

# Relationship Of Knowledge Level With Parent Acceptance Of Students On Covid-19 Vaccine In Elementary School Children Ages (6-11 Years) In Makassar City

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## Abstract

This study examines the relationship between knowledge and parental acceptance of the COVID-19 vaccine in elementary school children aged (6-11 years) in Makassar City. The type of research used is analytic observational with a cross sectional study design. The population in this study were all parents of students with school-age children (6-11 years) in Makassar City who were categorized as eligible for vaccination, which was around 264,000 people. While the number of samples as many as 1,073 parents. The sampling technique used is snowball sampling. Data were analyzed using SPSS with Chi-square test. Data analysis performed was univariate and bivariate. The results showed that the knowledge variable had a significant relationship ( $p < 0.05$ ).

**Keywords:** Child COVID-19 Vaccine, Knowledge, Parents.

## Introduction

The current COVID-19 vaccination activity is not only given to children aged 12 years, but has begun to be given to children aged 6-11 years [1]. The implementation of this COVID-19 vaccination is based on the issuance of recommendations from the National Immunization Expert Advisory Committee (Indonesian Technical Advisory Group on Immunizational / ITAGI) regarding the study of COVID-19 vaccination for children aged 6-11 years and the existence of Emergency Use Authorization (EUA) from BPOM for the use of Sinovac vaccine for children aged 6-11 years [2]. The COVID-19 vaccination has begun to be carried out in almost all regencies and cities in Indonesia, one of which is South Sulawesi Province. The realization of vaccination achievement from the target of 896,163 doses for the first dose was around 179,242 (20%) and the second dose was 446 (0.05%) [3].

One of the regencies/cities in South Sulawesi with low realization of vaccination for children aged 6-11 years is Makassar City. Based on data from the Makassar Education Office, (2022) out of a target of 132,000 children, there were 21,811 elementary school students who had been given the COVID-

19 vaccine [4]. This is as reported by the South Sulawesi Provincial Health Office, (2022) dated 28 January 2022 with a vaccination coverage percentage of 9.92%. The data coverage above is still far from the predetermined target. The implementation of the COVID-19 Vaccination activity has almost the same obstacles as the obstacles experienced in the implementation of vaccination activities at the age of 12 years and over, namely there are problems related to receiving the COVID-19 vaccination. There is a rejection of the vaccine, causing the achievement target of vaccination activities has not been achieved [5]. This could be due to the respondent's lack of knowledge regarding the benefits or effectiveness of the vaccine itself.

Based on the facts above, it is necessary to conduct a deeper study or research regarding whether there is a relationship between knowledge and their acceptance of the COVID-19 vaccine. So it is hoped that later the data obtained can be useful, especially for the Makassar City government in accelerating the distribution of COVID-19 vaccination activities in children.

## Methods

This research was conducted in Makassar City from March to June 2022. This type of research is an analytic observational study with a cross sectional study design. The population in the study were all parents of students who have school-age children (6-11 years) in Makassar City who were categorized as eligible for vaccination, namely around 264,000 parents. Based on the calculation

of the minimum sample size, a sample of 1,073 parents was obtained. Data processing was carried out using the SPSS program and then presented in the form of a table accompanied by an explanation in the form of a narrative. The test used to see the relationship between variables was carried out by analyzing bivariate data with the chi square test.

## Results and Discussion

**Table 1. Distribution by Characteristics of Respondents**

Characteristics of Respondents	Number of Respondents (n= 1.073)	
	n	%
<b>Sex</b>		
Male	181	16,9
Female	892	83,1
<b>Age group</b>		
25-34 years	240	22,4
35-44 years	616	57,4
45-54 years	201	18,7
55-64 years	16	1,5
<b>Job</b>		
Jobless	73	6,8
Laborer/farmer	44	4,1
Housewife	553	51,4
Employee	147	13,7
Civil Servant	141	13,1
Entrepreneur	115	10,7
<b>Education</b>		
Not completed in primary school	19	1,8
Primary School	57	5,3
Junior high School	68	6,3
Senior High School	392	36,5
S1/D3	484	45,1
S2	51	4,8
S3	2	0,2

Table 1 shows that the majority of respondents are female (83%) or as many as 892 people. Based on the age group, the most respondents were the age range of 35-44 years, namely (57.4%) or as many as 616 people. The lowest age group is 55-64 years old (1.5%) or as many as 16 people. As many as (51%) or as many as 553 respondents work as IRT,

this shows that most of the respondents are from the IRT, while the least are workers/farmers (4.1%) or 44 people. The education of the respondents who filled the most was S1/D3 (45.1%) or 484 people, while the education of the respondents who filled the least was S3 (0.2%) or as many as 2 people.

**Table 2. Distribution of Respondents Based on Knowledge Assessment of Parents**

No.	Vaccine Questions	True		False	
		n	%	n	%
1.	Vaccination is the process of building immunity	1.029	95,9	44	4,1
2.	Children must be in good health to be vaccinated	1.067	99,4	6	0,6
3.	Children who have immune disorders, malnutrition can not be vaccinated	442	39,3	651	60,7
4.	Can you delay giving vaccines if your child has tested positive for COVID-19?	891	83,0	182	17,0

5.	The distance to be vaccinated after being positive is 3 months	506	47,2	567	52,8
6.	Vaccines can protect children from the COVID-19 virus	939	87,5	134	12,5
7.	Children who have tested positive can not be vaccinated	898	83,7	175	16,3
8.	Vaccines are halal	1.025	95,5	48	4,5
9.	Long-term effects can interfere with growth	919	85,6	154	14,4
10.	Usually after the vaccine there will be side effects such as fever, pain and feeling tired	964	89,8	109	10,2

Source: Primary Data, 2022

Table 2 shows that about 80% of parents correctly answered questions about vaccines. The most correct questions were "children must be in good health to be vaccinated" by (99.4%) or as many as

1,067 people while the most incorrect questions were "children who have immune disorders, poor nutrition can not be vaccinated" by 60, 7% or as many as 651 people.

**Table 3. Analysis of the Relationship between Knowledge and Parental Acceptance of the COVID-19 Vaccine in Children**

Knowledge	Vaccine Acceptance				Total		P Value
	Accept		Reject		n	%	
	n	%	n	%			
Low	7	16,3	36	83,7	43	100,0	0,000
High	892	86,6	138	13,4	1.030	100,0	
Total	899	83,8	174	16,2	1.073	100,0	

Based on table 3, it can be seen that the percentage of respondents who received the COVID-19 vaccine in children was mostly those with high knowledge (86.6%) or as many as 892 people compared to respondents with low knowledge (16.3%) or as many as 7 people. In addition, we can also find out that the highest percentage of respondents who refuse vaccines is respondents who have low knowledge (83.7%) or as many as 36 people. However, the data shows that the percentage of those who received both high and low knowledge were greater than those who refused the COVID-19 vaccine in children. Based on the results of the Chi-square test analysis, it can be seen that the value ( $p = 0.000$ )  $< 0.05$ , which means that  $H_0$  (Null Hypothesis) is rejected. This means that "There is a relationship between knowledge and acceptance of the COVID-19 vaccine in children".

### The Relationship between Knowledge Level and Parental Acceptance of the COVID-19 Vaccine in Children

In this study, the results showed that there was a significant relationship between knowledge and parental acceptance of the COVID-19 vaccine in children ( $p = 0.042$ ). Table 3 shows that 86.6% of parents who are highly knowledgeable receive the COVID-19 vaccine for their children. Of course, this figure is high when compared to parents who refuse. The more parents who have high knowledge about the COVID-19 vaccine, the more parents will receive the vaccine to be given to their children. The same results were found in a study in

the Dukuh Menanggal sub-district, Surabaya City, showing that there is a relationship between knowledge and acceptance of the COVID-19 vaccine ( $p=0.000$ ) [6]. Another study showed that there was a relationship between knowledge and vaccine acceptance and as many as 58.5% of well-informed respondents received vaccines [7]. Good knowledge will increase a person's desire to be vaccinated against COVID-19 [8]. Another similar study conducted by (Mohamed et al., 2021) showed that there is a relationship between knowledge and acceptance of the COVID-19 vaccine [9].

Research conducted shows that of the 3,226 respondents, 91.9% received the COVID-19 vaccine and 80% had good knowledge about vaccines. The results of statistical tests showed that there was a relationship between knowledge and acceptance of the COVID-19 vaccine ( $p=0.000$ ) [10]. Based on the discussion and theory stated above, it can be concluded that knowledge about the COVID-19 vaccine has an influence on respondent acceptance. The higher the knowledge of parents, the higher their acceptance of the COVID-19 vaccine in children. This shows that knowledge is one of the factors associated with receiving the COVID-19 vaccine. Therefore, the importance of the participation of all relevant sectors in the distribution of knowledge in society, especially parents for the realization of the overall acceptance of the COVID-19 vaccine to all children aged 6-11 years.

### Conclusion

Based on the discussion of the research results, we can conclude that there is a significant relationship between the level of knowledge and parental acceptance of the COVID-19 vaccine in elementary school children aged (6-11 years) in Makassar City. It is hoped that all relevant elements or agencies will re-passive all things related to the COVID-19 vaccine in children so that they can contribute in finding solutions to accelerate the distribution of COVID-19 vaccination activities in children aged (6-11 years).

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