

The Relationship Between Mother's Knowledge And The Completeness Of Basic Immunization At Tenga Public Health Center

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ABSTRACT

The immunization program is a form of basic health efforts in an effort to accelerate breaking the chain of transmission of PD3I (Immunization-Preventable Diseases). Factors related to the completeness of immunization are very important to understand as one of the efforts to increase the coverage rate of basic immunization completeness. The purpose of this study was to determine the relationship between maternal knowledge about basic immunization and the completeness of basic immunization in the Tenga Community Health Center Work Area. The study used a cross-sectional approach. Samples were taken by purposive sampling totaling 70 respondents. Data analysis using chi square in the SPSS V.25 computer program. The analysis results showed no relationship between knowledge and the completeness of basic immunization ($p = 0.001$). Based on the results of this study, it can be concluded that the completeness of basic immunization is not influenced by maternal knowledge about basic immunization.

Keywords: Basic Immunization, Knowledge.

INTRODUCTION

Immunization is an active way to boost immunity. This ensures that if a person is exposed to a pathogen, they will not become ill or will only experience mild illness. Infants are one group at high risk of exposure to a disease. Therefore, children under one year of age must receive complete basic immunizations to protect themselves from Immunization-Preventable Diseases (VPD3I) (World Health Organization, UNICEF, & US Centers for Disease Control and Prevention, 2019).

One of the most cost-effective investments in preventing and reducing the incidence of illness, disability, and death due to PD3I is immunization (Fitirana et al., 2022). Article 44,

Paragraphs 1-4 of Law of the Republic of Indonesia Number 17 of 2023 concerning Health states that every infant and child has the right to receive immunization in accordance with the provisions to provide protection from PD3I, and the government is obliged to provide complete immunizations to every infant. Furthermore, the central and regional governments, families, and the community must support these immunization activities.

In 2022, the target of 90% complete basic immunization coverage was achieved with a realization rate of 92.7%. Increasing from 2022, the target for complete basic immunization for infants aged 0 to 11 months in 2023 was 100% (Ministry of Health of the Republic of Indonesia, 2022). The complete basic immunization program carried out in 2022 includes the Hepatitis B vaccine, the Bacillus Calmette Guerin (BCG) vaccine, the Bivalent Oral Polio Vaccine (bOPV), the Inactivated Polio Vaccine (IPV), the Diphtheria, Pertussis, Tetanus, Hepatitis B, Pneumonia, and meningitis caused by Hib infection (DPT-HB-Hib), and the Measles and Rubella (MR) vaccine (Ministry of Health of the Republic of Indonesia, 2022). Meanwhile, starting in 2023, the Ministry of Health added two vaccines to the basic immunization program, namely the Pneumococcal Conjugate Vaccine (PCV) and Rota Virus (RV).

In order to achieve the target of 92.7% in 2022 to 100% in 2023, it is necessary to understand the factors that cause the 7.3% of the population to have not received or be late in receiving immunizations. These factors include socioeconomic and demographic factors, including income, employment, parental education, and government policies; migration status; information, beliefs, and behavior; and health services (Crocker-Buque et al., 2017). Furthermore, one factor that significantly contributes to the completeness of children's immunizations is maternal knowledge (Agustin & Rahmawati, 2021). Some reasons parents and caregivers give for not receiving or being late in receiving immunizations include long waiting times at health services, lack of immunization appointments, forgetfulness, and poor maternal or child health on the day of the appointment (Odotola et al., 2015).

Maternal knowledge is a crucial issue that must be addressed, given their significant role in making decisions about the completeness of children's immunizations. A study found a correlation between maternal knowledge and compliance with basic immunizations (Hasanah et al., 2021). Regarding knowledge, research findings indicate that 11 out of 52 mothers (respondents) had poor knowledge. This study, conducted in Palembang, found incomplete immunization rates reaching 63.6% (Chairani et al., 2020). If maternal

knowledge about immunization is low and mothers do not understand the importance of vaccination, this may impact the scheduling, administration, and completeness of immunizations for children. If children do not receive immunizations, their immune systems will be weakened against certain infectious diseases, as well as other negative impacts (Mulyani et al., 2018).

This research was conducted in a sub-district in South Minahasa to determine mothers' knowledge of complete basic immunization for children and its impact on the completeness of complete basic immunization. One of the sub-districts studied was Tenga Sub-district at the Tenga Community Health Center.

METHOD

The study used a cross-sectional approach. A sample of 60 respondents was taken using purposive sampling. Data analysis used chi-square in the SPSS V.25 computer program.

RESULTS AND DISCUSSION

Respondent Characteristics

Table 1. Frequency Distribution by Age

Age	Frequency	Percentage (%)
< 20 Years	14	23.3
21 - 35 Years	34	56.67
36 – 45 Years	13	21.67
Total	60	100

According to table 1. frequency distribution of respondents based on age, of the 60 respondents, the majority of respondents were aged 21 - 35 years, as many as 34 people (56.67%), respondents aged <20 years were 14 people (23.3%), and respondents aged 36 - 45 years were 13 people (21.67%).

Table 2. Frequency Distribution Based on Education

Education	Frequency	Percentage (%)
Elementary-Middle School	16	26.67
SENIOR HIGH SCHOOL	35	58.33
S1	9	15
Total	60	100

According to table 2. frequency distribution of respondents based on education, the majority of respondents had a high school education of 35 people (58.33%), respondents with elementary-junior high school education were 16 people (26.67%), and respondents with a bachelor's degree were 9 people (15%).

Table 3. Frequency Distribution by Occupation

Education	Frequency	Percentage (%)
housewife	40	66.67
Work	20	33.33
Total	60	100

According to table 3. frequency distribution of respondents based on occupation, the majority of respondents have jobs as housewives or are not working as many as 40 people (66.67%), and respondents who work as many as 20 people (33.33%).

Univariate Analysis

Table 4. Frequency Distribution Based on Mother's Knowledge

Knowledge	Frequency	Percentage (%)
Good	51	85
Enough	5	8.33
Not enough	4	6.67
Total	60	100

According to the Table4 Frequency distribution based on maternal knowledge, the number of mothers with good knowledge was 51 people (85%), respondents with sufficient

knowledge were 5 people (8.33%), and respondents with insufficient knowledge were 4 people (6.67%).

Table 5. Frequency Distribution Based on Immunization Completeness

Immunization	Frequency	Percentage (%)
Complete	56	93.33
Incomplete	4	6.67
Total	60	100

According to table 5. Frequency distribution based on completeness of immunization, the majority of children had complete immunization (56 children) (93.33%), and 4 babies (6.67%) had incomplete immunization.

Bivariate Analysis

Table 6. Relationship between Mother's Knowledge and Completeness of Basic Immunization

		Immunization		Total	P-value
		Complete	Incomplete		
Knowledge	Good	51	0	51	0,000
	Enough	5	0	5	
	Not enough	0	4	4	
Total		56	4	60	

According to table 6. The relationship between maternal knowledge and the completeness of basic immunization, shows that mothers with good knowledge numbered 51 with all complete child immunizations, mothers with sufficient knowledge numbered 5 people, all with complete immunizations. Mothers with less knowledge numbered 4 people, all with incomplete immunizations. The results of the statistical analysis obtained a p value = 0.000 $< \alpha = 0.05$, meaning H_0 was rejected and H_a was accepted so that there was a relationship between maternal knowledge and the completeness of basic immunizations at the Tenga Health Center.

A 2015 study of mothers in the Dumai City Community Health Center (Puskesmas) showed that age influences mothers' knowledge about immunization. Mothers in the adult age group (25-45 years) had a higher level of knowledge than mothers in the early adult age group (18-25 years) (Hijani, 2015). Individuals of productive age tend to be more open to new things from outside, thus increasing their knowledge. As a person ages, their mental maturity increases, enabling them to think more rationally (Wardani et al., 2018).

Another factor influencing mothers' knowledge regarding basic immunization is education. Table 1 shows that the highest educational level for respondents was high school (35 respondents, 58.33%). As research conducted in 2018 with parents in Wonokusumo Village, low education contributes to mothers' low knowledge regarding basic immunization (Dillyana, 2019). Education is directly related to a person's level of knowledge, so it can be assumed that a higher level of education is considered to increase an individual's knowledge. With a higher level of knowledge, it is expected that a person will be able to apply their knowledge, especially when family members need assistance (Notoatmodjo, 2014).

Table 1 shows that the majority of respondents are unemployed/housewives, amounting to 40 respondents (66.67%). Based on research conducted in 2017 with respondents all mothers of toddlers aged 0-12 months who visited the Cempaka Integrated Health Post (Posyandu) in Kedung Cowek Village, Surabaya, employment did not affect mothers' knowledge about basic immunizations. Mothers who are unemployed and employed have the same opportunity to obtain information about health services, including basic child immunizations (Mayasari & Ngakili, 2017).

Completeness of basic immunizations was measured using the Child Health Card (KIA) provided by the community health center to respondents in the immunization table. The immunization table lists the types of basic immunizations, along with the appropriate month in which a child should receive a specific vaccine, and the month in which a child can receive catch-up immunizations. Catch-up immunizations are activities that provide immunizations to infants and toddlers who have not received the appropriate vaccine dose according to the national immunization schedule until the child is 36 months old (Ministry of Health of the Republic of Indonesia, 2021). Immunizations are categorized as complete if a child has received all vaccine doses for ages 0-11 months, and incomplete if one or more doses have not been received. If a box is filled with a date, it indicates that the child has been vaccinated on that date. Of the 78 respondents with a KIA, 71 (91%) children have received complete

basic immunizations. However, this immunization completeness rate has not reached the maximum. Several factors that can influence incomplete basic immunizations in the Kenjeran area of Surabaya should be identified. Age is a characteristic that influences a person's attitude (Rahmawati & Umbul, 2014). Younger maternal age is associated with easier access to information. Furthermore, increased maternal age provides greater experience in childcare, enabling mothers to understand the importance of disease prevention (Prihanti, Rahayu, & Abdulloh, 2016). Education is knowledge derived from a series of lifelong learning experiences and acquired information (Rahmawati & Umbul, 2014). Mothers with higher education can obtain more information, thereby improving the completeness of basic immunizations. Furthermore, employment can also be a factor influencing incomplete basic immunizations. Research conducted in the work area of Community Health Center X in Kediri City revealed that employment significantly influences incomplete basic immunizations (Prihanti, Rahayu, & Abdulloh, 2016). However, in research conducted in 2009 in Jati Village, East Jakarta and in 2014 in North Krembangan Village, it was stated that work was not a factor influencing incomplete basic immunization because there were similarities among the respondents, namely not working even though their child's basic immunization was complete or not (Rahmawati & Umbul, 2014; Prayogo et al, 2009).

The Indonesian Ministry of Health's national program to achieve Complete Basic Immunization (IDL) coverage involves improving the quality of immunization services and raising public awareness of the importance of immunization. One way is by disseminating information and providing education about immunization to the public through various media such as posters, banners, basic immunization advertisements, and social media. This approach has successfully achieved the set target of restoring public trust in the importance of immunization. The achievement of indicators is also due to support from professional organizations and ongoing monitoring. However, many parents still refuse to immunize their children and are concerned about side effects after immunization (Directorate General of Disease Prevention and Control, 2022).

Knowledge and insight are also closely related to educational attainment (Notoatmodjo, 2014). The educational environment can be said to influence a person's healthy behavior. A person's education is in line with their ability to receive and digest information, resulting in a greater understanding of the information they possess (Cahyawati & Herawati, 2023).

CONCLUSION AND SUGGESTIONS

The results of the chi-square statistical test analysis obtained the Asymp.sig value = $0.005 \leq 0.05$, so it can be concluded that there is a significant relationship between maternal knowledge about complete basic immunization and the completeness of immunization provision in the Tenga Community Health Center work area. Further researchers should follow up on this study to find out what factors have the most influence on the completeness of immunization.

For future researchers, it is hoped that they can develop research variables by adding new variables related to the completeness of children's basic immunizations.

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