Analysis of Information on The Influence of Vaccine on The Level of Participation of Covid-19 Vaccination in Various Puskesmas in NTT Province

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Abstract: Public knowledge about COVID-19 and vaccines can support the success of programs dealing with this disease. The scope of providing vaccine information in Indonesia is not maximized because it is still new and some people refuse to be vaccinated for reasons of worry about the safety and effectiveness of vaccines, they express distrust of vaccines and question the halalness of vaccines. To find out Information Analysis About the Effect of Vaccines on the Participation Rate of Covid-19 Vaccination at Various Health Centers in NTT Province. Obtain research knowledge regarding the influence of Information Analysis on the Effect of Vaccines on the Participation Rate of Covid-19 Vaccination at Various Health Centers in the Province of NTT. This research is also useful for helping research subjects increase their knowledge and insight into knowledge by participating in COVID-19 vaccination at various health centers in NTT Province.

Keywords: Pandemic Covid-19, Effect of Vaccines, Vaccination Participation in NTT

INTRODUCTION

The Corona Virus Disease 2019 (COVID-19) pandemic, or better known by the public as the COVID-19 pandemic, is a health problem that is currently in the world's spotlight. COVID-19 has been defined by the

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Indonesian government as a non-natural disaster and is receiving attention from health scientists and the general public. The first confirmed cases have spread to rural areas in remote areas, not only in the Special Capital Region of Jakarta and other densely populated cities. As of January 27 2022, 4,309,270 cases have been confirmed in Indonesia and 144,261 people have died. (1) According to data from the Ministry of Health of the Republic of Indonesia, until Saturday, January 29 2022, the number of COVID-19 cases in East Nusa Tenggara (NTT) Province has reached 64,592 people. Furthermore, there were 1,352 people who died due to COVID-19 in NTT, and 206 people were still sick (active positive), and 63,042 people were declared cured.\(^1\)

Coronaviruses are enveloped non-segmented positive-sense RNA viruses that can cause respiratory and gastrointestinal infections in humans and some animals (3). The average incubation period for this virus is 5-6 days with a range of 1 to 14 days. Common symptoms found early in the disease are fever, fatigue or myalgia, dry cough. It can also cause symptoms such as sore throat, tremor, confusion, high fever, shortness of breath, dry cough, headache, nausea, vomiting and diarrhea in patients. Thus causing a significant increase in cases.\(^2\)

In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). Transmission of the coronavirus can occur very quickly which makes it difficult to control. The spread of the virus from human to human occurs by close contact with an infected person, exposed by coughing, sneezing, respiratory droplets or aerosols. Everyone is generally susceptible to infection. If someone is exposed to a large amount of the virus

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at one time, it can cause disease even though the body's immune system is functioning normally. People with weak immune systems such as the elderly, pregnant women, and other conditions, the disease can be progressively faster and also more severe.\(^3\)

The current handling of COVID-19 cases is more focused on efforts to prevent transmission because no drug has yet been found that can treat this viral infection. Socialization of "new normal" habits began to be carried out and enforced in society. The application of 3M habits (washing hands, wearing masks and maintaining distance) continues to be encouraged, even now it has been developed into 5M (washing hands, wearing masks, keeping distance, reducing mobility and staying away from crowds).\(^4\)

Since January 2021 the Government has carried out vaccinations in stages while remaining disciplined in health protocols. An evaluation of the effectiveness of the COVID-19 vaccine conducted by the Republic of Indonesia Health Research and Development Agency, proved that vaccines can reduce the risk of being infected with COVID-19, as well as reduce treatment and death for the community.\(^5\) The emphasis on promotive and preventive efforts continues to be made in increasing the role of the community, the private sector, across programs and across sectors to support efforts to handle and prevent COVID-19 so that it is hoped that it will be positively received and the COVID-19 mortality rate can be reduced.

To reduce transmission or transmission of COVID-19 in the community, so as to reduce morbidity and mortality from COVID-19. In addition, with this vaccination, it is hoped that community or group immunity will be achieved, meaning that there will be more healthy people than sick or


infected people. Herd immunity can only be formed if vaccination coverage is high and evenly distributed throughout the country.

Based on survey results in 2021, the Indonesian Ministry of Health and the University of Maryland in partnership with Facebook. A survey conducted from 10 January to 31 March 2021 regarding the COVID-19 vaccination program stated that 80.8% of the public was willing to be vaccinated. Based on this, the government stated that the public's doubts about getting the vaccine had decreased from 28.6% to 19.2% during the period from January to March 2021. (1.9) Data on the COVID-19 vaccination in the Province of East Nusa Tenggara (NTT) which is has been updated stating that as many as 77.38% of the public had carried out the first dose of vaccination, and as many as 45.31% of the public had carried out the second dose of vaccination.

Public knowledge about COVID-19 and vaccines can support the success of programs to deal with this disease. The scope of providing vaccine information in Indonesia is not maximized because it is still new and some people refuse to be vaccinated for reasons of worry about the safety and effectiveness of vaccines, they express distrust of vaccines and question the halalness of vaccines. The results of a vaccine acceptance survey conducted by the Ministry of Health, the Indonesian Technical Advisory Group on Immunization (ITAGI), the United Nations International Children's Emergency Fund (UNICEF) and the World Health Organization (WHO), namely:

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In research conducted by Setiyo Adi Nugroho et al (2021) on 110 students of the Faculty of Health, University of Nurul Jadid, with the title information analysis on the effect of vaccines and the self-efficacy of COVID-19 vaccination on students of the Faculty of Health, University of Nurul Jadid. ⁹ In this study there is a very strong relationship and a positive pattern on the level of knowledge with self-efficacy with the results of data analysis with Spearman's rho, obtained a value of \( r = 0.756 \) and a value of \( p = 0.000 \). In contrast to the research conducted by Irssa Intan Fatiha et al (2021) on 4,674 people in Latukan Village, entitled the level of community participation in the COVID-19 vaccination program by Government Agencies in Latukan Village, Kec. Karanggeneng Regency Lamongan. In this study, the percentage of people participating in the COVID-19 vaccination program by the government at the first and second doses was 17% who were willing, covering the total number of the first and second doses, namely 800 and 774 people, respectively. Meanwhile, another 83% did not participate in the COVID-19 vaccination. The main reason for the lack of community participation in the COVID-19 vaccination is because there is no socialization carried out by Latukan Village government agencies.

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agencies, so that the community lacks knowledge about COVID-19 and efforts to deal with COVID-19 through the vaccination program. The purpose of this study was to find out information analysis about the effect of vaccines on the participation rate of Covid-19 vaccination at various health centers in NTT province. The benefit of the research is to gain research knowledge regarding the influence of Information Analysis on the Influence of Vaccines on the Participation Rate of Covid-19 Vaccination at Various Health Centers in NTT Province.

RESEARCH METHODS

This type of research was carried out using an analytic observational research design with a cross-sectional or cross-sectional approach to find out information analysis about the effect of vaccines on the participation rate of Covid-19 vaccination at various health centers in NTT province. The population in this study were all visitors to the NTT Provincial Public Health Centers. The sample in this study were visitors to the Health Center in NTT Province who were willing to be the research sample and met the inclusion and exclusion criteria. The sampling technique in this study used a non-probability sampling technique with the type of consecutive sampling, that is, the sample was selected based on inclusion and exclusion criteria sequentially until the minimum sample size was met. This study uses primary data or directly from research subjects obtained from filling out the questionnaire. The data studied has a data scale in the form of an ordinal scale for the independent variable (level of knowledge) and a nominal scale for the dependent variable (participation in COVID-19 vaccination).

RESEARCH RESULTS

Univariate Analysis Results

The following is the result of a univariate analysis to get an overview of the information about the effect of vaccines by participating in the COVID-19 vaccination at Community Health Centers in the Province of NTT.

Information about the effect of vaccines on health center visitors in NTT Province

Knowledge can be obtained by a person naturally or intervened either directly or indirectly, according to the philosopher of knowledge, namely Plato stated knowledge as "true belief that is justified (valid)" (justified true belief) and is influenced by several factors such as education, information, social culture and the economy, environment, experience and age. According to Skinner in Budi and Riyanto (2013) knowledge measurement can be done by interviews or questionnaires that you want to know or measure according to information about the effect of the respondent's vaccine.13

The assessment is carried out by comparing the number of expected scores (highest) then multiplied by 100% and the resulting percentage will then be classified into 3 categories, namely good categories (76-100 %), moderate or sufficient (56%-75%), and less (< 55%). 32 The following is the distribution of data. Information about the effect of vaccines on participation in the COVID-19 vaccination of visitors to Puskesmas in NTT Province was obtained from a questionnaire given by the researcher.

<table>
<thead>
<tr>
<th>No</th>
<th>Level Knowledge</th>
<th>Frequency (N)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Good (76-100%)</td>
<td>54</td>
<td>54</td>
</tr>
</tbody>
</table>


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Currently (56-75%)

26

26

Not enough (<55%)

20

20

Total

100

100

Table 1. Information about the impact of vaccines on health center visitors in NTT Province shows that the majority, namely 54%, had good information about the effect of the vaccine, while 26% had moderate information about the effect of the vaccine and as many as 20% had insufficient information on the effect of the vaccine.\(^{14}\)

The questions that can be used to measure knowledge in this study are in the form of objective questions, questions in the form of statements with true-false answer choices. Then an assessment of 1 is carried out for the correct answer and a value of 0 for the wrong answer from the total statements on the questionnaire. 32 Of the 10 statements, there are 5 positive statements in which the respondent must answer correctly and 5 other statements, namely negative statements in which the respondent must answer incorrectly. The following is the result of respondents' answers regarding knowledge of participating in the COVID-19 vaccination.\(^{15}\)

Table 2. Distribution of Knowledge Questionnaire Answers on COVID-19 Vaccination Participation

<table>
<thead>
<tr>
<th>No</th>
<th>Statement</th>
<th>Correct Frequency</th>
<th>Correct %</th>
<th>Wrong Frequency</th>
<th>Wrong %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SARS-CoV-2 is type virus new which cause disease <em>Coronavirus disease</em> 2019 or COVID-19.</td>
<td>90</td>
<td>90</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>54</th>
<th>54</th>
<th>46</th>
<th>46</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>COVID-19 can be treated with Antibiotics.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Symptom consequence infection COVID-19 like fever, flavor lazy And cough dry.</td>
<td>91</td>
<td>91</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>After in Vaccination COVID-19, No needed again implementation of 3M, ie use face mask, guard distance, And wash hand.</td>
<td>72</td>
<td>72</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>5</td>
<td>Detection COVID-19 can through laboratory examination in the form of Reverse Transcription Polymerase Chains reaction (RT-PCR) that is swab on throat.</td>
<td>84</td>
<td>84</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>6</td>
<td>COVID-19 vaccination is carried out for complete effort prevention deployment COVID-19 And held with still apply protocol Health.</td>
<td>97</td>
<td>97</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>Risk infected COVID-19 the more low to person carry on age And somebody Which own history disease default.</td>
<td>57</td>
<td>57</td>
<td>43</td>
<td>43</td>
</tr>
<tr>
<td>8</td>
<td>Vaccination COVID-19 aim reach immunity group in public (herd immunity).</td>
<td>88</td>
<td>88</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>9</td>
<td>After in Vaccination COVID-19 We No can infected COVID-19 Again.</td>
<td>69</td>
<td>69</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>10</td>
<td>COVID-19 only detected on person</td>
<td>60</td>
<td>60</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>
Based on table 2, the measurement of knowledge of COVID-19 vaccination participation at Community Health Centers in the Province of NTT was assessed using a validated questionnaire. In this study it was found that all the statements asked were answered correctly with an average prevalence of 76.2% in each statement.16

**Participation Rate of COVID-19 Vaccination at Community Health Centers in NTT Province**

Distribution of COVID-19 vaccination at Puskesmas in NTT Province obtained from questionnaires given by researchers and COVID-19 vaccination data for Puskesmas visitors in NTT Province.

Table 3. Distribution of COVID-19 Vaccinations

<table>
<thead>
<tr>
<th>No</th>
<th>Vaccination COVID-19</th>
<th>Frequency (N)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td>54</td>
<td>54</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
<td>46</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 3 of the distribution of COVID-19 vaccination illustrates that the majority of Puskesmas visitors in NTT Province had carried out phase I, II, and III COVID-19 vaccinations, namely 54 respondents (54%) and 46 respondents (46%) only carried out COVID-19 vaccinations stage I and II.

**Results of Bivariate Analysis**

Bivariate analysis was used to analyze information about the effect of vaccines participating in the COVID-19 vaccination using the Chi-Square test with a significant rate (α) of 0.05. If the results of the Chi-Square test

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with a p value <0.05 then the data can be said to be significant, conversely if the results of the Chi-Square test with a p value > 0.05 then the data can be said to be insignificant.

Table 4. Bivariate Analysis Information on the effect of vaccines on Vaccination Participation

<table>
<thead>
<tr>
<th>Level Knowledge</th>
<th>Vaccination</th>
<th>n (%)</th>
<th>p.s</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>n (%)</td>
</tr>
<tr>
<td>Good</td>
<td>37</td>
<td>17</td>
<td>31.5</td>
</tr>
<tr>
<td>Currently</td>
<td>11</td>
<td>15</td>
<td>18.2</td>
</tr>
<tr>
<td>Not enough</td>
<td>6</td>
<td>14</td>
<td>70</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>46</td>
<td>46</td>
</tr>
</tbody>
</table>

All cells that have been combined have fulfilled the Chi-Square test requirements with no expected count value less than (<) 5 in each cell so that the p value can be seen from the Pearson Chi-Square table. The results of the analysis in table 4.8 show that the significance value is p = 0.005 (p <0.05) so that there is a significant relationship between information about the effect of vaccines and participation in COVID-19 vaccination at Community Health Centers in the Province of NTT.

Based on table 4 respondents with good information about the effects of vaccines, 37 respondents (68.5%) had carried out phase I, II, and III COVID-19 vaccinations, and 17 respondents (31.5%) had only carried out phase I and II vaccinations. Meanwhile, for respondents with information about the effects of moderate vaccines, 11 respondents (42.3%) had completed the complete vaccination and 15 respondents had not received complete vaccination. And for respondents who have less information
about the effects of vaccines. as many as 6 respondents (30%) had received complete vaccinations and as many as 14 respondents (70%) had not received complete vaccinations.

**Discussion**

Research on the analysis of information about the effect of vaccines with the participation of COVID-19 vaccination at Community Health Centers in the Province of NTT was conducted to determine the relationship between the two variables. The results of the study in table 4.8 used the Chi-Square test and obtained a significance value of $p = 0.005$ or $p < 0.05$. The $p$ value indicates that there is a significant relationship between information about the effects of vaccines and the level of participation in carrying out COVID-19 vaccinations for visitors to health centers in the Province of NTT.

![Figure 2. Percentage of information on the effect of vaccines on COVID-19 vaccination participation](image)

Based on the results of the study in Figure 2, it shows the percentage of respondents with good information about the effects of vaccines, most of whom had carried out the COVID-19 phase I, II and III vaccinations, as many as 37 respondents (68.5%) and as many as 17 respondents (31.5%) had not yet vaccinated. complete COVID-19, then for respondents with moderate information about the effect of the vaccine as many as 11 respondents (42.3%) had completed the complete COVID-19 vaccination
and as many as 15 respondents (57.7%) had not carried out the complete COVID-19 vaccination and the respondents. With less information about the effects of vaccines, as many as 6 respondents (30%) had received a complete COVID-19 vaccination, while 14 respondents (70%) had not carried out a complete COVID-19 vaccination.17

This is in accordance with research conducted by Noer Febriyanti et al. (2021) in the city of Surabaya with the results of the research namely information about the effect of vaccines and citizens' readiness about the COVID-19 vaccine are in the good category. The knowledge that the community gains about information is influenced by education, that is, the higher the level of education, the easier it is to receive information. 12 Based on this statement, according to Sukmana et al., (2021) if the news of information is clear, detailed and valid, it can make the public have information. about the good effects of vaccines and is an important key in increasing public awareness about the COVID-19 vaccination program. Limited information is one of the reasons people are hesitant to vaccinate against COVID-19. 18

And this is in accordance with the results of the survey on Acceptance of the COVID-19 Vaccine in Indonesia in November 2020 which was held by the Indonesian Ministry of Health, ITAGI, UNICEF and the World Health Organization (WHO), namely around 79% of respondents wanted to hear more information about the COVID-19 vaccine. The different levels of public confidence in the COVID-19 vaccine are due to limited information regarding the type of vaccine, when the vaccine will be available and its safety profile. 9 In table 4.5 it is described that as many as 54 respondents have good information about the effects of vaccines (54%) and in table 4.7 as many as 54 respondents (54%) had already carried out phase I, II and III COVID-19 vaccinations, meaning that in this study the


provision of information could be said to be good because most of the visitors to the Puskesmas in NTT Province had good knowledge and the level of participation in the COVID-19 vaccination had exceeded half of the total research sample.\footnote{Indonesia KKR. Protokol Tata Laksana COVID-19. In: KKBI Daring [Internet]. 2020. Available from: https://kbbi.kemdikbud.go.id/entri/Tata Laksana}

Then according to Budi and Riyanto (2013) one of the factors that influence knowledge is education. Education is guidance given by a person for the development of other people towards certain ideas that determine humans to act and fill life to achieve safety and happiness. 32 Ichsan et al., (2021) states that the level of education is also a factor that influences people's willingness to receive the COVID-19 vaccination. 40 In table 4.3 of respondents with an education level of strata I (S1) there were 41 respondents (41\%) and as many as 23 respondents (56.1\%) had already carried out the COVID-19 vaccination stages I, II and III, from the number of 41 respondents can represent the level of education in this study that almost the majority of the research sample has a high level of education.

Researchers when conducting research also found information that influenced community participation in the COVID-19 vaccination, namely the period of a mother's pregnancy. Several respondents who were pregnant women only carried out phases I and II of the COVID-19 vaccination due to this period of pregnancy which caused a mother to not be able to carry out the complete COVID-19 vaccination until the specified period. This is also in accordance with the statement from the Ministry of Health of the Republic of Indonesia (2022) that in particular for phase III (Booster) vaccination for pregnant women it can be carried out based on several conditions because the vaccine has several side effects, pregnant women who have several health problems should be referred to the home sick and get approval from a doctor to be able to vaccinate against COVID-19.\footnote{Indonesia KKR. Protokol Tata Laksana COVID-19. In: KKBI Daring [Internet]. 2020. Available from: https://kbbi.kemdikbud.go.id/entri/Tata Laksana}

The results of research conducted by researchers are in line with research on information analysis about the effect of vaccines and COVID-19 Vaccination Self-efficacy by Setiyo Adi Nugroho et al (2021) which
concluded that Self-efficacy is a general concept that refers to the extent to which people believe they have competence to tackle a task or solve a problem. Information about the effects of vaccines is an important factor in self-efficacy, especially when a person wishes to vaccinate against COVID-19, however information about the effect of the vaccine is not the most dominant but depends on the extent of the information obtained.

The results of this study can be used as a foundation for human behavior in dealing with the COVID-19 pandemic and the success of the COVID-19 vaccination so that herd immunity can be formed if the vaccination coverage is high and evenly distributed throughout the region and is able to reduce the transmission rate of COVID-19 throughout the region. Indonesia especially for the region.

CONCLUSION

After conducting the research, it can be concluded that there is a relationship that influences information about the effect of vaccines on the level of participation in COVID-19 vaccination at Community Health Centers in the Province of NTT which is indicated by the receipt of H1 where the significance value is p=0.005 or p<0.05. Distribution of information about the effects of vaccines at the health centers in NTT Province illustrates that the majority, namely 54 respondents (54%) have good information about the effects of vaccines, 26 respondents (26%) have sufficient information about the effects of vaccines and 20 respondents (20%) have Information about the effects of vaccines is lacking. The distribution of participation rates for COVID-19 vaccination at Puskesmas in NTT Province illustrates that the majority of visitors have carried out phase I, II, and III COVID-19 vaccinations, namely 54 respondents (54%) and who have carried out phase I and II COVID-19 vaccinations. 46 respondents (46%).
BIBLIOGRAPHY


