

THE IMPACT OF HOAX ON COVID-19 VACCINATION IN INDONESIA

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ABSTRACT

The world is currently facing the COVID-19 pandemic and it has become easy to spread hoaxes on the internet. However, there are no papers that talk about its impact on COVID-19 vaccination. This study aims to investigate the impact of the spread of false news on the COVID-19 vaccination in Indonesia. An online survey with 396 respondents was done to investigate the frequency of COVID-19 vaccination news encounter and the trust towards the news. 17 of the respondents were then invited to an interview. The findings showed that 43.7% of the respondents are almost always exposed to news about COVID-19 vaccination and 28.7% almost always believed it. These news have created concerns, misunderstandings and noise, delaying COVID-19 vaccination in Indonesia. It is recommended to prepare more in-depth questions to be asked to respondents and conduct a longer survey. This study needs more respondents to have more validated generalization.

Keywords: hoax, internet, COVID-19, vaccination



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INTRODUCTION

Internet

The development of digital technology has increased rapidly and has become more sophisticated over the last decade, especially since the advent of the internet. The internet is changing human life significantly and can have a significant impact on cultural values. Since its inception, the Internet has been researched and developed by professionals and technology watchers, making it increasingly attractive to users (Hakam et al., 2020). Based on data from the Ministry of Communications and Information of the Republic of Indonesia, Indonesia's internet users will increase by 11% year-on-year from 175.4 million to 202.6 million in 2021. Indonesia is one of the 10 largest internet users in the world (Kominfo RI, 2021).

From the early of 2020 to the second quarter, internet users reached 196.7 million, or 73.7% of the population (Jatmiko, 2020). According to Hootsuite We Are Social's findings, as of January, 209 Indonesian social media users accounted for 150 million, or 56% of the total population. Media users' social gadgets have reached 130 million, or about 48% of the population (Databox, 2019).

The rapid development of technology today is of great interest to the community. As a result, the development of this technology has made it easier for the general public to access information and news disseminated through online media. Not only is this done through commonly known news sites, but ongoing advances have given us the freedom to search for the latest news and surrounding information. Especially in the current pandemic era, there are always good news and bad cases (Handayani et al., 2021).

The existence of the Internet as a result of the development of digital technology and also as a new communication medium, not only makes it easier for us to build relationships and interact socially, but also reduces our interactions with others directly (Permana & Abdullah, 2020). Moreover, with the recorded number of internet usage which has skyrocketed, the impact is that it creates new problems that previously rarely occurred, such as fraud. This fraud leads to many things, direct fraud that we usually encounter and large-scale fraud through unverified news (Trustyanda et al., 2021).

Especially during a pandemic like this, a lot of fake news is being spread in any news media, especially about health. With low public literacy, the spread of fake news is very detrimental to some people, because people are confused with news that is inversely proportional to the situation (Nugroho et al., 2021).

COVID-19 Pandemic

The world is currently facing a COVID-19 pandemic. There are hundreds of viruses that belong to the coronavirus family. Coronavirus is a positive single-stranded large RNA virus with an envelope that infects not only humans but also many animals. SARSCoV2 seems to have transitioned from animals to humans at the South China seafood market in Wuhan, China (Lone et al., 2020).

Infection with Severe Acute Respiratory Syndrome Coronavirus 2 (SARSCoV2), which appears clinically primarily in the respiratory system (COVID-19), has shown very high infection rates in different parts of the world, so the WHO will eventually have determined the status of this infection. As a pandemic, this even urged some countries to implement blockade policies to prevent widespread and large-scale spread of the virus (Lone et al., 2020). As the virus began to spread in Indonesia in February 2020, the WHO pointed out that the government had to take proactive measures such as restricting regional movements and compulsory teleworking (WFH). People around the world live and work at home (Harahap et al., 2020).

The COVID-19 epidemic case illustrates the significant impact of this new information environment. The dissemination of information can have a significant impact on people's behavior and change the effectiveness of government measures. In this regard, virus spread prediction models are beginning to take into account the behavioral response of the population to public health interventions and the dynamics of communication behind content consumption (Lone et al., 2020).

In Indonesia, more than 5,000 people were confirmed to be COVID-19 positive in early April 2020. The Indonesian government is currently working hard to reduce the number and mortality of this infection every day. One of the efforts underway is the implementation of a Large Social Restriction (PSBB) policy. One form of implementation of this policy is the use of physical distance (Ministry of Health, Republic of Indonesia, 2020). The contextual implications of the physical distance policy in the field can take the form of an appeal to work/study/worship at home. Due to these movement restrictions and the introduction of telecommuting, the number of internet users is increasing.

Vaccination

We hope that the long-term solution to the 2019 coronavirus disease (COVID19) pandemic will be a globally safe and secure vaccination program that offers a wide range of clinical and socio-economic benefits. Dozens of vaccines are under development, eight of which are currently in Phase 1 trials. (DeRoo et al., 2020).

However, the mere availability of vaccines is not sufficient to guarantee comprehensive immunological protection. The vaccine must be acceptable to the health community and the general public. Depending on various biological, environmental and social behavioral factors, the COVID19 herd immunity threshold can be between 55% and 82% of the population. (DeRoo et al., 2020).

COVID-19 vaccine development began in several research centers and pharmaceutical companies as soon as SARSCoV2 was identified as the pathogen and the first genomic sequence was released. On March 16, 2020, the first candidate for the COVID-19 vaccine, an mRNA-based vaccine developed by Moderna Inc., participated in a Phase 1 clinical trial in the United States and China (ChiCTR2000030906). Other vaccine candidates have been developed, including DNA-based vaccines, inactivated, live attenuated, subunits, and replicative viral vector-based vaccines. (Harapan et al., 2020).

The implementation of COVID-19 vaccination is a government priority for the restoration of national health and the achievement of national goals, as seen in the fourth paragraph of the preamble to the Constitution of the Republic of Indonesia 1945, it fully

protected the Indonesian people and all those who shed Indonesia, promoted the public interest, educated the people, and participated in the realization of a world order based on freedom, eternal peace and social justice (Masnun et al., 2021).

To ensure that the vaccination can be taken by Indonesian citizens, Edward Hiariej, Deputy Minister of Justice and Human Rights (HAM), said anyone who refused to receive the COVID-19 vaccination could be sentenced to up to one year in prison (Ramadhan, 2021).

Hoax

The social media platform can provide instant access to an unprecedented amount of content, amplify suspicious rumors, information and spread hoaxes. Taking into account user preferences and settings, the algorithm conveys and promotes the promotion of content and thus the dissemination of information. This departure from the traditional news paradigm has had a major impact on social cognition and the construction of narrative frameworks. It influences the development of political decision-making, political communication, and public debate, especially on controversial issues. Online users tend to get information according to their worldview, ignore dissenting opinions, and form polarized groups around the general story. In addition, false information can easily increase with high polarization. Some studies have shown that fake news and inaccurate information can spread faster and more than factual news (Cinelli et al., 2020). This so-called inaccurate information is well known as "hoaxes".

Hoax is information that is not true or invalid and is part of the information that cannot be proven to be true. Hoax means deceptive, dishonest, false, or lying words that are misleading or merely for the purpose of joking (Juditha, 2019). In other words, clever and fraudulent cases are also known as hoaxes.

With current technological developments, spreading hoax messages is very easy via social media: the internet via articles, WhatsApp, Instagram, Line and Facebook. In Indonesia, many citizens are active social media users, and the increase in internet users can have an impact as a place to disseminate information and news that is not always true. On social media, people can interact with so many people that each individual or community still has a lot of people who are slightly different and are not critical or cautious in communicating information. And there are still many people who are not very careful when dealing with information and are not critical (Putri et al., 2020).

In addition, you can't limit the sending of messages, and everyone can access them quickly. According to a survey, about 17% of respondents receive fake news every day. They also get news from various social media sources distributed through official recognition

(Rahayu & Sensusiyati, 2020). As a source of printed and electronic forms, the media plays an important role in shaping the public perception and response to COVID-19. Today's fast-growing social media makes it easy for people to establish communication and access information anytime, anywhere (Mardika & Wulandari, 2021).

According to the KIC survey, at least 30% to nearly 60% of Indonesians are exposed to false reports when accessing and communicating through cyberspace. Currently, only 21-36% can recognize false reports (Cahyadi, 2020). The rise in fake news in Indonesia is driven by a crisis of confidence in the mainstream media that the general public is throwing at fake media. According to Yosp Adi Prasetyo, chairman of the press council, hoaxes are the effect of changing the functioning of social media from friendship media, expressing political opinions, and exchanging means of commenting on the opinions of others.

METHOD

Research Participants

Participants amounted to 396 respondents ranging from high school students, college students, and working adults were involved in non-proportional stratified random sampling. The inclusive criteria include: (1) uses the internet on a daily basis, (2) aware of the current Indonesian COVID-19 vaccination program, (3) willing to participate as proven by informed consent.

Data Collection

This study used a quantitative research method using research or survey tools, an approach to literature research through a variety of available data and information sources. The research targets are the internet users that use the internet daily. After collecting data and sources of information, the researchers reviewed the data and information by determining the research subject. The research subject is the result of a framework regarding where the data or research variables are found or where the object of research can be found.

The results of the survey that have been obtained will be continued by presenting the data in tabular form in order to show precise results and easier to analyze. This data processing activity will be made by comparing the presentation results on the poll and the respondents who participated in the questionnaire.

After finishing the survey, an interview was conducted with 17 of the respondents of the survey to further find out the impact of the hoaxes to their decision in taking the COVID-19 vaccination. The saturation of the qualitative interview was fulfilled. The results of the interview are then encoded and analyzed to comprehend the reason why the spread of hoax

can impact the COVID-19 vaccination. The results are then presented in the form of a map that shows the reason why the spread of hoaxes can impact the COVID-19 vaccination.

This study also used a descriptive qualitative approach. The data source has been published online over the last three years and has been obtained from a trusted literature search. For example, hoaxes, COVID-19 pandemics, use of social media, the effects of the internet and hoax epidemics, the worries of vaccination.

Data Analysis

Several steps are used to analyze the data (Sidiq U, 2019). There are three types of these steps: 1) Data reduction. At this stage, the data obtained is very extensive and needs to be investigated in more detail in order to obtain the points or most importantly relevant to the purpose of the research being carried out. 2) Disclosure of data. In qualitative research, data can be published by providing narration and data presentations so that readers can understand the content of the research being conducted. 3) Withdrawal/review of conclusions. At this stage, the researcher can create a summary of the answers to the question.

Study Design

The first step is to determine the formulation of the problem that will be investigated. Regarding this research, a question would like to be addressed, which is why does the spread of hoax impact the COVID-19 vaccination in Indonesia. After determining the problem formulation, data is collected in two methods. The first method was by distributing an online questionnaire that acts as a survey to investigate the exposure of the respondents to the news regarding the COVID-19 vaccination and their trust towards the news even after knowing those news differ from the general perception. The second method was by interviewing the community directly to collect more accurate and profound data. After all the data was collected, an analysis was conducted using qualitative descriptive data analysis techniques. Then, conclusions are created based on the results of the data analysis done earlier.

RESULTS AND DISCUSSION

Participant Demographics

Table 1. Demographics Data of Research Participants

Category	Frequency	Percentage (%)
Gender		
Man	151	38.1
Woman	245	61.9

Age		
15-19	102	25.7
20-24	163	41.2
25-28	83	21.0
>29	48	12.1

Most of the participants in this study were women (61.9%). Most of them are also within the age range of 20-24 years (41.2%). More details of the demographics can be seen in table 1.

Table 2. Distribution of the frequency of how often the respondents who use the internet on a daily basis encounter news about COVID-19 vaccination

Category	Frequency	Percentage (%)
Almost Always (81-100% of the time)	173	43.7
Frequently (61-80% of the time)	85	21.5
Sometimes (41-60% of the time)	83	20.9
Seldom (21-40% of the time)	46	11.6
Almost Never (0-20% of the time)	9	2.3
Total	396	100

The data obtained was converted into a table, namely table 1, which shows the 396 respondents who use the internet on a daily basis. From 396 respondents, 172 respondents (43.7%) almost always encounter news about COVID-19 vaccination, 85 respondents (21.5%) frequently encounter news about COVID-19 vaccination, 83 respondents (20.9%) sometimes encounter news about COVID-19 vaccination, 46 respondents (11.6%) seldom encounter news about COVID-19 vaccination, and 9 respondents (2.3%) almost never encounter news about COVID-19 vaccination.

Social media or the internet has a big enough role for this vaccination activity. It is evident that, when the government suggested vaccinating, data on three topics became the main search topics on social media, including Covid, Sinovac, and Vaccination. From this data, we can conclude that social media has a big enough role in influencing people to participate in vaccines or just as a source of information about vaccines (Kurniawan & Sutan, 2021).

Due to the variety of sources available, social media now has a lot of information about health. Information about health and social media is extraordinary today due to the accessibility and availability of various sources that help social media users get the information they need. There are many COVID-19 hoaxes that can be found on the internet, especially during such a pandemic. In fact, many people in Indonesia do not have accurate information about COVID-19 (Dewayani et al., 2021).

Based on the results and the discussion done by Rahayu and Sensusiyati in 2020, 50 false reports on coronavirus were distributed in January 2020, focusing on the outbreak of coronavirus, treatment and prevention of coronavirus infection, and social behavior in dealing with the virus. This is a challenge for all of us who understand today's technology. The threat posed by mischief has a huge impact. With the spread of COVID-19 hoaxes on social media, people are becoming more and more unconscious, making it difficult to distinguish between real news and hoax messages (Rahayu & Sensusiyati, 2020).

Table 3. Distribution of the frequency of whether the respondents believed the news they see on the internet regarding the COVID-19 vaccination to be accurate even if it differs from the information given by the government

Category	Frequency	Percentage (%)
Almost Always	114	28.7
Most News Sources, Not Certain Sources	127	32.1
Certain Sources, Not Most News Sources	87	22.0
Almost Never	68	17.2
Total	396	100

The data obtained was converted into a table, namely table 2, which shows the 396 respondents who use the internet on a daily basis. From 396 respondents, 114 respondents almost always believe the news about COVID-19 vaccination (28.7%), 127 of the respondents believe most news sources, but not certain sources (32.1%), 87 of the respondents believe certain sources, but not most news sources (22.0%), and 68 of the respondents almost never believe the news about COVID-19 vaccination (17.2%).

Trust is an intrinsic and potentially controlling component of successful uptake of the COVID-19 vaccine. Findings suggest that public trust in government is very low with regard

to vaccine acceptance and may contribute to public adherence to definite measures (Astuti et al., 2021). This could possibly be caused by the spread of misinformation and hoaxes.

Study done by Mukhi and Medise (2021) shows that health workers experience problems in persuading parents to complete vaccination, namely parental fear of visiting facilities, difficulty in contacting parents, and anti-vaccine rumors or hoaxes about COVID-19. This has certainly put a great stress on Indonesia's current most crucial target, which is the COVID-19 vaccination of all Indonesian citizens.

The data obtained from the interview that has been conducted was analyzed, coded, and converted into the plot below.

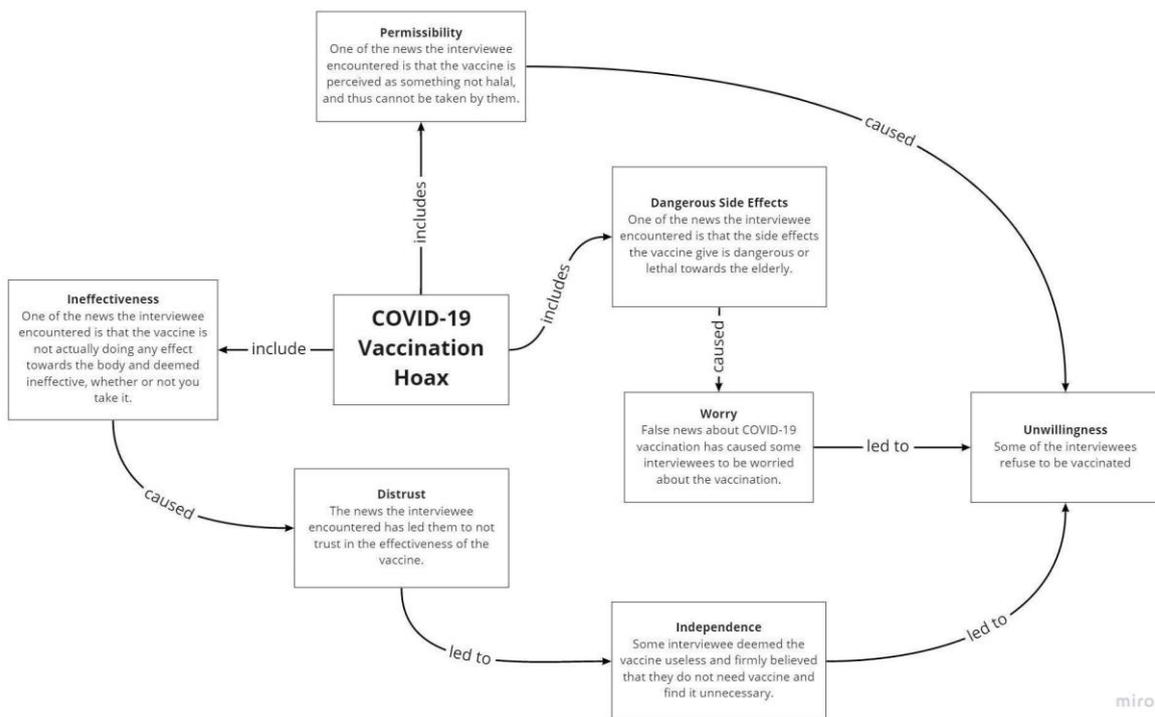


Figure 1. Interview Results

According to the interviewee, the COVID-19 vaccination news that they have been exposed to includes news about the ineffectiveness of vaccination, the permissibility of the vaccine which is not allowed to be consumed by the muslims, and the dangerous side effects the vaccine possesses. These news have caused them to distrust the vaccine and to be worried about the vaccination, some of the interviewees even believed that they could stay healthy without the need of vaccination. These news have caused them to be unwilling to be vaccinated.

The spread of hoax messages affects the community. These hoax messages create worries, misunderstandings, and noise, and the effects they cause are negative because many people are harmed by the messages and ridiculous to those who consume them. Hoaxes are

also a way to distract the problem, divide the masses, and cheat. The spread of hoaxes is mainly done by irresponsible people who know that the news is a lie and deliberately spread fake news in order to attract attention and guide public opinion.

Hoaxes also seem to have a significant impact on older people who are feeling the threat of COVID-19. There is a lot of news that is not yet known to young people and millennials, as well as the unpleasant elderly. In this study, search results show that adults and the elderly are the ones who actually experience anger and are afraid of the most confusing news, but adults have a better understanding of health and other aspects (Rayani, Purqoti, 2020).

In this regard, people are afraid to get vaccinated and even refuse. According to an online survey data done by Putri et al. (2021), with 399 respondents, 81.2% of them are willing to be vaccinated, while the other 48.1% have anxiety about vaccination because of the many hoaxes that exist. Some of the hoaxes that spread have to inject the vaccine into the male penis, the COVID-19 vaccine is genetically modified, dead, destroys indigenous people, and contains Vero cells from green monkeys in Africa. Only Indonesia ordered the COVID-19 vaccine (Wicaksono, 2021). Hoaxes cause mental illness in the community during a pandemic. The problematic situation, combined with inadequate reporting and information literacy, has created new barriers to mitigate the effects of outbreaks during a pandemic (Kurniawan et al., 2020).

The lack of public understanding of vaccination is one of the issues that the Indonesian Ministry of Health must address as it is one of the factors as to why the Indonesian community can easily accept hoaxes related to the vaccination (Susilo, Putranto and Navarro, 2021). Take the example in the city of Depok, it is known that the final result after a research was carried out was the amount of people who had received the 1st and 2nd vaccinations in the city of Depok starting from January 14, 2021 to August 21, 2021, amounted to only 613,275 out of the population of 1,886,890 (Nalawati & Liliana, 2021).

Apart from all our anxiety about the COVID-19 pandemic, there are some simple things that we can apply to take care of ourselves, namely by paying attention to our nutritional balance, so that our immune defenses are maintained, and always applying health protocols. Even though official information has been given regarding simple ways to prevent COVID-19, there is still disinformation circulating about prevention which can actually increase the number of COVID-19 cases (Rachmah et al., 2021).

Vaccine hesitancy and misinformation present major barriers to achieving community coverage and immunity. Unless and until the origins of the wide variations in willingness to

receive a COVID-19 vaccine are better understood and addressed, differences in vaccine coverage between countries could potentially delay global control of the pandemic and subsequent social and economic recovery (Généreux et al. 2020). The events above should not have happened, or at least not that bad, if the community had a good literacy culture, especially COVID-19 literacy (Harisanty et al. 2020).

CONCLUSION

After the COVID-19 pandemic outbreak, internet and social media users in Indonesia have increased significantly. In addition, with current technological developments, spreading news is not a difficult task as it could be easily distributed through social media. During the pandemic, many of those news are related to COVID-19 and as many internet users grow, many of the citizens are exposed to those news, including the fake news or hoaxes. Some people almost always believe in those news, including the news that could have been fake. These fake news or hoaxes caused people to doubt the effectiveness of COVID-19 vaccine. Some are also misinformed about the side effects of the vaccine. These cases have caused few people to refuse to be vaccinated. This shows that the distribution of hoax impacts heavily on the COVID-19 vaccination in Indonesia because it has made few people to be worried and develop trust issues towards the vaccination, to not believe in the effectiveness of the vaccination, and to doubt the permissibility of the vaccine, leading them to not wanting to be vaccinated, thus delaying COVID-19 vaccination in Indonesia.

RECOMMENDATION

For further research, it is recommended to prepare clearer and more in-depth questions to be asked to respondents, not forgetting to conduct a longer survey so that more data from various aspects can be obtained. The participants of the interview must also represent every strata investigated in the study. This study needs more respondents to have a more validated generalization.

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