



AISCH 2023

The 4th Al Insyirah International Scientific Conference on Health

MOTHER'S KNOWLEDGE ABOUT COMPLETE BASIC IMMUNIZATION OF BABIES AGED 0–1 YEARS AT THE PUSKESMAS PEKAN HERAN

¹Nofri Hasrianto, ²Jufenti Ade Fitri, ³Melliza

^{1,2,3}Departement Public Health, Healthy Faculty, Al Insyirah Institute of Health and Technology

¹nofrihasrianto@gmail.com

ABSTRACT

It is known that the highest prevalence of disease in babies at the UPTD Pekan Heran Community Health Center is acute pharyngitis (37 people), ISPA (117 people), and influenza (73 people). Judging from the KMS when providing immunizations at Posyandu, there are many toddlers whose immunization lists are incomplete. Providing immunizations can prevent and reduce the incidence of morbidity, disability, and death due to diseases that can be prevented by immunization (PD3I). This study aims to determine the relationship between maternal knowledge about immunization and the completeness of basic immunization in babies aged 0–12 months. This type of research is analytical, showing the relationship between one variable and another using a cross-sectional approach. The total sample of 264 respondents was determined using the purposive sampling technique. The statistical test used is the chi square test. The research results showed that a p value of 0.000 was obtained. So it can be concluded that there is a relationship between a mother's knowledge and the completeness of basic immunization for babies aged 0–1 year in the Pekan Heran Puskesmas UPTD Work Area. It is hoped that in the future, health workers will provide information in education and increase mothers' motivation regarding the importance of providing immunizations and monitoring the provision of immunizations according to the baby's age so that confidence is created in doing so.

Keywords: Basic Immunization, Completeness, Knowledge

INTRODUCTION

Knowledge is information and understanding that is understood and possessed by a person or the general public through education, experience, or study (Cambridge, 2020). Immunization is a process that aims to create or increase the body's immunity against a disease by administering a vaccine or weak antigen that stimulates the production of antibodies. The body's immune system has memory capabilities that will store experiences after a vaccine is introduced into the body, so that if the body is exposed again to the same antigen, antibodies will be created more quickly and in large quantities, increasing the body's resistance to the disease. Immunization aims to protect individuals and society from infectious diseases and is an important part of disease prevention

efforts (Proverawati & Andhini, 2013). Immunization is an effort to prevent disease in accordance with the teachings of the Islamic religion, as stated in the Qur'an and hadith, and can be compared with the technical methods of the Prophet's time as a form of natural treatment for newborn babies.

Based on data from UNICEF (World Health Organization) in 2018, it was found that the number of live births in the world was 139,677,000 out of a total population of 7,586,000,000 babies, of which 135,636,000 survived. From this data, the vaccination target population is BCG 89%, DPT 1 90%, DPT 3 86%, HepB 42%, Hib 3 72%, and Polio 3.85%, meaning that the vaccination target has not yet reached 100% (UNICEF, 2021).

Providing immunization is a public health effort that has been proven to be the most cost-effective and has a positive impact on realizing the health status of mothers and children in Indonesia. The current direction of health development focuses on promotive and preventive efforts without neglecting curative and rehabilitative aspects. One preventive measure is the implementation of an immunization program. Providing immunizations can prevent and reduce the incidence of morbidity, disability, and death due to diseases that can be prevented by immunization (PD3I), which is estimated at 2 to 3 million deaths each year (Ministry of Health of the Republic of Indonesia, 2021). Pekan Heran Puskesmas data for 2022 shows that the highest prevalence of disease in babies is 37 people with acute pharyngitis, 0 tonsillitis, 0 acute laryngitis and tracheitis, 117 people with acute respiratory infection, and 73 people with influenza. Judging from the KMS, when providing immunizations at Posyandu, many toddlers had incomplete immunization lists; this is in accordance with disease prevalence data in 2022. The implementation of a comprehensive national immunization program requires cooperation between several parties. Among them is the role of the mother, which is an important factor for a child to receive a complete basic immunization. In this aspect, indicators of knowledge, confidence, motivation, and parental health behavior correlate with the accuracy of immunization targets. Apart from that, the role of health workers is needed as a promotional and preventive effort, which influences the lack of knowledge of parents to provide complete immunization (Triana, 2017).

Based on research by Dewi et al. (2014) regarding the relationship between maternal knowledge and the provision of complete basic immunization to babies in the Parupuk Tabing sub-district, statistical tests were obtained, which showed that there was a significant relationship. The completeness

of immunization is dominated by mothers who have sufficient knowledge (87.5%) compared to mothers who have less knowledge (4.3%). This research is in line with the results of research by Sari et al. (2016): of 52.3% of mothers with a good level of education, 66.2% of babies had complete immunization status, while 33.8% of babies had incomplete immunization status. Factors that influence this are age, which falls into the productive age category, and the highest level of education, so that it is easier to get information about immunization from various sources. There has been a lot of research on the relationship between a mother's knowledge about immunization and the completeness of basic immunization for babies. However, there has been no research, especially in the Pekan Heran Puskesmas Work Area, which can be seen from data from the Health Service in 2021 (51.02% and in 2022 (38.8%). Therefore, this research was conducted to determine the relationship between maternal knowledge about immunization and the completeness of basic immunization for babies aged 0–1 year in the Pekan Heran Puskesmas Working Area, West Rengat District, Indragiri Hulu Regency. The aim of this study was to determine the relationship between maternal knowledge about immunization and the completeness of basic immunization in babies aged 0–1 year in the Pekan Heran Puskesmas UPTD Work Area.

RESEARCH METHODS

This research uses an analytical research design approach with a cross-sectional method that collects data through questionnaires at a certain time to see the relationship between one variable and another (Notoatmodjo, 2018). The research was carried out from April to June 2023 and was located at the Posyandu in the Pekan Heran Puskesmas Working Area, West Rengat District, Indragiri Hulu Regency. The population in this study were mothers who had babies aged 0–12 months, with a

total population of 777 babies in the Pekan Heran Puskesmas Working Area, West Rengat District, Indragiri Hulu Regency. The sample in this study was mothers who had children under five who visited the Posyandu in the Pekan Heran Puskesmas Working Area, West Rengat District, Indragiri Hulu Regency, totaling 264 respondents. Data collection techniques can be carried out by means of interviews, questionnaires, observations, or a combination of the three (Sugiyono, 2017). Data analysis in this research includes univariate analysis to explain the characteristics of each research variable as well as bivariate analysis to see the relationship between the independent variable and the dependent variable using the Chi Square test at a confidence level of 95%.

RESULTS AND DISCUSSIONS

Table 1. Frequency Distribution of Characteristics of Mothers Who Have Babies Aged 0–1 Year in the UPTD Working Area of Pekan Heran Puskesmas

| No | Characteristics of Respondents | f | % |
|--------------|--------------------------------|------------|------------|
| 1 | Education | | |
| | Basic Education | 109 | 41,3 |
| | Secondary Education | 131 | 49,6 |
| | Higher Education | 24 | 9,1 |
| Total | | 264 | 100 |

Based on table 1 above, it shows that the characteristics of the respondents are 109 people (41.3%) with basic education levels and 131 people (49.6%) with secondary education levels. Furthermore, there were 24 people with higher education levels (9.1%).

Table 2. Frequency Distribution of Mothers' Knowledge at UPTD Pekan Heran Puskesmas

| No | Mother's Knowledge | Frequency | Percentage |
|--------------|--------------------|------------|--------------|
| 1 | Good | 111 | 42,0 |
| 2 | Enough | 55 | 20,8 |
| 3 | Less | 98 | 37,1 |
| Total | | 264 | 100,0 |

Based on table 2 above, it shows that the majority of mothers' knowledge is good for as many as 111 people (42.0%). Furthermore, the number of mothers who lacked knowledge was 98 (37.1%).

Table 3. Frequency Distribution of Basic Immunization Completeness for Babies Aged 0–12 Months in the UPTD Working Area of Pekan Heran Puskesmas

| Completeness of Basic Immunization of Infants | | | |
|---|-----------------|------------|--------------|
| No | Immunization of | f | % |
| 1 | Complete | 121 | 45,8 |
| 2 | incomplete | 143 | 54,2 |
| Total | | 264 | 100,0 |

Based on Table 3 above, it shows that the majority of complete basic immunizations for babies 0–12 months are in the incomplete category, with as many as 143 people (54.2%). Meanwhile, 121 people (45.8%) had completed basic immunizations for babies

Table 4. Analysis of the Relationship between Mother's Knowledge and Completeness of Basic Immunization for Babies Aged 0-12 Months in the UPTD Work Area of Pekan Heran Puskesmas

| | Immunization Completeness | | | | Total | | <i>p value</i> |
|--------------|---------------------------|-------------|------------|-------------|------------|------------|----------------|
| Knowledge | Complete | | Incomplete | | | | |
| | f | % | f | % | f | % | |
| Good | 62 | 55,9 | 49 | 44,1 | 111 | 42,0 | 0,000 |
| Simply | 30 | 54,5 | 25 | 45,5 | 55 | 20,8 | |
| Less | 29 | 29,6 | 69 | 70,4 | 98 | 37,1 | |
| Total | 121 | 45,8 | 143 | 54,2 | 264 | 100 | |

Based on table 4, it shows that the majority of mothers' knowledge was good, with as many as 111 people (42.0%) with basic immunization completeness in the complete category, namely 62 people (55.9%). Furthermore, 55 people (20.8%) had sufficient knowledge of mothers with complete basic immunizations in the complete category, namely 30 people (54.5%). On the other hand, 98 people (37.1%) had insufficient knowledge of mothers with complete basic immunizations in the incomplete category of 69 people (70.4%). The results of the Chi-Square statistical test show that the p value is $0.000 < 0.05$, meaning that H_0 is rejected, which means there is a relationship between mother's knowledge and the completeness of basic immunization for babies aged 0–1 year in the Pekan Heran Puskesmas UPTD Working Area.

Respondent Characteristics

Respondent characteristics, especially education level, play an important role in determining the completeness of basic immunization for babies. The research results showed that the majority of respondents had secondary education (49.6%), and the knowledge of mothers at the Pekan Heran Community Health Center UPTD was greatly influenced by several factors. This finding is in line with research by Yuliarti et al. (2022), where the majority of respondents also had secondary education (42.9%). Education is a significant factor in influencing a mother's knowledge. Individuals with higher education are more likely to receive information, including information about immunization, from health workers. In contrast, mothers with education basic.

may face difficulties in understanding information regarding the completeness of immunization. Education also influences a person's ability to make decisions, where highly educated mothers tend to be more open to new ideas and are better able to receive and implement information (Prihanti et al., 2016).

Based on researchers' assumptions, education is a process of programmed experience, both formal and non-formal, throughout an individual's life with the aim of optimizing the individual's ability to carry out their life roles. By increasing the level of maternal education, it is hoped that their knowledge about the importance of immunization for babies will also increase, so that they are more able and encouraged to provide complete immunization to their babies.

Mother's Knowledge

The results showed that the majority of mothers had good knowledge (42.0%), while mothers with insufficient knowledge were 37.1%. These results are consistent with research by Humaira et al. (2020), who found that the majority of mothers had good knowledge about basic immunization, namely 66.1% of the total respondents. Knowledge is the result of a sensing process regarding a particular object, and behavior based on knowledge tends to be more consistent and sustainable. Mothers' good knowledge is reflected in their ability to answer questions about basic immunizations correctly. This knowledge becomes the basis for mothers' immunizations for their babies. Knowledge is defined as a collection of information that is understood and obtained through a lifelong learning process and can be used for self-adjustment. This includes recognition of the reality, truth, principles, and rules of an object and plays a role in influencing changes in behavior according to a person's level of intelligence

Completeness of Basic Immunization for Babies Aged 0–1 year

In this study, the results showed that the majority of babies aged 0–1 year had incomplete basic immunizations of 54.2% (143 people), while complete basic immunizations were 45.8% (121 people). This result is different from previous research by Ridha (2022), where 91.2% of respondents had complete basic

immunization status. Complete basic immunization includes BCG once, DPT three times, polio four times, HB three times, and measles one time. Evaluation of the completeness of immunization can be seen from the coverage of measles immunization, because measles immunization is the last immunization given to babies after ensuring that previous immunizations are given according to the schedule set by health workers (Arsyad, 2019). This completeness is influenced by individual awareness of the importance of health and compliance with medical advice and health policies that have been determined.

Relationship between maternal knowledge and the completeness of basic immunizations for babies aged 0–1 year

This study found that the majority of mothers had good knowledge (42.0%), and of this group, most had complete basic immunization for babies aged 0–1 year (55.9%). On the other hand, mothers with less knowledge (37.1%), most of whom had incomplete basic immunization requirements (70.4%). Analysis using the Chi-Square statistical test shows that there is a significant relationship between maternal knowledge and the completeness of basic immunization for babies aged 0–1 year in the Pekan Heran Puskesmas UPTD Work Area (p value = $0.000 < 0.05$). The results of this research are in line with previous research by Nurhidayati (2016) and Agustin & Rahmawati (2021), which also found a relationship between maternal knowledge and the completeness of immunization for toddlers. Public knowledge, especially for mothers as parents, about the importance of immunization plays a crucial role in the completeness of immunization for babies. Education and information provided to the public, especially mothers, about the benefits and importance of immunization will increase awareness and the desire to complete immunization in children. The level of education also influences the

mother's level of knowledge, so increasing knowledge can be an important step to increasing the completeness of basic immunization for babies.

Based on the researchers' assumptions, it is estimated that the relationship between maternal knowledge and the completeness of basic immunization in babies aged 0–1 year can be explained by the mother's understanding of the benefits of immunization. Mothers who have adequate knowledge tend to be more aware of and appreciate the importance of immunization for their children's health. In the current information age, easy access to various sources of information plays an important role in increasing public knowledge about immunization. Therefore, it is recommended that young mothers be given appropriate education and information about the importance of immunization so that they are more active in completing basic immunizations for their babies

CONCLUSION

1. Frequency distribution of characteristics of respondents of mothers who have babies in the UPTD Work Area of Pekan Heran Puskesmas, namely the educational level of most of them is secondary education, 131 people (49.6%).
2. Frequency distribution of knowledge among mothers who have babies in the Pekan Heran Puskesmas UPTD Work Area. Most mothers have good knowledge, namely 111 people (42.0%), and mothers who have poor knowledge are 98 people (37.1%).
3. The results of the study show that there is a relationship between maternal knowledge and basic immunization equipment for babies aged 0–1 year in the Pekan Heran Puskesmas UPTD Work Area

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