RELATIONSHIP OF MOTHER’S KNOWLEDGE ABOUT POLIO IMMUNIZATION WITH MOTHER’S BEHAVIOR POST INFANT’S POLIO IMMUNIZATION IN VILLAGE MANCANG COMMUNITY HEALTH CENTERS

by Dina Indarsita
RELATIONSHIP OF MOTHER’S KNOWLEDGE ABOUT POLIO IMMUNIZATION WITH MOTHER’S BEHAVIOR POST INFANT’S POLIO IMMUNIZATION IN VILLAGE MANCANG COMMUNITY HEALTH CENTERS SELESAI-LANGKAT 2014

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Abstract

The breast-milk that comes out when the baby is aged 0-3 months contain antipolioimmunities high levels of substances that can neutralize the virus polio vaccine in the gut of children thus inhibiting the formation of an anti-body. Many mothers do not know that breastfeeding soon after giving polio immunization may affect the effectiveness of the polio immunization given by mouth.

The aim of research to determine the relationship of mother knowledge about polio immunization with the mother's behavior post infant’s polio immunization in Mancang village Community Health Centers Selesai Langkat.

The methodology of this research is descriptive correlation with cross sectional approach. The sample in this study is 54 mothers who comes to immunizing infants aged 0-3 months, using purposive sampling. Data were analyzed using Fisher's Exact.

Results of this study found that the majority of mothers were both knowledgeable and well behaved post polio immunization in infants 13 people (24.07%), and mothers who are less knowledgeable and less behaved 38 people (70.38%). There is a significant relationship between mothers knowledge and behavior after the polio immunization, evidenced by the value of p = 0.000.

Conclusions from this research is that there is a relationship between mothers knowledge and behavior after the polio immunization because the lower the mothers knowledge, the behavior of the mothers are also getting less. Therefore, health workers are expected to provide information about polio immunization so that the knowledge and behavior to be better mothers.

Keywords: knowledge, behaviors, polio immunization

INTRODUCTION

The world fact nowadays, especially in developing countries every 14.5 million children under five die because of preventable diseases, malnutrition, dehydration due to vomiting and each year 3.5 million children under five die from diseases that could be prevented by immunization. According to Markum (2002 in Widayati, 2009) Results of Indonesian Demographic and Health Survey (IDHS) 2007 showed Infant Mortality Rate (IMR) 34 per 1,000 live births and the Child under five Mortality Rate (CMR) 44 per 1,000 live births. Target achievement of the target in 2015 that Infant Mortality Rate (IMR) 23 per 1,000 live births and the Child under five Mortality Rate (CMR) 32 per 1,000 live births.
Implementation of health development covering health efforts and resources should be integrated in order to achieve optimal results. In 2014 the nation of Indonesia is expected to achieve a certain level of health that marked the population living in the healthy environment and behavior, are able to obtain a fair adequate and high quality health care, equitable and has a degree of optimal health.

Based on data from the Directorate General Sub-Directorate Immunization PPM and PLP Health Departement 2004 immunization coverage in Indonesia is pertangien coverage namely to 4 doses of polio reach the target of 85%.

According to Achmadi (2006 in Widyawati, 2009 2). In the past 20 years, polio has crippled about a thousand children every day in almost every country in the world, but in 1988 the anti-polio world proclaimed. The first major outbreak in the United States occurred in 1916, when more than 27,000 people affected by this disease and about 6,000 people die and most are children. 3

Until well into 2004, there are only 1,266 cases of polio around the world, mostly found in polio endemic countries, namely Yemen, Nigeria, India, Pakistan, Egypt, Afghanistan, that is in the world, approximately 25% was in Indonesia and was ranked third in this world.

Expended Programe Imnniznation (EPI) or Program Development Immunisation (PPI) in the world began in 1974. Since then the disease poliomyelitis which reported from every state has decreased. At the 41st WHA court in 1988, it was decided to conduct global polio eradication which completed in 2000 through the Global Polio Eradication Initiative (Indonesia known as ERAPO) (Hadinamoboro 2011 case 267).

The number of polio cases in Indonesia until the date of 21 March 2006 was found in 305 children spread at 10 provinces in Indonesia, namely West Java (59 cases), Banten (160 cases), Central Java (26 cases), Lampung (26 cases), Jakarta (4 jerseys), North Sumatra (10 cases), Riau (3 jerseys), East Java (10 cases), Southern Sumatra (5 cases) and NAD (5 cases).

According to the North Sumatra Health Office (2009) Achievement of immunization programs in North Sumatra is quite high when viewed from immunization term which the 306,221 babies are being targeted, it is known that the third polio immunization for babies 286,359 (93.51%).

Polio may cause mild or very severe illness symptoms. This disease can affect the digestive system and the nervous system. Polio causes fever, vomits and muscle stiffness and can affect the nerves resulting in permanent paralysis. The disease can paralyze breathing and swallowing muscles that support the process, causing death. Between two and five percent of people with polio will die from this disease and approximately 50% of patients who survive suffer permanent paralysis. Polio can be spread when feces contaminate people with food, water or hands (Proverawati and Andhini 2010 p.56)

Poliomyelitis is an acute fever disease caused by the polio virus. There are about 95% of all polio infections. According to estimates of the ratio of the disease without any symptoms of the disease paralatik vary from 50:1 to 1000:1 (average of 200:1). Patients with an infection without excreting the virus with feces can transmit the virus to others. Approximately 4% - 8% of polio infection without clinical symptom. Occurs in 1% - 2% of polio infections are preceded by prodromal symptoms of mild illness that lasts a few days. Paralysis symptoms occur with less than 2% of all polio infections. The paralysis symptoms generally begin 2-3 days (Hadinamoboro 2011 p.267).
According to Zulkifli (2007 in the journal 4) paralysis occurs within a week or the beginning of the illness. This paralysis occurs as a result of damage to the cells of motor neurons in the medulla spinalis spinal cord) caused due to virus invasion. This paralysis is asymmetrical so inclined to cause deformity (body shape disorder) which tends to stabilize or even become more severe. The vast majority of paralysis will strike the leg (78.6 percent), while 47.4 percent will strike the arm. This paralysis will go gradually and takes 2 days (i.e. 2 months).

According to Nelson (2006 in Widayati 2009, 5) it is important for parents to know why, when, where, and how many times the child should be immunized. The main obstacle to the success of immunization of infants and children in a health care system that is low awareness and a lack need of immunization in community. The entrances to the immunization services are inaccurate, neglect opportunities for vaccine delivery and accurate source for public health and prevention programs. Immunization in infants and children not only give prevention of disease in the child, but also provide a wider impact because it can prevent transmission of the disease to other children. Therefore, the knowledge and attitudes of parents, especially mothers, is very important to understand about the benefits of immunization for children in Indonesia.

According to Ranuh (2006 in Widayati, 2009: 6) Mothers knowledge about immunizations affect the implementation of immunization, when the mothers knowledge about immunization are less feeling of unnecessary or just going along with it, the course immunization in children would not appropriate with the schedule in both time and distance. If mothers knowledge about immunization are good, it's expected of immunization distribution are on schedule, so that the immunization program can fulfill the quantity and quality of the baby’s health, finally have an impact on improving the health status and community resources in the future.

According to Wahyuono (2002, in Widayati 2009:8) Additionally, post-immunization behaviors also affect the success of immunization, where breastfeeding (breast milk) after polio immunization in infants aged 0-3 months can weaken the polio vaccine which dripped into the baby’s mouth, so that polio immunization is not effective. Milk that came out at the time of infants aged 0-3 months contain many antipoliomelitik substances that can neutralize the virus polio vaccine in the children’s gut thus inhibiting the formation of antibody substances.

Based on the preliminary survey conducted by researchers at the Selesai Community Health Centers, against 10 mothers who came to immunize their babies, there were six mothers who directly provide breast milk to their babies shortly after the baby is given a polio immunization.

3 Formulation Of The Problem
From the description above, the formulation of the problem to be studied is "Is There a Relationship Of Mother’s Knowledge About Immunization Polio With Mother’s Behavior Post Infants Polio Immunization in the Mancang village Community Health Centers Selesai, Langkat in 2014?"

Research Purpose:
1. To know relationship of mother’s knowledge with mother’s behavior post infants polio immunization in Mancang village Community Health Centers Selesai Langkat in 2014.
2 To determine the level of mother’s knowledge about polio immunization in
the Mancang village Community Health Centers Selesai Langkat.

3. To determine the mother's behavior, whether the mothers directly breastfeeding or not immediately after the baby is immunized in the Mancang village Community Health Centers Selesai Langkat.

Benefits Of Research
1. It is expected that the results of this research become resources and inputs for health practitioners.
2. It is expected to add insight, knowledge and experience in applying the knowledge that received in the lecture bench.
3. Expected to increase knowledge about polio immunization.

RESEARCH METHODOLOGY
4. This research is descriptive analytic with cross-sectional. It is a design of study that the measurements or observations were made at a certain moment or at one time. This study aims to determine the relationship of mother's knowledge about polio immunization with the mother's behavior after the administration of polio immunization in infants at the Mancang village Community Health Centers Selesai Langkat 2014.

Population
Population according to Sugiono is a generalization region consisting of objects / subjects that have certain quantity and characteristics defined by the researchers to be learned and drawn a conclusions (Hidayat, 2011). The population in this study are all mothers who come to give polio immunization for their baby in Community Health Centers Selesai Langkat during March to June 2014 as many as 115 people.

Research samples

Samples are part of mothers who gave polio immunization to their baby at the Community Health Centers Selesai Langkat on March - June 2014.

Technique sample
Sampling was done by purposive sampling techniques (sampling intended) that the sampling technique used by the researcher if the researcher has certain considerations in taking the sample (Arikunto, 2007 p.97).

Inclusion criteria
a. Mothers who came to gave polio immunization to their babies aged 0-3 months.
b. Infants aged 0-3 months who are otherwise healthy to get polio immunization.
c. Mother who willing to become respondents or subjects of the researcher.

Exclusion criteria
Mothers who do not breastfeed their babies with breast milk and mothers who refuse to become subject of the study.

Location Research
This study will be conducted in the Mancang village Community Health Centers Selesai Langkat.

Time Research
This research was conducted in the Mancang village Community Health Centers Selesai Langkat on March to June 2014.

Data Analysis
Data analysis aims to prove whether there is a relationship between independent variables with the dependent variable. The statistical analysis chi-square tests were processed using computerized, before the chi-square analysis first gradually, namely:

1. Univariate Analysis
This analysis is the analysis of the variables used to obtain a picture of the
respondents characteristics, mother knowledge about polio immunization and maternal behavior post polio immunization in the form of a frequency distribution table and narrated.

2. Analysis Bivariat
This analysis was conducted to examine the relationship between two variables research, namely independent variables with the dependent variable. The statistical test used is Chi-square test for ordinal and nominal scale data, the confidence level used is 95% or $\alpha = 0.05$, with the following provisions:
- P value $> value \alpha = 5\%$, then $H_0$ is accepted.
- P value $< value \alpha = 5\%$, then $H_0$ is rejected.

Chi Square statistical significance computerized with significant $p \leq 0.05$. Results of analysis of said significant if $p < 0.05$, meaning that there is a relationship between independent variables with the dependent variable being studied. Instead the result of analysis is said to be significant when $p > 0.05$, meaning there is no relationship between independent variables with the dependent variable being studied.

Research Result

Univariate analysis
a) Mother Demographic Characteristics
Characteristic of respondents mother who came to gave polio immunization for her baby in the Manicang village Community health centers Selesai, Langkat 2014 are as follows:

| Distribution Characteristics of Respondents Who Came For Infant's Polio Immunisation in the Manicang Village Community Health Centers Selesai, Langkat 2014 |
|---|---|
| **Characteristics of Respondents** | **f** | **%** |
| 1. Age | | |
| $< 20$ years | 13 | 24.08 |
| 20 – 35 | 35 | 64.81 |
| $> 35$ years | 6 | 11.11 |
| Total | 54 | 100 |
| 2. Education | | |
| Elementary School | 9 | 16.67 |
| Junior High School | 18 | 33.33 |
| Senior High School | 23 | 42.60 |
| College | 4 | 7.40 |
| Total | 54 | 100 |
| 3. Work | | |
| Does not work | 29 | 53.70 |
| Work | 25 | 46.30 |
| Total | 54 | 100 |
| 4. Resources | | |
| Mass media | 14 | 25.93 |
| Family | 8 | 14.81 |
| Health Workers | 32 | 59.26 |
| Total | 54 | 100 |
Based on Table 1 it can be seen that the demographic characteristics of the mothers who come for their infant's polio immunization at the age of 0-3 months, the majority of mothers aged 20-35 years old are 35 people (64.81%). Majority of mothers education 23 people (42.60%) are High School. Majority of mothers job 29 people (53.70%) are unemployed. The source of information that majority given by health care workers can be as many as 32 people (59.25%).

<table>
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<td>Less</td>
<td>38</td>
<td>70.38</td>
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<tr>
<td>2</td>
<td>Good</td>
<td>16</td>
<td>29.62</td>
</tr>
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<td></td>
<td><strong>Total</strong></td>
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Based on the table 2 data obtained on the mother's knowledge about polio immunization is the majority have less knowledge as many as 38 people (70.38%).

<table>
<thead>
<tr>
<th>No</th>
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<tr>
<td>1</td>
<td>Less</td>
<td>41</td>
<td>75.93</td>
</tr>
<tr>
<td>2</td>
<td>Good</td>
<td>13</td>
<td>24.07</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>54</td>
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Based on Table 3 data obtained on Mother's behavior post infant's polio immunization is of 54 respondents the majority that behaves less as many as 42 people (77.78%).
Bivariate analysis

The Relationship Of Mother’s Knowledge And Behavior Post Infant’s Polio Immunization

Table 4:
Relationship Mother’s Knowledge About Polio Immunization With Mother’s Behavior Post Infant’s Polio Immunization in The Mancang Village Community Health Centers Selesai, Langkat 2014

<table>
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<tr>
<th>Mother knowledge about polio immunization</th>
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<td>F</td>
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<td>24.07</td>
<td>41</td>
<td>75.93</td>
<td>54</td>
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</table>

Based on the research results, majority of mother who come to the community health centers for infant’s polio immunization have less knowledge about polio immunization as many as 38 people (70.38%), which behaves less in the Mancang village Community Health Centers as many as 41 people (75.93%).

From the statistical test using Fisher’s Exact test with significance level of 5% (0.05) was obtained \( p = 0.000 \). So that the results obtained are \( p < 0.05 \) then has received. This means that there is a significant relationship between mother’s knowledge about polio immunization with the mother’s behavior post infant’s polio immunization in the Mancang village Community Health Centers Selesai, Langkat 2014.

Discussion

Maternal knowledge about polio immunization in the Mancang village Community Health Centers Selesai, Langkat 2014

Results of the research that has been done it can be seen that the majority of the 54 respondents are knowledgeable about as many as 38 respondents (70.38%)

Knowledge is the result from knowing that occurred after people perform sensing on a particular object. Sensing occurs through human senses, namely: the senses of sight, hearing, smell, taste and touch. Most of the human knowledge acquired through the eyes and ears.

According to the researchers assumption of mother’s knowledge who give polio immunization to their baby in this study majority of them were less knowledgeable due to their lack of a sense of curiosity and concern for an information about polio immunization. Then it is advisable to all mothers to always be active in seeking information about polio immunization.

Maternal knowledge about polio immunization Based on Age

Based on the research results data obtained from 54 respondents can be seen that 13 respondents aged < 20 years were majority knowledgeable as many as 12 respondents (22.22%), and of 34 respondents aged 20-35 years were majority less knowledgeable...
According to Notoatmodjo (2007) stated that age is closely related to a person's knowledge level because the more human lifespan increased the more the experience or the knowledge that they gained.

According to the researchers' assumption there is a gap with Notoatmodjo's opinion that age affects the person's knowledge. Because in this study there are 6 mothers aged > 35 years the majority of them were less knowledgeable as many as 4 respondents (7.41%) and this is because at this age the mothers seem do not care in searching for information because they are more focused on taking care of their family circumstances.

Maternal Knowledge About Polio Immunization Based On Education

Based on the results data obtained from 54 respondents. It can be seen that the 9 respondents graduated from elementary school that less knowledgeable as much as 9 respondents (16.67%), of 18 graduated from Junior High School that majority less knowledgeable as many as 14 respondents (25.92%), of the 23 respondents graduated from Senior High School that majority less knowledgeable as many as 14 respondents (25.92%), and of 4 respondents graduated from university that majority well knowledgeable as many as 4 respondents (7.41%).

According Notoatmojo (2007) Education in general is all effort that planned to influence others; either individuals, groups and communities. So they will do what is expected by the education actors in the search for knowledge and aspects of life. The level of education has a close relationship with the social, cultural, political, economic, and so on. Education is also one of the factors that influence someone's perception to easily accept new ideas/technologies.

According to the researchers' assumption there is no gap with Notoatmodjo that is with education someone can grow and develop through the learning process from the education because in the process of learning a person was given a lesson in order to become from not knowing to knowing. So that a person with low education, the lower of his knowledge level that he get, because the less educated tend to be more difficult to understand something or receive information. Vice versa, the higher one's education are more likely easier to receive information and to understand something. These affect their insight. Education also will affect mother's mindset, attitude and actions.

Mother's Knowledge About Polio Immunization Based On Jobs

Based on the results of research conducted showed that of the 54 respondents, 25 respondents who worked that majority well knowledgeable as many as 13 respondents (24.07%), and of the 29 respondents who did not work that majority less knowledgeable as many as 26 respondents (48.14%).

According Notoatmojo (2007) Work is an activity that is performed daily, the type of work performed can be categorized as not working, wisawata, civil servants and private employees in all areas of work are generally required a good social relationship. Work owned an important role in determining the quality of human. It limits the gap between health information and practices that motivate a person to obtain information and to do something to avoid health problems.

According to the assumptions of researchers from the research there is no gap with Notoatmojo, where of the results
obtained by respondents influential enough because some of the respondents worked. This is because the mother had made an interaction with others so that the information about polio obtained and received by the mother. It can be seen from the results of the study. Mothers who work as many as 25 respondents and the majority from them who well knowledgeable as well as 13 respondents (24.07%) this is due to the mother who had made more interaction with people around the workplace because they will exchange information and knowledge they have acquired. So that the mother's level of knowledge even get higher. While Mothers who do not work who less knowledgeable as many as 26 respondents (48.14%) this is due to the mothers who do not work did not gain much information because they had not made interaction with people outside their home environment so that mother's knowledge is not much developed because the mothers do not work had less knowledge rather than those who work.

Maternal knowledge about polio immunization Based Resources

Based on results of the research data obtained from 54 respondents pregnant women, it can be seen that 18 respondents who obtained the information from the mass media that majority less knowledgeable as many as 11 respondents (20.37%), of the 10 respondents who received information from family that majority less knowledgeable as many as 6 respondents (11.11%), and of the 32 respondents who received information from health official that less knowledgeable as many as 21 respondents (38.89%).

According Notoatmojo (2007) Sources of information are all things that become intermediaries in conveying information, stimulate someone's mind and ability. Other people around us is one among the social component that influence our attitude.

According to the researchers assumption there is gap with Notoatmojo (2007), which is the information source obtained by the respondent did not affect his knowledge. The theory says the better sources of information will be the better of someone's knowledge. Examples of information sources from the health care workers will be very good in providing information on polio immunization because health care workers are people who have been trained and trusted by the community in the health sector so that people will follow the advices from health workers.

But the results obtained by researchers respondents who received information from health care worker that majority less knowledgeable as many as 21 respondents (38.89%). This may be due to mother neglected the information that health care worker submitted.

4 Mother's Behavior Post Infant's Polio Immunization in the Mancang Village Community Health Centers Selasei Langkat 2014

Based on the study data showed that the majority of mother who give polio immunization to their baby in Public Health Centers Selasei 2014 that behaved less post polio immunization to their baby as many as 41 people (75.93%). One of the factors that influence the behavior is knowledge. Based on the results of the study, the majority of mothers who have less knowledge as many as 38 people (70.38%), 13 people (24.07%) behaved well post polio immunization on infants. So knowledge is an important domain of the formation of a person's behavior (Notoadmodjo, 2012 p.138).

According to the researchers assumption the majority of respondents who behaved
less due to his less knowledgeable or mothers who neglect the knowledge that she gets from health workers. Examples of health workers who provide information about polio immunization with breastfeeding but the mother does not care about the information she gets, possibly because the mother was busy taking care of the family and household.

Relationship Of Mother’s Knowledge And Behavior Post Infant’s Polio Immunization In The Mancang Village Community Health Centers Selesai Langkat 2014

Based on the research that has been done shows that the value of p < 0.05 then there is a significant relationship between knowledge and behavior where the majority of mothers that well knowledgeable and well behave post polio immunization to the baby as much as 13 people (4.07%), and the majority of mothers that less knowledgeable and less behave as many as 38 people (70.38%).

This is consistent with research Widayati (2009) in An-Nissa Maternity Hospital Surakarta that there is a significant relationship between mother's knowledge about polio immunization with mother's behavior post polio immunization evidenced by p value of 0.0001.

Conclusion
1. The majority of respondents that less knowledgeable as many as 38 respondents (70.38%)
2. The majority of respondents less behaved as much as 41 respondents (75.93%)
3. There is a significant relationship between mother's knowledge with mother's behavior post polio immunization. This means that the lower the person's knowledge, the behavior is also increasingly less proven with p value of 0.000.

Suggestion

1. It is expected to Selesai Public Health Centers in order to give more information about polio immunization so that mother has well knowledge and behavior.
2. It is expected to further research in order to better develop further research on mother's behavior post polio immunization and it can examined on other variables beside knowledge and also can do reliability test to different respondents as subject in research.

BIBLIOGRAPHY


# Relationship of Mother's Knowledge About Polio Immunization with Mother's Behavior Post Infant's Polio Immunization in Village Mancang Community Health Centers

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