

# Analysis of the Relationship from the History of Active Smoking to Pulmonary TB Patients in the UPTD Area of the Trimoharjo Puskesmas East OKU District

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**Abstract**—The smoking habit is a lifestyle that is far from healthy. In cigarettes, there are approximately 25 types of diseases that attack various organs of the human body that have been proven to be caused by smoking habits. Apart from that, blood vessel diseases were also found besides chronic obstructive pulmonary disease and various lung diseases, including pulmonary TB. UPTD Community Health Center Trimoharjo, East Ogan Komering Ulu Regency, is a community health center in East OKU with many pulmonary TB cases. This study aims to determine the analysis of pulmonary TB patients with a history of smoking in the UPTD area of the Trimoharjo Health Center, East OKU Regency. The research design is quantitative with a cross sectional approach. The research sample was pulmonary TB sufferers in the UPTD Working Area of the Trimoharjo Community Health Center, East OKU Regency, totaling 60 respondents (Total Sampling). Data analysis using tests chi square at 95% Confidence level. The results of this research are the relationship between knowledge of pulmonary TB patients and smoking history in the UPTD area of the Trimoharjo Health Center, East OKU Regency with  $p$  value 0,000. The relationship between age at which smoking starts between pulmonary TB patients and a history of smoking in the UPTD area of the Trimoharjo Health Center, East OKU Regency with  $p$  value 0.001. The relationship between the number of cigarettes smoked in pulmonary TB patients and smoking history in the UPTD area of the Trimoharjo Health Center, East OKU Regency with  $p$  value 0,000. The relationship between the duration of smoking and pulmonary TB patients with a history of smoking in the UPTD area of the Trimoharjo Health Center, East OKU Regency with  $p$  value 0,000. The conclusion of this research is that there is a relationship between knowledge of pulmonary TB patients and their history of smoking, there is a relationship between the age at which they started smoking and their history of smoking, there is a relationship between the number of cigarettes smoked and their history of smoking, there is a relationship between the number of cigarettes smoked and their history of smoking, there is a relationship between the length of smoking and their history. Pulmonary TB with a history of smoking in the UPTD area of the Trimoharjo Health Center, East OKU Regency.

**Keywords**— Pulmonary TB, Knowledge, Behavior, Active Smoker.

## I. INTRODUCTION

TB disease is still a public health problem in the world, especially in developing countries, including Indonesia. This disease is a big threat to human resource development so it needs more serious attention from all parties. Treatment for TB itself will only be effective if the patient complies with the treatment rules (Sari & Oktarlina, 2024).

Smoking is a habit that is detrimental to health because it is a process of mass burning of tobacco which causes concentrated air pollution, which is consciously directly inhaled and absorbed by the body along with respiratory air (Suharmanto, 2024). A person's smoking status can be grouped into non-smokers, active smokers and former smokers (Sari & Oktarlina, 2024).

Smoking is a habit that can provide false pleasure for the smoker, but on the other hand, it has a bad impact on the smoker himself and the people around him. Nicotine is a psychoactive substance that can increase motor activity, reduce the intelligence of children conceived by mothers who smoke and can increase the risk of sexual dysfunction in men and increases the risk of respiratory infections, asthma attacks, coronary heart disease and lung disease (Sari & Oktarlina,

2024).

South Sumatra Province Health Profile in 2023 the number of cases of pulmonary TB amounting to 23,256 (27.93%), while in East Ogan Komering Ulu Regency (East OKU) pulmonary TB was the sixth highest number in South Sumatra Province at 1,324 (5.69%), after Palembang at 7379 (29.79%) and Banyuasin numbered 2,085 (8.97%), Ogan Komering Ilir 1668 (7.17%), Muara Enim 1419 (6.10%) (*Kasus Penyakit Menurut Kabupaten/Kota dan Jenis Penyakit 2020-2022, 2023*).

Based on data from the East Ogan Komering Ulu District Health Service, the number of pulmonary TB cases in 2021 was 573 cases (35.1%). In 2022, pulmonary TB cases will increase to 878 cases (65.26%). In 2023, pulmonary TB cases will increase again to 1,324 cases (66.34%). UPTD Trimoharjo Health Center, East OKU Regency, is ranked 2nd highest in pulmonary TB disease in the East Ogan Komering Ulu Health Service (Dinkes OKU Timur, 2023).

One of the public health problems around the world, including in Indonesia, is pulmonary tuberculosis (TB). Although Tuberculosis Disease is usually known as a disease in adults, cases of Pulmonary TB are increasing, which is a big problem in the health field Hasnanisa et al., (2023).

Based on the description of the data above, the researcher interested in researching about "Analysis of the Relationship between Active Smoking History and Pulmonary TB Patients in the UPTD Area of Trimoharjo Health Center, East OKU Regency".

## II. RESEARCH METHODS

The research design used in this research is quantitative with a cross sectional approach. Darussalam et al., (2019). The research sample was pulmonary TB sufferers in the UPTD Working Area of the Trimoharjo Health Center, East OKU Regency, totaling 60 respondents (Total Sampling). Analysis of the data used in research is a test *chi square* at 95% Confidence level.

## III. RESEARCH RESULT

### 1. Age

Table 1. Age Frequency Distribution

No	Category Age	Frequency	Percentage (%)
1	Adult	35	58,3
2	Elderly	25	41,7
<b>TOTAL</b>	<b>TOTAL</b>	<b>60</b>	<b>100</b>

From table 1 for Age Frequency in the adult category there were 35 (58.3%) respondents and in the elderly category there were 25 (41,7%) respondents.

### 2. Gender

Table 2. Gender Frequency Distribution

No	Category Gender	Frequency	Percentage (%)
1	Male	44	73,3
2	Female	16	26,7
<b>TOTAL</b>	<b>TOTAL</b>	<b>60</b>	<b>100</b>

From table 2 for Gender Frequency in the male category there were 44 (73.3%) respondents and in the female category there were 16 (26.7%) respondents.

### 3. Education

Table 3. Education Frequency Distribution

No	Category Education	Frequency	Percentage (%)
1	SD	27	45,0
2	SMP	22	36,7
3	SMA	11	18,3
<b>TOTAL</b>	<b>TOTAL</b>	<b>60</b>	<b>100</b>

From table 3, the highest frequency of education is in the elementary school category, 27 (45.0%) respondents and the least in the high school category, 11 (18.3%) respondents.

### 4. Type of work

Table 4. Frequency Distribution of Types of Work

No	Category Types of Work	Frequency	Percentage (%)
1	Not Working	14	23,3
2	Laborer	15	25,0
3	Farmer	26	43,3
4	Entrepreneur	5	8,4
<b>TOTAL</b>	<b>TOTAL</b>	<b>60</b>	<b>100</b>

From table 4, the highest frequency of work is in the Farmer category, 26 (43.3%) respondents and the least in the Entrepreneur category, 5 (8.4%) respondents.

### 5. Pulmonary TB

Table 5. Frequency Distribution of Pulmonary TB

No	Category Pulmonary TB	Frequency	Percentage (%)
1	Active	33	55,0
2	Latent	27	45,0
<b>TOTAL</b>	<b>TOTAL</b>	<b>60</b>	<b>100</b>

From table 5, the Frequency of Duration of Stroke in the Active category was 33 (55.0%) respondents and in the Latent category there were 27 (45.0%) respondents.

### 6. Knowledge

Table 6. Knowledge Frequency Distribution

No	Category Knowledge	Frequency	Percentage (%)
1	Good	32	53,3
2	Not Enough	28	46,7
<b>TOTAL</b>	<b>TOTAL</b>	<b>60</b>	<b>100</b>

From table 6, the Frequency of Knowledge in the Good category was 32 (53.3%) respondents and in the Not Enough category there were 28 (46.7%) respondents.

### 7. Age of Starting Smoking

Table 7. Age Distribution of Smoking Initiation

No	Age of Starting Smoking	Frequency	Percentage (%)
1	Teenage	34	56,7
2	Adult	26	43,3
<b>TOTAL</b>	<b>TOTAL</b>	<b>60</b>	<b>100</b>

From table 7, the Age Frequency of Starting Smoking in the Teenage category was 34 (56.7%) respondents and in the Adult category there were 26 (43.3%) respondents

### 8. Number of Cigarettes Smoked

Table 8. Distribution of Number of Cigarettes Smoked

No	Number of Cigarettes Smoked	Frequency	Percentage (%)
1	Moderate Smoker	30	50
2	Heavy Smoker	30	50
<b>TOTAL</b>	<b>TOTAL</b>	<b>60</b>	<b>100</b>

From table 8 for Number of cigarettes smoked the most are in both Heavy Smoker and Moderate Smoker categories totaling 30 (50%) respondents.

### 9. Number of Years of Smoking

Table 9. Distribution of Smoking Time

No	Long Time Smoking	Frequency	Percentage (%)
1	Moderate	24	40,0
2	Old	36	60,0
<b>TOTAL</b>	<b>TOTAL</b>	<b>60</b>	<b>100</b>

From table 9, the highest number of smoking durations is in the Old category, 36 (60.0%) respondents and the least in the Moderate category, 24 (40.0%) respondents.

### 10. Types of Cigarette

Table 10. Distribution of Cigarette Types

No	Types of Cigarette	Frequency	Percentage (%)
1	White Cigarette	29	48,3
2	Clove Cigarettes	31	51,7
<b>TOTAL</b>	<b>TOTAL</b>	<b>60</b>	<b>100</b>

From table 10, the most common type of cigarette is in the Clove Cigarettes category with 31 (51.7%) respondents and the fewest in the White Cigarette category with 29 (48.3%) respondents.

11. Relationship between Knowledge of Pulmonary TB Patients and Smoking History in the UPTD Area of Trimoharjo Health Center, East OKU Regency

Table 11. Relationship between Knowledge of Pulmonary TB Patients and Smoker History in the UPTD Area of Trimoharjo Health Center, East OKU Regency

No	Category Knowledge	Pulmonary TB		Total	p-value
		Aktif	Latent		
1	Good	26 (81,3)	6 (18,7)	32 (100)	0,000
2	Not Enough	7 (25,0)	21 (75,0)	28 (100)	
<b>Total</b>		33 (55,0)	27 (45,0)	60 (100)	

From table 11 it is known that the proportion of incidents of respondents who had Good Knowledge and Active Pulmonary TB was 26 (81.3%) respondents, which was greater than the proportion of incidents of respondents who had Not Enough Knowledge and Active Pulmonary TB which was 7 (25.0%) respondents. Based on statistical tests *who Square* obtained *p value* 0.000, then it can be concluded that there is a relationship *significant* between Knowledge and Pulmonary TB.

12. Correlation between Age at Starting Smoking in Pulmonary TB Patients and History of Smoking in the UPTD Area of Trimoharjo Health Center, East OKU Regency

Table 12. Correlation between Age at Starting Smoking in Pulmonary TB Patients and History of Smoking in the UPTD Area of Trimoharjo Health Center, East OKU Regency

No	Age of Starting Smoking	Pulmonary TB		Total	p-value
		Active	Latent		
1	Teenage	25 (73,5)	9 (26,5)	34 (100)	0,001
2	Adult	8 (30,8)	18 (69,2)	26 (100)	
<b>Total</b>		33 (55)	27 (45)	60 (100)	

From table 12 it is known that the proportion of incidents of respondents whose starting age of smoking is in Teenage and active pulmonary TB is 25 (73.5%) respondents, which is greater than the proportion of incidents of respondents whose starting age of smoking is in adults and active pulmonary TB is 8 (30.8 %) respondents. Based on statistical tests *who Square* obtained *p value* 0.001, it can be concluded that there is a significant relationship between the age at which smoking starts and pulmonary TB.

13. Correlation between the number of cigarettes smoked in pulmonary TB patients and smoking history in the UPTD area of Trimoharjo Health Center, East OKU Regency

Table 13. Correlation between the number of cigarettes smoked in pulmonary TB patients and smoking history in the UPTD area of Trimoharjo Health Center, East OKU Regency

No	Number of Cigarettes Smoked	Pulmonary TB		Total	p-value
		Active	Latent		
1	Moderate Smoker	5 (16,7)	25 (83,3)	30 (100)	0,000
2	Heavy Smoker	28 (93,3)	2 (6,7)	30 (100)	
<b>Total</b>		33 (55)	27 (45)	60 (100)	

From table 13 it is known that from the proportion of incidents of respondents whose number of cigarettes smoked was a moderate smoker and active pulmonary TB, there were 5 (16.7%) respondents smaller than the proportion of incidents of respondents who had a number of cigarettes smoked in

Heavy smokers and active pulmonary TB were 28 (93.3%) respondents. Based on statistical tests *who Square* obtained *p value* 0.000, it can be concluded that there is a significant relationship between the number of cigarettes smoked and pulmonary TB.

14. The Relationship between Long Smoking and Pulmonary TB Patients with Smoker History in the UPTD Area of Trimoharjo Health Center, East OKU Regency

Table 14. The Relationship between Long Smoking and Pulmonary TB Patients with Smoker History in the UPTD Area of Trimoharjo Health Center, East OKU Regency

No	Long Time Smoking	TB Paru		Total	p-value
		Active	Latent		
1	Moderate	6 (25)	18 (75)	24 (100)	0,000
2	Old	27 (75)	9 (25)	36 (100)	
<b>Total</b>		33 (55)	27 (45)	60 (100)	

From Table 14 it is known that the proportion of incidents of respondents who smoked for a long time and active pulmonary TB was 6 (25%) respondents, which is smaller than the proportion of incidents of respondents who smoked for a long time and active pulmonary TB, which was 27 (75%) respondents.

Based on statistical tests *who Square* obtained *p value* 0.000, it can be concluded that there is a significant relationship between duration of smoking and pulmonary TB.

15. The Relationship between Cigarette Types in Pulmonary TB Patients and Smoking History in the UPTD Area of Trimoharjo Health Center, East OKU Regency

Table 15. The Relationship between Cigarette Types in Pulmonary TB Patients and Smoking History in the UPTD Area of Trimoharjo Health Center, East OKU Regency

No	Types of Cigarette	TB Paru		Total	p-value
		Aktif	Latent		
1	White Cigarette	24 (82,8)	5 (17,2)	29 (100)	0,000
2	Clove Cigarettes	9 (29,0)	22 (71,0)	31 (100)	
<b>Total</b>		33 (55,0)	27 (45,0)	60 (100)	

From Table 15 it is known that the proportion of incidents of respondents whose smoking type was white cigarettes and active pulmonary TB was 24 (82.8%) respondents, which was smaller than the proportion of incidents of respondents whose smoking type was clove cigarettes and active pulmonary TB which was 9 (29.0 %) respondents.

Based on statistical tests *who Square* obtained *p value* 0.000, it can be concluded that there is a significant relationship between type of smoking and pulmonary TB.

#### IV. DISCUSSION

##### 1. Relationship between knowledge of pulmonary TB patients and smoking history in the UPTD area of Trimoharjo Health Center, East OKU Regency

From the research results, univariate analysis of 60 respondents showed that there were 32 (53.3%) respondents with Good Knowledge, which was greater than 28 (46.7%) respondents with Not Enough Knowledge. Bivariate results showed that the proportion of respondents who had good knowledge and active pulmonary TB was 26 (81.3%), greater than the proportion of respondents who had poor knowledge and active pulmonary TB, which was 7 (25.0%). Based on the results of the Chi square statistical test data analysis, the results were obtained *p-value* 0,000. So it can be concluded that the results of the research carried out are that there is a relationship between knowledge of pulmonary TB patients and smoking history in the UPTD area of the Trimoharjo Health Center, East OKU Regency.

The results of this research are in line with research conducted by (Nita et al., 2023) which entitled The relationship between knowledge, smoking habits and history of household contact with the incidence of pulmonary TB, which states that there is a relationship between knowledge and active smoking and the incidence of pulmonary TB. Judging from the results of the Chi square statistical test data analysis, the results were obtained *p-value*  $0.004 < 0.05$ . The results of this research are also the same as the journal's conclusions Anika Sari et al., (2023) entitled *Relationship Between Knowledge Level and Compliance in Tuberculosis Patients* which states the results *p-value*  $0.036 < 0.05$  means there is a significant relationship between knowledge and pulmonary TB patients. Also supported by research conducted by Niaz Ahmed et al., (2024) in the journal *Acta Tropica* title *Valuation Of Knowledge, Attitude, Practices Of Tuberculosis Among The Health Care Workers From Islamabad Pakistan* which states that there is a knowledge relationship with Tuberculosis patients. Strengthened by research (Mathofani et al., 2024) judul *Relationship between Knowledge, Age, Occupation, and Support of Health Workers with the Incidence of Pulmonary Tuberculosis* hasil *p-value*  $0,004 < 0,05$  and research Akbar et al., (2023) title *The Relationship between Smoking Habits and the Incidence of Pulmonary TB in Work Areas Kuta Alam Community Health Center Banda Aceh* results *p value*  $0.002 < 0.05$ . The results of the two studies stated that there was a relationship between knowledge and the incidence of pulmonary TB. Knowledge is a result that occurs after someone senses a particular object,

and can also be from the experience gained. A person's behavior that is based on knowledge will be of higher quality than behavior that is not based on knowledge. Knowledge is the result of knowing, and this occurs when someone has done something (Andraini et al., 2019). A person without knowledge has no basis for making decisions and determining actions regarding the problems faced. Knowledge or cognitive domain is a very important domain in shaping a person's actions. Factors that influence knowledge of active smoking in pulmonary TB patients include internal factors which include education, occupation and age, while external factors include social, cultural and economic environmental factors (Niaz Ahmed, et al, 2024).

##### 2. Relationship between age at which smoking starts between pulmonary TB patients and smoking history in the UPTD area of Trimoharjo Health Center, East OKU Regency

Based on univariate analysis of 60 respondents, it was found that the results of the age at which they started smoking in teenage were 34 (56.7%) respondents, which was smaller than the age at which they started smoking in adults, namely 26 (43.3%) respondents. And the results of bivariate research are the proportion of incidents of respondents who are starting analisa univariat age Smoking in Adolescents and Active Pulmonary TB was 25 (73.5%), smaller than the proportion of incidents of respondents whose Age of Starting Smoking in Adults and Active Pulmonary TB was 8 (30.8%). Based on the results of the Chi square statistical test data analysis, the results were obtained *p value* 0.001. So it can be concluded that the results of the research carried out are that there is a relationship between the age at which smoking starts between pulmonary TB patients and their history of smoking in the UPTD area of the Trimoharjo Health Center, East OKU Regency. The results of this research are in line with research conducted by Arikhman, (2019) entitled *The Relationship between Smoking Behavior and the Incidence of Pulmonary Tuberculosis in Patients at the Lung Disease Treatment Center* showing the results that the Age at which Smoking Starts is highly correlated with Pulmonary TB patients, with the value  $p 0.016 < \alpha 0.05$  which means there is a relationship between the age at which smoking starts and the incidence of pulmonary TB. The results of this study are also in line with research conducted by Perdamenta et al., (2023) entitled *The Relationship between Smoking and the Formation of Lung Cavity Lesions in Tuberculosis Patients at H Adam Malik Hospital*. Analysis of this research data uses Chi square, with values *p-value*  $p 0.014$  is smaller than  $\alpha 0.05$ , which means it can be concluded that there is an age relationship Start smoking with pulmonary TB. This research is also strengthened by research from (Ardanata, 2024), with the title *The Relationship between Knowledge and the Role of Parents and Smoking Behavior in Adolescents in Purwodadi District, Grobogan Regency*, which states that the results of the research are that there is a relationship between the Age of Starting Smoking and the incidence of Pulmonary TB. *p-value* 0.000 is smaller than  $\alpha 0.05$ . So there is a relationship between the age at which you start smoking and the incidence of pulmonary TB. Adolescents who are exposed to cigarette

smoke, both from active smokers in the family and environment around, there is a risk of experiencing various problems health. The age at which you start smoking is one of the risk factors for someone being exposed to pulmonary TB disease. So it plays a very important role in the occurrence of pulmonary TB and curing pulmonary TB. A person who starts smoking behavior will have the greatest possibility of smoking for a long period of time, several studies show that the incidence of pulmonary TB will increase if they carry out smoking behavior for a long period of time (Suharmanto, 2024)

### 3. Relationship between the number of cigarettes smoked in pulmonary TB patients and their history Smokers in the UPTD Area of Trimoharjo Health Center, East OKU Regency

Based on univariate analysis of 60 respondents, it was found that the results of the number of cigarettes smoked by moderate smokers were 30 (50.0%) respondents, the results were the same as the number of cigarettes smoked by heavy smokers, namely 30 (50.0%) respondents. And the bivariate research results show that the proportion of respondents whose number of cigarettes smoked among moderate smokers and active pulmonary TB was 5 (16.7%), smaller than the proportion of respondents whose number of cigarettes smoked among heavy smokers and active pulmonary TB was 5 (16.7%). 28 (93.3%). Based on the results of the Chi square statistical test data analysis, the results were obtained  $p$ -value 0,000. So it can be concluded that the results of the research carried out are that there is a relationship between the number of cigarettes smoked in pulmonary TB patients and smoking history in the UPTD area of the Trimoharjo Health Center, East OKU Regency.

The results of this research are in line with research conducted by (Kiswara et al., 2024) entitled Description of Length, Type and Frequency of Smoking in Pulmonary TB Sufferers Residents of Titang Tasikmadu Hamlet, Karanganyar, showing the results that the number of cigarettes In Suction is closely related to pulmonary TB patients, with value  $p$  0.000, which means there is a relationship between the number of cigarettes smoked and the incidence of pulmonary TB. The results of this research are also in line with research conducted by Annisa et al., (2023) entitled Smoking Behavior with Religious Knowledge about Students' Smoking against Pulmonary TB. Analysis of this research data uses Chi square, with values  $p$ -value  $p$  0.00, which means it can be concluded that there is a relationship between the amount of cigarette consumption and pulmonary TB.

This research is also strengthened by research from Indrawati et al., (2023), with the title Analysis of Risk Factors for Positive Acid Resistant Bacterial Pulmonary Tuberculosis in North Buton Regency, which states that the results of the research are that the number of cigarettes smoked is related to the incidence of pulmonary TB. mark  $p$ -value 0,000. So that there is a relationship between the number of cigarettes smoked and the incidence of pulmonary TB.

Klasifikasikan Classify them further according to the number of cigarettes they smoke, namely the number of

cigarettes smoked in units of cigarettes, boxes or packs per day. The quantity of smoking is divided into 3 groups, namely people who smoking less than 10 cigarettes a day is called a light smoker. If a smoker smokes 10-20 cigarettes a day, he is called a moderate smoker. A heavy smoker who smokes more than 20 cigarettes a day is called a heavy smoker. The number of cigarettes smoked will influence the incidence of pulmonary TB (Susanti et al., 2023).

### 4. Relationship between smoking duration and pulmonary TB patients with smoking history in the UPTD area of Trimoharjo Health Center, East OKU Regency

Based on univariate analysis of 60 respondents, it is known that the results of moderate smoking duration for 24 (40.0%) respondents are smaller compared to respondents who have smoked for a long time, namely 36 (60.0%) respondents. And the bivariate research results showed that the proportion of respondents who had smoked for a long time in Moderate and Active Pulmonary TB was 6 (25.0%), smaller than the proportion of respondents who had smoked for a long time in Moderate and Active Pulmonary TB, which was 27 (75.0%). Based on the results of the Chi square statistical test data analysis, the results were obtained  $p$ -value 0,000. So it can be concluded that the results of the research carried out are that there is a relationship between the duration of smoking between pulmonary TB patients and the history of smoking in the UPTD area of the Trimoharjo Health Center, East OKU Regency. The results of this study are in line with research conducted by Akbar et al., (2023) entitled The Relationship between Smoking Habits and the Incidence of Pulmonary TB in the Working Area of the Kuta Alam Community Health Center, Banda Aceh showed the results that the duration of smoking was strongly related to pulmonary TB patients, with value  $p$  0.005, which means there is a relationship between smoking duration and the incidence of pulmonary TB. The results of this research are also in line with research conducted by (Nadia Septiani et al., 2024), with the title Yang Factors Associated with the incidence of pulmonary TB At the Lung Clinic of Bangkinang Regional Hospital. Analysis of this research data uses Chi square, with values  $p$ -value  $p$  0.000 is smaller than  $\alpha$  0.05, which means it can be concluded that there is a relationship between the duration of smoking and the incidence of pulmonary TB. This research is also strengthened by these results in accordance with research by Nadia Septiani et al., (2024) conducted in Manado which showed that the 38 respondents who were positive for TB, most of them had smoked for 15-40 years.

The results of this research are in accordance with the theory which states that the older the respondent If you have a smoking habit, the greater the impact on your health. Prolonged exposure to cigarette smoke can cause Mycobacterium tuberculosis to damage lung alveolar macrophages and facilitate TB infection (Kakuhes et al., 2020).

### 5. The Relationship between Cigarette Types for Pulmonary TB Patients and Smoker History in the UPTD Area of Trimoharjo Health Center, East OKU Regency

Based on univariate analysis of 60 respondents, it was found that the results for the type of cigarette in white cigarettes were 29 (48.3%) respondents, which was smaller than the type of cigarette in clove cigarettes, namely 31 (51.7%) respondents. And the results of the bivariate research showed that the proportion of incidents of respondents whose smoking type was white cigarettes and active pulmonary TB was 24 (82.8%), smaller than the proportion of incidents of respondents whose smoking type was kretek cigarettes and active pulmonary TB, which was 9 (29.0%). Based on the results of the Chi square statistical test data analysis, the results were obtained  $p$ -value 0,000. So it can be concluded that the results of the research carried out are that there is a relationship between the type of cigarette between pulmonary TB patients and the history of smoking in the UPTD area of the Trimoharjo Health Center, East OKU Regency.

The results of this research are in line with research conducted by Kiswara et al., (2024) entitled Description of the Duration, Type and Frequency of Smoking in Pulmonary TB Sufferers Residents of Titang Tasikmadu Hamlet, Karanganyar, showing the results that the type of smoking is strongly related to pulmonary TB, with the value  $p$  0.000, which means there is a relationship between the type of smoking and the incidence of pulmonary TB. The results of this research are also in line with research conducted by Kamelia et al., (2022) entitled Correlation of Smoking Behavior with Community Health in Tegal Mukti Village. Analysis of this research data uses Chi square, with values  $p$ -value  $p$  0.000 is smaller than  $\alpha$  0.05, which means it can be concluded that there is a relationship between the type of smoking and the incidence of pulmonary TB. This research was also strengthened by Fifiani Yuli Astuti, (2023), with the title The Relationship between Smoking Habits and Symptoms of Lung Disease in Adolescents in Tanggel Village, Randublatung District, Bora Regency, who stated that the results of the research were that there was a relationship between the type of smoking and the incidence of pulmonary TB.  $p$ -value 0.005. So that.

There is a relationship between the type of smoking and the incidence of pulmonary TB. People who smoke filter cigarettes are six times more likely to experience increased blood pressure than people who have never smoked. Cigarette filters have the ability to filter inhaled cigarette smoke and minimize the entry of chemicals into the lungs. Cigarette filters are made from a type of symmetrical fiber foam which can filter nicotine, but cannot filter nicotine perfectly (Andyanita Hanif Hermawati, S.Kep. et al., 2023). According to Dr. Soe Binde from the Centers for Disease Control (CDC), kretek cigarettes contain higher levels of nicotine and tar than regular cigarettes. The content of harmful substances in kretek cigarettes is greater than in filter cigarettes, so the potential for nicotine, tar and carbon monoxide to enter the lungs is greater. will be greater than cigarettes that use filters. On the other hand, people who smoke clove cigarettes have a higher risk of increasing blood pressure compared to people who have never smoked, which is 10.80 times higher. This is because cigarettes contain three main toxic components, namely

carbon monoxide (CO), nicotine (C<sub>10</sub>H<sub>14</sub> N<sub>2</sub>), and tar (Asep Ricky Subagya, 2023).

## V. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the research that has been carried out, the following conclusions can be drawn :

1. There is a significant relationship between knowledge of pulmonary TB patients and smoking history in the UPTD area of the Trimoharjo Health Center, East OKU Regency with  $p$  value 0,000.
2. There is a significant relationship between the age at which pulmonary TB patients started smoking and their history of smoking in the UPTD area of the Trimoharjo Health Center, East OKU Regency.  $p$  value 0,001.
3. There is a significant relationship between the number of cigarettes smoked in pulmonary TB patients and smoking history in the UPTD area of the Trimoharjo Health Center, East OKU Regency.  $p$  value 0,000.
4. There is a significant relationship between the duration of smoking for pulmonary TB patients and the history of smoking in the UPTD area of the Trimoharjo Health Center, East OKU Regency.  $p$  value 0,000.
5. There is a significant relationship between the type of cigarette and history of pulmonary TB patients Smokers in the UPTD Area of Trimoharjo Health Center, East OKU Regency  $p$  value 0,000.

Based on the results of the research that has been carried out, the suggestions are as follows:

1. TB cadres coordinate TB patients with the hope that TB patients will no longer smoke
2. Bidan desa membantu untuk memantau dan mengevaluasi pasien TB.
3. Village midwives help to monitor and evaluate TB patients.

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