

WHAT HEALTH INFORMATION IS NEEDED TO IMPROVE THE VACCINATION OUTCOMES OF COVID-19? : STUDY ANALYSIS IN COVID-19 VACCINATION IN SANGIHE ISLAND REGENCY, INDONESIA

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ABSTRACT

The Indonesian government enforces a COVID-19 vaccination policy for all. Still, the achievement rate for the COVID-19 vaccination in Sangihe Islands Regency at the first dose is only 1.05%, while the achievement at the second dose to date is only 0.47%. With this in mind, the vaccination policy has not been in line with community participation. Therefore, this study aimed to determine what kind of health information is needed to increase the covid-19 vaccination rate. The method used in this research is a descriptive study with a purposive sampling technique which was held from January 7 to February 8, 2021, with a total sample of 85 respondents who are health workers in the Sangihe Islands Regency. The data analysis used is descriptive analysis with frequency distribution. The results in this study were 15.3% stated that they were not willing to vaccinate COVID-19 because 39% of COVID-19 survivors, 38% had comorbidities, 15% were unsure of safety, and 8% feared side effects. Therefore, the conclusion of this study is to increase health information regarding vaccines for COVID-19 survivors, information about comorbidities such as what is appropriate for COVID-19 vaccination, safety, and side effects resulting from the COVID-19 vaccine.

Keywords: Health Information; Vaccination for COVID-19; Sangihe Island

INTRODUCTION

The number of COVID-19 cases globally as of April 26, 2021, was 146,841,882, with 3,104,743 deaths in these cases. Indonesia is ranked 24th globally for the most cases of COVID-19, with 1,641,194 cases (data on April 26, 2021). The number of cases is the same as 1.12% of the total cases in the world. The number of Case Fatality Rates for COVID-19 in Indonesia is 2.71%.¹

The high number of cases made the government decide to take serious steps. The Indonesian government is trying to deal with this problem by making a policy, one of which is by vaccinating the people of Indonesia for COVID-19 per presidential regulation number 14 of 2021 concerning vaccine procurement and vaccination in the context of tackling the COVID-19 pandemic.² This

policy is because the government has determined that the COVID-19 pandemic is a non-natural disaster included in the national disaster category.³ This policy is the responsibility taken by the government, which is seen as a state-based economic perspective, namely placing itself as a center for national interests.⁴

This policy came into effect in January 2021, starting with vaccination by the President of the Republic of Indonesia, which was then gradually carried out to health workers as a priority target. In stage 2 continued targeting public service workers and the elderly. After that, the target of the third stage was vulnerable people from economic, social and the final target is continued to the community and other economic actors based on the availability of vaccines.⁵

The vaccination policy has not been in line with community participation. Facts in the field as of April 28, 2021, it is known that the national level of vaccination against COVID-19 for the first dose is only 30.11%, while the vaccination for the second dose is 18.37%. How are vaccinations done in border areas? Sangihe archipelago district is one of the regencies in North Sulawesi province, which directly borders the Philippines. The achievement rate for the first dose of vaccination is only 1.05%, while the achievement in the second dose is only 0.47% so far.⁶

The low achievement is due to many hoaxes regarding vaccination that people in border areas also accept. In this district, not all regions have access to the internet network. Therefore, the most effective health information is done manually by word of mouth.

Efforts set by the government to improve these achievements are by imposing sanctions in the form of termination of social assistance, termination of government administration services, and even fines for targets who do not vaccinate². In addition to these efforts, an effective strategy is also needed to overcome these problems. Based on this, the research team is interested in knowing what kind of health information is required to increase the COVID-19 vaccination rate. This research can be used as a model in developing health education, especially for the community, especially in the Sangihe Islands Regency, in increasing the number of COVID-19 vaccination achievements.

MATERIAL AND METHODS

This research method is a descriptive survey. The population in this study was the people in the Sangihe Islands Regency. Health workers were chosen because they were the priority targets for the first stage, and then health workers would also be in charge of disseminating health information to the public. The sampling method used purposive sampling with the help of social media WhatsApp and used applications google forms to the questionnaire and questionnaires

manually because some areas plagued the Internet network. This research activity was carried out for one month, from January 7, 2021, to February 8, 2021. The data analysis technique used was descriptive analysis with frequency distribution.

RESULTS

Table 1. Univariate test results

Univariate	N (85)	%
Age		
24-31 years	46	54.1
32-40 years	26	30.6
41-49 years	10	11.8
50-58 years	3	3.5
Gender		
Male	24	28.2
Female	61	71.8
Marital Status		
Married	63	74.1
Alone	22	25.9
Religion		
Protestant Christians	70	82.4
Islam	8	9.4
Catholic Christian	7	8.2
Education Level		
Diploma	47	55.2
Bachelor	10	11.8
Bachelor and Profession degree	26	30.6
Master	2	2.4
Occupation		
Nurse	65	76.5
Dental Nurse	1	1.2
Midwife	7	8.2
Epidemiologist	4	3.5
Administration and Health Policy Personnel	4	4.7
Doctors	5	5.9
Place of work		
Department of health	20	23.5
Community health center	35	41.2
Hospitals	28	32.9
Others	2	2.4
Willingness to vaccinate COVID		
Willing	72	84.7
Not willing	13	15.3

A total of 85 respondents participated in this study. Most respondents in the age category 23-31 years as many as 46 respondents (54.1%), with the most gender being women as many as 61 respondents (71.8%). Respondents with married status were also the largest respondents in this study, with 63 respondents (74.1%). The majority of religions of the respondent were Protestant Christians as many as 70 respondents (82.4%), Diploma was the highest level of education among respondents, namely 47 respondents (55.2%) with the type of work as nurses were the most significant respondents with 65 respondents (76.5%). Then the most respondents were respondents who worked at the Community Health Center as many as 35 respondents (41.2%).

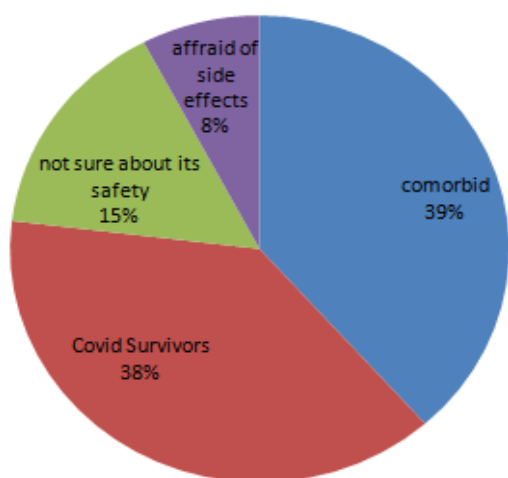


Figure 1. Reasons for not being willing

Based on figure 1, it is known that 15.3% who were not willing to be vaccinated against COVID-19 stated that 39% of them refused because they had been diagnosed with COVID-19, and 38% of respondents refused because they had comorbid diseases. Meanwhile, the remaining 15% are not sure about its safety, and the remaining 8% are afraid of the side effects.

Table 2. Comorbid diseases in respondents

Comorbid Diseases	N (5)	%
Hypertension	2	40
Diabetes melitus	2	40
Allergies	1	20

A total of the 85 respondents, five respondents, did not want to be given the COVID-19 vaccine because they had comorbid diseases. These comorbid diseases include hypertension (40%), diabetes mellitus (40%), and allergies (20%).

Table 3. Information needed regarding COVID-19 vaccination

Type of information	N (85)	%
Vaccines for COVID-19 Survivors	38	44.7
Comorbid	37	43.5
Safety of vaccines	7	8.2
Side effects of vaccines	3	3.6

Table 3 explains that 38 respondents (44.7 %) stated that they needed information about vaccines for those who had been exposed to COVID-19, 37 respondents (43.5%) needed information about comorbid COVID-19, then seven respondents (8.2%) needed information about the safety of the COVID-19 vaccine. Themselves and three respondents (3.6%) said they needed information about the vaccine's side effects.

DISCUSSION

Compared with the results of a survey conducted by French 33.53%, The United States 28.19%, India 29.2%, Vietnam 13.8%, Singapore 4.6%, and the Indonesia government, which amounted to 8% of rejecting the vaccine.⁷⁻⁹ The results of other surveys are not much different, which states that people's desire to be vaccinated is very low, namely 14.8%.¹⁰ So the percentage of the results in this study was greater, which means that serious attention is needed to educate the COVID-19 vaccination. Then results of the vaccination results from the first dose and the second dose are still low in Sangihe District. It is necessary to carry out health promotion activities to change people's behavior in vaccination, namely by increasing predisposing, enabling, and reinforcing factors. Change someone's behavior.¹¹

Knowledge is important in changing a person's behavior. In making efforts to increase knowledge in the community, a

health promotion planning stage is needed through situation analysis, determining problem priorities, determining alternative problem solving, planning, and implementing. It so that the provision of health information is carried out to get maximum results¹². But often, health promotion efforts are not carried out. Carry out these stages, which result in the goal of the health promotion activity not being achieved.

Respondents are health workers who are also included in the reinforcing factor. Health workers have an essential role in delivering health information, especially in the Sangihe district. Health workers are role models in the health sector who are respected by the community. So health workers should reflect on the value of health to build trust and adherence to the vaccination program¹³. Support for health workers who master health information can increase success in health promotion activities, in this case, the achievement of COVID-19 vaccination.

The health information needed to improve vaccination outcomes is first in the form of information about someone who has been diagnosed with COVID-19. From the results of data analysis, when someone has been diagnosed, there is no need to be vaccinated again. Based on the guidance from PAPDI, it is also stated that someone who has been diagnosed with COVID-19 is not recommended to be vaccinated against COVID-19¹⁴. This is because someone diagnosed with COVID-19 has already formed antibodies in that person¹⁵. But the latest information is currently in Indonesia that for COVID-19 survivors, vaccinations are still carried out if they have been declared cured with a period of more than three months.¹⁶ Based on the latest information, it is hoped that the public will understand more about vaccination because the latest regulations set by the government have gone through various stages and tests, so that it is safe to do so.

The next health information that is important in improving COVID-19 vaccination outcomes is comorbid. Many studies have been conducted on people who

are positive for COVID-19. The result is that people suffering from the chronic disease have a higher risk of being infected with the SARS-CoV-2 virus and have a higher risk of dying after being infected¹⁷. This is from research conducted by a meta-analysis of 7 studies on severe degrees of COVID-19 which stated that COPD (OR = 6.42), diabetes mellitus (OR = 3.12), cardiovascular (OR = 2.70), and hypertension. (OR = 1.97).¹⁸ In another study conducted retrospectively on 487 COVID-19 subjects with a severe degree, it was also stated that age ≥ 50 years, men with a history of hypertension were high-risk factors for experiencing COVID-19.¹⁹ Meanwhile, in another study regarding the mortality of COVID-19, diabetes mellitus, and cardiovascular disease are high-risk factors for the death of COVID-19 at the Bhakti Dharma Husada Hospital Surabaya.²⁰ These respondents' information only slightly understands, even though the respondent is a health worker. Respondents' unwillingness was due to the respondents' lack of information that they understood about comorbid. For these comorbid reasons, many misunderstandings are found due to the lack of information they get. So far, efforts to increase knowledge have only focused on efforts to prevent COVID-19 itself, so that information about comorbidity is not specifically explained. It was explained that people with hypertension can be vaccinated on the condition that hypertension is controlled $<140/90$ with or without drugs, as well as diabetes mellitus that vaccines can be done provided that people with type 2 diabetes mellitus are controlled and HbA1C below 58 mmol or 7.5% can be given the vaccine. Meanwhile, people with food and drug allergies can also vaccinate COVID-19, except for some antibiotic drugs such as neomycin, polymyxin, streptomycin, and gentamicin which need major attention to the COVID-19 vaccine¹⁴. Recent information states that people with hypertension with a blood pressure reading of $<180/100$ mmHg can still be vaccinated, while for diabetes sufferers, vaccination is still carried out as long as there are no acute complications. Even

the latest information also states that cancer and autoimmune sufferers may be vaccinated against COVID-19.²¹ Based on this, people who have comorbidities make themselves the priority for vaccination.²²

The next information is in the form of the safety of the COVID-19 vaccine. Information that needs to be conveyed is that before this vaccine is given widely, such as Sinovac or Astra Zeneca, this vaccine must pass four stages of testing starting from the preclinical stage, namely the stage where the vaccine is given to animals such as mice and monkeys. Then proceed with the first phase of clinical trials, namely vaccines are given to dozens of people who will then be assessed for safety, dosage, and immune system stimulation. Then in the second phase of clinical trials involving hundreds of people who continue the first phase. Then it was carried out in the third phase of clinical trials on thousands of people to assess the vaccine's efficacy. The results of the various stages of the test were just accepted and deserved to be given widely. The result of the efficacy of the Synovac vaccine in Brazil was 78%, in Turkey, it was 91.25%, and in Indonesia, it was 65.3%. Meanwhile, for Astra Zeneca, 90%.²³

Important health information to be conveyed to the public to increase the vaccination rate is by providing information about the side effects experienced during vaccination. Many hoaxes are circulating in the community, so the explanation about this is very important to convey. Deddy Mulyana stated that the main factor of hoaxes spreading easily in Indonesia is the original Indonesian people's character. Indonesian people are considered not accustomed to different opinions. This condition is a factor in society swallowing the hoax without analyzing the source²⁴. Research also states that hoax which has been widely spread and carried out repeatedly through social media can form a public perception or opinion that the news conveyed is true.²⁵ Health information is required for behavior change.²⁶

The side effects that are obtained are very diverse. It is due to differences in the

condition of a person's body.²⁷ The study results stated that for Sinovac, based on local reactions, there are two mild to moderate in nature, such as pain, induration, irritation, redness, and swelling. Then, based on the systemic effect, the resulting reaction experiences myalgia, fatigue, and fever.²⁸ While the side effects resulting from Astra Zeneca are pain or pain when pressed at the injection site, headache, fatigue, muscle or joint pain, fever, chills, and nausea.²⁹

CONCLUSION

This study concludes that four health information is most needed in improving the achievement of COVID-19 vaccination. Firstly, about vaccines for COVID-19 survivors, secondly about what kind of comorbid COVID-19 vaccination is worth, the third and fourth are the safety and side effects of the COVID-19 vaccine.

It is recommended that health workers promote activities for the four health information. If provided to the public, these four pieces of information are expected to increase public knowledge, which will result in an increase in participation rates for COVID-19 vaccination.

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