

## KNOWLEDGE AND ATTITUDES OF PREGNANT WOMEN IN IMMUNIZING TETANUS TOXOID AT BOTANIA PUSKESMAS, BATAM CITY

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### Abstract

**Background :** Tetanus is still a leading cause of maternal and neonatal death and illness. Immunization of TT (Tetanus Toxoid) which is a process of building immunity as an effort to prevent tetanus infection. The estimated global incidence of tetanus is 18 per 100,000 population per year. The purpose of this study was to determine the relationship between knowledge and attitudes of pregnant women in immunizing Tetanus Toxoid.

**Method :** The research method used was an analytic survey with a cross sectional approach. Conducted at Puskesmas Botania, Batam City, the study was conducted for 6 months, the population in this study were all trimester III primigravida pregnant women, with a sample of 30 respondents, using a total sampling technique. Data collection using a questionnaire. Data presented in tabular and textual form, data analysis using Chi-square.

**Result :** The results of the study of 30 respondents found that 20 respondents (66.7%) had less knowledge about TT immunization, it was found that 19 respondents (63.3%) had negative attitudes, based on bivariate analysis using chi-square. From the Chi-Square test with a significance limit ( $\alpha$ ) = 0.05 and the result of p-value = 0.000 which means p-value  $<(\alpha)$ .

**Conclusion :** It is said that the two variables have a relationship or  $H_a$  is accepted, this means that there is a relationship between maternal knowledge and attitudes. in carrying out TT immunization at the Botania Health Center, Batam City. Research suggestions for pregnant women increase knowledge about TT immunization so that mothers comply with TT immunization

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**Keywords:** Knowledge, attitudes, TT immunization, pregnant women

### INTRODUCTION

Tetanus is still a leading cause of maternal and neonatal death and illness. The main problem faced is the low quality of health of the population, which is indicated by, among others, the high mortality rate for infants, toddlers and maternal mothers, as well as the high proportion of women who suffer from malnutrition; Handling of Tetanus Neonatorum is indeed not easy, so the most important thing is prevention efforts, namely hygienic delivery support supported by tetanus toxoid immunization in pregnant women. (DepkesRI, 2010)

TT immunization is one of the government programs in which TT (Tetanus Toxoid) immunization is a process to build immunity as an effort to prevent tetanus infection. TT

immunization can be given to pregnant women from the first trimester to the third trimester (Nanda, 2013).

Tetanus toxoid (TT) immunization is the formation of immunity to prevent diseases that can cause death in mothers and fetuses. The purpose of giving TT immunization to pregnant women is to prevent diseases that can cause maternal and fetal deaths and can prevent tetanus (Sulistiyawati, 2011). The minimum TT immunization is carried out 2 times with an interval of 4 weeks with a dose of 0.5 ml injected under the upper arm. The TT immunization given protects the newborn from the possibility of getting an infection in the umbilical cord. These infections can cause seizures in babies. If the seizures are repeated,

it can endanger the safety of the life and cause brain damage to the baby (Endjun, 2009)

Data from WHO (World Health Organization) calculates the global incidence of tetanus in the world is roughly between 0.5-1 million cases and tetanus neonatorum (TN) accounts for about 50% of deaths due to tetanus in developing countries. The estimated global incidence of tetanus is 18 per 100,000 population per year (Ida Wijayanti, et al, 2013).

According to WHO, it shows that TN deaths in developing countries are 135 times higher than in developed countries. In 2006, 2007 and 2008 the number of TN cases among ASEAN countries, Indonesia ranks second after Filipina with more than 100 sufferers. In addition, the rate of cases and deaths due to TN disease in Indonesia was still quite high from 2000 to 2008 (on average with a CFR > 50%) (Dewi Rokhmah and Abu Khoiri, 2012).

Tetanus neonatorum cases are often found in developing countries, especially countries with low coverage of births by health personnel in 2014, there were 84 reported cases from 15 provinces with 54 cases of death. Thus the CFR of tetanus neonatorum in 2014 was 64.3%, an increase compared to 2013 which was 53.8%. The case description according to the risk factors for immunization status shows that as many as 54 cases (74%) occurred in the unimmunized group. A total of 51 cases (68.9%) conducted pregnancy examinations with a doctor / midwife / nurse. According to birth attendant factors, 50 cases (68.5%) were assisted by traditional birth attendants, such as traditional birth attendants. According to the tools used to cut the umbilical cord, most cases were cut with scissors, namely 46 cases (59%) (Ministry of Health, 2014).

According to the Ministry of Health, the infant mortality rate in Indonesia which is caused by tetanus neonatorum is still high. Recorded in 1995 there were cases with a reference to 55/1000 live birth rates. The number of neonatal tetanus cases in 2003 was 175 cases with a mortality rate of 56%. Handling of neonatal tetanus is indeed not easy, so the most important thing is prevention efforts, namely hygienic delivery assistance supported by Tetanus Toxoid immunization in pregnant women (Ida Wijayanti et al, 2013).

The target set by the Indonesian government regarding the Tetanus toxoid immunization program during pregnancy is 80%, but in reality the targets achieved have not met the national targets that have been set. Mothers with TT1 status were 23.4%, pregnant women with TT2 status were 21.8%, mothers with TT3 status were 9.4%, mothers with TT4 status were 7.8%, mothers with TT5 status were 8.2%. (Permenkes, 2017) Even though the program has been implemented, the reach of TT immunization for pregnant women is still far from expectations

The achievement of TT immunization coverage can be influenced by several factors, including the perception of the distance to health services, employment, and support from husbands in immunizing tetanus toxoid (Wahyuni, and Suhartatik 2013). In addition, it can also be influenced by, education, awareness, experiences of mothers who have received tetanus toxoid immunity during pregnancy and the knowledge of pregnant women in immunizing tetanus toxoid. The lack of knowledge of pregnant women in immunizing tetanus toxoid can lead to less knowledge of pregnant women about tetanus which can harm both the mother and the fetus (Prihastanti and Hastuti, 2015).

Based on the 2016 Indonesian Health Profile, it is known that West Java and East Java have the most pregnant women, namely 975,780 and 638,168 pregnant women and have the highest TT1 immunization achievements in pregnant women in Indonesia, respectively, West Java TT1 total 609,837 or 62.50% , TT2 Total 552,152 or 56.59%. and East Java TT1 Total 301,766 or 47.29%, TT2 Total 33,618 or 5.27%. Meanwhile, the province with the lowest achievement was the number of pregnant women 78,157 Papua TT1 total 0 or 0.00%, TT2 total 0 or 0.00%. and Number of Pregnant Women 71,720 Bali TT1 Total 79 or 0.11%, TT2 Total 125 or 0.17% (Directorate General of Disease Prevention and Control, Ministry of Health RI, 2017

From the data from the Batam City Health Office, the coverage of pregnant women in Batam has reached 32.640% and the highest data is in Batu Aji Health Center with a total of 4580 pregnant women with immunization

coverage of TT1 962 (21.00%), TT2 869 (18.97), TT3 665 (14.51%), TT4 476 (10.39%) TT5 104 (2.27%), TT2 + 2,114 (46.15%

Based on the description above, the researcher is interested in conducting a study on the relationship of knowledge and attitudes of pregnant women in carrying out TT immunization at the Botania Health Center, Batam City.

### **RESEARCH PURPOSES**

This study aims to determine the relationship between knowledge and attitudes of pregnant women in immunizing Tetanus Toxoid (TT) at Botania Health Center, Batam City.

### **RESEARCH METHODS**

The research method used was an analytic survey with a cross sectional approach. Conducted at Puskesmas Botania, Batam City, the study was conducted for 6 months, the population in this study were all trimester III primigravida pregnant women, with a sample of 30 respondents, using a total sampling technique. Data collection using a questionnaire. Data presented in tabular and textual form, data analysis using Chi-square

### **RESEARCH RESULT**

From the research results, it can be seen from 30 respondents, it can be seen that as many as 20 respondents (66.7%) have less knowledge, while 10 respondents (33.3%) have good knowledge in carrying out TT immunization at the Botania Health Center, Batam City.

It is known from 30 respondents, it can be seen that as many as 19 respondents (63.3%) have negative attitudes in carrying out TT immunization, while 11 respondents (36.7%) have positive attitudes in carrying out TT immunization at Botania Health Center, Batam City.

It can be seen from 20 respondents (63.3%) who have less knowledge about TT immunization, there are 18 respondents who have negative attitudes and 2 respondents who have positive attitudes. When viewed from the Chi-Square test with a significance limit ( $\alpha$ ) = 0.05 and the result of p-value = 0.000 which means p-value  $<(\alpha)$ , it is said that the two variables have a relationship or  $H_0$  is accepted, this means that there is a relationship between

knowledge and attitudes of pregnant women in carrying out TT immunization at Puskesmas Botania

### **DISCUSSION**

Based on the results of research conducted on 30 respondents, it can be seen that as many as 20 respondents (66.7%) had less knowledge, while 10 respondents (33.3%) had good knowledge in carrying out TT immunization at the Botania Health Center.

Knowledge is the result of knowing this occurs after a person senses a certain object. Sensing occurs through the post-senses, namely the senses of sight, hearing, smell, taste and touch. Most of human knowledge is obtained by eyes and ears (Notoatmodjo, 2012)

The lack of knowledge of pregnant women about tetanus toxoid immunization shows that the mother's understanding of understanding tetanus toxoid immunization, the benefits and drawbacks of tetanus toxoid immunization, including less. Several factors related to a person's knowledge include education level, information or mass media, social, culture and economy, environment, experience, and age (Notoatmodjo, 2012).

The lack of information obtained by pregnant women about tetanus toxoid immunization causes their knowledge about tetanus toxoid immunization to be low. The results of this study are in line with research conducted by Yunica (2014) which showed a p-value of 0.001 which means that it has a relationship. meaningful between knowledge and participation in immunization against tetanus toxoid in pregnant women. The results of this study indicate that a mother who has good knowledge about tetanus toxoid immunization encourages her to get complete TT immunization than pregnant women who have less knowledge.

Judging from the results of the study of 30 respondents, it was found that 20 respondents (63.3%) had less knowledge about TT immunization, 18 respondents had negative attitudes and 2 respondents had positive attitudes. When viewed from the Chi-Square test with a significance limit ( $\alpha$ ) = 0.05 and the result of p-value = 0.000 which means p-value  $<(\alpha)$ , it is said that the two variables have a

relationship or  $H_0$  is accepted, this means that there is a relationship between knowledge and attitudes of pregnant women in carrying out TT immunization

Attitude is a certain provision in terms of feelings (affection), thoughts (cognition) and predisposition of action (conation) of a person towards an aspect of the surrounding environment. Attitude is a reaction or response of someone who is still closed to a stimulus and object (Notoatmodjo, 2012)

Attitudes related to maternal behavior in implementing Tetanus Toxoid immunization indicate that mothers who have received information about TT immunization will think and respond and try to get the benefits of TT immunization, so that the mother finally wants to carry out complete TT immunization. A positive attitude towards TT immunization will make the mother's behavior benefit by giving TT immunization. In line with research (Nora, 2012) on the relationship between knowledge and attitudes regarding the completeness of TT immunization in pregnant women, there is a significant relationship between the completeness of TT immunization for pregnant women and knowledge and attitudes where  $p < 0.05$ . Knowledge, attitudes supported by antenatal care and education variables obtained significant results, where mothers who have high knowledge, positive attitudes, frequency of antenatal care  $\geq 4$  times and higher education have a value of  $R^2 = 0.1501$  which means that they can predict the completeness of TT immunization for pregnant women by 15.01%

Based on the results of the study, it was found that most of the respondents (64.7%) were housewives (IRT). The formation of attitudes depends on the culture in which the individual is brought up. The environment provides a social influence first for a person, where a person can learn good things, also bad things depending on the nature of the group (Azwar, 2011).

The environment is a social influence for someone, where a person can learn good things and also bad things depending on one's own nature. In the environment, a person will get experiences that will affect the way of thinking. Based on the results of the study, it was found that some of the respondents did not get

information through about TT immunization. One of the factors that influence attitudes is the increase in information, the more knowledge is obtained. The more knowledge will influence respondents in thinking and behaving about TT immunization. Based on the results of the study, it was found that most of the respondents (61.2%) had high school education. By having sufficient education, respondents will understand about TT immunization. This is in accordance with what Azwar (2011) said that attitude formation can be influenced by several factors, namely education, experience

There is a relationship between attitudes and knowledge of pregnant women, indicating the influence of knowledge in realizing a person's attitude. The consistent relationship between the affective component and the cognitive component means that if a person has a positive attitude towards an object, the cognitive index will also be high, and vice versa. Knowledge, thinking, beliefs and emotions play an important role in determining attitudes (Azwar, 2011). Sufficient knowledge gives a tendency for pregnant women to have negative attitudes or tend not to consider TT immunization important.

Lack of desire and there is still a lot of confidence / belief of the respondent in something that is still believed by the family from generation to generation, besides that the mother believes that even without being immunized, the mother and fetus will be healthy and avoid tetanus infection so that the mother has a negative attitude towards Tetanus Toxoid immunization.

## **CONCLUSION**

Based on the results of research conducted on 30 respondents, the following results were obtained:

- a. It is known that the results of the frequency distribution of knowledge of pregnant women in carrying out TT immunization as many as 20 respondents (66.7%) have less knowledge in carrying out TT immunization at Botania Health Center
- b. It is known that the results of the frequency distribution of the attitudes of pregnant women in carrying out TT immunization as many as 19 respondents (63.3%) had a positive attitude in carrying out TT immunization at the Botania Community Health Center.

c. It is known that there is a relationship between maternal knowledge and attitudes in carrying out TT immunization at the Botania Community Health Center, Batam City with a p value <0.000

### SUGGESTION

#### 1. For Further Researchers

This study can be used as basic data for future researchers so that this research can be carried out further in relation to the relationship between knowledge of pregnant women and adherence to TT immunization.

#### 2. For Educational Institutions

The research results are expected to be used as information and reference, as reading material for students and to increase knowledge and insight about the relationship between knowledge of pregnant women and adherence to TT immunization.

#### 3. For the Botania Community Health Center

The results of this study can be used as a medium of information for health workers at the Botania Batam Health Center in providing counseling to pregnant women about TT immunization and input for Batu Aji Health Center in improving service care for clients in carrying out TT immunization by optimizing maternal knowledge so that mothers comply with TT immunization. .

#### 4. For pregnant women

This research is useful for pregnant women to be able to increase knowledge about TT immunization and so that mothers comply with TT immunization

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