



Correlation Between Knowledge Level On Anxiety Level Post-Coronavac Vaccine at The Clinic of dr. Irma

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ABSTRACT

Vaccination is the government's effort to prevent the spread of the COVID-19 pandemic. Lack of knowledge about the Coronavac vaccine gives rise to various kinds of speculation, resulting in anxiety. This study attempts to analyze evaluate the correlation between knowledge level of public officers about the effects of Coronavac vaccine on anxiety level post-Coronavac vaccine at the dr. Irma Clinic. The study was an analytic observational study with a cross-sectional design, conducted on March 22, 2021. 62 public officers who received the Coronavac vaccine at the dr. Irma Clinic was enrolled. The sampling technique used was total sampling. The data analysis used was the Mann-Whitney test. The result showed that 39 (62.9%) respondents had a good level of knowledge. 42 (67.7%) respondents showed no sign of anxiety. There was a tendency that the better the level of knowledge, the less anxious, and vice versa, the less knowledge, the more respondents experience both mild and moderate anxiety. From the Mann Whitney test results, the p-value was 0.000 (sig < 0.05). There was significant correlation between knowledge level of public officers about the effects of Coronavac vaccine on anxiety level post-Coronavac vaccine at the dr. Irma Clinic.

Keywords : anxiety, coronavac vaccine, knowledge.

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INTRODUCTION

The rapid spreading of COVID-19 has become the primary health problem around the world. As of December 31, 2020, the number of positive cases of COVID-19 in Indonesia was 743,198 cases. 611,097 people recovered and 22,138 people died (COVID-19 Task Force, 2020). Seeing a situation like this, one possible way to prevent the spread of COVID-19 was by developing vaccines (Liu et al., 2020).

Currently, the COVID-19 vaccination in Indonesia has been carried out and the target of period 1 was health workers and public officers. On February 1, 2021, 1,531,072 targets had received the COVID-19 vaccination (KPCPEN, 2021). However, misinformation or hoaxes about

the COVID-19 vaccine have circulated (COVID-19 Task Force, 2021). The arises of hoax news further contribute to anxiety, especially after the vaccination.

Anxiety is an emotional mental disorder. Anxiety is a condition of helplessness, insecurity or immaturity, and inability to deal with environmental demands (Epstein D, 2020). Anxiety is characterized by two components: awareness of physiological sensations (such as palpitations and sweating) and awareness of being nervous or frightened. In addition to visceral and motor influences, anxiety affects thinking, perception, and learning. Anxiety tends to cause confusion and distortion of perceptions of time, space, people, and the meaning of events. It can interfere with the learning process by reducing concentration, reducing memory, and interfering with the ability to connect one thing to another, namely making associations (Kaplan & Sadock, 2014). Increased anxiety levels are mental health problems that often occur during a pandemic, including COVID-19 pandemic (WHO, 2020).

One that affects anxiety is knowledge. Ignorance can cause anxiety, and knowledge can overcome existing problems (Fudyartanta, 2012). The earlier research by Sirait et al. (2020) stated that there was a similar correlation between knowledge and anxiety levels. Knowledge is the result of knowing, and this occurs after people have sensed a particular object. Sensing occurs through the five human senses, namely sight, hearing, smell, taste, and touch. Most of the human knowledge is obtained through the eyes and ears (Notoatmodjo, 2014).

METHODS

The research was conducted as a cross-sectional analytic observational study. It took place on March 22, 2021, at the dr. Irma Clinic. Public officers who received the Coronavac vaccine at dr. Irma Clinic was enrolled. With a total of 62 respondents, Total Sample was employed as the sampling technique.

The variables were separated into two categories: dependent variables and independent variables. The level of anxiety was the dependent variable, and the level of knowledge about the Coronavac vaccine was the independent variable.

The level of knowledge contained all knowledge that public officers knew about the effects of the Coronavac vaccine, including benefits, side effects, indications, and contraindications. The results were presented in a percentage of correct answers compared to all questions, classified into good (56-100%) and poor ($\leq 55\%$) (Arikunto, 2013). The level of anxiety, an emotion that arises from non-specific causes that may lead to feelings of discomfort and threatened, was measured with the Hamilton Anxiety Rating Scale (HARS). The results were presented on an ordinal scale, classified into no anxiety (score < 14), mild anxiety (score of 14-20), moderate anxiety (score of 21-27), severe anxiety (score of 28-41), and very severe anxiety (score of 42-56).

A univariate analysis was used for the two sample groups to collect the number and characteristics of respondents, and a bivariate analysis was used to determine the correlation between public officers' knowledge of the effects of the Coronavac vaccine and anxiety levels after Coronavac vaccine administration. As a bivariate analysis, the Chi-square test was performed. It was used because the type of data was categorical data. The significance limit was ' $\alpha = 0.05$ ' to see the significance of the calculation results, so if the statistical analysis results were $p\text{-value} < 0.05$, the correlation between the two variables was not significant. The Chi-square test was carried out if a condition was fulfilled, that is, cells with an expected count value of < 5 a maximum of 20%. If it did not meet the requirements, then the Mann-Whitney alternative test was used.

RESULTS AND DISCUSSION

Based on the study result conducted on public officers who received the Coronavac vaccine in the third week of March 2021 at the dr. Irma Clinic, 62 respondents were obtained. This study used the Chi-square test to determine the correlation between the knowledge level of public officers about the effect of the Coronavac vaccine on the anxiety level post-Coronavac vaccination. The demographic data of respondents were also collected, including age and gender.

Demographic data of public officers who received the Coronavac vaccine at dr. Irma Clinic was shown on the table below:

Table 4.1 Descriptive Statistics of Age Characteristics

Characteristic	N	Minimum	Maximum	Average	Standard Deviation
Age	62	20	58	36.27	11.88

The table of age characteristics explained that the lowest age of respondents was 20 years, the highest was 58 years, and the average was 36.27 years.

Table 4.2 Frequency Distribution of Gender Characteristics

Gender	Frequency	Percentage
Female	31	50%
Male	31	50%
Total	62	100%

The table of characteristics by gender showed that among 62 public officers who received the Coronavac vaccine at the dr. Irma Clinic, the number of male and female respondents was equal.

The distribution of knowledge levels and anxiety levels of public officials who received the Coronavac vaccine shown below:

Table 4.3 Frequency Distribution of Knowledge Level

Knowledge Level	Frequency	Percentage
Good	39	62.9
Poor	23	37.1
Total	62	100%

The results showed that the knowledge level of public officers who received the Coronavac vaccine was mainly good, with 39 respondents (62.9%).

Table 4.4 Frequency Distribution of Anxiety Level

Anxiety Level	Frequency	Percentage
No anxiety	42	67.7%
Mild anxiety	16	25.8%
Moderate anxiety	4	6.5%
Severe anxiety	0	0%
Very severe anxiety	0	0%
Total	62	100%

The results showed that the majority of public officers who received the Coronavac vaccine were not anxious with a total of 42 respondents (67.7%), mild anxiety with a total of 16 respondents (25.8%), and the least with moderate anxiety with a total of 4 respondents (6.5%). None of the respondents had severe or very severe anxiety levels.

The analysis of the correlation between the knowledge level and the anxiety level was shown in the table below:

Table 4.5 The Correlation Between Knowledge Level and Anxiety Level

Knowledge Level	Anxiety Level			Total f (%)	p-value
	No anxiety f (%)	Mild anxiety f (%)	Moderate anxiety f (%)		
Good	36 (92.3%)	3 (7.7%)	0 (0%)	39 (100%)	0.000 ^a
Poor	6 (26.1%)	13 (56.5%)	4 (17.4%)	23 (100%)	
Total	42 (67.7%)	16 (25.8%)	4 (6.5%)	62 (100%)	

^a Mann Whitney Test

The cross-tabulation results revealed that among the 39 respondents who had good level of knowledge, the majority did not feel anxious after receiving the Coronavac vaccine (92.3%), and 7.7% had a mild level of anxiety. Then from 23 respondents with a poor level of knowledge, the majority had mild anxiety levels after receiving the Coronavac vaccine (56.5%), not anxious (26.1%), and 17.4% had moderate anxiety. The results of the Mann Whitney test (chi-square conditions are not met) indicated that the p-value obtained was 0.000 (sig < 0.05). Hence, the knowledge level correlated with the anxiety level of public officers who received the Coronavac vaccine.

This study involved public officers who received the Coronavac vaccine at the dr. Irma Clinic, conducted on March 22, 2021, using a knowledge level questionnaire about the Coronavac vaccine. Among 62 respondents, the most public officers, 39 respondents (62.9%), had a good level of knowledge. Furthermore, 23 respondents (37.1%) had poor knowledge level. The study results were in line with a survey conducted by the Ministry of Health of the Republic of Indonesia in 2020; out of 115,000 respondents, 74% claimed to know about the COVID-19 vaccination program (Kemenkes RI, 2020).

Anxiety is an emotional, mental disorder. Anxiety is a condition of helplessness, insecurity or immaturity, and inability to deal with environmental demands (Epstein D, 2020). In this study using the Hamilton Anxiety Rating Scale (HARS) questionnaire, the majority of public officers who received the Coronavac vaccine, 42 respondents (67.7%), were not anxious, 16 respondents (25.8%) had mild anxiety, and 4 respondents (6.5%) had moderate anxiety.

Based on the results of the cross-tabulation between the level of knowledge and the level of anxiety, it showed that, out of the 39 respondents with a good level of knowledge, the majority did not feel anxious after receiving the Coronavac vaccine (92.3%) and 7.7% had a mild level of anxiety. Furthermore, 23 respondents with a low level of knowledge, the majority (56.5%) had mild anxiety levels, 26.1% were not anxious, and 17.4% had moderate anxiety. There was a tendency that

the better the level of knowledge, the less anxious, and vice versa, the less knowledge, the more a chance to experience both mild and moderate anxiety. The results of the Mann Whitney test (chi-square conditions are not met) showed that the p-value obtained was 0.000 ($\text{sig} < 0.05$). Hence, the level of anxiety correlated with the level of knowledge of public officers who received the Coronavac vaccine.

The results were in line with Fudyartanta (2012), which stated that ignorance might cause anxiety and knowledge could overcome existing problems. The results were also in line with the research conducted by Sirait et al. (2020), which stated that there was a correlation between knowledge about Covid-19 and the level of anxiety in the elderly who experienced hypertension in RW 09 Housing Gate PermaiPamengkang, the working area of the Pamengkang Health Center in 2020, with p-value = 0.007 ($\alpha = 0.05$). Although the research was conducted on different samples, it was found that there was a similar correlation between knowledge and anxiety levels. However, the results of this study contradicted the research of Suwandi and Malinti (2020), which stated that there was no correlation between the level of knowledge and the level of anxiety about COVID-19 experienced by adolescents, especially teenagers in XII-grade of Balikpapan Adventist High School. It might be because the sample was in adolescent age, where anxiety is more easily experienced by younger individual (Fudyartanta, 2012).

CONCLUSION AND SUGGESTION

Based on the study results, it can be concluded that the frequency distribution of the knowledge level about Coronavac vaccine in public officers who received Coronavac vaccine at dr. Irma Clinic mostly had a good level of knowledge. Moreover, the frequency distribution of the anxiety level was mainly not anxious. There was a tendency that the better the level of knowledge, the less anxious, and vice versa, the less knowledge, the more a chance to experience both mild and moderate anxiety. A significant correlation was found between the knowledge level and the anxiety level of public officers about the effects of the Coronavac vaccine after receiving the Coronavac vaccine at the dr. Irma Clinic.

Several suggestions can be given regarding the results of this study. First, health workers need to be more active in carrying out health promotion/outreach to the public regarding COVID-19 vaccination in Indonesia and how to overcome anxiety about COVID-19 vaccination. For further researchers, it is necessary to use different samples, such as health workers, the elderly, and the general public, with a larger number of samples. In addition, research is needed on samples receiving vaccines other than Coronavac, such as AstraZeneca, Moderna, and Pfizer. Research variables can use other factors that affect the level of anxiety.

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