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The Relationship Of Mother's Knowledge About DPT Aefi To Compliance In Basic Immunization

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ABSTRACT

Background : Based on Riskesdas, child immunization data in Pati City in 2018 was Hepatitis B immunization 95.49%, BCG immunization 95.60%, DPT-Hib 1-3 immunization 76.33%, Polio immunization 89.24%, and Measles immunization 90.53%. The aim of this research was to determine the relationship between maternal knowledge about KIPI DPT and compliance with basic DPT immunization in Growong Kidul Village, Juwana District.

Methods : This research is a descriptive observational study with a cross sectional approach, sampling was carried out using a random sampling method with inclusion and exclusion criteria, and data analysis used Spearman Rank.

Result : In the study, 48 respondents (84.2%) were aged 20-35 years, 20 respondents (35.1%) had high school/vocational education, 40 respondents (70.2%) were housewives, 30 respondents (52.6%) had knowledge sufficient, and 47 respondents (82.5%) had timely DPT immunization for children. In the Spearman Rank test, the values obtained were p=0.001 and r=0.435, which means that there is a relationship between maternal knowledge and compliance with DPT basic immunization with a correlation of sufficient strength.

Conclusion : Mother's knowledge is related to compliance with basic DPT immunization in Growong Kidul Village, Juwana District.

Keywords : Children Age 2-6 Months, Knowledge Mother, Obedience Giving Immunizations.

INTRODUCTION

The immunization program was established as a global effort by the World Health Organization (WHO) and is conducted concurrently with the Expanded Immunization Program (EPI) administered by the World Health Assembly (WHA). Immunization is the process of creating and increasing the body's resistance to certain infectious diseases. The way to induce this immunity is to give a vaccine. The DTP vaccine (diphtheria, whooping cough, tetanus) is one of the preventive vaccines that must be given to children for protection against diphtheria, whooping cough, and tetanus (Damanik, 2021).

According to Basic Health Research (Riskesdas), there are children who have basic immunizations in Central Java Province and Pati City who have not reached the target. Complete immunization coverage data according to age in Indonesia is 57.9%, 32.9% incomplete, and 9.2% not immunized, while complete immunization coverage data according to age in Central Java is 75%, 22.3% incomplete, and those who were not immunized were 2.7% (Kemenkes, 2018). Data on child immunization in Pati City in 2018, namely Hepatitis B immunization of 95.49%, BCG immunization of 95.60%, DPT-Hib 1-3 immunization of 76.33%, Polio immunization of 89.24%, and immunization of measles as much as 90.53% (Riskesdas, 2018). It can be seen that DPT immunization coverage is lower than other immunizations.

According to Lawreen Green's theory, there are several factors that influence immunization adherence, namely predisposing factors, supporting factors, and reinforcing factors. Predisposing factors are knowledge, attitude, age, education, occupation, and parity. Supporting factors consist of health service facilities and affordability of immunization places. Meanwhile, reinforcing factors include family support and the role and attitudes of health workers (Cani, 2021).

The existence of Post-Immunization Follow-up Events (KIPI) makes people think negatively about basic immunization, because they are afraid of being exposed to the AEFIs that are caused. Bad thoughts from the community arise, due to a lack of knowledge when dealing with AEFI (Damanik, 2021). Parents who have knowledge about DTP and AEFI vaccination can ensure that their children are vaccinated against DTP and ensure AEFI is treated. However, parents who do not understand what the DTP vaccine is will think that the vaccine will make their child sick, so they prefer not to be vaccinated or take the DTP vaccine (Defilza et al., 2021). So, having knowledge of AEFI can help people accept it, especially parents.

Growong Kidul is a village in Juwana, Pati Regency, Central Java Province. The village is located at 1 km from Juwana Square. Growong Kidul Village has 4 RWs and 17 RTs and has a population of 5,401 people, most of whom work in metal crafts, agriculture and fisheries. In addition, in Growong Kidul Village there are programs for elderly classes, classes for pregnant women, and classes for toddlers. The program is held once a month and a maximum of 30 people can take part in rotation according to the order of the RT. According to the village midwife, in 2022 January-August as many as 72 children had received DPT immunization at the Posyandu in Growong Kidul Village, Juwana District, and stated that there was something related to basic immunization at the Posyandu in Growong Kidul Village, Juwana District, namely the availability of vaccines, the condition of the children, and the lack of socialization of health workers. Because the availability of vaccines is limited, mothers should come as early as possible so that their children get the vaccine, so that their child's immunizations are timely and age-appropriate. When there is health socialization, the class for pregnant women and the class for toddlers conveys as much as possible the importance of complete basic immunization for children according to their age and how to handle if there is an AEFI after immunization.

When researchers conducted preliminary surveys and interviews with mothers of toddlers whose children had received DPT immunization, they said that the first DPT immunization was carried out at the village posyandu. However, after the DPT immunization, her child became sick, so the mother felt afraid if her child took the next DPT immunization. Because the mother's lack of knowledge about AEFI makes the mother feel anxious about the side effects after immunizing her child, so she can think about not bringing her child for immunization. From this explanation, researchers will examine whether there is a relationship between mother's knowledge about AEFI DPT and adherence to basic DPT immunization in Growong Kidul Village, Juwana District.

METHODS

This research was carried out on 10-11 December 2022 at the Posyandu in Growong Kidul Village, Juwana District. This research was conducted with a quantitative descriptive observational study with a cross sectional method. The population in this study were mothers who had children aged 2-6 months in Growong Kidul Village, Juwana District. Then a sample size is obtained which is determined using the Lemeshow formula and the data obtained from the population in the study requires a sample of 57 people.

Determining the sample in this study using the inclusion criteria and exclusion criteria. The inclusion criteria were willing to be research respondents, mothers who had children aged 2-6 months who were immunized at the Posyandu in Growong Kidul Village, Juwana District, and children who were immunized with DPT in January-August 2022. Meanwhile, the exclusion criteria were incomplete and incomplete immunization data. cooperative.

Sampling of this study by random sampling. The variables used were mother's knowledge about AEFI DPT and adherence to basic DPT immunization. The data used are primary data and secondary data. The primary data used is the mother's identity and level of knowledge. While the secondary data used is child immunization data based on the MCH handbook.

In this study, data analysis was performed using univariate analysis and bivariate analysis. Univariate analysis to describe and see the description of the distribution and proportion of each variable. The data obtained will be presented in the form of a frequency distribution or percentage. Bivariate analysis to prove the hypothesis in this study. The relationship between the independent variables and the dependent variable uses the Rank Spearman test. This research has received a certificate of proper ethics from KEPK FK Unimus with letter number (No.: 096 / EC / KEPK-FK / UNIMUS / 2022).

RESULTS AND DISCUSSION

Univariate analysis

Based on the findings in the research analysis, namely child immunization data and the results of calculating the mother's knowledge level questionnaire about AEFI DPT.

Table 1. Characteristics of the research sample (n = 57)

Characteristics	F	%
Mother's age		
20-35	48	84,2
>35	9	15,8
Mother's education		
Elementary school	9	15,8
Junior high school	14	24,6
Senior high school	20	35,1
College	14	24,6
Mother's job		
Housewife	40	70,2
Laborer	4	7
Self-employed	4	7
Government employees	3	5,3
Employee	6	10,5
Level of knowledge		
Less	12	21,1
Enough	30	52,6
Good	15	26,3
Immunization DPT		
Not on time	10	17,5
On time	47	82,5

Based on the table, the majority of 48 respondents (84.2 %) are aged 20-35 years, 20 respondents (35.1 %) have high school/vocational school education, 40 respondents (70.2 %) are housewives, 30 respondents (52,6 %) had enough knowledge, and 47 respondents (82.5 %) gave DPT immunization on time to children.

Bivariate analysis

Relationship between Mother's Knowledge and Compliance with Basic DPT Immunization

Table 2. Analysis of Mother's Knowledge and Compliance with Basic DPT Immunization

Level of knowledge	Accuracy of basic DPT immunization				Amount		p-value	correlation coefficient
	Not on time		On time					
	f	%	f	%	f	%		
Less	6	50	6	50	12	100	0,001	0,435
Enough	4	13,33	26	86,67	30	100		
Good	0	0	15	100	15	100		

The results of the bivariate analysis in the table between mother's knowledge and adherence to basic DPT immunization using the Rank Spearman test obtained a p value of 0,001. Because the

p value is less than 0,05, it means that there is a significant relationship between the variables of mother's knowledge about DPT AEFI and adherence to basic DPT immunization. Meanwhile, the correlation coefficient (r) of 0,435 means that the level of strength of the relationship (correlation) between the variables of mother's knowledge about AEFI DPT and adherence to basic DPT immunization is moderate correlation. Because the correlation coefficient in the results above is positive, so the relationship between the two variables is unidirectional (type of unidirectional relationship), which means that the higher the mother's knowledge, the higher the compliance with basic DPT immunization in children.

This study involved 57 respondents who met the inclusion and exclusion criteria by using a questionnaire as a research instrument in primary data collection conducted on mothers who had children aged 2-6 months who were immunized in January-August 2022. The results showed that there was a relationship between knowledge mothers on adherence to basic DPT immunization and based on the analysis conducted, it can be seen that mothers in Growong Kidul Village, Juwana District, on average, have sufficient knowledge and on average basic DPT immunizations are given on time.

The research results obtained are in accordance with research by Lisa Rahmawati et al, where mother's knowledge has an influence on adherence to DPT immunization (Rahmawati & Ningsih, 2020). Knowledge is the result of what is known and understood about an object. Discovery comes from the five human senses, namely sight, hearing, smell, taste, and touch. Much human knowledge is obtained through the eyes and ears. Knowledge is a very important part of organizing human behavior (and behavior) (Darsini et al., 2019). This knowledge varies in nature, some are specific and some are indirect, some are flexible, personal and specific, and some are fixed, objective and general. The type and nature of this knowledge depends on the source of knowledge, there is good knowledge and bad knowledge (Suwanti & Aprilin, 2017).

The results showed that most of the respondents graduated from SMA/SMK. Mother's education has an effect on giving complete basic immunization to children, because the higher the mother's education is expected the higher the mother's understanding. Research by Makamban et al shows that low education has a negative effect on respondents to vaccinate their children completely, while higher education has a positive effect on respondents to vaccinate their children who are totally immune (Makamban, Y., Salmah, 2014). A study by Hijani et al showed that the higher a mother's education, the more knowledge she has about vaccination. In fact, the information received by the mother is better so that it allows the mother to make decisions regarding the health of her child, especially for vaccination (Hijani et al., 2015). The results of this study are the same as the results of Pratiwi F's research, namely that most respondents graduated from high school with a total of 29 respondents. Uneducated mothers often have minimal knowledge so they don't vaccinate their children because they don't know the true benefits of vaccination. For example, an illiterate mother

who knows that her child has a fever after being vaccinated forces the mother not to bring her child again to be vaccinated. Because they think it will hurt their children (Pratiwi, 2015).

The results of this study are that most of the respondents have sufficient knowledge. Lack of mother's knowledge can increase the risk of incorrect administration of basic DTP vaccines to children, while mothers who are knowledgeable give DTP vaccines from an early age. These results are the same as Rahmawati's study, namely mothers with children with less immunization status generally have less knowledge, while mothers with children with complete immunization status generally have good knowledge, only a few do not have knowledge. There is a difference in the results of research from Rahmawati and this research, namely in Rahmawati's research the results showed that the knowledge level of the respondents was good (Adzaniyah Isyani Rahmawati, 2014). Whereas in Pratiwi's research, most of the respondents had poor knowledge, because most of the respondents had a low level of education (Pratiwi, 2015). Actions based on knowledge will last longer than actions that are not based on knowledge (Kadir, L., 2014). Knowledge will shape the mother's behavior, and this is the right way to get the DPT vaccine. Knowledge about motherhood can be gained through well-conducted academic studies.

The results showed that most of the mothers belonged to the fertile age group (20-35 years). The childbearing age group is the most productive and the best year in providing health services where mothers have a lot of life experience and adapt to changes in behavior quickly (Harmasdiyani, 2015). The increasing age of the respondents added experience in caring for children and influenced the behavior of respondents, one of which was the DTP vaccination schedule for children. The older the respondent's age, the more life experience he has, so that in terms of primary DTP vaccination it is expected that the respondent has sufficient knowledge and experience. This affects the mother's decision to give the vaccine on time in the next DTP cycle.

The results showed that most of the respondents were housewives. The mother's occupation is not seen from the influence of the economic aspect, and her daily activities are considered. Housewives often spend time at home, but there is a lot of homework that can prevent mothers from going to vaccinate their children so that the vaccinations are not done on time. As a housewife, you must be able to divide your time between taking care of the house and the interests of your children. By dividing their time, housewives can immunize their children on time and can attend toddler/pregnant women classes if they want to have more children so they can prepare for things that must be done when the child is immunized or MP-ASI needs. The results of this study are in line with research conducted by Rahmatina LA and Erawati M, in which the majority of respondents were IRT (Basra et al., 2018). Mother's time to vaccination is considered a predictor of maternal compliance with adequate immunization (Pratiwi, 2015).

Hypothesis testing was carried out on the independent variable of mother's knowledge with the dependent variable on adherence to basic DPT immunization. The results of the analysis in table

4.2 show that there is a correlation between mother's knowledge and adherence to basic DPT immunization. This research is in line with Harris RW research, with the result that there is a relationship between knowledge and completeness of DPT immunization (p value = 0.018 <0.05) (Haris, 2018). In contrast to Simanullang P's study which reported that there was no significant relationship between maternal knowledge and vaccination adherence (p value = 0.228 > 0.05). In Simanullang P's study, the results of the mother's knowledge level were lacking, while in this study the mother's level of knowledge was sufficient (Simanullang et al., 2022).

The results of the interpretation of the Rank Spearman correlation value in table 4.2 are 0.435 which has a positive meaning between mother's knowledge of adherence to basic DPT immunization with sufficient correlation strength and unidirectional correlation, this shows that if mother's knowledge increases then compliance with basic DPT immunization will also increase (Aditya ID, 2019). This finding is in line with research by Damanik RK, et al which showed that the higher the mother's knowledge, the more mothers give DTP to their children (Damanik, 2021).

CONCLUSION

Based on the results of the research and discussion, it can be concluded that mothers' knowledge in Growong Kidul Village, Juwana District is sufficient (52.6%), compliance with DPT basic immunization in Growong Kidul Village, Juwana District is timely (82.5%), and there is a significant relationship (p-value = 0.001<0.05) and has a significant positive correlation between maternal knowledge and compliance with basic DPT immunization in Growong Kidul Village, Juwana District with sufficient correlation strength (r = 0.435).

Future researchers are expected to conduct similar research with a cohort design, so that researchers can describe the process of developing mothers' level of knowledge regarding KIPI DPT towards compliance with basic DPT immunization or conduct similar research by comparing other villages around the Juwana Health Center working area, and for health workers and cadres. Health is expected to continue to optimize toddler class activities and provide information regarding immunization. It is also hoped that the pregnant mother class will be given information regarding basic immunization or advanced immunization for children, so that mothers can prepare and arrange a schedule for immunizing their children, so that the child can be immunized on time.

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