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Research Article

The Relationship of Pregnant Women's Knowledge about the Provision of Tetanus Toxoid Immunization to Pregnancy in Pmb Tri Lasiyanti Kelurahan Jatimakmur Pondok Gede, Bekasi City 2022

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Abstract

Aims: The purpose of this study was to determine the effect of the level of knowledge of pregnant women about giving tetanus toxoid immunization during pregnancy at PMB Tri Lasiyanti, Jatimakmur Village, Pondok Gede, Bekasi City in 2022.

Methods: This study uses an analytical survey with a cross-sectional approach. The sample used in this study amounted to 49 pregnant women using quota sampling that met the inclusion and exclusion criteria.

Results: Based on the results of the chi-square test, the p-value of 0.001 shows that there is a relationship between the two variables, meaning that the mother's level of knowledge can affect the administration of tetanus toxoid immunization at PMB Tri Lasiyanti, Jatimakmur Village, Pondok Gede, Bekasi City 2022.

Conclusion: From a study conducted in 2 months under the title "Level of Knowledge of Pregnant Women About Giving Tetanus Toxoid Immunization Against Pregnancy at PMB Tri Lasiyanti, Jatimakmur Village, Pondok Gede, Bekasi City 2022", based on the independent and dependent variables from the results carried out using data analysis namely univariate and bivariate analysis where both have the same result that is related, with a p-value of 0.001. For further researchers, it can be used as reading material and can be used as basic data as a comparison for further research with variables and a deeper level of analysis about the level of mother's knowledge about tetanus toxoid immunization.

Keywords:

Tetanus toxoid, knowledge

INTRODUCTION

Human development is the process of expanding the options available to humans. The most important options are to live a long and healthy life, to be educated, and to have access to the resources necessary to live a respectable life. Human Development Index (HDI) measures the achievement or advancement of a country or region. This HDI is derived from the measurement of a number of fundamental aspects of quality of life in order to attain human development. The HDI is a fundamental three-dimensional

approach to measuring quality of life that encompasses approaches to health, education, and purchasing power. Because they are tied to so many circumstances, the three dimensions of HDI development have a very broad understanding. The coverage of a pregnant woman's initial visit and the visits of four pregnant women can be used to assess the implementation of health services for pregnant women.

Indicators to assess the extent to which health services for pregnant women give an overview of the number of pregnant women

who visit health care facilities for the first time to get antenatal care. And the indicator for the fourth visit of pregnant women is access/contact of pregnant women with health workers with at least one contact in the first trimester (0-3 months of gestation), at least one contact in the second quarter (4-6 months of gestation), and at least two contacts in the third quarter (age 7-9 months of pregnancy) and as an indicator to see the reach of antenatal services and the program's ability to mobilize the community (West Java P) (1).

During the first visit, the pregnant woman took anamnesis regarding the history of pregnancy, the disease suffered in the current pregnancy, family history of illness, general examination, special obstetric examination, and laboratory examination (Hb, urine, and others). Obstetric examination, obstetric administration, administration of TT (Tetanus toxoid) immunization, administration of drugs and vitamins, breast care, and health education related to pregnancy. Maternal tetanus (tetanus that occurs in infants) is a leading cause of infant and child death. The Indonesian government, represented by the Ministry of Health, is dedicated to the Maternal and Neonatal Tetanus Elimination (MNTE) initiative, which aims to eradicate tetanus among infants and women of reproductive age .

Maternal and neonatal tetanus is said to be eliminated if there is only less than one case of neonatal tetanus per 1,000 live births in each district/city. One of the efforts to achieve this elimination is by administering Tetanus Toxoid immunization to women of childbearing age, including pregnant women. To provide lifelong protection against tetanus, including maternal and neonatal tetanus. This lifelong protection can be obtained by immunization of Tetanus Toxoid in as many as 5 doses according to the recommended interval or time interval. Tetanus Toxoid immunization is given at a dose of 0.5 and ml administered intramuscularly or subcutaneously.

In 2020, less than 20% of pregnant women will have received the full series of Tetanus toxoid vaccines (Tetanus toxoid 1 through 5). The percentage of people who received the fifth dose of tetanus toxoid was 15.8%, down from 16.3% in 2019. Tetanus toxoid 2+ vaccination will reach 54.7% of pregnant women by 2020. This is less than the coverage for maternity services for the Fourth Visit (84.9%), and it is lower than the coverage for 2019 (64.88%). For their fourth prenatal appointment, expectant mothers are required to have proof of a tetanus toxoid 2+ shot. Coverage is highest (86.9%) in East Java Province, then lowest (80.1% in West Java), and highest (73.1% in DI Yogyakarta). Lampung was the worst performing province with a 3.2% success rate, followed by North Sulawesi and North Kalimantan. Appendix 24-26 (Indonesian Health Profile 2020) includes more specifics on Tetanus Toxoid immunization for women of childbearing age and pregnant women.

One of the risk factors for maternal death is tetanus infection caused by the bacterium *Clostridium tetani*. The effort to control this tetanus infection is by implementing the Tetanus Toxoid Immunization program for women of childbearing age and pregnant women (2). The coverage of Tetanus Toxoid 2+ in 2020 is 89.0%, there are 6 city districts with achievements of more than 100%, namely Tasikmalaya City, Subang Regency, Cirebon Regency, Sumedang Regency, Bekasi Regency, and Garut Regency. While the achievement is low in Depok City.

The coverage of pregnant women who received Tetanus Toxoid immunization in Bekasi City in 2019 increased compared to 2018. This occurred in all types of Tetanus toxoids from Tetanus Toxoid 1 to Tetanus Toxoid 5, all of which experienced an increase. The coverage of Tetanus Toxoid 1 in pregnant women in 2019 was highest at the Duren Jaya Health Center (104.26%). Followed by Health Center Officers (95.98%) and Puskesmas Jaka Mulya (95.14%). Meanwhile, the three health centers with the lowest coverage were Harapan Baru Health Center (11.39%),

Seroja (17.07%), and Bekasi Jaya Health Center (17.20%) (Bekasi City Health Profile 2019).

The coverage of Tetanus Toxoid immunization at PBM Tri Lasiyanti increased by 80% from the previous year. In 2020, the Tetanus Toxoid immunization at PBM Tri Lasiyanti was 60%. In 2019, the Tetanus Toxoid immunization at PBM Tri Lasiyanti was 50%. This shows an increase from year to year. However, there are some pregnant women who are reluctant to carry out Tetanus Toxoid immunization due to fear of pain, no cost, nausea and vomiting, and so on.

Before giving a shot of Tetanus Toxoid, it is a good idea to check if the recipient has already been immunized. If evidence from Maternal and Child Health literature, medical records, or cohorts shows that women of reproductive age have undergone Tetanus Toxoid 5 vaccine, then tetanus toxoid immunization is not required. Tetanus Toxoid 2+ refers to groups of pregnant women who have been immunized against tetanus with toxins 2 through 5.

Knowledge of pregnant women is known to be one of the strong factors that affect this

immunization coverage. The knowledge in question is knowing about tetanus, the benefits that can be obtained after immunizing, knowing the immunization schedule, and others. Research conducted by (3) states that primigravida pregnant women who have good knowledge of tetanus toxoid immunization have a greater chance of immunizing. Research by (4) confirms that greater immunization rates are associated with better education among pregnant women, lending credence to this claim.

METHODS

This study uses an analytical survey with a cross-sectional approach. The sample used in this study amounted to 49 pregnant women using quota sampling that met the inclusion and exclusion criteria. The data analysis method used was the Chi-Square test using the SPSS 28 application.

RESULTS

Univariate analysis

- a. The rate of giving tetanus toxoid immunization at PMB Tri Lasiyanti, Jatimakmur Village, Pondok Gede, Bekasi City 2022.

Table.1 Distribution of respondents' frequency of giving Tetanus toxoid immunization

Category Tetanus toxoid Immunization	Amount (F)	Percentage (%)
Complete	18	36.7
Incomplete	31	63.3
Amount	49	100.0

Based on table 1 above, it can be seen that most of the respondents in this study had a complete level of immunization in 18 respondents (36.7%), and 31 respondents (63.3%).

- b. The level of knowledge of respondents about tetanus toxoid immunization at PMB Tri Lasiyanti, Jatimakmur Village, Pondok Gede, Bekasi City 2022

Table. 2 Frequency distribution of respondents' level of knowledge about tetanus toxoid immunization

Knowledge level	Amount (F)	Percentage (%)
Good	9	18.4
Low	40	82.6
Amount	49	100.0

Based on the table above, it can be seen that from 49 respondents there were 9 respondents who had good knowledge with a percentage of 18.4% and there were 40 respondents who had less knowledge with a percentage of 82.6%.

c. Parity level at Tri Lasiyanti PMB, Jatimakmur Village, Pondok Gede, Bekasi City 2022

Table. 3 Parity level frequency distribution

Parity Rate	Amount (F)	Percentage (%)
Low	26	53.1
High	23	46.9
Amount	49	100.0

It can be seen from the frequency distribution table above, from 49 respondents there are 26 respondents who have a low parity level with a percentage value of 53.1%, while the other 23 respondents have a high parity level with a percentage of 46.9%.

Bivariate Analysis

a. The relationship between mother's level of knowledge about giving tetanus toxoid immunization to pregnant women

Table 4. The relationship between the administration of tetanus toxoid immunization and with mother's level of knowledge

Giving Tetanus Toxoid Immunization	Knowledge				Amount		P-value
	Good		low		n	%	
	n	%	n	%			
Complete	9	18.4	9	18.4	18	36.7	<0.001
Incomplete	0	0.0	31	63.3	31	63.3	
Amount	9	18.4	40	81.6	49	100.0	

Based on the table above, it can be seen that from 49 respondents there were 9 respondents who had good knowledge with immunization completeness of 18.4%. There are 31 respondents (63.3%) with less knowledge.

Based on the results of the chi-square test, the p-value of 0.001 shows that there is a relationship between the two variables, meaning that the mother's level of knowledge can affect the administration of tetanus toxoid immunization at PMB Tri Lasiyanti, Jatimakmur Village, Pondok Gede, Bekasi City 2022.

b. The relationship between parity and giving tetanus toxoid immunization to pregnant women

Table 5. The relationship between a mother's level of knowledge and giving Tetanus toxoid immunization

Giving Tetanus Toxoid Immunization	Parity				Amount		P-value
	Low		High		n	%	
	n	%	N	%			
Complete	18	36.7	0	0.0	18	36.7	<0.001
Incomplete	8	16.3	23	46.9	31	63.3	
Amount	26	53.1	23	46.9	49	100.0	

From the table above, it can be seen that from 49 respondents with a low parity level, 18 respondents (36.7%), with complete immunizations, while for a low parity rate, 8 respondents (16.3%) had incomplete immunizations, for high parity it was given incomplete immunization as many as 23 respondents (16.3%).

From the results of the chi-square test, the p-value of 0.001 shows that there is a relationship between the two variables, namely, there is a relationship between giving tetanus toxoid immunization and giving tetanus toxoid immunization at PMB Tri Lasiyanti, Jatimakmur Village, Pondok Gede, Bekasi City 2022.

DISCUSSION

a. Giving Tetanus Toxoid Immunization

Based on the results of the study and univariate analysis test, it can be seen that most of the respondents in this study had a complete level of immunization in 18 respondents (36.7%), and 31 respondents (63.3%).

Based on research conducted by (5) the majority of 23 (57.5%) respondents had complete tetanus toxoid immunization for pregnant women in the third trimester. Furthermore, the completeness of tetanus toxoid immunization in third-trimester pregnant women was not complete for as many as 17 (42.5%) respondents. Tetanus toxoid immunization is a process to build immunity in an effort to prevent tetanus. To prevent neonatal tetanus, pregnant women must receive tetanus toxoid immunization, so that the mother already has tetanus antitoxin in the mother's body which will be transferred through the placenta which will protect the baby to be born from tetanus. Immunization is an effort to increase a person's immune system actively or passively against disease by artificial means, namely the administration of antigens to the body. Another term for immunization is a vaccine, vaccine is

defined as something that comes from germs and then is weakened or turned off to stimulate the body to make immunity or antibodies (6).

According to (7), systematic efforts to eliminate neonatal tetanus began with tetanus toxoid immunization for pregnant women and prospective brides through the Immunization Development Program, which was introduced in 1979, and the acceleration of tetanus toxoid immunization for women aged fertile, especially in areas with low coverage of tetanus toxoid immunization and low clean deliveries. The selection of this acceleration strategy in Indonesia has been recognized by UNICEF as the main strategy or alternative for achieving the Elimination of Tetanus Neonatorum (ETN).

b. Relationship of Mother's Knowledge to Tetanus Toxoid Immunization

A p-value of 0.001 was calculated from the study's findings using the chi-square test for univariate analysis. This demonstrates that the mother's level of education influences the success of the tetanus toxoid immunization program at PMB Tri Lasiyanti in Jatimakmur Village, Pondok Gede, Bekasi City, Indonesia in the year 2022. This study's findings corroborate those of (8) who found a correlation between tetanus toxoid immunization awareness and coverage ($p=0.013$). (9) findings that there is a correlation between understanding and administering tetanus toxoid vaccine to pregnant women are supported by the findings of the present study.

Based on research and distribution of questionnaires to respondents, they did not do tetanus toxoid immunization because many did not know about tetanus toxoid immunization in terms of meaning, purpose, benefits, and schedule for giving tetanus toxoid immunization. The low knowledge of pregnant women regarding tetanus toxoid immunization is due to the lack of information provided

by health workers in the form of counseling to the community, especially pregnant women where it is the main source of information for mothers, and mothers also do not want to seek information on their own about tetanus toxoid immunization. Based on the statements of pregnant women, they did not carry out tetanus toxoid immunization, in addition to not knowing there was also no invitation or direction from health workers when pregnant women checked their pregnancies.

One of the factors that influence knowledge is education. The majority of pregnant women's education is in the medium category, namely, SMA is one of the things that causes the low knowledge of pregnant women about tetanus toxoid immunization. In addition, the number of second pregnancies and so on many pregnant women do not want to carry out tetanus toxoid immunization because in previous pregnancies there was no tetanus toxoid immunization and there would be no problems if no immunization was carried out.

Education is required to receive information, such as items that support health, in order to improve health status and quality of life. Education can influence a person's behavior in life patterns, particularly in promoting cooperative attitudes and development. In general, the more educated a person is, the easier it is to receive knowledge.

Efforts that might be made to increase the knowledge of pregnant women are to increase counseling and disseminate information about tetanus toxoid immunization. Provide health education about immunization for every patient visit to health facilities or independent practice midwives carried out by health workers.

c. The Relationship of Parity to Tetanus Toxoid Immunization

The p-value of 0.001 from the chi-square test indicates that there is a correlation

between the two variables; this means that parity does affect the distribution of tetanus toxoid vaccine at Tri Lasiyanti PMB in Jatimakmur Village, Pondok Gede, Bekasi City in 2022. This study's findings are consistent with those of Feny Wartisa. There is a correlation between parity and full tetanus toxoid immunization in the third trimester of pregnancy, as shown by the statistical tests with a p value = 0.002 (p).

According to (10), parity is the number of births that produce a fetus that is able to live outside the womb. Parity is very influential on one's acceptance of knowledge where the more experience a mother has, the easier acceptance of experience is an important approach to solving problems.

Parity is very influential on awareness of tetanus toxoid immunization. In this study, the lowest parity was found in primiparous parity because they did not know the importance of tetanus toxoid immunization so there were respondents who did not comply with tetanus toxoid immunization to the nearest health care facility and their wrong perception of the risks that occurred after tetanus toxoid immunization. Mothers with their first pregnancy will experience a maturity crisis that can cause stress, but these women will be better prepared to provide care and take on greater responsibilities. The parity of pregnant women in multiparity parity, is because the multiparous parity group knows more about the benefits of tetanus toxoid immunization related to their previous experience of having several pregnancies and deliveries.

CONCLUSION

From a study conducted in 2 months under the title "Level of Knowledge of Pregnant Women About Giving Tetanus Toxoid Immunization to Pregnancy at PMB Tri Lasiyanti, Jatimakmur Village, Pondok Gede, Bekasi City 2022", based on the independent

and dependent variables from the results carried out using data analysis, namely univariate and bivariate where both have the same result that is interconnected, with a p-value of 0.001. For further researchers, it can be used as reading material and can be used as basic data as a comparison for further research with variables and a deeper level of analysis about the level of mother's knowledge about tetanus toxoid immunization.

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