



The Correlation Between Mother's Knowledge About The Impact of The Covid 19 Pandemic and Mother's Attitudes Toward Bringing Babies to Immunization

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Abstract. The COVID-19 pandemic is a coronavirus pandemic that was first identified in December 2019 in Wuhan, China. Indonesia confirmed the first case of COVID-19 on March 2nd, 2020. The emergence of coronavirus impacted the mother to bring her baby to do immunization. Because the mother was worried about being infected by covid, on the other hand, babies must receive immunization to keep their immune systems. This study aimed to know the correlation between maternal knowledge about the impact of the Covid 19 pandemic and maternal attitudes in bringing babies to immunization at Sirapit Public Health Center. This study is quantitative research and uses a cross-sectional approach with a chi-square test. For acquiring samples, this study uses an accidental sampling technique. Of 40 respondents, five had poor knowledge (12.5%), no positive attitude (0%), and five with a negative attitude. Another 24 respondents (60%) had decent knowledge, 21 respondents with a positive attitude (67.7%), and three respondents with a negative attitude (33.3%). Lastly, 11 respondents had good knowledge (27.5%), ten respondents with a positive attitude (32.2%), and one respondent with a negative attitude (11.1%). Chi-square statistical test showed p-value = 0.000 (p-value<0.05).

Keywords: attitude; covid-19 impact; immunization; knowledge

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1. Introduction

The COVID-19 pandemic is caused by the coronavirus that was initially identified in December 2019 in Wuhan, China (WHO, 2020). In Indonesia, President Joko Widodo announced the first case of coronavirus, which affected two Indonesians on March 2nd, 2020 (detikcom, 2020). The emergence of the coronavirus disrupts daily activities. One of them is baby immunization. Mothers were worried about bringing their babies to do immunization. Immunization is the most effective and efficient health effort to prevent disease and reduce the mortality rate from the diseases such as smallpox, polio, tuberculosis, hepatitis B, diphtheria, measles, rubella and congenital rubella syndrome (CRS), tetanus, pneumonia and meningitis. Immunization for toddlers has saved 2-3 million lives every year globally. It significantly reduced the baby mortality rate globally from 65 deaths per 1,000 births in 1990 to 29 deaths per 1,000 births in 2018 (Shet, 2020).

It is believed that immunization should reduce the toddler mortality rate due to vaccine-preventable diseases (VPD) (Info Datin Kementerian Kesehatan, 2016). In the last few years, toddlers' mortality rate due to vaccine-preventable diseases is still alarming. 2020 WHO's report mentioned that there are 20 million kids who have not got vaccinated regularly every year globally. The rising number of children who have not been vaccinated caused the reemergence of paralysis diseases in developed and developing countries; they are measles, pertussis, diphtheria, and polio (Hidayah, 2019). Immunization is essential for every baby. However, the Covid-19 pandemic caused parents to be afraid and worried about bringing their babies to immunization. The decreased coverage of complete basic immunization will cause toddlers and babies not to have immunity, reducing their health status (Kementerian Kesehatan Republik Indonesia, 2020). The research on reducing the coverage number of mothers bringing their babies to do immunization was conducted by Diharja et al. in 2020. Her research conducted in West Jawa showed that the coverage of complete basic immunization reduced from 79% to 64% after the Covid-19 pandemic hit. The initial survey was conducted at Sirapit Public Health Center. The survey showed that the coverage number was reduced to 33%. On average days, there were 30-35 babies that do immunization. Due to the Covid-19 pandemic, only 10-13 mothers got their babies' immunizations.

Several kinds of research results showed some factors affecting complete basic immunization. One of the factors is age. Younger mothers commonly can digest information better than older mothers. Younger mothers who have just had children tend to provide more attention to their baby's health, including immunization (Prihanti et al., 2016). Another factor is education. Mothers with lower education are 2.2 times more likely to have incomplete basic immunization for their children than mothers who have higher education (Astutik), 2017. Another factor is occupation. Working mothers have a 0.739 times better chance of completing basic immunization for their babies than mothers who do not work. It is because mothers who do not work have less

information about immunization than working mothers (Rakhmawati et al., 2020). In the initial survey conducted in Sirapit Public Health Center in 2020, the researcher found that the number of mothers bringing their babies to do immunization could be higher. According to the data of mothers who have babies in the Sirapit Public Health Center working area, there are around 100 babies. However, only 30-35 mothers brought their babies to do immunization at the public health centre. The reduced number of mothers bringing their babies to the public health centre will cause a disruption in the baby's schedule to get scheduled immunization. Based on the above background and initial survey, the researcher is interested in researching the correlation between mother's knowledge about the impact of the Covid-19 pandemic and mother's attitudes toward bringing babies to immunization in Sirapit Public Health Center in 2022.

2. Research Methods

This research is quantitative, using a crosssectional approach. It was conducted at Sirapit Public Health Center in 2022. The population is 100 mothers with babies with scheduled immunization, and accidental sampling was used as the sampling technique. Forty people act as the sample. For the data this research used primary and secondary data. For the analysis, this research used univariate and bivariate analysis.

3. Research Results

a. Univariate Analysis Result

The three tables below show the result of univariate analysis based on respondents' characteristics, including age, education, occupation, postpartum day, and the number of children, resulting in the frequency distribution of respondents.

Table 1 The Distribution of Respondent's Frequency on The Correlation Between Mother's Knowledge about The Impact of the Covid-19 Pandemic and Mother's Attitude toward Bringing Babies to Immunization in Sirapit Public Health Center in 2022

Characteristic	(n)	(%)
Age		
20 – 25	7	17,5
26 – 30	6	15
31 – 35	10	25
36 – 40	17	42,5
Total	40	100
Education		
Elementary	0	0
Junior high	22	55
Senior high	15	37,5
University	3	7,5
Total	40	100
Occupation		
Housewife	13	32,5
Farmer	12	30
Merchant	7	17,5
Private Sector Employee	8	20

Continue Table 1

Characteristic	(n)	(%)
Number of Children		
1 – 2	13	32,5
3 – 4	18	45
5 – 6	9	22,5
Total	40	100

Table 1 above shows 17 people aged 36-40 (42.5%) and six aged 26-30 (15%). Twenty-two people are Junior high school graduates (55%), three are University graduates (7.5%), and no respondents are Elementary school graduates (0%). For Occupation, 13 people (32.5%) are housewives, and seven are merchants (17.5%). For the number of children, 18 respondents have 3-4 children (45%), and nine have 5-6 children (22.5%).

Table 2 Mother's Knowledge on The Impact of the Covid-19 Pandemic in Sirapit Public Health Center in 2022

Knowledge Level	(n)	(%)
Good	11	27,5
Decent	24	60
Poor	5	12,5
Total	40	100

Table 2 shows that five respondents need a better knowledge level (12.5%). Eleven respondents have a good knowledge level (27.5%), and 24 have decent knowledge (60%)

Table 3 Mother's Attitude in Bringing Babies to Immunization during the Covid-19 Pandemic in Sirapit Public Health Center in 2022

Attitude	(n)	(%)
Positive	32	80
Negative	8	20
Total	40	100

Table 3 shows that 32 respondents have a positive attitude (80%), and 8 have a negative attitude (20%).

b. Bivariate Analysis Result

Two tables below show the bivariate analysis result on The Correlation Between Mother's Knowledge about The Impact of the Covid-19 Pandemic and Mother's Attitudes toward Bringing Babies to Immunization in Sirapit Public Health Center in 2022.

Table 4 The Correlation Between Mother's Knowledge of The Impact of the Covid-19 Pandemic and Mother's Attitude to Bringing Babies to Immunization in Sirapit Public Health Center in 2022

Knowledge Level	Attitude				Total	
	Negative	%	Positive	%	Total	%
Poor	5	55,5	0	0	5	12,5
Decent	3	33,3	21	67,7	24	60
Good	1	11,1	10	32,2	11	27,5
Total	9		31		40	

Table 4 shows that five respondents (12.5%) need better knowledge. Twenty-four respondents (60%) have a decent knowledge level, with 21 respondents having a positive attitude (67.7%) and three respondents having a negative attitude (33.3%). Eleven respondents (27.5%) have a good knowledge level, with ten respondents (32.2%) having a positive attitude and one respondent (11.1%) having a negative attitude.

Table 5 The result of the Chi-Square Test on The Correlation Between Mother's Knowledge about The Impact of the Covid-19 Pandemic and Mother's Attitude toward Bringing Babies to Immunization in Sirapit Public Health Center in 2022

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.733 ^a	2	.000
Likelihood Ratio	17.866	2	.000
Linear-by-Linear Association	10.599	1	.001
N of Valid Cases	40		

Table 5 shows the p-value is 0.000 (p-value < 0.05). Based on the research hypothesis, it can be concluded that there is a correlation between mother's knowledge about the impact of the Covid-19 pandemic and mother's attitudes toward bringing babies to immunization at Sirapit Public Health Center.

4. Research Discussion

The research result showed that 40 respondents provided different data. Five respondents (12.5%) have a poor knowledge level, with 0 respondents having a positive attitude (0%) and five respondents having a negative attitude (5.5%). Twenty-four respondents (60%) have a decent knowledge level, with 21 respondents having a positive attitude (67.7%) and three respondents having a negative attitude (33.3%). Eleven respondents (27.5%) have a good knowledge level, with ten respondents (32.2%) having a positive attitude and one respondent (11.1%) having a negative attitude. Good knowledge affects one's attitude to do his/her activity. For instance, of 11 respondents with good knowledge levels, ten have a positive attitude, and one has a negative attitude. That statement aligns with this research, indicating a correlation between respondents' knowledge level and Covid-19 prevention behaviour in the community. It is essential to raise the public's knowledge level to improve their Covid-19 prevention behaviour (Mujiburrahman, 2020).

The above statement also aligns with another research showing a correlation between knowledge and attitude with Covid-19 prevention behaviour in Sagerat Village, Matuari Sub-district, Bitung. Providing specific and accurate knowledge will improve public precautions against Covid-19 infection (Irianti Diana Biney*, 2022). Another research also stated that there is a correlation between knowledge and attitude with Covid-19 infected people of North Sulawesi, with its p-

value ($p = 0.000$). People with good knowledge levels and positive attitudes will conduct real action to reduce the risk of Covid-19 infection (Erika Emnina Sembiringa, 2020).

This research and other research can conclude that there is a significant correlation between mothers' knowledge about the impact of the Covid-19 pandemic and mothers' attitudes toward bringing babies to immunization in health services, including public health centres. The information clarity on the Covid-19 impact provided by health workers is indispensable. Thus, mothers will keep bringing their babies to immunization without worry during the Covid-19 pandemic.

5. Conclusions and Recommendations

The writer's research showed a correlation between mothers' knowledge about the impact of the Covid-19 pandemic and mothers' attitudes toward bringing babies to immunization at Sirapit Public Health Center. Its chi-square statistical test showed p-value is 0.000 ($p\text{-value} < 0.05$). Furthermore, having a good knowledge level will affect one's attitude to do any activity. People, specifically mother, need to find out about Covid-19. Future researchers should improve this research by adding other variables or research methods. Site Sirapit Public Health Center's health workers should provide transparent information about Covid-19.

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