JURNAL KOMUNIKASI

P-ISSN: 1907-848X, E-ISSN: 2548-7647
Homepage: https://journal.uii.ac.id/jurnal-komunikasi

From traditional to digital media: Sources of information and resistance behavior of COVID-19 vaccination

Dari media tradisional ke digital: Sumber informasi dan perilaku resistensi vaksin COVID-19

Azizun Kurnia Illahi, Nilam Wardasari, and Yun Fitrahyati Laturrakhmi

To cite this article:
Illahi, A. K. ., Wardasari, N., & Laturrakhmi, Y. F. . (2025). From traditional to digital media: Sources of information and resistance behavior of COVID-19 vaccination. *Jurnal Komunikasi*, 19(2), 371–392. https://doi.org/10.20885/komunikasi.vol19.iss2.art11

Published online: April 26, 2025

JURNAL KOMUNIKASI

P-ISSN: 1907-848X, E-ISSN: 2548-7647
Volume 19, Nomor 2, April 2025, Hal 371-392
DOI: 10.20885/komunikasi.vol19.iss2.art11

Check for updates

From traditional to digital media: Sources of information and resistance behavior of COVID-19 vaccination

Dari media tradisional ke digital: Sumber informasi dan perilaku resistensi vaksin COVID-19

Azizun Kurnia Illahi[1]*, Nilam Wardasari[2], and Yun Fitrahyati Laturrakhmi[3]

[1] Ilmu Komunikasi, Fakultas Ilmu Sosial Dan Ilmu Politik, Universitas Brawijaya, Malang, Indonesia. Email: azizun.nia@ub.ac.id
[2] Ilmu Komunikasi, Fakultas Ilmu Sosial Dan Ilmu Politik, Universitas Brawijaya, Malang, Indonesia. Email: nilamwardasari@ub.ac.id
[3] Ilmu Komunikasi, Fakultas Ilmu Sosial Dan Ilmu Politik, Universitas Brawijaya, Malang, Indonesia. Email: yun.fitrahyati@ub.ac.id
* Corresponding author

Article Info

Article History
Submit:
October 13, 2023
Accepted:
March 21, 2025
Published:
April 26, 2025

Keywords:
Communication network, COVID-19 vaccine, information reference, message

Abstract: The study aims to map rural communities' attitudes and acceptance of the COVID-19 vaccine, examine the sources of information they rely on, and analyze the communication networks formed among vaccine-resistant groups. Findings reveal a balance between digital and conventional information sources in accessing COVID-19-related information, supported by sufficient human resources and infrastructure in certain areas. Social media and television emerge as the dominant sources of vaccine-related information, indicating high exposure to media content. Meanwhile, healthcare workers, health cadres, and government institutions serve as secondary sources of information. Notably, word-of-mouth remains a significant channel for spreading misinformation, contributing to high acceptance of hoax messages and reinforcing vaccine resistance within the rural community of Tawangsari.

Kata kunci:
Jaringan komunikasi, pesan sumber informasi, vaksin COVID-19

Abstrak: Penelitian ini bertujuan untuk memetakan sikap dan penerimaan masyarakat desa terhadap vaksin COVID-19 serta sumber informasi yang digunakan, menganalisis jaringan komunikasi yang terbentuk pada masyarakat resisten vaksin. Hasil penelitian menunjukkan adanya keseimbangan sumber informasi digital dan konvensional dalam mengakses informasi terkait COVID-19 yang didukung dengan sumber daya manusia dan infrastruktur yang memadai di beberapa wilayah. Dominasi media sosial dan televisi sebagai sumber informasi terkait vaksin menunjukkan terpaan informasi tinggi. Sedangkan tenaga kesehatan, kader kesehatan dan pemerintah sebagai sumber informasi kedua. Word of mouth menjadi sumber informasi yang masih dominan terhadap isu atau pesan hoax yang riskan menyebabkan perilaku resisten masyarakat Desa Tawangsari terhadap program vaksin dengan data intensitas penerimaan pesan hoax terhadap vaksin yang tinggi.

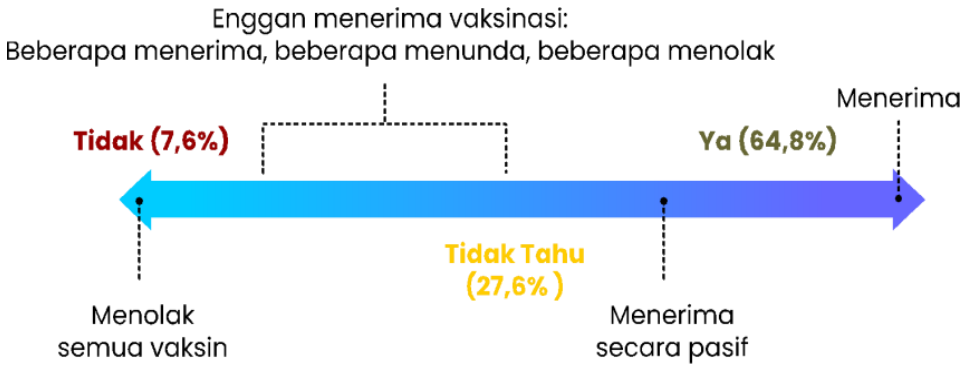
INTRODUCTION

Efforts to prevent the spread of COVID-19 in Indonesia continue to be carried out. This began with the shift from working in offices to working from home, online schooling, the implementation of social distancing, the enforcement of Large-Scale Social Restrictions (PSBB), and currently, the implementation of Micro Community Activity Restrictions (PPKM) in Java and Bali from February 23 to March 8, 2020. However, despite these efforts, the number of positive COVID-19 cases in Indonesia continues to rise. As of February 23, the number of positive COVID-19 cases has reached 1.29 million, with an additional 10,180 cases reported in one day (GitHub, 2021).

This year, the Government is striving to ensure that all Indonesians receive the COVID-19 vaccine. This effort is reinforced by the Presidential Regulation (Perpres) on the procurement of vaccines and the implementation of the vaccination program to address the COVID-19 pandemic. The regulation stipulates that the Government will prepare the procurement and distribution of vaccines, as well as oversee its implementation (Kemkes RI, 2020). However, since the dissemination of information related to the COVID-19 vaccine through the media, there has been both support and opposition within society.

The Ministry of Health of the Republic of Indonesia has conducted research through an online survey that took place from September 19 to 30, 2020. The survey had more than 115,000 respondents from 34 provinces in Indonesia. The data collected revealed that respondents with lower incomes had the least knowledge about the vaccine. Knowledge about this information tended to increase according to the respondents' economic status. This may be attributed to the higher access to information available to those with higher economic status. The availability of vaccine-related information influences public acceptance of vaccination, as illustrated in the figure 1 (Kemkes RI, 2020).

Figure 1
Vaccination Acceptance



Source: Kemkes RI, 2020

A study conducted by Rachman and Pramana mentioned that the public also provides responses and opinions through social media, one of which is Twitter. The research involved filtering the data to capture only responses and opinions originating from the public, excluding opinions from non-public accounts such as institutions, companies, or news portals. From this filter, 4,941 tweets were collected. The results of the study showed that the public sentiment towards the COVID-19 vaccination was dominated by neutral sentiment, which accounted for 46.8%. Positive sentiment accounted for 29.6%, while negative sentiment accounted for 23.6%. In addition to the findings on public sentiment towards COVID-19 vaccination, the study also found public opinions regarding the vaccine's usability test and the halal certification of the vaccine (Rachman & Pramana, 2020).

The findings of the study by Rachman and Pramana are also consistent with research conducted by the Ministry of Health in collaboration with the WHO and UNICEF, which indicates that respondents expressed concerns about the safety and effectiveness of the vaccine, particularly due to distrust in the vaccine stemming from issues regarding its halal status. In fact, 30% of respondents stated that they rejected the vaccine due to safety concerns, while the remaining respondents gave various reasons, such as concerns about side effects and religious reasons (Kemkes RI, 2020b).

Similarly, a study conducted by Shahrun et al. in India found that 86.3% of respondents planned to get the COVID-19 vaccine if it became available, while 13.7% of respondents expressed no intention to be vaccinated. However, when respondents were asked about their views on COVID-19 vaccination, 64.4% expressed concerns about the side effects following the vaccination, 20.2% of respondents were skeptical about the vaccine's effectiveness, and 12% believed that the COVID-19 vaccine was part of a conspiracy (Sharun et al., 2020).

The findings of several previous studies mentioned above share similar results and data, namely the lack of access to information among the public, leading to both support and opposition regarding COVID-19 vaccination. The Government has been unable to effectively design communication strategies that also consider the geographical diversity of the population, the varying educational levels of the public, and has not made maximum efforts in the educational process related to the preparation for the COVID-19 vaccine. This includes the need for proper risk communication and community empowerment. The lack of community empowerment by the Government has made it difficult for the public to find reliable sources of information and access information about the COVID-19 vaccine, particularly for those in remote areas, those with limited access to healthcare facilities, the poor, and the vulnerable.

The discussion on resistance behavior in rural groups within the context of health communication is indeed rarely encountered. However, the discussion on resistance in the treatment process, as written by Cheraghi et al., (2023) which explains that changes in components of care are one of the factors contributing to resistance in the treatment process itself. In addition to changes in the treatment process, there are other factors that contribute to the development of resistance, such as individual, interpersonal, and organizational factors (Cheraghi et al., 2023). Another study by (Cahyani et al., 2019) also mentions that

human behavior and the environment have the potential to influence disease. Contact with disease can originate from human dwellings themselves. Infectious diseases, as a category of communicable diseases, were found to have a higher prevalence in conditions of uninhabitable dwellings. Homes that do not meet health standards facilitate the transmission of diseases through various media.

However, specifically in the context of the pandemic, only a few previous studies have recommended the need for the design and implementation of tailored communication interventions aimed at minority groups and specific populations ((Kalbfleisch, 2009)(Kelly-Hanku et al., 2019)(Crouse Quinn, 2008)). This highlights that these groups are not only vulnerable during the disaster itself but also before, during, and after the occurrence of the disaster (Rowel, R; Sheikhattari, P; Barber, T.M.; Evans-Holland, 2019), but they also develop their own values and theories about health (Dutta, M.J.; Basu, 2007; Dutta, 2004) which can be very different from the biomedical perspective based on scientific approaches, as it dominates the views on health and treatment (Apker, 2012). Nelson, Pomerantz, & Bushy (2007) even identified distinguishing factors between rural communities and urban societies that impact the unique characteristics of health contexts in rural areas. The same literature reveals that cultural values, religious beliefs, and personal values have a significant influence on the understanding of diseases, how health information is accessed, as well as decisions regarding health interventions (Nelson et al., 2007).

On previous studies, there has been no research focusing on communication network studies within rural communities related to the COVID-19 vaccine. Therefore, this study offers novelty by identifying the communication networks in rural communities. By conducting research on communication networks in rural areas, it will be possible to map attitudes and acceptance of the COVID-19 vaccine among rural populations, identify access to information sources about the COVID-19 vaccine, examine communication networks formed among rural communities opposing the vaccine, and analyze the characteristics and message framing in the dissemination of information about the COVID-19 vaccine in rural communities.

This study also utilizes the concept of communication networks, specifically the communication network concept proposed by Wilbur Schramm (1973). Schramm's communication network has a relational type of communication network. The main component of this concept is that information represents the relationship among participants as active receivers in the communication process. This network emphasizes that a set of communication acts is focused on a set of informational signs within a particular relationship (Rogers & Kincaid, 1980).

Based on the explanation of the concept and previous research above, this study is specifically aimed at mapping the attitudes and acceptance of the community toward the COVID-19 vaccine, as well as identifying public access to information sources about the COVID-19 vaccine in Tawangsari Village, Pujon, Malang Regency, identifying the communication networks formed among individuals opposing the COVID-19 vaccine in Tawangsari Village, Pujon, Malang Regency, analyzing the characteristics and framing of messages in the dissemination of COVID-19-related information and designing a campaign and educational model on COVID-19 vaccination tailored for a specific population, namely rural communities, particularly in Tawangsari Village, Pujon, Malang Regency. Dengan menggunakan konsep jaringan komunikasi

This study has implications not only for the design of vaccination program models during the pandemic period. The model design as an implication of this research is not limited to COVID-19 only vaccination campaign and education programs, but can also be applied to similar health programs that specifically target rural communities with characteristics similar to those of the informants in this study.

The occurrence of the global COVID-19 pandemic further highlights the contribution of communication science in the context of health, not only at the academic study level but also in providing practical applications of communication in the health sector. As Viswanath (Donsbach, 2008) stated, health communication is the study and application of the development, formulation, and dissemination of health-based information, interactions between individuals, social actors, and institutions related to health, and its impact on the public (individuals, communities, and institutions).

Various academic studies still view communication merely in the function of generating and delivering health-related messages, meaning that communication is simply seen as a tool to achieve behavioral change (e.g., Edelsburg, et al., 2014; Shizamaki & Takenaka, 2015; Kostigina, et al., 2020). However, ideally, communication in the context of health should also function to empower the community by providing sufficient knowledge and understanding about specific health issues and interventions, as emphasized by Muturi (Schiavo, n.d.). Specifically, in the context of the pandemic, several previous studies have recommended the need for targeted communication design and interventions for minority groups and specific populations (Kalbfleisch, 2009; Kelly-Hanku et al., 2019; Crouse Quinn, 2008). This is because these groups are not only considered the most vulnerable before, during, and after a disaster (Rowel et al., 2019), but they also build their own values and theories about health (Dutta & Basu, 2007; Dutta, 2004), which may be vastly different from the biomedical perspective based on scientific approaches that dominate views on health and treatment (Apker, 2012). Nelson, Pomerantz, and Bushy (2007) even identified the distinguishing factors between rural communities and urban societies that impact the unique characteristics of the health context in rural areas. The same literature revealed that cultural, religious, and personal values greatly influence the understanding of diseases, the way health information is accessed, as well as decisions regarding health interventions (Nelson et al., 2007).

Communication in rural areas is also unique, as rural communities still rely on word-of-mouth communication (WOM), especially when communication actors aim to introduce health programs to the community. Thomas emphasizes that WOM and spokespersons can serve as tools for communication processes between the community and organizations. One of the objectives of community outreach initiatives is to generate word-of-mouth (WOM) communication about the programs or services provided. Efforts to generate positive word-of-mouth support are crucial because there is often a tendency for WOM communication to be negative. Meanwhile, spokespersons are considered to possess many qualities that support effective communication—such as recognition, credibility, authority, and so forth. Spokespersons can take various forms, depending on the nature of the organization, the material being presented,

and the ultimate goal of the communication initiative (Thomas, 2006).

METHOD

This research uses a communication network analysis method. The study will examine how the flow of information occurs within the category of the community in Tawangsari Village that resists the Covid-19 vaccine. An interpretive approach using a mixed method in communication network analysis allows the researcher to inductively identify new network flows that contribute to other network flows, and so on, using relational data. Outside the network structure, it can be used to explore what flows (i.e., what is transmitted) across the network (Williams & Shepherd, 2017). This research uses a quantitative method with relational data to examine the involvement of actors and the network flows formed by the community that resists the Covid-19 vaccine. In using the quantitative research method, the researcher distributes questionnaires to the residents of Tawangsari Village aged 16-60 years. This age range is based on the age group eligible to receive the Covid-19 vaccine. Meanwhile, a qualitative method with a descriptive type is used to analyze the characteristics and message framing in the dissemination of information about the Covid-19 vaccine. The data obtained using this qualitative method is gathered through interviews with residents of Tawangsari Village. This research is located in Tawangsari Village, Pujon District, Malang Regency. The reason for choosing Tawangsari Village is because it has a rural community with characteristics typical of village life. The majority of the population in Tawangsari Village work as farmers, agricultural laborers, and livestock breeders.

The population in this study consists of the residents of Tawangsari Village, who will serve as respondents in the data collection related to the community's attitudes and acceptance of the Covid-19 vaccine, as well as the identification of the community's access to information sources about the Covid-19 vaccine. The sample for this study will be the residents of Tawangsari Village who are opposed to the Covid-19 vaccine, based on the mapping results conducted by the researcher. Based on the communication network data, the researcher will determine the study informants for analysis of the characteristics and message framing in the dissemination of information about the Covid-19 vaccine, using snowball sampling. The data collection techniques used in this study include open-ended questionnaires and in-depth interviews. The data analysis employed is an interactive model analysis technique, which involves data reduction, data presentation, and conclusion or verification (Miles et al., 2014).

RESULT AND DISCUSSION

Attitudes and Acceptance of the Covid-19 Vaccine

The current pandemic situation presents a unique challenge for rural communities, including the residents of Tawangsari Village, Pujon, Malang Regency. The pandemic has changed the way the rural community interacts and communicates, especially since the village is known for its concept of guyub (community harmony). The government's programs, such as social distancing and physical distancing, have forced the residents of Tawangsari Village to adapt their interactions and communication to the current pandemic conditions. This adaptation process has also led to conflicts within the community.

These conflicts began with a belief held by some members of the Tawangsari Village community that Covid-19 was the result of a conspiracy by certain groups, to the point where some believed that fearing

Covid-19 meant not believing in the existence of God Almighty. This has made it difficult for some members of the Tawangsari community to raise awareness about practicing the 4M (Menggunakan Masker, Mencuci Tangan, Menjaga Jarak, and Menghindari Kerumunan), particularly when it comes to wearing masks and gathering for various activities, including religious and other community events. This is supported by the following interview excerpt:

> "Well, Miss, the community doesn't really trust the vaccine because of the hoax information spreading among people — like the idea that the vaccine was created by a certain group, or about the frightening side effects. And maybe because there are so many positive cases here, people are not really aware of the importance of getting vaccinated. In the end, they just do whatever they want, not really following health protocols because they don't really believe in the existence of the coronavirus. Only a few people are aware of the importance of regular health check-ups." (*Village Midwife, August 26, 2021*)

> "...Afraid of the side effects... Afraid of the side effects like the ones seen on social media..." (*PKK Member, August 26, 2021*)

The village government, the PKK women's group, health cadres, and the village midwife realize that the conflicts within the community related to the pandemic, which have led to the prohibition of many community activities that cause crowds (such as funeral ceremonies, Eid prayers, religious studies, and other community events), as well as the challenges with mask usage during outdoor activities and maintaining social distance, have not yet ended. As a result, the village government, PKK women's group, health cadres, and the village midwife collaborated to provide socialization to the community about the Covid-19 vaccine. The socialization was conducted by visiting each household in Tawangsari Village to prevent crowds from forming during the dissemination of information.

The Covid-19 vaccination program in Indonesia is divided into four stages, namely (Khr/nma, 2021). The first stage, with the implementation period from January to April 2021. The target of the first stage of the Covid-19 vaccination is healthcare workers, healthcare support staff, supporting staff, as well as students undergoing medical profession education who work at healthcare service facilities.

The second stage, with the implementation period from January to April 2021. In the second stage, there are two sub-categories set by the government to implement the vaccination program. First, public service workers, including the military/police, law enforcement officers, and other public service personnel, such as those working at airports, seaports, stations, terminals, banks, state-owned electricity companies, regional drinking water companies, and other personnel directly involved in providing services to the public. Second, the elderly population, or those over 60 years old. The third stage, with the implementation period from April 2021 to March 2022. The target of the third stage of the Covid-19 vaccination is vulnerable communities in terms of geospatial, social, and economic aspects. The fourth stage, with the implementation period from April 2021 to March 2022. The target of the fourth stage of the Covid-19 vaccination is the general public and other economic actors, with a cluster-based

approach according to the availability of vaccines.

The door-to-door socialization can be considered successful, as out of 66 residents who participated, 49 individuals stated that they understood the importance of the Covid-19 vaccine, while 14 others indicated that they did not understand its importance. This means that 74.24% of respondents understand the importance of the Covid-19 vaccine, while 24.24% do not.

Figure 2
Pie Chart of Understanding Level of the Covid-19 Vaccine

Source: Survey data processing

The community's understanding of the Covid-19 vaccine is accompanied by the positive attitude of the residents of Tawangsari Village, who approve and support the government's Covid-19 vaccination program. This includes 52 residents of Tawangsari Village. The same number of residents also responded positively when asked about their willingness to get the Covid-19 vaccine, with 52 residents agreeing to get vaccinated and also expressing their willingness to encourage their families and close ones to do the same. One reason provided by the residents of Tawangsari Village regarding their attitude and acceptance of the vaccination program is that by participating in the Covid-19 vaccination program, they aim to avoid the misinformation (hoax) about vaccinations that claims vaccinated individuals could turn into zombies.

Figure 3
Pie Chart of Willingness to Get the Covid-19 Vaccine

Source: Survey data processing

The residents of Tawangsari Village who rejected the vaccination, based on the questionnaire responses, were 12 individuals. These 12 residents each had their own reasons, including: they disagreed with and did not support the vaccination program due to underlying health conditions; they disagreed with and did not support the vaccination program due to fear of KIPI (*Kejadian Ikutan Pasca Imunasi)*; they disagreed with and did not support the vaccination program because they were focused on earning a living; and they disagreed with and did not support the vaccination program due to fear of needles. These responses were further reinforced by interviews with the Secretary of PKK and confirmed by the village midwife, who stated that some people still chose not to get vaccinated due to their fear of AEFI and the negative information circulating in the community, such as the case of a resident dying after receiving the vaccine.

The community's attitudes and acceptance of the Covid-19 vaccination program are clearly influenced by both pro and contra opinions within the society. This research also seeks to understand how often the community engages in discussions about anti-vaccine views. This is aimed at tracing the source of the counter-narratives regarding the Covid-19 vaccination program. Through the question, "Do you often discuss the opposition (contradiction/anti) to the Covid-19 vaccine with others?" 32 residents of Tawangsari Village responded that they often engage in such discussions,

while 30 others stated that they do not often discuss the opposition to the vaccination program. Four individuals did not provide an answer. The rejection and non-acceptance of the vaccination program by some members of the community are not without reasons.

Sources of Information about Covid-19

From the data coding results, it was found that most of the community obtains information about Covid-19 from social media platforms such as Facebook, Instagram, and TikTok. The coding results showed that 26 respondents indicated social media as their primary source of information. Social media has become a frequently used source of information for the community. Additionally, television remains a reliable medium for the residents of Tawangsari Village to receive news, especially news related to Covid-19, with 21 respondents mentioning television news. The characteristics of rural communities are also strongly evident in Tawangsari Village, as shown by the high number of respondents who rely on word of mouth as a source of information—21 respondents in total. The data from word of mouth is comparable to that of news from television. In this case, word of mouth refers to Covid-19 information obtained from neighbors, other villagers, and friends.

The PPKM (Public Activity Restrictions) condition has become an obstacle for the PKK women's group to conduct regular socialization activities. This is in line with the questionnaire results, where the PKK women's group was identified as a source of information by a small number of respondents, with only 2 individuals mentioning it. Other sources of information obtained by the residents of Tawangsari were the internet and village devices, each with 2 respondents. Parents and the PeduliLindungi app were the least mentioned sources of information, with only 1 respondent each.

Sources of Information on the Importance of the Covid-19 Vaccine

The research findings indicate a more diverse set of data regarding the sources of information obtained by the residents of Tawangsari Village concerning the importance of the COVID-19 vaccine. Word-of-mouth remains the most dominant source of information, with 18 respondents stating that they received information through this method. The village government and social media serve as the second most common sources, each cited by 12 respondents. Furthermore, health cadres were identified as sources of information by 11 respondents, while healthcare workers or village midwives were mentioned by 7 respondents. Health cadres play a role as facilitators and community mobilizers, encouraging villagers to become more aware of the importance of health, particularly in understanding the benefits of vaccination and motivating them to participate in the vaccination program.

Television remains a trusted source of information for the residents of Tawangsari Village. Data indicates that 10 respondents reported receiving information about the importance of vaccination from television. A significant number of respondents also became aware of the importance of vaccination through their own realization, as evidenced by questionnaire results showing 4 respondents. Additionally, 2 respondents stated that their source of information was their parents. The least common source of information was from PKK (Family Welfare Empowerment) members.

Discussion Partner on the Controversy Surrounding the COVID-19 Vaccine

In addressing the COVID-19 pandemic, the government has launched a nationwide vaccination program for all Indonesian citizens. However, this vaccination program has led to several issues within society, primarily due to the widespread dissemination of misinformation and hoaxes. In relation to this, research data indicate that the residents of Tawangsari Village frequently engage in discussions about opposition to the COVID-19 vaccine. The data show that the most common discussion partners regarding vaccine opposition are fellow community members. This aligns with previous findings, which highlighted that word-of-mouth is a significant source of COVID-19-related information. The second most common discussion partners on vaccine opposition are family members or relatives. This is because family members are the closest individuals, with whom respondents have frequent interactions, leading to discussions within their own family circles. Similarly, the third most common discussion partners recorded in the data include seven respondents who engage in discussions on this topic with others.

The village government and healthcare workers are government entities that are required to support the vaccination program. Consequently, data on discussion partners regarding opposition to the COVID-19 vaccine show a low number, with only one respondent. The government does not reject discussions with residents about vaccines, whether in support or opposition. Similarly, local healthcare workers or village midwives adopt the same approach. If community members express opposition to the vaccine, they are invited to engage in discussions to understand the reasons behind their concerns and to provide explanations regarding the importance of vaccination.

Sources of Information on COVID-19 Vaccine Issues

Opposition to the COVID-19 vaccine cannot be separated from the circulating issues regarding its negative effects. Research data indicate that several respondents reported receiving information about vaccine-related issues (prohibited/dangerous/unsafe) from the surrounding community, with 23 respondents providing this answer. This aligns with previous findings that word-of-mouth serves as a highly influential medium among the residents of Tawangsari Village, as evidenced by the high number of respondents citing word-of-mouth as a primary source of information. The second most common source of vaccine-related issues was social media, with 7 respondents identifying it as their main source of information. Meanwhile, television news was cited by 4 respondents. The lowest figures regarding sources of information on vaccine-related issues (dangerous/prohibited/unsafe) came from the village government and friends.

Intensity and Type of Message

Information Obtained Regarding the COVID-19 Vaccine

Research findings indicate that the types of information most frequently obtained by the residents of Tawangsari Village relate to the benefits of the vaccine and its potential negative effects. A total of 27 respondents reported receiving information about the benefits of vaccination, while 25 respondents reported receiving information about its negative effects. The types of information regarding vaccine benefits include its role in boosting

immunity and minimizing critical conditions in COVID-19 patients. Meanwhile, information related to the negative effects of vaccines includes reports of *Kejadian Ikutan Pasca Imunasi (KIPI)* and concerns that the vaccine could be fatal. Apart from vaccine benefits and negative effects, the lowest number of respondents—only one person—reported receiving information about vaccine types and vaccination locations. Information regarding vaccine types was also found to be associated with concerns about potential negative effects.

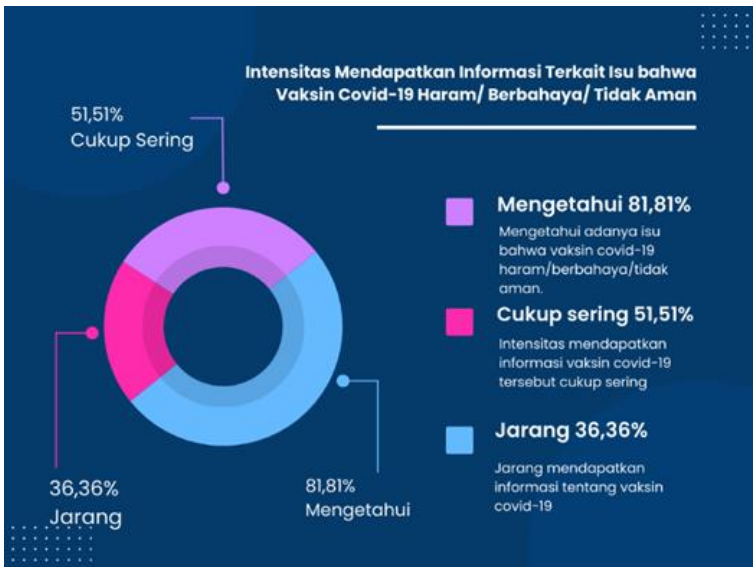
Types of Information Discussed

Various types of negative effects of the vaccine have become the dominant type of information discussed by respondents regarding opposition to the COVID-19 vaccine. These negative effects include concerns that the vaccine is harmful to the body, potentially causing illness and even death. The data indicates that 30 out of 66 respondents, or 45%, provided this response. Additionally, it was found that another type of message discussed in relation to vaccine opposition is educational messages, with 3 respondents, or 4.54%, reporting this. The research findings suggest that these educational messages were chosen by respondents as an effort to raise awareness among some residents of Tawangsari Village who were perceived to be against the COVID-19 vaccine. This effort was carried out by health cadres and healthcare professionals.

Intensity of Receiving Information

According to research, more people are now aware of the detrimental effects of immunisations. Of the 54 responses, 81.81% are aware that the Covid-19 vaccination is hazardous, dangerous, or haram. With 34 responses, or 51.51%, answering frequently, 36.36%, or 24 respondents, answering infrequently, and 4 respondents, or 6.06%, answering never, the intensity of obtaining this information is fairly frequent. Researchers found that responders typically receive information regarding this problem on a daily basis. Because residents already had access to a variety of media, such as social media, the internet, and television, research informants realised that it was impossible to stop the development of this detrimental issue. Furthermore, the Tawangasari Village community's strong word-of-mouth culture is undoubtedly contributing to the problem's quicker development.

Figure 4
Intensity of Receiving Information Regarding the Issue that the COVID-19 Vaccine is Forbidden/Dangerous/Unsafe



Sumber: Survey data processing

Public Attitudes and Acceptance of the COVID-19 Vaccine

The adoption of healthy behaviors, policymaking, and the implementation of practices to support better health is not a simple task. In his book Health Communication from Theory to Practice, the author explains how childhood immunization programs were considered successful in previous decades. Immunization has been one of the key programs in reducing various diseases that once threatened the lives and well-being of children. As a result, many childhood diseases have become rare or have been eradicated in numerous countries worldwide. However, before immunization was widely implemented to curb these diseases, changing public perception and convincing parents to vaccinate their children was a significant challenge (Schiavo, 2007).

Schiavo provides an illustration of the case of Bonnie, a mother of a newborn who was offered a vaccine for her child. A few days later, she encountered conflicting information regarding the potential side effects and risks associated with immunization, leaving her uncertain about which information was accurate. Bonnie's doubts can be addressed through a health communication approach. Effective health communication requires a deep understanding of individuals' lifestyles, concerns, beliefs, attitudes, barriers to change, and sources of information. However, it is equally important to comprehend the cultural, social, and ethnic environment in which a person lives. What kind of support does she receive from her family, friends, and workplace? Who has the greatest influence on her decisions regarding her child's well-being and upbringing? What are her primary fears regarding immunization? And are there any community programs focused on childhood immunization? (Schiavo, 2007).

The illustration depicted by Schiavo seems to offer a real depiction of the current situation. The Government's COVID-19 vaccination program has sparked various opinions, attitudes, and levels of acceptance among the public. The COVID-19 vaccination, which started in January 2021, continues to face many challenges, one of which is the presence of people who are either refusing or hesitant to get vaccinated due to the lack of positive education from close acquaintances, discussions of information not sourced from credible references, or media accessed that tends to be against the program implemented by the Government. As explained earlier, when discussing health communication, it cannot be separated from lifestyle, concerns, beliefs, attitudes, barriers to change, sources of information, environment, culture, and social and ethnic factors where the person resides.

Health communication itself is the study and strategy of communication aimed at informing and influencing the knowledge, attitudes, and practices of individuals and communities in relation to health. In the United States, nearly all its citizens have been exposed to health messages through public campaigns. These public campaigns aim to change the social climate to encourage healthy behaviors, raise awareness, change attitudes, and motivate individuals to adopt the recommended behaviors. These campaigns can be carried out traditionally by relying on mass communication and messages through print media (Thomas, 2006). Thus, health communication can be understood as a form of information that influences the knowledge, attitudes, and implementation of individuals and communities in relation to health.

Healthy People 2010 defines communication as the art and technique of informing, influencing, and motivating audiences, institutions, and the public about important health issues. Another crucial role of communication in the concept of health communication is to create a receptive and supportive environment where information can be shared, understood, absorbed, and discussed by the target audience of a program. This requires a deep understanding of the needs, beliefs, taboos, attitudes, lifestyles, and social norms of all key communication audiences. It also demands that communication be based on messages that are easy to understand (Schiavo, 2007).

Health communication can occur at several different levels. The following are some of these levels (Thomas, 2006) such as: Individual Level, The individual is the most fundamental target for health-related changes because individual behaviors influence health status. Communication can affect awareness, knowledge, attitudes, self-efficacy, and individual skills for behavior change. Health communication activities at all other levels ultimately aim to influence and support individual changes. Social Networks, The relationships an individual has with others and groups can have a significant impact on their health. Health communication can work to shape the information received by the group and may attempt to alter the patterns or content of communication. Leaders of a network are often the entry point for health programs within a group. Organization, An organization is classified as a formal group with a predetermined structure. It can convey health messages to its members, provide support for individual efforts, and implement policy changes that facilitate individual transformation. Community, A community can serve as an influential group in shaping policies that promote a healthy lifestyle and reduce or eliminate hazards in social and physical environments. Community-level

initiatives are planned and led by organizations and institutions that have the ability to influence health, such as schools, workplaces, healthcare settings, community groups, and government agencies. Society, Society as a whole has a significant influence on individual behavior, including norms and values, attitudes and opinions, laws and policies, the physical environment, the economy, culture, and information.

All the levels described above are closely interconnected. These levels are also observed in Tawangsari Village, where individual decisions to oppose or reject the COVID-19 vaccination program are influenced by their surrounding environment. This begins with their social networks, communities, organizations, and society. Based on the data collected during the research, the most frequently referenced sources of information by the residents of Tawangsari Village are social media platforms such as Facebook, Instagram, and TikTok. However, the circulation of information on these platforms often contains elements of misinformation or hoaxes. Regarding the characteristics of Tawangsari Village's population in terms of educational attainment, many residents have only completed elementary school, while some have attained higher education, such as a bachelor's degree. However, research data indicates that most Tawangsari Village residents have completed their education at the elementary, junior high (SMP/MTs), or senior high school (SLTA) levels. As a result, their ability to critically filter information from social media remains limited. One of the findings suggests that public resistance and opposition to the COVID-19 vaccination program stem from fears of *KIPI*, which they believe could lead to fatal consequences.

Following social media as the primary source of information for the residents of Tawangsari Village, the next most referenced sources are television news and neighbors' conversations. In response, the Village Government, PKK (Family Welfare Movement) members, village midwives, and health cadres took the initiative to conduct door-to-door socialization efforts to provide understanding and education to the community. This initiative aims to minimize public fear of the COVID-19 vaccination and to counter misinformation and hoaxes originating from social media and other non-credible sources.

To minimize public resistance and improve acceptance of the government's COVID-19 vaccination program, the role of health communication becomes essential and crucial. As explained by the Centers for Disease Control and Prevention in the book Health Communication, its roles are described as follows Thomas, 2006) such as: Increasing knowledge and awareness about health issues or health solutions. Influencing perceptions, beliefs, attitudes, and social norms; Encouraging prompt action; demonstrating or illustrating skills; Showcasing the benefits of behavioral change; Enhancing demand for healthcare services; Strengthening knowledge, attitudes, and behaviors; Addressing myths and misconceptions; Helping to unify organizational relationships and the last advocating for health issues or specific population groups (Thomas, 2006)

The roles of health communication mentioned above have been indirectly implemented by the Village Government (specifically the Village Officials), PKK members, and Health Cadres in supporting the COVID-19 vaccination program. The aim is to set an example for the community, demonstrating that the COVID-19 vaccine

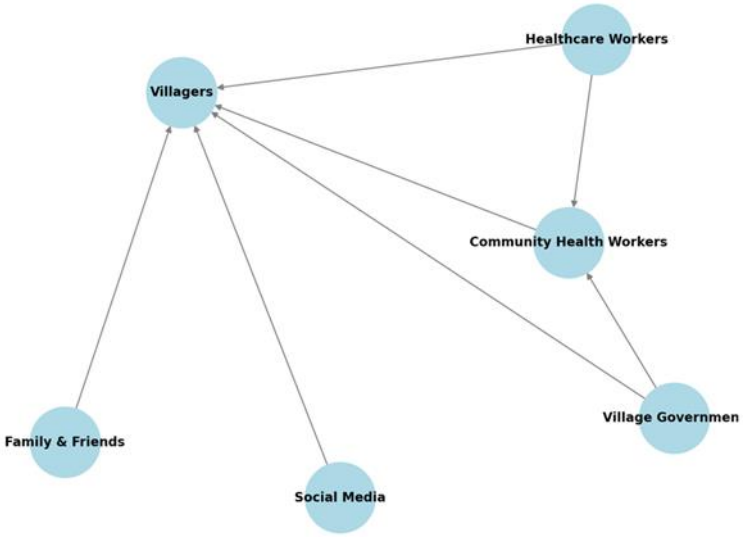
does not cause negative effects. Additionally, this initiative is expected to influence public perception, beliefs, attitudes, and social norms.

Sources of Information on COVID-19 and Vaccination in Rural Communities

The research findings indicate that there is a balanced access to different types of media among rural communities, particularly in Tawangsari Village, in utilizing both digital media (social media) and conventional media (television) to obtain information about COVID-19. This contrasts with previous studies, which suggested that rural communities predominantly relied on conventional media as a source of health information, whereas urban communities tended to use digital media as their primary source of information (Garcia-Cosavalente et al., 2010). Most of the residents in Tawangsari Village have adapted to technological advancements, enabling them to access information through digital media, such as social media.

In the writings of Bohlman (2004), it is explained that there is no single definitive answer to the question of how people obtain and utilize health information. However, data on health information obtained through responses from participants in the National Adult Literacy Survey (NALS) indicate that more than half of individuals at all literacy skill levels assessed by NALS reported obtaining health information from various sources. According to the data, between 62 and 69 percent of adults across all literacy skill levels reported obtaining information from family and friends. Additionally, between 94 and 97 percent of adults across all NALS literacy levels reported using radio or television to obtain health information (Bohlman et al., 2004). If Bohlman et al. attempted to elaborate on their findings related to health information sources in the context of 2004, similar conditions are observed in the community of Tawangsari Village. The findings indicate an equal distribution of information sources regarding the importance of vaccination in rural communities, including word of mouth, television media, social media, healthcare professionals, health cadres, and village government officials. Healthcare professionals, health cadres, and the village government emerge as prominent sources of information regarding vaccines, consistent with previous research. Healthcare professionals are identified as the primary trusted source for delivering health information, while the government serves as the second most significant source (Jackson et al., 2019). Consistent with previous research, vaccine providers are the most frequently accessed sources of information (Eller et al., 2019) and are considered credible sources (Nyhan et al., 2014). However, when there is distrust in the information provided by vaccine providers, individuals tend to seek additional sources of vaccine information (Austvoll-Dahlgren & Helseth, 2010). When illustrated in the form of a sociogram, it appears as follows:

Figure 5
Sociogram of the communication network of Tawangsari community



Source: The Results of the Researcher's Data Processing

From the explanation above, it can be interpreted that a portion of the Tawangsari Village community actively seeks information related to COVID-19. The availability of resources and supporting infrastructure in Tawangsari Village (although not in all areas) has facilitated broader access to information for the community. This contrasts with the findings of Garcia-Cosavalente, who stated that rural communities tend to be passive audiences in accessing information and struggle to actively manage communication media due to limitations in resources and infrastructure (Garcia-Cosavalente et al., 2010). However, the findings of this study confirm that a portion of the Tawangsari Village community actively seeks information related to COVID-19. The availability of resources and supporting infrastructure in Tawangsari Village (although not in all areas) has facilitated broader access to information for the community. Other research findings indicate that healthcare workers and the government are not the primary sources of information for the Tawangsari Village community. Sources such as word of mouth, television media, and social media, which are typically considered supplementary sources of information, emerged as the most frequently accessed sources in this study. This phenomenon is likely since the COVID-19 vaccine was a government-mandated program implemented nationwide to combat the pandemic. Consequently, the government employed communication strategies to disseminate vaccine program information through media channels with high levels of trust and exposure among the Indonesian population. A total of 73% of respondents accessed information through television, which was considered credible or trustworthy by 52% of them. Meanwhile, most of the community (nearly 80% of respondents) accessed information through online sources, even though they

perceived these sources to be less credible (35%) (Kemkes RI, 2020).

Tendency of Sources and Types of Information That Are Prone to Resistant Behavior in the COVID-19 Vaccination Program

This study found a tendency for sources of information and types of messages that are prone to resistant behavior in the COVID-19 vaccination program. It was discovered that word of mouth is the dominant source of information related to opposition to the COVID-19 vaccination program. Word of mouth serves as an information dissemination strategy that occurs through verbal communication in specific situational contexts (Allsop et al., 2007) and contains cognitive and emotive elements(Sweeney et al., 2012). Word of mouth remains the dominant source of information regarding hoax issues or messages that pose a risk of fostering resistant behavior among the Tawangsari Village community toward the vaccination program. This is further exacerbated by data indicating a high intensity of hoax message reception related to vaccines.

Reflecting on the prevalence of word of mouth as a primary source of information regarding opposition to the COVID-19 vaccine aligns with previous research findings. The gethok tular (word of mouth) communication pattern is characterized as an informal communication approach in which messages are conveyed through personal interactions (Darmastuti et al., 2016). The *gethok tular* communication strategy is a communication approach within social movements that is shaped by the local wisdom of the community.

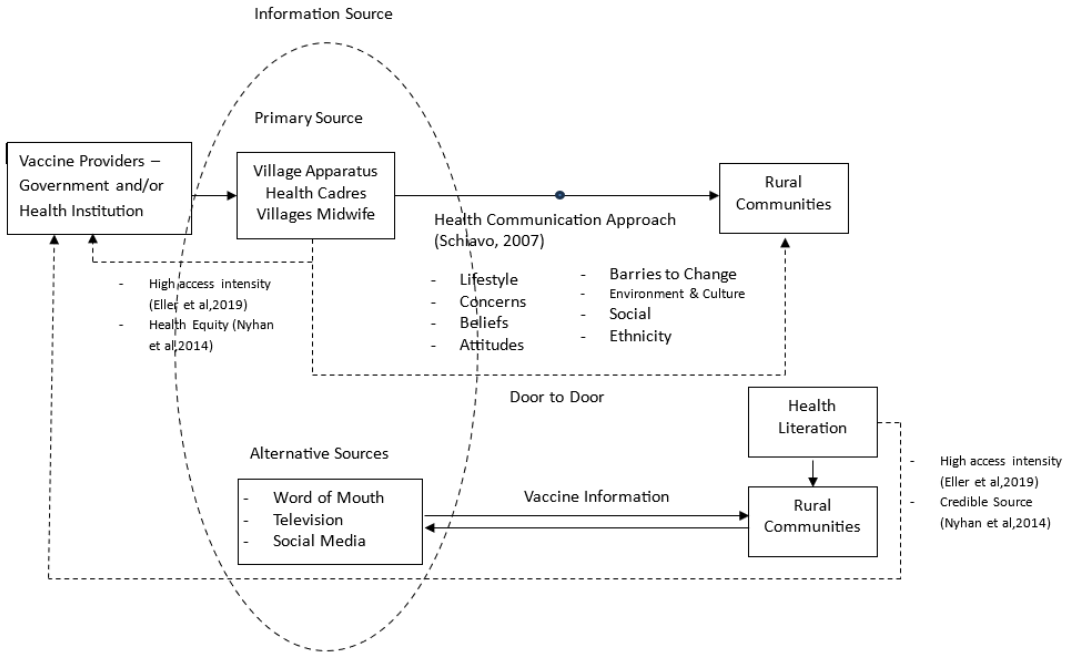
The types of messages regarding vaccines received by the residents of Tawangsari Village are actually balanced between positive and negative messages. Both are conveyed through word of mouth, either directly (face-to-face meetings), via text, or visually through digital media that enable message transmission between individuals. Different individuals exhibit varying tendencies in utilizing a combination of messages and word-of-mouth channels (Ring et al., 2016). The type of information that is likely to trigger resistant behavior includes content related to controversies or hoaxes about the COVID-19 vaccine, such as claims that the vaccine is haram, can cause death, is dangerous, and similar misinformation.

Recommendations for the design of vaccination campaign and education models for specific populations

Based on the research findings and analysis conducted, the researchers have designed a health campaign and education model related to the vaccination program for rural communities with characteristics similar to the informants in this study (see figure 6). As depicted in the model diagram above, vaccination campaigns or education initiatives can be implemented through two groups of information sources: primary sources and alternative sources. The primary sources include village officials, health cadres, and village midwives, who are considered credible sources of valid vaccination information because they serve as facilitators between the government and rural communities. Ideally, village officials, health cadres, and midwives are well-equipped with sufficient health information from the government and central health institutions through high-intensity health literacy programs (Eller et al., 2019) and reliable sources (Nyhan et al., 2014). In conducting campaigns and education for rural communities, they can utilize a health communication approach by considering several elements, including lifestyle, concerns, beliefs, attitudes, barriers to

change, sources of information, environment, culture, social aspects, and ethnicity within which the community resides (Schiavo, 2007). This will influence the messaging strategy that must be designed to ensure it is well received and understood by rural communities. The 'door-to-door' strategy is an effective approach for educating rural populations. Through this strategy, village authorities, health cadres, and midwives, as vaccination message communicators, have the opportunity to explain and engage in discussions with diverse community members. If there are individuals who oppose vaccination, the door-to-door approach provides a greater opportunity to offer clarification and understanding.

Figur 6
Design of vaccination campaign and education models for specific populations



Source: The Results of Processing Researcher Data

The model design as an implication of this research is not limited to COVID-19 vaccination campaign and education programs alone, but can also be applied to similar health programs that specifically target rural communities with characteristics similar to those of the informants in this study.

CONCLUSION

This research showed that the attitude and acceptance of the Tawangsari village community toward the COVID-19 vaccination program tend to be resistant, as many residents predominantly rely on word-of-mouth, social media, and television as their primary sources of information without adequate health information literacy. The Tawangsari village community uses a balance between digital and conventional information sources to access COVID-19-related information, supported by adequate human resources and infrastructure in certain areas. The dominance of social media and television as primary sources of

vaccine-related information indicates a high level of media exposure, aligning with the government's vaccination communication strategy. Meanwhile, healthcare workers, health cadres, and government institutions serve as secondary sources of information. Word-of-mouth remains a dominant source of information, particularly regarding hoax messages, which poses a significant risk of reinforcing vaccine resistance within the Tawangsari community. This is further exacerbated by the high intensity of hoax message acceptance related to vaccines.

This study also recommends a campaign model as an educational tool for an ideal vaccination program by involving village officials, health cadres, and village midwives as primary sources of health information, particularly regarding vaccines, for the local community. The dissemination of information and education can be carried out through a 'door-to-door' approach. Additionally, social media, television, and word-of-mouth can still serve as alternative sources of information for rural communities, provided that health literacy support is facilitated by the primary information sources. This proposed model is expected to prevent the spread of vaccine-related misinformation and hoaxes, which may contribute to resistance behavior.

The academic implication of this study is that it can offer a new communication model that may be tested or replicated in future research. Meanwhile, the practical implication lies in its potential use as a guideline for central or local governments in implementing vaccination programs, particularly in designing campaigns and educational efforts targeted at rural communities with similar characteristics to the informants in this study.

REFERENCES

Allsop, D. T., Bassett, B. R., & Hoskins, J. A. (2007). Word-of-mouth research: Principles and applications. journal of advertising research. *Journal of Advertising Research*.

Apker, J. (2012). *Communication in Health Organizations*.

Austvoll-Dahlgren, A., & Helseth, S. (2010). What informs parents' decision-making about childhood vaccinations? *Journal of Advanced Nursing*.

Bohlman, L. N., Allison, M. P., & David, A. K. (2004). *Health Literacy: A Prescription to End Confusion*. National Academies Press (US).

Cahyani, S. D., Poerwoningsih, D., & Wahjutami, E. L. (2019). Konsep hunian adaptif sebagai upaya penanganan rumah tinggal tidak layak huni terhadap resistensi penyakit infeksi. *Mintakat: Jurnal Arsitektur*, *20*(2). https://doi.org/10.26905/mj.v20i2.3800

Cheraghi, R., Ebrahimi, H., Kheibar, N., & Sahebihagh, M. H. (2023). Reasons for resistance to change in nursing: An integrative review. *BMC Nursing*, *22*(1). https://doi.org/10.1186/s12912-023-01460-0

Crouse Quinn, S. (2008). Crisis and emergency risk communication in a pandemic: A model for building capacity and resilience of minority communities. *Health Promotion Practice*, *9*(4 Suppl). https://doi.org/10.1177/1524839908324022

Darmastuti, R., Bajari, A., Martodisdjo, H. S., & Maryani, E. (2016). Gethok tular, pola komunikasi gerakan sosial berbasis kearifan lokal Masyarakat Samin di Sukolilo. *ASPIKOM*.

Donsbach, W. (2008). *The International Encyclopedia of Communication*.

Eller, N. M., Henrikson, N. B., & Opel, D. J. (2019). Vaccine information sources and parental trust in their child's health care provider. Health Education & Behavior. *Health Education & Behavio*.

Garcia-Cosavalente, H. P., Wood, L. E., & Obregon, R. (2010). Health information seeking behavior among rural and urban Peruvians: Variations in information resource access and preferences. *Information Development*, *26*(1), 37–45. https://doi.org/10.1177/0266666909358640

GitHub. (2021). *no title*.

Jackson, D. N., Peterson, E. B., Blake, K. D., Coa, K., & Chou, W. Y. S. (2019). Americans' trust in health information sources: Trends and sociodemographic predictors. *American Journal of Health Promotion*, *33*(8), 1187–1193. https://doi.org/10.1177/0890117119861280

Kalbfleisch, P. J. (2009). Effective health communication in native populations in North America. *Journal of Language and Social Psychology*, *28*(2), 158–173. https://doi.org/10.1177/0261927X08330607

Kelly-Hanku, A., Newland, J., Aggleton, P., Ase, S., Fiya, V., Aeno, H., Vallely, L. M., Mola, G. D. L., Kaldor, J. M., & Vallely, A. J. (2019). Health communication messaging about HPV vaccine in Papua New Guinea. *Health Education Journal*, *78*(8), 946–957. https://doi.org/10.1177/0017896919856657

Kemkes RI. (2020). *Survei penerimaan vaksin COVID-19 di Indonesia*. .

Khr/nma. (2021). *Empat Timeline Vaksinasi RI Hingga Maret 2022*. *CNN Indonesia*.

Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis: A methods sourcebook (3rd ed.)*.

Nelson, W., Pomerantz, A., Howard, K., & Bushy, A. (2007). A proposed rural healthcare ethics agenda. *Community and Family Medicine,*.

Nyhan, D., Richey, S., & Freed, G. L. (2014). Effective messages in vaccine promotion: A Randomized Trial. *PEDIATRICS*.

Rachman, F., & Pramana, S. (2020). *Analisis sentimen pro dan kontra masyarakat Indonesia tentang vaksin COVID-19 pada Media Sosial Twitter*.

Ring, A., Tkaczynski, A., & Dolnicar, S. (2016). Word-of-mouth segments. *Journal of Travel Research*.

Rogers, D., & Kincaid, L. (1980). *Communication networks: Toward a new paradigm for research* .

Schiavo, R. (n.d.). *Health communication from theory to practice Second Edition*.

Schiavo, R. (2007). *Health Communication: From theory to practice (1st ed.* Jossey-Bass.

Sharun, K., Rahman, C. K. F., Haritha, C. V., Jose, B., Tiwari, R., & Dhama, K. (2020). Covid-19 vaccine acceptance: Beliefs and barriers associated with vaccination among the general population in India. *Journal of Experimental Biology and Agricultural Sciences*.

Sweeney, J. C., Soutar, G. N., & Mazzarol, T. (2012). Word of mouth: Measuring the power of individual messages. *European Journal of Marketing*.

Thomas, R. K. (2006). *Health communication*. Springer US.

Williams, T. A., & Shepherd, D. A. (2017). Mixed method social network analysis: Combining inductive concept development, content analysis, and secondary data for quantitative Analysis. *Organizational Research Methods*, *20*(2), 268–298. https://doi.org/10.1177/1094428115610807