

**RELATED FACTORS TO GIVING OF IPV (INACTIVATED POLIO VACCINE) POLIO IMMUNIZATION TO BABY IN
THE WORKING AREA OF THE PAUH HEALTH CENTER,
CENTER OF PARIAMAN DISTRICT, PARIAMAN CITY**

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ABSTRACT

The IPV Polio immunization program has been introduced since 2015 as part of the national immunization program. Coverage of IPV Polio immunization in Indonesia has decreased since the emergence of the Covid-19 pandemic, including in the working area of the Pauh Community Health Center, Central Pariaman District, Pariaman City. This study aims to analyze factors related to the implementation of IPV Polio immunization. A cross sectional study was conducted in the working area of Pauh Community Health Center, Pariaman District, Pariaman City Center, on 93 mothers who have a baby aged 3-20 months. The understand the related factors, the data was analyzed both using univariate, bivariate, and multivariate analysis. The result of the study showed that IPV Polio immunization was associated with motivation ($p=0,017$) and family support ($p=0,025$). Suggestions for future researchers, to be able to research other than the factors above.

Keywords: Factor., Immunization., IPV Polio., Baby

INTRODUCTION

Determination of Indonesia's status as a Polio KLB (Extraordinary Event) where one case of polio was discovered in Pidie Regency, Aceh. This polio case found in a child aged 7 years and 2 months. From the test results, the child suffered from Polio Virus Type 2 and Sabin Type 3, with initial symptoms of fever, pain in the joints and weakness in the limbs¹⁻².

From data the Ministry of Health, Polio immunization coverage in Indonesia has decreased since the emergence of the Covid-19 pandemic. Therefore, 30 provinces covering 415 city districts are at high risk of being affected by polio²⁻³. There has been a decline in polio vaccine coverage, both OPV and IPV, over the last 2 years^{1-2, 3-5}. In 2020 for example, OPV vaccination coverage reached 86,8%, then decreased in 2021 to 80,2%. It cannot be denied that there are many areas with vaccination coverage of less than 50% since 2020. Because of this, the Ministry of Health is promoting mass immunization for all children aged 0-13 years in Aceh, starting from Pidie Regency and followed by other provinces throughout Indonesia and the Government as well increase routine immunization nationally⁶⁻⁸.

Polio is an infectious disease that has caused a stir in the past. Polio has existed since ancient times and was a dangerous and deadly disease at that time⁸⁻¹⁰. The most widespread outbreak occurred in the first half of the 1900s,

until the polio vaccine was introduced in 1955¹¹⁻¹². However, now polio can be prevented through IPV immunization. In fact, polio can be fatal and endanger the sufferer's life. The best way to treat polio is to prevent it from happening. This is why the polio vaccine is included in the mandatory immunization for children¹³⁻¹⁵.

At the peak of the polio epidemic in 1952, nearly 60.000 cases with more than 3.000 deaths occurred in the United States. However, with the issuance of the IPV vaccination recommendation, polio has been eliminated in the United States since 1979. This condition was followed by other countries throughout the world¹⁶⁻¹⁸.

Polio or poliomyelitis is a disease caused by a viral infection that attacks the brain and spinal cord¹⁹⁻²⁰. This disease can cause paralysis in people who experience it and threaten the sufferer's life. Therefore, the best way to treat polio is to prevent it early. Thanks to technological advances, polio can be prevented by IPV immunization from infancy^{16-18, 21-23}.

The polio virus is also categorized as very dangerous, because it can be spread from one person to another²³⁻²⁴. Most people infected with the polio virus (about 72 out of 100) will not show any symptoms. However, the symptoms of polio can be seen at a glance like flu, namely sore throat, fever, fatigue, nausea, headache, stomachache²⁵⁻²⁷. The symptoms usually last for 2-5 days, then disappear by themselves. However, children who appear to have fully

recovered from polio may experience muscle pain, weakness, or paralysis as adults, at the age of 15 to 40 years. This persistent effect is also called post-polio syndrome^{13-15, 27-30}.

There are two types of polio vaccine, namely the drop vaccine and the injection vaccine. The drip vaccine or oral vaccine is known as the oral poliovirus vaccine (OPV), while the injectable vaccine is known as IPV immunization or inactivated poliovirus vaccine (IPV)³¹⁻³². These two vaccines are equally effective in maintaining a child's immune system. The polio vaccine may be given at the same time as other vaccines and must be given from childhood. The IPV immunization schedule is usually recommended for children from the ages of 2 months, 4 months, 6-18 months, 4-6 years, and up to 59 months.

IPV immunization works by producing antibodies in the blood to ward off the polio virus³³⁻³⁴. The goal is to

protect the body from paralytic poliomyelitis. Paralysis is the most severe symptom associated with polio, as it can cause permanent disability and death³⁵⁻³⁷. Between 2 and 10 out of 100 people who experience paralysis due to polio virus infection die, because the virus affects the muscles that help them breathe. The way IPV immunization works is that the antibodies that have been formed can fight the virus and prevent it from entering the central nervous system³⁷⁻⁴⁰.

MATERIALS AND METHODS

This study aims to analyze the factors that influence parents' decisions to provide polio immunization using IPV to their children. The type of research that will be used is descriptive analytic research with an observational study design, cross sectional study approach. Data will be analyzed univariately and bivariately.

RESULTS

Univariate Analysis

To find out the frequency distribution of each variable (independent and dependent variables) research can be seen in table 1.

Variable	F	%
Giving of IPV Polio Immunization		
- Not given IPV Polio Immunization	62	66,7
- Given IPV Polio Immunization	31	33,3
Motivation		
- Poor Motivation	15	16,1
- Good Motivation	78	83,9
Family Role		
- Doesn't play a role	22	23,7
- Play a role	71	76,3
Myth		
- Believes	16	17,2
- Not believes	77	82,8

From the results of the research analysis in the table 1 above, it can be seen that there were 66,7% of respondents who did not provide IPV polio immunization to their babies,

16,1% of respondents had poor motivation, 23,7% had families who did not have a role, and 17,2% of respondents believes in myths.

Bivariate Analysis

The Relationship between Motivation and Giving IPV Polio Immunization

Table 2 The Relationship between Motivation and IPV Immunization

Motivation	Giving of IPV Polio Immunization				Total	p
	Not Given		Given			
	n	%	n	%		
Poor Motivation	14	93,3	1	6,7	15	100
Good Motivation	48	61,5	30	38,5	78	100
Amount	62	66,7	31	33,3	93	100

Relationship between Family Role and Giving IPV Polio Immunization

Table 3 Relationship between Family Role and Giving IPV Polio Immunization

Family Role	Giving of IPV Polio Immunization				Total	<i>p</i>
	Tidak Diberikan		Diberikan			
	n	%	n	%	n	%
Doesn't play a role	12	85,7	2	14,3	14	100
Play a role	50	52,7	29	26,3	79	100
Amount	62	66,7	31	33,3	93	100

Relationship between Myth and Giving IPV Polio Immunization

Table 4 Relationship between Myth and Giving IPV Polio Immunization

Myth	Pemberian Imunisasi Polio IPV				Total	<i>p</i>
	Not Given		Given			
	n	%	n	%	n	%
Believes	50	64,9	27	35,1	77	100
Not believes	12	75	4	25	16	100
Amount	62	66,7	31	33,3	93	100

DISCUSSION

The Relationship between Motivation and Giving IPV Polio Immunization

Based on the research results, it was concluded that majority (83,9%) of respondents had good motivation and a small portion (16,1%) of respondents had poor motivation. With a value of $p = 0,017$ ($p < 0,05$), it means that there is a significant relationship between motivation and giving IPV polio.

The researcher's assumption is that, although the research results show that there are more mothers who have good motivation in giving IPV polio immunization, the provision of IPV polio immunization is still very low (33,3%). This can be caused by many factors, some of which are the mother's knowledge and attitude. If the mother's knowledge is good in understanding and knowing about IPV polio immunization, and this have an impact on the mother's better motivation towards IPV polio immunization.

Relationship between Family Role and Giving IPV Polio Immunization

Based on the research results, it was concluded that the majority (76,3%) of respondents had families who played a role and a small percentage (23,7%) of respondents whose families did not play a role. With a value of $p = 0,025$ ($p < 0,05$), it means that there is a significant relationship between the role of the family and the provision of IPV polio.

The researcher's assumption is that, although the research results show that there are more mothers who have families who play a role in giving IPV polio immunization compared to mothers who do not have a family role in giving IPV polio immunization, there are still many who do not provide IPV polio immunization to their children (33,3%). This is caused by several factors, namely

knowledge, motivation and environment. This may be due to the presence of family members who suggest and/or giving exclusive breast milk alone which is enough for baby's immune system. These family members are of the opinion that if with breast milk alone the baby is already healthy why should they be injected with immunizations or other substances which are not necessarily halal and they also said that children are already healthy, why should they be made sick because they are given immunizations that make children feverish and fussy.

And if we look at the research results, families who play a role in giving IPV polio immunization but still do not immunize their children by the mother, this could by the mother's lack of motivation to immunize her baby in a timely and complete manner, coupled with an unsupportive environment, such as information provided by neighbors that immunizations make children disabled, paralyzed, sick and even die.

Relationship between Myth and Giving IPV Polio Immunization

Based on the research results, it was concluded that the majority (82,8%) of respondents did not believe in myths and a small portion (17,2%) of respondents believed in myths. With a value of $p = 0,437$ ($p > 0,05$), it means that there is no significant relationship between myths and giving IPV polio immunization.

One of the obstacles for mothers in giving IPV polio immunization is believes in myths. In fact, the truth of what is called a myth cannot be proven. Myths are the result of ancient ideas where analysis of condition still has very limited tools. In line with the term 'not all myths are wrong', not all myths can be held to be true. Moreover, with increasingly modern life, there are many differences between the symptoms of mothers and babies today and in

the past. This may be due to a lifestyle that could be said to be far from ancient times⁴¹.

The researcher's assumption is that, even though the research found that a small percentage of respondents believed in the myth, there were still many mothers who did not give their babies IPV polio immunization. This condition can be caused by several factors, due to environmental influences so that the mother's motivation in giving IPV polio immunization is not good, causing low IPV polio immunization coverage rates.

CONCLUSIONS AND SUGGESTIONS

There is a significant relationship between motivation and IPV polio immunization, there is a significant relationship between family role and IPV polio immunization, and there is no significant relationship with IPV polio immunization.

Suggestions for future researchers, to be able to research other than the factors above.

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