

Association of Knowledge and Attitude Between Women of Childbearing Age about Tetanus Toxoid Immunization with Tetanus Toxoid Immunization Status for Future Bride and Groom

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ABSTRACT

Background: According to WHO in 2016 the incidence of tetanus neonatorum infection reached 13% of the total number of babies born in the world, Tetanus neonatorum in Indonesia causes 50% of perinatal deaths and accounts for 20% of infant deaths. One effort to prevent this is the tetanus toxoid immunization. The aim of the study was determine association of knowledge and attitude between women of childbearing age about tetanus toxoid immunization with tetanus toxoid immunization status for future bride and groom.

Methods: The study was conducted using a cross sectional study design. Data were collected in working area of Kampung Baru Padusunan Primary Health Care, West Sumatera Province Indonesia. The populations in this study were all women of childbearing age with sample size 93 respondents. Sampling technique was done with simple random sampling. Data analysis used Chi-square test. A two-tailed *P*-value of <0.05 was considered statistically significant. All data were analysed using SPSS 21.0 program.

Results: The results of the study found that of 93 respondents there were 58.1% of respondents with low knowledge, 60.2% of respondents had a negative attitude, and 63.4% respondents received incomplete tetanus toxoid (TT) immunization in the working area of Kampung Baru Padusunan Primary Health Care, West Sumatera Province Indonesia. The results of bivariate analysis found that there were a significant association between knowledge (*p* value=0.002) and attitude (*p* value=<0.001) with the status of TT immunization.

Conclusion: This analysis confirmed there was association between knowledge and attitudes with the TT immunization status. It is expected that health workers to provide more education and information to mothers about TT immunization, so that no more women of childbearing age who do not immunize tetanus toxoid.

Keywords: Knowledge, Attitude, Immunization, Tetanus Toxoid,

INTRODUCTION

According to World Health Organization (WHO) in 2016, the incidence of tetanus neonatorum infection reached 13% of the total number of babies born in the world. The incidence in Southeast Asia in 2016 reached 13% and in Indonesia reached 15%.^[1] Tetanus neonatorum in Indonesia causes 50% of perinatal deaths and accounts for 20% of infant deaths. The incidence rate is 6-7/100 live births in urban

areas and 11-23/100 live births in rural areas. While the incidence of tetanus in children in hospitals is 7-40 cases/year, 50% occur in the 5-9 years group, 30% in the 1-4 year group, 18% in the group > 10 years, and the rest in infants <12 months. The overall death rate is between 6.7-30%.^[2]

According to data from the Health Office of West Sumatra Province Indonesia in 2016, the infant mortality rate in West Sumatra was 39/1000 live births. Neonatal

deaths account for 68% of 56% infant deaths due to tetanus infection during perinatal period. [3]

One of the Ministry of Health Republic of Indonesia strategies to achieve the elimination of tetanus neonatorum is by conducting TT immunization in pregnant women. Field evaluations indicate that TT coverage for pregnant women is still low. Therefore, the Indonesian Ministry of Health began to develop intensification of TT immunization in women of childbearing age, the future bride and groom. But until now the program has not been implemented well. [2]

Immunization is an effective, easy and inexpensive prevention to prevent the occurrence of dangerous infectious diseases. Through immunization, an individual will become immune to certain infectious diseases. Immunization provides protection, prevention, even immunity and minimizes the possibility of disease transmission, so that children can avoid certain diseases that can cause disability or even death. The immunization program is felt to be very important for the community, especially for pregnant women, newborns, school children, and women of childbearing age, including the future bride and groom. Infants and children are a group of children who are very susceptible to disease because their immune system is still low. Therefore, the government requires the provision of basic immunization to infants and TT immunization to prospective brides and mothers. [2,4]

The aim of the study was determine association of knowledge and attitude between women of childbearing age about tetanus toxoid immunization with tetanus toxoid immunization status for future bride and groom.

MATERIALS & METHODS

Study Design and Research Sample

The study was conducted using a cross sectional study design. Data were collected in working area of Kampung Baru Padusunan Primary Health Care, West

Sumatera Province Indonesia. The populations in this study were all women of childbearing age with sample size 93 respondents. Sampling technique was done with simple random sampling.

Operational Definitions

The variables of this study included independent variable were knowledge and attitude. Dependent variable was tetanus toxoid immunization status for future bride and groom.

Data Collection Technique

Data collection technique used questionnaire with interview. This study was approved by the Ethical Committee of Universitas Negeri Padang, West Sumatera Indonesia.

Data Analysis

The quantitative variables were recorded as frequency and percentage. Data analysis used chi-square test. A two-tailed *P*-value of <0.05 was considered statistically significant. All data were analysed using SPSS 21.0 program.

RESULT

Characteristic of respondents (Table 1).

Table 1: Characteristic of respondents

Variables	f/%
Age (years)	
21-25	31 (33.3)
26-30	58 (62.4)
31-35	4 (4.3)
Level of education	
Junior high school	20 (21.5)
Senior high school	54 (58.1)
Vocational degree	8 (8.6)
Bachelor degree	11 (11.8)

Table 1 known more than half of respondents were 26-30 years (62.4%) and senior high school level of education (58.1%).

Frequency distribution of knowledge and attitude among women of childbearing age about tetanus toxoid immunization (Table 2).

Table 2: Frequency distribution of knowledge and attitude among women of childbearing age about tetanus toxoid immunization

Variables	f/%
Knowledge level	
High	39 (41.9)
Low	54 (58.1)
Attitude	
Positive	37 (39.8)
Negative	56 (60.2)

Table 2 known more than half of respondents were low knowledge level (58.1%) and negative attitude (60.2%).

Frequency distribution of tetanus toxoid immunization status for future bride and groom (Figure 1).

Figure 1 known more than half of respondent did not TT immunization (63.4%) and TT immunization (36.6%).

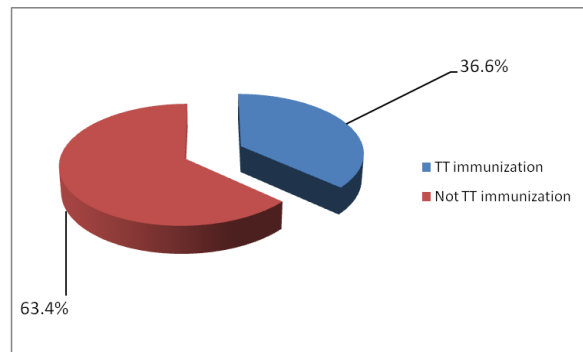


Figure 1: Frequency distribution of tetanus toxoid immunization status for future bride and groom

Association of knowledge and attitude between women of childbearing age about tetanus toxoid immunization with tetanus toxoid immunization status for future bride and groom (Table 3)

Table 3: Association of knowledge and attitude between women of childbearing age about tetanus toxoid immunization with tetanus toxoid immunization status for future bride and groom

Variables	TT Immunization				Total		p value
	TT Immunization		Not TT Immunization		Total	%	
	f	%	f	%			
Knowledge							0.002
Positive	22	56.4	17	43.6	39	100	
Negative	12	22.2	42	77.8	54	100	
Attitude							<0.001
Positive	32	86.5	5	13.5	27	100	
Negative	2	3.6	54	96.4	56	100	
Total	34	36.6	59	63.4	93	100	

Table 3 showed there were a significant association between knowledge (p value=0.002) and attitude (p value=<0.001) with the status of TT immunization.

DISCUSSION

The results of the study found that of 93 respondents there were 58.1% of respondents with low knowledge, 60.2% of respondents had a negative attitude, and 63.4% respondents received incomplete tetanus toxoid (TT) immunization in the working area of Kampung Baru Padusunan Primary Health Care, West Sumatera Province Indonesia. The results of bivariate analysis found that there was a significant association between knowledge and attitude with the status of TT immunization.

Based on both immunization card and oral history, 607 (72.5%) mothers were protected against tetanus at their last birth. This finding is similar to a study done in

Ethiopia and Ghana. [5,6] But higher than the proportion reported in 2016 EDHS report which was 49% and 50.9% for national and SNNPR, respectively. [7] This difference might be due to hard to reach areas included in EDHS report and the additional health center construction in Damboya Woreda that gives an extra opportunity for TT vaccination.

Previous study found mothers who heard of TT were 1.54 more likely to have been immunized than those who did not, while mothers who knew the use of tetanus toxoid were 2.15 times more likely to have been immunized than those who did not, and those who knew at least one of the tetanus symptoms were 1.86 times more likely to have been immunized than those who did not, respectively controlling other variables constant. Furthermore, women who had antenatal care were 30 times more likely to have been immunized than those

who did not. Enhancing mothers' knowledge on tetanus is important to increase the coverage of tetanus toxoid. Moreover, antenatal care would cause contact with sources of tetanus toxoid and hence increase the chance of having the immunization. At the same time, this decreases tetanus neonatorum. Considering the majority of pregnant women received information on tetanus from health workers, the use a variety of media would be advantageous. [8]

Based on researcher analysis, the results of the study indicate that there were still some women of childbearing age who have high knowledge but the level of activity in finding information about health is still lacking. According to researchers from the results of analysis in the field the lack of desire or innovation of women of childbearing age is because mothers are lazy to explore health information and especially for their own health. Many women of this age who underestimate the TT immunization because they think it is unimportant and not fatal to them.

The results also showed that there were still some women of childbearing age who had negative attitudes in carrying out the TT immunization. According to researchers from the results of analysis in the field there is a negative attitude in women of childbearing age because women of childbearing age assume TT immunization is not important in health and that is because of low-fertility knowledge of women, especially information for their own health. Many women of childbearing age do not know the uses and benefits of TT immunization. In fact, the content of tetanus toxoid immunization is important in protecting the body from tetanus infection

and for pregnant women to prevent the fetus in the womb from being infected by tetanus neonatorum.

CONCLUSION

The conclusion of this study confirmed there was association between knowledge and attitudes with the TT immunization status. It is expected that health workers to provide more education and information to mothers about TT immunization, so that no more women of childbearing age who do not immunize tetanus toxoid.

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