

The Effects of Providing Health Education About Basic Immunization on The Level of Mothers' Knowledge at Basirih Public Health Centre, South Kalimantan

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ABSTRACT

Role of the mother in the immunization program is very important, so an understanding of immunization is very needed. The lack of mother's knowledge about basic immunization is caused by a lack of information facilities. One of the efforts made to increase mother's knowledge about basic immunization is by providing health education through counselling. The purpose of This research is to know about the effect of providing health education about basic immunization on the level of mothers' knowledge at the Basirih's public health center. Design that used on this research is quantitative research type with a one group pretest - post-test pre-experimental design. The sample in this study were infant mothers, using total sampling technique with a total sample of 30 respondents. Data was taken using a questionnaire. Data analysis used non parametric statistical analysis design, the Wilcoxon Signed Test. Result of this research from 30 respondents, average level of mother's knowledge about basic immunization before health education was given, it was found that 0% was good, 13.3% was sufficient and 86.7% was lacking. And after given health education, it was found that 53.3% was good, 46.7% was sufficient and 0% was lacking. The results of Wilcoxon's statistical analysis on knowledge data obtained a Z value of -4.800 and a P Value showing a significance of 0.000. There was an effect of health education on the level of mother's knowledge about basic immunization. Can be concluded research showed that overall level of mothers' knowledge about basic immunization at Basirih's public health center before given health education is included in the poor category and after given health education, the level of mother's knowledge is included in the good and sufficient category.

INTRODUCTION

Immunization is an effort to actively create/increase a person's immunity to a disease so that if one day they are exposed to the disease, they will not get sick or only experience mild illness. Some infectious diseases included in (PD3I) include Hepatitis B, TB, Diphtheria, Pertussis, Tetanus, Polio, Measles, Rubella, and pneumonia (Kementarian Kesehatan RI, 2020). In the scope of health services, the preventive sector is the main priority. In implementing the National Health System (NHS), immunization is a form of health intervention that is very effective in reducing infant and toddler mortality rates. The transmission of infectious disease incidents has occurred for decades in developed countries that have carried out regular immunization with wide coverage (I.G.N Ranuh et al., 2018).

Babies are more susceptible to disease and unhealthy conditions than adults. This immunity that has not been formed properly makes babies very susceptible to disease (Isnayni, 2016). In Indonesia, every baby aged 0-11 months is required to receive complete basic immunization consisting of 1 dose of Hepatitis B, 1 dose of BCG, 3 doses of DPT-HB-HiB, 4 doses of Oral Polio Vaccine (OPV) polio drop, 1 dose of Inactivated Polio Vaccine (IPV) injection polio, and 1 dose of measles rubella. Some of the reasons why babies do not receive complete immunization are due to lack of information, motivation, and situation. Reasons for information include lack of knowledge of mothers about the need and unwillingness, mothers' knowledge of the importance of immunization, completeness, and the proper immunization schedule.

In 2018, there were approximately 20 million children who did not receive complete basic immunization, and some children did not receive any immunization at all. According to WHO, out of 194 countries, the achievement of complete basic immunization in Indonesia was 86.8% in the sense that Indonesia is a country with low IDL achievement and below the target where the global immunization target coverage is 90% (IDAI, 2018). In 2020, the national coverage of complete basic immunization was 83.3%. This figure has not met the 2020 Strategic Plan target of 92.9%. In 2020, the coverage of UCI villages in Indonesia was 59.2%.

There are two provinces that have achieved 100% coverage of UCI villages/sub- districts, namely Central Java and DI Yogyakarta. Meanwhile, for the province of Central Kalimantan, the coverage of UCI Villages/Sub-districts in 2020 was only 57.1%, and the coverage of complete basic immunization only reached 42.9% (Directorate General of Disease Prevention and Control, Ministry of Health of the Republic of Indonesia, 2021).

At the Basirih Public Health Center, the number of visits by mothers bringing their babies for immunization has been low and some babies have dropped out of immunization so that the immunization target must be achieved by conducting sweeps visiting the homes of babies who have dropped out of immunization. From the sweep, it was found that mothers did not want to immunize their children because after immunization, their children had a fever, were fussy, and cried. From data from the Basirih Public Health Center, the percentage of babies who received immunization in 2021 was BCG

Immunization (6.66%), DPT-HB1 immunization (46.66%), Polio 1 immunization (66.66%), DPT-HB2 immunization (40.00%), and Polio 2 immunization (43.33%).

DPT-HB3 immunization (13.33%), polio immunization 3 (43.33%), polio immunization 4 (13.33%), measles immunization (10.00%). The average number of babies who received immunization in 2021 was 20 babies (66.66%). Meanwhile, data from the Basirih Public Health Center from January - October 2022 were BCG immunization (39.28%), DPT-HB1 immunization (14.28%), polio immunization 1 (42.85%), DPT-HB2 immunization (14.28%), Polio immunization 2 (21.42%), DPT-HB3 immunization (17.85%), Polio immunization 3 (7.14%), Polio immunization 4 (17.85%), Measles immunization (17.85%).

Meanwhile, the percentage of babies who have not received immunization until October 2022 is BCG immunization (60.72%), DPT-HB1 immunization (85.72%), Polio 1 immunization (57.15%), DPT-HB2 immunization (85.72%), Polio 2 immunization (78.58%), DPT-HB3 immunization (82.15%), Polio 3 immunization (92.86%), Polio 4 immunization (82.15%), measles immunization (82.15%), the average number of babies who received immunization in 2022 was 12 babies (42.85%). Judging from the data from 2021 to 2022, there was a decrease in babies who received immunization, namely 23.81%. Some mothers still do not know for sure about the benefits of immunization, the immunization schedule according to the baby's age, the side effects of immunization, and AEFI.

LITERATURE REVIEW

One effort to increase knowledge can be done through promotive and preventive efforts aimed at increasing maternal knowledge so that mothers understand the functions obtained if their children receiving basic immunization. These promotive and preventive efforts include counseling activities (Notoatmodjo, 2018), namely, by providing health education carried out at the Basirih Public Health Center (Puskesmas). The purpose of this study was to determine the Effect of Providing Health Education About Basic Immunization on the Level of Mothers' Knowledge at the Basirih Community Health Center.

METHODOLOGY

This type of research is quantitative research, the research design used is a pre-experimental one-group pre-test-post-test design. In this design there is a pre- test before health education is given, namely by providing a questionnaire sheet containing written questions answered by respondents, then health education is given through counseling and the media used is a leaflet, after health education is given a post- test is carried out by providing the same questionnaire to be answered by respondents. Post-test to analyze the differences before and after health education is given so that the results of health education can be known more accurately because it can be compared with the conditions before health education is given.

RESULTS AND DISCUSSION

Based on the research results, the frequency distribution results for univariate analysis were as follows:

Respondent Characteristics

Table 1. Respondent Characteristics by Age

Age	Number	Percentage
17-25	11	36.7
26-35	14	46.7
36-45	4	13.3
>45	1	3.3
Total	30	100

The findings of the study, which are presented in Table 1, indicate that the average age of respondents is between the ages of 26 and 35, with a total of 14 individuals (46.7%). The respondents who are older than 45 years old make up the smallest percentage, with just one individual (3.3%), and the respondents who are between the ages of 17 and 25 years old make up the largest percentage, with 11 individuals (36.7%). Four individuals, or 13.3% of the total, were respondents between the ages of 36 and 45.

Table 2. Respondent Characteristics based on Occupation

Occupation	Number	Percentage
Housewife	22	73.3
Private	7	23.4
Civil Servant	1	3.3
Total	30	100

In Table 2, the results show the characteristics of respondents based on their jobs. Most of the respondents were housewives, which accounted for 73.3% of the total, respondents working in the private sector, which accounted for 23.4% of the total, and the least number of respondents working as civil servants, which accounted for 3.3% of the total.

The results presented above indicate that the majority of respondents are housewives, specifically 22 individuals, which accounts for 73.3% of the total. Given that the majority of respondents are housewives, this does not have an impact on the relationship or interaction between mothers and health workers. On the other hand, mothers who are employed are likely to be absent from their homes due to the demands of their jobs, which results in the relationship or interaction between mothers and health workers becoming less frequent.

Table 3 Respondent Characteristics based on Education

Education	Number	Percentage
Elementary School	8	26.7
Junior High School	11	36.7
High School	9	30.0
University	2	6.6
Total	30	100

As can be seen in Table 2, the respondents' highest level of education was that of junior high school graduates, which accounted for a total of 11 individuals (36.7% of the total), followed by high school graduates, which accounted for 9 individuals, elementary school graduates, which accounted for 8 individuals (26.7% of the total), and college graduates, which accounted for 2 individuals (6.6%), were the respondents with the lowest level of education.

Univariat Analysis

Table 4. Level of Mothers' Knowledge about Basic Immunization at the Basirih Public Health Center before being Given Health Education

Knowledge Level	Frequency	Percentage
Good	0	0
Enough	4	13.3
Less	26	86.7
Total	30	100

The results of the research that was carried out at the Basirih Public Health Center with a total of thirty respondents before they were given health education on basic immunization are presented in Table 4 above. The majority of the respondents had good knowledge, with a total of zero people (0%), while mothers with less knowledge numbered four people (13.3%), and mothers with less knowledge numbered twenty-six people (86.7%). Sixteen of the twenty-six respondents had a level of knowledge that was inadequate, specifically eight respondents with an elementary school education, eleven respondents with a junior high school education, and seven respondents with a senior high school education.

Table 5. Level of Mothers' Knowledge about Basic Immunization at the Basirih Public-Health Center after being Given Health Education

Knowledge	Percentage Level	Frequency
Good	16	53.3
Enough	14	46.7
Less	0	0
Total	30	100

The findings presented in Table 5 are derived from a survey that was carried out at the Basirih Public Health Center with a total of thirty participants. Following receiving health education on fundamental immunization, the majority of mothers had strong knowledge, which amounted to 16 individuals (53.3% of the total), while mothers who had sufficient knowledge amounted to 14 individuals (46.7% of the total), and mothers who had insufficient knowledge amounted to 0 individuals (0% of the total).

Bivariate Analysis

Table 6. Results of the Wilcoxon Signed Test Analysis of the Level of Maternal knowledge about Basic Immunization at the Basirih Public Health Center

		N	Mean Rank	Sum of Ranks
Posttest- Pretest	Negative Ranks	0 ^a	.00	.00
	Positive Ranks	30 ^b	15.50	465.00
	Ties	0 ^c		
	Total	30		
Z			Posttest- Pretest -4.800 ^b	
Asymp. sig. (2-tailed)			.000	

It is clear from the data presented in Table 6 that there is a distinction between the values obtained from the pre-test and the post-test measurements of moms who have received health education. After receiving health education, there were no respondents who experienced a decrease in their level of knowledge, and there were no respondents who experienced an increase in their level of knowledge. On the other hand, there were thirty respondents who experienced an increase in their level of knowledge after receiving health education, which is one hundred percent.

Finally, there were no respondents who did not experience a change in their level of knowledge. The results of the analysis of respondent knowledge data using the Wilcoxon Signed Test statistical test showed that there was a difference showing a positive direction in the posttest results compared to the pretest of 15.50.

This difference showed that posttest knowledge increased positively from pretest knowledge, and there was an influence of health education both before and after the test. Following the completion of the analysis of the data pertaining to the respondents' knowledge, a significant value of 0.000 was achieved. The statistical test yielded a p value of 0.000, which was below the threshold of 0.05 ($0.000 < 0.05$). This indicates that there was a significant impact of delivering health education about basic immunization on the level of knowledge possessed by mothers at the Basirih Public Health Center.

The findings of this study are corroborated by the findings of a research study that was carried out by Widyawati and Widia Tri Marety in 2020 and was titled "The effect of health education on increasing maternal knowledge about basic immunization in the work area of the Pabatu Tebing Tinggi Health Center" In the present study, the results of the analysis of the level of understanding and understanding of information about basic immunization will be easily accepted. The results of the study from 30 respondents at the

Basirih Public Health Center, most of whom were aged 17- 25 years, are from late adolescence. This is in line with the opinion of Wawan A (2019), the older you are, the more mature a person's level of maturity and strength will be in thinking and working so that the knowledge they get will improve. The level of education factor affects the mother's level of knowledge, where education affects the learning process, the lower the level of education, the more difficult it is for respondents to receive information.

The results of the study from the Basirih Public Health Center Most respondents had elementary school education 26.7% and junior high school 36.7%. This is in line with (Wawan A, 2019) knowledge can be influenced by formal education, knowledge is very closely related to education, it is expected that with higher education, the person will have broader knowledge. But that does not mean that people with low education absolutely have low knowledge. A person's knowledge contains two aspects, namely positive and negative aspects. These two aspects will determine a person's attitude.

The more positive aspects and objects are known, the more positive attitudes will arise towards certain objects. This reminds us that increasing knowledge is not absolutely obtained from formal education alone, but can be obtained through non-formal education, such as training and seminars, one of which is by providing health education.

In addition, the lack of information causes mothers not to understand basic immunizations, so it is very necessary to provide information through health education, and it is hoped that the level of knowledge of mothers about basic immunizations will improve. The results of this study before being given health education, the respondents' knowledge was included in the category of less, as many as 26 people (86.7%). This condition is related to the respondents' education, the majority of whom were elementary school graduates (26.7%) and junior high school graduates (36.7%).

Another factor that influences low knowledge is the mother's job. Work is an activity that must be done, especially to show her life and family life. Work is one of the things that influences knowledge, because someone who does not work has less experience compared to someone who works will often interact with other people so that they share information about basic immunization.

The results of the study at the Basirih Public Health Center, the majority of mothers' jobs are as housewives (73.3%). This can be caused by a lack of interaction with mothers and health workers, but now knowledge can be easily obtained, for example with internet access and social media, in addition to following health education and counseling provided by health workers. The intention to know something, especially about basic immunization, can arise from each individual.

The results of this study are supported by a research journal conducted by (Izhar Athala Sigit, Maestro Bina Utama Simanjuntak, Marlina Rajagukguk) with the title "The relationship between the level of knowledge, age, education, work on the completeness of basic immunization in infants at the Bandar Khalifah Public Health Center in 2022. from the study, the results showed a

significant relationship between the level of knowledge, age, education, work on the completeness of basic immunization in infants, namely a p value < 0.05.

After being given health education, the respondents' knowledge increased to be good because the respondents were able to understand basic immunization, namely the definition of immunization, the purpose of immunization, the benefits of immunization, types of immunization, immunization schedules, side effects of immunization, and post-immunization events (KIPI) from counseling and information provided by researchers.

In addition, respondents were also interested in reading the leaflets provided by researchers and made it easier for them to understand and understand so that they could increase their knowledge. After being given health education, the respondents' knowledge was in the sufficient category because some respondents still did not understand and comprehend the basic immunizations that had been given by the researcher, this was caused by several factors such as in terms of age, namely 17- 25 years (early adolescence), in terms of education, namely many were junior high school and in terms of work, namely many respondents worked as housewives. The author argues that with the information received by respondents through health education about basic immunizations provided through counseling, respondents understand and comprehend better so that knowledge becomes better than before being given health education.

From the data on the age of respondents who dominated the change in knowledge to good was the age of 26-35 years, from the education of respondents who dominated the change in good knowledge was high school education, and from the mother's occupation who dominated the change in good knowledge was private work, while the age of respondents who dominated the change in sufficient knowledge was the age of 17-25, from the education of respondents who dominated the change in sufficient knowledge was junior high school education, and from the mother's occupation who dominated the change in sufficient knowledge was the work of a housewife.

CONCLUSIONS AND RECOMMENDATIONS

The level of knowledge of mothers before being given health education was in the category of less than 86.7% (26 people), after being given health education the level of knowledge of mothers about basic immunization was in the category of good 53.3% (16 people). The results of this study can be concluded that there is an effect of providing health education about basic immunization on the level of knowledge of mothers at the Basirih Public Health Center.

FURTHER STUDY

For Basirih Public Health Center

It is expected to be used as additional information material for health service officers, especially in the field of immunization and to conduct health education on basic immunization as a promotive effort to provide counseling, especially knowledge on aspects of understanding immunization, the purpose of immunization, the benefits of immunization, types of immunization,

immunization schedules, side effects of immunization and post-immunization adverse events (KIPI). to the community, especially mothers of babies to increase mothers' knowledge about health problems, especially in basic immunization.

For Mothers

Mothers are expected to be able to apply the information they have received and understand about basic immunization provided by researchers through health education, especially aspects that mothers have not understood, namely the definition of immunization, the purpose of immunization, the benefits of immunization, types of immunization, immunization schedules, side effects of immunization, and post-immunization adverse events (kejadian ikutan pasca imunisasi, KIPI). Mothers are also expected to be able to improve and develop knowledge and information about basic immunization by reading books and actively participating in counseling activities so that mothers understand and understand what is expected to be motivated to bring their children to the Basirih Public Health Center for immunization.

For Health Workers

It is hoped that this research can be used as input for health workers and as motivation to be more effective in providing counseling on the importance of basic immunization, especially about the purpose of immunization, types of immunization, immunization schedules and side effects of immunization so that mothers can better understand and comprehend basic immunization and it is hoped that basic immunization coverage in infants can be achieved.

For Researchers

This research can be used as a means to develop science and to increase knowledge and insight in providing health education about basic immunization to mothers. It is expected to conduct further and in-depth research on the effect of providing health education about basic immunization on the level of knowledge of mothers and it is necessary to develop other health education methods such as video education methods so that mothers are more interested and motivated in visiting and increasing their knowledge about basic immunization.

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