Factors in Rejecting Covid-19 Vaccine in Indonesia: A Systematic Review

Dewi Indana Zulva1), Jayanti Dian Eka Sari2), Syahrul Ramadhan1), Afan Alfayad1), Anjali Putri Agustin1), Syifaul Lailiyah1)

1) Public Health Study Program, Faculty of Health, Medicine, and Life Sciences (FIKKIA), Universitas Airlangga, Indonesia

Email: jayantidian@fkm.unair.ac.id

ABSTRACT

Background: The primary approach to mitigating the Covid-19 epidemic is the implementation of community-wide vaccination initiatives. Nevertheless, a significant obstacle is the widespread refusal to accept the administration of the Covid-19 vaccination. Objective: This study aims to ascertain the determinants behind vaccination hesitancy towards the Covid-19 vaccine in Indonesia. Methods: The research methodology used in this work involves a systematic review approach, specifically using a literature study technique. The literature review used the Google Scholar, Neliti, and Garuda Jurnal databases, focusing on publications published between 2020 and 2021. The literature study search included inclusion criteria encompassing studies involving human subjects, open access availability, and publication in national journals. Results: 38 related publications were identified by the keywords. There were 9 studies subjected to analysis in the final process. Conclusion: The rejection of vaccines in Indonesia can be attributed to various factors, including the prevalence of COVID-19 hoaxes and conspiracies, the level of public knowledge, attitudes, and perceptions towards vaccines, doubts and concerns regarding their efficacy, potential side effects, safety, and compliance with halal standards, as well as the influence of individuals in close relationships.

Keywords: Covid-19 Vaccine, Indonesian, Vaccine Refusal

INTRODUCTION

In December 2019, the world again faced a problem that shocked society: the Covid-19 pandemic. As a result of this incident, almost all aspects of life experienced worrying changes. This incident began in Wuhan, China, in early 2020 (Ciotti et al., 2020). The virus was once believed to have originated in the Huanan seafood wholesale market, which was famous for trading many live animal species. Furthermore, there are allegations that this viral pathogen has the potential to spread quickly to many regions in China (Dong et al., 2020). Between 31 December and 3 January 2020, there was a significant spike in case documentation, as seen in the total reporting of 44 cases (Susilo et al., 2020). On 11 March 2020, the World Health Organization (WHO) officially declared the COVID-19 outbreak a global pandemic, marking its peak status until the end of 2019 (Ciotti et al., 2020). After being declared a global pandemic, Covid-19 cases increased rapidly and spread to several countries. Based on data from the Ministry of Health of the Republic of Indonesia in 2020, the cumulative total of confirmed cases was 414,179 cases, and 18,440 deaths were reported on 25 March. These cases were recorded in 192 countries/territories, resulting in a Case Fatality Rate (CFR) of 4.4%. The initial transmission of COVID-19 in Indonesia occurred on 2 March 2020, with indications that the infection came from an Indonesian resident who had direct contact with a foreign national (Nalini, 2021).

The government has made various efforts to respond to the COVID-19 pandemic, one of which is by implementing a 14-days lockdown in Indonesia after confirmation of the existence of the virus in the country (Yunus & Rezki, 2020). This action was carried out according to the provisions of Law Number 6 of 2018 concerning Health
Quarantine. This law regulates the implementation of Health Quarantine at entry points and in certain areas. It includes implementing disease surveillance activities and assessing public health risk factors related to means of transportation, individuals, commodities, and/or the surrounding environment. It includes implementing health quarantine measures in response to a public health emergency. Apart from the steps mentioned above, the follow-up policy is the implementation of Large-Scale Social Restrictions or in Indonesian called Pembatasan Sosial Berskala Besar (PSBB) and the Implementation of Community Policy Restrictions or in Indonesian called Pemberlakuan Pembatasan Kebijakan Masyarakat (PKKM). In addition to the policies mentioned above, there are proposals to enforce mandatory health standards across communities, often called the 5M initiative. The five key steps, often referred to as the 5Ms, include the following practices: hand hygiene through regular hand washing, adherence to physical distancing guidelines, use of masks, restricted movement when engaging in essential activities and avoiding gatherings or crowded places (Irwan et al., 2021). However, this approach is widely recognized as inadequate in mitigating the impact of the Covid-19 epidemic. The government is currently implementing a Covid-19 vaccine campaign.

Vaccination is a very successful approach to preventing infectious diseases (Farina, 2021). Vaccination is a universal preventive measure that can be given to all age groups, from babies to the elderly. Vaccines function by introducing weakened or inactivated bacterial or viral antigens, which then cause an immune response in the human body. This stimulation is intended to signal the body to recognize foreign objects that enter the body to carry out its natural mechanism, namely recognizing, generating, and remembering the foreign object. So, in the future, when the bacteria or virus enters the body, the body will be able to fight back well because antibodies have been formed as immunity (Andriadi et al., 2021). From 2010 to 2015, WHO stated that vaccination prevented nearly 10 million deaths worldwide. Vaccination can prevent pneumonia, diarrhea, whooping cough, measles, and polio. (WHO, 2015).

METHODS

The research methodology used in this study involves a Systematic Literature Review (SLR). The main goal of this approach is to systematically find, examine, and assess relevant literature to answer a predetermined research question (Fitriani & Putra, 2022). Research includes many sequential steps, including formulation of research questions, exploration of existing research literature, establishment of criteria for including and excluding research material, selection of relevant research literature, presentation and analysis of data, and derivation of findings.

Researchers conducted a comprehensive literature review using the Google Scholar, Neliti, and Garuda Journal databases, focusing on research published between 2020 and 2021, due to the fact that Covid-19 was on the rise since 2020 until 2021 and vaccination was mandatory at that time. The keywords used were “Indonesia Covid 19 Vaccine Acceptance”, “Indonesia Covid 19 Vaccine Receipt”, “Vaccine Acceptance”, “Coronavac Indonesia Acceptance,” “Astrazeneca Indonesia Acceptance,” “Pfizer Indonesia Acceptance”, “Moderna Indonesia Acceptance”, Sinovac Indonesia Acceptance”, “Vaccine Covid 19 Indonesia Acceptance”, “Coronavac Indonesia Rejection”, “Astrazeneca Indonesia Rejection”, “Pfizer Indonesia Rejection,” “Moderna Indonesia Rejection,” “Sinovac Indonesia Rejection,” “Covid 19 Vaccine Indonesia Acceptance”, “Covid 19 Vaccine Indonesia Rejection,” and “Covid 19 Vaccine Rejection”.

The literature search used specific inclusion criteria, which included research involving human subjects, open-access availability, and publication in national journals. The literature is then obtained and undergoes a selection and analysis process guided by previously established inclusion and exclusion criteria. Data was obtained through keywords, namely from a total of 38 publications. These articles were then selected according to predetermined inclusion criteria, resulting in 14 selected articles. A total of nine papers were evaluated in this study.
Next, the researcher continued to document the paper in tabular format. Next, the researcher thoroughly examined and analyzed the publication, emphasizing the sections related to the research findings. After the research reached its culmination, the researcher conducted a comparative analysis of the results obtained from many scientific journals and then formulated a conclusive statement. Conducting literature searches and selecting articles will be carried out using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) technique. The findings of this research are shown in the following search results.

Figure 1. Literature search results using PRISMA method

RESULTS AND DISCUSSION

Based on the findings, researchers found 9 studies about factors of public refusal of Covid-19 vaccination. The findings are summarized in Table 1.

<table>
<thead>
<tr>
<th>Author, Year</th>
<th>Title</th>
<th>Number of Respondents</th>
<th>Data Collection Method</th>
<th>Data Analysis Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wirawan et al., 2021</td>
<td>Conspiracy beliefs and trust as determinants of COVID-19 vaccine acceptance in Bali, Indonesia: Cross-sectional study</td>
<td>779 respondents</td>
<td>The survey was conducted using Google Forms. The survey was distributed through social media platforms including Facebook, Instagram, WhatsApp, and Twitter, using URLs and pamphlets.</td>
<td>The study design employs a cross-sectional approach with a binomial logistic test.</td>
<td>Trust in vaccine conspiracies is associated with low vaccine acceptance, with an odds ratio (OR) of 0.3 (95% CI = 0.20-0.54). The vaccine conspiracies include: 1. Covid-19 is a man-made disease. 2. Covid-19 is a biological weapon. 3. Covid-19 is...</td>
</tr>
</tbody>
</table>
1. 5G signals caused by.
2. Covid-19 is only equivalent to the common flu.
3. Covid-19 is a means to coerce people into getting vaccinated.
5. Covid-19 is not as deadly as it appears.
8. The Covid-19 vaccine and its treatment have been discovered but concealed.
10. The government utilizes the Covid-19 pandemic as one of its sources of power.
11. The findings revealed that the reasons respondents disagreed with the Covid-19 vaccination program included a lack of awareness regarding the effectiveness of the vaccine.

Susilawaty et al., 2021: Attitude, Risk Perception, and Public Acceptance against Coronavirus Disease 2019 Vaccination in Indonesia

The survey was conducted using Google Forms. The survey was carried out through various social media platforms, including Facebook, WeChat, and Instagram. The study design employed a cross-sectional approach with descriptive analysis testing.

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<table>
<thead>
<tr>
<th>Authors</th>
<th>Study Title</th>
<th>N (respondents)</th>
<th>Study Design &amp; Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sutriyawan &amp; Hidayatulloh, 2021</td>
<td>Factors Related to Public Acceptance of the Covid-19 Vaccine</td>
<td>159</td>
<td>Online surveys conducted using questionnaires. Study design using a cross-sectional approach with a chi-square test.</td>
</tr>
<tr>
<td>Putri et al., 2021</td>
<td>Public Concern Regarding Covid-19 Vaccination</td>
<td>399</td>
<td>Online surveys conducted through WhatsApp. Study design using a cross-sectional approach with a chi-square test. There is a significant relationship between vaccine availability and anxiety (p = 0.000).</td>
</tr>
<tr>
<td>Puspasari &amp; Achadi, 2021</td>
<td>Health Belief Model Approach to Analyzing the Acceptance of Covid-19 Vaccination in Indonesia</td>
<td>472</td>
<td>Online surveys Study design using a cross-sectional approach with a chi-square test. There are several factors in vaccine acceptance, including: 1. Perception of vulnerability, namely that COVID-19 causes serious complications, fear of contracting it, and the belief that one will become seriously ill if infected with COVID-19. 2. Perception of barriers, such as concerns about the effectiveness of the vaccine, ability to afford it, potential side effects, and its compliance with halal standards.</td>
</tr>
</tbody>
</table>

About potential side effects (1.6%), and uncertainty about the vaccine's safety (5.1%).
<table>
<thead>
<tr>
<th>Authors</th>
<th>Title</th>
<th>Methodology</th>
<th>Sample Size</th>
<th>Data Collection</th>
<th>Analysis Method</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azim et al., 2021</td>
<td>Public Acceptance of the Covid-19 Vaccine Based on the Health Belief Model Theory in Poasia Subdistrict, Kendar City</td>
<td>110 respondents</td>
<td>Data collection through offline questionnaire distribution.</td>
<td>The majority of respondents (57.3%) rejected the Covid-19 vaccine. Factors associated with vaccine acceptance include knowledge (p = 0.000). Additionally, perceptions of safety (p = 0.000), benefits (p = 0.006), and barriers (p = 0.000) are also related to Covid-19 vaccine acceptance.</td>
<td></td>
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<tr>
<td>Nurhayani et al., 2021</td>
<td>Case Study Analysis of Refusal Towards Health Workers to Distribute Covid-19 Vaccine in the Working Environment of Munyang Kute Radelong Regional General Hospital, Bener Meriah Regency in 2021.</td>
<td>3 informants</td>
<td>Interview Qualitative</td>
<td>Some of the reasons for the rejection of vaccines are as follows: 1. Lack of confidence in the vaccine given to healthcare workers due to its low efficacy and being a product from China. 2. Doubts about its halal status as there is no halal certificate from MUI.</td>
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<tr>
<td>Arumsari et al., 2021</td>
<td>Overview of Covid-19 Vaccine Acceptance in Semarang City</td>
<td>200 respondents</td>
<td>Online Google form questionnaire, distributed for one month.</td>
<td>The rejection response to the COVID-19 vaccine is indicated in the respondents' answers as follows: 1. 54.1% of respondents reject the safety of the COVID-19 vaccine. 2. 59.5% of respondents believe that the vaccine has no impact on suppressing the spread of the Corona Virus.</td>
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3. 42.6% of respondents doubt the effectiveness of the COVID-19 vaccine.

4. 50% of respondents doubt the halal status of the vaccine.

5. 58.1% of respondents agree/believe that humans do not need vaccines.

6. 52.0% of respondents state that they agree that the Corona Virus will disappear if humans completely surrender to God.

7. 47.3% of respondents agree that the spread of the Virus can only be suppressed by taking 3M precautions; 48.0% of respondents agree that COVID-19 can be cured with Indonesian herbs/rhizomes.

8. 51.4% of respondents agree that the COVID-19 pandemic is a product of propaganda, and so on.

9. 57.4% of respondents doubt if the government can handle the COVID-19 pandemic well.

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Woisiri & Hutapea, 2021
Overview of Community Resistance to the Covid-19 Vaccine
24 subjects
In-depth interview
Qualitative
Some of the reasons for public rejection of the Covid-19 vaccine include: limited
Covid-19 Hoaxes and Conspiracies

The Coronavirus, scientifically called SARS-CoV-2 and colloquially known as COVID-19, is a new type of virus that triggered a global pandemic, significantly impacting the global health crisis. It is considered a deadly virus because it attacks the human respiratory system. Apart from the dangerous virus, the situation is also worsening due to the many hoaxes circulating about Covid-19, which are spreading on social media (Priastuty et al., 2020). In this research, the results showed that one of the factors for refusing vaccination was the existence of hoaxes regarding Covid-19, including regarding vaccination. Research shows that people are reluctant to vaccinate against COVID-19 because hoaxes are circulating (Carrity Virginia Woisiri & Hutapea, 2021).

Other studies show that belief in vaccine conspiracies is associated with low vaccine acceptance in society (Wirawan et al., 2021). Among these hoaxes and conspiracies, such as COVID-19 is a disease deliberately created by humans to force vaccinations for specific interests, the media is exaggerating the dangers of COVID-19 to the point that the government is considered to be using the COVID-19 pandemic as one form of power or something else. According to research conducted in 2020, evidence suggests an increase in the spread of fake news towards the end of the year. This hoax news is said to be more dangerous than the virus itself because it causes people to become anxious and reluctant to vaccinate. Even though this vaccination is a solution to the pandemic problem, in the end, hoaxes become an obstacle to the smooth running of vaccination.

Knowledge, Attitudes, and Public Perceptions of Vaccines

The acquisition of knowledge has a vital role in developing attitudes. The use of knowledge can be a catalyst for behavior change, especially in the context of administering the Covid-19 vaccine. Based on research conducted in Doyo Baru Village, Jayapura Regency, it was discovered that 6 of the total 24 participants had a high level of knowledge. It can be seen from their understanding of the benefits of the COVID-19 vaccine, including its ability to increase body immunity and provide personal protection (Woisiri & Hutapea, 2021). In line with research findings, the data shows that participants have a high understanding of COVID-19 vaccination, where 93.7% of respondents fall into the "excellent" category regarding their knowledge. Understanding of the program, objectives, and benefits associated with effective COVID-19 vaccination may vary based on age and job category (Putri et al., 2021). Individuals who have less information have been shown to have a higher likelihood of not receiving COVID-19 vaccination (Azim et al., 2021). Common factors contributing to limited public understanding of COVID-19 vaccination are primarily rooted in public skepticism regarding its safety and efficacy.

Respondents’ sentiments towards COVID-19 vaccination show variability. Many participants expressed reluctance to get the COVID-19 vaccine due to their observations of individuals in their social circle experiencing adverse health impacts, including death, after vaccination (Carrity Virginia Woisiri & Hutapea, 2021). Based on previous findings, there is a correlation between perceptions of vulnerability/seriousness and acceptance of COVID-19 vaccination. This phenomenon may be caused by survey participants’ reduced awareness of their vulnerability to non-vaccination (Azim et al., 2021). This phenomenon may be caused by the reluctance of individuals who consider themselves sensitive or susceptible to COVID-19 to undergo vaccination due to a lack of knowledge about the potential risks associated with the disease. Respondents’ perception of low susceptibility to COVID-19 transmission was caused by their lack of understanding about the virus, even
though COVID-19 spreads quickly to individuals without discrimination.

Doubts and Concerns regarding the Efficacy, Side Effects, Safety, and Halalness of Vaccines

Uncertainty and worry are standard when facing new experiences. The research findings show that six studies have identified several elements that raise doubts and concerns regarding the effectiveness, potential side effects, safety, and compliance with halal standards of the COVID-19 vaccine. These factors include worrying about side effects, not being sure it is safe, feeling anxious, worrying about the cost of the vaccine, and worrying about the halalness of the vaccine. The research was conducted using an online survey method of respondents who refused the vaccine program because they were worried about the efficacy and effects caused by the vaccine (Suslawaty et al., 2021). Additionally, in previous studies that used online survey methodology and adopted a health belief modeling framework, participants expressed concerns regarding vaccination efficacy, potential financial implications, possible adverse effects, and vaccine compliance with Halal standards (Puspasari & Achadi, 2021).

People's concerns about new things are very natural. There is a need for delivery and outreach to the public, especially ordinary people who need help understanding the new products provided. Apart from that, respondents were also unsure about the COVID-19 vaccine, which was considered to have low efficacy and was a Chinese product, and doubted the halal status of the MUI (Nurhayani et al., 2021). It is coupled with research on different populations, namely in the city of Semarang, that most respondents agree that vaccines are unsafe, doubt their effectiveness, and doubt the halalness of vaccines (Arumsari et al., 2021). The halalness of vaccines is a challenge to prove because the majority of Indonesian people are Muslims, and one of the conditions for using any product is that it must be tested and certified halal. Meanwhile, research conducted using an online survey method via WhatsApp showed results regarding anxiety regarding vaccine availability (Putri et al., 2021).

Influence of Close People

Individuals generally listen to input and imitate those closest to them (Wartini & Riyanti, 2018). These characteristics can lead individuals to make bad decisions if they are not wise in determining their role models. Moreover, Indonesian people like to provide invalid information (hoaxes), including COVID-19 vaccination education (Pranesti & Arifin, 2019). Vaccination, a preventive measure for the spread of Covid-19, faces many challenges in its realization. It was motivated by the public's distrust regarding the effectiveness of the COVID-19 vaccine (Woisi & Hutapea, 2021). This distrust continues to spread through people closest to it until it becomes a community and an action against vaccination (Astuti et al., 2021). People feel anxious, afraid, and depressed and do not believe in the certainty of the vaccine's effectiveness (Andriadi et al., 2021).

The lack of education and teaching regarding COVID-19 vaccination is one of the factors driving the rejection of serial vaccinations by people closest to them. This form of rejection through attachment to those closest to you is found in the Papuan people, who are known to be strongly influenced by culture and those closest to them (Woisi & Hutapea, 2021). It aligns with the theory that individual subjectivity focuses on a person's judgments and assumptions in supporting actions (Saraswati & Kiswara, 2013). Other research states that the influence of those closest to the family is enormous in contributing to an individual deciding what action to take (Dewi, 2020). All of these are essential points in the community's refusal to vaccinate due to the support of family and those closest to them through the implementation of the Theory of Reasoned Action, which states that a person's subjectivity is a determinant of a person's desire to act based on the beliefs they have which originate from the approval and experience of other individuals (Yzer, 2013).

CONCLUSION

Based on the results of the study, it can be concluded that vaccine rejection factors in Indonesia are influenced by the existence of COVID-19 hoaxes and conspiracies, public knowledge, attitudes...
and perceptions of vaccines, doubts and concerns regarding the efficacy, side effects, safety and Halal of vaccines, as well as the influence of people closest to them. The advice given is the government is expected provide education and socialization on Covid-19 vaccination to the public so that they can understand the importance of vaccination in preventing Covid-19 and for them to not be influenced by unnecessary information regarding Covid-19 vaccination.

REFERENCES


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