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The Effect of Exposure to Hoaxes About COVID-19 Vaccination on Social Media and Perception in The Health Belief Model on COVID-19 Vaccination Behavior: A Cross-Sectional Study of The General Public in Jombang Regency

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Abstract

Background: The spread of hoaxes about COVID-19 vaccination on social media has the potential to influence public perception and vaccination decisions. Perceptions within the Health Belief Model (HBM) also play a crucial role in shaping health behaviors. This study aims to analyze the influence of exposure to COVID-19 vaccination hoaxes and HBM perceptions on vaccination behavior among the general public in Jombang Regency. Method: Quantitative research with cross-sectional designThe study was conducted in October 2022 in Jombang Regency. Respondents were selected using cluster random sampling and consisted of 400 individuals aged 18 years and older who met the inclusion criteria. The independent variables included exposure to COVID-19 vaccination hoaxes on social media and perceptions of the HBM (susceptibility, severity, benefits, and barriers), while the dependent variable was COVID-19 vaccination behavior. The research instrument was a structured questionnaire. Data analysis used the t-test, F-test, and multiple linear regression. Results: A total of 400 respondents were analyzed. Exposure to hoaxes negatively impacts vaccination behavior (β=–0.173, $p < 0.05$; 95% CI–0.20 sd–0.14), while perception in HBM has a positive influence (β= 0.095, $p < 0.05$; 95% CI 0.07 to 0.12). Simultaneous analysis showed that both variables had a significant effect on vaccination behavior ($F = 80.509$, $p < 0.05$) with a contribution of 28.9% (R^2= 0.289). Conclusion: Exposure to COVID-19 vaccination hoaxes on social media and perceptions in the Health Belief Model have a significant influence on vaccination behavior. Social media-based educational efforts that emphasize the benefits of vaccination and clarify misinformation need to be strengthened to increase vaccination coverage.

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INTRODUCTION

The SARS-CoV-2 virus, commonly known as COVID-19, is a type of coronavirus first discovered in Wuhan, China, on December 31, 2019. On March 1, 2020, the virus was declared a pandemic. COVID-19 prevention has entered a new phase with the availability of a COVID-19 vaccine that has undergone several stages of clinical trials and can be mass-produced. The current vaccination policy is one step towards ending the COVID-19 pandemic. The Health Belief Model (HBM) explains that individual perceptions of vulnerability, severity, benefits, and barriers influence health behavior.

Based on the Minister of Health's Decree No. HK.01/07/Kemenkes/12758/2020, seven vaccines will be used in Indonesia, produced by PT. Bio Farma, AstraZeneca, Sinopharm, Moderna, Novavac, Pfizer/Biontech, and Sinovac. Two doses will be administered with eight injection intervals ranging from 14 to 28 days. In line with the government's efforts to implement the vaccination program, the spread of various types of information related to COVID-19 has also increased. The large number of social media platform users in Indonesia has resulted in rapid access to information spread on social media.

People continue to circulate on various social media platforms, leading to the emergence of numerous hoaxes related to the pandemic. The spread of hoaxes is easily consumed by the public. While many people are skeptical, hoaxes also demonstrate the public's willingness to believe various information on social media. Public perceptions of those who reject the COVID-19 vaccination are influenced by various factors, including individual knowledge, attitudes, and actions. Health behavior is expected to serve as a basic reference in the form of a health belief model that combines individual or group knowledge and actions related to health and preventative measures.

This research is expected to provide informationto create increased understanding regarding the Covid-19 vaccination so that they can change their behavior towards healthy behavior, namely carrying out the Covid-19 vaccination.

METHOD

This research design uses a cross-sectional quantitative approach. The study used a questionnaire covering three topics: the Application of Hoaxes, Perceptions of Health Belief Models, and COVID-19 Vaccination Behavior. The study was conducted in Jombang Regency in October 2022.The subjects of this study were the entire general public, both vaccinated and unvaccinated. The sample size was calculated using the Slovin formula with a 5% margin of error. The first independent variable in this study is the influence of exposure to vaccination hoaxes on social media. The second independent variable in this study is perceptions within the Health Belief Model. The dependent variable in this study is COVID-19 vaccination behavior. Inclusion criteria were age ≥18 years, domiciled in Jombang, able to read/write, and willing to complete the questionnaire. Exclusion criteria were incomplete questionnaire data. Incomplete data were excluded from the analysis. After the data is obtained, it is then processed using SPSS and the research results are presented in table form.

RESULTS AND DISCUSSIONS

The majority of respondents were aged 18–35 years (65%), female (58%), had a high school education or above (70%), and 90% were active social media users.Exposure to hoaxes is measured using a Likert scale based on the frequency of seeing/receiving hoax information. The HBM perceptions include vulnerability, severity, benefits, and barriers.Vaccination behavior is measured based on dose status and compliance. In particular, developments in information and communication technology have driven the growth of electronic and online media, such as social media, which is growing rapidly due to the ease of access to information via smartphones, including online mass media. This information can be accessed quickly. The analysis results are reported with β values, 95% CI, R^2, and p-values.Exposure to hoaxes had a negative effect ($\beta = -0.173$; 95% CI –0.20 to –0.14; $p < 0.05$). Perception of HBM had a positive effect ($\beta = 0.095$; 95% CI 0.07 to 0.12; p <

0.05).In accordance with the development of information and communication technology, information production was initially elitist, meaning that information that initially only came from a handful of people was then shared with many people, but now information can move from many people to more people, increasingly the masses. The instrument was tested for validity with Pearson correlation (r > 0.3) and reliability with Cronbach Alpha (α > 0.7).To minimize bias, respondent selection was random, questionnaires were anonymous, and data were analyzed without personal identification.A total of 420 questionnaires were distributed, 410 were returned, and 400 met the inclusion criteria for analysis.

Table 1. Heteroscedasticity Test Results
Coefficient

Model		Unstandardized Coefficients		Standard Coefficient		
		B	Std. Error	Beta	T	signature.
1	(Constant)	1,974	,639		3,090	,002
	Hoax Exposure (X1)	.024	.016	,080	1,549	.122
	Perception in Health Belief Model (X2)	-.011	,006	-.094	-1,817	,070

A. Dependent Variable: Absolute Residue

Table 2. Results of T-Test Analysis
Coefficient

Model		T	signature.
1	(Constant)	10,379	,000
	Hoax Exposure (X1)	-6,339	,000
	Perception in Health Belief Model (X2)	8,703	,000

A. Dependent Variable: COVID-19 Vaccination Behavior (Y)

Table 3. Results of F-Test Analysis
ANOVA

Model		Sum of Squares	df	Means Square	F	signature.
1	Regression	882,813	2	441,407	80,509	,000b
	Remainder	2176.624	397	5,483		
	Total	3059.437	399			

A. Dependent Variable: COVID-19 Vaccination Behavior (Y)

B. Predictors: (Constant), Perception on Health Belief Model (X2), Exposure to Hoaxes (X1)

Based on the results of the research conducted, to determine the description of the variables of exposure to information on social media regarding the Covid-19 vaccine among the general public of Jombang Regency, it can be seen from respondents' answers to variables based on their dimensions: frequency, duration, and attention on each social media. Based on three exposure indicators, namely frequency, duration, and attention, the level of exposure to information about the Covid-19 vaccine among the people of Jombang Regency is determined. Based on Table 4.14, it can be seen that the frequency dimension variable of exposure to Covid-19 Vaccination Hoaxes on social media is in the rare category, with an average of 1.99 or 49.74%.

Based on table 4.15, it can be seen that the dimension variable of the duration of exposure to the Covid-19 Vaccination Hoax on Social Media in the rare category averages 1.92 or 48.04%. Based on table 4.16, it can be seen that the dimension of attention in the variable of exposure to the Covid-19 Vaccination Hoax on Social Media in the ignoring message category averages 1.19 or 29.74%. Based on the results of data analysis in table 4.10, it shows that with a significant t-value of 6.339 > t-table 1.965 and a sig value of 0.00 < 0.05, it is known that exposure to hoaxes influences Covid-19 vaccination

behavior.Based on table 4.11, the results of the ANOVA test show that the calculated f value is 80.509 > from the f table, which is 3.018 with a significance of 0.00 <0.05. It is known that simultaneous exposure to hoaxes with the perception variable in the Health Belief Model has an influence on Covid-19 vaccination behavior. Based on table 4.12, the results of the multiple linear regression test obtained a regression equation of y = 11.428 - 0.173X1 + 0.095 Hoax has a negative influence in the opposite direction on Covid-19 vaccination behavior. Based on table 4.13, the results of the determination coefficient test analysis show an R value of 0.537 indicating that both variables X1 (Hoax Exposure) and X2 (Health Belief Model) simultaneously influence the Y variable (Vaccination Behavior). by 53%. The R square value = 0.289 indicates that variable Y (Vaccination Behavior) is 28.9% influenced by variables X1 (Hoax Exposure) and X2 (Health Belief Model), while the remaining 71.1% is influenced by other factors. The effective contribution (SE) of exposure to Covid-19 vaccination hoaxes on social media to the Covid-19 vaccination behavior of the general public in Jombang Regency is 10.95%, the relative contribution (SR) of variable X1 (Hoax Exposure) to Y (Vaccination Behavior) is 37.95%. The variable scores are categorized as low, medium, and high based on percentile distribution.

In this study it was also found thatthatExposure to hoax news about Covid-19 vaccination has a 10.95 percent influence on the behavior of Covid-19 vaccination, so it is known that there are other factors that also influence the decision to get the Covid-19 vaccination. The study entitled Exposure and Order Effects of Misinformation onHealthDecisions by

Mustafa Abualsaud & Mark D. Smucker in 2019 found that respondents who were exposed to more accurate information were more likely to make correct and less dangerous health decisions than respondents who were exposed to more information. misinformation/exposure to inaccurate information (Abualsaud, M., & Smucker, 2019, p. 1), so it can be assumed that exposure to accurate information can be another factor influencing Covid-19 vaccination decisions that needs to be taken into account.

The Health Belief Model concept is a concept of health behavior from a social psychological perspective that uses expectations, values and decision making to influence people's actions.

Based on the research conducted, to understand the perceptions in the Health Belief Model regarding the Covid-19 vaccine among the general public in Jombang Regency, respondents' answers to the four dimensions of the Perception variable in the Health Belief Model (X2) can be seen. The variables are based on the dimensions of vulnerability, severity, benefits, and barriers in the Health Belief Model (X2).

Table 4.17 shows that the vulnerability dimension of the Perception variable in the Health Belief Model is in the positive category, with an average of 2.93 or 73.22%. Table 4.18 shows that the Perception Severity dimension in the Health Belief Model is in the positive category, with an average of 3.71 or 79.30%. Table 4.19 shows that the benefit dimension of the Perception variable in the Health Belief Model is in the negative category, with an average of 2.16 or 54.05%.

Based on table 4.20, it can be seen that the barrier dimension of the Perception variable in the Health Belief Model is in the negative category, with an average of 2.29 or 57.27%. Based on the results of data analysis in table 4.10, it shows that with a significant value of t 8.703> t table 1.965 and a sig value of 0.00 <0.05, it is known that perceptions in the Health Belief Model influence Covid-19 vaccination behavior. . Based on table 4.11, the results of the ANOVA test obtained a calculated f value of 80.509> from the f table, which is 3.018 with a significance of 0.00 <0.05. It is known that perceptions in the Health Belief Model together with the Covid-19 vaccination hoax exposure variable have an influence on Covid-19 vaccination behavior. -19. Based on table 4.12, the results of the multiple linear regression test obtained the regression equation y = 11.428 – 0.173X1 + 0.095. Thus, the perception in the Health Belief Model has a positive directional influence on Y (Covid-19 vaccination behavior).

Based on table 4.13, the results of the coefficient of determination test analysis show an R value of 0.537 indicating that both variables X2 (Health Belief Model) and X1 (Hoax Exposure) simultaneously influence variable Y (Vaccination Behavior) by 53%. The R square value of 0.289 indicates that variable Y (Vaccination Behavior) is 28.9% influenced by variables X2 (Health Belief Model) and X1 (Hoax Exposure) while the remaining 71.1% is influenced by other factors outside this study.

The effective contribution (SE) of the perception variable in the Health Belief Model to the Covid-19 vaccination behavior of the general public in Jombang Regency was 17.90%, the relative contribution (SR) of variable X2 (Perception in the Health Belief Model) to Y (Vaccination Behavior) was 62.05%. The results showed that the majority of respondents had a positive perception of vulnerability and severity, while some respondents had a positive perception of benefits and a negative perception of barriers.

As mass vaccinations continue, numerous hoaxes are circulating in the community. The proliferation of hoaxes on various social media platforms and in the community has led to varying perceptions among the public and hampered the COVID-19 vaccination program. As a result of hoax news about COVID-19 vaccinations, people have begun to believe rumors or news they want to believe regarding the situation. This has resulted in people having varying perceptions due to the spread of these rumors.

Based on the results of the ANOVA test data analysis, the calculated f value was 80.509 > f table of 3.018 with a significance of 0.00 < 0.05, indicating that the variables of hoax exposure and perception in the Health Belief Model simultaneously have an influence on Covid-19 vaccination behavior. Based on the results of the Multiple Linear Regression test with the following regression equationYou = 11.428 – 0.173X1 + 0.095 X2. The test results show that exposure to hoaxes has a negative effect in the opposite direction. Coefficient The regression coefficient of X1 (Hoax Exposure) of -0.173 indicates that Y (Vaccination Behavior) decreased by -0.173. Perception in the Health Belief Model has a positive influence on COVID-19 Vaccination Behavior. The regression coefficient of X2 (Perception in the Health Belief Model) is known to have a value of 0.095, this indicates that a 1 unit increase in Perception in the Health Belief Model will cause Y (COVID-19 Vaccination Behavior) to increase by 0.095.

Results of the analysis of the coefficient of determination testshowThe R value = 0.537 indicates that both variables (X1 and X2) simultaneously influence the Y variable by 53%. The R square value = 0.289 indicates that the Y variable is 28.9% influenced by variables X1 and X2, while the remaining 71.1% (100% - 28.9%) is influenced by other factors outside this study. Based on the calculation results above, it can be seen that the effective contribution (SE) of variable X1 to Y is 10.95%. Meanwhile, the effective contribution (SE) of variable X2 to Y is 17.90%. Thus, it can be concluded that variable X2 has a more dominant influence on variable Y compared to variable X1. The total SE is 28.85% or equal to the coefficient of determination (R square) for the regression analysis, which is 28.85%. Based on the calculation results above, it can be seen that the relative contribution (SR) of variable X1 to work motivation Y is 37.95%. Meanwhile, the relative contribution (SR) of variable X2 to Y is 62.05%. There is an influence of exposure to Covid-19 vaccination hoaxes and the perception of the Health Belief Model on the Covid-19 vaccination behavior of the general public in Jombang Regency.

Additional analysis showed that the influence of hoaxes was stronger among respondents with low education compared to high education. These findings indicate the need for a social media-based public education strategy to counter hoaxes and HBM-based health promotion.

Based on the results of the hypothesis test in this study, a relationship was found between exposure to Hoaxes with the Health Belief Model and doubts about the COVID-19 vaccine among the general public in Jombang Regency, which indicates that in this case the study is accepted.

The results of this study can be generalized, especially to urban communities with the characteristics of active social media users, but caution is needed in applying them to different populations.This study has limitations: (1) the use

of self-report questionnaires can lead to social bias, (2) the research location is limited to Jombang Regency so that the results cannot be generalized to all of Indonesia, (3) other factors such as economics and access to health services were not analyzed.

CONCLUSION

Exposure to hoaxesvaccination COVID-19 on social media and perceptions in the Health Belief Model have a significant influence on the COVID-19 vaccination behavior of the general public in Jombang Regency.

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REFERENCES

Abualsaud, M., & Smucker, M.D. (2019). Exposure and Order Effects of Misinformation on Health Search Decisions.

Aditama, TY (2022). Two Years of the COVID-19 Pandemic. Indonesian Medical Journal, 1-3. (Sinta 2)

Amaratunga, D., Fernando, N., Haigh, R., & Jayasinghe, N. (2020). The COVID-19 outbreak in Sri Lanka: a synoptic analysis focusing on trends, impacts, risks and science-policy interaction processes. Progress in Disaster Science, 8, 100133.

Amelia, R., Wijaya, H., Harahap, J., & Rusdiana, R. (2023). Citizens' perception of and willingness to receive COVID-19 vaccination in Medan, Indonesia. IJID regions, 8, S39-S43.(Scopus)((q3)

Aurellia, R., & Soekanto, A. (2022). Description of Anatomy Learning Difficulty Levels in Online and Offline Systems for Students of the Faculty of Medicine, Wijaya Kusuma Surabaya. Wijaya Kusuma Scientific Journal of Medicine, 11(1), 56-60. (Sinta 3: SINTA Wijaya Kusuma Scientific Journal of Medicine)

Barello, Serena. Anna Falco Pegueroles. Deborah Rosa. Angela Tolotti. Guendalina Graffigna. Loris Bonetti . (2020). The Psychosocial Impact of Flu Influenza Pandemics on Healthcare Workers and Lessons Learned for The COVID-19 Emergency: a Rapid Review. International Journal of Public Health (2020) 65:1205–1216.https://doi.org/10.1007/s00038-020-01463-7

Becker, M.H. . The Health Belief Model and Personal Health Behavior. Health education Monographs. Vol 2 No 4.

Beta, AR, & Shobah, SN (2022). STUDENT RESPONSE TO HOAX NEWS ABOUT COVID-19 VACCINATION PROGRAM ON THE FACEBOOK. Scientia Journal, 11(02), 257-260.

Chen, D., Cowling, B.J., Ainslie, KE, Lin, Y., Wong, J.Y., Lau, E.H., ... & Nealon, J. (2024). Association of COVID-19 vaccination with duration of hospitalization in older adults in Hong Kong. Vaccine, 42(9), 2385-2393.(scopus)(q2)

Christian, Alvania Claresta Sarah. and Mochammad Sa'id. (2021). Public Obedience to Health Protocols during COVID-19 Pandemic in Indonesia: A Perspective from Health Belief Model Theory. Journal of Social Sciences and Humanities [Journal of Social Sciences and Humanities]. Volume 11, Number 2, 2021

CIPOLLETTA, Sabrina; ANDREGHETTI, Gabriela Rios; MIONI, Giovanna. Risk perception towards COVID-19: A systematic review and qualitative synthesis. International Journal of Environmental Research and Public Health, 2022, 19.8: 4649.

Conner, M., & Norman, P. (2016). Predicting and Changing Health Behavior (3rd Edition). McGraw Hill. Retrieved from https://drive.google.com/drive/u/2/folders/17eJCVJY9HdM062IqAo9qV8ho5jSSQW5 D

Cori, L., Bianchi, F., Cadum, E., & Anthonj, C. (2020). Risk perception and COVID-19. International journal of environmental research and public health, 17(9), 3114.

DeLuca, N., Caruso, E., Gupta, R., Kemmerer, C., Coughlin, R., Chan, O., ... & Haile, G. (2023). Experiences with COVID-19 case investigation and contact tracing: A qualitative analysis. SSM-Qualitative Research in Health, 3, 100244.(scopus(q1))

Dewi, YK, & Probandari, A. (2021). Covid-19 risk factors and health protocol compliance among mall employees and officers in Yogyakarta. Community Medical News, 37(1), 21. (Sinta 2: SINTA Community Medical News)

Ditsungnoen, D., Greenbaum, A., Praphasiri, P., Dawood, F.S., Thompson, M.G.,

Yoocharoen, P., Lindblade, K.A., Olsen, S.J., & Muangchana, C. (2016). Knowledge, Attitudes and Beliefs Related to Seasonal Influenza Vaccine among Pregnant Women in Thailand. Vaccine, 34(18), 2141-2146.(scopus(q1))

Edition 5. Salemba Publisher: Jakarta.

Ejaz, Waqas., Muhammad Ittefaq . (2020). Data for understanding trust in varied information sources, use of news media, and perception of misinformation regarding COVID-19 in Pakistan.(2020).Data in Brief. 32 (2020).journal homepage:www.elsevier.com/locate/dib (scopusq1))

Eka, R. (2018, August 17). Hoax distribution through digital platforms in Indonesia 2018. Dailysocial. Retrieved December 23, 2021, from https://dailysocial.id/research/hoax-distribution-through-digital platforms-in-indonesia-2018.

Galvez, Javier Alvarez ; Jose A. Salinas-PerezIlaria Montagni ; Luis Salvador-Carulla. (2020). The persistence of digital divides in the use of health information : a comparative study in 28 European countries. International Journal of Public Healh, https://doi.org/10.1007/s00038-020-01363-w (scopus(q1))

Ghozali, I. (2012). Multivariate Analysis Application with IBM SPSS Program. Yogyakarta: UNDIP.

Glanz, K., Rimer and Viswanath, (2008). Health Behavior and Health Education, Health Education. Doi: 10.1016/S0033-3506(49)81524-1

Guillon, M., Nguyen-Van, P., Ventelou, B., & Willinger, M. (2024). Consumer impatience: A key motive for Covid-19 vaccination. Journal of Behavioral and Experimental Economics, 110, 102190.(scopus(q2))

Gujarati, N, Damodar. 2012. Fundamentals of Econometrics (Translation). Books 2.

Gunardi, H. (2021). Optimizing the First 1,000 Days of Life: Nutrition, Love, Stimulation, and Immunization Are the First Steps to Creating a Superior Next Generation. Indonesian Medical Journal, 1-1. (SINTA 2)

Hartono, CE, Tresia, L., Nathania, VA, & Pandin, MGR (2022). THE IMPACT OF HOAX ON COVID-19 VACCINATION IN INDONESIA. Academy of Education Journal, 13(2), 210-223.

Haryatmoko. (2017, November 15). When Emotions Dominate Politics. Kompas.Id. Retrieved fromhttps://kompas.id/baca/opini/2017/11/15/ketika-emosi-dominasi-politik/.

Kaplan, Andreas M.; Michael Haenlein (2010) "Users of the world, unite! The challenges and opportunities of Social Media". Business Horizons 53(1): 59–68.

Khatami, S.S., Revheim, M.E., Høilund-Carlsen, P.F., Alavi, A., Shirkouhi, S.G., & Andalib, S. (2024). Central Nervous System Manifestations Following Vaccination against COVID-19. Brain, Behavior, & Immunity-Health, 100788.(scopus(q1))

Kim, HJ, Kim, MH, Park, SJ, Choi, MG, & Chun, E.M. (2024). Autoimmune adverse events following COVID-19 vaccination in Seoul, South Korea. Journal of Allergy and Clinical Immunology. (scopus(q1))

Laksana, IKD, & Sudipa, IN (2021). The hoax news text on social media: A critical discourse study. International Journal of English Language Studies, 3(10), 14-21.

Lucy E Elkin, S.R. (2020). 'Should I vaccinate my child?' comparing the displayed stances of vaccine information retrieved from Google, Facebook and YouTube. Vaccine, https://doi.org/10.1016/j.vaccine.2020.02.041, 1-8.(scopus(q1))

Lupu, D., & Tiganasu, R. (2024). Does education influence COVID-19 vaccination? A global view. Heliyon, 10(3). (scopus(q2))

Madni, SA, Sharma, AJ, Zauche, LH, Waters, AV, Nahabedian III, JF, Johnson, T., ... & Vaccine Pregnancy Registry Work Group. (2023). CDC COVID-19 Vaccine Pregnancy Registry: Design, data collection, response rates, and cohort description. Vaccines. (scopus(q1))

Maharjana, MA, & Meregawa, PF (2021). Indonesian Journal of Medicine and Health. (Sinta 2)

Mahmood, S., Hussain, T., Mahmood, F., Ahmad, M., Majeed, A., Beg, B.M., & Areej, S. (2020). Attitude, perception, and knowledge of COVID-19 among general public in Pakistan. Frontiers in public health, 8, 602434.

MALECKI, Christian MC; KEATING, Julie A.; SAFDAR, Nasia. Crisis communication and public perception of COVID-19 risk in the era of social media. Clinical infectious diseases, 2021, 72.4: 697-702.

Mathew Toll, A.L. (2020). Vaccine sentiment and under-vaccination: Attitudes and behavior around Measles, Mumps, and Rubella vaccine (MMR) in an Australian cohort. Vaccine, https://doi.org/10.1016/j.vaccine.2020.11

.021, 1-9. (Scopusq1))

McQuail, D. (2008). McQuail's Mass Communication Theory. Netherlands: SAGE Publications, Ltd.(scopus(Q1))

Mellitus, D. (2020). Clinical Study of COVID-19 Infection in Pregnancy with Insulin-Dependent Diabetes Mellitus (IDDM). Wijaya Kusuma Scientific Journal of Medicine, 9(2), 229-244. (Sinta 3: SINTA Wijaya Kusuma Scientific Journal of Medicine)

Miller, C. (2020). Covid19 Crisis: Political and Economic Aftershock. ForeignPolicy Research Institute. https://www.fpri.org/article/2020/03/covid-19-crisis-political-and-economic-aftershocks/

Ministry of Health of the Republic of Indonesia (2022) Vaccines Dashboard: National COVID-19 Vaccination. Accessible athttps://vaksin.kemkes.go.id.

Mulyana, R., Emril, DR, Mutiawati, E., Yusuf, N., & Husna, F. (2023). The Relationship between D-dimer Levels and the Incidence of Post-COVID Neurological Syndrome in COVID-19 Patients. Indonesian Medical eJournal, 19-27. (SINTA 2)

Nguyen, K. H., McChesney, C., Rodriguez, C., Vasudevan, L., Bednarczyk, R. A., & Corlin, L. (2024). Child and adolescent COVID-19 vaccination coverage by educational setting, United States. Public Health, 229, 126-134.(scopus(q1))

Nisa, H., Kurniawati, P., Qatrunnida, R., & Mulyono, D. (2023). JKKI: Indonesian Journal of Medicine and Health. (Sinta 2: SINTA Indonesian Journal of Medicine and Health)

Nurullah, APP, Desmawati, D., Abdiana, A., Rita, RS, Khaira, F., & Elmatris, E. (2024). The relationship between physical activity levels and nutritional status of students at the Faculty of Medicine, Andalas University during the COVID-19 pandemic. Andalas Medical Journal, 46(7), 1152-1163. (Sinta 3)

Paul, E., Steptoe, A. and Fancourt, D.(2021). Attitudes Towards Vaccines And Intention To Vaccinate Against Covid-19: Implications For Public Health Communications, The Lancet Regional Health - Europe, 1. doi: 10.1016/j.lanepe.2020.100012.

Prabowo, PY, Dharmayana, IBGD, Ayu, I., Manik, I., & Shuarsedana, IGA (2022). Use of High Flow Nasal Cannula as Oxygen Therapy in Severe Covid-19 Cases with Obesity: A Case Report. Wijaya Kusuma Scientific Journal of Medicine, 11(1), 1-11. (Sinta 3)

Putri, NA, Putra, AE, & Mariko, R. (2021). The relationship between age, gender, and symptoms with the incidence of COVID-19 in West Sumatra. Andalas Medical Journal, 44(2), 104-111. (Sinta 3)

Radecki, Ryan P. , MD., MS. : Rory S. Spiegel, MD. Avoiding Disinformation Traps in Covid-19. (2020). Annals of Emergency Medicine. Volume 76, No. I. July, 2020

Rahmadiana, M., Wimbarti, S., Paramastri, I., & Triratnawati, A. (2021). Traveling home during the Covid-19 pandemic, anxiety, and depression among students in Indonesia. Community Medicine News, 37(1), 33-38. (Sinta 2: SINTA Community Medicine News)

Rick, AM, Laurens, MB, Huang, Y., Yu, C., Martin, TC, Rodriguez, CA, ... & Tran, C. (2023). Risk of COVID-19 after natural infection or vaccination. EBioMedicine, 96.(scopus(q1))

Riley Cox , Sarah. (2020). COVID-19 era of misinformation: When your family doesn't trust you, will your patients?.Journal of the American Pharmacists Association61 (2021) 33(scopus)((q1)

Rodríguez, A., Martín-Loeches, I., Moreno, G., Díaz, E., Ferré, C., Salgado, M., ... & Bodí, M. (2024). Association of obesity on the outcome of critically ill patients affected by COVID-19. Medicina Intensiva, 48(3), 142-154.(scopus(q1))

Setyawan, I. (2020). Factors Causing the Spread of Hoax News Via Social Media in Village Communities. Electronic Research Journal of Social Sciences and Humanities, 2, 223-231.

Shmueli, L. (2021). Predicting intention to receive COVID-19 vaccine among the general population using the health belief model and the theory of planned behavior model. BMC Public Health, 21(1), 1–13 (scopus)((q1)

Sodik, Muhammad Ali., Hera Aviyuni, Mika Vernicia Humairo. (2021). Implementation Of Health Belief Models In Efforts To Prevent Covid-19. Journal of Global Research in Public Health, Vol.6, No. 2, December 2021, pp. 98-102

Soekanto, A., & Rianti, EDD (2021). Analysis of Student Fatigue Levels in Online Learning During the Covid-19 Pandemic in the 2020/2021 Academic Year. Wijaya Kusuma Scientific Journal of Medicine, 10(2), 154. (Sinta 3: SINTA Wijaya Kusuma Scientific Journal of Medicine)

Supriyati, S., Angraeny, DK, Carissa, TM, Sheila, AP, Qisthi, SA, Rianti, M., & Roshan, T. (2021). Preparing a new normal: the health literacy assessment on the Covid-19. Ber. Covert. Masy, 37, 27-32.(Sinta 2: SINTA Community Medical News)

Syaiful, M., Akbar, M., & Bahfiarti, T. (2023). Analysis of Vaccine Hoax Information in Facing the Covid-19 Crisis on Twitter.

Syam, AF, Zulfa, FR, & Karuniawati, A. (2021). Clinical Manifestations and Diagnosis of Covid-19. Indonesian Medical eJournal, 8(3), 382771. (Sinta 2)

Tchakounté, F., Calvin, K.A., Ari, AAA, & Mbogne, DJF (2022). A smart contract logic to reduce hoax propagation across social media. Journal of King Saud University-Computer and Information Sciences, 34(6), 3070-3078.

VishnuHardana, A. (2018). Young People & Social Media: Understanding the Movement of Young People, Social Media, and Jokowi's Leadership in the Digital Ecosystem. Jakarta: Gramedia Pustaka Utama.

WHO. (2011a). The classical definition of a pandemic is not elusive. Bull World Health Organ, 89(7), 540-541. doi: 10.2471/blt.11.088815.

Wijaya Laksana, M. (2015). Communication psychology (E. Nasrudin (ed.); first). CV Pustaka Setia.

Winarti, Eko. , Chatarina Umbul Wahyuni, Yohanes Andy Rias , Yudied Agung Mirasa, Sondang Sidabutar, and Desi Lusiana Wardhani. (2021).Citizens' health practices during the COVID -19 pandemic in Indonesia: Applying the health belief model.Belitung Nursing Journal. Volume 7, Issue 4, July - August 2021.(scopus(q1))

World Health Organization (WHO) (2021) WHO COVID-19 Dashboard. Geneva: World Health Organization, 2020. Available at:https://covid19.who.int/(Accessed: January 5, 2021).

Yuliana, A., & Pebiansyah, A. (2022, December). Analysis of COVID-19 Vaccine Hoax News: Literature Review. In Proceedings of the National Seminar on Dissemination of Research Results of the Undergraduate Pharmacy Study Program (Vol. 2, No. 1).

Yuningsih, R. (2020) 'Coronavac Clinical Trials and Mass Covid-19 Vaccination Plans in Indonesia', Social Welfare Sector.