

Effectiveness Of The Demonstration Method And Discovery Method On Mother's Knowledge About The Completeness Of Basic Immunization In Infants At The Uptd Puskesmas Inpatient Warunggunung Lebak- Banten

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Abstract

Child health issues are one of the government's priorities in creating a quality generation. One effort for this purpose, all children under five are immunized. The challenge of implementing the immunization program that causes the target of immunization coverage not to be achieved is the lack of knowledge. In an effort to increase knowledge, the role of health workers, especially midwives, is to provide information through health education using both the demonstration method and the discovery learning method.

This study aims to determine the effectiveness of the demonstration method and the discovery method on mother's knowledge about the completeness of basic immunization in infants at the UPTD Inpatient Health Center Warunggunung - Lebak Banten 2023.

This study used a pre-experimental design with one group pretest-posttest design. One-group pre-post test design to obtain knowledge data before and after the intervention. The number of samples in this study were 66 mothers who had babies who met the inclusion criteria. The instrument used for data collection used a questionnaire and then the data were analyzed using a paired test and an independent sample T test.

The results of the research produced in this study were that the mother's knowledge before the intervention was included as lacking and after being given the intervention with demonstration and discovery was sufficient. There is an influence of health education demonstration and discovery methods on mother's knowledge about completeness of basic immunization (*p* value 0.000). There is no difference in the effectiveness of the demonstration method and the discovery method on mother's knowledge about the completeness of basic immunization in infants with a *p* value of 0.068.

Keywords: demonstration, discovery, knowledge, basic immunization.

I. BACKGROUND

One of the challenges of implementing the immunization program that has resulted in not achieving the immunization coverage target is the low level of knowledge from the public about the importance of immunization because it is based on doubts and differences in perceptions in the community, widespread misinformation about immunization, and fears of post-immunization follow-up events. (KIP) for health workers who carry out immunization services against multiple immunizations.

In efforts to increase knowledge, it is deemed necessary to have the role of health workers, especially midwives, namely providing information through health education. Health education is essentially an activity or effort to convey health messages to society or individuals. With the hope that with this message, groups or individuals can gain better knowledge about health. This knowledge is ultimately expected to influence behavior (Notoatmodjo, 2017). The provision of quality health education in midwifery practice is urgently needed, this indicates that health education must be able to convey complete and clear information about the importance of basic immunization for children.

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Various methods that can be used in health education include demonstration methods and discovery methods. The demonstration method is a way that is used to show a process or way of working with respect to the subject matter. (Mubarak, 2015).

Providing health education can change the knowledge and behavior of mothers who have toddlers regarding complete basic immunization, as in research conducted by Aswan (2020) found that during the research process mothers were enthusiastic in participating in counseling. Giving a questionnaire was carried out as a form of evaluating the knowledge of the baby's mother about the importance of complete basic immunization, the results obtained before giving counseling were that the average level of knowledge of mothers was 58.96% and after being given counseling it was 80.68%.

Likewise with Aritonang's research (2018) found that from the results of the research, the results of statistical tests using the chi-square test showed that there were differences in knowledge ($p = 0.000$) after health education was carried out. Health education about advanced pentabio immunization can increase mothers' knowledge in administering pentabio advanced immunization to toddlers aged 17-18 months, so that it will be able to increase immunization coverage and reduce risk factors for diphtheria outbreaks in Aceh Province.

The results of a preliminary study conducted in December 2022 at the Warunggunung Health Center as one of the Community Health Centers in Lebak Banten Regency obtained data on complete basic immunization coverage for infants in 2021 reaching 47.2%, this has decreased in 2022 to 46.8%. According to the Disease Prevention and Control Program Section at the Warunggunung Health Center, information was obtained that so far efforts have been made to increase immunization coverage through health counseling at the Health Center and outside the Health Center building such as Posyandu, recitations, and other community social activities involving religious leaders and community leaders.

II. THEORETICAL DESCRIPTION

Health education is a form of activity by delivering material about health that aims to change target behavior (Indrayani & Syafar, 2020). while the goals of health education (Nursalam, 2011), namely: There is a change in attitudes and behavior of individuals, families, special groups and communities in fostering and maintaining healthy living behaviors and playing an active role in efforts to achieve optimal health status.

In this study, researchers in their research used two methods, namely the demonstration method is a method used to show a process or the workings of an object with respect to the subject matter. The demonstration method is a teaching method by using demonstrations to clarify an understanding or to show how a certain formation process works for the participants (Mubarak, 2015).

According to Oemar Hamalik (Illahi, 2012: 9) states that discovery is a learning process that focuses on the intellectual mentality of the participants in solving various problems encountered, so as to find a concept or generalization that can be applied. So that the teacher can apply the concept well.

Djamarah argues that discovery learning is learning to find and find yourself. In this teaching and learning system the teacher presents lesson material not in a final form, but participants are given the opportunity to seek and find themselves by using problem solving approach techniques (Djamarah, 2014).

III. RESEARCH METHODS

The type of research used is quantitative with analytic methods with a Quasi-Experimental design used in this study is a one group design. The research design used is a post-intervention design by observing the outcome variables for the intervention group providing education using demonstration and discovery methods. The population in this study were mothers who had babies in the working area of the Warung Gunung Lebak-Banten Inpatient Public Health Center, totaling 193 people. A sample of 66 people using a purposive random sampling technique was divided into 2 groups, namely group A with 33 respondents who received the demonstration method and group B with 33 respondents who received education through discovery. Data collection used primary data obtained directly from respondents through questionnaires to assess respondents' answers related to the assessment of knowledge about basic immunization in infants. Then the data were analyzed using central tendency and paired test and independent sample t test.

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IV. RESULTS AND DISCUSSION

Characteristics of Respondents

Table 1. Frequency Distribution of Respondent Characteristics at UPTD Warung gunung Inpatient Health Center Kab. Lebak-Banten 2023

Characteristics of Mother	n	%
Age		
<20 yrs	3	4,5
20-35 Years	41	62,1
>35 yrs	22	33,3
Education		
Elementary	2	3.0
Junior	8	12,1
Senior	44	66,7
College	12	18,2
Work		
Housewife	35	53.0
Laborer	11	16,7
Employee	5	7,6
Self-employed	13	19,7
civil servant	2	3.0
Child Characteristics		
Age (months)		
10 months	11	16.7
11 months	9	13.6
12 months	46	69.7
Immunization Type		
Hepatitis	66	100
Polio	66	100
BCG	66	100
DPT	66	100
HIB	43	65.2
Polio	43	65.2
Measles	41	62.1
MMR	39	59.1

The education of most of the respondents was from high school, namely as many as 44 people (66.7%) and the work of the respondents most of them did not work or as IRT as many as 35 people (53.0%).

Regarding the characteristics of children, it was found that most of the respondents were aged 12 months, namely 46 people (69.7%). Furthermore, regarding the immunizations that children receive, the results show that all respondents (100%) have received hepatitis, polio, BCG, and DPT immunizations which are obtained from the

time the baby is born until the baby is 12 months old. Then 43 people (65.2%) received HIB and polio immunization, 41 people (62.11%) received measles immunization and 39 people (59.1%) received MMR immunization.

Univariate analysis

Mother's knowledge about complete basic immunization in infants before and after being given health education using the demonstration method

Table 2. Descriptive Statistics Mother's knowledge about complete basic immunization in infants at the UPTD Inpatient Health Center Warunggunung Kab. Lebak- Banten 2023

Knowledge	Min-Max	Means	SD
Pre Demonstration	6-16	10.79	2,522
Post Demonstration	10-19	15.06	2,235

The data in table 2 shows that the respondent's knowledge score before being given the intervention with the demonstration method was the lowest 6 points and the highest 16 points, the average knowledge score was 10.79 points (low category). Whereas after the intervention the lowest score was 10 points and the highest was 19 points, with the average score increasing to 15.06 points (enough).

The knowledge of the respondents given the demonstration method

Table 3 Distribution of the frequency of knowledge before and after being given health education using the demonstration method

Knowledge	Pre Test		Posttest	
	F	%	f	%
Good	1	3.03	15	45,45
Enough	9	27,27	17	51,52
Not enough	23	69,7	1	3.03
Amount	33	100	33	100

The data in table 3 shows that most of the respondents' knowledge about basic immunization before being given health education by the demonstration method was mostly lacking, namely 23 people (69.7%), while after being given health education, most of them were in the sufficient category, 17 people (51.52%).

Mother's knowledge about complete basic immunization in infants before and after being given health education using the discovery method

Table 4 Descriptive Statistics Mother's knowledge about complete basic immunization in infants before and after being given health education using the discovery method at the Warunggunung Inpatient Health Center UPTDRegency. Lebak Banten 2023

Knowledge	Min-Max	Means	SD
Pre Discovery	6-16	10.97	2,284
Post Discovery	10-18	14.03	2,271

Data in table 4 shows that the knowledge score of the respondents before being given the intervention with the discovery method was the lowest 6 points and the highest 16 points, the average knowledge score was 10.97 points (Less). category of knowledge.

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Table 5 Distribution of the frequency of knowledge before and after being given health education using the discovery learning method

Knowledge	Pre Test		Posttest	
	F	%	f	%
Good	1	3.03	7	21,21
Enough	13	39,39	21	63,64
Not enough	19	57,58	5	15,15
Amount	33	100	33	100

The data in table 5 shows that most of the respondents' knowledge about basic immunization before being given demonstration method health education was lacking, namely 19 people (57.58%), while after being given health education, most of them were in the sufficient category, 21 people (63.64%).

Bivariate Analysis

Effect of health education demonstration method on mother's knowledge

Table 6. The effect of health education demonstration methods on mother's knowledge about the completeness of basic immunization in infants at the UPTD Warunggunung Inpatient Health Center, Kab. Lebak-Banten 2023

	Means	Differenc e	T count	sign
Pre Demo	10.79	4,273	17,844	0.000
Post Demos	15.06			

The effect of health education discovery method on mother's knowledge

Table 7. The effect of the health education discovery method on mother's knowledge about the completeness of basic immunization in infants at the UPTD Warunggunung Inpatient Health Center, Kab. Lebak-Banten 2023

	Means	Differen ce	T count	sign
Pre Discovery	10.97	3,061	19,551	0.000
Post Discovery	14.03			

The effectiveness of the demonstration method and the discovery method on mother's knowledge about the completeness of basic immunization in infants

Table 8. The effectiveness of the demonstration method and the discovery method on mother's knowledge about the completeness of basic immunization in infants at the UPTD Warunggunung Inpatient Health Center, Kab. Lebak Banten 2023

Knowledge	Mea ns	Diffe rence	T count	sign
Demonstration	15.06	1,030	1,858	0.068
Discovery	14.03			

Mother's knowledge about complete basic immunization in infants before and after being given health education using demonstration methods and discovery methods

Based on the results of the study, the average knowledge score before being given the demonstration method was 10.79 points, after the intervention the average increased to 15.06 points. If categorized, the respondents' knowledge about basic immunization before being given demonstration method health education was mostly lacking, namely 23 people (69.7%), while after being given health education, most of them were in the sufficient category, 17 people (51.52%).

Whereas in the group that was given health education using the discovery learning method, the average knowledge score before the intervention was 10.97 points and after the intervention, the average score increased to 14.03 points. If categorized, the respondents' knowledge about basic immunization before being given demonstration method health education was mostly lacking, namely 19 people (57.58%), while after being given health education, most of them were in the sufficient category, 21 people (63.64%).

Judging from these data, the knowledge of respondents before being given health education in both the demonstration group and the discovery group was low/insufficient. This can be seen from the average knowledge score, which ranges from 10 points, but after being given health education it has increased with an average of 14-15 points, if this score is categorized. The lack of knowledge possessed by respondents can be strengthened from the results of distributing questionnaires, in this case there are still many respondents who answered incorrectly about the meaning of immunization, the benefits and schedule of immunization. The reason for the information is the lack of knowledge of the mother about the needs, completeness and schedule of immunization, fear of immunization and the existence of wrong perceptions circulating in the community about immunization.

Effect of health education demonstration method on mother's knowledge about the completeness of basic immunization in infants.

The results showed that the average score of knowledge before being given health education using the demonstration method was 10.79 (less) points and after the intervention was 15.06 points (sufficient). Looking at these data, the knowledge score increased by 4.273 points, meaning that this data indicates an effect of health education carried out using the demonstration method.

This was reinforced by statistical tests using the paired test to obtain a p value of 0.000. This means that there is an influence of health education demonstration methods on mother's knowledge about the completeness of basic immunization in infants at the UPTD Warunggunung Inpatient Health Center, Kab. Lebak Banten 2023.

There is a better change in the knowledge of respondents illustrates the demonstration method is effective in increasing knowledge. Although in this study the average knowledge was found to be in the sufficient category, the respondents' scores increased. Because by using the demonstration method according to Mubarak (2017), health education is presented with a sequence of procedures for making something or the process of something happening to achieve teaching goals. Some of the advantages of using the demonstration method are that this method can provide a certain skill to the target group, it is more interesting and easier to understand something, the participants' attention is more focused on the lesson being given, the mistakes that occur when the lesson is lectured can be overcome through observation and real examples.

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Based on this description it can be stated that the demonstration method in health education about basic immunization will increase knowledge, because at this stage the respondent is more interested and easier to understand basic immunization, the respondent's attention is more focused on the material being given

Effect of discovery method health education on mother's knowledge about the completeness of basic immunization in infants

The results showed that the average knowledge score before being given health education using the discovery method was 10.94 points and after the intervention was 14.03 points. Looking at these data it indicates an increase in the respondent's score as an effect of the health education provided, the average increase is 3.061 points.

Health education uses the effective discovery method of respondents, this is reinforced by the results of statistical tests using paired tests obtained with a p value of 0.000. This means that there is an influence of the health education discovery method on mother's knowledge about the completeness of basic immunization in infants at the UPTD Warunggunung Inpatient Health Center, Kab. Lebak Banten 2023.

There is a significant difference in the results of the mother's knowledge before and after the intervention was given the effect of discovery. Discovery learning as a model that requires the respondent to explore material more interesting than just reading, because by exploring the respondent makes his own discoveries, not only is the theory accepted but there is continuity and proof between theory and facts. Mubarak et al (2018) stated that discovery learning is a model that directs participants to discover concepts through various information or data obtained through observation or experimentation.

The results of research conducted by Aswan (2020) found that from the results of giving questionnaires as material for evaluating the knowledge of mothers under five about the importance of complete basic immunization, the results obtained before giving discovery counseling were that the average knowledge level of mothers under five was 58.96% and after being given counseling there was an increase very significant with an average of 80.68%.

The Discovery learning model that emphasizes discovery is felt to be able to develop the knowledge competence of respondents so that the discovery-based health education process will present an active and meaningful atmosphere for respondents.

The effectiveness of the demonstration method and the discovery method on mother's knowledge about the completeness of basic immunization in infants

The results showed that the average score of knowledge in the group given health education using the demonstration method was 15.06 points, while in the group given health education the discovery method was 14.03 points.

The test results using the independent sample T test obtained a p value of $0.068 > 0.05$. This means that there is no difference in the effectiveness of the demonstration method and the discovery method on mother's knowledge about the completeness of basic immunization in infants at the UPTD Inpatient Health Center Warunggunung Kab. Lebak Banten 2023. From the independent T-test conducted by the demonstration group and the discovery group, it can be concluded that there is no significant difference between the two groups. Based on the results above, demonstrations and videos are both effective in increasing knowledge.

These results are in accordance with those found by Aritonang (2019) who conducted health education through questions and answers, discussions to independently explore basic immunization problems. In her research, she found that there was a significant difference between mothers' knowledge in administering advanced immunization before and after being given health education using demonstration and discussion media.

V. CONCLUSION

Mother's knowledge about complete basic immunization in infants before the intervention was considered lacking and after being given health education using the demonstration method and the discovery method was considered sufficient. There is an effect of demonstration method health education on mother's knowledge about the completeness of basic immunization in infants with a p value of 0.000. There is an effect of health education discovery method on mother's knowledge about the completeness of basic immunization in infants p value 0.000. There is no difference in the effectiveness of the demonstration method and the discovery method on mother's knowledge about the completeness of basic immunization in infants with a p value of 0.068.

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