



Determinants of Maternal Behavior in Basic Immunization of Children Aged 0-9 Months at Health Center in Southern Nias District 2023

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Abstract: The aim of this research was to determine the influence of mothers' attitudes, knowledge and perceptions on the status of basic immunization requirements for children aged 0-9 months at the Community Health Center of South Nias Regency. This research uses a quantitative analitic research design with a cross sectional approach. The population in this study were parents who had children aged 0-9 months who were within the coverage area of the South Nias Regency Health Center. The sample size used in this research is 120 samples. Data analysis in this research is univariate and bivariate analysis. The results obtained from this research are that mothers' attitudes, knowledge and perceptions partially influence the basic immunization status of children aged 0-9 months at the Community Health Center, South Nias Regency, P-value < 0.05. Attitudes, knowledge and perceptions simultaneously influence the basic immunization status of children aged 0-9 months at the Community Health Center of South Nias Regency P-value < 0.05.

Keywords: Attitude; Knowledge; Perception; Status of Children's Basic Immunization Supplies.

Introduction

The immunization program is a government measure to protect people from certain diseases. Immunization is a way to actively form and improve the body's immune system against a disease, so that if one day exposed to a certain disease, the possibility of getting the disease is getting smaller. The provision of immunization to infants and toddlers is very important, because the immunization program is a very effective form of intervention in reducing infant and toddler mortality rates, it appears that many infants and toddlers have died due to diseases that can actually be prevented by immunization. (Dwi Ghunayanti Noviana & Mochammad Bagus, 2020)

The completeness of a person's immunization is determined by the administration of 1 x HB 0 vaccination and vaccination at birth, 1 x BCG, 4 x

pentavalent (DPT-HB-HiB), 5 x OPV, 2 x MR (measles) and 1 x IPV indications as evidenced by vaccination documents in KIA. Indicators of successful vaccination implementation are measured by the achievement of universal childhood immunization (UCI), i.e. H. more than 80% of infants (0-11) per village or sub-district receive complete vaccination. (Rizani et al., 2009)

The role of parents in this immunization program is very important, because usually parents are responsible for childcare, especially the role of mothers to maintain the health of their babies or children and prevent disease. Knowledge, attitude, lack of motivation and lack of knowledge related to immunization affect the incompleteness of immunization in children. (Sari et al., 2022)

The picture of basic immunization coverage in Indonesia from 2016 to 2020 is 91.58% in 2016, 85.41% in 2017, 57.95% in 2018, 93% in 2019, and 83.3% in 2020.

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From these figures, it is necessary to achieve the 2020 Strategic Plan target of 92.9%. Complete basic immunization coverage in 2020 is the lowest coverage of complete basic immunization in the period 2011-2020. In Indonesia, every baby aged 0-11 months is recommended to get complete basic immunization. While by province, only 15 areas have reached the target; of the 15 areas, North Sumatra Province still has not reached the target of 85.17%. (Indraswari et al., 2021)

Data from the North Sumatra Provincial Health Office Profile in 2020 shows that IDL coverage in North Sumatra Province in 2019 was 85.17% and in 2020 it was 74.97% in North Sumatra. The province has not yet met the IDL target of 93.5%. North Sumatra is one of the areas with low basic immunization coverage. One of the areas in North Sumatra is Padangsidempuan City, which is 68.04%. For the percentage of toddlers who have been immunized in Nias District in 2019 BCG was 94.5%, DPT-HB3/DPT-HB/Hib3 was 100.3%, Measles 99.8%, polio 99.7% and hepatitis B was 28.6%. (Simanjuntak, 2020)

The implementation of immunization is expected to reduce the number of children under five who die from diseases that can be prevented by immunization (PD31). However, in recent years, the mortality rate of children under five due to infectious diseases that should be prevented by immunization is still relatively high. The WHO report in 2020 states that there are 20 million children who have not received immunization services for children under five years of age worldwide routinely every year. The high number of unimmunized children has resulted in several diseases that can cause paralysis and even death, which should be prevented by vaccines, reappearing in developed and developing countries. These diseases include measles, pertussis, diphtheria and polio (Simanjuntak, 2020) (Adiwiharyanto et al., 2022)

A good view of immunization from various parties can build support and motivation for mothers to be able to provide immunization to babies completely and appropriately, to make children have good health and immunity now and in the future. From the description of the background above and from the results of previous studies, the researcher is interested in conducting research with the title "Determinants of Maternal Behavior In Basic Immunization of Children Aged 0-9 Months At Health Center In Southern Nias District 2023".

Method

This study used a quantitative analytic research design with a cross sectional approach. This study aims to analyze the effect of attitudes, knowledge and perceptions of mothers on the completeness of basic

immunization status of children 0-9 months. The type of design of this study uses a type of correlation which will connect one variable with another.

This research was conducted at 10 Health Center South Nias Regency. The population in this study were mothers who had children aged 0-9 months who were within the scope of the Health Center of South Nias Regency. Researchers used accidental sampling techniques in this study. Where the number of samples in this study were 120 samples. Research instruments include questionnaires by collecting data on research subjects and also conducting interviews with mothers. Data analysis in this study was analyzed by descriptive univariate and bivariate.

Result and Discussion

Table 1. Distribution of Respondent Characteristics

Age	n	%
17 - 25 years old	20	16.7
26 - 35 years old	57	47.5
36 - 45 years old	43	35.8
Total	120	100
Education	n	%
Primary School	62	51.7
Junior High school	10	8.3
Senior High School	23	19.2
College	25	20.8
Total	120	100
Job	n	%
Housewives	60	50
Private employee	40	33.3
Civil servants	20	16.7
Total	120	100
Income	n	%
< 1.000.000	63	52.5
1.000.000 - 3.000.000	34	28.3
3.000.000 - 5.000.000	23	19.2
Total	120	100
The Number of Children	n	%
≤ 2	38	31.7
> 2	82	68.3
Total	120	100

Table 1 describes the distribution of respondent characteristics. The results showed that the majority of respondents were aged 26-35 years as many as 57 respondents. The majority of respondents had the latest education level of elementary school as many as 62 people, the majority of respondents worked as housewives as many as 60 people, the majority of respondents earned Rp. <1,000,000 as many as 63 people and the majority of respondents had >2 children as many as 82 people.

Table 2. Univariate Analysis Results

Basic Immunization Completeness	n	%
Incomplete	47	39.2
Complete	73	60.8
Total	120	100
Attitude	n	%
Good	68	57.7
Enough	32	26.7
less	20	16.7
Total	120	100
Knowledge	n	%
Good	58	48.3
Enough	37	30.8
less	25	20.8
Total	120	100
Perception	n	%
Good	37	30.8
Enough	44	36.7
less	39	32.5
Total	120	100

Table 2 explains the results of univariate analysis where the results show the majority of respondents performed complete basic immunization as many as 73 respondents, the majority of respondents' attitudes about the completeness of basic immunization were good as many as 68 respondents, the majority of respondents had good knowledge about the completeness of basic immunization as many as 58 respondents, the majority of respondents had sufficient perceptions about the completeness of basic immunization as many as 44 respondents.

Table 3. The Effect of Maternal Attitudes on the Completeness of Basic Immunization Status of Children 0-9 Months of Age at Health Center South Nias Regency

Attitude	Basic Immunization Completeness				Total		P- Value
	Incomplete		Complete		n	%	
	n	%	n	%			
Good	7	5.8	61	50.8	68	56.7	P= 0.000
Enough	26	21.7	6	5	32	26.7	
less	14	11.7	6	5	20	16.7	
Total	47	39.2	73	60.8	120	100	

The results of the chi square test showed a p-value of 0.000 <0.05, which means that there is an effect of maternal attitude on the completeness of basic immunization status of children 0-9 months at the Health Center of South Nias Regency.

This study is in line with research conducted by Tri (2019) on the relationship between the level of knowledge, attitudes and perceptions of mothers with basic immunization status in Wonokusumo, the results of which show that there is a relationship between

maternal attitudes and the completeness of basic immunization status in RW 8 Wonokusumo Village. Maternal attitudes towards immunization will have an impact on the completeness of complete basic immunization in toddlers. Attitude is a person's closed reaction to a stimulus where opinion and emotional factors are involved. The manifestation of attitude can only be interpreted through behavior that is closed and cannot be seen directly. Attitude is the whole of the tendency of human feelings, assumptions, ideas, beliefs about certain topics.

Table 4. The Effect of Maternal Knowledge on the Completeness of Basic Immunization Status of Children 0-9 Months of Age at Health Center South Nias Regency

Knowledge	Basic Immunization Completeness				Total		P-Val ue
	Incomplete		Complete		n	%	
	n	%	n	%			
Good	6	5	52	43.3	58	48.3	P= 0.00
Enough	24	20	13	10.8	37	30.8	
less	17	14.2	8	6.7	25	20.8	
Total	47	39.2	73	60.8	120	100	

The results of the chi square test showed a p-value of 0.000 <0.05, which means that there is an effect of maternal knowledge on the completeness of basic immunization status of children 0-9 months at the health center of South Nias Regency.

This study is in line with research conducted by Tri (2019) on the relationship between the level of knowledge, attitudes and perceptions of mothers with basic immunization status in Wonokusumo, the results of which show that there is a relationship between maternal knowledge and the completeness of basic immunization status in RW 8 Wonokusumo Village. (Nanda Kharin et al., 2021).The deeper the knowledge gained, the wiser the mother will be in perceiving things and making decisions. Behavior based on knowledge will be long or continuous compared to behavior based on compulsion. (Rusmil et al., 2019)The provision of basic immunization to infants is closely related to the mother's knowledge about basic immunization by how the mother understands the meaning and benefits obtained from health services such as posyandu and healthcenter, the better the knowledge the mother has, the more concerned the mother is to immunize her baby.(Astuti et al., 2023) The mother's desire to complete the basic immunization status of her toddler is inseparable from the knowledge possessed by the mother to understand the importance of basic immunization, so it is expected that from the mother's level of knowledge, attitudes and behaviors will emerge to better utilize available health service facilities in obtaining immunization services. Respondents who

have a poor level of knowledge are due to the mother's low level of education and also a lack of understanding of information about basic immunization in toddlers.(Wibowo et al., 2020)(Dalimawati et al., 2023)

Table 5. The Effect of Maternal Perception on the Completeness of Basic Immunization Status of Children 0-9 Months of Age at Health Center South Nias Regency

Perception	Basic Immunization Completeness				Total		P-Value
	Incomplete		Incomplete		n	%	
	n	%	n	%			
Good	8	6.7	29	24.2	37	30.8	P=0.000
Enough	8	6.7	36	30	44	36.7	
less	31	25.8	8	6,7	39	32.5	
Total	47	39.2	73	60.8	120	100	

The results of the chi square test showed a p-value of 0.000 <0.05, which means that there is an effect of maternal perception on the completeness of basic immunization status of children 0-9 months at the Health center of South Nias Regency.

This study is in line with research conducted by Iik (2021) on the relationship between maternal perceptions of immunization and the completeness of basic immunization in infants aged 9-11 months in Paninggaran Village, Darma District in 2021, the results of which show that there is a relationship between maternal perceptions of immunization and completeness of basic immunization in infants aged 9-11 months in Paninggaran Village, Darma District in 2021.(Hudhah & Hidajah, 2018)

Mothers who have a positive perception will have an impact on the completeness of basic immunization status in infants, otherwise mothers who have a negative perception will have an impact on the incompleteness of basic immunization status in infants. Perception is one of the things that can build mothers in providing immunization to children, so that a good and correct view of immunization will encourage and motivate mothers to immunize their babies. Perceptions of seriousness are often based on medical information or knowledge, can also come from a person's belief that he will get difficulties due to illness and will make or effect his life in general.(Dalimawati et al., 2023)(Kemenkes & UNICEF, 2020)

Conclusion

The results of research and data show that the results of statistical tests there is an influence between attitudes, knowledge and perceptions of mothers on the completeness of basic immunization status of children 0-9 months at Health Center South Nias Regency 2023. Mothers who have a positive perception will have an

impact on the completeness of basic immunization status in infants, otherwise mothers who have a negative perception will have an impact on the incompleteness of basic immunization status in infants. Perception is one of the things that can build mothers in providing immunization to children, so that a good and correct view of immunization will encourage and motivate mothers to immunize their babies. The influence of perceptions on the provision of immunization to infants does not only lie with the mother, but also with the family and society at large. A good view of immunization from various parties can build support and motivation for mothers to be able to provide complete and proper immunization to babies, to make children have good health and immunity now and in the future.

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Author Contributions

Sri Lestari Ramadhani Nasution conceptualized the research idea, designed of methodology, Reynel management and coordination, wika hanida analyzed data.

Conflicts of Interest

The authors declare no conflicts of interest.

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