

Level of student education and knowledge about sinovac vaccine with immunization participation



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ABSTRACT

Introduction: Due to reports of thousands of deaths and cases of illness rising daily, the Covid-19 outbreak has been deemed a worldwide health emergency. Giving vaccinations is one preventive method to stop its spread. Analysis of the association between students' educational attainment and their knowledge of the Sinovac vaccination and their involvement in the Sinovac immunization program was the study's main goal.

Methods: This study uses a cross-sectional methodology to analyze Rank Spearman. 5400 students made up the study's sample, which was selected using a simple random sampling method. By sending out questionnaires via a Google form, data was collected.

Result: The majority of respondents with undergraduate education are 61.5%. According to the study's findings, the degree of education and immunization rates were significantly correlate, with p value = 0.000 (p-value < 0.05), and knowledge and immunization participation were significantly correlated, with p-value = 0.001 (p-value < 0.05).

Conclusion: The higher the education, the better the way of receiving information so that more information is obtained. Students can get knowledge through social media by exchanging experiences with individuals who have received vaccinations.

Keywords: education, knowledge, Sinovac vaccine, immunization.

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INTRODUCTION

The Sinovac Covid-19 vaccine from China, which is classified as a dead virus vaccine, has received an emergency use authorization (EUA) for the coronavirus vaccine (Covid-19) from the Food and Drug Supervisory Agency.¹ The Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) is the virus responsible for Coronavirus Disease 2019 (COVID-19), which is endemic and has spread globally.² Due to reports of thousands of cases and evidence of human-to-human transmission, the COVID-19 outbreak has been deemed a worldwide health emergency.³

Every day sees an increase in COVID-19's death and morbidity rates.⁴ As of December 27, 2020, there were 79,231,893 COVID-19 cases worldwide, and 1,754,574 individuals have died as a result, according to data from the World Health Organization. As of January 3, 2021, data on the distribution of COVID-19 in Indonesia

showed 765,350 confirmed cases, 22,734 cases that died, and 110,679 cases that were active or receiving treatment, according to the Covid-19 Handling Task Force (2021). With 86,361 confirmed cases, 11.3% of them originated in Surabaya City in East Java Province (18,288 cases). As much as 50% of those infected with COVID-19 are asymptomatic, and the majority of cases only display minor symptoms.⁵ However, the condition has serious clinical effects in 20% of patients, necessitating hospitalization and, in certain circumstances, intensive care.⁶

An inactivated vaccine, or dead virus, is the Sinovac vaccination. An inactivated vaccination, to put it simply, is one that stimulates an immune response by using a virus that has been weakened or rendered inactive. According to Handoyo (2021), the virus that is injected into humans is intact. Previously, the virus had been genetically tampered with or killed by chemicals, heat, or radiation so that when injected into humans it did not cause any

problems because the genetic material had been damaged so that it could not replicate. There are inactivated vaccines available for rabies, polio, hepatitis A, and the flu. Sinovac and Bio Farma are partnering to create CoronaVac, a vaccine.⁷

The lack of student knowledge about the Sinovac vaccine is mostly not done due to several factors including knowledge, education, occupation, attitude, income, family support, and support from high health workers. Knowledge and education play an important role in giving immunizations because they can influence attitudes in decision making towards immunization.⁸ The impact of not being immunized can cause the Covid-19 disease to continue to plague and even cause death. Based on the above background, the researcher is interested in conducting research entitled "Level of education and knowledge of students about Sinovac vaccine with Sinovac immunization participation". The purpose of the study was to analyze the relationship between

the level of education and knowledge of students about the Sinovac vaccine with Sinovac immunization participation.

METHOD

General Background of Research

This research is an analytical research of Rank Spearman with cross-sectional method.

Sample of Research

The population in this study was all Indonesian students. The sample used is all students who live in Indonesia. The technique used is a total sampling of 5400 students.

Instrument and Procedures

The instrument used in this study was a questionnaire sheet with a google form. The research procedure is by distributing links to students who are willing to become research subjects. The data that has been collected is then analyzed and interpreted so that the results of the analysis can be used as material for decision making in overcoming problems. After the data is processed, the next step is to analyze the data. The desired analysis is the Spearman Rank correlation statistical test using the SPSS 25 for the windows program with a significant level of = 0.05.

Data Analysis

Both univariate and bivariate analysis were used in the data analysis. Univariate analysis was used to determine the distribution and frequency of the dependent and independent variables, while bivariate analysis was used to determine the relationship between the dependent variable and the independent variable. This relationship was analyzed using the Chi-Square (X²) test using the SPSS program with a value of = 0.05, in accordance with the applicable provisions, namely if the p-value (0.05), then there is a significant. There is no significant link between the independent variable and the dependent variable if the p-value is less than 0.05.

RESULTS

Univariate analysis

Most of the student's education level is DIV/S1 (61.5%), and [table 1](#) about

demographic data based on gender reveals that women make up 54 percent of the population. Nearly half are between the ages of 18 and 22 (67.6%), and television is the most common source of information for these students (52.6 %).

Bivariate analysis

Based on [table 2](#) shows that the education level D1-D3 with a high participation rate obtained as many as 514 students (14.1%) while for S1-S3 education level with a high participation rate were 3124 students (85.9%). With a significance level of 0.05, the Spearman Rank test yielded a value of = 0.000, meaning that H₀ is not accepted and that there is a correlation between

students' educational attainment and their involvement in the Sinovac vaccination program.

Based on [table 3](#) shows that the level of low knowledge with a high level of participation obtained as many as 367 students (11.5%) while for a high level of knowledge with a high level of participation as many as 2821 students (88.5%). According to the findings of the Spearman Rank test, which had a significance threshold of = 0.05, a value of = 0.001 was obtained, meaning that H₀ is not accepted and that there is a correlation between students' educational attainment and their involvement in the Sinovac vaccination program.

Table 1. Demographic data on Indonesian student characteristics (n = 5400).

No	Variable	Frequency (n= 5400)	Percentage (%)
1.	Gender		
	Male	2480	45.9
	Female	2920	54.1
2.	Age		
	18-22 years old	3650	67.6
	More than 23 years old	1750	32.4
3.	Education Level		
	D1/D2	178	3.3
	D3	1577	29.2
	DIV/S1	3321	61.5
	S2	261	4.8
	S3	63	1.2
4.	Resources information		
	Television	2841	52.6
	Internet	1546	28.6
	Friends	1013	18.8

Table 2. The relationship between the education level of students about the Sinovac vaccine with Sinovac immunization participation (n=5400).

Level of Education	Participate				P value
	Low		High		
	n	%	n	%	
D1-D3	1241	70.5	514	14.1	0.000
S1-S3	521	29.5	3124	85.9	
Total	1762	100	3638	100	

Table 3. The relationship between the knowledge of students about the Sinovac vaccine with Sinovac immunization participation (n=5400).

Knowledge	Participate				P value
	Low		High		
	n	%	n	%	
Low	1388	62.6	367	11.5	0.001
High	829	37.4	2821	88.5	
Total	2217	100	3188	100	

DISCUSSION

Knowledge of the Sinovac vaccine is one of the important aspects of an understanding of the importance of Sinovac immunization. The study's findings show that Indonesian students have higher knowledge levels the higher the level of education they are pursuing.

The notion holds that the more education, the better the ability to learn, the more information acquired, and the greater the level of knowledge. The acceptance and comprehension of a substance or thing that manifests itself in the form of knowledge will depend on the person and their level of education. The degree of content mastery required to meet the aims and objectives will vary depending on a person's level of schooling. Adequate knowledge will make a person able to make decisions in the actions to be taken. Education that a person has can develop a personality to make it more valuable.⁹ So that students will develop themselves by reading and getting information from outside that can increase their knowledge and insight.¹⁰

Students will have a broad view and knowledge as well as their perception of the importance of something. In this case, student knowledge is good because the student develops himself by getting information from outside, for example through social interactions such as through social media with students who have been vaccinated sharing experiences with those who have never been vaccinated.¹¹ This is in accordance with a survey conducted by the Ministry of Health (2020).¹² Approximately 30% of respondents stated that they or their closest people such as family members, friends, or neighbors had contracted COVID-19 and this group of respondents was more willing to receive the vaccine.^{13,14} This is also consistent with research by Wardani, et al. (2020), which claims that social media is a crucial necessity for students since it allows them to get accurate and up-to-date information, such as information regarding Covid-19.^{15,16}

CONCLUSIONS

Knowledge and education play an important role in giving immunizations because they can influence attitudes in decision making towards immunization. The importance of socialization about the sinovac vaccine needs to be done in increasing knowledge, especially for students so that it is hoped that after getting good knowledge, it will increase student participation in immunization using the sinovac vaccine. Therefore, further research is needed to find out other factor factors that affect the level of student education and knowledge about sinovac vaccine with immunization participation.

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AUTHOR CONTRIBUTION

All authors contributed to this study's conception and design, data analysis and interpretation, article drafting, critical revision of the article, final approval of the article, and data collection.

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CONFLICT OF INTEREST

There is no conflict of interest in this manuscript.

ETHICAL CONSIDERATION

This study has been declared ethical by the Ethical Commission for Health Research of the Universitas Nahdlatul Ulama Surabaya.

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