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 vaccine, 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 Spearmen 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 \( p = 0.000 \), 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 \( p = 0.001 \) 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.
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. So that students will develop themselves by reading and getting information from outside that can increase their knowledge and insight. 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. Adequate knowledge will make a person more likely to be vaccinated sharing experiences with those who have never been vaccinated.

Approximately 30% of respondents stated that they or their closest people such as family members, friends, or neighbors had contracted COVID-19 and this is in accordance with a survey conducted by the Ministry of Health (2020). Approximately 30% of respondents stated that they or their closest people such as family members, friends, or neighbors had contracted COVID-19 and this is in accordance with a survey conducted by the Ministry of Health (2020).12

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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.

REFERENCES