

# The Correlation Between Knowledge Level and Willingness to Receive COVID-19 Vaccine in School

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ARTICLE INFO	ABSTRACT
<p><b>Article history:</b></p> <p>Received 12/09/2021 Approved 10/11/2021</p>	<p><b>Abstract:</b> In Indonesia, vaccination against COVID-19 has become a requirement for all educational institutions. The vaccine can help instructors, education staff, and students prevent the spread of COVID-19 in schools. However, a person's awareness and willingness to receive the COVID-19 vaccine might be influenced by a number of other circumstances. The purpose of this study is to analyze the relationship between knowledge level and willingness to receive the COVID-19 vaccination among students at MAS Ulumul Quran in Banda Aceh. The research was conducted using a mixed method, involving all students of MAS Ulumul Quran, Banda Aceh, totaling 260 students. The study concluded that there is no significant correlation between knowledge and willingness to receive COVID-19 vaccination in students of MAS Ulumul Quran in Banda Aceh. This can also be interpreted that the level of knowledge of students has no correlation with their willingness to receive the COVID-19 vaccination.</p>
<p><b>Keywords:</b></p> <p>Covid-19 Knowledge Willingness Vaccination</p>	

## INTRODUCTION

On March 2, 2020, the Corona Virus Disease 2019, also known as COVID-19, was first detected in Indonesia. COVID-19 has a variety of effects on the people of Indonesia, one of which is on educational institutions. According to a government regulation regarding the implementation of educational policies in an emergency period for the spread of coronavirus disease (COVID-19) in circular letter number 4 of 2020, learning activities should be conducted online and the school should refrain from face-to-face activities in order to prevent the spread of COVID-19 (Irinna A. N and Hudaidah, 2021).

Based on the assessment of the COVID-19 situation and the COVID-19 risk zone as of August 3, 2021, as many as 534,259 education units in Indonesia did not conduct face-to-face learning activities. The number of education units allowed to conduct face-to-face learning (PTM) was limited to only 6,720 (1.2%). From the perspective of the learning process during the Covid-19 pandemic on August 9, 2021, national data showed that 99% of education units carry out PJJ (distance learning) and 1% managed to do limited PTM (face-to-face learning). The province of Aceh had an 80 percent participation rate in the PJJ (remote learning) implementation phase, but only 20 percent participated in the PTM (face-to-face learning) implementation process (Kemendikbudristek, 2021).

According to the Ministry of Education and Culture, the online learning implemented during the COVID-19 pandemic resulted in a significant drop in student learning outcomes (learning loss). An investigation conducted by INOVASI and the Center for Policy Research (Puslitjals) Kemendikbudristek, found that in Indonesia, the learning process has to be done online for more than 5–6 months per year. In addition, an investigation by the World Bank also found that currently, as many as 118,000 children in Indonesia who are at primary school age have dropped out of school. This number has increased five times compared to 2019.

Therefore, to increase the outcomes, the intervention must be staged so that the learning can be held face-to-face and, at the same time, COVID-19 transmission can be minimized. Vaccination is one of the preventive measures aimed at reducing the number of deaths and transmissions of COVID-19. Ophinni et al. (2020) stated that nationally, Indonesia must reach herd immunity of around 67% to stop COVID-19. It means that as many as 175 million people must be vaccinated, and Indonesia has a supply of 350 million stocks of vaccines. However, there are many negative issues circulating related to vaccinations, causing many people to resist vaccinations (Ophinni, Y, et.al, 2020).

COVID-19 vaccination is critical for all educational units. Prof. Nizam, Director-General of Higher Education at the Ministry of Education and Culture, stated that vaccines in educational institutions could expedite the process of resuming face-to-face teaching. Along with following the 5M health routine (cleaning hands, wearing masks, maintaining a safe distance, avoiding crowds, and limiting mobility), vaccination is critical for preventing the spread of COVID-19. Administering vaccinations in schools establishes herd immunity, hence reducing COVID-19 transmission (KPCPEN and Kemenkes RI, 2021).

As of August 4, 2021, data on COVID-19 vaccination in the learning process indicated that 39% (2,231,416 people) of educators and education personnel (PTK) had received the first dose of the vaccine and 31% (1,753,242 people) had received the second dose. Additionally, during the Covid-19 pandemic, the Covid-19 vaccination was distributed in Aceh. During this time period, 13% of educators and education personnel (PTK) received the first dose and 6% received the second dose (Kemendikbudristek, 2021).

According to the Joint Decree of the four Ministers issued in March 2021 regarding the acceleration of limited face-to-face learning, all relevant agencies such as the central government, regional governments, regional offices, and the Ministry of Religion are required to provide services to educational units if educators and educational staff have been vaccinated. The services include limited face-to-face instruction (PTM) in accordance with strict health protocols, as well as distance learning (PJJ). This form of learning is non-coercive, which means that it depends on the parents'/guardians' willingness. If parents/guardians are concerned about their children's limited face-to-face learning, they might opt for distant learning. Additionally, because face-to-face learning is critical, educational units that have not been vaccinated or are currently being vaccinated may conduct limited face-to-face learning with the authorization of the local government and in accordance with applicable health regulations (Kemendikbudristek, 2021).

Knowledge is the outcome of sensing something, such as hearing, seeing, or feeling a certain object. Making decisions on how to tackle challenges requires an assessment of one's knowledge (Irwan, 2017). Knowledge of the COVID-19 vaccine has the potential to alter an individual's perspective towards vaccination. Knowledge is similar to experience in that it can stimulate an individual's curiosity and attention. Prevention of health problems is extremely beneficial as health knowledge increases. Knowledge can influence a person's attitude toward a task. This indicates that if a person's knowledge develops, his or her interest in vaccinations will develop as well (S. Nanang, et.al, 2017).

Research in Southern Ethiopia indicates that there is a significant relationship between educational status, knowledge of COVID-19, and the willingness to receive the COVID-19 vaccine. Another study states that a person's acceptance of the COVID-19 vaccine is strongly influenced by the effectiveness of the vaccine in curbing the virus, as well as a person's awareness of protecting others from COVID-19 (Daniel Ginting, et.al, 2021)

Willingness is a person's openness to something; a person's willingness to do something without being coerced by anyone. Additionally, willingness can be defined as an individual's attitude toward obtaining something (Windiyati, 2021). According to the knowledge-attitude-behavior paradigm, knowledge and information are critical foundations for anyone interested in doing something linked to health. This means that someone with a proper understanding of vaccines is automatically more aware of the vaccine's benefits and importance. As a result, they have a favorable opinion of vaccines and believe that they are appropriate for use in the quest to prevent COVID-19 (Keytimu, Y.M.H, et.al, 2021).

Certain factors can influence a person's knowledge. Education, age, information or mass media, social, cultural, and economic context, and experience influence knowledge. As with knowledge, attitudes are influenced by various elements, including personal experience, significant others, culture, mass media, educational and religious institutions, and emotional aspects (Budiman and Riyanto, 2013).

The government can make people more willing to get vaccines by developing a public communication strategy involving religious leaders, professional organizations, and civil society groups. This strategy will provide support for information about the COVID-19 vaccine and encourage people to get vaccinated.

Previous research suggests that after being exposed to information about the covid-19 vaccination by researchers, there were many teenagers who did not understand the importance of vaccines as an effort to prevent covid-19. This predicament is the result of a number of factors, including concern of the vaccine's side effects, such as fever and dizziness, and the fact that some minors did not obtain parental consent (Windiyati, 2021).

MAS Ulumul Quran is an integrated Islamic boarding school in Banda Aceh. It is located in Gampong Bineh Blang, Aceh Besar, Ingin Jaya District. According to initial observations made during the vaccination at MAS Ulumul Quran, Banda Aceh, on September 28, 2021, relatively few pupils requested vaccination. Additionally, based on initial interviews, it was discovered that the majority of them were vaccinated against their will; they even referred to it as a "soft forced vaccine." This is why researchers conducted a study entitled "The Relationship Between Knowledge Level and Willingness to Receive COVID-19 Vaccine for Students at MAS Ulumul Quran in Banda Aceh City."

## METHOD

The research design of this study was mixed-method research by combining qualitative and quantitative research methods. This study aims to analyze the relationship between knowledge level (independent variable) and willingness to receive covid-19 vaccination (dependent variable) for students of MAS Ulumul Quran in Banda Aceh. The research instruments used were an initial observation, questionnaires were distributed to 122 students, and interviews with seven students. Quantitative data analysis was done

through the chi-square correlation test, and then qualitative data analysis was carried out by describing the results of interviews. The population in this study was all the students of MAS Ulumul Quran in Banda Aceh, which had a total enrollment of 260 students divided into nine classes, three for students in class X, two for students in class XI, and four for students in class XII. A simple random sampling procedure was used to establish the sample size, which resulted in 122 students.

## FINDINGS

In the Results section, we present Table 1, which showcases the frequency distribution based on the gender of respondents at MAS Ulumul Quran in Banda Aceh City. This table provides valuable insights into the demographic composition of the respondents, shedding light on the representation of both males and females in the study.

**Table 1. Frequency Distribution Based on Gender of Respondents at MAS Ulumul Quran Banda Aceh City**

Gender	N	%
Male	61	50
Female	61	50
<b>Total</b>	<b>122</b>	<b>100</b>

According to table 1, male respondents accounted for 61 respondents (50 percent), while female respondents accounted for 61 respondents (50 percent).

**Table 2. Frequency Distribution Based on Respondents' Vaccination Doses at MAS Ulumul Quran, Banda Aceh**

Vaccination Dose	N	%
Not Yet	35	28,7
First Dose	42	34,4
Second Dose	45	36,9
<b>Total</b>	<b>122</b>	<b>100</b>

According to table 2, there were 35 respondents (28.7 percent) who had not been vaccinated, 42 respondents (34.4 percent) who had received their first dose, and 45 respondents (36.9 percent) who had received their second dose.

Tables 3 and 4 below illustrate the distribution of information of the COVID-19 vaccination campaign and their willingness to receive the vaccine in MAS Ulumul Quran Banda Aceh:

**Table 3. Frequency Distribution Based on Knowledge of Respondents at MAS Ulumul Quran Banda Aceh.**

Knowledge	N	%
Good	117	95,9

Poor	5	4,1
<b>Total</b>	<b>122</b>	<b>100</b>

Based on table 3 above, respondents with good knowledge were 117 respondents (95.9%) while respondents with poor knowledge were 5 respondents (4.1%).

**Table 4. Distribution of Frequency Based on Willingness to Receive the Covid-19 Vaccination of Respondents at MAS Ulumul Quran, Banda Aceh.**

Attitude	N	%
Positive	40	32,8
Negative	82	67,2
<b>Total</b>	<b>122</b>	<b>100</b>

Based on table 4 above, 40 respondents (32.8%) received vaccinations with a positive attitude, while 82 respondents (67.2%) viewed vaccination with a negative attitude.

**Bivariate Analysis**

This analysis was used to determine the correlation between the independent variable (knowledge) and the dependent variable (willingness to be vaccinated) with statistical tests using the Chi-Square test with a significance level of = 0.05.

**Table 5. Relationship between students' knowledge level and willingness to get Covid-19 vaccine.**

Knowledge	Attitude				Total		p-value
	Negative		Positive		n	%	
	N	%	N	%			
Poor	5	4,1	0	0	5	4,1	0,111
Good	77	63,1	40	32,8	117	95,9	
<b>Total</b>	<b>82</b>	<b>67,2</b>	<b>40</b>	<b>32,8</b>	<b>122</b>	<b>100</b>	

1.

Based on Table 5, it can be seen that from 122 respondents, 5 respondents (4.1%) had poor knowledge on vaccination, most of them had a negative attitude as many as 5 respondents (4.1%) and none of the respondents (0%) had a positive attitude. While respondents who have good knowledge consist of 117 respondents (95.9%), as many as 77 respondents (63.1%) have a negative attitude and only 40 respondents (32.8%) have a positive attitude.

Based on the bivariate analysis, the results of statistical test analysis using an alternative test, the chi-square test, obtained a value of 0.111 ( $\alpha = 0.05$ ), it can be concluded that there is no significant correlation between knowledge and willingness to be

vaccinated for students of MAS Ulumul Quran Banda Aceh. This can also be interpreted that the level of knowledge of students has no correlation with the willingness to receive the covid-19 vaccination.

## DISCUSSION

### Level of Knowledge on Covid-19 Vaccine

According to Donsu (2007) in Yusmanijar (2019), knowledge is acquired by human sense of certain objects. The critical nature of understanding about COVID-19 vaccination can alter a person's perspective on vaccination. As with experience, knowledge can stimulate someone's curiosity and attention. A person's level of knowledge has a significant impact on their education, employment, hobbies, experience, and information.

According to the study's findings, respondents' knowledge of COVID-19 vaccination was quite good (95.9 percent). The students at MAS Ulumul Quran in Banda Aceh now understand how the COVID-19 vaccine works, its composition, the types of vaccines supplied by the government, and who should receive the COVID-19 vaccine first.

Akarsu et al. (2021) in Keytиму, Y.M.H, et al., (2021) conducted a study on parents' knowledge about vaccinations for their children. Before the socialization of the covid-19 vaccine, they did not permit to vaccinate their children because they had poor knowledge of vaccine side effects. However, when parents were educated about the potential adverse effects of vaccines, they agreed to have their children vaccinated. This demonstrates that knowledge can alter a person's opinion on vaccination.

### Willingness to Receive Covid-19 Vaccination

The term "willingness" can also refer to an attitude. An attitude can have a significant impact on a person's decision to do or not do something. Students' lack of motivation in having COVID-19 vaccinations was influenced by respondents' negative attitudes toward vaccinations. According to the studied questionnaire data, several pupils lacked understanding about the COVID-19 vaccine and expressed a low willingness to get it. Meanwhile, other students have a strong grasp of the COVID-19 vaccine but were still unwilling to receive it. This demonstrates that those with a positive attitude do not necessarily act positively toward vaccination.

According to the study's findings, students' willingness to undergo the COVID-19 vaccination was in the poor range. This is demonstrated by the fact that 82 respondents (67.2 percent) had a negative attitude, whereas 40 respondents had a good attitude (32.8 percent). Around 67.2 percent of respondents were unwilling to be vaccinated because they did not trust the immune-boosting effects of the COVID-19 vaccine. They believed the vaccine provided by the government was ineffective in comparison to vaccines offered by other countries. They believed that COVID-19 could be cured with herbal medicine rather than a vaccine, and that 3M was sufficient to contain the spread of COVID-19.

According to Pramesti, T.A., et al. (2021), people's opinions about the COVID-19 vaccination vary due to a lack of information about the sorts of vaccines administered in the community, such as when the vaccine is accessible and how safe it is. Due to a lack of information, many are unwilling to be vaccinated. Additionally, bad media coverage of COVID-19 has prompted some people to postpone or even refuse vaccination. This is a hurdle for the government when it comes to implementing the vaccination program necessary to achieve herd immunity in Indonesia. Thus, it is necessary to develop a public communication strategy to support information about COVID-19 vaccination, involving influential figures such as religious leaders, professional organizations, and civil society organizations, in order to increase public willingness to be vaccinated and thus the vaccination program's success in Indonesia.

According to data from the COVID-19 Vaccine Acceptance Survey in Indonesia, the most frequently cited reasons for refusing the COVID-19 vaccine were uncertainty about its safety (30%), ineffectiveness in preventing COVID (22%), fear of side effects (12%), distrust of vaccines (13%), incompatibility with religious beliefs (8%) and other effects (15%) (Kemenkes, 2020).

### The Relationship between Students' Knowledge Levels and Willingness to Receive Covid-19 Vaccination

According to the study's results using the chi-square test, a value of 0.111 ( $= 0.05$ ) indicated that there is no significant relationship between students' knowledge and willingness to receive COVID-19 vaccination at MAS Ulumul Quran in Banda Aceh. While knowledge is a significant element in a person's inclination to vaccinate, it is not the only factor.

The low correlation between students' knowledge and willingness to receive COVID-19 vaccination is due to a number of factors, including personal experience, the influence of information or mass media, the social, cultural, and economic environment, as well as the influence of other people they regard as important. Thus, it is conceivable for someone with adequate information to have a positive attitude about something, but it is also possible for someone with adequate knowledge to have a negative attitude toward

something. Thus, someone who is knowledgeable and positive about COVID-19 vaccination does not necessarily have a favorable attitude regarding willingness to receive COVID-19 vaccination. This is consistent with Notoatmodjo's (2010) theory in Rachmani et al. (2020), where they defined attitude as "individual responses that affect the ideas, feelings, and concerns associated with agreeing or disagreeing with a problem".

The results of interviews conducted with several students show that they believed in COVID-19 and the COVID-19 vaccinations. However, they refused to be vaccinated because they were not allowed by their parents; they have a history of illness and a fear of side effects after vaccination, such as fever, shortness of breath, numbness in the arms, nausea, vomiting, and so on. Their information regarding the vaccine's side effects came from social media, the news, and their closest relatives. In fact, one student from Subulussalam stated that her neighbor was paralyzed after being vaccinated against COVID-19.

## CONCLUSION

Based on the research that has been conducted on the relationship between the level of knowledge and the willingness to receive the COVID-19 vaccine in students at MAS Ulumul Quran, Banda Aceh, it is found that the significant result is  $0.111 > 0.05$ , indicating that there is no significant relationship between knowledge and the willingness to receive the vaccination against COVID-19 among students at MAS Ulumul Quran, Banda Aceh. This could also mean that students' degree of understanding is unrelated to their willingness to get the COVID-19 vaccine.

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