

## The Relationship of Mom's Knowledge about the Importance of Measles Rubella (MR) Immunization with Compliance with Immunization

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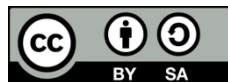
### ABSTRACT

Measles and Rubella are kinds of infectious diseases through the airway that caused by virus of measles and Rubella (MR) and the immunization of measles and rubella (MR) will be one immunization to avoid the disease. This research is taken to know the correlation of mothers knowledge about Measles and Rubella Immunization in Hospitalized local government clinic of Gunungtua, North Padang Lawas Regency in the year 2021. Type of this research is quantitative research with descriptive correlation design and it is taken by cross sectional study approaches. This research is taken place at the local Government clinic unit Hospitalized Gunungtua, North Padang Lawas Regency. The population and sample of this research are coming from the mothers who have child on 9 months age until <15 old years, that are about 122 people. The results of this research show that got about p-value 0.000 <0.05, Its means that there is a significant correlation between knowledge with subservience in having Immunization of Measles Rubella (MR) int the Local Government Clinic Unit Hospitalized Gunungtua, North Padang Lawas Regency. The suggestions is the Healthy servant should give information as well as education for the society about the immunization of Measles Rubella (MR).

#### Keywords:

Knowledge, Compliance, Immunization, Measles Rubella (MR)

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## 1. INTRODUCTION

Measles and Rubella are infectious diseases transmitted through the respiratory tract caused by the Measles and Rubella virus [10] Measles, also known as Morbili or Measles, is a highly contagious or infectious disease caused by the myxovire viridae virus measles and is transmitted through the air (spit splashes). ) from sneezing or coughing sufferers [20] Rubella is a mild disease in children, but can have a negative impact if it occurs in first trimester pregnant women, namely miscarriage or disability in the baby is often called Congenital Rabella Syndrome (CRS) such as abnormalities heart and youth, deafness and developmental delay [12]

Based on data from UNICEF [27] from 161 countries that reported cases of measles and rubella, 168,532 cases of measles and 124,581 cases of rubella were recorded. In Southeast Asia, UNICEF recorded 29,542 cases of measles and 18,418 cases of rubella. Based on data from the 2017 Indonesian Health Profile, the incidence of measles is higher when compared to 2016 which was 15,104 cases. There were 383 positive measles and 732 positive rubella, while in 2016 there were 12,730 suspected cases of measles rubella, and recorded 2,949 positive measles and 1,341 positive rubella. Based on age group, the largest proportion is in the 5-9 year old (29%) and 1-4 year old (25%) group [14]

Based on data from the North Sumatra Provincial Health Office, the Measles Rubella (MR) immunization target was 4,291,857 children, as of October 4, 2018, it was reported that immunization coverage reached 1,837,773 children (42.80%) for manual reports sent from districts/cities to North Sumatra Provincial Health Office, while the recapitulation of reports from rapidpro (reports via SMS by the service unit to rapidpro at the Indonesian Ministry of Health) has reached 2,113,034 children (49.23%). Based on the daily target that has been set by the Indonesian Ministry of Health as of 5 October 2018 of 71.2%, from 33 districts/cities in North Sumatra, only 10 districts/cities have reached the target [14]

The percentage of children under five who received Measles Rubella (MR) immunization in North Padang Lawas Regency was 58.3% (BPS North Sumatra, 2020) and the percentage of children under five who received Measles Rubella (MR) immunization at the UPTD Inpatient Public health center Gunungtua the coverage of Measles Rubella immunization achievement (MR) that is equal to 75.2%. This coverage has not yet reached the target target, even if it is still far from wanting to eliminate measles in Indonesia [15].

Mothers play an important role in the immunization needs of their children such as research conducted by Ayu DP, 2017 which states that there is a relationship between knowledge and attitude with compliance in the implementation of Measles Rubella (MR) immunization. This is in line with research conducted by Ilfa H which states that there is a relationship between knowledge and mother's attitude towards compliance in the implementation of the Measles Rubella (MR) vaccine as well as the Prabandari, UR, DKK research [21] that there is a relationship between the level of mother's knowledge of the mother's behavior in administering Measles Rubella (MR) immunization.

Based on the initial survey conducted to 10 mothers who had children aged 9 months to < 180 months, it was found that in the working area of the Gunungtua Inpatient Health Center UPTD, it was found that 2 mothers had given Measles Rubella (MR) immunization and 8 mothers had not immunized Measles Rubella (MR). ) their children, 5 people because they are afraid that the Measles Rubella (MR) vaccine is against religion, it's not halal (haram) and 2 more because of a ban from their family/husband , and 1 person because they are afraid of the side effects of vaccines for children to get fever. Research Objectives To determine the relationship between mother's knowledge about the importance of Measles Rubella (MR) immunization with compliance with immunization.

## 2. METHOD

The type of research used is quantitative research with a descriptive correlation design using a cross sectional approach. The population in this study were mothers who had children aged 9 months to <180 months who were selected for this study as many as 122 people. Technique The sample used is purposive sampling technique. Bivariate analysis was carried out on two variables suspected to be related or correlated. Previously, a normality test was carried out, which is a test carried out with the aim of assessing the distribution of data in a group of data or variables, whether the distribution of the data is normally distributed or not. The normality test of this data uses the Kolmogrov Smirnov test because it is adjusted for a small research sample. In its application, researchers can use computer applications. To see the effect of knowledge with Measles Rubella (MR) immunization compliance. The bivariate analysis used was the Chi Square ( $X^2$ ) test. The conclusion is based on the comparison of the significant value (p) obtained with the desired level of significance ( $\alpha$ ) ( $\alpha= 5\%$  or  $0.05$ ) [24]

## 3. RESULTS AND DISCUSSION

### 3.1. Results

**Table 1. Distribution of Respondents Based on Characteristics of Respondents in the UPTD Working Area of the Gunung Tua Inpatient Health Center in 2021**

Characteristics	F	Percentage (%)
<b>Age</b>		
20 – 29	56	46.0
30-39	33	27.0
40-49	33	27.0
<b>Education</b>		
SD	19	15.6
SMP/MTS	50	41.0
SENIOR HIGH SCHOOL	53	43.4
<b>Work</b>		
IRT (Housewife)	75	61.5
Farmer	15	12.3
Self-employed	32	26.2
<b>Total</b>	<b>122</b>	<b>100</b>

Based on Table 1. Characteristics of respondents, based on the age of 122 people (100%), shows that the majority of respondents based on the age of 20-29 years 56 people (46 %) and the minority of respondents in the 30-39 and 40-49 years age groups, namely 33 people ( 27.0%) . Characteristics of respondents based on education showed that the majority of respondents with high school education were 53 (43.4 %) and the minority of respondents with elementary education were 19 people (15.6 %). In the table above, the characteristics of respondents based on occupation show that the majority of respondents with IRT (housewife) jobs are 75 people (61.5%) and the minority of respondents have farmer jobs as many as 15 people (12.3%).

**Table 2. Frequency Distribution of Respondents Based on Knowledge Answers in the UPTD Working Area of the Gunung Tua Inpatient Health Center in 2021**

Question	Answer				Total	
	f	Right %	f	Wrong %	f	%
According to the mother, what does Measles Rubella (MR) immunization mean?	69	56.6	53	43.4	122	100
According to the mother, what diseases can be prevented by Measles Rubella (MR) immunization	36	29.5	86	70.5	122	100.0
Measles can cause serious complications such as diarrhea, pneumonia, inflammation of the brain, blindness, poor nutrition	11	9.0	111	91.0	122	100.0
Rubella is usually a mild disease in children, but if it infects the mother during pregnancy it can cause:	37	30.3	85	69.7	122	100.0
Symptoms of measles are:	91	74.6	31	25.4	122	100.0
Symptoms of rubella are:	107	87.7	15	12.3	122	100.0
In your opinion, what are the benefits of Measles Rubella (MR) immunization	89	73.0	33	27.0	122	100.0
Where do mothers get Measles Rubella (MR) immunization services	89	73.0	33	27.0	122	100.0
At what age do babies start to be immunized against Measles Rubella (MR)	122	100	0	0	122	100.0
At what age should a child be immunized against Measles Rubella (MR) the second time	87	71.3	35	28.7	122	100.0
<b>At what age was the last time the child was immunized against Measles Rubella (MR)</b>	33	27.0	89	73.0	122	100.0
<b>According to the mother, how many times should the child be immunized against Measles Rubella (MR)</b>	122	100	0	0	122	100.0
<b>How to give Measles Rubella (MR) immunization</b>	54	44.3	68	55.7	122	100.0
<b>According to the mother, the condition of the child who should not be immunized with Measles Rubella (MR) is :</b>	87	71.3	35	28.7	122	100.0
<b>How does Measles Rubella (MR) immunization work</b>	87	71.3	35	28.7	122	100.0
<b>In your opinion, what is the cause of Measles Rubella (MR) disease?</b>	35	28.7	87	71.3	122	100.0
<b>According to the mother, how is Measles Rubella (MR) transmitted</b>	40	32.8	82	67.2	122	100.0
<b>According to the mother, what should be done when the child has a fever after immunization Measles Rubella (MR)</b>	54	44.3	68	55.7	122	100.0
<b>According to the mother, who is at risk for Measles Rubella (MR)</b>	44	36.1	78	63.9	122	100.0
<b>Children who are not recommended for Measles Rubella (MR) immunization are:</b>	39	32.0	83	68.0	122	100.0

Based on table 2 above, it is known that the answers to the questions based on the most wrong order, namely question number 3, namely measles can cause serious complications such as diarrhea, pneumonia, inflammation of the brain,

blindness, poor nutrition as many as 111 people (91.0%), ranked second no. 11 At what age was the last time the child was given Measles Rubella (MR) immunization as many as 89 people (73.0%), ranked third no.16 According to the mother, what causes Measles Rubella (MR) disease as many as 87 people (71.3 %), ranked fourth no.2 According to mothers, what diseases can be prevented by Measles Rubella (MR) immunization as many as 86 people (70.5 %), ranked fifth no.4 rubella is usually a mild disease in children, but if it infects the mother during pregnancy it can cause as many as 85 people (69.7%), the sixth rank is 20. Children who are not recommended for Measles Rubella (MR) immunization are 83 people (68.0%) and the seventh is no. 17 according to the mother who is at risk of getting Measles Rubella (MR) as many as 78 people (63.9%).

**Table 3. Frequency Distribution of Respondents Based on Knowledge in the Working Area of the Gunung Tua Inpatient Health Center in 2021**

Knowledge	f	%
Not enough	94	77.0
Currently	27	22.1
Well	1	0.9
<b>Total</b>	<b>122</b>	<b>100</b>

Based on table 3, the frequency distribution of respondents based on knowledge shows that the majority have knowledge of 94 people (77.0 %) and the minority have good knowledge of 1 person (0.9%).

**Table 4. Frequency Distribution of Respondents Based on Compliance with Measles Rubella (MR) Immunization in the Work Area UPTD Public health center Gunung Tua Inpatient in 2021**

Obedience	F	%
Not obey	83	68.0
Obey	39	32.0
<b>Total</b>	<b>122</b>	<b>100</b>

Based on Table 4, the frequency distribution of respondents based on compliance with Measles Rubella (MR) immunization showed that the majority did not comply with 83 people (68.0%) and the minority complied with 39 people (32.0%).

**Table 5. Relationship between Knowledge and Compliance with Measles Rubella (MR) Immunization in the UPTD Working Area of Gunung Tua Inpatient Health Center in 2021**

	Obedience		Total	p - value
	Not	Yes		
Knowledge				
Not enough	77	17	94	0.000
Currently	6	21	27	
Well	0	1	1	
<b>Total</b>	<b>83</b>	<b>39</b>	<b>122</b>	

Based on table 5 above, it is known that respondents who have less knowledge and are not obedient in implementing Measles Rubella (MR) immunization are 77 people and it can be seen that respondents with moderate knowledge but obedient in administering Measles Rubella (MR) immunization are 21 people. The results of statistical tests using the chi-square test obtained a p - value of 0.000 < 0.05, meaning that there is a significant relationship between knowledge and compliance with Measles Rubella (MR) immunization in the UPTD work area of Gunungtua Health Center inpatients, North Padang Lawas Regency in 2021.

### 3.2. Discussion

#### a. Characteristics of Respondents

Characteristics of respondents, based on the age of 122 people (100%), showed that the majority of respondents based on the age of 20-29 years 56 people (46 %) and the minority of respondents in the 30-39 and 40-49 years age groups, namely 33 people (27, 0%). According to Budiman and Riyanto [4] the factors that influence knowledge are education, information/media, socio-cultural and economic, environment, experience and age. High education, age and economy/occupation will affect respondents in receiving information, thus causing positive behavior in terms of implementing MR immunization.

Characteristics of respondents based on education showed that the majority of respondents with high school education were 53 (43.4 %) and the minority of respondents with elementary education were 19 people (15.6 %). Education for everyone has various meanings. Education is generally useful in changing mindsets, behavior patterns, and decision-making patterns. A sufficient level of education will make it easier to identify stressors within themselves and from outside themselves. The level of education also affects awareness and understanding of the stimulus. A person's level of education is influential in responding to something that comes both from within and from outside. People who have higher education will give a more rational response than those with lower education or those who are not educated [19].

Characteristics of respondents based on occupation showed that the majority of respondents with IRT (housewife) jobs were 75 people (61.5 %) and the minority of respondents had farmer jobs as many as 15 people (12.3 %). This result is in accordance with the theory which states that someone who works will have wider knowledge than someone who does not work, and has good access to various information, including health so that knowledge and experience are more [12].

#### **b. Respondents' knowledge about Meas les Rubella (MR) immunization**

Respondent knowledge based on the answers to the questions in the most wrong order, namely question number 3, namely measles can cause serious complications, such as 111 people (91.0%), second rank no.11 at what age was the last time the child was immunized against Measles Rubella (MR) as many as 89 people (73.0 %), the third rank is no.16 according to the mother, what causes Measles Rubella (MR) disease as many as 87 people (71.3 %), the fourth rank no.2 According to the mother, what diseases can be prevented by Measles Rubella (MR) immunization as many as 86 people (70.5 %), fifth rank no. 4 rubella is usually a mild disease in children, but if it infects the mother during pregnancy it can cause as many as 85 people (69.7 %), sixth rank no. 20 Children who are not recommended for Measles Rubella (MR) immunization as many as 83 people (68.0%) and the seventh rank is no. 17 according to the mother who is at risk of getting Measles Rubella (MR) as many as 78 people (63.9%).

This result, according to the researcher's assumption, affects the respondent's actions, as seen from the number of respondents who answered incorrectly on the questions which are an important point of Measles Rubella (MR) immunization, such as the measles question which can cause serious complications, the majority of whom answered incorrectly as many as 111 people, as well as with the question of what age was the last time the child was given Measles Rubella (MR) immunization as many as 89 people answered incorrectly, when viewed from the answers of the respondents in this question many were wrong, this could influence the respondent/mother to bring their child to the complete Measles Rubella (MR) immunization. The distribution of the frequency of respondents based on knowledge showed that the majority had less knowledge of 94 people (77.0 %) and the minority had good knowledge of 1 person (0.9%).

Knowledge or cognitive is a very important domain for the formation of one's actions ( overt behavior ). Because from experience and research it turns out that behavior based on knowledge will be more lasting than behavior that is not based on knowledge [17]. Knowledge is defined as an introduction to reality, truth, principles and rules of an object. Knowledge is the result of information stimulation that is noticed and remembered. Information can come from various forms including formal and non-formal education, daily conversation, reading, listening to the radio, watching television and from other life experiences [17].

According to the researcher's assumption, public knowledge is not obtained through formal education but is obtained from the results of non-formal stimuli, namely through conversations between friends/neighbors around the house, social media interactions are very widespread, therefore low education does not mean having low knowledge, as evidenced by not all respondents have less knowledge, when viewed from the level of education of respondents who are classified as more at the basic education level, namely elementary to junior high school.

#### **c. Respondents Compliance with Measles Rubella (MR) immunization**

The frequency distribution of respondents based on compliance with Measles Rubella (MR) immunization showed that the majority did not comply with 83 people (68.0 %) and the minority complied with 39 people (32.0%).

Based on the results of the study, the researchers assumed that the level of adherence was still relatively low because the community/mother did not know what the actual benefits of the Meas les Rubella (MR) immunization were, because the benefits of immunization were not directly felt by children and this immunization was also carried out repeatedly. This causes the mother to feel that she can give this immunization at another time.

#### **d. Relationship between Knowledge and Compliance with Measles Rubella (MR) Immunization.**

The results of statistical tests using the chi-square test obtained a p - value of  $0.000 < 0.05$ , meaning that there is a significant relationship between knowledge and compliance with Measles Rubella (MR) immunization in the UPTD work area of Gunung Tua Health Center inpatients, North Padang Lawas Regency in 2021. The results of this study are in line with Merlinta [15] at the Kartasura Health Center, Sukoharjo Regency, Central Java, the results of knowledge 38 respondents have high interest in immunizing MR, knowledge 10 respondents had no interest in immunizing MR, while 5 respondents have low interest in immunizing MR, low knowledge is not interested in immunizing MR as many as 7 respondents so that the p value = 0.016. Based on the research that has been

done, it can be concluded that there is a relationship between knowledge about MR vaccine with interest in MR vaccination.

The results of this study are also in line with the research conducted Praban from 2018 in Gumpang Village, Kartasura Sub-district, Sukoharjo who showed that knowledge about measles-rubella immunization was significantly related to the reception of measles-rubella immunization ( $p = 0.006$ ) (12). This research is also in line with Trianadi's research in Kuranji District in 2015, which showed that respondents had low knowledge of 48.75 % . The results of the bivariate analysis showed that knowledge variable is related to the completeness of immunization baseline in infants with a p-value of 0.007.

Knowledge is the result of "knowing", and this happens after people To do sensing of a particular object. Sensing occurs through the human senses, namely: the sense of sight, hearing, smell, taste and touch. Some human knowledge is obtained through eyes and ears. Knowledge itself is influenced by many factors One of them is the formal education factor. Knowledge is very close relationship with education, where it is hoped that with higher education, the person will be wider as well his knowledge. However, it should be emphasized, it does not mean someone who low education is absolutely low knowledge. It remembers that the increase in knowledge is not absolutely obtained from formal education alone but can be obtained through non-formal education. Knowledge or cognitive is a very important domain for the formation of someone's actions (overt behavior [17]

According to the researcher's assumptions, based on the results of this study, it shows that mother's knowledge is significantly related to compliance with Measles Rubella (MR) immunization in the working area of the UPTD Public health center Inpatient Gunungtua . In this study, it was seen that mothers who were less knowledgeable more than well-informed mothers. Number of mothers who 94 people have less knowledge and 77 people do not comply, which means there are still many mothers who do not understand the importance of giving Measles Rubella (MR) immunization but there are also those who have low knowledge and have compliance in giving Measles Rubella (MR) immunization as many as 17 people. Mothers who are less knowledgeable are caused by lack of obtaining information or the level of mother's education is partly still basic (SMP/MTS) so that knowledge about Measles Rubella (MR) immunization is also still minimal, but there are those who have a low and sufficient level of knowledge but also have compliance in implementing Measles Rubella (MR) immunization. This is in line with research conducted by [1] which states that education has no effect on the provision of Measles Rubella (MR) immunization.

#### 4. CONCLUSION

Characteristics of respondents based on the age of the majority aged 20-29 years , based on education the majority had high school education and based on occupation the majority were IRT (housewives). The distribution of knowledge of the majority of respondents is lacking and the distribution of compliance of the majority of respondents is not compliant in administering Measles Rubella (MR) immunization. Knowledge relates to compliance with Measles Rubella (MR) immunization with a  $p$  - value of  $0.000 < 0.05$ , meaning that there is a significant relationship between knowledge and adherence to Measles Rubella (MR) immunization in the working area of UPTD Public health center inpatient Gunungtua, Padang Lawas Regency. North 2021.

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