

Determinants Of The Incident Of Pulmonary Tb Disease Transmission In Families Living In The Same House At Putri Hijau Tk Ii Hospital, Medan, 2023

¹Syafrita Sundari, ²Kesaktian Maurung, ³Rinawati Sembiring

^{1,2,3} Program Studi Magister Kesehatan Masyarakat Direktorat Pascasarjana, Universitas Sari Mutiara Indonesia

Email: kesaktianmanurung56@gmail.com

Keywords

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Contact History.

Abstract. Tuberculosis is a direct infectious disease caused by Mycobacterium tuberculosis, most of the tuberculosis germs attack the lungs, but also affect other organs of the body. Tuberculosis is a health problem with a very high incidence and is a global health problem today. The healthy and sick status of family members and families influence one another. A disease that runs in a family affects the whole family and in turn affects the course of the disease and the status of family members. Therefore, the influence of the health/sickness status on the family influences or is highly dependent on one another. Family behavior in prevention plays an important role in reducing the risk of pulmonary TB transmission. The increasing number of pulmonary TB patients in Indonesia is caused by unhealthy behavior. The formulation of the problem in this study is the determinants of the incidence of pulmonary TB transmission in families who live in the same house at Putri Hijau Tkt Hospital. II Medan in 2023. The type of research is observational analytic research using the cross-sectional method, namely the independent variables and the dependent variable are observed simultaneously. The sample used in this study was a total sample or total sampling of 52 people. The results in this study indicate that there is no relationship between age and a P-value of 0.084, there is a relationship between gender and a P-value of 0.000, there is a relationship between work and a P-value of 0.001, there is a relationship between knowledge and a P-value of 0.001, There is a relationship between smoking habits with a P-value of 0.001, There is a relationship between nutritional status and a P-value of 0.001, There is a relationship between contact history and a P-value of 0.001. The most dominant factor related is the history of contact with Exp (B) 108,168 in the prevention of pulmonary TB transmission in families at Putri Hijau Tkt Hospital. II Medan in 2023.

1. INTRODUCTION

Tuberculosis is a direct infectious disease caused by Mycobacterium Tuberculosis bacteria, most of the tuberculosis germs attack the lungs, but also affect other body organs [1]. Tuberculosis is a health problem whose incidence rate is very high and is a global health problem today. The World Health Organization (WHO) and all member countries are trying to suppress or reduce cases or Pulmonary TB is transmitted through inhalation of droplets, from one individual to another and forms colonization in the bronchioles or alveoli. A patient's infectious power is determined by the number of germs they emit by the lungs. Each patient with pulmonary TB can infect an average of 15-20 other people. In 2020, an estimated 10 million people suffer from TB worldwide. 5.6 million men, 3.3 million women and 1.1 million children. TB exists in all countries and in all age groups. However, TB is curable and preventable. In 2020, 1.1 million children suffered from TB worldwide. TB in children and adolescents is often overlooked by health professionals and can be difficult to diagnose and treat. In 2020, 30 countries with a high TB burden accounted for 86% of new TB cases. Two-thirds of this amount came from eight countries, with India the largest contributor, followed by China, Indonesia, the Philippines, Pakistan, Nigeria, Bangladesh and South Africa. Drug-resistant TB (TB-RO) remains a public health crisis and a threat to health security. In 2020, only around one in three people with TB-RO accessed treatment[2].

The health and illness status of family members and families influence each other. An illness in the family affects the entire family and in turn influences the course of an illness and the status of family members. Therefore, the influence of health/illness status on the family influences each other

or is very dependent on each other. The strong relationship between the family and the health status of its members means that the role of the family is very important for every aspect of health care for individual family members, from strategy to the rehabilitation phase. Assessing or assessing and providing health care is important in helping each family member to achieve a state of health to an optimum level. The presence of health problems in one family member can lead to the discovery of risk factors in other members. This is often a problem when visiting family members who have chronic health problems or infectious diseases[3].

The presence of a serious and chronic disease, one of which is pulmonary TB, in a family member usually has a deep influence on the family system, especially on the role structure and implementation of the family structure, because family members feel anxious about being infected by other family members who suffer from TB disease. Lungs. Many studies consistently document the stress and burdens faced by families, especially caregivers, when providing care to chronically ill family members. Providing this continuous care at home can result in serious negative consequences for the care provider [3].

Family behavior in prevention plays a very important role in reducing the risk of transmission of pulmonary TB. The increasing number of pulmonary TB patients in Indonesia is caused by unhealthy behavior. For example, families who still use eating or drinking utensils together, lack of lighting in the house, patients who still spit carelessly. Apart from that, there are myths related to pulmonary TB transmission that are still found in society. For example, the public assumes that the spread of pulmonary TB is not due to direct contact with TB patients (infectious) but rather due to smoking habits, alcoholics, eating fried foods, sleeping on the floor and sleeping late [4].

Based on the recapitulation report on the number of pulmonary TB sufferers in Medan City in 2022, there will be 18,962 sufferers. One of the indicators used in TB control is the Case Detection Rate (CDR), namely the proportion of the number of new BTA positive patients found and treated to the number of new BTA positive patients estimated to exist in that area [5].

From the results of the initial survey conducted at the Puri Hijau TKT II Hospital, Medan City, it was shown that the number of patients suffering from pulmonary TB was 52 people and they were regularly consuming DOTs with details of 30 men and 22 women. The most common pulmonary TB sufferers were found. At the age of 18-52 years there were 36 people, more than 52 years old there were 16 people. This data was obtained from medical records. [6].

2. METHOD

The type of research is observational analytical research using the cross sectional method, namely the independent variable and the dependent variable are observed simultaneously. Observations and variable measurements were carried out only once and at the same time. The population in this study was all members of the patient's family diagnosed with pulmonary TB who lives at home. Based on examination results obtained from medical record data at Putri Hijau Hospital Tkt. II Medan at the time of the study there were 52 people. The research instrument used in this study was a questionnaire, to determine Age, Gender, Occupation, Knowledge, Smoking Habits, Concomitant Diseases, Nutritional Status, Contact History as an illustration of the profile of pulmonary TB transmission in families living in the same house and what risk factors are dominantly associated with transmission of pulmonary TB in families living in the same house. The questionnaire that has been prepared is first tested before being used as a research measuring tool that aims to find out validity and reliability of measuring instruments. A questionnaire trial was carried out on 30 people in the community who had families suffering from pulmonary TB in the working area of the Glugur health center. The data that had been collected was processed and analyzed using manual calculations and using a computerized system.

3. RESULTS AND DISCUSSION

Research Result

Univariate Analysis Results

Univariate analysis was carried out to determine the frequency distribution of each variable studied, including the variables of pulmonary TB sufferers, age, Gender, Occupation, Knowledge, Smoking Habits, Nutritional Status, History Contact.

Age

The age classification of respondents in this study was divided into two groups namely productive age 15-58 years and non-productive age <15 years > 58 years.

Table 1 Frequency Distribution of Respondents Based on Age with transmission of pulmonary TB in families living in the same house in the hospital Putri Hijau Tkt. II Medan

Respondent's Age	Amount	
	N	%
15-58 years old	25	48.1
<15 years >58 years	27	51.9
Amount	52	100

Based on table 4.1, it shows that of the 52 respondents, the majority respondents aged <15 years >58 years were 51.9% and 15-58 years as much as 48.1%.

Gender

Table 2 Frequency Distribution of Respondents Based on Gender with transmission of pulmonary TB in families living in the same house at Putri Hijau Hospital Tkt. II Medan

Respondent's Gender	Amount	
	N	%
Man	21	40.4
Woman	31	59.6
Amount	52	100

Based on table 2, it shows that of the 52 respondents suffering from TB The majority of lungs are women 59.6% and men 40.4%.

Work

Table 3 Frequency Distribution of Respondents Based on Occupation with transmission of pulmonary TB in families living in the same house in the hospital Putri Hijau Tkt. II Medan\

Respondent's Occupation	Amount	
	N	%
Work	29	55.8
Doesn't work	23	44.2
Amount	52	100

Based on table 3, it shows that of the 52 respondents suffering from TB The lungs of the majority of respondents who do not work are 55.8% and respondents who not working 44.2%.

Knowledge

Table 4 Frequency Distribution of Respondents Based on Knowledge with transmission of pulmonary TB in families living in the same house in the hospital Putri Hijau Tkt. II Medan

Respondents' Knowledge	Amount	
	N	%
Good	20	38.5
Not enough	32	61.5
Amount	52	100

Based on table 4, it shows that respondents suffer from pulmonary TB the majority have less knowledge, 61.5% and respondents with good knowledge as much as 38.5%.

Smoking Habit

Table 5 Frequency Distribution of Respondents Based on Smoking Habits with transmission of pulmonary TB in families living in the same house at home Sick Putri Hijau Tkt. II Medan

Respondents' Smoking Habits	Amount	
	N	%
Smoke	25	48.1
Do not smoke	27	51.9
Amount	52	100

Based on table 4.5, it shows that the majority smoke 51.9% of respondents suffering from pulmonary TB were non-smokers and 51.9% of them were non-smokers moking is 48.1%.

Nutritional status

Table 6 Frequency Distribution of Respondents Based on Nutritional Status With Transmission of Pulmonary TB in Families Living In The Same House In The Hospital Putri Hijau Tkt. II Medan

Nutritional status	Amount	
	N	%
Obesity (BMI >27 kg/m ²)	8	15.4
Normal (BMI 18-25 kg/m ²)	19	36.5
Thin (BMI <18.5% kg/m ²)	25	48.1
Amount	52	100

Based on table 4.6, it shows that the majority of respondents have thin nutritional status was 48.1%, obesity was 15.4% and normal nutritional status as much as 36.5%.

Contact History

Table 7 Frequency Distribution of Respondents Based on Contact History with transmission of pulmonary TB in families living in the same house at home Sick Putri Hijau Tkt. II Medan

Contact History	Amount	
	N	%
Yes	8	15.4
No	19	36.5
Amount	52	100

Based on table 7, it shows that respondents suffer from pulmonary TB who have a history of contact with family members who live at home is that the majority have an undisclosed history with sufferers who are as large as 53.8% and those in contact were 46.2%.

Incidence of Pulmonary TB Transmission

Table 8 Frequency Distribution of Respondents Based on Age with transmission of pulmonary TB in families living in the same house in the hospital Putri Hijau Tkt. II Medan

Contact History	Amount	
	N	%
Yes	14	26.9
No	28	73.1
Amount	52	100

Based on table 8, it shows that of the 52 respondents, the majority respondents had no contact history as much as 73.1% and those had a contact history of 26.9%.

Bivariate Analysis

The bivariate analysis carried out aims to determine the relationship Among the dependent variables is the transmission of pulmonary TB in families living in the same house at Putri Hijau Hospital Tkt. II Medan with independent variables, namely variables age, gender, occupation,

knowledge, smoking habits, nutritional status, contact history. Bivariate analysis results depicting each risk The variables for preventing pulmonary TB disease are explained as follows:

Table. 9 Age relationship based on prevention of pulmonary TB transmission to families living in the same house at Putri Hijau Hospital Tkt. II Medan

Age	Prevention of Pulmonary TB Transmission				Amount		Pvalue
	Good		Not Good		N	%	
	N	%	N	%			
15-58	14	26.9%	11	21.2%	25	48.1	0.084
<15<58	21	40.4%	6	11,5%	27	51.9	

From the research results in table 4.9, the majority of respondents aged <15 <58 showed good prevention of pulmonary TB transmission at 40.4% and that not good at ages 15-58 amounting to 21.2%. Based on the analysis results obtained the proportion coefficient (p) of 0.084 is greater than the level The error used is at the $\alpha= 0.05$ level so it can be concluded that There is no relationship between age and behavior of pulmonary TB sufferers in prevention transmission of pulmonary TB in the family.

The Relationship between Gender and Prevention of Pulmonary TB Transmission in family living in the same house at Putri Hijau Hospital Tkt. II Medan

Table. 10 Relationship between gender distribution and prevention transmission of pulmonary TB in families living in the same house in the hospital Putri Hijau Tkt. II Medan

Gender	Prevention of Pulmonary TB Transmission				Amount		Pvalue
	Good		Not Good		N	%	
	N	%	N	%			
Man	14	26.9%	11	21.2%	25	48.1	0.084
Woman	21	40.4%	6	11,5%	27	51.9	

From the research results in table 10, the majority of female respondents showed good prevention of pulmonary TB transmission at 55.8% and male respondents showed that it was not good at 28.8%. Based on the results of the analysis, it was found that the proportion coefficient (p) of 0.000 was greater than the error level used at the $\alpha= 0.05$ level, so it could be concluded that there was a relationship between gender and the behavior of pulmonary TB sufferers in preventing transmission of pulmonary TB in the family.

The Relationship between Work and Preventing Transmission of TB Sufferers Lungs in families living in the same house at Putri Hijau Hospital Tkt. II Medan

Table. 11 Relationship between work and prevention of pulmonary TB transmission to families living in the same house at Putri Hospital Green Tkt. II Medan

Work	Prevention of Pulmonary TB Transmission				Amount		Pvalue
	Good		Not Good		N	%	
	N	%	N	%			
Work	13	25.0	16	30.8	29	55.8	0,001
Doesn't work	22	42.3	1	1.9	23	44,2	

From the research results in table 4.11, the majority of respondents are working shows good prevention of transmission of pulmonary TB to those who do not work as many as 42.3% and the majority of respondents work to prevent transmission Lung TB which is not good is 30.8%. Based on the analysis results obtained the proportion coefficient (p) of 0.001 is smaller than the level The error used is at the $\alpha= 0.05$ level so it can be concluded that There is a relationship between work and the behavior of pulmonary TB sufferers in prevention transmission of pulmonary TB in the family.

The Relationship between Nutritional Status and Prevention of Pulmonary TB Transmission in family living in the same house at Putri Hijau Hospital Tkt. II Medan

Table 12 Relationship between nutritional status and prevention of pulmonary TB transmission to families living in the same house at Putri Hospital Green Tkt. II Medan

Nutritional status	Prevention of Pulmonary TB Transmission				Amount		Pvalue
	Good		Not Good		N	%	
	N	%	N	%			
Thin	11	21.2	14	26.9	25	48.1	0,001
Normal	17	32.7	2	3.8	19	36.5	
Obesity	7	13.5	1	13.5	8	15.4	

From the research results in table 12, the majority of respondents are Having normal nutritional status indicates prevention of pulmonary TB transmission both 32.7% and the majority of respondents who have a thin nutritional status with poor prevention of pulmonary TB transmission as much as 26.9%. Based on the results of the analysis, the proportion coefficient (p) was more than 0.001 small compared to the error level used at the $\alpha= 0.05$ level So it can be concluded that there is a relationship between nutritional status and sufferer behavior Pulmonary TB in preventing transmission of pulmonary TB in the family.

The Relationship between Knowledge and Prevention of Pulmonary TB Transmission in family living in the same house at Putri Hijau Hospital Tkt. II Medan

Table. 13 Relationship between knowledge and prevention of pulmonary TB transmission in families living in the same house at Putri Hospital Green Tkt. II Medan

Knowledge	Prevention of Pulmonary TB Transmission				Amount		Pvalue
	Good		Not Good		N	%	
	N	%	N	%			
Good	11	21.2	14	26.9	25	48.1	0,001
Currently	17	32.7	2	3.8	19	36.5	

From the research results in table 13, the majority of respondents are Having good knowledge shows the prevention of pulmonary TB transmission while it was 51.9% and the majority of respondents had good knowledge with poor prevention of TB transmission as much as 23.1%. Based on The results of the analysis showed that the proportion coefficient (p) was 0.001 smaller Compared with the error level used at the $\alpha= 0.05$ level, it can be concluded that there is a relationship between knowledge and the behavior of TB sufferers Lungs in preventing transmission of pulmonary TB in the family.

The Relationship between Smoking Habits and Prevention of TB Transmission Lungs in families living in the same house at Putri Hijau Hospital Tkt. II Medan

Table 14 The Relationship Between Smoking Habits and Prevention of Transmission Pulmonary TB in families Living In The Same House In The Hospital Putri Hijau Tkt. II Medan

Smoking Habit	Prevention of Pulmonary TB Transmission				Amount		Pvalue
	Good		Not Good		N	%	
	N	%	N	%			
Smoke	11	21.2	14	26.9	25	48.1	0,001
Do not smoke	24	46.2	3	5.8	27	51.9	

From the research results in table 4.14, it shows that the majority respondents who have the habit of not smoking to prevent transmission Pulmonary TB is good as much as 46.2% and those who have the

ability to smoke with prevention of TB transmission is not good, the majority is 26.9%. Based on the analysis results The proportion coefficient (p) obtained was 0.001 smaller than that The error level used is at the $\alpha= 0.05$ level so it can be concluded that there is a relationship between lighting and the behavior of deep pulmonary TB sufferers preventing transmission of pulmonary TB in the family.

Relationship between contact history and prevention of pulmonary TB transmission to families living in the same house at Putri Hijau Hospital Tkt.II Medan

Table.15 Relationship between contact history and prevention of transmission Pulmonary TB sufferers in families living in the same house in the hospital Putri Hijau Tkt. II Medan

Contact History	Prevention of Pulmonary TB Transmission				Amount		Pvalue
	Good		Not Good		N	%	
	N	%	N	%			
Yes	9	17.3	15	28.8	24	46.2	0,000
No	26	50.0	2	38	28	53.8	

From the research results in table 4.15, the majority of respondents are have a history of no contact with prevention of TB transmission by 50% and A history of bad contact was found in 28.8%. Based on the results analysis showed that the proportion coefficient (p) was 0.000 smaller than that with the error level used at the $\alpha= 0.05$ level, it can be concluded that there is a relationship with the behavior of pulmonary TB sufferers.

Multivariate Analysis

This multivariate analysis is to determine the relationship between independent variables namely: age, gender, occupation, nutritional status, knowledge, smoking and Contact history and knowing the most dominant independent variable relate. From the results of the Chi-Square test on these variables, it can be seen included in the multivariate analysis because the p value was <0.25 Next, a multivariate analysis was carried out with a multiple logistic regression test gradually. The results of the multiple logistic regression analysis can be seen from the table following.

Table 16. Bivariate Test Results Included in Regression Analysis Multiple Logistics

Variabel	B	p.value	Exp(B)
Age	-0.109	0,084	5.331
Gender	1.673	0,000	42.173
Work	-0.615	0,000	4.806
Knowledge	-0.867	0,001	13.296
Smoking habit	-0.195	0,001	5.657
Nutritional status	-0.673	0,001	6.807
Contact History	3.244	0,000	191530
Constant	-7.310	0,001	,000

Based on table 16, the results of the multiple logistic regression test analysis above It is known that the variables age, gender, occupation, nutritional status, knowledge, smoking and this contact history have a relationship to prevention transmission of pulmonary TB in families living in the same house at Putri Hijau Hospital Tkt. II Medan. Of all the variables studied, to see the relationship most significantly related to preventing transmission of pulmonary TB in the family who live in the same house at Putri Hijau Hospital Tkt. II Medan then next on the variables studied, looking at the test results in step 6, it can be seen that the variables The most significantly related variable is contact history and values The highest Exp(B) is 108,168, which means this contact history variable has the strongest relationship in preventing transmission of pulmonary TB in family living in the same house at Putri Hijau Hospital Tkt. II Medan years 2023.

Discussion

Relationship between age and transmission of pulmonary TB in families live in the same house at Putri Hijau Hospital Tkt. II Medan

From the research results in table 4.8, the majority of respondents aged <15 <58 showed good prevention of pulmonary TB transmission at 40.4% and that not good at ages 15-58 amounting to 21.2%. Based on the analysis results obtained the proportion coefficient (p) of 0.084 is greater than the level The error used is at the $\alpha= 0.05$ level so it can be concluded that There is no relationship between age and behavior of pulmonary TB sufferers in prevention transmission of pulmonary TB in the family. Active pulmonary TB infection increased significantly According to age, the highest incidence of pulmonary TB usually affects adults young.

Relationship between Gender and Prevention of Pulmonary TB Transmission to families living in the same house at Putri Hijau Hospital Tkt. II Medan

From the research results in table 4.9, the majority of female respondents showed good prevention of pulmonary TB transmission, 55.8%, and 28.8% of male respondents showed poor prevention. Based on the results of the analysis, it was found that the proportion coefficient (p) of 0.000 was greater than the error level used at the $\alpha= 0.05$ level, so it could be concluded that there was a relationship between gender and the behavior of pulmonary TB sufferers in preventing transmission of pulmonary TB in the family.

The Relationship between Work and Prevention of Transmission of Pulmonary TB Patients in Families Living in the Same House at Putri Hijau Hospital Tkt. II Medan

From the research results in table 4.10, the majority of respondents who work show good prevention of transmission of pulmonary TB, among those who do not work as much as 42.3% and the majority of respondents who work show good prevention of transmission of pulmonary TB as much as 30.8%. Based on the results of the analysis, it was found that the proportion coefficient (p) of 0.001 was smaller than the error level used at the $\alpha= 0.05$ level, so it can be concluded that there is a relationship between work and the behavior of pulmonary TB sufferers in preventing transmission of pulmonary TB to the family. The type of work determines the risk factors that each individual must face. If workers work in a dusty environment. Exposure to dust particles will cause problems with the respiratory tract. Chronic exposure to polluted air can increase morbidity, especially the occurrence of respiratory tract diseases and especially pulmonary TB.

Relationship between nutritional status and prevention of pulmonary TB transmission in families living in the same house at Putri Hijau Hospital, Tkt. II Medan

From the research results in table 4.11, the majority of respondents who have normal nutritional status show good prevention of pulmonary TB transmission at 32.7% and the majority of respondents who have thin nutritional status show poor prevention of pulmonary TB transmission at 26.9%. Based on the results of the analysis, it was found that the proportion coefficient (p) of 0.001 was smaller than the error level used at the $\alpha= 0.05$ level, so it can be concluded that there is a relationship between nutritional status and the behavior of pulmonary TB sufferers in preventing transmission of pulmonary TB in the family.

The Relationship between Knowledge and Prevention of Pulmonary TB Transmission in families living in the same house at Putri Hijau Hospital Tkt. II Medan

Knowledge is the basic capital for someone to behave. People who have a good understanding of TB disease will become a reference for them to try to prevent the disease, because they already understand the dangers and transmission of pulmonary TB disease. From the research results in table 12, the majority of respondents who have good knowledge show moderate prevention of pulmonary TB transmission at 51.9% and the majority of respondents who have good knowledge show poor prevention of TB transmission at 23.1%. Based on the results of the analysis, it was found that the proportion coefficient (p) of 0.001 was smaller than the error level used at the $\alpha= 0.05$ level, so it can

be concluded that there is a relationship between knowledge and the behavior of pulmonary TB sufferers in preventing transmission of pulmonary TB in the family.

The Relationship between Smoking Habits and Prevention of Pulmonary TB Transmission in Families Living in the Same House at Putri Hijau Hospital Tkt. II Medan

From the research results in table 13, it shows that the majority of respondents who have the habit of not smoking with good prevention of pulmonary TB transmission are 46.2% and those who have the habit of smoking with poor prevention of TB transmission are the majority 26.9%. Based on the results of the analysis, it was found that the proportion coefficient (p) of 0.001 was smaller than the error level used at the $\alpha= 0.05$ level, so it can be concluded that there is a relationship between lighting and the behavior of pulmonary TB sufferers in preventing transmission of pulmonary TB in the family.

The Relationship between Contact History and Prevention of Pulmonary TB Transmission in Families Living in the Same House at Putri Hijau Hospital Tkt.II Medan

From the research results in table 4.14, the majority of respondents who had a history of contact that was not good for preventing TB transmission was 50% and a history of contact that was not good was found to be 28.8%. Based on the results of the analysis, it was found that the proportion coefficient (p) of 0.000 was smaller than the error level used at the $\alpha= 0.05$ level, so it could be concluded that there was a relationship with the behavior of pulmonary TB sufferers.

4. CONCLUSION

Based on the research results, it can be concluded that there is no relationship between age and transmission of pulmonary TB in families live in the same house at Putri Hijau Hospital Tkt. II Medan in 2023 is not associated with a P-value of 0.084. There is a relationship between gender and transmission of pulmonary TB in families living in the same house at Putri Hijau Tkt Hospital. II Medan in 2023 corresponds to a P-value of 0.000. There is a relationship between work and the transmission of pulmonary TB in families living in the same house at Putri Hijau Tkt Hospital. II Medan in 2023 is associated with a P-value of 0.001. There is a relationship between knowledge and transmission of pulmonary TB in families living in the same house at Putri Hijau Tkt Hospital. II Medan in 2023 is associated with a P-value of 0.001. There is a relationship between smoking habits and transmission of pulmonary TB in families living in the same house at Putri Hijau Tkt Hospital. II Medan in 2023 is associated with a P-value of 0.001. There is a relationship between nutritional status and transmission of pulmonary TB in families living in the same house at Putri Hijau Tkt Hospital. II Medan in 2023 is associated with a P-value of 0.001. 7. There is a relationship between a history of contact with pulmonary TB sufferers and the transmission of pulmonary TB in families living in the same house at Putri Hijau Tkt Hospital. II Medan in 2023 is associated with a P-value of 0.001. The most dominant factor related is the history of contact with Exp (B) 108,168 in preventing transmission of pulmonary TB in families at Putri Hijau Hospital Tkt. II Medan in 2023.

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