

Conference Paper

Perspectives of COVID-19 Vaccines Among Indonesians: A Thematic Content Analysis of Online Media

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ORCIDHenik Tri Rahayu: <https://orcid.org/0000-0002-9623-771X>**Abstract.**

The world continues to face the COVID-19 pandemic, including in Indonesia. The number of COVID-19 infections and deaths continue to escalate. COVID-19 vaccines were globally distributed and became a vital tool to prevent the spread of COVID-19 and reduce its life-threatening effects. However, community perspectives regarding COVID-19 vaccines are still varied, which is vital for promoting vaccine programs successfully. The purpose of this study was to explore the community perspectives of COVID-19 vaccines in Indonesia. This was qualitative research that utilized secondary data from online news media. The data were analyzed through content analysis using the NVivo 12 Plus software. The findings indicated that Indonesian community perspectives regarding COVID-19 vaccines are varied. Some accept the vaccines and think they are vital to prevent the increasing number of infections and stop the COVID-19 pandemic; however, some think that the COVID-19 vaccine is only a political issue, not essential, and some do not believe that COVID-19 exists. Negative beliefs or perspectives of COVID-19 vaccines are a barrier to successfully implementing vaccine programs. This study highlights the importance of understanding community perspectives and identifying problems in vaccination programs. Healthcare providers can utilize the findings to provide better health education, particularly in the context of the pandemic.

Keywords: COVID-19, vaccine, community perspective, online media, content analysis, NVivo analysis

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1. Introduction

In December 2019, an outbreak of pneumonia of unknown origin occurred in Wuhan City, Hubei Province, China. The genome was identified as a new type of coronavirus related to SARS-CoV, so it was named Severe Acute Respiratory Syndrome Coronavirus Type 2 (SARS-CoV-2), in which SARS-CoV-2 is a β -coronavirus belonging to the subgenus Sarbecovirus (1). The global spread of SARS-CoV-2 and thousands of deaths from the Coronavirus Disease (COVID-19) caused the World Health Organization to declare a pandemic on March 12, 2020 (1).

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By the middle of September 2021, the number of confirmed cases of COVID-19 globally has reached over 226.8 million cases, including over 4.6 million deaths which day by day still have rates of new cases (2). In Indonesia itself, there were about 4.2 million confirmed cases of Covid-19, with an exceeding 140 thousand deaths reported until September 20, 2021 (2). The World Health Organization [2] reported that over 5.6 billion vaccine doses had been administered worldwide, and more than 117.5 million doses were also administered in Indonesia. So far, the world has paid a high price for this pandemic in terms of loss of life, economic impact, and increased poverty (1, 3).

The COVID-19 pandemic represents a major global health crisis. The vast number and fast spread of coronaviruses (COVID-19) impact health problems and social, economics, education, politics, and almost all aspects of daily life. Unfortunately, the unavailability of an effective antiviral drug and approved vaccine worsens the situation more critically (4). The most potent and most effective weapon that society has against this virus is its prevention. The main points to prevent the spread to society are hand hygiene, social distance, and quarantine. The improved testing capacity also enables the reduction of secondary cases with stricter quarantine rules by detecting more COVID-19-positive patients in the community (5). Besides, covid-19 vaccination was also a practical choice to control the spread of the virus and prevent more severe complications or infection effects (5, 6).

However, vaccines hesitancy has happened in many countries around the world. Based on the Strategic Advisory Group of Experts on Immunization (SAGE), vaccines hesitancy was defined as “delay in acceptance or refusal of vaccination despite the availability of vaccination services” (7). Complacency, convenience, and confidence are all factors that influence attitudes toward vaccination acceptance (7, 8). Vaccination was thought unneeded due to complacency or a low assessment of the disease’s danger. In comparison, confidence relates to the belief in the safety and effectiveness of vaccinations and the competency of healthcare systems. Vaccine availability, price, and delivery in a comfortable setting are all examples of convenience (9). Besides, the feasibility and safety of vaccine campaigns to suppress coronavirus 2019 disease (COVID-19) are not the only factors to consider (8). The general public’s and healthcare professionals’ acceptance of vaccines appears to play a critical part in the pandemic’s efficient implementation (8).

Vaccine hesitancy remains a substantial challenge in some middle and low countries, including Pakistan and others (8, 10-12). The amid various conspiracy theories were influenced this condition. Various theories make the acceptance rate of covid-19 vaccines low (12). These conditions were similar happened in Indonesia. Besides, in Indonesia,

vaccine hesitancy was also influenced by beliefs perceived to vaccines. In the beginning of government announcement due to covid-19 vaccines, still debated and results in pros and cons, resulting in a pretty low acceptance rate of these vaccines. Although the acceptance rate of covid-19 vaccines has risen, many people still did not receive the vaccination for many reasons. Thus, the need to know the reasons for refusing covid-19 vaccination was essential to identify the problems and solve the problems to increase the acceptance rate and successfulness program of covid-19 vaccination in Indonesia. Therefore, this study aims to explore the perspective of Indonesian people about covid-19 vaccines and the reasons they refused and hesitated the covid-19 vaccination.

2. Methods

2.1. Research Design

This study was a qualitative review conducted by utilizing the online media news to explore Indonesia's perspective towards covid-19 vaccines. The sample of online media in this study consisted of 28 articles from five famous online media in Indonesia, including kompas.com, pikiran-rakyat.com, tribunnews.com, ugm.ac.id, and voaindonesia.com.

The online media news articles were captured using NVivo captured menu, and the data were managed and analyzed using QSR Nvivo 12 software.

3. Results

3.1. Descriptions

Of 28 articles, ugm.ac.id has the least number of articles related to covid-19 vaccines included in this study (n=2), and the other online media has 6-7 articles included. Table 1 described the number of articles that mentioned the themes of reasons for refusing COVID-19 vaccines. There were ten themes generated from the articles related to reasons for COVID-19 refusal. A darker color highlighter indicates more number articles that mention the themes. Reason 7 (hesitating the vaccines' effectiveness) and reason 6 (doubting the sides effects and safety of COVID-19 vaccines) were the two highest reasons for vaccine refusal (of 22 and 16 articles, respectively). While reason 4 (beliefs and values) and reason 8 (environmental influences) were the two most minor reasons found in the articles.

Figure 1 shows the clustered analysis of themes of reasons for COVID-19 vaccines refusal and media online. This figure indicated that most articles' content was about the reasons for vaccination refusal; however, only ugm.co.id has content related to the effects of vaccinations or refusal. Then, Figure 2 shows the inter themes correlations (items clustered by word similarity, with $r > .4$), indicating that almost all themes were correlated with each other. For instance, doubting the side effects and safety of the vaccines and hesitating the vaccine's effectiveness have correlated with the anti-vaccine group and environmental influences. Then, the reasons for not wanting to pay for the vaccination were correlated with environmental influences, lack of information, anti-vaccine groups, and other factors. Besides, the reasons of perceived that no need for vaccination was correlated with environmental influences, lack of information, beliefs and values, and distrust of COVID-19 virus existence. In addition, further investigates of main themes, we found subthemes of beliefs and values, which indicates three subthemes of beliefs and values, including anti-vaccine group, doubting the halal of vaccines, and perception of vaccines itself, which the second reasons (doubts the halal of vaccines) were the most reason related this beliefs and values (Figure 3).

Finally, we utilized a mind map to illustrate the themes and subthemes of reasons and effects for COVID-19 vaccination refusal (Figure 4a and b). The mind map demonstrated ten main reasons for COVID-19 refusal, which beliefs and values have three subthemes mentioned previously, and the distrust of viruses consists of three subthemes: conspiracy, hoaxes, and propaganda. The conspiracy itself has five subthemes, including [1] virus came from 5G signal radiation, [2] anti-covid necklace, which some people beliefs that COVID-19 can be prevented and healing by using an anti-covid necklace, [3] COVID-19 is only man-made with hidden purposes, [4] COVID-19 vaccination is a way to microchip installation to human bodies, and [5] its only profit seeking-pharmaceutical business. Then, the hoaxes also have fives subthemes, including [1] Indonesian people will be killed by China, [2] someone said have met God and God has said that we no need vaccination for this disease, [3] vaccines can cause infertility, [4] vaccines cause morbidity and mortality, and [5] the vaccines injection needles of world's leader were only charade or fake.

The mind map of vaccination refusal effects consisted of three main themes: cannot gain herd immunity, environmental effects, and individual effects (Figure 4b). The environmental effects include [1] accelerating and expanding disease transmission, [2] extending the COVID-19 pandemic, and [3] increasing mortality risk for vulnerable

groups. In comparison, individual effects include [1] higher risk of infected and transmitting, [2] higher risk of mortality, and [3] potential to experience more severe symptoms when infected.

TABLE 1: Themes reasons of refusing the vaccines.

Themes reasons of refusing the vaccines	kompas.com (n=6)	pikiran-rakyat.com (n=7)	tribunnews.com (n=7)	ugm.ac.id (n=2)	Voaindonesia (n=6)	Total (n=28)
No need vaccines	2	0	1	0	2	5
Other factors	1	2	1	0	1	5
Distrust of vaccines	1	0	1	1	2	5
Beliefs and values	0	0	0	1	0	1
Lack of information	1	1	1	1	2	6
Doubts side effects and safely	4	4	4	0	4	16
Hesitate the vaccines effectiveness	7	4	4	0	7	22
Environment influences	0	0	0	1	0	1
Don't want to pay vaccines cost	1	0	1	0	2	4
Vaccines is poison and have a negative effect to the body	0	1	0	0	1	2
Total	17	12	13	4	21	67

4. Discussions

The study's findings demonstrated variations of the reasons Indonesian peoples refuse the COVID-19 vaccination taken from the online media articles. It indicates that the problems of vaccine hesitancy were still serious among Indonesian. The findings suggest that hesitating the vaccine's effectiveness and doubting its side effects and safety were the two highest reasons for refusal. As the COVID-19 is a new disease that still limited resources of guidelines and research support its treatments, including COVID-19 vaccinations that are still continually developed, its effectiveness and safety hesitancy was commonplace (11). These results were supported by previous studies that mentioned that the determinants of three main aspects, including confidence, complacency, and convenience, which hesitating vaccine's effectiveness and safety, represent vaccine confidence (7). Then, these study findings also highlight that complacency, which denoted the low perceptions of disease risks (7, 8), existed in the COVID-19 vaccination. For instance, some people express that they do not want to self-pay the vaccination, have specific beliefs and values related to vaccination, felt no need for vaccination because felt healthy. Furthermore, for vaccine convenience, in the early periods of the policy of COVID-19 vaccination, it might exist because of the limit of vaccine availability.

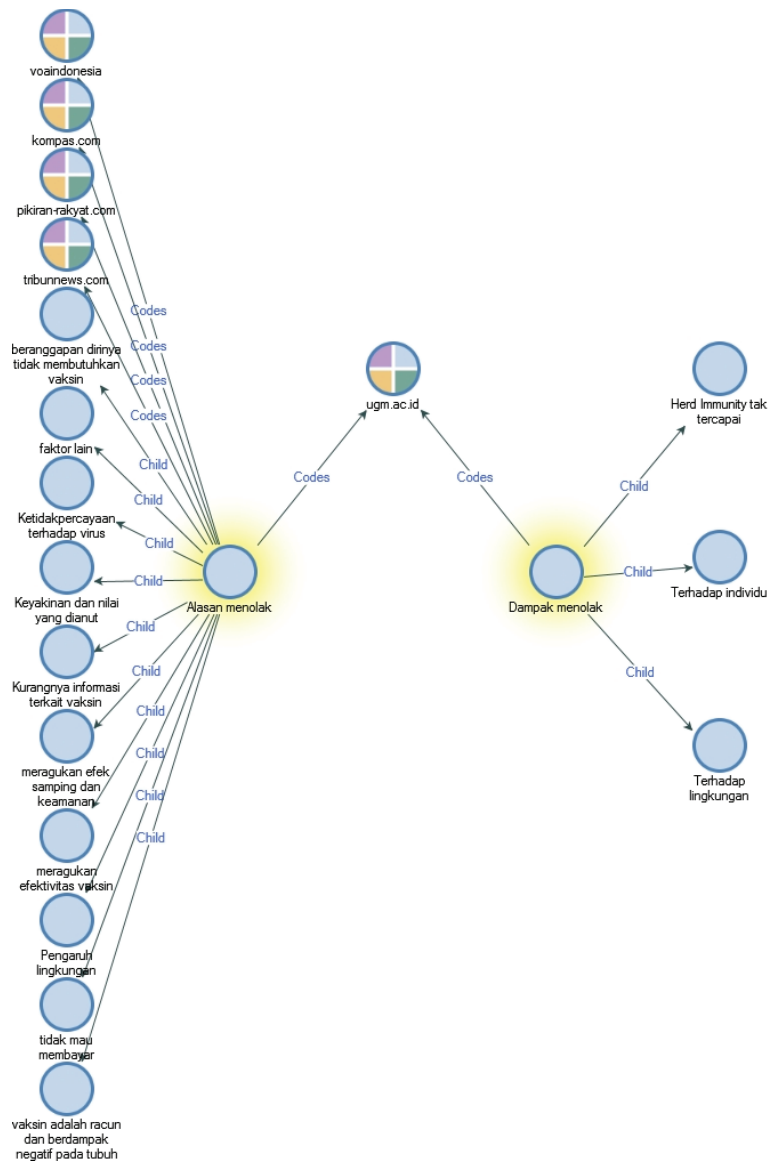


Figure 1: Clustered analysis of themes of reasons for COVID-19 vaccination and media online.

Currently, it is not a problem since the government has already increased the number of vaccines and provided vaccines for almost all people.

Vaccine hesitancy remains a barrier to population immunization against highly infectious diseases, which vaccine hesitancy occurred not only among the community but also among some health care providers who did not directly responsible treat COVID-19 disease (13) and some medical students (14). Although this study did not identify each type of population, the findings demonstrated that vaccine hesitancy existed among some Indonesian. Some of the unique reasons for COVID-19 refusals, such as beliefs and values regarding the COVID-19 vaccines and other political issues, indicated the uniqueness of the Indonesian people. Beliefs and values related to vaccination, such

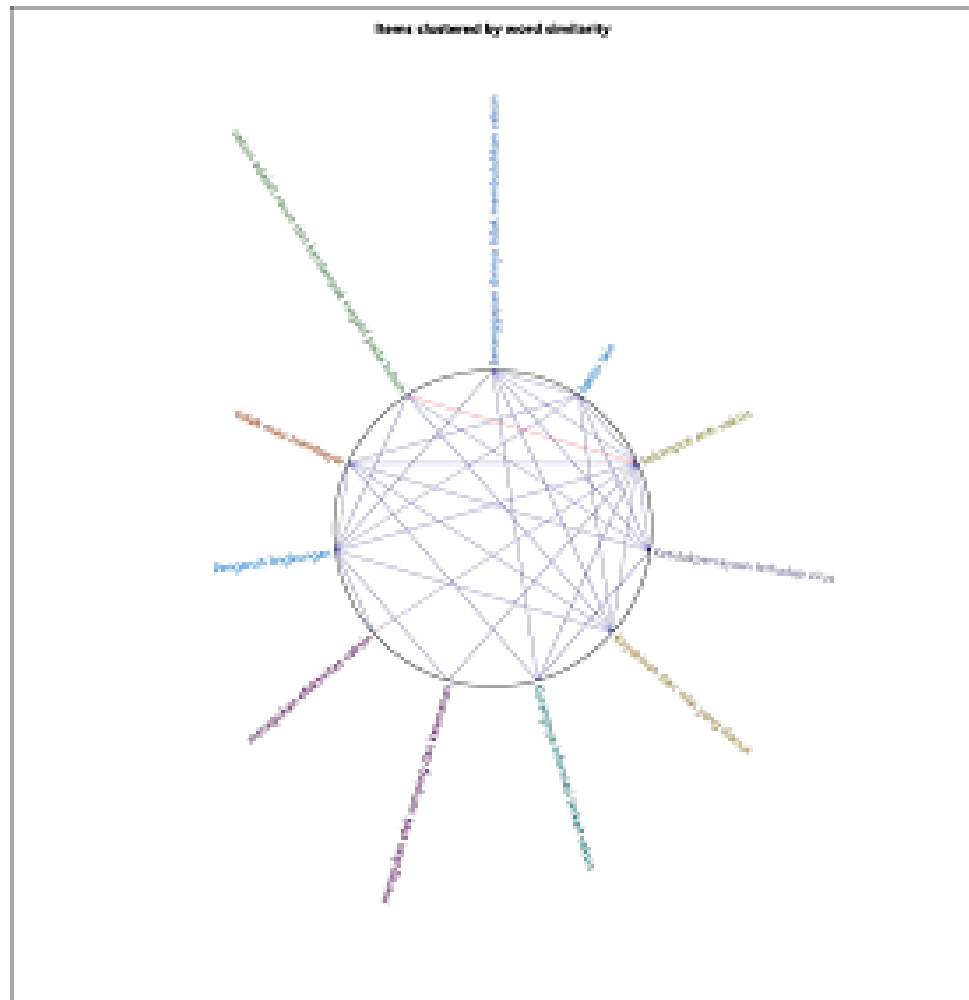


Figure 2: Items clustered by word similarity of reasons for COVID-19 vaccination refusal $r > .4$.

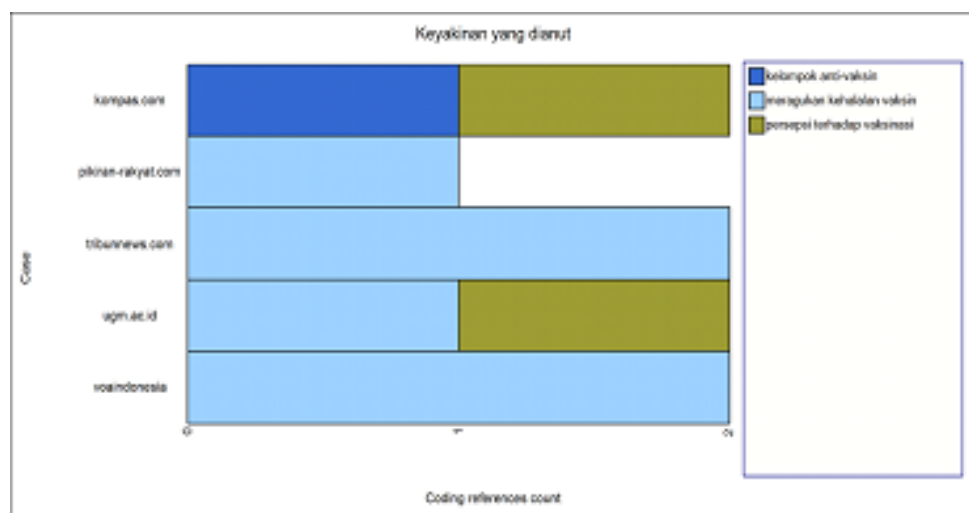


Figure 3: Beliefs and values subthemes.

as doubts about the halalness of the vaccines, were shared as most Indonesian were Muslim, and halalness was a vital issue for them. Then, the distrust of the existence of

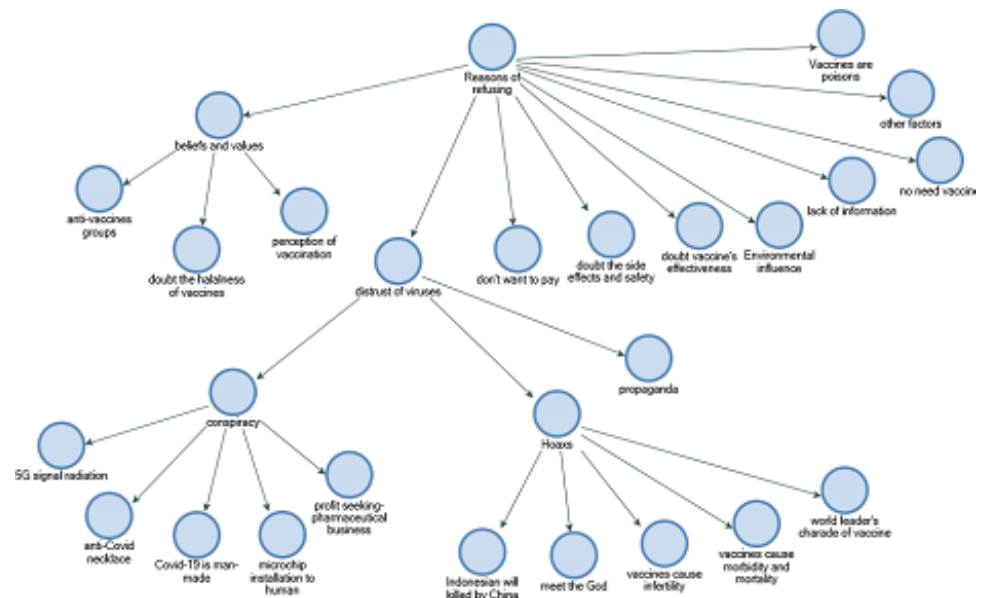


Figure 4: Mind map of reasons for COVID-19 vaccination refusal.

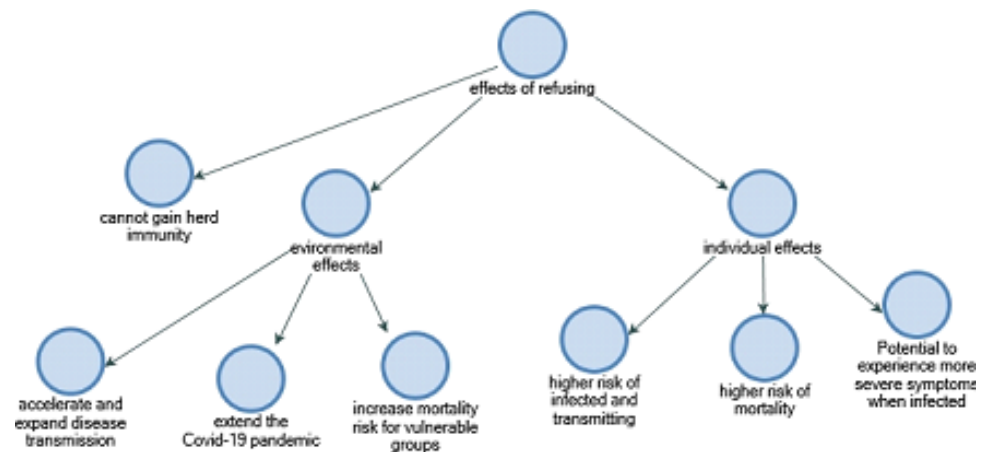


Figure 5: Mind map of COVID-19 vaccination refusal effects.

the COVID-19 virus, including the beliefs of conspiracy, hoaxes, and propaganda, was influenced by many factors, mainly a low level of education among the community so that they so easily affected irresponsible ones. The findings mentioned conspiracy related COVID-19 virus existence including such as virus COVID-19 were man-made or artificial, caused by 5G signal radiation, can be cured using an anti-COVID necklace, vaccination was the way to microchips installation to the human body, and it is only a profit-seeking of the pharmaceutical business. Furthermore, the hoaxes such as Indonesian will be killed by Cina, a man argued that he was met the GOD and said that the GOD asked not to take the vaccination, vaccines cause infertility, morbidity, and mortality, and lastly, the injections of world leaders' were beliefs as only a charade.

All of the problems related to vaccine refusals might affect environmental and individual effects. Mainly aims of the vaccines, refusal cannot gain a herd immunity of COVID-19.

The environmental effects include accelerating and expanding the disease transmission, extending the COVID-19 pandemic, and increasing mortality risk for vulnerable groups. The individual effects might result in a higher risk of being infected and transmitting COVID-19, increase the risk of individual mortality, and increase the potential to experience more severe symptoms when infected. It highlights that overcoming the refusal vaccine problem was vital to gain the goals and preventing the risks.

5. Conclusions

This study highlighted the factors of COVID-19 vaccine refusals among Indonesian. The government and healthcare providers should have more efforts to reduce the refusals by providing proper education, being good role models for successful COVID-19 vaccinations, and correcting misunderstandings related to COVID-19 and its vaccination.

6. Research limitation

This study has some limitations that are worth mentioning. First of all, the data were only used a tiny part of online media; further study may use broader data. The limitation of utilizing online media was that the data were news that could not provide exact scientific data; thus, it only figures typical pictures, not the exact number as a quantitative or qualitative original study.

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