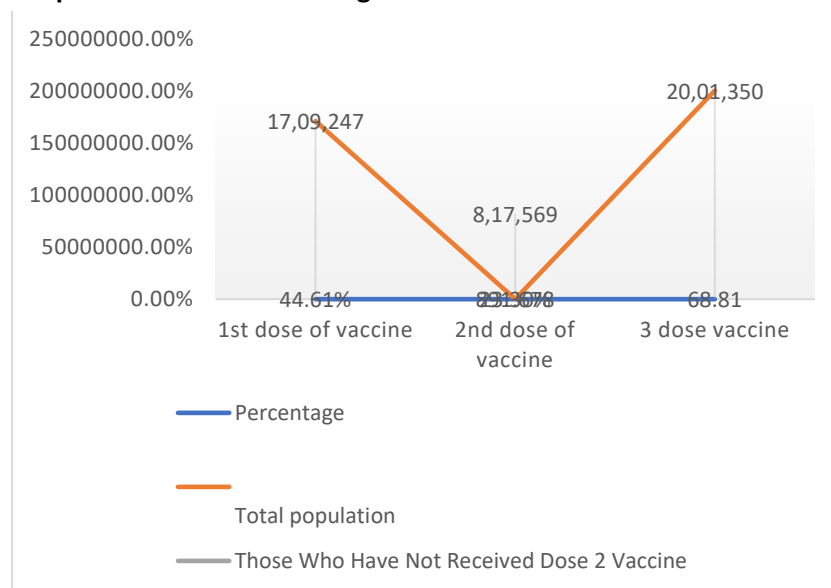
The inclusion criteria used by the authors in determining mass media, both newspapers, radio and electronic media, are those that have news about the Covid-19 vaccine, with the aim of limiting the mass media that will be conducted research, starting from December 2021 to October 2022. The data collection technique used in this study was observation and documentation, while the data analysis technique used was descriptive analysis.

RESULTS

Covid-19 Vaccination Coverage for NTT Province in 2021 and 2022

Vaccination 1 will take place in 2 batches, namely batch 1 from January to June 2021, prioritizing health workers and public officials. Batch 2 takes place from December 2021 to October 2022 to reach the entire community. Based on data as of December 17, 2021, the total dose I vaccination was 44.61% or 1,709,247 people. The total dose II vaccination is 23.3% or as many as 891,678 people. Those who had not received the second dose of the vaccine were 817,569 (47.8%). Total dose III vaccination is; 68.81% or as many as 2,001,350 people. And the total use of the Covid-19 vaccine in the province of NTT reached 93.70%. More accurately can be seen in graph 1.

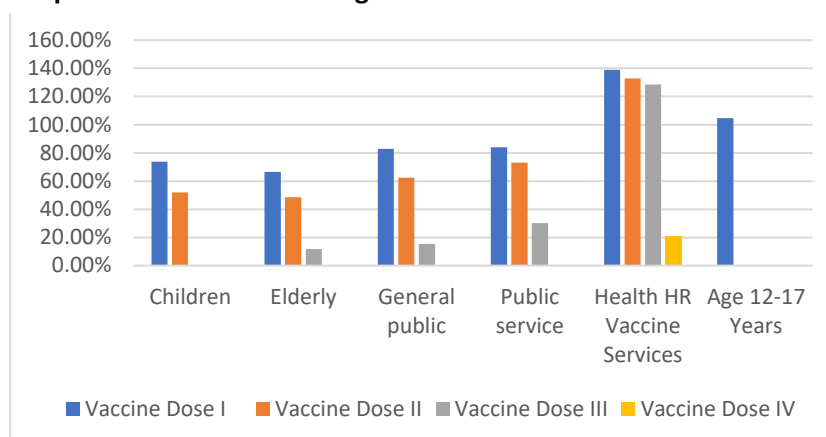
Graph 1. Vaccination Coverage for Covid 19 in NTT Province in 2021



Referring to data as of October 10, 2022, the total number of vaccine services for children with a target of 607,189 people will receive a perdose percentage, namely dose I: 73.79%, dose II: 52.05% and dose III: 0%. Total elderly vaccine services with a target of 405,566 people received the percentage of dose I: 66.52%, dose II: 48.65%, dose III:

11.66%. Total vaccine services for the general public with a target of 2,408,586 people, dose I: 82.85%, dose II: 62.32%, dose III: 15.35%. Total public service vaccine services with a target of: 402,222 people; Dose I: 83.90%, dose II: 73.02%, dose III: 30.12%. Total HR Health vaccine services with a target of: 32,221, Dose I: 139.02%, Dose II: 132.77%, Dose III: 128.509% and Dose IV: 20.91%. And the total vaccine service for ages 12-17 years with a target of: 582,844 people; Dose I: 104.59%. In more detail, it can be seen in graph 2.

Graph 2. Vaccination Coverage for Covid 19 in NTT Province in 2022



Covid-19 Vaccination Coverage in NTT Province Based on District/City Achievements

In East Nusa Tenggara Province, there are 22 districts that have been recorded as of October 22, 2022. All of these districts have received vaccine services from the first dose to the third dose, but from the number of vaccination targets and the total people of East Nusa Tenggara who have been vaccinated, it can be seen that vaccination has not maximally carried out in the province of East Nusa Tenggara. Overall, in East Nusa Tenggara, out of a total target of 4,438,628 people, only around 3,706,118 have received vaccine I service, 2,283,013 people who received vaccine II service, and 588,346 who received vaccine III service. In detail can be seen in table 1.

Table 1. Covid 19 Vaccination Coverage per District in East Nusa Tenggara Province

District	in	Target	Vaccine	Total	Vaccine 2	Total	Vaccine 3	Total
East Nusa Tenggara			1 24/5/20 22	Vaccines 1 1/10/2022	24/5/2022	Vaccine 2 24/10/2022	Vaccine 3 24/5/2022	Vaccine 3 24 /10/2022
Alor		174.238	85,62	132.505	62,62	99.292	8,27	12.60 8

Belu	184.253	90,31	146.764	74,73	121.585	16,92	27.022
Ende	231.526	94,93	196.921	73,73	154.559	13,07	31.731
Flores Timur	232.750	83,80	179.125	67,59	149.654	14,38	43.237
Kota Kupang	373.461	103,95	355.793	83,83	285.274	22,82	89.508
Kupang	316.174	83,06	242.609	57,04	167.300	22,43	56.664
Lembata	110.853	101,19	96.796	80,73	78.975	8,60	13.385
Malaka	156.913	88,35	123.102	64,19	89.582	14,73	19.627
Manggarai	259.851	103,33	237.472	75,28	179.827	10,58	29.345
Manggarai Barat	208.629	107,29	196.006	81,39	149.851	15,24	34.828
Manggarai Timur	230.392	96,78	193.680	75,30	154.666	12,91	31.908
Nagekeo	135.295	91,21	109.428	71,47	88.534	9,07	12.688
Ngada	140.329	94,38	118.177	71,13	90.775	13,80	23.992
Rote Ndao	118.042	88,51	90.735	61,60	63.804	12,72	11.502
Sabu Raijua	72.420	86,76	53.452	66,72	41.584	11,53	5.448
Sikka	263.547	98,31	230.692	76,53	181.637	9,26	23.202
Sumba Barat	118.039	91,11	93.961	66,30	69.814	18,48	18.824
Sumba Barat Daya	243.188	103,90	210.224	66,30	135.099	12,47	24.432
Sumba Tengah	68.465	90,73	54.092	69,27	42.085	17,75	13.272
Sumba Timur	198.895	97,29	170.236	67,56	119.870	14,82	26.502
Timor Tengah Selatan	384.544	86,98	300.568	60,66	213.443	6,47	23.640
Timor Tengah Utara	216.824	91,72	173.780	76,70	145.803	8,17	14.981

Nusa	4.438.6	94,09	3.706.118	70,66	2.823.013	13,70	588.346
Tenggara	28						
Timur							

Mass Media Promoting the Importance of Vaccines in East Nusa Tenggara

The mass media has disseminated vaccination information and procedures for preventing this virus. The mass media is one of the policy-making tools with the largest number of opinions (Jelahun 2020). Computer technology provides an extraordinary opportunity and role to fight the plague. The mass media that conveys the most information about the covid-19 vaccine in NTT is radio. The people of NTT with its geography are an archipelago and the conditions are quite difficult to reach. Radio is one of the answers to get various information about the covid-19 problem and its vaccine. Radio is so important for the community that most people in NTT rely on radio for information. Therefore, the government, with its policies, conveys more health information, in this case Covid-19, via radio. Based on the data obtained during the research, it was found that the mass media most often promotes and appeals to the benefits and safety of vaccines, which can be seen in table 2.

Table 2. Mass Media Promoting Vaccines in East Nusa Tenggara

Num.	Types of Mass Media	Duration	News content
1	RRI Pro 4 Kupang, with a frequency of 104.3 MHz FM	1 minute 7 seconds	Provides information about what Booster is. Booster vaccination is a Covid-19 vaccination after a person has received a complete dose of primary vaccination so that the immune system is stronger. This vaccine is free and can be obtained at health facilities. In addition to this information, it is also accompanied by an invitation to immediately booster vaccines
		58 Seconds	Providing information about the importance of vaccines to suppress the danger of Covid-19. And every routine activity requires a vaccine card. For example: getting on a plane requires a vaccine card, getting on a ship gets a vaccine card checked, teaching at school

			requires a vaccine card. This ad also invites people not to be afraid of being vaccinated
		46 Seconds	Provide information about the importance of adhering to health protocols in daily activities as a way to prevent the Corona virus from developing and spreading. Among them: wearing a mask, frequently washing hands, avoiding crowds and reducing mobility
2	Radio Suara Kupang AFB radio with Frequency 95,2 MHz	3 Seconds	Song ad about washing hands
4.	Suara Timor	2 Seconds	Ads using masks
5.	Radio Suara Kupang regency with Frequency of 100.8 MHz	there are 5 advertisements related to Covid-19 Vaccination which are played 20 times a day	1. Appeal from the Regent of Kupang and Deputy Regent of Kupang so that people must wear masks, wash their hands often, always use soap, keep their distance, avoid crowds, keep faith, immunity is definitely safe, don't lose it, with a duration of 1 minute and rotate it 5 times a day 2. An advertisement for enthusiasm for complete vaccination at a health facility, with a duration of 2 minutes played 5 times a day 3. Appeal from the Chairperson of the Kupang Regency PKK Mobilization Team and Deputy

Chairperson of the Kupang Regency PKK Mobilization Team so that people protect themselves and their families from the Corona virus by taking the following steps: eat nutritious food, exercise diligently, get enough rest, wash hands in running water, take care clean the environment, wear a mask, drink 8 glasses of water a day, don't forget to pray, and follow all government recommendations, with a duration of 1 minute 40 seconds played 4 times a day

4. Advertisements for vaccinations for the elderly and children as well as health protocols with a duration of 1 minute are played 4 times a day
 5. Advertisements from Prodia contain promos for all types of health checks, for example for the purposes of vaccination, vitamins and other medicines and there is a home service with a duration of 1 minute which is played twice a day.
-

6	Covid-19 Ads on National Television	Recommended duration is 2 seconds and only 3 views throughout the broadcast from 06.00 to 23.00.	Eyevit ad, at the end of this ad contains advice to comply with health protocols by doing 3M (Using Masks, Washing Hands and Keeping Your Distance).
---	--	--	--

DISCUSSION

The participation of the mass media, both television, print, radio and online media is vital for reporting issues related to the Covid 19 booster vaccination (Nur 2021). The media will be the spearhead in declaring government programs (Talib and Kawengian 2021). With an understanding from journalists regarding issues related to vaccination, it is hoped that the media can convey accurate and correct information to the public, especially issues related to prevention, increasing public awareness and concern. Various information about areas that are not exposed by the national media underlies the presence of radio. private sector in various regions. The presence of local radio adds variety or choice for the community to get information, entertainment and education (Maulana and Ali 2021). This is in accordance with the mandate of Broadcasting Law No. 32 of 2002 which focuses more on community participation and control and empowering local institutions (Doly 2016).

Mass media is a communication tool used to disseminate information en masse to the public. However, the mass media, especially newspapers, do not only disseminate information but also have a social responsibility to show direction and create harmonious relations and integration at the social level. McQuail in (McQuail 2014) states that the mass media is often seen as an effective tool of power, because of its ability to do one or more of several things such as: attracting and directing attention, persuading opinions and assumptions, influencing the choice of attitudes, providing status and legitimacy, defining and shape the perception of reality. One of the strengths of the mass media that shape the perception of reality in society is newspapers or newspapers. This newspaper has long been used to spread information and social control on policies taken by the authorities. According to Suwardi in (Sinaga, Suwardi, and Dayana 2020), the function of a newspaper consists of three things; namely the function of broadcasting information, the function of educating, and the function of influencing. The function of broadcasting information means that various information can be conveyed quickly and accurately by newspapers. Readers become newspaper buyers

because they want to know what information is going on in various places in the world. The educational function means that newspapers indirectly provide an educational function to their readers (Chabibah et al. 2022). This can be seen from the content of the message presented. The content of the message conveyed also provides a treasury of knowledge for the reader even though the weight of understanding of the readers is different.

The role of the mass media is strictly regulated in Law No. 40 of 1999 concerning the press. In the Press Law No. 40/1999 (Sahputra 2020), it is stated in article 3 paragraph 1 that it reads "The National Press Has a Function as a Media of Information, Education, Entertainment and Social Control". Mass media is a communication tool that allows the delivery of messages and information from sources to the public (Cangara 2003). The mass media used as criteria in this study include three types of mass media, namely print, electronic, and online or the internet. Opinion from Sutisna in (Widyaningsih 2017) which states that teenagers use the internet or online media the most to obtain information according to the results of research conducted on 155 class X respondents at SMAN 1 Purwokerto, namely there are 32.78% of respondents who use the internet. The rest use other mass media. According to research, many stated that the lack of information obtained from the mass media affected their insights and knowledge about reproductive health (Pratiwi and Laksmiwati 2016). Wrong knowledge about reproductive health influences adolescents to behave deviantly (Hakim and Kadarullah 2016). Adolescent deviant behavior in reproductive health includes sexual intercourse, kissing, petting and others (Hardiyanto and Romadhona 2018). This deviant behavior causes a lower level of adolescent reproductive health. So the number of mass media used by adolescents to access information affects the level of reproductive health of these adolescents (Rosyidah and Nurdin 2018).

There are various policies issued by the Government as an effort to stop or at least minimize the chain of spread of the COVID-19 virus. One of the steps to prevent and stop the spread of the Covid-19 virus is vaccination which is considered to be one of the most effective efforts to overcome the ongoing Covid-19 pandemic (Akarsu et al. 2021). Covid-19 vaccination aims to create herd immunity so that people become more productive in carrying out their daily activities. The Covid-19 vaccination program in Indonesia continues to be expanded and targets a number of age groups. (4) It is known that the government has approved various types of Covid-19 vaccines from various vaccine provider companies to achieve the target of herd immunity. According to (Chang, Chen, and Lai 2022) Types of vaccines that have the potential and are approved to pass the trial stage include: (1) inactivated or weakened viruses, types that do not have

the ability to cause disease, but can trigger a protective immune response (CoVaxin & Sinovac Biotech); (2) protein-based, containing harmless viral fragments, such as spike proteins or protein shells that resemble COVID-19 (Epivac Corona Vaccine); (3) viral vector vaccines, using a carrier virus that functions to carry genes that produce corona virus proteins to the host to cause an immune response (Gam-Covid-Vac/Sputnik V & AstraZeneca/Oxford Vaccine Trial); (4) RNA and DNA vaccines, using mRNA or DNA gene modification to produce proteins that induce the immune system (Moderna Vaccine Trial mRNA 1273 and Pfizer/ BioNTech Vaccine Trial/ BNT162b2). According to (Chrissian et al. 2022) Administration of booster doses is carried out through two mechanisms, namely: (1) Homologous, which is the administration of further doses (boosters) using the same type of vaccine as the complete dose of primary vaccine previously obtained; (2) Heterologous, namely the administration of booster doses using a different type of vaccine from the complete primary vaccine that was previously obtained. According to (Russell, Millar, and Baillie 2020) the administration of this booster vaccine is carried out in order to maintain the immunogenicity of the vaccine against Covid-19. The Pfizer-BioNTech vaccine is a vaccine that has a good level of effectiveness and safety with a value of 94.6% and does not cause serious side effects (Harun and Ananda 2021).

The target of this booster vaccine is people at high risk including the elderly, medical personnel and groups of people who have problems with immunity (immunocompromised). This booster vaccine is given to people aged 18 years and over and have been vaccinated in phase one and phase two doses. Policy regarding the Covid-19 vaccine that has been issued by the government which is the most effective way to prevent transmission of the Covid-19 virus (Sidabukke, Barus, and Lumbantoruan 2022).

Furthermore, specifically in Kupang City, based on data released by the Kupang City DISKOMINFO as of May 27, 2022, it was stated that the total population that had received the first dose of vaccine was 347,025 people (104.02%), then the second dose totaled 280,047 people (83.94%) and 64,802 people. (25.54%) for the third dose. The number of vaccine recipients has increased as Circular Letter (SE) No. 18 of 2022 concerning Provisions for Domestic Travel. The new regulation states that domestic travelers (PPDN) who have received the second and third doses of vaccination (booster) are not required to show negative results from the RT-PCR test or antigen rapid test. This circular letter is effective starting May 18, 2022. Requirements for travelers or travelers who can go home without testing conditions, namely for those who have booster vaccines, testing is not applied. However, those who receive the second dose of the vaccine still require an antigen test with samples taken within 1 x 24 hours, or 3 x

24 hour PCR. Especially those who have just received the first dose still require PCR within 3 x 24 hours.

CONCLUSION

From the results and discussion above, it can be concluded that firstly, vaccination is the key to ending the pandemic because it can be used to reduce morbidity and mortality rates and form herd immunity against the COVID-19 virus. Second, the administration of this booster vaccine is carried out in order to maintain the immunogenicity of the vaccine against Covid-19 through homologous and heterologous mechanisms. Third, Mass Media Content greatly influences the effectiveness of the Covid-19 vaccination in the province of East Nusa Tenggara.

Bibliography

- Akarsu, Büşra, Dilara Canbay Özdemir, Duygu Ayhan Baser, Hilal Aksoy, İzzet Fidancı, and Mustafa Cankurtaran. 2021. "While Studies on COVID-19 Vaccine Is Ongoing, the Public's Thoughts and Attitudes to the Future COVID-19 Vaccine." *International Journal of Clinical Practice* 75(4):e13891.
- Ayuni, Qurata, Hafied Cangara, and Arianto Arianto. 2019. "The Influence of Digital Media Use on Sales Level of Culinary Package Product among Female Entrepreneur." *Jurnal Penelitian Komunikasi Dan Opini Publik* 23(2).
- Cangara, Hafied. 2003. "Dimensi Komunikasi." Jakarta: PT. Raja Grafindo Persada.
- Chabibah, Nur, Tatang Taryana, Rini Novianti Yusuf, and Ade Ismail Fahmi. 2022. "Pemanfaatan Media Surat Kabar Sebagai Sumber Pembelajaran Untuk Meningkatkan Pemahaman Siswa Terhadap Pembelajaran PKN." *Jurnal Tahsinia* 3(1):20–28.
- Chang, Renin, Hui-Yuan Chen, and Chih-Cheng Lai. 2022. "SARS-CoV-2 Infections, Hospitalizations, and Mortality in Vaccinated Patients With Cancer in the US." *JAMA Oncology* 8(10):1515–16.
- Chrissian, Ara A., Udochukwu E. Oyoyo, Pranjali Patel, W. Lawrence Beeson, Lawrence K. Loo, Shahriyar Tavakoli, and Alex Dubov. 2022. "Impact of COVID-19 Vaccine-Associated Side Effects on Health Care Worker Absenteeism and Future Booster Vaccination." *Vaccine* 40(23):3174–81.
- Doly, Denico. 2016. "Urgensi Perubahan Undang-Undang Nomor 32 Tahun 2002 Tentang Penyiaran." *Negara Hukum: Membangun Hukum Untuk Keadilan Dan Kesejahteraan* 4(2):215–30.
- Gandryani, Farina, and Fikri Hadi. 2021. "Kedudukan Diplomasi Parlemen Dalam Rangka Pemulihan Ekonomi Nasional Pasca COVID-19 Di Indonesia." *Jurnal Ilmiah Dunia Hukum* 6(1):38–51.

- Gurning, Fitriani Pramita, Laili Komariah Siagian, Ika Wiranti, Shinta Devi, and Wahyulinar Atika. 2021. "Kebijakan Pelaksanaan Vaksinasi Covid-19 Di Kota Medan Tahun 2020." *Jurnal Kesehatan* 10(1):43–50.
- Hakim, Abdul, and Oke Kadarullah. 2016. "Pengaruh Informasi Media Massa Terhadap Pengetahuan Kesehatan Reproduksi Pada Siswa Sma." *Psycho Idea* 14(1).
- Hardiyanto, Sigit, and Elfi Syahri Romadhona. 2018. "Remaja Dan Perilaku Menyimpang." *Jurnal Interaksi: Jurnal Ilmu Komunikasi* 2(1):23–32.
- Hartmann, Donald P., and David D. Wood. 1990. "Observational Methods." *International Handbook of Behavior Modification and Therapy: Second Edition* 107–38.
- Harun, Ahmad, and Dea Putri Ananda. 2021. "Analisa Sentimen Opini Publik Tentang Vaksinasi Covid-19 Di Indonesia Menggunakan Naïve Bayes Dan Decission Tree: Analysis of Public Opinion Sentiment About Covid-19 Vaccination in Indonesia Using Naïve Bayes and Decission Tree." *MALCOM: Indonesian Journal of Machine Learning and Computer Science* 1(1):58–64.
- Ilahi, Vitratul, and Masrizal Dt Mangguang. 2022. "Evaluasi Dan Implementasi Sistem Surveilans Epidemiologi COVID-19 Di Kantor Kesehatan Pelabuhan Kelas II Padang Wilayah Kerja Bandara International Minangkabau." *Health and Medical Journal* 4(1):40–46.
- Iskandar, Ramadhan Attalarik. 2022. "Kajian Nilai Perjuangan Dalam Novel Mahbub Djunaidi Dengan Menggunakan Metode Deskriptif Analisis Dan Pemanfaatannya Sebagai Alternatif Bahan Ajar Novel Sejarah." *Al-Afkar, Journal For Islamic Studies* 160–79.
- Jelahut, Felisianus Efrem. 2020. "Peran Komunikasi Sebagai Mitigasi Stigmatisasi Covid 19." *Jurnal Jurnalisa* 6(1).
- Maulana, Randhitya, and Dini Salmiyah Fitrah Ali. 2021. "Peran New Media Podcast Podkesmas Dalam Menyosialisasikan Vaksin Covid-19." *EProceedings of Management* 8(5).
- McQuail, Denis. 2014. *Mass Communication*.
- Nugroho, Setiyo Adi, and Indra Nur Hidayat. 2021. "Efektivitas Dan Keamanan Vaksin Covid-19: Studi Refrensi." *Jurnal Keperawatan Profesional* 9(2):61–107.
- Nur, Emilsyah. 2021. "Peran Media Massa Dalam Menghadapi Serbuan Media Online." *Majalah Semi Ilmiah Populer Komunikasi Massa* 2(1).
- Pratiwi, Iffa Dian, and Hermien Laksmiwati. 2016. "Kepercayaan Diri Dan Kemandirian Belajar Pada Siswa SMA Negeri CEX." *Jurnal Psikologi Teori Dan Terapan* 7(1):43–49.
- Rosyidah, Feryna Nur, and M. Fadhil Nurdin. 2018. "Perilaku Menyimpang: Media Sosial Sebagai Ruang Baru Dalam Tindak Pelecehan Seksual Remaja." *Jurnal Pemikiran Dan Penelitian Sosiologi* 2(2):38–48.
- Russell, Clark D., Jonathan E. Millar, and J. Kenneth Baillie. 2020. "Clinical Evidence Does Not Support Corticosteroid Treatment for 2019-NCov Lung Injury." *The Lancet* 395(10223):473–75.
- Sahputra, Dedi. 2020. "Implementasi Hukum Pers Di Sumatera Utara." *Jurnal Penelitian Hukum De Jure* 20(2):259–74.

- Sidabukke, Ida Ria Royentina, Darwita Juniwati Barus, and Mestika Lumbantoruan. 2022. "Aplikasi Kinerja Dosen Kesehatan Pada Kegiatan Pemberian Vaksin Booster Pada Masyarakat Di Lingkungan Kampus USM-Indonesia." *Jurnal Abdimas Mutiara* 3(2):283–88.
- Silvia, Irene, Elok Perwirawati, M. I. Kom, Besti Rohana Simbolon, and S. Sos. 2021. *Manajemen Media Massa*. Scopindo Media Pustaka.
- Sinaga, Redianto, Suwardi Suwardi, and Dayana Dayana. 2020. "Strategi Media Relations Humas Pemerintah Kabupaten Tapanuli Utara Untuk Meningkatkan Citra Positif." *GOVERNANCE: Jurnal Ilmiah Kajian Politik Lokal Dan Pembangunan* 7(2).
- Susanna, Dewi. 2020. "When Will the COVID-19 Pandemic in Indonesia End?" *Kesmas: Jurnal Kesehatan Masyarakat Nasional (National Public Health Journal)* 15(4).
- Talib, Saskia R., and Debby D. V Kawengian. 2021. "Kajian Peran Humas Dalam Meningkatkan Kepercayaan Masyarakat Terhadap Vaksin Sinovac." *Acta Diurna Komunikasi* 3(4).
- Widyaningsih, Destu Satya. 2017. "Pengaruh Penggunaan Internet Terhadap Tingkat Pengetahuan Kesehatan Reproduksi Pada Remaja Di Kabupaten Bantul." in *Jurnal Formil (Forum Ilmiah) KesMas Respati*. Vol. 2.